

PROTEIN POLITICS

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Voor de varkens van Nederland

je heurt wel 's van die verhalen
dat vlees ongezond veur joe is
daor kan ik wel inkommen
ik eet nou al veul vaker vis
vlees is nie best veur joen hart
want joen aders slibben dicht
dat komp deur al die hormonen
ze zeggen dat 't doar an ligt

't skient ok dat die beesten
veul hebben te verduren
veuls te kleine hokken
en veuls te lange uren
en da'j dus als protest
de slager veurbij moet lopen
nou alsjeblieft, nee dank je wel
ik moet ze gewoon wel kopen

dreuge worst, dreuge worst
'k zou nie weten wat ik zunder mos
dreuge worst, dreuge worst

(Skik, D. Lohues & M. van der Helm)

Voorwoord

Als ik van de Universiteit naar huis fietste, was ik vaak in gedachten bezig het voorwoord van mijn proefschrift aan het schrijven. Een plezierig tijdverdrijf, het doen alsof het allemaal af is terwijl ik, veel wijzer geworden natuurlijk, terugblik op de periode waarin ik er aan werkte. Toen het daadwerkelijk zover was en ik toe was aan het schrijven van een voorwoord, wilde ik er eigenlijk maar vanaf zien. Ik had helemaal niets te vertellen. Maar ik doe het uiteindelijk toch, want er zijn mensen die beslist een bedankje verdienen.

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Mijn ouders hebben mij altijd stof tot nadenken gegeven over voedsel en de omgang met dieren. Wij woonden in een modern woonwijk-huis. Alleen groeiden er bij ons aardappels en spruitjes in de voortuin en liepen er kippen in de achtertuin. Mijn vader zat aan de eettafel vaak met een stompje potlood en een papertje uit te rekenen hoe duur onze eieren kwamen (en nooit zaten ze onder de winkelprijs). Als de eierproductie naar beneden liep, kwamen al mijn vriendjes op tafel en reed ik rond op een fiets vol bloedspatten. Mijn ouders stopten voor dode, aangereden hazen. Om ze mee te nemen en op te eten. Ze reden naar een dorp speciaal voor een slager, want die slachte nog zelf. We hadden een roestige oude ton in de achtertuin, waarin mijn vader (hij wordt 'beroerd van de stank' als er in de buurt wordt gebarbecued) zijn palingvangst rookte. Vooraf waarschuwden mijn ouders de omwonenden vanwege de enorme rookontwikkeling. Tegenwoordig eten ze het hele jaar rond groente van eigen tuin en zit ik na een bezoekje in de trein met rode bieten, wortels en door mijn vader voorgesneden en voorgewassen boerenkool. Heit en mem, bedankt voor deze verrijkende ervaringen en voor al het andere dat jullie mij hebben meegegeven.

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1

Introduction

1. The problem with proteins

According to some, drastic changes in our contemporary lifestyles are necessary to reduce ecological damage to the environment. A shift in the proportion of meat and plant proteins in diets would constitute such a major change. Almost half of the human pressure on the environment is directly or indirectly a result of the production and consumption of food. The production of meat contributes greatly to this pressure. Considering the growth of the world population and the increase of meat consumption in some areas in the world like China, the production and consumption of animal proteins are an environmental threat in the near future, (Tilman, Cassman, Matson, Naylor & Polasky, 2002). Environmental effects such as deforestation, loss of biodiversity and pollution could be substantially reduced if plant proteins were used for direct human consumption, rather than for cattle feed (Aiking & Vellinga, 2000).

This study is part of the program of the interdisciplinary research group Profetas (protein foods, environment, technology and society). Profetas consists of technological, environmental and socio-economic research projects on protein food systems which result in the development of scenarios and strategies for guiding a shift towards a more plant protein based diet. The different research projects focus on the goal of identifying viable options for a more sustainable food system. Profetas arose from a concern with the increasing impact of food production and consumption on the environment and a desire to restrain human pressure on the environment. Profetas has formulated three research questions:

1. To what extent is a shift from animal to plant protein foods environmentally more sustainable than present trends?
2. To what extent is a shift from animal to plant protein foods technologically feasible?
3. To what extent is a shift from animal to plant protein foods socially desirable?

The reason for investigating environmental, technological and societal aspects is that in addition to environmental effects, decision makers in both government and industry have to deal with complex issues such as technological innovation, consumer demands, international specialisation, employment and food security (Aiking & Meerdink, 1999). Publications by the research group can be found on www.profetas.nl.

The relation between the consumption of meat and population growth is not new. In a given area more food can be obtained from plant crops than by animal production (Hartog, 1982, p.53). When meat became too expensive in 18th century Europe, thinkers promptly explained this lack of meat as beneficial for public health (Montanari, 1994, p.164-165):

“ ‘Men kan zich afvragen’ - schrijft Adam Smith in 1776 - ‘of we vlees wel nodig hebben. Uit ervaring weten wij dat uit graan en andere gewassen [...] en zonder vlees een zeer rijk dieet samengesteld kan worden, dat bovendien het gezondst, voedzaamst en meest versterkend is. Nergens vereist het decorum dat een mens vlees moet eten.’” (Montanari, 1994, p.165)¹

¹ “ ‘One can wonder’ – Adam Smith writes in 1776 – ‘whether we need meat. From experience we know that from grain and other crops [...] and without meat, a rich diet can be composed, that besides

In this chapter, the research problem (section 2) and the research approach (section 3) will be discussed, followed by the research questions (section 4). Section 5 provides the content of the chapters and section 6 gives the main argument of the book.

2. Protein politics

Dynamics and stability in diets result from heterogeneous processes regarding the production and consumption of food. Over time food production and consumption evolve and what is considered tasty changes (Jobse, 1995). Policies and politics also evolve with regard to the consumption, production and trading of food. Food involves a great variety of policy issues. This study concentrates on the ways in which these diverse policies have influenced the proportion of animal and plant proteins in our diets. At first glance, government may seem to have little to do with personal food choices. Nor would most people appreciate policies meddling with their personal food choices. The ways in which policies affect our food choices are much more indirect and have more to do with which products are made available and developments in what makes a product a success. Therefore, this study examines the development of contemporary food production and consumption practice and the ways in which governmental policies were involved.

By ‘practice’ I simply mean the everyday production and consumption of food. Practice is also a concept in ‘practice theory’ in which an actor with his or her beliefs and values, resources and external environment are integrated into one ‘activity system’. In this system, social, individual and material aspects are interdependent. The focus is on the way different elements relate to each other (Hajer & Wagenaar, 2003, p.20). I will not go further into the theoretical discussion on this concept as I’ll be using it in a practical sense.

The project addresses the following research problem: how do politics and public policy affect the possibilities of a diet transition towards less animal protein, and more plant protein food production and consumption? Politics, technology and markets are interconnected spheres of human society (Jasanoff et al., 1995). This research project is concerned with how politics influences and is influenced by technology and markets. This means that production and consumption are at least partially facilitated by a political infrastructure. The research focuses on the ways policies and politics have effected proportions of plant/animal proteins in diets and how they can contribute to a diet shift in an effort to achieve more sustainable food production and consumption. Conversely, in what ways do policies and politics obstruct such a diet shift? This leads to a description and explanation of the role of politics and policies in the (past) constitution and (contemporary) processes of maintenance and transformation of protein food production and consumption.

The focus is on the consequences of policies for diets: favouring certain products or production processes over others. Probably most policies that affect maintaining or shifting diets do not intend to directly influence people’s diets. As a consequence, the normative, political aspect of protein politics is not primarily found in discussions between politicians, interest groups and citizens. It is more a side-effect

is the most healthy, nutritious and most strengthening. Nowhere does decorum demand that a person should eat meat.” (Montanari, 1994, p.165, translation MV)

of decisions on other issues and the result of the production and consumption practice. The outcome of interactions in the practice of food production and consumption makes certain diets more normal (usual) than others. As such, contemporary practice provides what we shall eat and what is easily available. For this reason, this study focuses on the political practice of food production and consumption.

3. Research approach

Uncovering the indirect ways in which policies affect food production and consumption requires a kind of research that begins not from the current practice of food production and consumption, but from the question of how current food practice was constructed. What seems normal today, such as eating meat on a daily basis or governmental intervention in an agricultural crisis, probably was not always normal. I will look into the process in which those events have been made normal. This process of normalisation (Brown, 1999), shows how certain views, roles, interests and activities became dominant over others. Unravelling the underlying views that are incorporated in food practice will show the politics of food. The important question here is how certain views and customs reached a point beyond discussion and which actions and choices have made certain policy goals evident while discarding other solutions.

Fiddes (1991) searches in 'Meat: a Natural Symbol' for the cultural backgrounds for eating certain quantities of meat. In the same fashion, I will look into the heterogeneous (socio-techno-econ-political) practices to find out how the meat/plant protein ratios are kept stable or have been changed. Fiddes explains it in the following manner:

“The absence of more than superficial consideration of the reasons for meat eating in much of the literature on vegetarianism may lie partly in the conventional assumption of the majority of the population that meat is a normal, natural aspect of the diet, and vegetarianism an aberration to be explained. Indeed, in British society, until recently, that has broadly been the case. Children have traditionally been brought up to regard consuming of the flesh of other animals for food as both normal and desirable. Meat eating is part of what Bourdieu (1977) calls our 'habitus' - it is a principle unquestioned by most people. That this traditional view is implicit in much published research is obvious from language commonly used: of 'faddism', 'rebelliousness' or 'deviance'. It would be easy to find any number of people who would agree that vegetarianism is generally ideological, if not overtly political. It would be harder to persuade most of those same people that meat eating is likewise. Nonetheless, any study of food habits must recognise that food selection is imbued with social rules and meaning, and it is clear from the extent of its association with cultural rituals, both religious and secular, that meat eating is a medium particularly rich in social meaning. From an academic viewpoint, therefore, a prejudice in favour of the majority is unsatisfactory. All that can be said is that food habits differ, and the meat-eating habit requires explanation as much as does the non-meat eating habit. [...] Our attitudes to meat, I suggest, are the reflection of our worldview, and changing habits in meat consumption may well indicate a changing perception of the world we inhabit.” (Fiddes, 1991, p.4-5.)

Like Fiddes, this research will not start from a prejudice in favour of the majority, because it would then be impossible to study the process in which this majority was assembled. As in ethnomethodological research, this research shall be based on the view that objectivity and normality is constituted in practice (Maso, 1984, p.10). Law (1992) states: if we want to understand the mechanics of power and organisation, it is important not to start out assuming what we want to explain. This means that if I start

out assuming the animal protein network sells more products than a plant alternative because the former is big and powerful and the latter is small and powerless, I would close the door on explaining why one is larger than the other. What activities are needed to become and remain big? (Callon, 1986; Callon, 1987; Latour, 1999).

In order to study how prevalent food practice came about with regard to protein ratios and (degrees of) governmental interference with food, it is necessary not to define concepts in the food practice previously, but instead study how concepts were defined in practice. Van de Ploeg (1990) and Marsden, Flynn & Harrison (2000) have done this for quality of food: how quality is defined tells something about the dominant values with regard to food and by whom quality is defined we learn how roles and power are divided. The politics studied are not bound to texts and discussions. The politics of technology design and economical infrastructures are of equal importance (Howard, 2002; Callon 1986).

Activities in the practice of food production and consumption can be regarded as building, maintaining or deconstructing orderings. An ordering with regard to food is a practical and conceptual organisation of how organisms are made into something that is being eaten and why. Whether intentional or not and despite ideas, desirability and interests with regard to food, orderings make what food is about. Orderings can be considered normative or political, because an ordering makes certain consumption patterns, such as the consumption of meat, normal. It prescribes the norm for what we should eat. An ordering requires continuous activity to keep it in place (Law, 1992; Marsden, Flynn & Harrison, 2000, p.184, Callon, Law & Rip, 1986).

I will follow the history of food in order to find out what happens with regard to this building, maintaining or deconstructing of orderings. These ordering activities can clarify how certain meat/plant ratios are normalised and certain public policies are made possible. What changed and what was kept stable? What does this tell us about the division of power and roles in food production and consumption? Policies are observed as activities aimed at building, maintaining or deconstructing orderings. I will concentrate on the impact of policies on normalising or de-normalising meat and plant protein products. This will reveal ways in which government and public policies actively contribute to the construction and prioritising of those issues that lead to stability and change of protein production and consumption. From these data, I will discuss the roles that policies can play in a (partial) diet shift.

3.1. The practice of food production and consumption as a generator of - and generated by - definitions, frames and guiding principles.

Food practice is considered to be built up in ordering activities. By these activities, certain views, values and rules become significant and dominant. The contemporary practice of production and consumption of meat does not only generate a certain tonnage of meat, but incorporates a common way to produce and consume.

“[...] the ability to “supply” things, in the broadest sense, is [...] a vital source of power, not only because it may include some ability to bestow meanings, but also because meaning coalesces around certain relationships. Objects, ideas, and persons take on a patterned structural unity in the creation of ritual, as happened, for example, when “high tea” became a working-class eating custom. But it was the purveyors of the foods, the givers of employment, the servants of the state who exercised the power that made the foods available.” (Mintz, 1996, p.30-31).

In order to be able to gain insight into this power, or the normalisation of certain views, values and rules, I will look into (problem) definitions, frames and guiding principles generated in the practice of food production and consumption. The ability to define things or to bestow meaning is an important source of power (Mintz, 1996, p.30; Schattschneider, 1960, p.66). Problems, interests and roles are defined in ordering activities. The process in which definition and coordination of roles takes place is called enrolment by Callon and Law (Callon & Law, 1982; Callon, 1986). By looking at how and by whom definitions are bestowed, we can learn about power and influence in food practice. Problem definitions are considered a strategic representation of situations (Stone, 1997, p.133).

Frames provide interpretations about the world by casting an event in a certain evaluative mode and suggesting lines of action. If an event is considered a threat, people can reframe it in such a manner, that its significance for his/her well-being is alleviated. Something can be framed as moral or technical, consequently proposed courses of action will differ (De Boer, 1999, p.75-77). A policy frame contains the underlying structures of belief perception and appreciation of the policy makers through which a problem and its solutions are conceived (Schön & Rein, 1994, p.23; Hoppe & Hisschemöller, 1996). In policy making, framing also has to do with what is included on the political agenda and what is not (Belasco, 1989, p.158). To be able to set the policy agenda and the policy alternatives, to select issues and predefine problems, is to have power (De Boer, 1999, p.85). According to Schattschneider, political organisation is the mobilisation of bias: some issues are organised into politics, others are organised out (1960, p.69).

Van de Poel (1998, p.56) and Elzen, Enserink & Smit (1990) use the term guiding principle, with which they mean shared values that justify and rule actions and restrain alternatives. It is a strategy for problem solving, guiding further developments. A practice can generate rules for what food must be in order to be successful and rules that prescribe actions of actors. This term can also be useful in finding out what is influential and what does and doesn't matter in food production and consumption.

These definitions, frames and guiding principles together will help us discover what the path dependent developments in food production and consumption will be as well as which ideas and actors are included or excluded from the food practice. Developments in the practice of food production and consumption that adhere to the guiding principles, frames and definitions (of roles, problems and interests) are path dependent and contribute to the ordering of the food practice. If a diet shift requires action that does not fit the guiding principles, definitions and frames, a transition is necessary. A transition is a cluster of trend ruptures that lead to an altered ordering of society (te Riele et al, 2000).

3.2. Following the history of food

For this study, I needed a broad overview of developments in the practice of food production and consumption. Therefore, I mainly relied on secondary sources describing a history of food related topics. I studied literature about the production and consumption of food in order to find out which developments had taken place. I then tried to understand and explain these developments as construction, maintenance or deconstruction of orderings. I tried to find which definitions, frames and guiding principles were applied, what the consequences were for plant-animal protein

proportions and what role policies played. In this analysis, what did *not* happen and why is just as important a question as what did happen and why.

Although most developments described also occurred in other Western-European countries, I concentrated on studying the Netherlands. I made this choice because the Profetas project, to the extent it aimed for possible policy change, focussed on the Netherlands. Focussing on the Netherlands allowed for a degree of detail useful for policy options.

4. Research questions

To be able to ascertain how politics and public policy affect possibilities of diet transition towards less animal and more plant protein food production and consumption, I specified the following research questions:

- ❖ What are protein politics? Which problem definitions, frames and guiding principles organise protein products in or out of food practice?

The historical analysis in this book goes towards answering this question, which also forms the basis of the next three questions and for which an answer will be sought in the final chapter.

- ❖ What are the implications of ordering activities on the operationalisation of a diet shift?
- ❖ Will a diet shift require a transition?
- ❖ What are possible roles of policymakers in a diet shift?

5. Content of the book and guide to reading

The chapters are chronological. The study starts in the 1850s because around this period the notion of ‘proteins’ first came into use. A publication of 1847 on the necessity of proteins in diets form an ideal starting point for the analysis. The chapters are divided on changes in the proportion of proteins in diets or changes in the consumption or production of meat. Because relevant developments occur in a broad range of subjects such as diet, health, agriculture, food technology and trade, different ‘storylines’ can be found throughout the book.

Chapters 2-5 describe how developments in society, the economy and politics to some extent ordered food production and consumption by constructing the guiding principles for change, the spheres of activity (such as market and regulatory practices) and roles of the actors involved. Chapter 2 [around the 1850s] can be seen as a prologue as it covers only a few years. This chapter shows how a food shortage was used to make food into a scientific and economic issue and how food shortage was used in politics as a catalyst for implementing the free trade principle. Chapter 3 [1850-1895] discusses how food products became standardised as they became more readily available. The second topic of the chapter discusses how the reactions to the agricultural crisis provided a reframing of the role of the government in agricultural developments. Policies shifted from a liberal stance to interventionist. Chapter 4 [+/- 1895-1950] shows that quality measurement and export interests are interwoven. The result was a unified specification (a normalisation) of food quality. Subsequently is

described how convenience became a frame for what food had to be for consumers and businesses. The third subject of chapter 4 is how meat production became a policy-interest. Chapter 5 [+/- 1950-1970] describes how the role of the consumer became defined. It also describes how a shift in protein consumption (more animal protein than plant protein is consumed), changed the meaning of meat. Thirdly, it describes how agricultural policies have an impact on the kind of products that are produced and the efforts to maintain the ordering of the previous period.

Chapters 6 and 7 show efforts to maintain the ordering in food production and consumption. Chapter 6 [+/- 1970-1992] describes counter developments that threatened the order of the prevailing food practice. Activity from the prevailing practice to deal with the raised problems resulted in maintaining the ordering. Re-ordering activities are described regarding criticism to industrialisation of food and intensive animal production. Chapter 7 [+/-1992-2001] describes how problems regarding meat production were dealt with: environmental problems related to meat production and outbreaks of several animal diseases. The chapter explains that the problems encountered are dealt with in such a way that the prevalent food practice can maintain its ordering and meat consumption levels are maintained.

Chapter 8 gives a summary and describes the conclusions. It then discusses two distinct kinds of diet shifts: a shift through producing more plant products (NPFs) and a shift through eating less meat. It explains why current ordering is biased in favour of the 'produce more' option. It discusses whether a diet shift needs to be accomplished through a transition. Then it describes the current policy frame and its implications. With the use of different policy roles a description follows of what governmental actors can do within the current frame and what they can do to widen it in order to democratise decision making with regard to food.

6. Main argument of the book

This study argues that decisions and developments regarding food are never neutral. Certain viewpoints are behind the practice of food production and consumption and because of processes of normalisation, these viewpoints become invisible. Historical and contemporary political and socio-economic developments show that diets and food production are made normal as a result of processes of ordering. Discovering what the orderings in the food system are built from and what keeps them together indicates that these are not untouchable macro-structures. This study's aim is to reveal the political aspects to orderings with regard to food and to enhance the transparency of orderings that come along with certain choices as well as what this means for what food is about. Current food practice forms a frame from which new problems are solved and along which new developments are guided. This practice discriminates between products and production methods and between values regarding food and food production. Food has many meanings and purposes, but developments in the prevalent practice of food production and consumption are mainly structured by the commercial market of food products. The commodification of food is enhanced by the further industrialisation of food production. Government and policies have contributed to construct the prevalent practice by concentrating on the (agricultural) income with regard to food. This book explains why it is important to look beyond this bias. By revealing the 'protein politics' underlying the current ordering of the food practice, it becomes possible to make new choices for food production and consumption practices. This could result in governments being more conscious and

clearer with regard to partiality and assumptions underlying their actions to improve sustainability in the food system.

Change in the proportion of animal/plant protein consumption in the direction of a more sustainable food system could differ in nature, depending on which orderings are constructed, sustained or broken down in the process. Different processes shaping a diet-transition, although leading to sustainability in one form or another, could have different effects on the division of power, prevailing values and product choices in the food system.

A diet shift can take two forms: the production of more plant alternatives to meat, or the consumption of less meat. Because the emphasis of current food production and consumption practice is on 'more', the prevalent practice of food production is biased in favour of the 'production of more plant proteins' option. Although not actively promoting the 'more production and consumption option', governmental action is biased in favour of the 'production of more plant proteins option' as well, because of their approach to solving food related problems without negatively affecting the economic value of food and the food production sector. However, if sustainability and long-term social acceptability is the goal of a diet shift, the 'eating less meat' option should be considered also as an option. Policy makers could try to create a more equal situation for the 'new plant protein production' part of a diet shift on one side, and the 'less meat eating' part on the other. This would involve substantial effort to reduce their own interests in the consequences for profitability of a diet shift. In this way, other possible interests in food, such as 'natural, simple foods', are not immediately organised out of a partial diet shift. In this role, policy makers would be aiming at a more diverse food system, with different approaches to food, so that 'new plant protein production' would not necessarily become more normal than 'eating less meat'.

2

Lack of protein [around the 1850s]

During the 1850s, the amount of meat in diets had greatly diminished. It is assumed that meat had been an important foodstuff during the dark ages, when Western Europe was relatively sparsely populated. Rapid population growth in the Netherlands, at the beginning of the 19th century² had reduced the consumption of meat. First, meat had been replaced by cereal. Later cereal became too expensive for many and was replaced by potatoes³. Potato disease during the years 1845-1847 shrank the potato supply. Because of the dependence of a large part of the Dutch population on potatoes, the result was a famine of which approximately 53,000 people died (Den Hartog, 1982, p.15, 53, 59)⁴.

In this chapter, I will argue that the food shortage did not stand on its own, but became linked to efforts to increase health and work performance (section 1), and to efforts to instigate free trade (section 2).

1. Questioning diets and hunger: food as a scientific and economic issue

Around the 1850s proteins and the effects of the lack of proteins in diets of a large part of the population gained attention. In 1847, a book was published explaining the noted lack of intellectual and physical strength of the lower social classes (60-70% in the cities); its cause lay in a diet that consisted mainly of potatoes. The book was written by the physician G.J. Mulder⁵. He recommended the consumption of more 'protein substances'. He wrote that there are similarities between the composition of animal products and plant products:

“...meat is present in bread and cheese in grass” (G.J. Mulder cited in: Van Otterloo, 1990, p.57, translation mv)

Since meat was far too expensive, he suggested the consumption of more peas and beans. Also, people should eat more dried fish and breed their own rabbits for consumption (Van Otterloo, 1990, p.34, 38-39; Den Hartog, 1982, p. 57-58).

² Between 1815 and 1850, the population of the Netherlands increased from 2.2 to 3 million inhabitants (Bieleman, 1992, p.209).

³ Potato consumption and appreciation of their taste had grown since the end of the 18th century. It was easy to grow and delivered twice as much yield per hectare compared to grains. A growing part of the population became dependent on potatoes since other products became less affordable. Because potatoes were relatively cheap, they first replaced roots and turnips, and from the second decade of the 19th century they also replaced grains, which (being a staple food) was the most important source of protein. Wages were very low, while the cereal prices were increasing because of increased demand. In 1847, the price of rye (the most consumed cereal product) was raised even more, because of a bad harvest (Van Otterloo, 1990, p. 15).

⁴ In Ireland there also was a famine from 1845 to 1849 because the poor potato harvest (Pyke, 70, 134-146).

⁵ The physician G.J. Mulder had used the term protein for the first time in 1838 (Hermus & Van de Zedde, 1980).

The lack of food during the potato disease led members of higher social classes (physicians, economists and employers) to study and discuss the situation. Inventories of diets were published. Mulder's study was one of the first to appear. In the medical profession, health was increasingly brought into relation with food intake and the existing problems stimulated the development of a scientific ground for this relationship.

Economists discussed the meagre diets in relation to poverty, free trade and bread factories. With regard to poverty, opinions were divided on whether wages were too low or just ill spent (on liquor). With increasing industrialisation, more people found jobs in factories. For employers, malnourished employees became a problem (Van Otterloo, 1990, p 38-42). In a report from 1870, the Dutch association for the promotion of industry concludes that the problem should be solved through education, in order to improve budgetary choices:

“Bij meerdere intellectuele ontwikkeling zal het hem niet vruchteloos worden voorgehouden dat hij, ook bij matige voeding met eiwitachtige zelfstandigheden, meer werk verrichten kan, dan door zijn maag te vullen met aardappelen, waarmede hij welverzadigd, maar onvoldoende gevoed wordt...” (directeuren der Nederlandsche Maatschappij ter bevordering van nijverheid, cited by Van Otterloo, 1990, p. 42)⁶.

In conclusion, in the events described above identify ‘the protein’ for the first time as a matter of debate on how the population should ideally feed itself. The food shortage led some members of the higher classes to focus on the relationship between food and health and between food and work performance. This made food into a medical, economic and scientific issue. The appearance of protein in scientific work made it possible to rationalise diets and to discuss the amounts of protein necessary for a healthy diet.

This formed a basis for food policies that will be discussed in next chapters. During the 1850s, however, the government was not focussed on policies regarding diets. Still, the food shortage had an important impact on agricultural policies. This will be the focus of the next section.

2. Food shortage as a catalyst for implementing the free trade principle

During the food shortage, riots broke out in several places. The concern of the government was keeping order; charity wasn't considered a public responsibility. The hungry population was advised to eat the rotten potatoes. The meagre harvests of sound potatoes and cereal were exported (Den Hartog, 1982, p.75). The king (Willem II) proposed that the government should buy foreign potatoes. The minister of home affairs wanted to buy rice, a prohibition on the export of potatoes and to control the use of potatoes for gin and treacle. The liberal minister of finance, Van Hall wanted no such thing. He wanted to temporarily remove tariffs on potatoes and also, considering the severe situation, on barley, rice, beans, peas and lentils (the tariffs on rye and buckwheat were already too low to influence imports). Van Hall's proposition

⁶ “With increased intellectual development, it will not be in vain to impress upon him, that he, also with moderate consumption of protein like substances, can get through more work than by filling his stomach with potatoes, with what he gets filled up, but is insufficiently fed.” (directeuren der Nederlandsche Maatschappij ter bevordering van nijverheid, cited by Van Otterloo, 1990, p. 42, translation MV)

was accepted and the removal of the trade tariffs was prolonged for another year because of a failed rye harvest. This temporary abolishment of the corn law gave proponents as well as opponents a chance to get used to this situation (Vermeulen, 1966, p.14-16).

In 1845, Van Hall proposed to reduce tariffs for international trade. An earlier effort to reduce obstacles to trade had not succeeded. The liberals in the government wanted to retain the Dutch trade-position by following the developments in neighbouring countries of reducing obstacles for trade. Thus Van Hall proposed to revise the corn law but withdrew his idea so not to ruin propositions for reducing tariffs for other products (Vermeulen, 1966, p.9-14). Meanwhile, Dutch agriculture profited from the high cereal prices. Industrialised neighbouring countries were becoming more dependent on import. Because of this, the significance of export was increasing for the Netherlands. Export of livestock and meat to Germany and Belgium had already risen and the abolishment of the protectionist British Corn Law in 1846 was the beginning of free trade between several European countries. For the Netherlands, England became the most important export market (Bieleman, 1992, 211-214).

The free trade principle swayed agricultural politics: inspired by the British 'Anti-Corn Law-league', the Dutch 'graanwet' (corn law) was abolished. Bad harvests and food shortages were brought up as arguments for international free trade. In 1847, Van Hall introduced a white paper that argued for the abolition of the 'graanwet'. In the elucidation, it is stated that bad harvests in recent years showed the importance of free trade. Protection would hurt the lower classes. Further, it expressed the hope to return to an international cereal trade. The Netherlands had turned to protection because of the protectionist measures of neighbouring countries, and now that these countries were abolishing these measures, the Netherlands should do the same. These foreign changes together with the high grain prices made this the time to act. Additionally, objections to free trade from the agricultural provinces should not be over-estimated, while the interests of the provinces Noord- en Zuid Holland (that account for a large part of the state taxes), should not be forgotten. This was the argument of the white paper. Even opponents of the white paper voted in favour of it to avoid the bad impression if such an important proposition was only accepted by a small majority which would risk unrest in cereal producing areas of the country (Vermeulen, 1966, p. 16-23).

In conclusion, the potato famine and the lack of food for the public coincided with liberalising trade. From all possible (proposed or not proposed) solutions for the potato crisis, international free trade was pushed forward as an answer. The abolition of the 'graanwet' was put forward as the solution for the lack of food. But simultaneously, its objectives were improvements in international trade and to the advance of liberalism. With the use of policy intervention, agricultural production in the Netherlands could keep its interest in export markets. Promoting export therefore was at the centre of political activity.

3. Implications for proteins

Lack of food, combined with political, scientific and industrial developments, resulted in framing the problem in such ways that solutions would benefit trade, production and the rationalisation of food. In this period, attention was directed to proteins for the first time. Proteins were used in an endeavour to increase the productivity of workers.

3

An increase in protein intake [1850-1895]

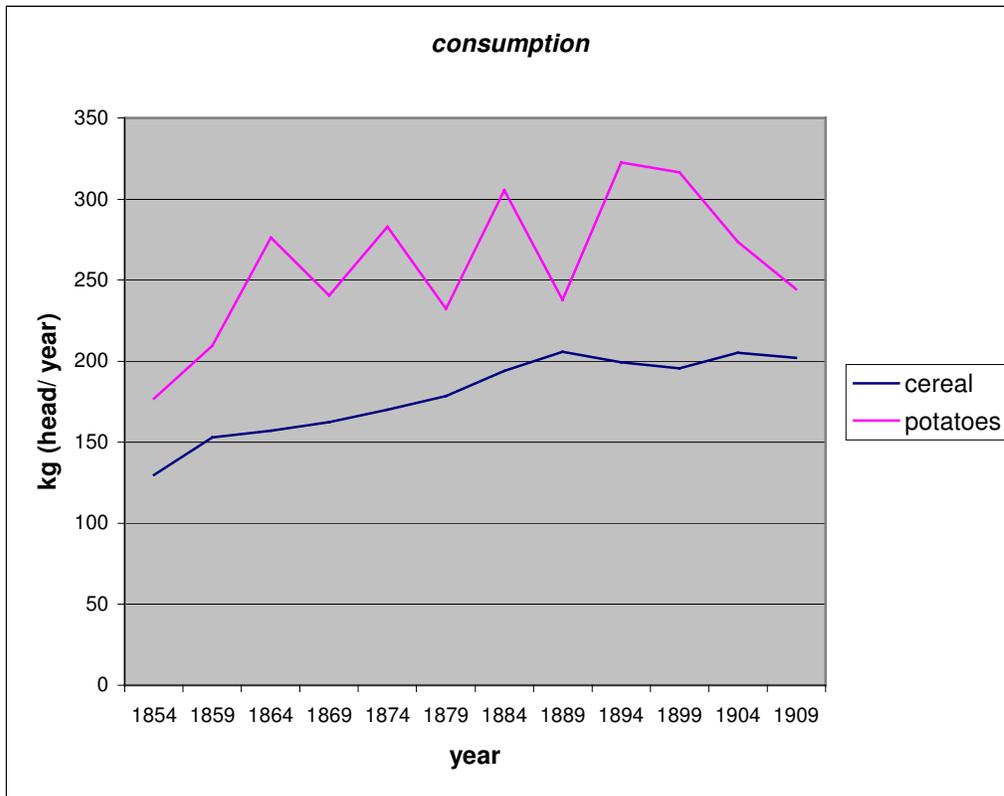


Fig 1. Consumption of cereal and potatoes. After Van Otterloo, 1990, p.46 (figures include feed for livestock)

In the period between 1850 and 1895, there was a slight increase in protein consumption. This was mainly due to an increase in cereal consumption, as figure 1 shows. Among the lower class, meat had almost disappeared completely from the menu, because of high prices, especially in the cities. The diet around 1890 showed a modest variation in the diet and a little meat on the (Sunday) menu for many. (Van Otterloo, 1990; Jobse van Putten, 1995). In the first section, the mechanisation of food production because of urban demand will be discussed. Food was increasingly industrialised and standardised and was more available. Food could now be more controlled. In the second section, it is argued that policies and agriculture became increasingly interwoven and the export position of the Netherlands grew in significance for the food practice.

1. The mechanisation of food production

The production methods and availability of food products gradually changed. Food production became increasingly mechanised. Technical breakthroughs for specific products, scientific advantages, mechanical engineering and new energy bases made it

possible to mechanise the existing processing and preservation technologies (Sorj & Wilkinson, 1985). The prices of meat, bread and fuel (for cooking) lowered, which meant that a wider range of products became available to a greater part of the population.

From 1848, the government's attention was focussed on the removal of obstacles for trade and industry. This gradual liberalisation had an important impact on people's diets. Excises on the necessities of life were abolished between 1852 and 1865 and led to lower prices of these products. The regulation of the bread supply, the 'broodzetting', which set a minimum price for bread, was abolished as well. This contributed to the industrialisation of bread production. The year the 'broodzetting' was abolished in Amsterdam (1854), the first bread factory was established in Amsterdam. This was initiated by S. Sapharti, whose concern lay in a lower bread price and higher bread quality. The mechanisation of bread production led to specialisation and standardisation of bread. Specific types of grain were selected for their ability to produce more loaves per pound of flour and stay fresh longer, which reorganised agricultural production in line with the demands of the industrial process (Sorj & Wilkinson, 1985). Traditional bakeries kept providing a large amount of the bread supply since they could deliver a broad range of bread products (Den Hartog, 1982, p.76, Van Otterloo, 1990, p.43-45; p.62-63).

Industrialisation also became significant for meat production. From the 1860s onward, conserved meat became cheaper than fresh meat. Cans of meat were not popular because of the taste and because of worries about the nutritional value of the product, hygiene in the factories and diseases in the (American) husbandry. From 1885, the appreciation for canned meat changed. For a number of households, canned products became a delicacy that exceeded fresh products (Van Otterloo, 1990 p. 84-85).

The slaughter process became increasingly distanced from the consumption of meat. The arrival of public slaughterhouses in the cities hid the slaughtering process and all its inconveniences from the public eye. Livestock was formerly slaughtered on streets and in back gardens and caused nuisance. Since more and more people had moved to urban areas, space had become scarce. The local authority of Amsterdam was urged to action by citizens pressing for a public slaughter facility. Meanwhile, complaints were voiced about the lack of hygiene, the lack of quality control and the relation between price and quality. An example is this citation from a letter that appeared in the local paper, addressing the problem:

"[...] het oprichten van abattoirs, zoals reeds te Rotterdam en schier overal in grote steden plaatsvond, en het nuttige hiervan ter voorkoming van ziekten, schijnt hier aan de overwegingen der Gezondheidscommissie te zijn ontgaan en door de gemeenteraad nog niet ter harte genomen. Ieder die een slachter in zijne nabijheid heeft wonen, zal het ongerief en de overlast afkeuren van zulk een buur, vooral wanneer de slachter een spekslachter is. Welke vergunning bestaat er voor spekslagers hun bedrijf in hun tuin achter het huis gelegen uit te oefenen? En dat wel op uren die geen werkuren zijn? Het behoeft geen betoog dat de grond, voortdurend met bloed en drek gedrenkt, allernadeligste uitwasemingen teweeg brengt en de burens van een slachter zeer dikwijls verhinderd worden, hun tuinen te bezoeken en de daardoor veroorzaakte stank, om niet te gewagen van het rustverstorende geschreeuw, teweeggebracht door het afmaken van varkens." (Cited by Van Otterloo, 1990, p.111)⁷

⁷ "[...] The establishing of abattoirs, as has already been done in Rotterdam and other large cities, and the value of this for preventing diseases, appears to have escaped the attention of the Health Commission and is not taken to heart by the town council. Everyone who has a slaughterer living nearby will disapprove of the inconvenience and the nuisance of such a neighbour, especially when the slaughterer is a bacon butcher. Which permit exists for bacon butchers that have their business in their

Butchers were protected in their profession by a law that prohibited public slaughterhouses though this law was abolished in 1875 expressly against their will. In 1887, the first public slaughterhouse was opened (Van Otterloo, 1990, p.94-95; 102-104; 110-112). In the countryside, however, home slaughtering remained common.

Because of the new production methods, the quality of meat and bread was improved. Public slaughterhouses enabled quality control and hallmarks. Quality became gradually more measurable and testable and swindling preventable. Physicists and hygienists developed quality standards and methods for detecting swindling and scientifically confirmed the relation between health and food. Bread factories made it possible to deliver a standardised quality of their bread. The quality of bread was a problem because of swindling. Possible additions were too much water, pea meal, bean meal, potatoes, turnips, sand, gyps, marble and copper vitriol (Van Otterloo, 1990, p.96; Jobse- van Putten, 1995, p.130).

“Naar mijn mening [...] is het hollandsche brood over ‘t algemeen *zeer slecht*, en wél geproefd: *geen* brood. [...] De Franschen dien men het voorzet, noemen het, als ze zich beleefd willen aanstellen, *gâteau*, en vragen wat anders. Ook ik vraag wat anders, en noem het, onbeleefd, half-gaargebakken watten met krijt, koper, aluin, geile melk, vitriool en oudsche eieren.” (Multatuli, 1871, cited in Jobse-van Putten, 1995, p.130)⁸

For the food industry, it became possible and lucrative to search for cheaper alternatives to existing foods. Product innovation was now increasingly dependent on the chemical industry, in order to blend different ingredients. The distance between rural production and industrial food production made it possible to look for cheaper ingredient alternatives. Advantages in the chemical industry made it possible to interchange ingredients. Margarine is an example of a cheap mass substitute for butter (Sorj & Wilkinson, 1985). According to Sorj and Wilkinson (1985), the challenge for the development of the food industry was not breaking previous food habits, but establishing existing technologies on an industrial footing and incorporating scientific advantages.

A product innovation that was not in line with the food habits of the time, prefabricated pulse powder, did not become a success. In Switzerland, a doctor and factory inspector became concerned about the nutrition of factory workers and published writings about pulses as food for the people. A welfare organisation took up the project to introduce the new product, with the businessman Maggi as partner. Maggi, in permanent contact with chemists and a physiologist, developed pulse powders in the flavours A, B, C (low fat), AA, BB, CC (medium) and AAA, BBB, CCC (high fat), packed in brown paper bags. The product was processed in such a way, that the level of nutrient absorption was improved, bloating properties reduced and toxicity eliminated. The product’s shelf life was extended and cooking time shortened to just 20-30 minutes. The applications of the product were virtually

backyard? And during hours that are not working hours? It isn’t necessary to argue that the soil, continuously drenched with blood and dung, brings about most disadvantageous exhalations and most often prevents the neighbours of the butcher to visit their gardens and the thereby cause stench, not to mention the disturbing screaming made by the slaughtering of pigs.” (Cited by Van Otterloo, 1990, p.111, translation MV)

⁸ “In my opinion [...], the Dutch bread is in general very bad and well tasted: not even bread. [...]. The French who are served this, call it, when they want to be polite, *gâteau*, and ask for something else. I too ask for something else, and call it, impolitely, half baked cotton wool with chalk, copper, alum, lewd milk, vitriol, and old eggs.” (Multatuli, 1871, cited in Jobse-van Putten, 1995, p.130, translation MV)

unlimited and it was cheap. The product was not successful, notably among those for whom the product was intended: the ill-fed workers. The product had caught on, however, among the upper classes and the more affluent workers (Schrärer, 1995).

The consumption of meat and bread did decreasingly denote one's social status. The increase in cereal intake was almost entirely caused by the increase of wheat consumption. Rye was traditionally the most eaten cereal, but between 1877 and 1881 wheat consumption began to take precedence over rye consumption. Wheat can be made into white bread, which was popular because of the high social standard attached to it. But with the lowering of prices, it became within reach of a growing number of consumers (Van Otterloo, 1990, p.62-64, p.101; Jobse-van Putten, 1995, p.126).

Meat became more available to the lower class, though it wasn't yet common (with the exception of bacon, which was somewhat more widespread). Meat remained expensive. With increasing employment, some more meat could be afforded. Meat had been one of the products by which members of the upper class were distinguished from the lower class. Montanari (1994, p.171,183) claims that with the growing role of the food industry and the attendant democratisation of consumer goods, the pursuit of profit required that deep rooted habits of associating certain products with social status and the practices of exclusion had to be set aside. With the increase in the availability of meat for a growing amount of people, meat lost its image as an elite product.

A few members of the upper class formed a countermovement, by abstaining from meat or taking up a vegetarian diet (Jobse-van Putten, 1995, p.120). An organisation for vegetarians⁹ (Nederlandse Vegetariërs Bond) was established in 1894 (Van Otterloo, 1990). The ethical conviction that animals should not be unnecessarily harmed and killed formed the motive for those who abstained from meat (van Otterloo, 1990, p.189). New economic arguments were also proposed that emphasised the higher productivity of plant products in comparison to meat (Montanari, 1994, p.169). According to Montanari (p.183), vegetarianism was a new way for the elite to distinguish themselves. Van Otterloo points out that a vegetarian diet denotes an opposition against the industrialisation of food habits. Vegetarians organised themselves into movements pleading for more natural and healthy eating habits¹⁰, because according to them, urbanisation and industrialisation brought along incorrect and artificial diets on a large scale (1990, p.186; 1983). Besides, as Spencer (1993, 293-294) mentions, urbanisation brought a desire for the country life and preservation of nature on the one hand, while on the other hand it made it possible for individuals to organise and publish their views, while before those who abstained from meat were isolated voices.

To summarise: the broader availability of bread and meat changed them as products. Industrialisation of the production process became more common, making more standardised products and standardised quality (and quality control) possible. From the consumer point of view, public slaughterhouses distanced the slaughtering process from eating meat. Pulse powder as a food innovation broke with existing food habits and did not become a success.

⁹ In England the term vegetarianism was used in the 1840s and became official with the foundation of the Vegetarian Society in 1847 (Spencer, 1993, p.252).

¹⁰ This counterculture standing up for more natural food exists today, with periods of revival around the 1920s and in the 1970s-1980s (van Otterloo, 1990, p.186).

2. Agricultural crisis: shifting to policy intervention in agriculture

This section will describe how policies became actively involved with the direction of developments in agriculture and with agricultural production.

From 1878 to 1895, European agriculture suffered a crisis. The application of the steam engine to shipping resulted in 1878 in the arrival of shiploads of cereal from the United States. Because of the mechanisation of agriculture, large areas of the American plains had been cultivated. A gradual fall in cereal prices was the consequence. Shortly there-after, imports from other continents and imports of meat and livestock followed. In the Netherlands, this implied an extra impulse for the reduction of agricultural labour, which had started in the 1860s; many farmers went seeking employment elsewhere (Bieleman, 1992, Vermeulen, 1966). Larger farms were most affected by the crisis. The severity of the crisis may therefore have been overestimated, because larger farmers were more able than peasants to express their needs (Tracy, 1964, p.25-26). Consumers profited from the low prices as well as an increase in the supply and variation of food: apart from the growth in cereal consumption, meat, pulses, fruit and vegetables appeared more often on the menu (Jobse-van Putten, 1995).

Among scholars and politicians, the agricultural crisis forced a few advocates of agricultural interests to question the free-market principle. Neighbouring countries (except for Great Britain) had shifted to protectionism and these men urged the government to do the same. They did not find much support, however. Most, including several agricultural advocates, were optimistic and believed in the self-regulation of the market. Among politicians, agriculture was not on the political agenda. In the organisation of ministries, agriculture was not set apart from other economic activities; these all fell under the section trade and industry and were represented by seven civil servants (Vermeulen, 1966, p.53-56).

In 1885 the government received two requests for protection measures as a solution for the agricultural crisis. Since none of the officials responsible for agricultural affairs had any noteworthy agricultural knowledge, there appeared the need for an advisory board. The head of the civil servants, J.C. De Marez Oyens, contacted C.J. Sickesz, an expert on political as well as agricultural affairs, to examine his plan for an independent commission for agricultural affairs that could advise the government and should answer the question whether agricultural policies would be needed or not. Sickesz found in De Marez Oyens a willing ear for his rhetoric about governmental intervention in agriculture:

“Mijn hemel, het is al zo vaak en zo goed aangetoond dat [staatsbemoeiing] noodzakelijk is! De commissie moet onderzoeken in welke richting de regering werkzaam zal zijn, en die richting aangewezen zijnde, welke punten het eerst voorziening vereisen.” (Sickesz, cited in Vermeulen, 1966, p. 64)¹¹.

As a consequence, De Marez Oyens dropped the question of whether or not there should be governmental intervention and reformulated the main question the commission should answer as *what kind* of governmental intervention would be required. Next, De Marez Oyens and Sickens set out to prudently appoint the

¹¹ My goodness, it has already been so often and so well proved that [state intervention] is necessary! The commission should investigate in what direction the government will be employed, and that direction been pointed out, which points need the first provision.” (Sickesz, cited in Vermeulen, 1966, p. 64. translation MV)

members for the commission. They sought representatives from agriculture, agricultural experts, bank directors and politicians. Among the politicians, there was a great deal of scepticism, but the budget for the commission was endorsed (Vermeulen, 1966, p.56-69).

The propositions the agricultural commission came up with in 1886 were not new, but were fortified by the standing of the commission. This brought the propositions under the attention of the press and politicians, and created a mind-set of the deplorable state of the Dutch agriculture and of the right agriculture had to receive governmental help. In light of public opinion, the government undertook immediate action, in the form of state financed agricultural teachers, agricultural winter schools, test farms, horse breeding and dairy consultation (Vermeulen, 1966, p. 74-78). Just two years before the start of the agricultural crisis, in 1876, the state had provided for an agricultural school in Wageningen. Education was seen as one of the possibilities to improve the Dutch agricultural position, together with technical and livestock breeding developments and intensification of agriculture (Vermeulen, 1966, p. 45-49).

From 1895 onwards, the agricultural crisis was over. As can be seen in figure 1, the consumption level of cereal stops increasing with the ending of the crisis. The Netherlands profited from industrial developments in England and Germany. Production increased and prices for agricultural products rose. The number of pigs had grown during the crisis, because the cheap cereal during the agricultural crisis had been used for feed. This increase in production meant mainly an increase in export (Vermeulen, 1966, 91-92, Ketelaars, 1992, p. 31). Dutch agriculture became prominently focussed on export. At the same time, an increasing amount of feed was imported. Husbandry became gradually less dependent on soil to provide for feed (Bieleman, 1992, p.23; 219-220). Gradually, agriculture changed into a part of a staged production process, based on the supply and delivery of raw materials (den Hartog, 1982, p.68-70; Jobse-van Putten, 1995, p.124).

In conclusion, the response of policy makers to the agricultural crisis provided an adaption of the role of the government to a new agricultural ordering. Policies shifted from liberalism to active regulation of agriculture in order to keep considering the agricultural trade interests. The end of the crisis did not end the policy intervention. Agriculture became more export oriented with greater emphasis on the processing of raw materials (feed) into animal products. Education, consultation and research became important steering mechanisms for the development of agriculture towards specialisation and rationalisation of businesses.

3. Implications for proteins

Protein products became more standardised, wider available and more common. Meat became disassociated from animals and slaughtering, as these activities were performed at a distance from the public. Industry became more important to food production. With urbanisation less people provided their own food and consumers became more dependent on suppliers. Eating meat became linked to the industrialisation of food and urbanisation. On the opposite, plant foods were considered natural. It became possible to add value by processing raw materials into animal products. The conversion of plant proteins into animal proteins was applied on a larger scale.

4

Ups and downs in protein consumption [+/-1895-1950]

During the first half of the 20th century, there was a very slow development towards more meat consumption, interrupted by periods of scarcity in the food supply. This chapter will deal with policy regulation and the rationalisation of food quality. Secondly, it will describe the redefining of convenience, rendering household and business interests congruent. The third part examines governmental actions regarding food supply during the First and Second World Wars and the economic depression of the thirties, and describes how policies became more focussed on agricultural production to the exclusion of other food matters.

1. Policies with regard to food quality standards: rationalisation of food quality

Scientific food research made it possible to consider healthiness of food in terms of nutritional values and substances. At the beginning of the 20th century the vitamin was discovered and physicians started to ascribe certain symptoms to a lack of vitamins and recommending dietary changes. Advice based on research¹² from cooking teachers altered eating habits, but only in those cases when the advice complemented tastes and fit eating patterns (Jobse-van Putten, 1995, p.349-350, 355-356, 397-399, 423, 473; van Otterloo, 1990, p.136-138, 142-143, 145-147). Developments in food science made regulation possible. State intervention with food quality coincided with the development of a rationalistic and intellectual apparatus that made food problems measurable and devised suitable responses and solutions (Beartsworth & Keil, 1997, p. 133, Van Otterloo 1990, p.105). A result was a unified specification (a normalisation) of food quality, making it possible to measure, prescribe and control a degree of quality while at the same time rendering it almost unavoidable for products to meet the standards.

Medical scientists, food scientists and politicians had been arguing for over a century for governmental quality control of food. The quality of food was a problem because of adulteration (Van Otterloo, 1990, p.96; Jobse- van Putten, 1995, p.130). The demand for products was enormous, so many people had no other option but to eat unhealthy, low quality food. Sellers were in no way restrained by income loss through decreasing demand caused by insufficient quality:

“Wat slechts de schijn van eetbaar heeft, wordt, helaas! door behoefte of snoepzucht nog door onze nooddruftige natuurgelieven genuttigd en soms in zoo walgelijke vorm dat een dier zich daarvan onthouden zou. Kaas die in de letterlijke zin des woords een verpestende stank verspreidt, vindt zelfs kopers en verbruikers.” (Report from food inspectors from Amsterdam, 1862, cited by Van Otterloo, 1990, (from Giele, 1983), p.99)¹³

¹² For example on the influence of cooking and storing on vitamin-content and nutritional value or the relation between lack of variation and shortages in diets.

¹³ “What has just the appearance of edibility is, unfortunately! still eaten by our indigent fellow beings out of need or fondness and sometimes in such disgusting shape that an animal would abstain from it. Even cheese that in the literal sense of the word spreads a pestilential stench, finds buyers and

To improve health, a society for the public interest (Maatschappij tot Nut van het Algemeen) had been spreading brochures on food since 1850, but the target group could hardly read, let alone understand the content. (van Otterloo, 1990, p.134).

From 1858, food quality control had been taken up by the city council of Amsterdam with varying success and was followed around the turn of the century by other local governments in the cities. These local inspection agencies checked for bad food, but their definition of bad food differed and led to differing results. In Amsterdam for example, it was food that adversely affected health, while in Rotterdam it also included forgery with food products. On a national level it was illegal to add poison or harmful substances to food, but this law hardly ever led to prosecution. Physicists and chemists worked on quality of food by means of private research bureaus, publications of lists of voluntarily inspected and approved firms, publications how to do home testing and a journal against food forgery. In 1905, food scientists began developing standards and norms for food quality in what was called the Codex Alimentarium (Van Otterloo, 1990, p.98, 102-104.)

“Met deze [gemeentelijke] verordening en met de richtlijnen en onderzoeksmethoden die in de Codex Alimentarium waren vastgelegd, kon de keuringsdienst een vuist maken en kon men nu ook aandacht gaan besteden aan het keuren van waren, andere dan melk en melkproducten.” (Speet, 1989, p.31.)¹⁴

Over the years, problems with food quality remained. The rise of food industry that under severe competition began to put additives in their products, furthered an extra need for quality control. Larger food manufacturers used the prominence of nutrition in food science for marketing purposes, adding vitamins to their products (Horrocks, 1995, p.8-10).

Problems increased during the first World War, which placed tainted or unsanitary food and swindling under renewed attention of public figures (Van Otterloo, 1990, p.102-106). In 1918, the department of public health was working on a policy for food inspection, while simultaneously in another department the agriculture section was working on a policy for stimulation of fairness in trade. When the similarity in subject and implementation became known, the two bills were united into one. Existing regional inspection agencies, and new ones for areas that were lacking an agency, were to implement the law. The inspectors were pharmacists (Speet, 1989, p.33-34; Kappelhof, 1990, p. 45). In 1919, the ‘Warenwet’ was introduced, which was meant to control the food quality and protect consumers against bad food and swindling. During the economic depression of the thirties the government had plans to withdraw the ‘Warenwet’ in order to cut down expenses. These plans were not followed: food producers were willing to pay for quality control, because they considered it a benefit for food production (Kappelhof, 1990, p. 47). Also in 1919¹⁵, inspections of meat were regulated in the ‘vleeskeuringswet’, to safeguard the hygiene of slaughter animals and meat.

consumers.” (Report from food inspectors from Amsterdam, 1862, cited by Van Otterloo, 1990, (from Giele, 1983), p.99, translation MV)

¹⁴ “With this [regional] regulation and with the directions and research methods that were recorded in the Codex Alimentarium, the inspection agency could make a fist and also give attention to the inspection of goods other than milk and milk products.” (Speet, 1989, p.31, translation MV)

¹⁵ The passing of the bills apparently went swiftly: without voting, carried through parliament together with the labour bill, cattle bill, health bill and accidents bill (Schönwetter, 1999, p. 143).

Quality standards and control affected meat production and trade. British inspection of Dutch meat made quality into a trade issue. Prior to the law on meat inspection, the inspection of meat for export was regulated by law from 1907, to avoid more rejection of Dutch meat by England on sanitary grounds. These regulations only applied for meat that was intended for export (Logtestijn, 1980). With the law on meat inspection the number of public slaughterhouses grew. The inspection of meat was carried out regionally. When approved meat was transported from one region into another, it had to be inspected again. The regions differed in tariffs, which led to 'tariff-wars' and obstacles to national meat trade (Schönwetter, 1999, p. 142-144). This implies that motives for forming quality regulations were mainly framed as financial barriers or opportunities, rather than the public's health.

For consumers, meat gained attractiveness during this period. Because many people were dependent on home slaughtering for their meat, home slaughtering was exempted from the law on meat inspection. For those who bought their meat from the slaughterhouses, a standard quality was guaranteed by regulation. Efficiency of meat products was enhanced by conservation techniques and its healthiness was scientifically determined. Although vegetables were eaten by the high class, this was considered too much of a peculiarity. Meat up to that time was familiar and appreciated. It seems that the only things that could possibly hold most people back from eating meat on a daily basis were its availability and price.

2. Convenience: the food industry and rationalisation of household labour

Beginning in the late 19th century and particularly between the First and the Second World Wars, food production developed into more part of industry and less part of households. During the 1920s, the market share of preserved and processed food products grew rapidly. These products were mainly products like bread spreads, sweet snacks such as biscuits and chocolate, fats and instant soups and deserts. Brands appeared for an increasing number of products. For brand products to be recognisable, packing was necessary (Van Otterloo, 1990, p.157-174).

Housekeeping in wealthier circles changed. Housemaids had become expensive and scarce while urban houses were getting supplied with gas, plumbing and electricity. High class women now faced doing the household labour themselves with the use of new equipment such as gas or electric cooking ranges. Scientific management principles and labour organisation found their way into homes and were propagated under the working classes. Magazines for women, housekeeping handbooks and cooking-radio programs appeared that paid attention to rationalising housekeeping. Household labour was to be organised in such a way that it was efficient, so time could be saved (Van Otterloo, 1990, p.157-174; Jobse van Putten, 1995, p.432).

Van Otterloo (p.163) calls the combination of these developments an increasing intertwining of households and the market economy. The products the food-industry delivered were preserved and did not require much time and labour. Packaged products were considered more hygienic. Brand advertisements appeared regularly in women's magazines. For cooking teachers this development fit their aspirations and they added recipes or health-recommendations to these products, so education and advertising went hand in hand. The next passage will give an illustration (van Otterloo, 1990, p.157-174).

In 1929, the company Margarine Unie, a predecessor of Unilever, bought ‘Hartog’s vleesfabrieken’, the meat factories that later became Unox. As part of a campaign to position its conserved products on the market, Unilever opened a Unilever consultation institute in 1938 to advise women on household affairs. This institute was led by Lotgering-Hillebrand, a household expert and former director of the Amsterdam school of home economics whose advice on food was further spread by her radio-program (1937-1967), newspaper and magazine columns and articles (1914-1973), books and her extensive contacts with housewives. Advertisements for Unilever products, such as Unox canned meats were accompanied by Lotgering-Hillebrand’s signature, recipes and brochures in which she substantiated the efficiency and hygiene the products offered (van Otterloo, 1990, p175-180).

Convenience food was redefined as something that was both profitable for industry and easy to prepare in household cooking, rendering the developments in foodindustry and modern housekeeping congruent. This development facilitated the introduction of new products and the falling out of favour of other products, as will be described in the next section, on plant protein products.

2.1. A new definition of convenience and taste: the consequences for plant protein products

Among the higher class, meals consisted of separate dishes: meat, vegetables and potatoes. Others frequently ate one-dish meals: meal dishes, pulses and potato-based hotchpotch. These one-dish meals were eaten mostly for convenience, especially on laundry days. Meal dishes were also known as ‘lazy women dish’, because they required so little preparation. Pulses were considered tasty because of their heartiness:

“De definitie van ‘lekker’ was destijds duidelijk verbonden met dik, stevig en voedzaam.”
(Jobse-van Putten, 1995, p.445)¹⁶.

Other than use in soups, pulses were prepared in such a way that the substance of the meal was further increased: with bacon fat and bacon if possible, mixed through porridge or mixed with potatoes. This last variety was known colloquially as concrete, cement, putty or clot, leaving no question that it served the purpose of filling the stomach. Pulses were cheap or self-grown and because of their tenability, they were available all year round, making them a popular winter food (Jobse-van Putten, 1995, p.359-368, 384-385).

Pulses did not appear on the Sunday menu, which was reserved for more refined meals (meat, vegetables and potatoes). For Sunday dinner, food had to meet criteria other than convenience and heartiness in order to be appreciated. Food had to be special. This meant that more effort and fuel was put in preparation in order to serve separate dishes and the more expensive or scarce products appeared on menus. The higher class set the example for how one should eat at one’s best. This didn’t change their appreciation for simple weekly meals. Jobse-van Putten (p.356, 385) describes the lack of interest people working for farmers had for joining in their meals due to the lack of substance. It did however guide the kind of change in eating patterns if one’s welfare had improved, reliability on self-sufficiency had lessened or

¹⁶ “The definition of ‘tasty’ those days was clearly connected to heavy, firm and nutritious.” (Jobse-van Putten, 1995, p.445, translation MV)

when labour required less physical effort (Jobse-van Putten, 1995, p360-366, 420-424).

Although pulses were recommended because of their healthiness, they did not fit as a bulk food into the meals of those who followed the new definitions of convenience and taste (see also section 3.3). This section showed that tastiness of food is not intrinsically linked to a certain product based on its physical substance, but taste is rather something that interacts with other contexts such as availability, social status and physical needs. Convenience as the labour extensive preparation of a refined meal with the use of processed food spread at the cost of the labour extensive cooking of a one-dish meal existing of available ingredients. The appreciation of food slowly moved away from hearty and cheap food towards lighter and more expensive food.

3. Governing food supply and agriculture

During the two world wars and the economic crisis, government intervened with the distribution of food. Basically, two food-related matters were addressed: food supply and agriculture. This section is concerned with the differences between matters of food supply on one hand and agriculture on the other, and the implications of the intertwining of agriculture and government.

3.1. Export: Europe's vegetable garden

With the end of the agricultural crisis at the end of the 19th century, Dutch agriculture developed into an up-grading industry. Feed and fertilizer were imported and meat, eggs, vegetables and distinctive trade crops were exported. This was in line with the liberal idea of division of labour with regard to agricultural production: every country could produce those products that were most suitable and then trade those on the free market. Since Dutch cereal could not compete on the world market, cereal was imported and home-grown cereal was used for feed (Sneller, 1943, p. 90-91; Minderhoud, 1943, p. 498-499).

Production expanded, especially in horticulture, where approximately 70% of the yield was exported. The production of butter, cheese, pig meat and eggs also increased. Some were warning against too much of an export orientation. J. Smid¹⁷, for example, wrote that it would be dangerous to become 'Europe's vegetable garden'. Critics noted that production would become too vulnerable if it depended largely on international trade; a change in foreign trade politics could cause a collapse in agricultural production. But the argument was that lessening the export orientation would bring about severe protectionist measures and less possibility for expansion. Neither option was acceptable (Sneller, 1943, p.91, Minderhoud, 1943, p. 489-499).

¹⁷ J. Smid was an agricultural scientist and later the leader of the farmers' organisation 'Landbouw en Maatschappij' (L & M; Agriculture and Society). L & M was one of the many continual critics of the policy course followed during the depression of the 1930s.

3.2. Increased organisation of agricultural interests

After the agricultural crisis, the representation of agricultural interests became increasingly organised. Apart from propositions concerning agricultural policies, the agricultural commission of 1886 had also recommended centralisation in agricultural policy-making, instead of it being divided over two departments (agricultural education and agricultural business) that did not communicate. The government consented to put all matters concerning agriculture under one department (Vermeulen, 1966, p. 79-81).

The ‘Landbouw-commité’ (agricultural committee) was founded in 1884. The agricultural committee became an official representative for Dutch agriculture in 1893. It was subsidised by the government to enable the fulfilment of this function. The committee was liberal, technologically oriented and included several members not directly involved in agriculture, but interested wealthy men. This raised questions of how representative the committee truly was. Articles in the papers, most frequently in the mainly catholic provinces of Brabant and Limburg, pressed for the (small) farmers to organise in order to be heard by the government. They considered themselves victims of the agricultural crisis and of liberal governmental policies whose interests were subordinated by trade and industry. This organisation, under the guidance of catholic clergymen, could save the farmers from their distressful situation and protect them from revolutionary tendencies:

“Is er niemand die hulp en redding bieden kan? Is er niemand, dan staat het te vrezen dat de socialist met zijn kwakzalversmiddelen bij den thans geduldigen maar weldra wanhopigen landman aan de deur komt kloppen en... wordt binnengelaten.” (G. van den Elzen, 24-1-1892, cited by Smits, 1996, p. 28)¹⁸

To be able to set the farmer as a religious human being in the centre, the interconfessional Dutch ‘Boerenbond’ was set up in 1896. In spite of what the instigators for organisation who pleaded for protectionist agricultural policies had suggested, there appeared to be disagreement over the desirability of protectionism. The issue appeared to bring discord among the members, so it was kept out of the mission statement (for the time being). The motivation for farmers to join however, were the economic advantages of cooperation in buying and selling products (Bieleman, 1992, p.233; Smits, 1996, 22-37). Numerous farmers had got organised in cooperations (for supply, sale, processing and credit) (Sneller, 1943, p.99). Lack of interests of banks led to the instigation of a cooperative bank for farmers: the Rabobank (Adviescommissie perspectieven voor de agrarische sector in Nederland aan het Landbouwschap, 1989, p.30). As the above indicates, organisation on economic grounds had huge consequences for the organisation on the political level.

3.3. World War I: failing regulations of the food supply

During World War I, governmental concern with food concentrated on regulating the food supply: with rising foreign demand from Germany and Great Britain, there was not enough food available for the population on the home market and the national

¹⁸ Is there nobody that can offer help and salvation? Is there nobody, than it is to be dreaded that the socialist with his quack remedies will come knocking on the door of the now patient but soon desperate peasant and...is let in.” (G. van den Elzen, 24-1-1892, cited by Smits, 1996, p. 28, translation MV)

food supply was threatened. In August 1914, the government enforced a law against hoarding and forcing up of prices of essential products (levensmiddelenwet). This law was evaded on a large scale (Rutte & Koning, 1998, p.24). The government enforced certain products to get consent before they were allowed to be exported. A 'cereal-bureau' (Rijksgraanbureau) was established that imported cereal from northern America. But from 1916 onward, the war rendered it virtually impossible to import cereals for human consumption, which greatly affected lower income groups. The government felt forced to regulate the distribution more drastically. It resulted in a distribution law that involved rationing bread, followed by several other products, and a campaign in which farmers were called upon to deliver grain to the government: (den Hartog, 1982, p. 90-93; Bieleman, 1992, p 222-223; Sneller, 1943, p.110-116.)

"Landbouwers. Gy alleen kunt den hongersnood buiten de grenzen houden. Levert uw koren aan de regering." (text from one of a series of posters, in Bieleman, 1992, p. 223)¹⁹.

But these campaigns did not bring enough farmers to grow cereals for human consumption. Signs of malnutrition became noticeable due to the decline in quantity and quality of food. In 1917, minister Posthuma tried to regulate bread and meat consumption. The consumption of white bread was prohibited (except by medical prescription) in favour of the consumption of whole wheat bread. Because of huge protests, this prohibition lasted only two months. With regard to meat, he introduced a standard sausage ('de eenheidsworst'), which consisted of 90% beef and 10% pig meat, and was the only sausage available for consumption. The fact that the word 'eenheidsworst' became an expression for uniformity with a negative connotation shows the unpopularity of this measure. Rutte and Koning (1998, p. 24) characterise the food distribution as fraudulent and failing policy measures. It appeared almost impossible to prescribe and unify the food intake of the population.

The government began to be involved with food education. Cooking teachers communicated the use of good and cheap food. They propagated the consumption of beans and rye bread, but those who in the decennia before had just begun to introduce vegetables, meat and sugar in their diets did not want to go back to what they considered animal feed (van Otterloo, 1990, p.151, 153). Public eating-houses re-appeared. In 1917, there were no potatoes left, but there was a vast supply of rice. The population did not know or appreciate rice, and were now forced to eat it. When in Amsterdam it became known that there were ships full of potatoes in the canal and the shortage could mainly be attributed to a malfunctioning distribution, the distress reached a climax and the so-called 'potato-riots' broke out (Jobse-van Putten, 1995, p.373). In 1918, allotments were stimulated as a measure for improving the food situation (den Hartog, 1982, p.90-93).

In contrast to consumers, Dutch agriculture did not suffer much from World War I; the prices for various agricultural products were high. The home supply and demand were not highly correlated. Until 1917, imports of fodder cereals and fertilizer were still possible. From February 1917, however, imports were practically impossible. Later that year the government forced farmers who partly depended on livestock to deliver their entire cereal yield to the government. This meant that these farmers were forced to reduce their livestock. The government also forced farmers to transform their grass fields into arable land with the 'scheurwet' (Bieleman, 1992, p. 222-223).

¹⁹ "Farmers. Only you can keep starvation outside the borders. Supply your grain to the government" (text from one of a series of posters, in Bieleman, 1992, p. 223, translation MV)

By means of petitions, the 'Boerenbond' (NBB) tried to demonstrate the injustice of the 'scheurwet' and the obligatory delivery of cereals to the government. The provincial organisations organised a protest and the government was threatened that not one grain would be sown if the minister did not capitulate. The actions fell on deaf ears. The confessional 'Boerenbond' and its provincial sub-organisations had a problematic relation with the official agricultural advisory board: the liberal Dutch agricultural committee. The provincial organisations were members of the agricultural committee but the confessional organisations criticised it because they felt they had little influence in it, it was lacking representativeness (with non-farmers as members) and it represented agricultural interests instead of farmers interests. The NBB decided in 1917 to set up a permanent bureau in Den Haag to increase their political influence, their prestige and their representativeness for all Christian farmers (Smits, 1996, p.46-47, 59-60; Bieleman, 1992, p.233-234).

In 1918, a Protestant-Christian organisation was established. From then on, there were three major farmers' organisations for general agricultural affairs: the agricultural committee (Koninklijk Nederlands Landbouw-Committee, KNLC), the 'Boerenbond' which in 1929 became the catholic Dutch farmers and market-gardener organisation (Katholieke Nederlandse Boeren- en Tuindersbond, KNBTB) and the 'Christelijke Boeren- en Tuindersbond' (CBTB). These organisations were called CLOs, which stands for collective agricultural consultation ('collectief landbouw overleg') since they represented regional organisations²⁰ (Bieleman, 1992, p. 234). Despite their mutual criticism and their differing foundations, the three CLOs agreed from 1922 to meetings by their executive committees, so that if they agreed on certain issues they could cooperate and so increase their pressure on the government (Smits, 1996, p. 85-87; Rip, 1952, p.10-16). Besides farmers' organisations, there were also three agricultural-labourers organisations. These organisations had no part in these discussions until 1939, except in matters of labour conditions (Rip, 1952, p. 20-27; Smits, 1996, p.85).

In summary, the regulation of the food supply during World War One was not successful. Consumers were hardly moved to change their eating habits even when faced with shortages. Farmers did not voluntarily cooperate with producing in order to feed the population, which implied an income loss. Farmers' organisations became more active and better organised in order to increase their influence on policies.

3.4. Economic depression: keeping agriculture going

3.4.1. Regulating the food supply

Between 1929 and 1936, income per capita decreased by 20% and the number of people that were unemployed grew from 50,000 to 414,000. The income loss affected basic life supplies (den Hartog, 1982, p. 94).

Food consultation increasingly became the concern of the state. The government began to subsidise cooking schools and two organisations for food consultations were established and financed by the government (van Otterloo, 1990, p.151). The government distributed food at reduced prices on social indication, among which were cans of meat and fish. Cans of cheap beef (a result from an agricultural

²⁰ The CLO's spread information through the press. There were collective and separate subdivisions to the CLO's providing advice on certain issues like education (Smits, 1996, p.70, 78-79; Rip, 1952, p.14-18).

crisis policy measure of large scale slaughtering of cows), were not appreciated. Rumour had it that these cows had had tuberculosis and also had a 'side taste of being on the dole' (Krips-van der Laan, 1985, p.86; Schönwetter, 1999, p.61). Food was distributed as school meals on social indication as well. From 1936, milk was supplied to schoolchildren to enhance their health and reduce the milk surplus. Many children didn't take part in the distribution of food in schools. Families tried to avoid to seeming poor, because of embarrassment or because it singled them out (den Hartog, 1982, p.94-96). Regulation of the food supply did not reach the entire target group, food distributed on social indication carried the stigma of being poor and would only be taken if it was absolutely necessary.

3.4.2. Agriculture and politics come together

During the crisis, government intervened with agriculture to such a degree, that it did not seem odd that many people who had lost their jobs during the depression were fed with superfluous cattle slaughtered in order for farmers to keep their jobs. This section describes how agriculture and politics assembled in a 'green front'.

For agriculture, the 1920s had been years of overproduction accompanied by lower prices. Encouraged by high wheat prices during the war, the United States, Canada, Argentina and Australia increased their wheat production by using new growing-techniques, new wheat species and more mechanisation, all of which led to an increase in the world supply. New wheat growing techniques were also introduced in the Netherlands. Chicken husbandry also grew fast. The export of eggs increased dramatically between 1919 and 1931: from 10 tons to 86,200 tons (Ketelaars, 1992, p.70). Total agricultural export had doubled between 1921 and 1929. In 1928 and 1929, yields were particularly high almost world wide, leading to drastic lowering of income and employment in the agricultural sector. Prices of agricultural products dropped faster than those of industrial products. Farmers' incomes were lower and also decreased more rapidly than industrial labourers' incomes (de Ru, 1980, p.75-77; Bieleman, 1992, p.223-224; Minderhoud, 1943, p.500-501, 504).

The government remained liberal: market intervention would only be in the way of the process of economic self-restoration. It saw as solutions to the economic difficulties the improvement of consultation and the improvement of international relations. But with the increasing depression, a growing number of politicians turned towards favouring governmental intervention as a solution (Keesing, 1947, p. 149). Over the years, research, education and consultation had evolved. Agricultural scientists had beside knowledge also prestige. Maintenance of agriculture was not just presented as an agricultural interest; it also was scientifically founded.

The catholic and protestant CLOs had been pressing the government for agricultural measures since 1929. Special public meetings held in order get attention for the necessity of policy measures were organised in 1930 by both confessional CLO's. The KNBTB meeting was opened by the chairman ascribing the major causes of the problems to the Dutch trading politics: other countries could sell their products freely on the Dutch market, but imposed obstructing conditions to Dutch export products. One of their recommendations therefore was to revise the trade politics and they suggested a negotiation tariff. The contacts and cooperation between the CLOs and also between related organisations increased from this period:

“Slechts daardoor [krachtige samenwerking tussen KNBTB en andere landbouworganisaties] en daarbij optredende met een onverzettelijke grimmigheid, één front, het groene front vormende, kan ons succes beschoren zijn” (delegate from farmers organisation of the province of Limburg on KNBTB meeting, may 1930, cited in Smits, 1996, p. 99.)²¹

Apart from separate petitions to the government, the CLOs made a collective urgency program. They all had pleaded for an extension of the agricultural consultation and education, a separate ministry for agriculture (before 1930, the KNLC had not been in favour of this), financial support and the abolition of the levies on meat. In addition, some protectionist measures were proposed by the KNBTB and the CBTB as well as the suggestion from KNLC for a milling order that would prescribe the use of Dutch wheat for bread (Smits, 1996, p. 97-100).

In 1931, income from wheat production dropped fast. The liberal solution was adaptation, lowering of productions costs and clearing of the most costs inefficient producers. Minderhoud, an agricultural economics professor, calculated in a pre-advise for the organisation for state economy and statistics (Vereeniging voor de Staatshuishoudkunde en de Statistiek) that the liberal solution would lead to a standstill of all production (Minderhoud, 1943, p.507). The suggestion for a milling order by the CLOs resulted in the regulation of the percentage of wheat bakeries were obliged to mix with their meal for white bread (Tarwewet). Before, white bread had been made entirely out of imported wheat and now the entire Dutch wheat yield was used in the national bread supply. The amount of hectares used for growing wheat doubled. In 1932, the government set a limit to stop further growth of the areas used for wheat. (Smits, 1996, p.101, Minderhoud, 1943, p. 508-510). Keesing (1943, p.151-152) notes that the ‘Tarwewet’, broke through the laissez-faire principle: the question was now not whether, but how wheat-cultivation should be helped. Also, in order to make the Tarwewet possible, an organisation was necessary ordering all involved in bread production (Krips-van der Laan, 1985, 44-54).

Two other main policies followed in 1932: the ‘zuivelwet’ regulating dairy products and the ‘varkenswet’ enforced to support the pig farmers. The prices farmers were paid for their bacon pigs were kept higher than the price of bacon in London. This was paid for by levying pig meat. Slaughtering and export was centralised and the government controlled the numbers and the export. Export increased until the English took measures against it later that year (Schönwetter, 1999, p.59). These regulations of animal production were an answer to the problems that arose in these sectors from 1931: Britain had abandoned the gold standard in 1931, which meant that the Dutch export lost much income. Also, a growing number of plant-farmers had taken up livestock breeding between 1930 and 1931, made possible by the low prices for feed (Bieleman, 1992, p 224; Smits, 1996, p.101).

More measures followed. Meanwhile, the agricultural policies were constantly monitored and commented on²² by the CLOs. The individual policies were not so much criticised, but agricultural policy as a whole was. It was argued to be too slow, the measures were said to be incoherent and one-sided, and should aim more at trade politics. Dutch production should be protected and a principle of reciprocity should be

²¹ “Only this way [through strong cooperation between KNBTB and other agricultural organisations] and acting with an immovable grimness, one front, forming the green front, can we reach success” (delegate from farmers organisation of the province of Limburg on KNBTB meeting, may 1930, cited in Smits, 1996, p. 99, translation MV)

²² In the (own) press, on meetings, in petitions, in voting advices, by establishing special committees that focus on international trade politics and an audience with the queen (in March 1932, the pig and dairy laws passed in June and July) (Smits, 1996; de Ru, 1980).

abided by: if countries obstructed export, then imports from these countries should be obstructed as well. Criticism also came from within the government. The minister of finance stated that the measures were too expensive, were obstructing a necessary lowering of the costs of live supplies and were weakening the competitive position of the Netherlands:

“Ik heb gisteravond getracht de heer [S.L.] Louwes, Regeringscommissaris voor de Tarwewet, aan het verstand te brengen, dat wij onmogelijk kunnen voortgaan op deze wijze de landbouw kunstmatig in stand te houden ten koste van de consument. De heer Louwes had hier tegen geen ander verweer, dan dat zolang de arbeider in de grote steden nog zo'n hoog loon verdient, het veel lager inkomen van de boeren geen aanleiding kan geven tot kritiek.” (the minister of finance, cited by de Ru, 1980, p. 121).²³

Foreign countries intensified their import limitations and Dutch exports decreased. In 1933, all measures were bundled in the agricultural crisis law (landbouw-crisiswet). With this law, the government controlled a considerable part of agricultural production. After the failure of the economic world conference, the government became convinced of the enduring character of the crisis and the necessity to revise the trade politics. The law was altered and some protectionist measures were taken. The state finances could not provide for the agricultural crisis policies, so imports of foreign products were levied as well as products sold at the home market, increasing the costs for food. For some Dutch products, Dutch consumers had to pay twice as much as consumers abroad. Export restitutions were given out. At the same time, a maximum was set to cultivation and breeding and surpluses were got rid of. A hundred thousand cows were slaughtered in order to keep the farming and slaughtering business going. A great amount of superfluous vegetables were destroyed. Production became controlled: everyone involved in the production was obliged to organise in state-led organisations and every farm animal was registered (Minderhoud, 1943, p.511, 515-520; Bieleman, 1992, p.224-225; Schönwetter, 1999, p.60-61; Keesing, 1947 p.187; Krips-van der Laan, 1985, p.85). The government spent almost a quarter of its total budget on the agricultural crisis law between 1933 and 1936 (almost f200 million per out of f800 million), paying for nearly half of the agricultural income (f400-f500 million per year) (Bieleman, 1992, p.238-239).

The measures mentioned above met with severe criticism from various directions. But opposed to the previous measures, there had scarcely been any political opposition against the law: it passed without voting. Krips-van der Laan (1985, p.67-70) attributes this to the government's inability to come up with an acceptable (theoretical founded) alternative. The situation was worsened by the failure of the international economic conference, which rendered liberalism inappropriate. Without being able to argue in favour of an alternative, the practice of the measures in progress prescribed further action. As a result, the viewpoint that Dutch agriculture must be maintained and that without governmental intervention agriculture would collapse became valid for the government.

In their second urgency programme of 1933, the CLOs had discussed the question of whether the export position should be maintained, especially because of

²³ “Yesterday evening, I tried to convince mister [S.L.] Louwes, government director for the ‘tarwe wet’ (grain law), that it is impossible for us to continue to artificially keep agriculture going at the expense of the consumer. Mister Louwes’ only defence was that as long as the labourer in the larger cities earn such high wages, the much lower income of the farmers can give no cause for criticism.” (the minister of finance, cited by de Ru, 1980, p. 121, translation MV)

the high costs involved in maintaining it. Their answer was yes: the export markets should be preserved for future benefits (Smits, 1996, p.104-107; Krips-van der Laan, 1985, p.57; Bouman, 1943, p. 292; Keesing, 1947, p.185, 187)

“Wij meenen, dat zulk een belangrijk stuk ‘National Goodwill’ niet voor ons volk verloren mag gaan, sterker nog, dat met alle mogelijke middelen moet getracht worden deze te behouden.” (cited in Smits, 1996, p.105).²⁴

Additionally, farmers’ organisations stated that their pressing for political support was not just in the interest of farmer but of national importance, because agriculture was one of the foundations of national welfare (Smits, 1996, p.100, 115; Krips-van der Laan, 1985, p.44). For others, however, the given support for agriculture was regarded unjust or unsound. Raising prices for live supplies, the obstruction of lowering production costs and the comparison with lack of support for industry were among the bones of contention (de Ru, 1980, p.124; Krips-van der Laan, 1985, p. 66, 72-74). When the chairman of the union of employers (Verbond van Nederlandsche Werkgevers) in a speech mentioned that a heavy burden was placed on the population in favour of agriculture the farmers’ organisation ‘Landbouw en Maatschappij’ (agriculture and society) addressed the government with a request that the government do more against the ‘poisoning of the public opinion’ (de Ru, 1980, p. 137). This shows that the opinion that agricultural interests were a national interest was thoroughly propagated.

With a new government in 1937, agriculture again became a sub department within economic affairs. When in 1939 a new cabinet was formed, the CLOs pressed for a separate ministry of agriculture. They felt agriculture was subordinated and considered an appendage that could be shifted from one department to the other. It had been shifted in 1922 when it was brought under home affairs, much against the will of agricultural organisations, with the exception of the KNLC. Then in 1932, because of a ministerial reorganisation, it was shifted from home affairs to economic affairs. This was considered somewhat better because it showed that agriculture was considered a vital economic function. Since the agricultural commission of 1886, representatives from agriculture had been pressing for a separate agricultural ministry on various occasions and especially during the crisis. On the 8th of May 1940, the government decided in favour of an agricultural ministry (Smits, 1996, p.86-87, 99-100; Zuurbier, 1984, p.41.)

In summary: in the previous chapter we saw how governmental intervention with agriculture became obvious during the agricultural crisis. Then governmental intervention was in accordance with liberalism and support was given by stimulation of research, education and consultation. By the time the economic depression started, the agricultural organisations already had access to the political agenda through the official, though disputed, advisory function of KNLC. With the duration of the depression, the laissez-faire principle found less support, which opened opportunities for those pressing for governmental intervention with agriculture. Maintaining agriculture was made normal. Agricultural organisations and the government reached a shared frame from which problems and solutions regarding agriculture were dealt with. This ‘green front’ would last for decades to come.

²⁴ “We think, that such an important piece of ‘National Goodwill’ may not get lost for our people, in fact, with all possible means it has to be tried to keep it” (cited in Smits, 1996, p.105, translation MV)

3.5. Second World War

3.5.1. Regulation of the food supply

In contrast to the First World War, the government succeeded in regulating the food supply during the Second World War. The major difference is that during the Second World War, the population had no choice but to accept the interventions, since the food supply was so limited.

In 1937, the government had begun to prepare for the regulation of the food supply during a war. A governmental bureau for preparation of the food supply during a war was installed. The personnel of this bureau were almost identical to that of the bureau that had regulated plant and animal breeding during the crisis and again was led by S.L. Louwes (Krips-van der Laan, 1985, p.81). In 1938, large supplies of wheat, rice and animal feed had been stocked and by 1939 a distribution law was completed (Rutte & Koning, 1998, p.24; Bieleman, 1992, p.227).

Food was rationed according to age and profession. Central kitchens were opened, where extra food was supplied to certain groups. Just after the invasion, a food council ('Voedingsraad', from 1941: 'Voorlichtingsbureau voor de voeding') was installed, which, together with a newly installed research institute (Centraal Instituut voor Voedingsonderzoek (under TNO)), constantly monitored the food situation and investigated nutritional aspects of food. The food council also informed the population on eating new things, like wild plants, and on energy and nutrition efficient preparation. In the western part of the Netherlands, approximately 1800 calories were available per head. Before, it had been around 3000. The authorities managed to keep the calorie (and protein) intake nearly stable until 1943 (den Hartog, 1982, p.98-103).

In agricultural production, export to Germany remained a major source of income, while overseas exports had been blocked. To safeguard the food supply, the bureau for food supply had ordered the reductoin of grassland in favour of arable land, which would deliver more calories per hectare. The bureau regarded husbandry animals as competition to human consumption, so during the first year of the war, the number of livestock had to be reduced to a third of the original number (Ketelaars, 1992, p.84; Bieleman, 1992, p.229; Schönwetter, 1999, p.78).

3.5.2. Discussing the ordering of agriculture

When the economic crisis was over, the CLOs did not want to turn back to the situation previous to the crisis. The causes of the agricultural problems were considered structural, not just induced by the crisis. The content of the agricultural crisis policies had hardly met criticism from the CLOs. They did however have objections with regard to the implementation as they wished to be more involved with the organisation of these regulations. Since 1933, there had been propositions to let agriculture take over the governmental regulation as a means to give support to the 'natural weakness of agricultural businesses against the developing trade and industry' and to prevent agriculture from being 'crushed to death'. Self-regulation would make it possible to compete and more freedom for businesses. In 1935, Minister Deckers acted upon the criticism of the CLOs by installing a commission that was to investigate which revisions to the implementation of the agricultural crisis regulations would be needed. The commission suggested giving the boards that

centralised production some self regulating power. The ministry started with the preparation of an 'orderings law' for agriculture, and installed another commission (commissie van Rhijn) for advise. The CLOs supported self-regulation; under the condition that government should not only prevent agriculture from downfall, but should also stimulate the making of profit under certain circumstances and should enlarge the proportion of agricultural products in the total export. The white paper for the orderings law provided for the installation of a public body for agriculture. By then, war preparations took up most attention and the bill was not followed up (Rip, 1952, p.32-34; Smits, 1996, p.114-116).

During the war, clandestine discussions took place between a few representatives of the CLOs, two confessional agricultural labourers' organisations and the directorate of the food supply. The discussions concentrated mainly on the future with regard to the ordering of agriculture; how agriculture could best be represented and regulated. There could only be a public body for agriculture when it was considered to be representative. The organisations were on different political or religious grounds in favour of ordering agriculture. The situation of war in which discussions took place probably helped overcome their differences and define the future ordering of agriculture into a public structure, the 'publiekrechtelijke bedrijfsorganisatie, PBO'. This should make a 'new future' possible:

“Wie de schrik niet in de benen geslagen is en nog over jeugdige kracht en moed beschikt, kan ook de weg zien naar een betere toekomst” (KNBTB-secretary Heymeijer, 1940, cited by Smits, 1996, p. 159).²⁵

In this PBO, all parties saw a better future for agriculture. The catholic organisation saw PBO as a supplement to the private initiative where the activity of the individual should lead the way. Socialists saw the development of the PBO as a way to expand governmental control on industry, while liberals and Protestants wanted government intervention to help industry enlarge its capacity (Bakker, 1995, p.38-39).

Additionally, there were just a few participants in the discussions and the war situation isolated the representatives from their organisations. In the case of the KNBTB it turned out after the war that the representative had been speaking of his own accord rather than for the KNBTB. Shortly after the war, a 'foundation for agriculture' was set up in which the six agricultural organisations planned for the PBO. Various KNBTB members had problems with aspects of the functioning of the public body by the foundation of agriculture, because these were not completely in line with their beliefs. There was no turning back, however, because openly criticizing the foundation would suggest a wavering policy and confuse the farmers (Smits, 1996, p.158-167):

“De Stichting voor den landbouw is met veel fanfare na de bevrijding gestart, zij is door de KNBTB aanvaard en gepropageerd, van haar daden wordt ook in Uw bladen wekelijks getuigd en achteraf zou blijken dat ze gevaarlijk is.” (Cornelissen, cited by Smits, 1996, p.165).²⁶

²⁵ “Who has not become paralysed with fright and still possesses youthful strength and courage, can also see the path to a better future.” (KNBTB-secretary Heymeijer, 1940, cited by Smits, 1996, p. 159, translation MV).

²⁶ The foundation of agriculture is started with much ado after the liberation, she has been accepted and propagated by the KNBTB, of her deeds is weekly reported by your magazines too, and in hindsight would appear that she is dangerous.” (Cornelissen, cited by Smits, 1996, p.165, translation MV)

3.6. Conclusion

Problems with the supply and distribution of food during the First and Second World Wars as well as the economic depression of the thirties led to increased governmental intervention with regard to food. This led to a certain ordering of governmental interventions with regard to food. Agricultural and governmental export interests were more tightly linked. This made agricultural production for export a national interest.

During World War I, governmental concern lay mainly with regulating the food supply. It appeared almost impossible to prescribe and unify the food intake of the population. This was also the case during the depression when food distributed on social indication carried the stigma of being poor and would only be accepted when absolutely necessary. During World War II the food situation was severe for a greater number of people, making food rationing more socially acceptable. All in all, regulating what people should eat proved difficult. It was also difficult to drive farmers to produce for the home market instead of the export market, because this would imply an income loss.

Regulating agriculture as an export industry proved to be effective and led to policy intervention which shared a frame with agricultural interest groups. The income of agricultural production depended on exports. With high demand for export products, agricultural production increased. When the demand shrank during the economic depression, the caving in of agriculture was prevented by united strength, which included the government. After some time, it was argued that the problems agriculture dealt with were structural, which led to lasting regulation of agriculture. As a consequence, agriculture was maintained and distinctly altered. First, I will describe the alteration with regard to farmers and then with regard to food-related governmental intervention.

According to Minderhoud (1943, p.521), most farmers wanted higher prices for their products and also keep their sense of independence. The higher wages of the industrial workers were a constant grievance. Farmers wanted the same income as these labourers, while maintaining their social status as the 'class with property'. Farmer's organisations also intended to improve the social standing of farming compared to the urban lifestyle (De Ru, 1980, p.152-155). Possibly farmers managed to keep their *sense* of independence with the measures taken to improve the prices and so being enabled to stay *farmers*. But the price for maintaining their social standing and their status of independence was a loss of their productive independence; agriculture had become entirely ordered:

“Klein was het aantal personen dat begreep en openlijk durfde getuigen, dat structuursverandering van de land- en tuinbouw langs geordenden weg noodig was en dat deze ordening voor een groot aantal mensen veel lasten en weinig lusten met zich mee zou brengen.” (Minderhoud, 1943, p.521)²⁷.

Production had become centralised, administrated and controlled. Where initially the representation of agricultural interests had been divisive, now agricultural interests aligned. The problems drove the CLOs together, which were collectively representing 60 to 70% of the farmers in 1952 (Rip, 1952, p.12). The development of the PBO

²⁷ “Few was the number of people that understood and dared to state openly that change in the structure of agriculture and horticulture was necessary along an ordered path and that this ordering would bring a great burden and a little satisfaction for many people.” (Minderhoud, 1943, p.521, translation MV)

would lead to institutionalising *the* agricultural interest that would be applied to every single farmer.

Agricultural interests and government became more closely linked: on one hand by a separate ministry of agriculture, political active CLO representatives and communication between policy-makers and CLOs; while on the other hand by agriculture becoming able to govern their own sector through PBO.

If we now look at agriculture as one of several food related matters and compare governmental intervention with food supply and with agriculture, food became defined more as a source of income than as a source of nutrition. The intertwining of government and agriculture had as a consequence that food-related initiatives could find passage more easily when they would benefit agricultural income (rationalisation and intensification of agriculture and stimulating export of agricultural products). At the same time, the 'green front' could hinder alternative agricultural or food political interests. As will be discussed in the next chapter, the implication was that in policy *effects* the financial gains to food were more important than other aspects of food. Producing those products that were most economically viable was not only a business interest, but also stimulated by public action. This made the production of animal products more politically interesting than the production of plant protein products.

4. Implications for proteins

Developments in consumption and production described in this chapter advanced meat in lieu of pulses and cereal. In the first part was mentioned that for most people price and availability were the only things that kept them from eating meat on a daily basis. The specific circumstances of war and economic crisis also resulted in low meat consumption. The second part showed that agricultural production became a policy goal in itself, enabling meat-production to benefit from agricultural politics. In the next chapter, I will survey the relation between food-related political action and the price and availability of meat.

5

A shift in protein consumption: eating more animal than plant based protein [+/- 1950-1970]

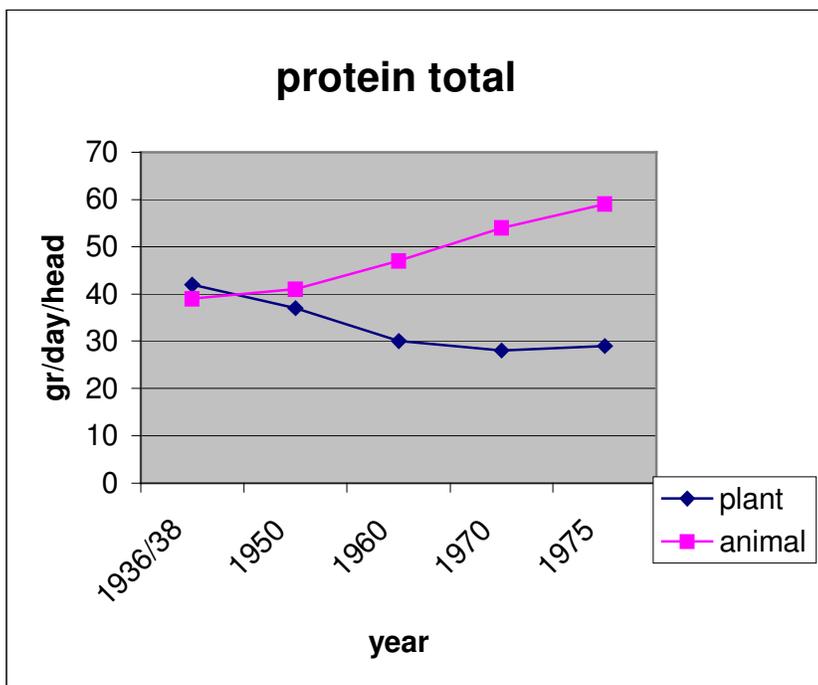


Fig.2. Consumption of animal and plant proteins. Source: Hautvast & Hermus, 1982, p. 194.

Soon after World War II, the food supply was sufficient to feed the population. In November 1949 the last, more expensive products: cheese, pork and meat, were taken off the ration (Jobse-van Putten, 1995, p.432; Den Hartog, 1982, p.103). In the following years, a shift took place in the proportion of plant/animal protein intake. Animal protein products became part of the daily menu and partly replaced plant protein products. Consumption of meat (for most people 5-6 times a week), cheese, eggs and fish increased, while the consumption of cereal (bread) and potatoes decreased between 1950 and 1975 (Mulder, 1973; Mulder, 1962; Bosman & Kosten-Zoethout, 1978, van Schaik & Drenth, 1968). In this period, food production and preparation became increasingly detached from household labour. Other people and machines elsewhere took over tasks such as growing crops, slaughtering animals and processing food. Food production was increasingly industrialised and food was turned into a commodity. Food was distributed from one stage in the constructed production-consumption chain to another.

This chapter contains three sections. The first addresses the commodification of food: how the market became dominant in the construction of food. The second section will give a description of agricultural policy: first on how the agricultural policy frame was narrowed to increasing production and second on how the internationalisation of agricultural policy enabled continued upscaling of agricultural production. The third section gives an account of the diet shift that occurred in this

period. It shows that before meat could become normal every day food, a redefinition of the role of meat had first taken place in which various political, technical, economic and social activities were pivotal.

1. The increasing role of the market: defining the consumer and the commodification of food

1.1. Defining the consumer

During the 1960s, limited budgets got less to do with diets, while spending got more to do with diets. Incomes increased by approximately 50% between 1950 and 1960 (Maris 1963, p.6). The national income of the EEC tripled between 1950 and 1970 (Louwes, 1980, p.230). Increasing amounts of money were spent on products that enhanced peoples' sense of well being (Rutte & Koning, 1998, 146-147). In the previous chapters, we saw that meat was such an article. As a result of the increase of income per capita, meat became affordable on a daily basis. Overall, cheap food was replaced by more expensive food products (Den Hartog, 1982, p.107). Expensive food was appreciated more because of the social standing or the convenience attached to it (previous chapter). At the same time, physical demand for substantive food decreased (the appreciation for hearty food), because of less physically straining labour. This development put animal proteins at an advantage over plant proteins.

The composition of diets in the first half of the century was guided by the limited budgets of most people. Now that budgets had grown, *consumption* became increasingly important. With the rise of 'the consumer', preferences in diets shifted from cooking food in the preferred way, to buying preferred foods. The term: 'grandma's recipe' used by food companies to recommend their product, may illustrate that, first, 'grandchildren' did not cook like grandma anymore and second, that food companies had taken over this role. This made it possible that with regard to food 'consumers' became defined: people that exchange money for goods and services (Tansley & Worsley, 1995, p.142-143, Van Otterloo, 1995, p.257).

This process placed the consumer at the end of the modern food production and consumption chain. Consumers became less involved in the activity of producing and preparing food. Production and eating were increasingly dependent on the market and less by physical involvement transforming raw material into food. The control of how food is processed and what is added to a product has shifted to the stage of food manufacturing (Tansley & Worsley, 1995, p.142-143). Because of the increasing marketisation of food, the only way citizens engage in food production is in their role as a consumer. Consumers can choose their own preferred meal and in this way 'vote' in the democracy of the market (Lindblom, 1962). However, the influence of the consumer in the marketsystem is limited to choosing an endproduct that is already on the market (Woodhouse, 2002). Having bearing on what precedes the endproduct, the kind of production process and choice on what is produced, falls outside the role definition of the consumer.

1.2. Retail: the growing importance of food prices

A new kind of shop opened In the early fifties (the first opened in 1949): the self-service shop, styled after US and Swiss examples. Self-service wasn't just a new way

of selling food, it changed the role of grocery-shops and its personnel. In ordinary stores, the seller sold mostly unwrapped products from behind a counter. He advised customers. From his position, the shopkeeper was informed of product's characteristics by travelling salesmen. In self-service shops, products needed a package. Presentation and placement in the store became important as products had to sell themselves. Contact between the seller and the buyer was reduced. The first just calculated the total of the products the customer placed in her basket, which meant a reduction of labour costs. For stores, prices, pace and a broad assortment were all-important, and sales representatives now provided the shopkeeper with economic arguments instead of product information.

For customers the buying experience began to change. In the early fifties, self-service wasn't appreciated much as it was not considered cheaper. Many housewives were satisfied with their usual way of shopping or having their groceries delivered and feared buying too much in self-service stores. A journalist suspected in 1955 that, apart from the pace and the low prices, the 'magic of the free display of the products' was the explanation for high turnover in self-service stores (Rutte & Koning, 1998, p.59, 66-67, 71). A reporter for the women's magazine 'Margriet' wrote:

“Je verkeert in een roes... voelt je heerseres over een klein koninkrijk... ik was opeens geen journaliste meer, maar alleen vrouw. Ik moest en zou met zo'n mandje aan mijn arm langs de smakelijke uitstallingen lopen. Ik ben met mijn aktentas vol boodschappen weggegaan. Efficiënt boodschappen doen is dan volgens mij ook niet meer mogelijk.” (Cited in Rutte & Koning, 1998, p.66).²⁸

The first self-service grocery stores did not sell fresh products like meat, bread or vegetables. But over time, stores broadened their product range so customers could buy everything in one shop.

Retailers became increasingly limited by and focused on price. Now that people could buy what they wanted, retailers were motivated to have people buy (more) food in *their* store. This placed a new emphasis on prices in buying food. Prices were not a constraint for consumers anymore compared with the period before the Second World War, but instead, lowered prices together with the increasing variety, provided consumers with the freedom to literally grab the food they liked. The first self-service shops were often named 'KijkGrijp' ('Look Grab'), (Rutte & Koning, 1998, p.49). At the same time, retailers paid less attention to quality or other product characteristics. In addition, the power of the vertical price fixation²⁹ waned, and with it, the relative non-importance of the price in competition between brands. Where competition between products first existed mainly over product characteristics, now competition was over price. All in all, food became more tightly linked to price. This not only affected the retailer but wholesalers and industry had to emphasise their products profitability in order for the retailer to buy it, and retailers selling strategy towards the consumer was mainly based on lowering prices. With profitability being an important aspect for the sales and success of a product, this led to a decreasing importance of other aspects to food, such as social aspects, affectional aspects, nutrition and production methods.

²⁸ “It is like you are intoxicated...feeling like a sovereign over a small kingdom...suddenly I was no longer a journalist, but just a female. I just *had* to walk along the tasty displays carrying a shopping basket on my arm. I left with a briefcase full of groceries. Efficiently shopping therefore is not possible anymore, I reckon.” (Cited in Rutte & Koning, 1998, p.66, translation MV)

²⁹ An agreement of an organisation of major brand producers, which obliged stores to sell brands for the exact same price. This meant that stores could not use brands in price-competition with other stores.

1.3. Convenience: the expansion of food industry

In the previous chapter, we saw that the interests of housewives and the food industry were linked through defining convenience food as high status, industrialised and time and effort saving. During the interbellum, there was only a small range of products and the activity taken over by the food industry was mainly food production. From 1950, food preparation also became less attached to home cooking. In the sixties, processed food products really broke through. The range of products was much broader, became part of main courses and included meat products (like sausages and canned meat) and frozen foods (Van Otterloo, 1990). This section describes how the food industry became a noteworthy link in the food production and consumption chain.

People in Western Europe were provided with enough food, while their income grew. No longer could food makers expand simply by producing more food. For food commerce to grow, it was necessary to add value to food, which would lead to increasing profits on the same basic foodstuff. As we've seen in the previous chapter, in interactions between the food industry, household experts and housewives 'value' had already been defined as labour and time saving, high status and hygiene. Processed and pre-prepared products were more expensive than unprocessed foods, but the convenience gained with the use of them won importance with the increase of income (Van Otterloo, 1990, p.175-181, Den Hartog, 1982, p.106-108). As the food industry could add these values to food, this development of saturated markets and increased incomes meant an opportunity for the food industry to grow by materialising the need for convenience. If a new product did not prove to be convenient, the product could not become a success:

“Niet elke productinnovatie was even succesvol. Homburg heeft in de jaren zestig onder andere een vleesproduct voor het binnenland ontwikkeld waarvan thuis kroketten konden worden gemaakt. ‘Kroketta’ heette dat. Kroket uit blik is geflopt. Het vlees bleek zelfs met de meest ingenieuze handleiding niet uit het omhulsel te krijgen. Kroketta voldeed duidelijk niet aan de gemaksbehoefte van de huisvrouw. Diepvrieskroketten deden dat daarentegen wel. We hebben Kroketta snel uit ons assortiment verwijderd.” (L. de Wijze in Schönwetter, 1999, p.113).³⁰

Besides making convenient products, the challenge for the food industry was to deliver a product for a reasonable price, find ways to process and prepare perishable foodstuffs without decay and with as little as possible loss of taste. Innovations in conservation, preparation, distribution and packaging (as the use of plastics) opened up possibilities for vulnerable products (Van Otterloo, 1990). The following is an illustration. From the end of World War II Unilever had been working on their ‘most daring project on food’: frozen food. They spent several years trying, with high costs and failures, before it was successful on the market. Frozen foods demanded different harvesting techniques, the establishment of cooling warehouses, cooling transport and cooling cabinets in stores (which came with the rise of supermarkets) and new buying and eating behaviour. Reader (1980, p.62-64)

³⁰ “Not every product innovation was as successful as the other. In the 1960s, Homburg developed a meatproduct for the homemarket, that made it possible to make ‘kroketten’ [popular Dutch snack, MV] at home. ‘Kroketta’, it was called. Kroket from a can failed. The meat could not be removed from the can, even with the most ingenious instructions. Kroketta obviously did not meet the housewives’ wish for convenience. Frozen kroketten, however, did. We quickly removed Kroketta from our assortment.” (L. de Wijze in Schönwetter, 1999, p.113, translation MV)

mentions that the change in eating habits was possibly the biggest obstacle for making frozen food a success. If a customer bought a frozen product, it usually had to be eaten at once since the product couldn't be kept cool. In 1962, those households with a refrigerator used it mainly for storage of their home-slaughtered, or homegrown products. In urban areas, the refrigerator was not a desirable item until products that required cooling were on the market. The convenience of these products partly depended on there being a refrigerator in a household. Albert Heijn supermarket contributed significantly to the adoption of refrigerators with an offer that allowed customers to buy one for a much reduced price. On the first day of this action alone, 5500 refrigerators were sold. In 1964, 40% of households had a refrigerator. By 1984, it was 86%, which now allowed home-storage of food that required cooling and therefore stimulated the consumption of convenience food (Jobse-van Putten, 1995, p. 450-452).

In conclusion, convenience became a more important aspect of eating habits because technological innovations made convenience applicable for a wider range of products. People were willing to pay more for convenience. Food companies made great effort to develop and apply new techniques in trying to make products both efficient and easy for the consumer and profitable for the company.

“Vooral tussen 1954 en 1964 maakte [Unilever's levensmiddelenindustrie] een krachtige ontwikkeling door, toen Unilever besloten had te reageren op de 'levensmiddelenrevolutie', d.w.z. op de opkomende bereidheid van de huisvrouw om te betalen voor het extra gemak, dat toebereide en geconserveerde levensmiddelen haar boden. In deze periode stegen de investeringen van Unilever in haar levensmiddelen bedrijven van 410 miljoen tot 1580 miljoen gulden [...]” (Wilson/Baudet, (1967) 1984, p.223-224).³¹

Convenience, defined as an industrially processed and/or prepared product, grew to be a more important aspect of food choices. A central role was created for the food industry in adding value to food. The range and amount of food products that were industrially processed or prepared grew and as a consequence, the economic importance of the food industry increased (Maas, 1994, p. 69-72). Convenience food became more 'complex' food, because of added treatments, additives, and packaging to the basic product, various activities that take place before the product is eaten and the many steps in the trajectory the product goes along from 'farm to fork'. While convenience food means time and effort saving for a housewife, food companies invest much time and effort in convenient foods. Only products that meet standards of convenience 'negotiated' between developers and buyers will be a success and the influence of the food industry is bound to their success in negotiating the convenience standards to their advantage.

1.4. Conclusion: the market as guiding principle means 'more'

The market became central to the daily practice of food, and as such, pivotal in constructing what food is about. The chain that was created foremost focused on price, which had an impact on the kind of products that became successful. Food,

³¹ Especially between 1954 and 1964 [Unilever's food industry] went through a great expansion, when Unilever had resolved to react to the 'food revolution', which meant the increasing willingness of housewives to pay for the extra convenience that prepared and conserved food products offered. In this period, Unilever's investments in her food industry increased from 410 million to 1580 million guilders [...]” (Wilson/Baudet, (1967) 1984, p.223-224, translation MV)

food packaging and food storage became increasingly more technical matters. For consumers, a broader range of products became available. The influence on what food was made of and how it was produced shifted away from those eating it.

Because of the marketisation of food, the emphasis on developments concerning food is on 'more'. Selling more, adding more value to food and eating more. Problems with regard to food production and consumption, as environmental damage because of the production of food, or overeating, are since the shift that happened in this period solved via the market. This means producing or eating less is not considered an option since *less* is not marketable (see also Dagevos, 2002; Nestle, 2002).

2. Agricultural policies

2.1. Intensification and rationalisation of agriculture: narrowing the frame of agricultural politics

The 'green front' of policy-makers and agricultural organisations that had arisen (see previous chapter) was not purely guided by export interests in agricultural production. Especially the CLOs depended on the farmers they represented. The larger the number of farmers they spoke for, the greater their power. Also, the agricultural policy makers did not want to lose voters (Tracy, 1990, p.13, 26; Louwes, 1980, p.228). So, in addition to increasing production, it was of importance to retain the agricultural population. This section will describe that this second goal (retaining the agricultural population) could not be assimilated with the first (increasing production).

From 1945, the institutionalisation of agricultural politics took form and governmental support for agriculture became definite. In 1945, S.L. Mansholt became minister of agriculture. The precursor to the 'Stichting voor de Landbouw' was installed in 1953 as the 'Landbouwschap' (agricultural board). This was the first organisation founded under the law on statutory trade organisations (PBO). Farmers paid levies to trade organisations, which were used in the collective interest. Between the ministry and the Landbouwschap a monthly contact took place. Policies were developed in cooperation between the trade organisations and the CLOs. This became known as the green front ('het groene front'). The goal was to increase the contribution of agriculture to the national income by focussing on profitable export products. Therefore, production had to be increased and intensified, costs decreased and farms enlarged. The contribution of the government would be indirect: to maintain a price policy (in order to give direction to the kind and volume of production), encourage private initiatives and support education and information. The idea was that government created optimal conditions for farmers to take up their responsibility to adapt to the changing circumstances. The organisation of agriculture made it possible for organisations to execute and pay for some agricultural policies (Van der Meer, Rutten & Dijkveld Stol, 1991, p.36-37; De Groot & Bauwens, 1990, p.146-150; Van den Brink, 1990, p.122; Zuurbier, 1984, p.59). A change of government in 1959 meant enlarged representation of the interests of livestock producers. The former leaders had mainly come from the Northern crop growing regions, while the new front men came from the Southern Catholic regions, where small mixed farms were common. During the fifties, expanding areas for agriculture

had been the main focus; now intensifying also became an important opportunity to sustain farms. The growth of intensive livestock farming received more attention (Van den Brink, 1990, p.120; Smits, 1996, p.179).

Before the Second World War, agriculture in the Netherlands was diverse: 83 different agricultural areas were discerned that adapted to local circumstances. That governmental intervention would help one section to the detriment of others was inevitable (Minderhoud, 1943, p.499). The economic crisis of the 1930s and the policy measures especially hit the small farmers (mostly mixed farms, with chickens and pigs) and threatened the existence of their farm. Between 1935 and 1937, agriculture had a separate ministry, which was led by a former secretary of KNBTB (Deckers). A special unit for small farmers was established and they were supported to stay in business, i.e. by setting up exemplary farms (Zuurbier, 1984, p.42-43). The impetus for these measures was that if these farmers lost their business they would lose their sense of independence and be 'thrown back to the class without property' (Smits, 1996, p.108-112; Bieleman, 1992, p.225-226; Minderhoud, 1943, p. 519).

Especially for the KNBTB, the protection of small farmers was of importance. Just after the war, there was a limit in force with regard to the number of chickens per farm because of feed shortages. Since chicken husbandry was an important source of income for small farmers, they were favoured in the allotment of chickens. In 1952, this system was abolished, and with it, governmental support for the small farmer. The CLOs pressed for political support for the small farmer and the government complied by controlling the number of chickens per farm. The KNBTB and the Stichting voor de Landbouw also wanted measures to prevent competition from non-farmers. In reaction, the government implemented the 'pluimveeregeling' (poultry regulation) in 1953, which limited the amount of egg producing chickens per farm. It was criticised for hindering the necessary intensifying and specialisation. A large number of farmers (10,000) however, had been given an exemption. Many others remained far below the permitted number of animals. When the poultry regulation was abolished in 1961, some were worried about the position of the small farmers as they feared a chicken-industry run by non-farmers. After 1961, chicken breeding expanded drastically, not just egg production, but also meat production. The battery husbandry system was introduced for the third time after previous attempts in the 30s and the 50s, and this time with success. Stock-farming techniques and businesses also advanced (Ketelaars, 1992, p.88-92, 152-153, 170).

Agricultural production evolved rapidly after 1945. Farms were enlarged, while their functioning and business plans were adapted to new technological possibilities. The number of people working in agriculture drastically decreased, while the work itself and the labour organisation were rationalised. Production grew and production methods were mechanised (Maris & Rijneveld, 1963, p.7). Prices for agricultural products decreased, while business investments increased. The amount of energy, resources and raw material used in production grew. The production per plant or animal was increased by innovations in breeding and feeding techniques. For example, milk production per cow, number of eggs per chicken and the amount of wheat per hectare, were all raised spectacularly. Production on individual farms became specialised: feed was not grown on the farm, but imported. And the national production specialised in high value products to meet export possibilities³² (Peys, 1986, p.145-152). Agricultural production became more dependent on delivery and

³² In 1985, The Netherlands was the greatest exporter of pig meat, cheese, tomatoes, onions and potatoes in the world. This was due to the developments in agriculture, but also to the processing industry (slaughter industry, crisps factories) (Peys, 1986, p.152).

purchase firms (Maas, 1994, p.67, 70-71, Van der Meer et al., 1991, p. 136-140, 155-156).

The introduction of innovations in agriculture, transforming farms into businesses, was made possible by the exertions of the 'OVO-triangle' (education, research and consultation). Although not the whole 'OVO-triangle' was financed by the government³³, it was a prevalent policy-instrument for trying to influence the development, direction and passing on of agricultural knowledge. Apart from financing, governmental institutions played a central role in coordinating this knowledge system which consisted of a trajectory of specialised, interacting links and feedback loops (Van der Meer et al, 1991, p.54, 57). The basis of the consultation policy after The Second World War was the rationalisation of agriculture. Mansholt enlarged the consultation facility for the education of small farmers. Winning trust was considered an important aspect of consultation and therefore consultation was combined with subsidies from the fund for small farmers and personal visits to the farmers. Consultation in the early 60s included enlisting accountant agencies to support making business plans (like building plans and long term planning) and also to make it possible to compare individual businesses. Consultation was also focused on technical matters such as mechanisation, feed and labour. According to administrators effort was necessary in order to change the resigned attitude to life of farmers in areas with bad circumstances for production. Social consultation was aimed at helping the agricultural population adapt to the current changes. Its goal was to make farmers understand the societal changes, so this understanding could lead to making the right decisions. Through socio-economic consultation, the farmer received guidance in the concrete steps to making the changes (regarding finances, contracts, legal regulations as well as social arrangements). Also, in areas where the region was improved, farmers wives were consulted in order to persuade them of the value of rational working methods and to direct their motivation in this direction (Zuurbier, 1984, p.50, 53, 61-62, 67-68). Farmers at first were not keen on the new way of running their farms, but eventually they accepted the message and the new motto of production growth (Termeer, 1993, p.75).

In 1963, a fund was created to end unprofitable small farms and develop promising ones (development and reorganisation fund; ontwikkelings- en saneringsfonds, O&S). Government and trade organisations acknowledged that to increase agricultural incomes, the number of farms needed to be reduced. The Catholics in government eased the acceptance of this policy within the KNBTB, who elevated small farms. The CLOs could however only agree to this policy if the remaining farms would get support in modernising. In practice, the developing part of the fund did not become very effective until the 70s, but putting the word 'development' first in the title for the fund helped in gaining cooperation with the CLOs. There were three successive arrangements, each follow-up less focused on social effects and more on clearing land to increase agricultural production as 65% of the cleared areas were used for the expansion the remaining farms. Of the 54,000 farmers that left their profession, one fifth had made use of the O&S fund, mostly farmers from the Northern region (Van den Brink, 1990, p.124-153; Smits, 1996, p.179-180).

A distinction between two types of farmers arose: those who quit ('wijkers') and those who remained by increasing productivity ('blijvers'). The KNBTB had to let go of its inclination towards the traditional small mixed farm as this would become

³³ For example, the pig breeding consultation was 50-50 financed by government and businesses (Ketelaars, 1992, p.39).

an unrealistic image of modern farm practice (Smits, 1996, p.181). Those farmers who could or would not make the necessary changes to stay in business were no longer represented by the CLOs or the trade organisations. These outsiders (organised in the 'free farmers movement') hardly affected the green front because most had to give up being a farmer. Because of the increasing welfare, there was employment in other sectors and industry lost its negative image among farmers (De Groot & Bauwens, 1990, p.152-156, 165; Smits, 1996, p. 58).

In this period, farming became less contrasted to industry. First, because fitting agricultural production into export interests required industrialising production methods. Secondly, agricultural production became tied to (industrial) suppliers of raw materials and services and (industrial) buyers. The metamorphosis of farming meant that to support the population of farmers, farming in the traditional sense of the word could no longer be the goal. Thus, expansion of the export position of agricultural products became even more dominant as the guiding principle for agricultural development. This implies that the influence the green front had on the development of agriculture, was not an absolute influence that could be directed elsewhere, but was bound to raising the export of agricultural products.

2.2. The internationalisation of agricultural politics: strengthening the importance of the trade value of food

During the period shortly after the war, there were worries among farmers and in the department of agriculture, fisheries and food-supply of losing the export position. Since Dutch agriculture depended on export, the main concern was to raise agricultural productivity (Bauwens et al., 1990, p.5). In 1949, Dutch agriculture had been practically restored to the level of before the Second World War (Horring & van den Noort, 1963). The Netherlands were no exception in trying to increase agricultural productivity. The whole of Western Europe strove for a rapid agricultural recovery after the Second World War, because of food shortages and to stay ahead of the competition by increasing exports or reducing imports. The United States stimulated quick economic recovery with the Marshall Plan, which began in 1948. In 1949, the agricultural production of OEEC (Organisation for European Economic Co-operation) countries exceeded the pre-war level (Tracy, 1964, p.225-227). However, from the early fifties, agricultural production in Europe started to exceed demand. The production grew while other countries protected their markets. The agricultural policy did not limit production growth and agriculture was heading for overproduction. Again, as in previous periods of increasing supply, production growth would lower prices and so the income of farmers. This was felt particularly by farmers because they compared their situation to the growth of incomes in other sectors. Governments tried to raise farmer's incomes, while facing the problem that the regular way of doing this: encouraging production, would lead to further surpluses (Tracy, 1964, p.231). This section will describe how agricultural production was guarded against collapsing by internationalisation of agricultural policies.

During the agricultural crisis of the late 19th century and the economic crisis of the 1930s, governmental intervention in agricultural trade much increased in most European countries. In the crisis of the thirties, opponents of protectionism had accepted the measures taken, supposing they would be temporary. But the crisis went on longer than was expected. This continued existence was facilitated by the intervention measures that limited demand, raised supply and depressed prices, which

in turn rendered intervention measures necessary. Agricultural production in Western Europe grew during the crisis. As in the Netherlands, agricultural policy measures in most other European countries started with improvising on the events, while later the practice of the measures in progress prescribed further action. Arguments for actions were given afterwards, which left considerations about agricultural policies on the long term or the place of agriculture in the economy - as how much food and what kinds of food should be produced at home, how big the agricultural population should be, what level of farm income was justifiable - out of political debates (Tracy, 1964, p.130-136).

In many European countries agricultural interest organisations had a strong influence on agricultural politics. The pursuit of permanent political influence proceeded not only through lobbying, but also through having members of agricultural interest groups in parliament. The highest level of political representation of agricultural interests eventually reached was the establishment of a ministry of agriculture, which carried political representation of agricultural interest into the cabinet (Louwes, 1980, p.224). The governmental protection of national agriculture is generally attributed to the exertions of agricultural interest organisations. The assembly of politics and agriculture that came about during the agricultural and the economic crisis, was considered as a given after World War Two. In fact, governmental support for agriculture was extended in some cases (Burger, 1993, p.12; Louwes, 1980, p.245).

During the fifties, Denmark and the Netherlands were net-exporters of agricultural products. Among the products exported were poultry, eggs, dairy and pig meat. For France, surpluses on wheat, dairy and meat were expected and for Belgium on dairy and meat. These countries were motivated to enlarge their export markets. Between 1950 and 1954, French and Dutch authorities made efforts to arrange a common European agricultural market with the 'green pool' proposals, in order to meet their export interests. The European countries couldn't reach agreement. Countries had their own individual interests with regard to agriculture and did not want to reduce their protection of national agriculture. For example, Germany depended largely on imports, which were levied. This money was used to partly finance their own agriculture. It also bought cheap products from the world market. With regard to a common market, Germany was not willing to reduce protection policies and did not want to be obliged to buy the more expensive European products. The Netherlands bought cheap feed from the world market, which enabled them to keep the meat and dairy prices low. If the Netherlands would be obliged to buy French wheat for feed, this advantage would disappear (De Hoogh, 1983, p.36). Belgium wanted to protect its home production from imports. France wanted free trade for their exports, but not their import products (Burger, 1993, p.22-27, 131-132; Tracy, 1964, 313-317).

Burger (1993) explains how eventually free agricultural trade between the six³⁴ EEC countries was reached between 1959 and 1966, despite differing national agricultural interests. Earlier, attempts to create a preferential European market for agricultural products only considered agricultural affairs. Now, non-agricultural topics were included in the negotiations. Creating links between agricultural and non-agricultural decisions could bring about the common agricultural policy with the creation of package deals. German interest in freeing the market for industrial products was made dependent on progression in agricultural agreements.

³⁴ Germany, France, Italy, Belgium, Luxembourg and The Netherlands

Agricultural interests organisations from the six countries came together in the COPA (Comité des organisations professionnelles agricoles), beginning in 1958. As a representative for agriculture, the COPA was an important communication partner for EEC policy makers from the start of the creation of the Common Agricultural Policy (CAP). There was much consensus between the agricultural policy makers and agricultural interest groups. This 'green front' narrowed the choice of instruments and was focused on the short term. Short term success was important for policy makers because of elections and for agricultural interest groups because of retaining their members. Retaining members was also an important argument for the choice of instruments for raising farmer's incomes; the simplest solution of lowering the number of fulltime farmers would reduce the political power of the agricultural organisations (Louwes, 1980, 227-229, 244; Tracy, 1990, p.25-26). Within the EEC, agricultural policymaking became detached from other policy making areas, through the use of special agricultural councils and the Special Committee for Agriculture for decision making (Molegraaf, 1999, p. 288-289).

Dutch production especially profited from free trade within the EEC. The Netherlands had an advantage since they were already an exporting country. It also enabled the Netherlands to specialise further in export products. The Dutch kept their advantage of importing feed from the world market and so remained able to keep the production costs of meat and dairy low (Van der Meer et al., 1990, p.64-66; De Hoogh, 1983, p. 38-39). Germany became the most important export market for the Netherlands (Strijker, 1990, p.101). With regard to policy making, it seems that the Dutch department of agriculture was more detached from broader political aims than other EEC countries (Louwes, 1980, p. 230, 237-238; Molegraaf, 1999, p. 290).

In summary, it had looked like the increase in the Dutch agricultural production was running at an end in the mid-fifties. The existing increasing agricultural production was saved however, by the creation of the Common Agricultural Policy. This would postpone a disentanglement of the assembly of agricultural production and politics for at least thirty years (Strijker, 1990, p.98; Louwes, 1980, p.242-243).

“The state, in short, is charged with the task of reconciling effects of continued productivity growth associated with industrial appropriation³⁵ on productive capacity and output, rural incomes and rural social structures.” (Goodman, Sorj & Wilkinson, 1987, p.162).

With the Common Agricultural Policy, the importance of national agricultural short term trade interests was lifted to an international level. The assembly of agriculture and politics became larger in scope and more difficult to surpass: agricultural politics became more normal. With regard to food issues in general, this meant that changes with regard to food production had to be in the different national interests of the countries involved in the common agricultural policy. This development contributed to fix 'trade value' as the most important feature to food. Trade interests structure developments around other aspects of food, such as eating habits. We eat proteins that are most economically viable: for the Dutch (and the French) meat and dairy.

³⁵ “[The] discontinuous but persistent undermining of discrete elements of the agricultural production process, their transformation into industrial activities, and their re-incorporation into agriculture as inputs we designate as *appropriationism*.” (Goodman, Sorj & Wilkinson, 1987, p.2)

2.3. Conclusion

Governmental interventions with food production and consumption were almost exclusively directed to agriculture (OECD, 1981, Molegraaf, 1999, p.288, Tansey and Worsley, 1995, p.216). For policy making this meant the relation between food and agriculture became weaker, because the agricultural policies were not regarded in their consequences to other aspects of food (overconsumption of animal proteins for example). As described in the previous chapter, existing food quality control was mainly guided by agricultural trade interests³⁶.

The emphasis on agricultural trade in food issues was backed up and facilitated by politics and policies. Agricultural policy making was institutionalised and it was clear that government interfered with agriculture. The statutory trade organisations acted to increase food production in the public interest. The government contributed to transforming agriculture, raising agricultural production and specialisation in those products that were most profitable on the export markets. International politics in forming the EEC prolonged the effectiveness of the agricultural policy course taken. A ‘green front’ evolved on EEC level: high consensus within agricultural policymaking and agricultural interests, while shielded off from other policymaking and interests. The consequence was that ‘agricultural economic development’ became a more solid guiding principle for developments with regard to food. For the decades to come, it would be in the political interest to increase meat production and consumption or at least to keep meat production and consumption stable.

3. Diet shift: redefining the role of meat in the production and consumption process

In this period a diet shift took place: the proportion of animal protein exceeded the proportion of plant protein. It can be generally observed that as incomes grow, more animal proteins are eaten, while the intake of plant protein slightly drops and then remains constant (Grigg, 1995).

“The map of protein consumption is the map of the level of economic development” (Grigg, 1995, p. 15)

This section will show that before the relation between rising income and increasing meat consumption could be possible, an ordering of the production and consumption process had taken place and the role of meat had been redefined. The diet shift was accompanied by changing the rules of what food had to be about in order to become a normal daily product.

Developments described in this chapter show that several changes in what food is about had occurred. The changes can be summarised as follows: food became more about money and less about household labour (cooking, home growing) and availability (seasons, distances and perishability). Production of food became increasingly rationalised and mechanised; allowing bulk supplies for lower prices. Retail offered increased variety and amount of food, making food more commonly available. The growing importance of the market gained an important role in the

³⁶ For this period, I did not come across major policy changes on this area, so the storyline with regard to food quality and nutrition policy developments will continue in the next chapter.

composition of diets. The process of food production and consumption became increasingly focused on food as a commodity. The division of labour in the production and consumption chain meant every stage in food production had to be lucrative in order to go on with it. The division of labour also meant that consumers did have to take much less effort in obtaining food. Particular knowledge about products and production methods was not required for being able to eat them. Before meat could become a normal everyday product, its role in the food chain had to be redefined.

Meat production and consumption had been dependent on and limited by seasons and availability. As we have seen in the previous chapters, in rural areas home slaughtering was important. The consumption of meat varied seasonally, with November being the slaughter period. In urban areas many butchers bought live animals that they slaughtered and sold. The consumption of meat here was mainly bound by limited supplies of certain meat products. The butcher sold the whole animal, whose carcass hung in the shop. This meant that better parts could be sold out early and some came in limited supply. There was just one tongue and tail per cow to sell and just two ribs per pig. From the 1920s, wholesale dealers in meat delivered additional amounts of these parts to butchers. Gradually, a growing amount of meat went via wholesale; many butchers stopped slaughtering themselves during the 1960s. Also from the 1920s, mechanisation and cooling techniques allowed meat processing industries to produce the whole year round and the assortment of products grew (Van der Peet, 1976, p.8-9, Schönwetter, 1999, p.73). Animal parts like head, liver, heart, kidneys and tongue were used for various kinds of sausages. Few animal parts were wasted because companies sought profitable markets for everything, for example: hair (brushes), blood (fertilizer), bones (glue) and slime from intestines (medicine) (Schuurmans, 2000, p. 87).

The development and activities of slaughtering and meat processing businesses were mainly focused on export markets. Export of pig meat and bacon to England was of particular significance (Langenhuyzen, 1988, p.20; Schuurmans, 2000, p.12). Export possibilities remained the driving force behind developments in slaughtering and meat processing. With regard to the home market, the meat processing industry profited greatly from the opportunities supermarkets offered. The production and distribution of meat were highly influenced by the rise of supermarkets. Although supermarkets were a lot smaller than today, a new characteristic was the amount of products they could offer. The cooling cabinets in supermarkets could store and preserve fresh and processed products. This made it easier for customers to buy the meat they wanted, instead of depending on limited supplies of meat. Several butchers started selling meat from supermarkets (Schönwetter, 1999, p.91-94; Van Otterloo, 1990, p.180).

Slaughterhouses mainly worked during the winter months because of the inconsistent supply from farms. With growing agricultural production, rationalisation of animal breeding, delivery contracts to the slaughtering industry, and the provision of balanced feed, the supply of slaughter animals grew and became more constant during the year. Because of the introduction of cooling transport, meat could now be distributed and exported in warmer months as well. Slaughter industries made an effort in developing animal breeds that could improve desired meat quality like fat-meat proportions. Also scientific research into feed composition led to efficiency and costs savings for the slaughter-industry, because animal quality became more uniform and reduced the amount of sellable weight-loss during slaughter. Slaughtering and butchering became increasingly mechanised and industrialised, for example

electrically sawing carcasses. The slaughtering capacity could increase drastically (Schuermans, 2000, p. 21, 31, 44-45, 67-69, 81-82; Langenhuyzen, 1988, p.131; Schönwetter, 1999, p.96).

In short, developments in food production and consumption made meat independent of seasons and availability. The amount of meat available for consumption increased. Product differentiation took place, creating a broader range of meat products. Apart from fresh meat, there was a wide assortment of luxurious convenience meat products. The separation of animal parts in an early stage of the production chain and the industrialising of slaughtering and butchering meant that the consumer became further removed from the animal and carcass. Now the consumer only saw and handled pre-portioned fresh meat or processed meat products.

The meaning of meat was altered. While the market had become more important in food production, because of the commodification of food described in the first section of this chapter, it was not straightforward that meat was a profitable product. Before the changes summarised above, meat was a perishable product, dependent on the slaughter seasons, which limited the amounts that could be on offer. Although meat was a highly appreciated and high status product, this certainly did not apply to the whole animal. For example, the paws and ears of a pig were cheap and not highly appreciated. These parts pressed the profit on meat down. Cooling transport and cooling cabinets took the limitation of perishability away. The ongoing rationalisation of meat production led to a constant and growing supply of animals. Distribution and wholesale made it possible to get the right parts to the right places. The growing meat processing industry could use the cheaper parts in convenience foods. Also, there was a shift in the kinds of meat: less beef and more pork and chicken, because the latter ones proved to be more convenient. The whole change in meat production methods meant a changed society.

“Each instance of the replacement of one set of foods by another [...] is complex and poses its own set of questions. But the meaning of the ousting of a local, small scale industry by an international, large-scale industry is that it marked a fundamental change in the nature of European economic life. [...] We must struggle to understand fully the consequences of this [sucrose replacing honey, MV] and kindred events, for upon them was erected an entirely different conception of the relations between producers and consumers, of the meaning of work, of the definition of self, of the nature of things. What commodities are, and what they mean, could thereafter be forever different.” (Mintz, 1996, p.65)

Although nowadays meat is considered a common bulk product for daily use, various political, technical, economic and social activities were pivotal to make meat into a normal product. The diet shift was accompanied by redefining the role of meat on the market and in diets. From a perishable and limited available reasonably profitable and hardly affordable, meat was transformed into an available, profitable, varied and affordable product. With the growth of the amount of animal protein, the production and consumption of these products became a more common part of daily practice. Meat was normalised in this process, which means that the function of meat on the market and in diets was considered normal, where it before was not normal to eat meat on an almost daily basis and to produce meat in those quantities and in a industrial way.

6

Solving problems within the ‘produce more’ guiding principle [+/- 1970-1992]

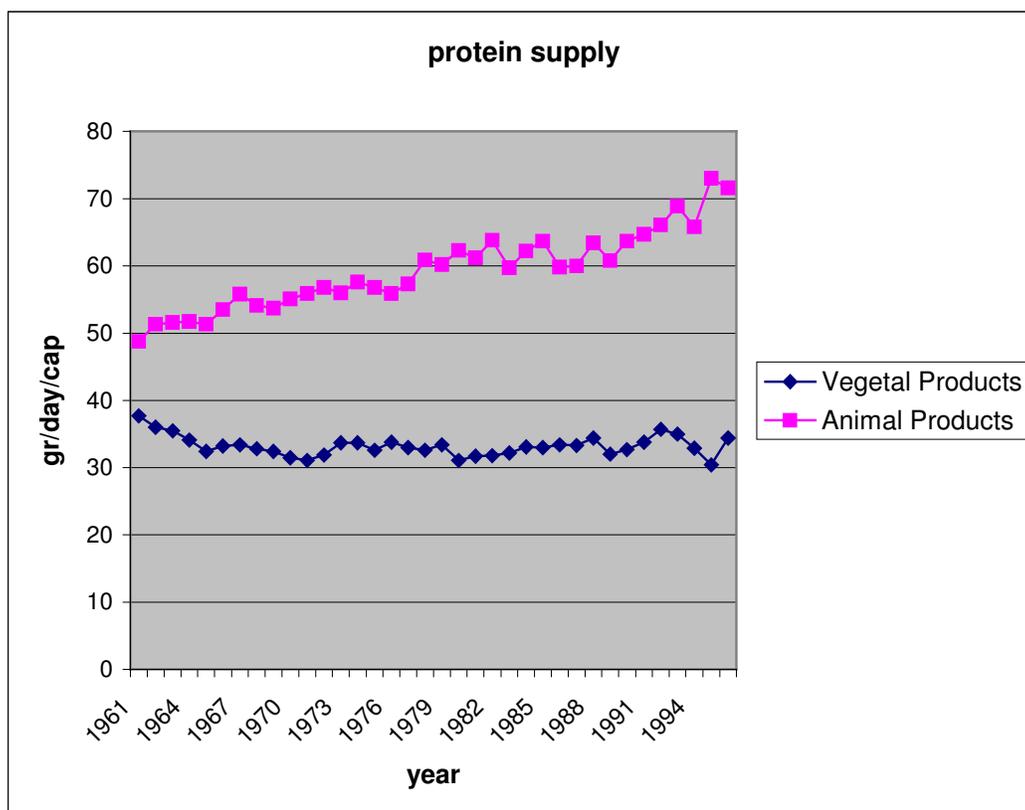


Fig.3. Consumption of animal and plant proteins. Source: FAO, 2001

Although the consumption of animal-based protein levelled out (Hautvast & Hermus, 1982), the supply per capita kept increasing between the 1960s and the 1990s³⁷. The increase in the supply of animal proteins was mostly due to pig meat, unprocessed as well as processed into meats, canned meats and ‘ready-meals’ (Bosman & Kosten-Zoethout, 1978). The supply of cereal (-protein) declined over the whole period. An extra supply of proteins in other plant products kept the plant protein supply practically stable.

After decades of diet uniformity, individualisation and sub-groups with regard to eating habits appeared. The ‘traditional’ dish of meat, vegetables and potatoes became less dominant in this period. Meals became less central in family-life and variation became more important. There was a growing market for snacks, especially among young people, which the meat-processing industry keenly filled. In 1971, the first McDonalds opened in the Netherlands (Schönwetter, 1999). Immigrants brought new dishes with them and Dutch tourists took new likings for food home. Eating out became more common (Jobse-van Putten, 1995, p.428-433, 519).

³⁷ This increase could be due to increasing waste (Bosman & Kosten-Zoethout, 1978, p.286).

While food production kept upscaling and industrialising, enabling to sell products of uniform quality at low prices, consumers profited from this increase in bulk-production. By 1992, the low-income segment of society consumed more meat than the high-income segment (Jobse-van Putten, 1995, p. 519).

Food technology took on an important role in food innovations and food control in the recent history of food production and consumption. In the decades after World War II, the applications of food technology enlarged. Agriculture made increasingly use of technology and in food manufacturing agriculture was increasingly partly replaced by food industry, applying cheaper raw materials into food products. Product innovation was done in close dependence on the principles of chemical engineering. Food technology was applied to controlling food quality, nutritional value, stability, preparation, appearance and taste. Governments, research institutes and food companies stimulated the development of innovative and profitable food technologies (Sorj & Wilkinson, 1985; Goodman, Sorj, & Wilkinson, 1987).

The previous chapters described how developments in society, economy and politics to some extent ordered food production and consumption, by constructing the practice, the guiding principles for development and defining roles of the actors involved. In this period, some counter developments to the prevailing food practice threatened this order. But these did not lead to major changes in food production and consumption practices. Reijnders and Sijmons (et al., 1974) describe this as follows:

“Het is meestal moeilijker om aan te geven of [...] negatieve kanten [aan voedsel] vermeden kunnen worden: veelal zijn tal van praktische redenen aan te geven waarom de huidige toestand bestaat. Meestal is dat een complex van technologische, markttechnische, economische en sociaal psychologische argumenten, die gehanteerd worden om de onvermijdelijkheid van de status quo aan te tonen. Bovendien zijn de huidige methoden en technieken historisch gegroeid en door en door verankerd in de hele maatschappijstructuur. De voeding van de mens en de distributie van levensmiddelen zijn een belangrijk onderdeel van de hele maatschappij. Het verhelpen van kwalen is dus niet eenvoudig.” (p.121)³⁸

“[...] we can fairly say that the ordered system which is a meal represents all the ordered systems associated with it. Hence the strong arousal power of a threat to weaken or confuse that category.” (Douglas, 1975, p.273).

This chapter focuses on how food production and consumption continued to develop along the path constructed in previous decades. Activity from the prevailing practice to deal with the raised problems resulted in maintaining the ordering.

The first section of this chapter will describe the way discontents with food concerning health and naturalness were incorporated into the prevailing practice of food production and consumption. The second section will describe how the growth of the intensive farming industry was questioned, while the growth of production rates was simultaneously stimulated by policy makers.

From the early seventies, criticism arose over the quantities of meat that were produced and consumed. The product board livestock, meat and eggs advertised meat consumption through the slogan “meer vlees mevrouw, u weet wel waarom...” (more

³⁸ “Often it is more difficult to state whether negative sides to food can be avoided: mostly it is possible to state many practical reasons why the current situation exists. Most often this is a complex of technological, market oriented, economic and social psychological arguments that are use to show the inevitability of the status quo. Besides, the prevalent methods and techniques are historically grown and thoroughly rooted in the whole structure of society. Man’s food and the distribution of food products are an important part of whole society. Therefore, it is not easy to mend defects.” (p.121, translation MV)

meat madam, you know why...). In the early 1970s, a poster appeared with the title: “minder vlees mevrouw, u weet hopelijk al waarom” (less meat madam, hopefully you know why...). The question whether one should eat less meat received public attention. Questioning the ratios of meat and plant proteins in diets will be the subject of the third section. The criticism centred on health, naturalness of products, world food divisions, the position of farmers, animal welfare and environmental effects (Documentatie- en informatiecentrale van de Horstink, 1975; Verheul, 1987; Zeiss, 1980).

1. The efforts of making discontents with food solvable within the prevailing food practice

In 1973, a group of biologists, chemists and food scientists wrote a book on food in the Netherlands (‘Werkgroep Voeding’). They observed that there was no Dutch study that provided an overview on food regarding the radical changes that had occurred in the food industry. The book sums up the criticism of the food production practice in the early seventies. It had a large impact on the manifestation of the concerns with regard to ‘good food’ (Rijneveld-van Dijk, 1982, p.223; De Groot, 1975, p.111). With regard to the position of the consumer, they concluded that consumers had little influence on the production of food (Reijnders and Sijmons (et al.), 1974):

“...er [is] dringend behoefte [...] aan een militant linkse consumentenbeweging, die effectief weerwerk kan leveren tegenover de producenten, zich een stevige machtspositie verwerft in de Adviescommissie Warenwet en daarnaast ook een lijn kan uitzetten voor de gewenste ontwikkelingen in het toekomstig voedselpakket.” (Reijnders and Sijmons (et al.), 1974, p.162).³⁹

In the previous chapter we saw that this lack of influence resulted from becoming involved with food primarily in the ‘consumer-role’. Tansey & Worsley (1995, p. 142) describe ‘consumer’ as a dehumanising term that “reduces a person to a single, somewhat passive aspect of human life – the ability to use money to consume goods and services”. In the previous period of growing welfare, the public interest coincided with consumerism. In this period of economic recession, other aspects and values became important to the public and related to food, for example ‘naturalness’. On the other hand, (bulk) food production had become quite popular as well as the use of agricultural pesticides and additives to food products.

A small number of people attempted to bring their eating style in concordance with their views on society, solidarity, nature and environment. Van Otterloo (1990, p. 209) calls this a temporary rise in the development of alternative approaches to food and eating that had emerged in reaction to the industrialisation processes in society. Health and naturalness revived as major food attributes. Corresponding organisations were founded: Ekologische Beweging (1969), Vereniging Milieudefensie (1971), Macrobiotic movement (1971) and Kleine Aarde (1972) (Van Otterloo 1990, p.184-188). Most people however, remained in their role of consumer.

³⁹ “There is an urgent need of a militant left-wing consumer movement that is able to effectively offer opposition against producers, obtain a firm powerful position in the advisory commission of the ‘warenwet’ [law on quality of goods, MV] and besides set a course for the desirable developments in the future food supply.” (Reijnders and Sijmons (et al.), 1974, p.162, translation MV)

Nonetheless, alternative approaches to food received attention among those working on food issues in government, science and business. The question arose whether the current eating behaviour was in the public interest.

In the United States, the interest in the naturalness of food coincided with the Anti-Vietnam War protest movement (Mintz, 1996, p.52).

“In seeking personal answers to social problems, whose causes were imputed to an irrational scientism, to corrupt political leadership and to a deep disregard for Mother Nature, many young North Americans turned toward religiously prescribed diets, different degrees of vegetarianism, special cooking devices and arrangements, fresh fruit and vegetable juice, high-fibre cereals, and other “natural” foods. (Mintz, 1996, p.53)

Belasco’s study (1989) gives an account of the reactions of the food practice to the ‘organic trend’ in the USA. Although the food sales in organic or health-food branches were too small to be a financial threat to regular food production, the existence of alternative food systems was experienced as a threat in itself, because it cast doubt on the prevailing food system.

“...the very existence of naturally produced alternatives might cause people to wonder about all the brand-name stuff they were buying. Beyond calling unwanted attention to food manufacturing, the organic paradigm questioned conventional science, challenged the prevailing system of food distribution, and advocated a radical decentralization of population and power.” (Belasco, 1989, p. 111).

Belasco writes that the food establishment (a loose alliance of agribusiness, government, science and mass media) before the 1970s distinguished what was to be considered healthy diets and safe food and what not. In this period, concerns divided the food establishment on these issues, distancing nutrition experts, politicians and food marketers (p. 111-112; 130).

1.1. Bringing health back in the food practice

In chapter 4, we saw that food and health became connected by scientific food research and rationalisation of diet. This made it possible to develop norms on healthy food that public institutions could act upon. Earlier, scientific and public institutions with regard to health and food had focused on shortages in nutrition. Now, the importance of this problem had decreased while the number and societal position of food scientists and food consultants had progressed (Van Otterloo, 1995, p. 254; Rijnveld - van Dijk, 1982, p.223). The existing scientific practice connecting health and food now focused on eating too much of certain substances. Eating patterns had developed towards an increased intake of sugar and fat and less starch. A number of people ate larger quantities of food. Food experts related overeating to cardio vascular and other diseases. Caries and toxicity were considered problems with regard to respectively the sugar consumption, and additives and residues in food (De Wijn, 1968, p. 16; Rethans, Van Staveren & Van Stigt Thans, 1976, p. 7-8; 12-13). Another concern was the loss of nutrients by technological processing or refining of food. Nutrients were sometimes re-added to the product, but the nutritional value of the unprocessed product was not restored (Ginjaar, 1980, p.21)

With regard to food and health, there were two public organisations. The bureau of Nutrition Education (‘Voorlichtingsbureau voor de Voeding’), an independent advisory board on food, had existed since the beginning of the Second

World War. Its activities were informing the public and advising organisations on food. It was funded by the ministries of welfare, health and culture as well as the ministry of agriculture and fisheries. Until the fifties, its main occupation was informing the public on eating sufficient nutritious matter. Their best known instrument was the 'schijf van vijf' (disk of five), which recommended eating something from every food group: carbohydrates, fat, proteins, dairy and vegetable products. In the beginning of the sixties, a recommendation to moderate the use of sugar and fat was added. Because of problems around over-eating that arose in the 70s, the disk of five (five equal parts) was transformed into a disk of four parts with vegetable products taking up two-third of the surface. This new disk was accompanied by a recommendation to moderate fat consumption and to eat many vegetable products. It gave less attention to fat-containing meat and meat replacements. (Rijneveld-van Dijk, 1982, p. 228-229, 237-241; Voorlichtingsbureau voor de Voeding, 1980, p.1-4; Den Hartog, 1965).

The Nutrition Council ('Voedingsraad') was established in 1952, also under the ministries of welfare, health and culture and the ministry of agriculture and food supply. Its goal was to contribute to balance interests between trade and health. It informed and advised government on food-health matters. In practice, the Nutrition Council acted mainly as a check on harmful effects of free economic activity. This implies a focus on what can be tolerated, not what can be improved with regard to food health. Hautvast and Hermus argue in 1982 that advice was not often picked up by government. Although the Nutrition Council for example put the item 'overeating' on the political agenda in 1973 with a report and recommendations on this item (Schaik, 1972), no policy initiative was taken (Den Hartog, 1976, p.76; Hautvast & Hermus, 1982, 195-196).

Relating health problems to modern consumption patterns meant that health did not fit unproblematically within the practice of food production and consumption anymore. The consumption and production of certain products were progressively considered unhealthy. This somewhat disordered the existing practice.

“Afgaande op diëtisten en andere gezondheidsbewakers is vet eten een straf. En dan te bedenken dat de nationale zuivelexport voor een groot deel op vet drijft. [...] De vethetze heeft in sommige gevallen geleid tot een onberedeneerde vetvrees. Dat treft bijvoorbeeld de magere spekklap. Die wordt plots niet meer gebliefd. Men vergeet daarbij dat blokjes gebakken magere spek juist de lekkere smaak aan stampot geven.” (L. de Wijze in Schönwetter, 1999, p.67-68).⁴⁰

Nutritional science had been used by food companies for both product development and marketing of products, especially since the 1920s (Horrocks, 1995, p. 7). In the 1970s, 35% of food advertisements contained a health claim. The relation between nutrition science and food industry was challenged with the intensified scrutiny of the relation between nutrition and health. The activities and claims of the food industry were followed more critically by food health advocates. An outcome was that the Nutrition Council initiated a prohibition on health claims in food advertisements in 1980 (Den Hartog, 1995, p. 273- 275).

⁴⁰ “If one relies on food consultants and other health watchers, it is a punishment to eat fat. And then to realize that the national dairy export is dependent on fat. [...] In some cases, the smear campaign on fat has led to an illogical fear of fat. That concerns the lean slice of bacon. Suddenly it is not wanted anymore. One forgets that it is the backed pieces of lean bacon that give the fine taste to 'stampot' [a typical Dutch meal in which potatoes, vegetables and meat are mashed together, MV].” (L. de Wijze in Schönwetter, 1999, p.67-68, translation MV)

Nutrition experts pressed for a food consumption policy, which would give priority to health and cover food consumption as well as quality and safety of important food products (Ginjaar, 1980; Rethans et al., 1976; Hautvast en Hermus, 1982).

“Zonder maatregelen valt te vrezen dat in het licht van de huidige voedselproductie en de ermede samenhangende verkoopbevordering een afglijden naar een ongunstiger voedingspakket niet onwaarschijnlijk is.” (Ginjaar, 1980, p.20).⁴¹

In 1983, a white paper on food policy appeared in which the state of affairs regarding knowledge on relation between health and diet is presented. It showed governmental reactions to the issues raised by food scientists and society. The white paper was an attempt to systematically and coherently describe current policies with regard to food (for example policies on food labelling, food safety and research). The intentions for a food policy mainly focus on research (with regard to consumption patterns and with regard to safety and composition of food products), and education and consumer consultation. The role of the government with regard to the promotion of improved diet patterns is seen as one of creating conditions, stimulation and consultation to make a choice for healthy food possible (WVC, 1983, p.7-8, 66). From this moment, the government attained more of a double role: educating citizens about moderating consumption of certain products in addition to the setting and guarding of boundary conditions for products, while still stimulating the growth of the Dutch food production.

The increasing professionalisation of food science and food consulting and the involvement of government with nutritional knowledge, resulted not only in applying the performance of the existing ‘scientific food research practice’ to a changed problem, but also in a further rationalisation of diets. This was not just the case in the Netherlands (Beardsworth & Keil, 1997, p.136):

“[...] the rationalisation of diet has seen professional groups, and the state itself, progressively claim ever more authority over nutritional knowledge and over dietary choices, in so far as these affect both short- and long-term health outcomes. Recommendations concerning the restraint of the appetite for certain foodstuffs, originally relevant only to the eating habits of a privileged minority, have now been generalized to entire populations in societies like the USA and the UK.” (Beardsworth & Keil, 1997, p.149).

The intentions of food scientists and government to provide freedom of choice, faced two barriers for changing eating patterns. First, it was difficult for information to reach the public (WVC, 1983, p.74; Provinciale Raad voor de Gezondheid in de Provincie Drenthe, 1968, p. 52-54). Second, knowledge did not in itself lead to recommended behaviour. It is noted in the white paper that the majority of people are not guided by health motives in their food choices, but by what is considered tasty, convenient, and cheap as well as by presentation of the product (WVC, 1983, p.71). These last aspects were part of consumer role, whereas public interest in food health was not. The created gap between the roles of citizen and consumer (previous chapter) possibly restrained change in eating habits: the citizen was provided with nutritional knowledge, but this did not relate strongly to consumer choices.

⁴¹ “Without measures it is to be feared that given the contemporary food production and the related sales promotion, a downfall to a less favourable food supply is not improbable.” (Ginjaar, 1980, p.20, translation MV)

The gap between consumer and citizen roles remained, since food producers and consumers made it possible to retain the consumer-role in the food chain, despite public awareness of nutrition problems. Interactions between producers and consumers played a vital role in relating health to consumer interests. According to Belasco (1989, p.200-217), food marketers managed to turn the threat of health concerns into a marketing opportunity. Although the majority of consumers were not guided by health concerns in their food choices, those who did belonged mainly to the higher-income market segment and were therefore of interest to food manufacturers (Belasco, 1989, p. 193-199; Otterloo, 1990, p.237-256). They detected that:

“[...] people now ate a lot of different things, at different times, and with different – often conflicting – meanings. The appropriate corporate response, therefore, was to go grazing too. [...] There was no mass, no “mature market”, just “niches”. [...] Even if all the individual components seemed hopelessly incongruous, they were linked together by the one common denominator that favoured the food industry: convenience.” (Belasco, 1989, p. 216).

Many products appealing to a single aspect of health appeared: light products, products lacking unhealthy ingredients (such as salt, sugar, cholesterol) and products high in a certain nutritious matter. New and existing products were presented differently. For the Netherlands, Den Hartog (1995, p.276) observes a renewed connection between nutrition science and the food industry since the 1980s, resulting for instance in the hiring of nutritional experts by food companies.

1.1.1. The challenge for two animal protein products: milk and meat

The increase in attention for health led to changes in (the position of) certain products relating to health. The bureau of Nutrition Educations' dietary advice emphasised less animal and more plant protein products. While the intake proportion of animal to plant proteins had reached 67:33, nutritionists advised a proportion of 40:60, or 1/3 animal protein in a diet (Voorlichtingsbureau voor de Voeding, 1980, p.1-4; Hautvast & Hermus, 1982, 197-200; Van den Berg, 1974). This meant that the new concept of 'health' was a threat for marketing certain animal products.

The intake of milk consumption had decreased since the Second World War. Apart from activities by the dairy-industry to increase milk consumption, nutritional scientists and EU-subsidised school-milk campaigns from 1977 onward provided backing to the image of milk as a healthy product (De Knecht-van Eekelen & Albert de la Bruhèze, 2000, p 320). Other food scientists argued that school milk was not necessary from a nutritional point of view (Voorlichtingsbureau voor de Voeding, 1980, p.5). Arguments against fat content of milk led to increased sales of low-fat and skimmed milk. Kjærness (1995) argues that in Norway the decline in milk consumption since the 1970s can be explained by milk having lost its image of 'health food' among consumers, politicians, producers and food scientists. The decline in Norway was in accordance with nutritional advice, while the producers' interests and a public policy 'captured' by these interests were only capable of partly postponing the decline.

Meat was not labelled a clear-cut healthy food anymore, at least the fat-containing kinds or large portions of meat in a meal (for UK: see Beardsworth & Keil, 1997, p. 214). This left room for meat alternatives. Food scientists declared that there were no nutritional arguments against vegetarianism (Zeiss, 1980, 214).

“In een tijd van bewuster eten kon het VoVo [bureau of Nutrition Education] niet achterblijven: er kwam een brochure over vegetarisch eten. Heette de eerste uitgave nog: ‘Eten zonder vlees *kan dat?*’, de tweede uitgave werd volmondig ‘eten zonder vlees *dat kan!*’ genoemd.” (Hallegraeff, 1991, p. 22).⁴²

Although the healthy image of meat was attacked in publications (Huis in ‘t Veld; 1983, p.124; Zeiss, 1980; Verheul, 1987, p.16-20), there was no decline in meat consumption. Scientific research on the meat-health relation mainly showed a lack of validation for possible harmful effects of meat consumption. Adaptation of pig diets and selective pig breeding led to the alteration of the fat/meat proportions from 1:1 to 1:2 and otherwise made meat healthier. Over the years, ways to improve the healthiness of meat resulted in procedures whereby commercial meat cuts were adapted so that fat was separated or extracted from the carcass. Other substances and (non-meat) ingredients were added to reduce the fat, cholesterol, calorie content, nitrates and sodium content of meat, as well as the addition of functional ingredients (Hermus & van de Zedde, 1980; Huis in ‘t Veld, 1983, p.44; Schönwetter, 1999, p.67, Jiménez-Comenero, Carballo & Cofrades, 2001). Meat producers organised in the educational bureau for meat (Voorlichtingsbureau vlees), which is part of the product board for livestock, meat and eggs, implicitly emphasized the health aspects of meat in their advertisements. Furthermore, the product board financed scientific research to determine and improve the health aspects of meat.

1.1.2. Conclusion

In sum, with the application of food health aspects to eating too much of certain substances, the order of the prevailing food practice was threatened. Regular consumption and production of certain amounts of products and substances could not remain unaffected by the pressure of ‘health food movements’ (alternative production, shops and diets) and food scientists. Health issues returned to the current practice of food production by redefining it as something that the current food practice provides for. Food science’s definition of health aspects in nutritional terms became increasingly influential with the growing of food science and the adoption of this definition by the government. This definition of health aspects of food in nutritional terms and rationalisation of diets was a first step in bringing health back to food practice. The second step was that nutrition was given a role in the production chain by consumers and producers, mainly by linking it to convenience. In other words, health was enrolled in the food practice. This means the order in the food practice could remain basically unaltered.

Because of the effort put in the re-enrolment of health into the prevailing practice, dominant guiding principles, roles and power in food practice were kept in place. The dominant methods of food production were able to work with the new nutrient definition of healthy food. The problems raised regarding health could be solved within the practice by food technical and marketing efforts (see also: Cannon, 1988, p. 231) The consumer role was kept in tact as health could be purchased. This defining and re-enrolling also cut health (temporarily) off from alternative definitions. Health as part of a lifestyle, for example, would have implied a change in the

⁴² “In a period of conscious eating, the VoVo [bureau of Nutrition Education] could not stay behind: a brochure appeared on vegetarianism. While the first edition was titled: ‘Eating without meat, *is that possible?*’, the second edition was unconditionally titled: ‘Eating without meat, *that is possible!*’” (Hallegraeff, 1991, p. 22, translation MV)

consumer-role by different dealings with food and the implication of different kinds of products:

“The counter cuisine advised consumers how to get needed nutrients - both physical and spiritual - from a few simple, time tested, inexpensive ‘Whole foods’”. (Belasco, 1989, p.216).

The adoption of the ‘nutrition-definition’ of health by the government and the application of this definition in food policy inevitably meant other conceptualisations (framing) of health were not followed in policy. Tansey and Worsley (1996, p.58) state that this implied health-food research dedicated to solving the nutrition problems of the affluent by striving to prolong their lives with days, and not to focus on sustainability and equality in the world food system, in attempts to improve health for all.

1.2. Naturalness versus food safety

The further industrialisation of food production in general and the rise of artificial means and enhancements in food specifically, aroused the desire for natural food (Otterloo, 1990, 184-208; Huis in ‘t Veld, 1983, p.20; Van Stigt Thans, 1988, p. 14):

“...the scientific jury was still out on most pesticides and additives, and it might never come in. Given the difficulty of testing thousands of food chemicals both as single toxins and in combinations, could anyone prove conclusively what caused cancer and what not? But despite the still sketchy evidence, it simply made sense that a sick society would produce carcinogenic food. And since modernity itself seemed the cause of cancer, the prevention seemed equally clear: think primitive. Avoid anything complex, anything you can’t pronounce, anything chemical, synthetic, or plastic.” (Belasco, 1989, p. 37).

Science and policy on ‘good food’ did not focus on naturalness, but on food safety; creating scientifically derived limits for providing safe food. The difference between the focus on food safety and on natural food appears in their implications. First, the problem for which it is a solution differ. Food safety results from a concern for human health. Naturalness involved a broader range of problems, which could be taken together as concerns for the health of the earth (Belasco, 1989, p. 42-87; WVC, 1983, p.11). Second, what is considered quality differs. Food safety is scientifically measured in the end product. In the words of Van der Ploeg & Ettema, it is made, assured and assessed by food technologists. Animal tests determine the possibly harmful doses. This could be opposed to framing quality as related to the way food is produced and with the incorporation of certain values (Van der Ploeg & Ettema, 1990, p.2-3; Belasco, 1989, p.46-48; Van Stigt Thans, 1988, p. 46-47; WVC, 1983, p.34). Third, the stances with regard to additives and residues differ. From a food safety perspective, only those quantities of substances that are harmful to people or that have no particular use should be banned. Conversely, the trend set for ‘natural’ or ‘pure’ food free of additives and residues, opposes too much human interference with food (Brunink, 1968; Spencer, 1993, p.333; WVC, 1983, p.33). Fourth, what is considered hazardous with regard to food differs. Within regulatory practice, food choice of consumers was considered the main threat for food safety (see previous section). Public view on the main food hazards diverged from the scientific: the public was mainly concerned about contaminants and additives in food (Van Otterloo, 2000, p.308-309; Van der Ploeg & Ettema, 1990, p.3).

As stated in chapter 4, regulation of food quality had been established both for protecting consumers and improving trade fairness. As I have argued, practices with regard to food quality became ordered to such degree that 'quality' could be defined and acted upon. Food products and production processes had changed in the 1960s (previous chapter), while the inspection procedures remained essentially unaltered (Kappelhof, 1990, p.148). Two departments were mainly concerned with food regulations: the department of health that aims mainly at the protection of public health, and the department of agriculture that aims at promotion of agricultural products sales. The division of responsibilities and tasks of the two departments has been in dispute ever since (Lugt, 1999, p.286).

The product boards that co-govern the implementation of the 'Warenwet' (meant to control the quality of food and so protect consumers against bad food and swindling) since 1965, were also part of its advisory commission. The divergence in interests regarding issues concerning the 'Warenwet' slowed down revisions and inhibited implementation decisions. In 1968, the chief inspector of regional inspections that operated under the 'Warenwet' proposed a modification in the Warenwet, in order to be able to react more promptly to new developments in food production (Kappelhof, 1990, p.66-67). It proved difficult to alter the Warenwet to such degree at that moment and also on later occasions. The conflict of interests between the departments involved (apart from agriculture and health there were the departments for economic affairs and environment) was one of the barriers. Reijnders & Sijmons et al. criticise the predominance of business interests in decision-making regarding the Warenwet, especially dealing with the position of the product boards (1974, p.141-144). Another barrier for drastic alterations of the Warenwet was that regulations on food inspection were of a very technical nature and controlled by professionals, which made it a subject members of parliament were not occupied with. In 1979, a number of organisations⁴³ formed a pressure group called LAVO ('Landelijk Voedsel Overleg': a national food deliberation group). The organisations were dissatisfied with a white paper on a new Warenwet and actively tried get the Warenwet on the political agenda (Huis in 't Veld, 1983, p.304-305; 324).

The white paper on food policy of 1983 had two central objectives. In addition to the promotion of sound dietary habits, discussed in the previous section, the second point concerned a sufficient and safe food supply with a reasonable price-quality relation. Priority was given to preventing food being a threat to the public health. The white paper states that the regulations regarding food, combined with the activities of producers, consumers and research institutes provide safe food (with rare exceptions). On the subject of additives and chemical and microbiological contamination of food, the existing regulations would be continued and expanded. This meant that additives were not considered negative in themselves, on the contrary, some could benefit the safety of food⁴⁴ (WVC, 1983, p.7-10, 21-23):

"De Nederlandse consument is gewend aan brood met een luchtige kruin, dat lang vers blijft, wat het gebruik van meelverbeteraars en emulgatoren noodzakelijk maakt. Op deze wijze kan

⁴³ Aktie Strohalm, Consumentenbond, de Kleine Aarde, Konsumenten Kontakt, Konsumententoneel, Stichting Huishoudelijke Voorlichting ten Plattelande, Vereniging van gebruikers van Ecologische Producten, Vereniging Milieudefensie, en Werkgroep Voeding van de Vereniging van Wetenschappelijke Werkers.

⁴⁴ Preservatives can, for example, lower the risk of eating food that has gone bad.

ook bruinbrood aantrekkelijker eigenschappen krijgen, hetgeen in vergelijking met brood van buitenlandse afkomst onmiddellijk opvalt.” (WVC, 1983, p.25)⁴⁵

Policy-makers with regard to food regulations reacted to the concerns about residues and additives by increasing the scientific research into the harmfulness for public health. But the wish for less industrialised, more natural food was not addressed. Experts and administrators representing food safety regulations reacted on the wish for natural food by explaining that it is incorrect to think natural is good and chemical is bad. Nature and chemistry are not opposed, since every substance is chemical. The concern is not natural versus chemical substances, but hazardous versus unarmful quantities of substances. In some cases, this point is backed by the statement that laboratory-made chemicals in food are more intensely studied than food derived from natural processes and therefore can be considered relatively safe. Further, it is stated that the institutions concerned with safety are to be trusted (Brunink, 1968, p.34-35, 39; De Groot, 1975, p.112-114; WVC, 1983, p.7-10; 22, 33; Van Stigt Thans, 1988, 15-17; 202-210; Belasco, 1989, p.115-122; Haken, 1970, p.259). By the 1990s, public opinion about food hazards had become more identical to the scientific perspective with food decay and dietary choices as the main concerns and additives considered less of a threat (Van Otterloo, 2000, p.309).

Where in policy making the value of ‘natural’ was denied, producers did use naturalness as a market opportunity. Producers frequently used the positive connotation of ‘natural’ that existed among consumers to improve the image of a product. Through commercials, packaging, highlighting of a selection of ingredients, emphasizing additives that were *not* in the product, developing snacks (like the muesli-bar), and slight alterations to the product (such as shifting to natural or nature-identical flavourings and pigments), an association between the product and the concept of naturalness was created (Belasco, 1989, p. 220-225; Van der Ploeg & Ettema, 1990, p.2-3; Van Stigt Thans, 1988, p. 15; Van Otterloo, 2000, p.309; Spencer, 1993, p. 334; Cannon, 1988, p. 212; Mintz, 1996, p.53). As was the case with health aspects, this enabled people to remain in their role of consumer.

Although actions in science and food regulation and the market differed, the result of both was that ‘natural’ did not have an unambiguous meaning, so that it was not possible to clearly distinct natural from unnatural:

“ While in their hearts most people still believed that only some things were natural and others were not, when it came to shopping it seemed that both everything was natural and nothing was natural” (Belasco, 1989, p.225).

1.2.1. Meat: from ‘unnatural’ to ‘safe’

An increasing amount of chemical substances were used in the process of meat production. Apart from additives used in the end product, residues from medicines and pesticides in feed were of concern to some. Among these medicines were antibiotics and hormones: in the early 1960s, it was discovered that animals gain weight faster because of them (Reijnders & Sijmons, 1974, p.53-73; Kappelhof, 1990,

⁴⁵ “The Dutch consumer is used to bread with a light top, that stays fresh for a long time, which makes it necessary to use flour improvers and emulgators. In this way also wholemeal bread can get attractive features, what immediately sticks out in comparison with foreign bread.” (WVC, 1983, p.25, translation MV)

p.163; Van Logtestijn, 1980, p. 197). With developments in meat production, meat became increasingly considered ‘unnatural’:

“Zoveel intensief geknoei met de natuur [...] kan natuurlijk niet helemaal onopgemerkt gebeuren. Het meest directe nadeel vinden we in de kwaliteit van vlees.” (Reijnders & Sijmons, 1974, p.56).⁴⁶

This created room for vegetarian products as the most obvious ‘natural alternative’. Over the years, publicity about livestock conditions and incidents of meat contamination strengthened the desirability of natural, vegetarian food (Spencer, 1993, p.333-336).

Food product regulations evolved mostly along the lines of the directives from the EEC and developments in international trade. In 1968, the United States demanded that Dutch meat should meet EEC directives. Complying with EEC directives was of importance for meat export to several countries, but the system of regional meat inspections did not deal with this task. Gradually the system was centralised and revised. From 1982, a national meat inspection was put in operation: the ‘Rijksdienst voor de keuring van Vee en Vlees’ (Kappelhof, 1990, p.33; Oosterwijk, 1999, p. 142). In 1972, the United States detected a pesticide in Dutch ham. Because of it, the Dutch meat industry lost the U.S. exports, which meant a great financial loss for the meat sector (Van Stigt Thans, 1988, p.53; Schönwetter, 1999, p.112, 145). Besides being considered a threat for human health (the Nutrition Council and the Health Council advised against the use in 1977), hormones could threaten export as when Italy refused to import calves given hormones (Kappelhof, 1990, p. 34).

Trade interests could obstruct the execution of the regulations. Hormones and antibiotics were used and traded illegally despite a 1965 law and a stricter revision of 1986 (Kappelhof, 1990, p.163-164; Panman, 1993). Schuddeboom (1980) mentions that sulphite in minced meat, although illegal, remained being used as long as the penalty did not outweigh the gain. Inspection of meat and production practices was complicated because of growing production and the broadening of the field (inspecting for residues). Some argued that public health interests were endangered by overloading inspectors. An additional difficulty was that the department of agriculture (L&V) ‘was not pleased’ with measures that would interfere with export. In 1971, meat inspection had unexpectedly become the responsibility of L&V⁴⁷, but the veterinary inspection under WVS, also supervised the process. This occasionally led to friction between the departments (Kappelhof, 1990, p.68-69, 156; Oosterwijk, 1999, p.147).

In previous chapters, I’ve described how export was made a dominant guiding principle in developments in products like meat. Because of this, export interfered strongly with the definition of ‘good meat’. Safety measures that would benefit export such as the standardisation regulations and centralisation of inspection were facilitated. On the other hand, effort was made to reduce the disadvantages of meat safety measures for export.

Developments in meat production moved away from ‘naturalness’. The dominant practice of meat production by its’ own classification excluded other

⁴⁶ “That much intensive tinkering with nature obviously cannot happen unnoticed. The most direct drawback we find in the quality of meat.” (Reijnders & Sijmons, 1974, p.56, translation MV)

⁴⁷ From 1920, it was the joint responsibility of the department of health and the department of agriculture.

definitions of 'good meat' (naturalness), while further industrialisation and centralisation of production was accompanied by increased interdependencies in the production process, rendering it harder for individuals to apply any other production methods (Van der Ploeg, 1990, p.19).

1.2.2. Conclusion

As was the case with health, the drive to naturalness implied an entirely different approach to food, which was considered a threat by the established food practice (Van der Ploeg, 1990, p.19). The prevailing food practice reacted by making the wish for 'natural food' partly into something that should not be desired and partly into a marketing opportunity. Measures taken in the public interest remained focussed on food safety. This focus on food safety meant that the raised problems were made solvable by technical measures while for the most part maintaining the order in the prevailing practice (see also Cannon, 1988, p. 211).

Science and policy-making mostly ignored 'naturalness' in addressing discontents with food and also redefined naturalness into something one should not be wanting. On the one hand, the distinction between natural and chemical was disproved:

“The “everything’s natural” argument simply defined away all conceivable conflicts.”
(Belasco, 1989, p. 115)

In the market, highly industrialised products were labelled 'natural', creating a situation wherein any product could claim to be natural. Van der Ploeg & Ettema call this 'fake green' which is both a reaction to and a condition for further development of food chains (1990, p.3). Belasco (1989, p.117) also mentions a second way in which natural was made undesirable: there was distinction between nature and man-made; and man-made was better. In this section, we came across this statement as an argument: much more research went into chemical substances, rendering them more reliable than natural resources.

With the shift of the public concern from 'naturalness' to food safety, the scientific, end product orientated view on food risks became normal. Naturalness no longer had a role in disputes over additives and residues in food. A resistance against industrialised food could not be linked to food quality issues.

1.3. Conclusion

The discontents described in this section would at first glance seem to point to 'less': eating less fats, sugars and additives and producing less processed and less complex foods. However, the way the discontents with food were dealt with, illustrates the consequences of the marketisation of food described in the previous chapter. The problems were solved via the market, which meant an emphasis on 'more'; as adding nutrients, more processing, more varieties of products with 'health foods and natural foods'; more technology in manufacturing and controlling foods, and more market and export opportunities.

This section has described how the ordering in the food practice was maintained by redefining threats as non-threats and opportunities. With these redefinitions, worries about additives, residues and the technological approach to food

and to solutions to problems with regard to food, were dismissed. As Otterloo (1990) describes, worries about naturalness and health with regard to food have come up with every major step in intensifying industrialisation of food and increasing the role of research and development in food developments. As shall be described in the next chapter, the activity from the food practice to re-enrol health and naturalness can not prevent worries and criticism to arise with regard to technological approaches to food and industrial processing of food. A wish for natural, whole foods and worries about high-tech food shall keep re-appearing as long as the prevalent ordering of the food practice will remain unaltered.

2. Agricultural policy: questioning the desirability of intensive animal production, while stimulating its growth

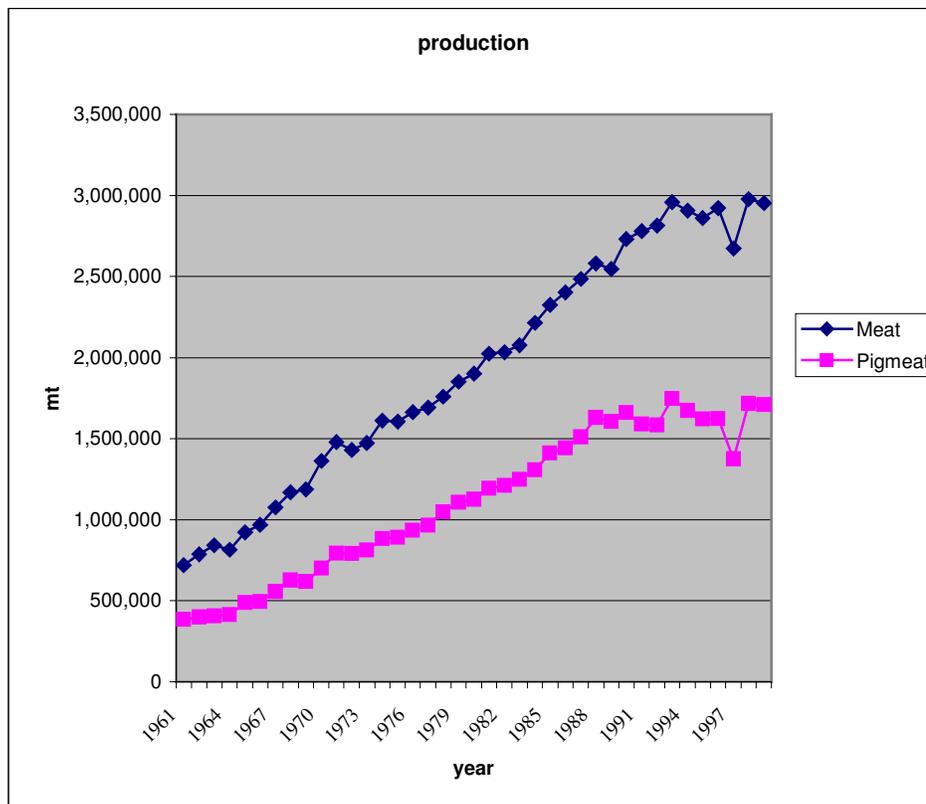


Fig. 4. Animal protein production. Source: FAO, 2001

As described in the previous chapter, livestock farming intensified from the early 1960s. In the 1970s, the production of animals grew further. Farms specialised and became concentrated in the sand areas. The number of animals per farm increased. Vertical integration of production had become inevitable in the intensive animal production in the form of contracts between the feed industry, farmers, and the slaughter industry. Between 1960 and 1977, the total number of pigs in the Netherlands grew from approximately 3 to 8 million. In 1976/1977 proceeds from intensive animal production was one third of the total profits from agriculture. Pig breeding took up the greater part of intensive animal production (70%). Intensive animal production was good for 4% of the Dutch export and 20% of the export of

agricultural products in 1976. Of the production of calves 88% was exported, 69% of chickens, 38% of eggs and approximately 50% of pigs (Wijnen, 1979, p. 13-15).

“In die tijd [begin jaren 70] ontstond ook de benaming ‘bio-industrie’ voor de agrarische bedrijvigheid, die in landbouwkringen al geruime tijd met ‘veredelingslandbouw’ werd betiteld, wat in kringen van de critici absoluut niet werd begrepen!” (Ketelaars, 1992, p.242).⁴⁸

“Dat daarbij in landbouwkringen het woord bio-industrie consequent wordt vervangen door termen als “veredelingslandbouw” of “dierveredeling” is – in het licht van de [...] ethische aspecten – een welhaast navrante bijkomstigheid.” (Algra, de Cloe & Vonkeman, 1972).⁴⁹

Developments in intensive animal production met with societal concern. Concerns about the quality and health of products as well as the conversion of plant into animal foods are discussed in other sections of this chapter. Also of concern was animal welfare, the impact of intensive animal production on the environment, the decline of agricultural employment, the income and position of farmers, stench, the deterioration of the landscape, overproduction, industrial production methods and the dominant position of large industries (Bio-industrie en landbouw, 1972; Programmakommissie bio-industrie, 1974; Velthuizen, 1973; Geesink & van den Brandt, 1980; Reader, 1980, p.68-69). The former minister of agriculture and former chairman of the European Commission, S. Mansholt claimed in 1974:

“Wij gaan een richting uit van zeer grote veredelingsbedrijven, vaak nog geconcentreerd in bepaalde gebieden. Deze ontwikkeling is officieel, ook door mij, aangemoedigd. Ik kan echter de nu sterk milieuvervuilende bio-industrie geen landbouw meer noemen [...]. De moderne behandeling die de dieren moeten ondergaan noem ik trouwens dierenmishandeling.” (Mansholt, 1974).⁵⁰

As the previous chapters indicated, the prevalent practice of animal production had become a tightly knit interplay between agricultural policy making and the expression of agricultural interests (the ‘green front’), research, education and consultation (the ‘OVO’-triangle), financing (the ‘Rabo-bank’) and production (delivery of feed, medication, buildings, animals etc.). This prevalent practice of political, technological, scientific and economic activity now evolved along the guiding principle of increasing the production and productivity that was build up from the past developments.

The role of the farmer was restricted, prescribed and consolidated by the production practice. Benvenuti writes that the farmer works within a technological administrative task environment. Technology as a language is an orderings mechanism as well as an ideological principle: criticism of developments in agriculture is not possible, because this counts in the prevalent language as irrational (Benvenuti, 1991).

⁴⁸ “In those days [the early 1970s] the name ‘bio-industry’ arose for the agricultural activity that in agricultural circles was called ‘improvemental agriculture’, something that was absolutely not comprehended by the circles of critics.” (Ketelaars, 1992, p.242, translation MV)

⁴⁹ “That in agricultural circles the word bio-industry consequently is replaced by terms such as ‘improvemental agriculture’, is – viewed in the light of the [...] ethical aspects – the sad part of the matter.” (Algra, de Cloe & Vonkeman, 1972, translation MV)

⁵⁰ “We are going in a direction of extremely large intensive husbandry, often concentrated in certain areas. This development has been officially encouraged, by myself also. However, I cannot call the now strongly polluting bio-industry agriculture anymore [...]. By the way, I call the modern treatment of animals abuse.” (Mansholt, 1974, translation MV)

This section will elaborate the role of (agricultural) policies in the progress of animal production and how the established practice dealt with obstacles raised regarding intensive animal production.

2.1. Reactions to resistance to intensive animal production

In the early seventies, modern techniques in livestock breeding (battery chickens) were displayed at the Flevohof, a 'look, play and do park' as well as a parade for Dutch agriculture, opened by the Ministry of Agriculture in 1972. To the surprise of organisers and contrary to the aspirations of the Flevohof, visitors were shocked by being introduced to the living conditions of the farm animals (Stol, 1977).

“Sinds die opening hebben veel mensen mensen met de bus of auto voor een “dagje uit” de Flevohof bezocht en dezelfde schrikreactie beleefd; de krant en de televisie zijn zich met het probleem gaan bemoeien; de - onvermijdelijke - actiegroep “Lekker Dier” is ontstaan; inventieve mensen komen op voor “scharrelkippen”; kortom het is - gelijk de milieuhygiëne - doorgedrongen tot het geweten van het Nederlandse volk en daarmee tot politiek niveau en regeringsbeleid.” (Riessen, 1976, cited in Stol, 1977, p.8)⁵¹

Harrison's *Animal machines* (1964), of which a Dutch translation was published in 1965, had raised some public concern about farm animal welfare (van de Poel, 1994). Television broadcasts in 1972 on the subject on animal welfare drew considerable public attention (Ketelaars, 1992, p.242). Conclusions from the few ethologists studying farm animals, were also critical with regard to modern production methods and breeding environments (Westerloo, 1972).

Intensive animal production broke off the relation between land and animals: feed and manure were no longer obtained and used at the animal farm. Concerns of possible overproduction of manure and the effects on the soil had first been raised in the mid 1960s by agricultural scientists. In 1972, a publication written by an agricultural researcher and published by an environmental organisation (“Stichting Natuur & Milieu”) brought the desirability of intensive animal production under the attention of a broader public (Algra, de Cloe & Vonkeman, 1972; Frouws, 1994, p.77). Parliamentary questions were raised with regard to this publication, which were the motive for a white paper on intensive animal production (L&V, 1975). The white paper discussed the economic and structural aspects as well as intentions regarding the arisen concerns:

“Het is duidelijk dat bij de beschouwing van de intensieve veehouderij de relatie mens-dier een rol speelt. Hoewel vanuit diverse cultuurpatronen hierover verschillend wordt gedacht, moet worden geconstateerd, dat in onze Westerse maatschappij de wens bestaat vlees te eten. Deze realiteit [...] gebiedt te erkennen dat het fokken, houden en slachten van dieren hieraan inherent is. Dit betekent niet dat de mens geen verantwoordelijkheid zou hebben ten opzichte van het dier, de natuur en het milieu. Het gaat erom voor ieder persoonlijk en voor de maatschappij als totaliteit de juiste relatie tussen mensen en natuur te vinden en te bewaren.” (L&V, 1975, p.2).⁵²

⁵¹ “Since its’ opening, a lot of people have visited the Flevohof, by bus or by car, for a day out and experienced the same shock reaction; the papers and television began to interfere with the problem; the –inevitable- pressure group “Lekker Dier” arose; inventive people stand up for “scratching chickens”; in short, it is –as is the case with environmental hygiene- dawned on the conscience of the Dutch people and with that reached the political level and governmental policy”, translation M.V.)

⁵² “It is clear that in considering the intensive husbandry the human-animal relationship plays a role. Although opinions from different cultures are divided on the subject, we have to establish that in our

The white paper expressed the expectation that possibilities for a further growth of intensive animal production was limited compared to the sixties, due to the saturated European market combined with production growth in other countries of the European community. Another reason for this expectation was that the feed supply had become more uncertain and costly. Also, a mixed farm with land-bound agricultural activities was considered to be the best option for the future. Concentration of animal production in relatively small regions was considered unacceptable, because of the risk of contamination of animal diseases and consequences for government and producers of the necessity of slaughtering a contaminated livestock, export blockade and transport prohibition. With regard to animal welfare the ministry declared to be willing to contribute to regulation if scientific, measurable norms were presented. Scientific research was encouraged. The environmental impact of intensive animal production was dealt with by means of regulations for the location of farms ('Hinderwet') and the distribution of manure ('mestbanken'). It is mentioned that there are ample possibilities for the use of manure in agriculture. With a production growth comparable to the previous ten years, the market for manure would be saturated by the 1980-1990s. However, the ministry expected the growth would be considerably slower in the coming years. Reversing recent developments in animal production was considered out of the question as the consumer would not pay the much higher prices and consequences for export (which the business depended on) would be disastrous (L&V, 1975).

The expectations voiced in the white paper regarding the limited production growth did not come to pass, partly because of activities by the ministry itself. Producers did not consider the white paper harmful to the sector (Ketelaars, 1992, p. 243). Next, I will describe how surpluses, animal welfare and manure were dealt with in the animal production practice⁵³.

2.1.1. Animal welfare

The pressure of animal protection organisations was eventually felt by producers:

“...Getuige een opmerking op een pluimveedag, dat het knippen van lange nagels bij batterijkippen *‘ter voorkoming van critiek van de zijde van de dierenbescherming het best in overleg met de dierenarts, dus zo vakkundig mogelijk, zonder bloedspatjes of pijn te veroorzaken, kan geschieden.’*” (Ketelaars, 1992, p.241).⁵⁴

As the white paper indicated, regulation for animal welfare however, would only be based on measurable, scientific norms. Science became vital in ascertaining what animal welfare was, bridging animal behaviour and human conclusions regarding the well-being of animals. Little research on the behaviour of farm animals had been done

Western society there is a desire to eat meat. This reality [...] commands to acknowledge the inherent breeding, keeping and slaughtering of animals. This does not mean that humans do not have any responsibility towards animals, nature and environment. It is a matter for anybody personally and for society as a whole to find and keep the right relation between humans and nature.” (L&V, 1974, p.2, translation MV)

⁵³ The consequences of concentration of farms and animal diseases will be described in the next chapter.

⁵⁴ “...Witness the remark on a poultry day that the cutting of long nails of battery chickens *‘to prevent criticism of the society for the protection of animals, could best be done in consultation with the veterinarian, thus as skilled as possible, without blood spots or causing pain.’*” (Ketelaars, 1992, p.241, translation MV)

thus far (NRLO-TNO, 1975, p. 41). The knowledge network of the agricultural practice -called the 'OVO'-triangle consisting of education, research and consultation- was mainly about raising productivity of agriculture. Results of ethological studies were not easily incorporated in production practices, because of the different approach to animals and since the results did not contribute to productivity. Also, research itself was challenging, because it required an uncommon approach to the subject (van Mansvelt, 1982, p. 21). Ketelaars (1992) mentions with regard to ethological research on chickens that:

“ In de 70-er jaren is dit gedragsonderzoek verder tot ontwikkeling gekomen op Het Spelderholt door Brantas, die het daar verre van gemakkelijk mee had, want veel begrip was er nog niet voor een dergelijke benadering.” (Ketelaars, 1992, p.242).⁵⁵

Besides the difficulty of incorporating the subject into the 'OVO-triangle', it was also kept out of the 'green front', the agricultural policy-making practice. The ethnologist Van Putten worked within a governmental institute, and was twice banned from public speaking by the ministry (Andere Tijden, 2001).

In the case of battery cages for chickens, the expectation was that through technology development animal welfare and profitability would be combined. In 1979, Minister of Agriculture Van der Stee mentioned a possible abolishment of battery-cages for chickens for the first time and ministers of agriculture in the European Community announced research into the possibilities. In 1983, the law Tazelaar/Van Noord was passed, which proposed some adaptations to the existing cages and an abolishment of battery-cages by 1994, provided that an economically viable alternative was available. An alternative was developed, but was considered politically and economically unacceptable. Both initiators of the law, Tazelaar (meanwhile the chairman of the product board for poultry and eggs), and Van Noord were against abolishment of battery cages. The abolishment was put off indefinitely as the government claimed it didn't want to damage the position of the farmers and wanted to keep pace with the European Community⁵⁶ (Van de Poel, 1994; Ketelaars, 1992, p.245).

Frouws sums up the history of regulations for pig production:

“Het Nederlandse welzijnsbeleid voor varkens kent een lange, weinig bemoedigende historie. Het begon met tien jaar onderzoek (1974-1984). Toen volgde er een periode van overleg tussen overheid, georganiseerde landbouw en maatschappelijke organisaties (1984-1988). Het resultaat was dat er besloten werd tot wetgeving, voorlichting en meer onderzoek. Uiteindelijk kwam er in 1994 een Varkensbesluit met huisvestingsnormen, verzorgingsvoorschriften [...] en overgangsbepalingen. Bij controle door de algemene inspectiedienst van het ministerie van Landbouw in 1995 bleek dat het Varkensbesluit niet werd nageleefd.” (Frouws & Van Broekhuizen, 2000, p. 28).⁵⁷

⁵⁵ “In the 1970s, this behavioural research has been developed further on 'Het Spelderholt' [research institute] by Brantas, who had it far from easy with it, because there was not much understanding for such an approach.” (Ketelaars, 1992, p.242, translation MV)

⁵⁶ In 1999, a resolution on EU-level was that battery-cages will be prohibited from 2012 (Frouws & van Broekhuizen, 2000, p.30)

⁵⁷ “The Dutch welfare policy for pigs has a long, scarcely encouraging history. It started with ten years of research (1974-1984). Then followed a period of consultation between government, organised agriculture and public organisations (1984-1988). The result was a decision for regulations, consultation and more research. Finally, in 1994, a 'Varkensbesluit' passed [a regulation concerning the welfare of pigs], with norms for accommodation, prescriptions for tending and temporary provisions. From checks of the inspection service of the ministry of agriculture in 1995, appeared that the 'Varkensbesluit' was not followed.” (Frouws & Van Broekhuizen, 2000, p. 28, translation MV)

The issue of animal welfare had become part of the animal production practice as ‘species-related behaviour of the animal’, in such a way that it did not obstruct production growth. In the construction of the prevailing animal production practice, the animal in was defined and enrolled in the practice. The animal was an agro-industrial production unit (van Mansvelt, 1982, p.21; Algra et al., 1972, p.37). The practice enabled developments concerning animals that were in accord with this role, while obstructing developments that did not comply with the functioning of animals in the production practice.

The prevalent practice prescribed and restricted the handling of the item of animal welfare. The dependency on science to find out whether the living conditions were problematic and on technology to solve problems by adjusting the husbandry systems, as well as the condition that measures would not damage the sector’s income were a result of the working of the animal production practice as it was constructed. Monster (1975, p.61-62) writes that results of animal behavioural research are not expected in the short term, and if measures would be enforced, they should be of no or little costs, because otherwise the export would be damaged.

Policy-makers also acted according to their role in the functioning of the production practice. Measures with regard to animal welfare could only be taken if the existing practice would remain intact (LNV, 1987, p.15-16); options that would lower the intensive animal production or change the leading guiding principle of increasing production were not considered or held up.

2.1.2. *Manure*

As the white paper on intensive animal production shows, eventual manure surpluses were not considered a threat. The forewarning of some agricultural scientists with regard to manure surpluses were not welcomed by representatives of the ‘green front’:

“ Hen [de kritische landbouwkundigen] werd indoctrinatie verweten, omdat zij een belangrijke tak van economische bedrijvigheid zwart maakten en te weinig vertrouwen stelden in een technische benadering van het mestvraagstuk.” (Frouws, 1994, p.77).⁵⁸

According to Frouws (1994), the ministry of agriculture, the trade organisations (Landbouwschap), and the interest organisations (LTOs) –the ‘green-front’- operated as gatekeepers for the animal production sector, actively neutralising or delaying information with regard to manure that would disadvantage the animal production. Henkes, one of the agricultural scientists who had proposed in 1973 to put a limit on the number of animals per hectare, was urged by a spokesperson for the ‘Landbouwschap’ not to mention any numbers that manure norms could be based upon (Frouws, 1994, p.77-82; Termeer, 1993, p.131)

In concordance with the functioning of the ‘OVO’-triangle, solutions were sought through science and technology. For example, through altering the feed-ingredients or new ways of manure processing. This was another way in which the prevailing practice kept animal production in tact. Frouws (1994, p.231) refers to the

⁵⁸ “They [the critical agricultural experts] were accused of indoctrination, because they blackened an important branch of economical activity and had to little faith in a technical approach of the manure problem” (Frouws, 1994, p.77, translation MV)

depoliticising effect of the technological approach to problems and the ‘OVO’-model where agricultural development follows one scientific-technological optimal path:

“Dit perspectief laat weinig ruimte voor politiek-maatschappelijke keuzen met betrekking tot de gewenste ontwikkeling van de landbouw en voor ‘afwijkingen’ van de door wetenschap en technologie uitgezette weg” (Frouws, 1994, p. 231).⁵⁹

Unable to entirely ignore warnings about manure surpluses, a stream of research into the nature of the problem and a search for technical solutions followed. The result was a battle over data on manure surpluses and a lot of (research, financial and ideological) efforts into making the processing of manure into a solution. (Termeer, 1993, p.131; Frouws, 1994, p.206; Renkema, 1986)

The ministry of agriculture were not able to deal with the issue on manure on their own and an interdepartmental struggle arose between them and the ministry of environmental hygiene. From the second half of the 1970s, opinions within the ‘green front’ were divided on acceptable policies. The number of animals per business grew and the belief in a natural limit to the animal population diminished. Though in 1975 the expectation was that the number of pigs would not surpass 7 million, there were 10 million pigs in the Netherlands by 1980. Reports of damaging environmental effects kept appearing, such as a 1982 article in *Nature* that concluded ammonia from manure was a main contributor to acid rain. By 1984, a manure surplus was generally accepted as a problem (Frouws, 1994, p. 82-88; Termeer, 1993, p.107-113, 135, 139). The ‘green front’ and the ‘OVO’-triangle had not succeeded in making technical innovations like manure processing the solution to manure surpluses. If that had been the case, the role and guiding principle of animal production could have remained intact. Now, manure surpluses formed a valid threat to the prevalent practice.

The ministry of agriculture saw a need to enforce regulation to reduce the negative effects of manure surpluses. In 1982, a new cabinet had improved cooperation between the ministries of environment and agriculture. The ministry of agriculture had also become responsible for ‘nature’, which meant they represented environment as well. For the ministry to deal with the manure surpluses meant acting against the agricultural interest organisations and the ‘landbouwschap’ while other departments and politicians had their say in the matter as well. In 1984, the ministry of agriculture launched an interim law that limited further growth of the number of pigs and poultry. It was the first measure taken without confiding the agricultural sector. The consequence for the ‘green front’ was that it was not able to operate as a ‘front’ anymore (Termeer, 1993, p.135-136, 139, 252; Frouws, 1994, p.89-90, 256, Breeman, Op den Kamp & Zannoni, 2000). The success of agricultural regulation had been made dependent on the functioning of the ‘green front’ following the guiding principle of stimulating production growth. The ministry by itself could not easily influence the practice on an environmental matter that acted against the guiding principle of economic growth. The minister indicated that maintaining a prospering animal production sector was still the starting point. Between 1984 and 1986, the number of pigs grew by 20% (Termeer, 1993, p.139; Frouws, 1994, p. 95, 100).

From 1987, most of the regulation on manure was implemented. The manure problem was not settled. The struggle over figures on surpluses and how to eliminate them continued. One possible solution to manure surpluses: reducing the number of

⁵⁹ “This perspective leaves little room for political- societal choices concerning the desired development in agriculture and for ‘deviations’ of the path set by science and technology.” (Frouws, 1994, p. 231, translation MV)

animals was a ‘taboo’. Political and agricultural decision-makers did not consider the option:

“Het omwille van een milieuprobleem inkrimpen van de veestapel is een opvatting die tegenstrijdig is met hun [configuraties landbouw en overheid] meest basale ideeën over landbouw en goed ondernemerschap.” (Termeer, 1993, p.266).⁶⁰

At the same time, those with environmental concerns considered a reduction of the number of animals as the only solution, though they were not considered serious contributors. Efforts to deal with manure surpluses were hardly carried outside the prevalent economic-technical frame (Termeer, 1993, p.140, 266-267; Frouws, 1994, p.100-101; 207, 235-237). By 2000, the ‘manure dossier has been talked to death’ (Schans, Ypma & Backus, 2000).

In conclusion, the established practice was not able to incorporate environmental effects of intensive animal production with a solution that did not affect the dominance of the ‘green front’ and the ‘OVO triangle’ and the guiding principle of increasing production. Manure remained a threat for animal production as it functioned. The prevalent practice could continue: measures that would be economically disadvantageous were not considered. Further growth of the animal production sector, however, was limited by environmental regulation (Ketelaars, 1992, p. 250). The role of the government in agricultural policy making was redefined. The ministry of agriculture was not as much part of a ‘green front’ anymore and environmental interests had to be considered in addition to agricultural interests.

2.2. Agricultural policy

Agricultural production in the European Community still faced surpluses (see previous chapter; Wesselius, 1974). These surpluses had to be sold outside the EC or used as food aid, which was costly for the European Union. The common agricultural policy took up a large part of the budget of the European Committee: about 75% in the 1980s. The Community was unable to solve the problems with high costs and overproduction in the short term, the common agricultural policy was reformed five times between 1968 and 1992.

“Ik geloof dat ons beleid deze problemen eigenlijk voor een groot deel heeft verergerd. Het is waar dat technische vernieuwingen een grote toename van produktie en produktiviteit in de landbouw mogelijk maakten. Maar wij hebben de productie-vergroting aangemoedigd door onze prijspolitiek. [...] Als er problemen opdoemden, neigden de landbouwministers en –dat moet ook worden erkend- de Commissie er steeds toe om de marktordering al maar ingewikkelder te maken: er werd nooit iets vereenvoudigd of afgebouwd.” (Tracy, 1990, p.23)⁶¹

⁶⁰ “Reduction of the number of pigs because of an environmental problem is a conception that is opposed to their [configurations agriculture and government] most basic ideas on agriculture and good entrepreneurship.” (Termeer, 1993, p.266, translation MV)

⁶¹ “I believe that our policy has actually worsened these problems. It is true that technical innovations made a huge increase in production and productivity possible. But we have encouraged production growth by our price politics. [...] When problems appeared, the agricultural ministers and - that has to be acknowledged – the commission repeatedly tended to make the market ordering more complicated: never was something simplified our reduced.” (Tracy, 1990, p.23, translation MV)

With the first revision, the ‘Plan Mansholt’, Mansholt’s proposition was to reduce the number of employees, the area of cultivated land and the number of livestock, lower prices and enhance the production efficiency. The plan met with severe resistance. In 1971, two people died and some ten got wounded when 80,000 farmers protested in Brussels against that year’s proposals. After four years (1972), the Plan Mansholt was narrowed down to those aspects of the plan that would stimulate production (De Groot, 1997, p.11, 53-60; Westerman, 1999, p.173-176; Tracy, 1990, p.22-24; Landbouwschap, 1969). According to Tracy (1990, p. 25-27), agricultural policy was mainly focussed on the short term and heavily influenced by the farmers’ organizations.

For agricultural products like meat, the market was actively extended by application in the food processing industries, promoting meat sales at home-market and by finding new markets abroad. One of the main activities of the product board of livestock, meat and eggs, was expanding the market. Part of the income from the levies on slaughter animals was used.

The ‘OVO’-triangle contributed to innovations dealing with feed, medical care, barn equipment, animal breeding, labour organization and business planning (Velthuis, 1973). New technologies were adopted by so-called ‘fore runner’ farms from where they spread among other businesses (Termeer, 1993, p. 76). Information was spread through agricultural consultants. With regard to pig production, consultation was paid fifty-fifty by the government and the pig production sector. Consultants visited the farms and assisted in running the business:

“De grotere bezochten we gewoon allemaal, vijf keer per jaar. En dat leidt natuurlijk tot een enorme intensieve begeleiding en het opkrikken van het ondernemerschap en het doorvertalen van nieuwe kennis en inzichten. Dat was gigantisch, [...]” (Backus, 2001).⁶²

Research was carried out and spread according to the ‘OVO’-model of a single optimal scientific-technological path for agricultural development’ (see section on manure). Performing within this model further normalised the constructed practice and fixed the guiding principle of increasing production for developments in agricultural research (see Schakel, 1990; Hengel, 1987).

“Wat opvalt in [...] onderzoek is dat onderzoekers niet simpelweg wetenschappelijke kennis ombouwen in technische adviezen, maar dat zij permanent bezig zijn technische gegevens, wetenschappelijke inzichten, sociale feiten, economische kengetallen en maatschappelijke normen te definiëren, te interpreteren en te modificeren. Daarmee gaan zij niet buiten hun boekje, omdat het juist eigen is aan technologisch onderzoek dat zowel de objectieve als de normatieve en de subjectieve dimensie in het geding zijn. Zij sleutelen dus niet alleen aan kennis, maar tevens aan normen, waarden, behoefteninterpretaties en identiteiten.” (Schakel, 1990, p. 171).⁶³

Research and consultation that was not according the guiding principle of increasing production found no application. For example, agricultural consultants promoting the

⁶² “The larger ones we just visited all, five times a year. And that leads to an enormous intensive supervision and the improvement of entrepreneurship and passing on of new knowledge and insights. That was gigantic, [...]” (Backus, interview 2001, translation MV)

⁶³ “What is striking in [...] research is that researchers do not simply transfer scientific knowledge into technical advices, but that they are continually working on defining, interpreting and modifying technical data, scientific insights, social facts, economic figures and societal norms. Doing this, they do not something illegitimate, because it is inherent to technological research that the objective as well as the normative and subjective dimension are in order. So they do not only tinker with knowledge, but also with norms, values, need interpretations and identities.” (Schakel, 1992, p. 171, translation MV)

motto, 'not more, but better', found no audience (Termeer, 1993, p.113). In 1990, more than a third of the budget of the ministry of agriculture was spent on 'OVO' (Heijman et al., 1991). The primary goal was to improve the productivity in agriculture by improving technical developments (Meester, 1980; Maas, 1994).

In 1978, a law on investment deduction ('Wet Investeringsrekening, WIR') was enforced in the Netherlands. This was an instrument for reaching selective economic growth and enhancing employment. It was part of a white paper on selective growth of 1976 ('Nota selectieve groei'). Growth would be selectively directed, in order to be able to reach other societal goals as well: an unpolluted environment, responsible town and country planning, restrained management of energy and materials, and international labour distribution that would be fair to developing countries. The WIR was also used to help bring about reasonable incomes in agriculture. The WIR turned out to be a powerful stimulator of the intensive animal production and the growth of the number of animals; large proportions of the investments on modernising and intensifying animal production systems were subject to tax deduction. Larger businesses especially profited from this policy (Van den Brink, 1990, p.156; Van der Meer et al., 1991, p.61; Kogels, 1981).

The OECD attempted to reintegrate food-related policy activities into a single system. An OECD report observes a growing awareness in OECD countries for viewing the whole range of activities relating to food as a single system. It is noticed that 'food policy' after the Second World War became identified with 'farm policy'. The report suggests a food policy approach, which would cover not only agricultural production, but every facet of food production and consumption. Instead of food related policies fragmented by narrow and partial approaches from several ministries, the overall implications of policies should be assessed. This approach would recognise the competing goals that exist within the food system. The approach would enable policy makers to see conflicting claims in the context of the food system as a whole and avoid the negative consequences of narrow administrative responsibilities (OECD, 1981, p. 7-15). The attempt was not successful. Norway became one of the few Western-European countries to set up a comprehensive food policy (Tansey & Worsley, 1995, p.219).

2.2.1. Conclusion

National and EC governments acted in favour of stimulating growth of intensive farming, and agricultural policies resulted in an active contribution to the growth of the intensive animal production sector. Policy focus remained on stimulating production. In spite of the expectations voiced in the white paper on intensive farming industry, the attempt by OECD to redefine the policy role with regard to food, and the shift in the role of policy-makers in agricultural policy makers brought on by the manure problems, the activities in stimulating agricultural production went on.

2.3. Conclusion

The criticism of intensive livestock production was treated in a technical way. In the 1970s and 1980s, the interconnectedness of politics, knowledge and agricultural production reached its zenith. It formed an infrastructure through which path-dependent (stimulating growth, efficiency and intensification) knowledge

development and application could easily find access. At the same time, it locked out non-fitting (knowledge) developments. For example, questions about whether intensive livestock production was on the whole desirable, questions regarding world food distribution, and ethical questions of animal treatment were all circumvented. The guiding principle of increasing production was kept in place. By working at technical solutions to isolated problems, intensive livestock production could keep growing. This led to a further increase and wider availability of animal products.

Two administrators from the department of agriculture concluded in an article that the national government hardly had any influence on developments in intensive animal production (Geesink & van den Brandt, 1980). They attributed the direction of the developments to geographic characteristics of the Netherlands, technical and industrial developments, and a growing market for products. The limited political influence on intensive animal production came from the European Commission. Although it was not in all cases directly intended, this section shows that both national and international government acted within the guiding principle of stimulating the growth of intensive livestock production. While noticing the desirability of the intensive livestock production was questioned at some points, the government was unable to act against the constructed governmental role in agricultural production and the constructed guiding principle of production growth stimulation. The governmental actions that had the most impact on the practice were choices that were inherent and beneficial to the system. The political interests that mattered most were corresponded to the frame of the practice. Thus, the practice of agricultural production retained the role of government and policies in it, and the activities of government and the working out of policies maintained the practice of agricultural production.

3. The world food supply: presenting a diet shift as a way to feed the world

During the late 1960s and early 1970s, experts expected that there wouldn't be enough protein by the 1980s, considering the global population growth. In 1967, the Food and Agriculture Organisation of the United Nations spoke of "the daily increasing protein crisis", and recommended a series of measures to address it (FAO, 1985; United Nations, 1968). In 1972 and 1973, a series of harvests failed, increasing the sense of concern regarding the world food supply (Terhal, 1974). Some interest groups, scientists, and political actors put forward that it might be better if the developed countries would consume more plant and less animal proteins, leaving more food for people in developing countries. The notion received attention from the media. (Documentatie- en informatiecentrale van de Horstink: Minder vlees mevrouw?, 1975; Van der Peet, 1976). The second report of the 'Club of Rome' was used for support, as it mentioned that 7 kilos of grains are needed to deliver 1 kilo of meat (Mesarović & Pestel, 1974). In a document prepared for the World Food Conference in Rome in 1974, progressive Dutch political parties (D'66, PPR & PvdA) wrote:

“Eigenlijk bestaat er nog steeds een vorm van kannibalisme op deze aarde, zij het in een moderne versluierde vorm. Het komt voor in rijke landen, waar men zich voedt ten koste van de mensen in arme landen.” (Ginkel, Rote, & Van der Hek, 1974, p.62)⁶⁴

As one of the 29 goals in their recommendations for a policy dealing with food shortages, they suggested to put a brake on the consumption of meat in the Netherlands and Europe. Levying meat was considered an option, and also good and active education by the government on correct and balanced eating patterns was deemed necessary (Ginkel, Rote & Van der Hek, 1974).

3.1. Seeking a diet shift through eating less meat

The quantities of meat production and consumption were questioned. The former minister of agriculture and former chairman of the European Commission, S. Mansholt argued:

“De vraag is hoelang we nog kunnen doorgaan met het omzetten van 10 kg plantaardig eiwit in 1 kg dierlijk eiwit, gezien de nood in de ontwikkelingslanden, de schaarste en de stijgende prijzen. Dit scheidt op den duur ook politiek een onhoudbare situatie.” (Mansholt, 1974). “We zullen moeten kiezen of we de mensen of de varkens op het spel willen zetten. [...] Tot dusver hebben we voor de varkens gekozen. De rijke landen zijn nu verplicht om hun ongebreidelde groei, die ten koste gaat van anderen, te stoppen.” (Mansholt, undated).⁶⁵

Arguments for lowering meat consumption to feed more people were often linked to criticism of modern animal production. The conversion factor, the amount of edible plant material it would cost to deliver a unit of meat, was frequently treated as part of the opposition to intensive animal farming methods along with other issues: animal welfare, environment, health (such as fat content and hormones in meat), the position of workers in production (such as the position of farmers in developing and developed countries) and certain philosophies on life (Geesink & Van den Brandt, 1980; Mathot, 1974; poster: ‘Minder vlees mevrouw!', 1975).

In the previous chapter, I argued that producing and eating animal products like meat had become the normal thing to do. Within the production and consumption practice, producers, consumers and animal products all obtained certain prescribed roles and interactions between them more or less fixed those roles. In the 1970s, meat production and processing kept increasing and the consumption of meat remained relatively stable. The notion of partly shifting diet, whether it seemed sensible or not, was not part of a daily routine, whereas the consumption and production of actual amounts of animal and plant products were part of regular everyday life. Meat and other animal protein products were therefore themselves important in refuting the notion of partially shifting from animal to plant products.

⁶⁴ “In fact, a form of cannibalism still exists on this earth, be it in a modern, concealed form. It exists in the rich countries, where people feed themselves at the expense of people in the poor countries” (Ginkel, Rote, & Van der Hek, 1974, p.62, translated by M.V)

⁶⁵ “The question is for how long we can continue with the conversion of 10 kg plant protein to 1 kg animal protein, in view of the need in developed countries, the scarcity and the increasing prices. In time, this leads also politically to an untenable situation.” (Mansholt, 1974). “We shall have to choose between putting people or pigs at stake. [...] Until now, we have chosen for the pigs. The rich countries are now obligated to put a halt to the unconstrained growth at the expense of others.” (Mansholt, undated, translation MV)

As far as animal product sales did not defy the notion of a shift towards plant products, representatives of animal food production, science and policy argued the worth of such a shift on a number of grounds. One of those was the conversion factor or the amount of edible plant material it cost to deliver a unit of meat (Documentatie- en informatiecentrale van de Horstink: *Minder vlees mevrouw?*, 1975). For example Zeiss (1975), argued that 21 units of mainly edible plant material is needed to produce 1 unit of meat, while scientists researching feed and feed producers stated that it was much lower, 3:1 at the most (Van der Molen, 1975; De Boer, 1975). The percentage of grains in feed had been reduced from 62% in 1961 to 30% in 1972/1973. This reduction was mainly caused by high prices for grain in the European Union, the importation of grain alternatives, the use of by-products and offal from the food processing industries and the technological competence of the feed industry (L&V, 1975; Stolwijk, 1992).

It was also argued that eating less meat in developed countries would not necessarily lead to a greater availability of food in developing countries. For example, the Dutch minister of agriculture Van der Stee argued that an EU-policy aimed at lowering meat consumption was not a realistic option. He mentioned as one of the reasons that eating less animal products in the EU would probably only lead to a lower production of grains by the United States, because the developing countries lacked the money to buy the grains instead (Tweede Kamer, 1975; also: Geesink & Brandt, 1980).

No consensus was reached for the view that a diet shift would solve problems with the world food supply. Composers of a collection of texts on the subject in 1975 write in their introduction:

“In het kader van het kerkelijk appel van een ‘Nieuwe Levensstijl’ heeft men wel eens het voorstel gedaan dit appel onder andere te concretiseren in een actiemodel vleesbeperking. Vanwege allerlei vragen die dit opriep is het voorstel blijven hangen. In zeker opzicht ook in deze map. Er is voldoende materiaal bijeengebracht voor aktievoering. Maar er is ook voldoende om aan de zin van aktie te twijfelen. Zowel de aktievoerder als de vleeseter moeten kiezen.” (Documentatie- en informatiecentrale van de Horstink: *Minder vlees mevrouw?*, 1975, p.3)⁶⁶

But also, the solution in terms of ‘eating less’ did not concur with the ‘more’ guiding principle of the market, along which developments with regard to food were constructed. So effort was put into refuting the argument that eating less meat would solve world hunger. As was the case with the discontents regarding health and naturalness, wider grievances with the prevalent meat production and consumption were dismissed.

3.2. Seeking a diet shift through producing more plant proteins

By the late 1960s, the isolation of plant proteins from materials such as fungi, leaves and soy, to make ‘meat alternatives’ for human consumption, showed potential

⁶⁶ “In the vein of an appeal by the church of a ‘New Lifestyle’, has at one time been suggested to operationalise this appeal in an action model for meat restriction. Because of various questions this raised, the proposition is left dangling. In a certain way, this is also the case in this collection of texts. It contains enough material for action. But there is also enough to doubt the purpose of this action. The activist as well as the meat-eater will have to choose.” (Documentatie- en informatiecentrale van de Horstink: *Minder vlees mevrouw?*, 1975, p.3, translation M.V.)

profitability for food companies. Raw plant materials were relatively cheap, for example soy-meal is a by-product of the oil production. For instance, the petroleum industry took an interest in developing synthetic proteins by growing yeast on petroleum (Pyke, 1970, p.4-5).

Expectations of a world protein shortage and the urgent problems of hunger fostered more interest in ‘synthetic proteins’. The United Nations stimulated a search for new protein sources, both for feed as well as direct human consumption (Task force on bioconversion of organic residues for rural communities, 1979). Food scientists were trying to find efficient ways to produce proteins (Dols et al., 1971). Plant protein products derived from food technology were expected to be more efficient and cheaper than meat. These ‘synthetic protein foods’ were intended for developed countries. The complex processing needed to produce these foods would tie the economic advantages to countries with a high consumption of animal proteins, where it could replace processed meat products (Soy fibres, 1967). In the UK, mycoprotein was developed with financial support from the British government and formed the basis for Quorn (Bud, 1995). In the Netherlands, a product called ‘Texturised Vegetable Protein’ (TVP) was marketed. TVP was developed in the US and was made of soy and supplemented with flavourings. Dutch consumers did not warm up to TVP. Despite the high expectations of TVP as a promising food innovation, it failed on the market (Baudet, 1986; Veldhoen & Van den Ende, 1995; De Bruin, 1995)

“TVP hing tussen kunst en kitsch. De naam alleen al. Ik zie het al voor me op de kaart: TVP met sla!” (L. de Wijze, cited in Schönwetter, 1999, p. 77)⁶⁷

For food companies, however, there remained opportunities in making meat products a little less meat and a little more plant. The food technology of making plant protein products did not go to waste, and was applied to some processed meats or snacks. Meat was partly or completely replaced by texturised proteins and flavourings, in order to decrease production costs and even in order to improve healthiness of the product. A barrier to be taken was the European law on food prohibiting plant proteins in meat. But by the early eighties, it became legal to mix soy proteins with meat proteins (Leerink, 1974; Huis in ‘t Veld, 1983; Jiménez-Comenero, Carballo & Cofrades, 2001).

3.2.1. Health and synthetic protein foods

With regard to health of these new products, there was ambivalence among policy-makers and nutrition experts, which can be understood in the light of concerns with regard to highly industrialised foods, as described in the previous section: ‘naturalness versus food safety’. In 1967, the Parliamentary Undersecretary of social affairs and public health asked the ‘Gezondheidsraad’ (health council) for advice concerning the chemical production of amino acids (proteins) by the chemical and food industry. The health department wanted to know whether these products were harmful to one’s health and they wanted the health council to give them insight into the shortage of protein in developing countries. In a report of 1970, the health council came up with detailed research guidelines for ascertaining the safety of proteins. The council wrote further that they couldn’t inform the department on the food situation in developing

⁶⁷ “TVP dangled between art and artificial. Its’ name alone. I can picture it on the menu: TVP with salad!” (L. de Wijze, cited in Schönwetter, 1999, p. 77, translation MV)

countries because of a lack of information. The situation in the Netherlands, however, was considered such that protein shortages might occur among the young and the elderly, so these groups could possibly benefit from synthetic proteins (Heax, 1970).

Nutritional scientists tested TVP on rats and since the growth of this test group stayed behind, it was recommended that TVP should not be fed to children, although it was not certain what the effects would be. The product seemed to be an excellent plant source of proteins and iron. The provisional recommendation in 1968 by the bureau of nutrition education was for adults not to eat TVP more than two times per week. De Kloe advised against feeding TVP to elderly people (Dalderup, De Kloe & Den Hartog, 1968; De Kloe, 1968).

3.3. Conclusion

A diet shift in the form of eating less animal and more plant protein foods as a possible solution for world food supply problems, was operationalised in two distinct ways. On one hand, the notion was linked to criticism of modern animal production. The emphasis was on eating less meat. On the other hand, the notion was linked to efforts to increase the profitability of food. The emphasis here was on producing new plant proteins. Although the emphasis 'produce more plant proteins' was in line with the 'more' guiding principle of the market and the increasing role of research and development (R&D) in food development, producers failed to make the product desirable for consumers. Also, it did not match with the existing worries regarding to naturalness and health.

It appeared impossible to support the notion that a partial diet shift would lead to increased efficiency in food supply into a reality of one form or another, with the exception of the increased efficiency through 'making meat less meat', by the addition of plant proteins. The two operationalisations would have had distinctly different consequences for the ordering of the food practice. The 'produce more plant protein' solution would maintain the ordering, keep consumers in their consumer-role, make the problem into an R&D problem and remain focused on the profitability of the end product. The 'eat less meat' solution would deconstruct the ordering by requiring more citizen concerns be reflected in buying behaviour, downscaling the role of R&D and decreasing the influence of the market on food choices.

4. Implications for proteins

Counter developments with regard to food and food production, served as a threat to further development along the guiding principles. In all the issues described in this chapter regarding health and quality of food, the world food supply, animal welfare and manure surpluses in intensive livestock production, representatives of the prevalent practice made the effort to maintain the guiding principles and roles as much as possible. In this way, the threat was reduced by defining a more general resistance against food and food production into problems that could be solved within the practice, and by those who previously had obtained a key role. A result was that the developments in this period did not lead to a reduction of animal protein production.

The prevailing practice was kept as much as possible in place because of two mechanisms. First, the frame of the prevalent practice restricted the range of possible

viewpoints, interests, action patterns, actors and solutions. Second, by functioning as a practice in producing, regulating, investigating, innovating the food system and in routines in its operating in daily practice, the practice was further normalised.

The role of governments and governmental policies in food practice changed; the actions and interests became more divergent. Trade as a guiding principle for food regulation remained important. Policies that could develop analogous to the path along which the food regulation was enforced, were much more effective than policies that did not.

7

From increasing sales by ‘producing more’ to increasing sales by ‘adding values’ [+/-1992-2001]

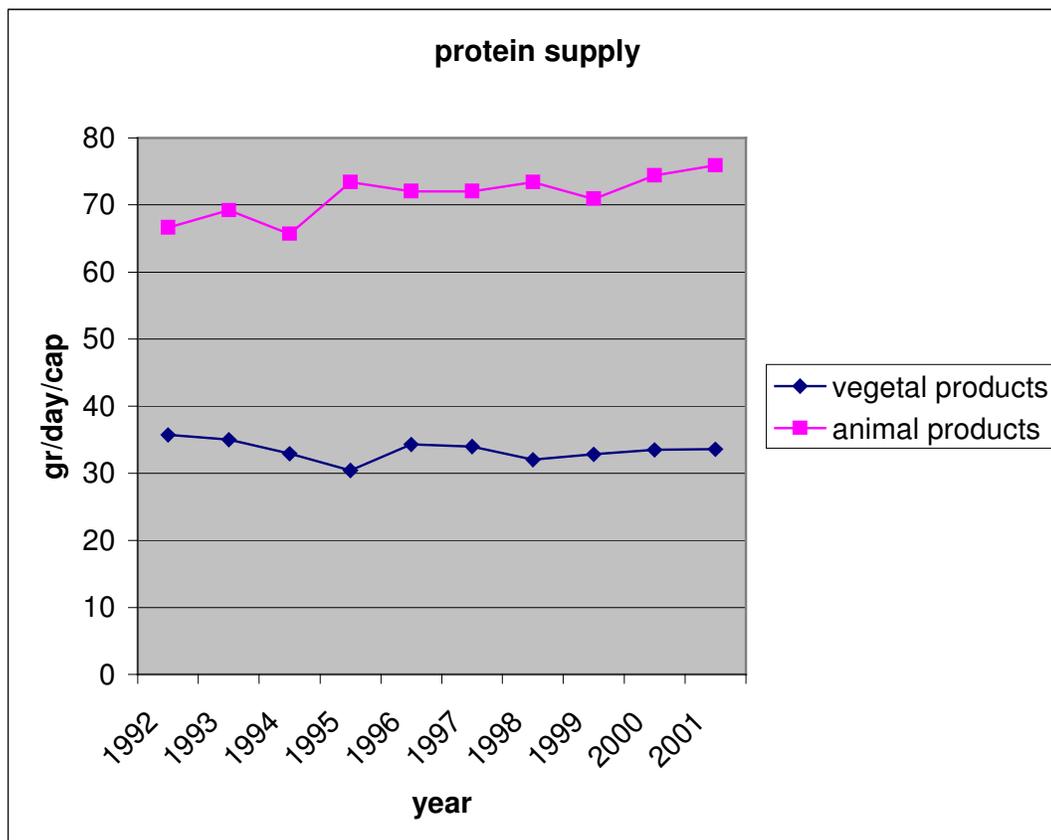


Fig. 5. Consumption of animal and plant proteins. Source: FAO, 2004

During this period, ‘values’ become important in food production. The agribusiness industry was confronted by globalisation of the food product market, concerns of environmental effects of food production and food safety. Furthermore, the market for agricultural products in developed countries began to be saturated. As the figure shows, the quantities of available animal and vegetal proteins remained relatively stable.

“De Nederlandse agro-industrie zit met een probleem. De vraag naar landbouwproducten in de ontwikkelde landen raakt verzadigd. De verschuiving van voedingspatronen van graanproducten naar dierlijke producten is goeddeels voltooid.” (Koning & Weerkamp, 1994, p.5)⁶⁸

⁶⁸ “The Dutch agro-industry has a problem. The demand for agricultural products in the developed countries is becoming saturated. The shift of food habits from grain products to animal products is for the greater part finished.” (Koning & Weerkamp, 1994, p.5, translation MV)

The GATT (General Agreement on Tariffs and Trade) limited dumping on the world market and the Mc-Sharry reforms reduced feed benefits for the Netherlands. A new way of improving the competitiveness of Dutch agro-food industry was a strategy aimed at a differentiated range of quality products. Dominant market positions could be reached in specialised niche markets for products that could be identified as healthy, natural, animal friendly or environmentally friendly. This new strategy appeared in 1989 (Adviescommissie Perspectieven voor de Agrarische Sector in Nederland). A working group “Ter Zake” further propagated this vision. Other options, such as limiting of the production were kept out of the debate (Koning & Weerkamp, 1994; Wielenga, 2001, p.89)

Although this change of strategy in food practice led to changes in developing, producing and marketing products; these actions are taken in order to maintain the formed ordering in the food practice. As noted in chapter 1, an ordering is never stable and requires constant management (compare Marsden, Flynn & Harrison, 2000, p.184). The changes could keep the market as the most important guiding principle for developments with regard to food. Producers, knowledge and research institutes, regulators and consumers could maintain their roles along with the change in strategy. The guiding principle of ‘more’ could remain valid, even though the emphasis was on increasing the profit margin of products.

Adding values to food, from the perspective of the Dutch prevalent food practice, is an expanded application of markets and technologies. The food practice delivers a frame from which problems with regard to food production and consumption are encountered. This chapter will illustrate how this frame works to define problems and solutions without deconstructing the food production practice, and to exclude other problem definitions. The first section will describe research into ‘novel protein foods’ as a solution to the detrimental environmental effects of meat production. The second section will address reactions to the succession of animal disease outbreaks in animal production.

1. Novel protein foods as a ‘more plant production’ solution to environmental problems relating to meat production

1.1. Contesting versions of environmentally sustainable futures

In the early 1990s, the notion of sustainability was high on the agenda of many countries and global agencies. Inspired by the ‘Brundtland report’ written by the United Nations World Commission on Environment and Development of 1987, ‘sustainable development’ became a leading concept on various societal levels. The term sustainability is subject to various interpretations and meanings (Levidow, 2000; Woodhouse, 2000; Kloppenburg, Lezberg, De Master, Stevenson & Hendickson, 2000, Redclift, 1991). Sustainability may be a common goal, but for some it will be reached through established practice, through the market and technology. For others it is sought through alternatives for the prevalent practices that caused the problems in the first place (Orr, 1992, p.24). Levidow (2000) and Woodhouse (2000) discern three leading views on sustainability. The first is the view of multinational large companies who see sustainability as eco-efficiency for enhanced competitiveness as promoted by the World Business Council for Sustainable Development. It encompasses marketing

of environmental assets and aims at improved competition for green commodities. The second is the view expressed in the Brundlandt report and can be regarded as an environmental management view, which entails socio-technical reorganisation in such a way that economic growth and environment developmental goals can both be reached. White papers by the Dutch government share this view (LNV, 2000; VROM, EZ, LNV & V&W, 1997). The third view, expressed by other organisations as well as eaters promotes alternative food practices and uses ‘sustainability’ as a kind of shorthand for the ‘green and good’. This indicates production and consumption systems associated with a broader range of attributes, such as community-based efforts to build healthy, just and local food systems. Kloppenburg et al. (2000) found the following attributes regarding sustainability according to members of the alternative farm/food community: relational, proximate, diverse, ecologically sustainable, economically sustaining, just/ethical, sacred, knowledgeable/communicative, seasonal/temporal, healthful, participatory, culturally nourishing, and regulated in a sustainable manner.

Solutions to environmental problems, scenario building and long-term sustainable design are efforts to ensure a certain view on sustainability. But since there is no consensus on the kind of society we want, sustainable designs adopted on one level, are criticised on another (Schakel, 1989; Howard, 2002). Conflicts in environmental policy-making often rest on the different views on sustainability, as Levidow (2000) shows for European policy dilemmas over Genetically modified (GM) crops. GM crops have been promoted as well as criticised using sustainability arguments (Levidow, 2000).

In industry, approaches such as ‘industrial ecology’ are often adopted, that reformulate political dilemmas into a technical engineering task leaving consumption levels unchanged (Howard, 2002). Corporate interests are warranted by optimising commodities and production processes to the ecological conditions using life-cycle analysis. For a white paper by the department of agriculture (Structuurnota), Schakel (1989) concludes that it follows that ‘ecological modernising’ as a sustainable design approach in which the environmental problems are one-dimensionally translated into technical problems, omits the normative and social components of the problems. These approaches are criticised for their lack of democratic decision making on which sustainability is desirable and the ‘technocratic bias’.

This section describes how new efforts to develop new plant protein products, Novel Protein Foods (NPFs), were proposed as a sustainable solution for the future food system. I will show that the development of NPFs implies a premature choice on the type of sustainability in framing the solution from an ‘industrial ecology’ approach. It contains assumptions regarding the characteristics of the future food practice. As Orr (1992) writes:

“The word “sustainable”, [...], conceals as much as it reveals. Hidden beneath the rhetoric are assumptions about growth, technology, democracy, public participation, and human values.”
(Orr, 1992, p.23)

With regard to plant/meat ratios, the focus will be on producing more plant proteins by developing ‘novel’ plant foods with added value, in contrast to eating less meat.

1.2. ‘Novel Protein Foods’: defining an environmental problem with food production into a technical problem requiring a technical solution

In the Netherlands, a white paper ‘technology and environment’ and a report of the council on long-term environmental policy had just appeared in the early 1990s. These papers toned down the optimistic expectations regarding technology as a solution to environmental problems and ascribed a more modest (end of the pipe) role to technology: technology is important, but no panacea, and: technology alone cannot save us (CLTM, 1990, p. 606, 610). A group of ‘environment-thinkers’ (of which some of the Ministry of Environment) did not agree with this -to them- subordinate, short-term role for technology:

“In their opinion, technology should and could be at the centre of a social process of change towards a more sustainable society” (Loeber, 1999, p. 12).

This group initiated a research programme called ‘Sustainable Technology Development’ (STD). The idea was that when technology development was to be focussed on sustainability, technology development could serve as a catalyst to reach a sustainable future (Loeber, 1999; Diepenmaat & Te Riele, 2001).

In a sub-programme of STD, financed by the Dutch government and some private companies, it was investigated whether a ‘new generation’ of meat replacements called novel protein foods (NPFs) could be developed which are at least 20 times more efficient in environmental terms than meat. This idea is further investigated in the research programme ‘Protein foods, environment, technology and society’ (Profetas). In most cases, the term NPFs does not refer to an existing product, but is used to refer to prototype ingredients or technological options. Genetic modification is considered as one of the possible methods for producing NPFs. The argument for NPFs was future environmental problems are expected due to growing consumption levels, population growth and the burden of food production on the environment. The environmental burden of meat production was attributed to a lack of sustainable alternatives to meat attractive to both producers and consumers (Loeber, 1999).

The conclusion of the STD-programme fits the idea connecting economic growth with relieving environmental pressure, and adding technology as a third component:

“Economy and ecology can go together. The results of the programme Sustainable Technology Development show this. Economic growth does not have to be a threat to ecological quality. A prudent integration of both is just the thing that leads to sustainability. With this, technology is a necessary key, in a strong interaction with culture and structure” (STD, 2001, internet site, translation, M.V.).

Because social participation in technology development was considered important, the STD-NPF project had a social component. In discussions, remarks kept re appearing that questioned the relation between sustainable development and NPF. A number of representatives from government and societal organisations were not convinced of the relation between sustainability and the NPF development. Their questions regarding other solutions for decreasing meat consumption, however, could not be addressed by the researchers because these didn’t fit the research design (Loeber, 1999; Loeber, 1998, p. 22, 43). When other solutions came up in the interactive part of the research project, the process manager often cut the discussion

short, reminding the participants that the problem definition: “the environmental burden caused by meat production was the result of a lack of environmental friendly meat replacements which are attractive to both producers and consumers”, was not open for discussion (Loeber, 1999, p. 23, 24).

In the STD-NPF project, the political sensitivity about the meat replacement part of the project was treated cautiously. The research team intended to keep the problem definition off the political agenda and succeeded. The issue was presented as a technological, not political, problem by formulating it in non-political terms. The political sensitivity relating to meat replacement was treated carefully both in the argumentation (meat production would not suffer, because given population growth the extra protein need could partly be made up by NPF) as by actively keeping on good terms with the product board PVE (Loeber, 1999).

As indicated earlier, the future success of the agro-industrial sector was considered dependent on the quality segment. Sustainability of food would be an added value to the food products. Where STD was purely a desk-study, in Profetas, technical food research was carried out. Customary in the research school carrying out the research is to have business-partners. Food technology researchers constantly keep in mind the effect their results may have for business. Profetas is co-financed by the following food industry companies: Boekos, Cebeco Group UA, DSM Food Specialities/Gist –brocades, Quest International Nederland BV, Unilever research Vlaardingen, and the Wageningen Centre for Food sciences. Boekos, a Dutch meat processing company, is working on ‘Eco NPF plus’, which would be a factor 40 more environmentally efficient (DTO-KOV, 2001).

In conclusion: NPFs as a proposed solution to environmental problems with food production could leave the focus of research institutes largely unchanged. Focussing on technical solutions and formulating the problem as a technical problem omitted a political discussion on sustainability of the food sector. R&D with regard to NPFs is complementary to the guiding principle of the market. In this way, other problem definitions and solutions were disregarded. NPFs fit in the trend of adding societal values to food products and production methods to remain economically viable and are created along the guiding principle of convenience. The role of the consumer remains identical and the bio-industrial complex will likely play a prominent part in manufacturing. With the saturation of the market for animal based products, meat processors can switch to cheaper plant based materials while continuing to produce processed foods. The development and marketing of NPFs is an exponent of an ongoing development of further marketisation and industrialisation of food.

1.3. Conclusion

Conflicting views of sustainable food production and consumption, with simple natural food on the one hand and eco-efficient or industrial ecology production systems on the other, remain unresolved. The development of NPFs as a way to enhance the sustainability of food systems is an operationalisation of the industrial ecology approach, which concentrates on improving the eco-efficiency of production flows. As such it provides a solution where there is no societal consensus on the problem definition. The underlying assumptions of improving sustainability through the development and marketing of NPFs did not become a political issue on a large scale (Loeber, 1999).

Sustainability through the development of NPFs will bring about a certain ‘shade of green’. To the scientists and companies involved in developing NPFs, these products are ecological and probably match a public desire for organically produced products and production methods humane to animals (Weaver et al., 2000), as well as satisfying the public desire for more natural food. The public, however, may conclude from the animal testing, artificial flavouring and industrial processing that the product is actually ‘unnatural’ (see also Sijmons, 2001).

1.3.1. Implications for the plant/meat ratio

As was the case with the ‘first generation’ of making new plant protein products or ingredients based on technology, the emphasis was now on ‘more plant protein production’. Though in the seventies there were some ideas to combine new plant protein technologies with a reduction of meat consumption, the NPFs in this period are meant to provide the growing population with alternatives to meat. Because population growth is expected to be higher than the expected growth of the European meat production, the development of NPFs do not threaten the meat production industry. The term ‘diet-shift’ is therefore somewhat misleading, for it denotes growth of both animal and plant proteins, leading to a different plant/meat ratio in the diets of future generations. From the production point of view however, NPFs fit the ‘produce more’ directives and offer the possibility of improving sales. For contemporary consumers, NPFs fit the ‘eat more’ directives (comp. Nestle, 2002). In development and marketing of meat alternatives like NPFs, all the effort was on more technology, more products and more food.

“The most significant change in our diet has been the growth in demand of convenience foods. [...] The vegetarian convenience foods have also expanded from the late eighties to the present time of writing, twinned with an expansion of organic foods as ingredients. There has been no decline in convenience foods which contain cow or chicken - quite the opposite - so it would seem that feelings for animal welfare or the ecology of the planet do not operate when faced with a quick and easy dish to cook for the evening meal, or only among a small minority.” (Spencer, 1993, p.333).

2. Deliberations on the future of livestock production

2.1. Animal diseases: putting animal production on the agenda

An outburst of swine fever in 1997 alarmed a significant part of the public, the production sector, scientists and politicians. This was not just a disease to deal with, it was considered a signal that present animal production could not remain unaltered.

The public was confronted with images of pig carcasses thrown on large piles by grab-cranes and piglets given deadly injections. A Dutch literary writer, J. Voskuil, initiated a ‘pigs in need’ protest action against living conditions in the intensive farming industry. The existing interest organisations were roused by public reactions and the protest action. The organisation criticising intensive farming industry founded in the early 1970, ‘Lekker Dier’, which means something like ‘tasty animal’, turned into ‘Wakker Dier’ (‘alert animal’). Fired up by the occurrences with regard to the swine fever, the animal production sector saw that innovations would be necessary to

cope with the crises in animal production. A think-tank instigated by the Ministry of Agriculture began with problems in the sector but encouraged new ideas, not necessarily limited to pig breeding. The think tank was financed by both the ministry of agriculture and the university of Wageningen and involved experts from the agricultural knowledge institutes. The resulting report stated that to safeguard a future for pig breeding, a licence to produce had to be established in dialogue with society. Due to aspects like the manure problem and the economic-rational way of looking at animal welfare, the licence to produce was lacking, and had to be earned back. This would mean a 'mental innovation' for the sector: an acknowledgement within the sector of societal problems regarding ethical, health and environmental aspects of production. (Denktank Varkenshouderij, 1998; LNV, 2000).

An outbreak of BSE and dioxin contamination in poultry feed, also caused concerns about food safety. Just as with swine fever, the incidents were linked to questions regarding the acceptability of modern animal production. The information that slaughter by-products had been used to feed cattle, startled the public to some degree. Some concluded that the efficiency of meat production had been carried too far⁶⁹. The destruction of animals and meat because of the BSE crisis met with public criticism. The wish for naturalness in food, after being translated into concordance with modern food production (see previous chapter), returned. Jasanoff (2001), remarks that BSE was associated with a general feeling of things being systematically wrong, with modern meat production as counter natural acting.

In 1999, a range of research and discussions organised by the Rathenau Institute (aimed at improving dialogue between politics, science and society) were dedicated to the programme 'deliberations on animal production' (afwegingen rond de veehouderij). Questions that had arisen over the previous years, such as citizen opinions, animal welfare and food safety, were investigated and elaborated. Another question was also raised in this programme regarding the economic significance of animal production. The study shows that a number of economists and opinion-leaders considered the present economic value of the animal production sector as modest. In the discussion regarding the future existence of animal production in the Netherlands, however, economic arguments are often the most influential. But with the declining importance of the economic value of the intensive animal production sector, its weight is expected to lessen, in favour of animal welfare, food safety and the environment (Edel et al., 2001).

The outbreak of foot and mouth disease in 2001 kept the future of animal production as an urgent topic on the agenda.

“Het was vreemd. Bij de crisis van varkenspest in 1997 werden er 11 miljoen varkens gedood en vernietigd. Met de crisis van mond- en klauwzeer waren zo'n 300.000 dieren gemoeid. Maar zelden, nee nooit, heb ik zo'n complexe situatie meegemaakt als de mkz-crisis, met zoveel partijen die zich ermee bemoeiden. Ik kreeg een eindeloze stroom brieven van kerken, pastorieën, bisdommen, van burgers en haastig opgerichte actiegroepen die me allemaal op hoge toon meedeelden dat het zo niet langer kon met de landbouw, of dat het Europese overheidsbeleid fout was.” (D.Duijzer, The director of the agricultural organisation LTO, in answer to the question of a journalist on how he has experienced the crisis of foot and mouth disease, in Trouw, 04-09-2001).⁷⁰

⁶⁹ The use of animal meal was prohibited. As a consequence, it turned out that the poultry sector had suffered the most financial damage from the BSE crisis, because of the costs instead of benefits from slaughter offal and the increased prices of poultry-feed (LEI, 19-6-01 *Boerderij (agri) BSE*)

⁷⁰ “It was odd. During the crisis of swine fever in 1997, 11 million pigs were killed and destroyed. In the crisis of foot and mouth disease 300,000 animals were involved. But seldom, no never, have I been in such a complex situation as the foot and mouth disease crisis, with so many parties that were

In attempts to stop the disease from spreading, animals in contaminated areas were preventively killed. This policy met with protests from individuals as well as animal welfare organisations. There were 26 cases identified and 2900 farms cleared with approximately 265000 animals. Because of the empty pastures and the red-white strips blocking farms and roads, the public could not ignore the crisis. The handling of the disease had its impact on tourism, sports and social traffic of the public as well, because cancellations of access to certain areas. Also, privately owned 'hobby animals' were not safe from preventive killing. Vaccination against foot and mouth disease had been abolished in 1991, to enable exports to countries such as Japan and the United States. The financial gains outweighed the financial risks of non-vaccination. But during the crisis, there was broad criticism of the European non-vaccination policy. The chairman of the product board of livestock, meat and eggs states:

“Maar we hebben ons ook vreselijk verkeken op het maatschappelijk draagvlak voor de aanpak van zo'n uitbraak. We hebben verkeerd ingeschat dat mensen zo'n moeite hebben met het preventief doden van ogenschijnlijk gezond vee.” (R. Tazelaar, in: de Volkskrant, 27-3-2001)⁷¹

The decisive economic motives underlying the handling of the disease were extensively criticised. Furthermore, international transport of animals became widely disapproved. Again, the general conclusion was that something was very wrong with the current state of affairs in modern animal production and changes would be inevitable. The ministry of agriculture installed a commission in May 2001, to outline a future course for the animal production sector. It was chaired by Wijffels with experts from science, government and meat industry (Commissie Wijffels). The commission envisioned animal production in 2010 including differentiation and variety, with a production chain for organic production alongside standard production. Characteristics of animal production would be the respectful handling of animals, less animal transport, transparency in production chains and competition on quality instead of price. The report echoes the view propagated by the 'Ter Zake' group, which was also chaired by Wijffels (see introduction to this chapter). Many alternative reports accompanied the vision of the commission Wijffels. Nature organisations, agricultural scientists, farmers, and political parties came up with a range of reports in which a preferred future for animal production is sketched (for example: Raad voor het Landelijk Gebied, 2001; Stichting Natuur en Milieu, 2001; Commissie Veerman, 2001; Van der Schans & Backus, 2001).

Also at the European level, maintenance of the Common Agricultural Policy seemed untenable as outbreaks of animal diseases had occurred in several European countries. The high costs of the CAP and the production surpluses had been a problem for decades, but drastic changes appeared to be impossible to make, because of the different interests of the countries involved. Now, the costs of combating animal

meddling with it. I received an endless amount of letters from churches, parsonages, diocese, citizens and in haste erected pressure groups that all, adopting a high tone, informed me that agriculture could not continue like this, or that the European governmental regulation was wrong.” (D. Duijzer, The director of the agricultural organisation LTO, in answer to the question of a journalist on how he has experienced the crisis of foot and mouth disease, in Trouw, 04-09-2001, translation MV)

⁷¹ “But we were terribly mistaken on the societal carrying capacity for the approach of such an outbreak. We estimated wrongly the difficulty people have with preventive killing of apparently healthy livestock.” (R. Tazelaar, in: de Volkskrant, 27-3-2001, translation MV)

diseases and the loss of public acceptance of the motives and regulations of the CAP began to tip the scale. Together with the entrance of new countries into the European Union and the WTO regulations that prohibit protectionism, a drastic reformation of European agricultural policy seemed inevitable.

2.1.1. Conclusion

Swine fever, BSE and foot and mouth disease, combined with food scares with regard to animal products did not allow for an unruffled settlement of a clear future course of the Dutch intensive farming sector. The crises in animal production uncovered a broader problem: a public resistance against modern animal production. One thing seemed certain, things could not go on unchanged and a new course had to be sought. Issues such as animal welfare, the environment, public acceptance and food safety were considered more important in decisions regarding future developments. Notable is the criticism aimed at the production of meat and the absence of discussions about consumption of meat. In the next section, I will describe how the notion that change was inevitable was dealt with in practice.

2.2. Restoring the balance

This section will concentrate on the reactions of policy-makers and other 'future-planners' to the drastic turn in intensive animal production. Did their reactions encourage a drastic turn, or was most effort put into protecting the ordering as much as possible?

2.2.1. Naturalness revisited, defined and put aside

The crises in the animal production led many to believe that modern animal production is not 'natural'. The wish for natural food was revived (te Velde, et al. & Hanning et al., 2001; Murdoch & Miele, 1999). This sub-section describes how general public dissatisfaction with modern animal production was dealt with as separate specific solutions regarding animal welfare, environment, and food safety.

As in the previous period, with regard to eating meat, the wish for naturalness was treated as a food safety matter. Food safety remained defined in rational technical terms, and as a result there was no option left for changing production methods or consumption patterns. Instead, solutions were sought in further monitoring and controlling the food chain. Newspaper headlines such as 'organically produced meat not healthier' (de Volkskrant, 12-4-01), suggest a perceived discrepancy between the matter of producing healthy, safe food and the tendency to turn to a production method considered more natural. The discussion whether organically produced meat is safer overcomes the wish for naturalness.

The treatment of animals in modern production was no longer publicly accepted. Organically produced meat or free-range meat was linked with the wish for natural food. The ministry of agriculture supported the view of organically produced food as a solution to environmental problems with food production.⁷² The demand for

⁷² In a brochure on the manure problem, the term bio-industry, instead of the term preferred by the sector: intensive animal production, is used for the prevalent animal production sector (LNV, 2001).

organic meat rose only slightly, however. No meat or less meat was hardly promoted as a solution to environmental problems with animal production, except for the interest for NPFs at the ministry of environment (see previous section; de Kuijer & Wielenga, 1999). NPFs and other high tech solutions (Van Kasteren, 2002) however, do not agree with the wish for naturalness. Another example of a solution to improve intensive animal production is the so called pig-flats, the idea of making animal production into an industrial activity, which would be more animal friendly than the prevalent animal production and environmentally more sound. Pig-flats met with a lot of public resistance because they are not considered natural.

The wish for more natural food and food production can be seen as an aggregated view of the future of meat production and consumption. Redefined in loose components such as animal welfare, environment and food safety, the 'natural' aspect diminishes. As proposed solutions, the components even conflicted (Swabe, 2001, p.36-38). In spite of recurring statements such as 'society had gone too far in industrialising animal production', or 'respect for animals should be brought back', or 'consumers had become alienated from what they eat', naturalness did not become a directive for the future of meat production and consumption.

2.2.2. Linking manure problems and swine fever

Breeman, Op den Kamp & Zannoni (2000) describe how the swine fever crisis was linked to a policy to reduce the manure surpluses. Until the outburst of swine fever, policy resolutions and the reactions of agricultural organisations had not been able to break the deadlock in which the manure-debate was situated for many years. The ministry of agriculture had been working on plans for restructuring since 1996, and this crisis of 1997 was regarded as an opportunity to act. The goals of this law were broadly shared. The ministry issued a policy to restructure the pig production sector ('wet herstructureren varkenshouderij'), which envisioned a 25% decrease of the number of animals (Breeman et al., 2000).

A successful implementation of the law did not occur. With the fading of the urgency of the crisis, politicians began to question the restructuring policy. Elections brought a new minister of agriculture. A pig farmer union leader had prosecuted the state, the loss of animals (through less 'varkensrechten' manure production rights; to produce certain amounts of manure) without financial compensation could be a violation of the rights of property. The court temporarily suspended the law. The court ruled in 2000 that a 10% reduction was sufficient. The manure production rights⁷³ were lessened by only 4% by June 1999. A policy regarding ammonia expulsion also did not reach the intended reduction (Breeman et al., 2000; Frouws & van Broekhuizen, 2000, p.38-40).

The disputes on the size of, and solutions to, manure surpluses continued. For example, the Netherlands Institute for Public Health and the Environment RIVM calculated for 2003 a surplus of 8 million kilos, while according to calculations of the foundation for nature and environment (st. Natuur & Milieu) the surplus would amount to 40-60 million kilos (Agriholland, 17-05-01 & 23-05-01). The reduction of the number of animals, enforced through manure production rights, remained a policy goal (LNV, 2001). The economic circumstances for pig production remained difficult without continuous expansion of the business. The total number of pigs gradually fell.

⁷³ The manure production rights, a policy instrument aimed at lowering manure production, was now used as a property right protecting farmers from reducing their manure production.

From 1999, the pig population decreased from nearly 14 million to just over 11 million animals (CBS, 2003).

2.2.3. Policy making around the untouchable side of animal production: the market

By 1992, the department of agriculture changed their thinking; they began to consider more actors and to reason in the line of more market and less governmental protection (Bekke et al., 1994; Wielinga, 2001, p. 86). In the years of the crises, it became clear that a drastic turn should be made in animal production, since the prevalent production was no longer socially accepted. The conclusion was that the one sided financial approach to animal production had led the sector in this fix and other aspects, such as animal welfare should now be taken into account as well. This section shows that, on policy level, this financial side to animal production was kept from the discussion about the future of animal production. Export and domestic sales remained decisive factors in decisions dealing with animal diseases by the EU and the national government.

In 2000, the ministry of agriculture published the white paper ‘Voedsel en Groen’ (‘food and green’). Following the course set before the crises, agriculture was intended to be treated as a normal economic sector. Socially desirable production would be pivotal, because the more the sector could succeed in winning back the licence to produce, the more favourable the future prospects would be. To be able to remain internationally competitive, the Netherlands should pioneer socially acceptable production methods. In the cabinet’s reaction to the report of the commission Wijffels, the viewpoint of the commission was adopted: that honouring public demands will weaken the competitiveness of the sector and that the challenge lies in the translation of values into financial value. In this way, a high-grade market segment could be reached (Wijffels, 2001; LNV, 2001). Thus, for the department of agriculture, socially desirable production was made subordinate to agricultural sales.

Policymaking and implementation with regard to animal welfare would take place at the EU-level, an extremely slow process that normally results in compromised legislation because of concerns regarding distortion of competition. Additionally, the WTO does not allow trade measures on grounds of production methods, such as requirements regarding animal welfare. In some cases, the department of agriculture considers it desirable to implement policies ahead of the European policies, preferably in accordance with other Northwest European countries. But this goes only as far as the EU regulation permits stricter policies (Frouws et al., 2000, p.23-32; LNV, 2001). More drastic national policies are not taken into consideration, because the export market would be lost. With regard to vaccination against foot and mouth disease, the question whether the Netherlands would move independently from the EU kept re-appearing. This was done away with by the common knowledge that the Netherlands would lose its export position to other countries (Schönwetter, 1999; Brinkhorst, radio oost, 31-3-01⁷⁴). In the case of the BSE-crisis, the public was instantly reassured that beef consumption could remain unaltered, through an advertisement campaign in the papers by the Dutch government. The advertisement informed the public that although BSE-cases had increased, food

⁷⁴ Brinkhorst said in a radio discussion about vaccination that the Netherlands cannot go alone, because of the trade politics: “other countries within Europe will say: ‘thank you Netherlands’ and fill up this space”. A farmer asks: “but is that thoroughly studied?” Brinkhorst: “everybody knows that!” (Radio Oost, 31-3-01)

safety had actually improved, because of more intensive testing (LNV & VWS, 6-2-01).

The minister of agriculture, Brinkhorst, suggested changing the name of the department of agriculture to the department of food and green. In contrast to Germany, where the name did change into consumer protection, food and agriculture, the suggestion of Brinkhorst was not followed. This illustrates that a shift in policy making did not take place. In fact, the sector was constantly protected from a collapse in sales by treating public complaints as subordinate to the guiding principle of export. The mindset was still partial to the sales of the animal production sector and solutions were sought only within this framework. Effort was taken to avoid damaging the export position due to societal concerns. The policy course of more market and less governmental support and the trend to quality production, set in 1992 was followed. Questions about the amounts of meat consumed were not raised.

2.2.4. Different meat production, same meat consumption?

During the crises, transition was demanded mainly on the production side. Questions regarding the future of meat consumption did not arise on a collective level. The crises in animal production hardly had an effect on meat consumption. The new generation of meat replacements, however, received considerable interest as a consequence of the crises in animal production. A growing range of meat-replacements, such as vegetarian burgers, became more widely available, as they appeared in supermarkets and butcher shops (de Telegraaf, 27-12-2001; NRC, 18-01-2001; NRC, 1-5-2001). The amounts of animal products consumed, only slightly decreased however, which was attributed to the rise of the meat prices in shops (De Volkskrant, 10-1-2001). In contrast to neighbouring countries, the Dutch beef intake did not decline during the BSE crisis (De Volkskrant, 15-2-01). In the UK sales of beef drastically fell as a result of mad cow disease (BSE), but the beef sales were back up to 85% of the former level within weeks (Marsden, Flynn & Harrison, 2000, p.192).

A decline in meat consumption as a possible new course in modern contact with animals is not considered by public organisations, policy makers or experts. Still, policy-makers and experts desire a more conscious buying behaviour:

“Als de burger een andere veehouderij wil, maar daar als consument geen consequenties aan verbindt, is hervorming van de sector kansloos. Het is daarom van het grootste belang beide met elkaar in lijn te brengen.” (Rapport Wijffels, 2001, p. 14)⁷⁵

In the long term, the intensive animal production sector in the Netherlands is expected to decline. It is however uncertain what this means with regard to meat consumption. If there is little change in consumption patterns, meat production levels and methods will not change much.

⁷⁵ “If the citizen wants another animal husbandry, but doesn’t want to commit to the consequences as a consumer, reformation of the sector is has no chance. It is therefore of the greatest concern to align the two.” (Rapport Wijffels, 2001, p. 14, translation MV)

2.2.5. Conclusion: implications for the plant/meat ratio

From the crises in animal production it became clear that a drastic change was needed. The reaction to the crises, however, prevented a transition in animal production rather than instigating one. The section on naturalness illustrates that a whole concept about what is felt to be wrong in modern animal production was broken down to separate existing and conflicting problems, which remained to be dealt with along previously set lines. A transition was not only resisted by those involved in such a change and consumers. Policy-makers who kept treating the financial aspect of animal production as the most important aspect, also resisted it. In dealing with the problem, the financial aspect was indisputable and set boundaries to the possible options for change.

The plant/meat ratio in diets was not affected by the crises in animal production. The old strategy for the future, Dutch agricultural production as a market leader in quality products, was adopted (van Bentum, 2001). Less meat consumption was not considered an option for a drastic change in animal production. Most of the efforts of those involved appeared to be making those changes that would be required to keep animal production and consumption as much as possible unaltered within the limits of public acceptability and to prevent the sector from capsizing altogether. In answer to the question posed at the introduction to this section, most of the effort was put into keeping the status quo. Consequences for the plant/meat ratios in people's diets would probably have been more notable *without* the efforts of those dealing with the envisaged changes in animal production.

3. How are protein products organised in or out of the food practice?

The guiding principle for developments in the food practice is 'more'. As described in chapter 5, meat was organised into the food practice. Various political, technical, economic and social activities made meat into a valuable export product and into normal product for consumers. Meat production was stimulated by governmental policies. Increases in transport, cooling techniques, meat processing and industrialisation of meat production contributed in making meat into an important economical product. The growth of the export market with the rise of the European Community and the extension of animal breeding, slaughtering and processing, meant growth in the income of meat production. For consumers, meat became increasingly convenient with the animals and the slaughtering processes out of sight and the meat available, processed and packed in ready to use portions. As was shown in chapter 6, these developments resulted in a taboo on reducing meat production and consumption.

Plant protein foods which require little processing, like grains and beans, were organised out of the food practice according to the guiding principle of 'more'. These products do not fit the definition of convenience foods. There is a small profit margin for these products and the processing does not require many steps for adding value to the product. The products do not fit the market frame through which the success of a product is viewed.

Now, as described in this chapter, 'Novel Protein Foods' seem to be the product of the future. With the meat production having reached a ceiling, there is not growth of the meat market anymore to be expected. NPFs can be organised into the food practice, because they fit into the existent definitions, guiding principles, frames and roles in the food practice. The emphasis can remain to be on 'more'. The product

can be defined through R&D and the market. The technical component of the product and the various stages in production gives the product a high added value and fits the definition of convenient. Businesses and industries can apply meat processing techniques on these products, while the raw material is even cheaper than meat (even grass is a possible crop for obtaining proteins). These products hold a promise for a growth market.

However, as was mentioned in the previous chapters, there are arguments against aspects of the food practice. The current roles, frames, definitions and guiding principles of the food practice are no stable structures. They can be subject to change. When they change, other products can get organised in or out of the food practice. The next chapter will discuss both change and stability in the ordering of the food practice.

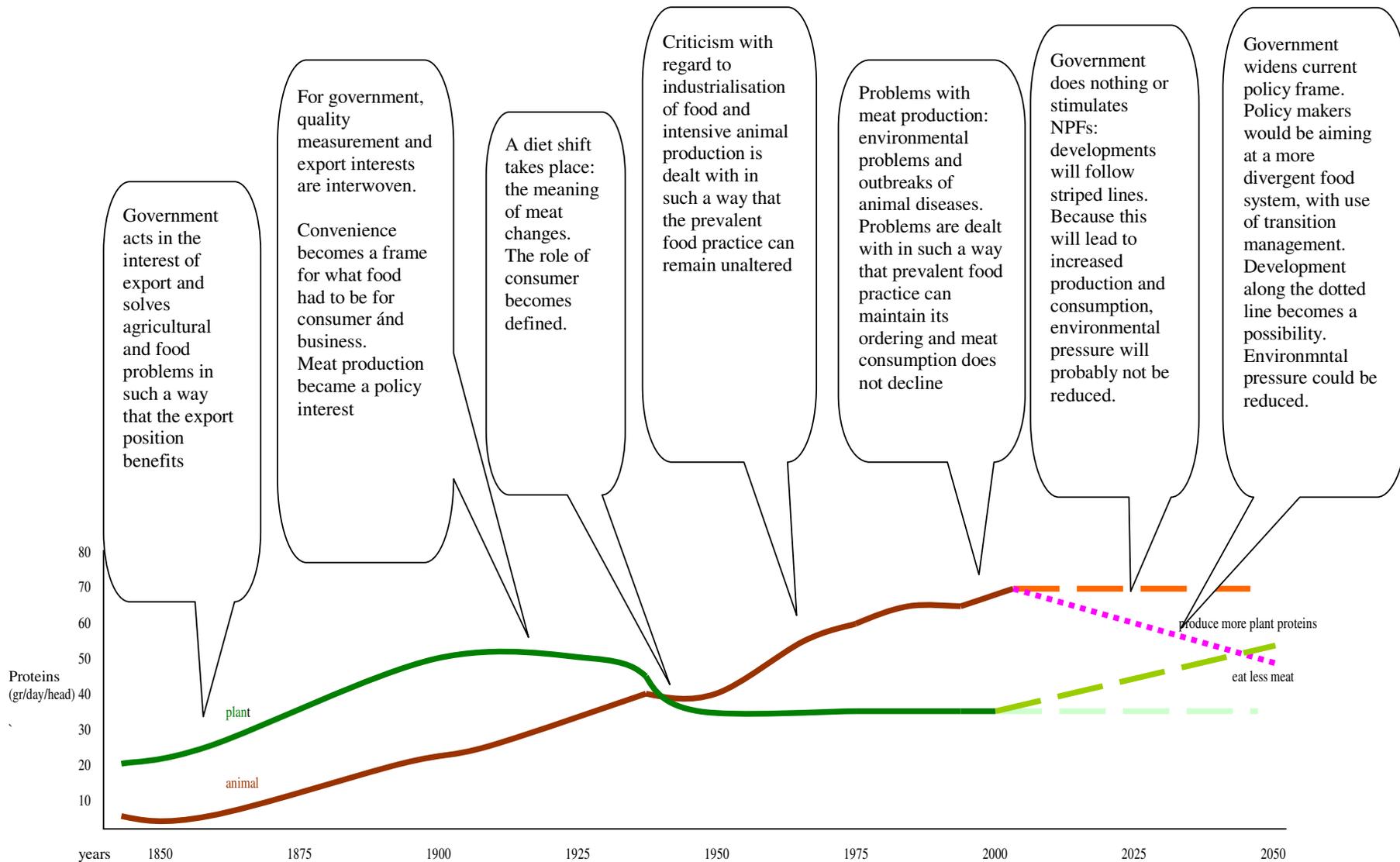


fig 6: sketch protein available for consumption

8

Diet-shift: policy options

This chapter aims at reflecting on ‘protein politics’ and discussing what policy-makers can do to reach a diet-shift. The historical analyses sought an answer to the question: What are protein politics? Which problem definitions, frames and guiding principles organise protein products in or out of food practice? Chapter 7 concluded with an answer. Figure 6 summarizes the historical analyses and shows options for the future. In the first section of this chapter, the practice of food production as a frame for future developments will be discussed. The second section goes specifically into the policy role in the food practice. The role of policies and government in building and maintaining orderings in the food practice will be summarised and discussed. These sections serve as a conclusion of the previous chapters and as an answer to the first research question.

The remaining three research questions: What are the implications of ordering activities on the operationalisation of a diet shift?; Will a diet shift require a transition?; What are possible roles of policymakers in a diet shift?; are answered in the remainder of this chapter. The current state of arguments regarding a diet shift and current activities in the direction of shifting diets will be discussed in section 3. In this section, the implications of ordering activities on the operationalisation of a diet shift will be discussed, while section 3.1. answers the question whether a diet-shift will require a transition. Sections 4 and 5 will elaborate on policy roles in a diet shift. Section 4 focuses on policy options for a diet shift within the established policy frame. In section 5, arguments and suggestions for reframing policy roles required to do so will be discussed.

1. The practice of food production as a frame for future developments

1.1. The prevalent practice of food production and consumption

In the past two and a half centuries of food production and consumption, food has increasingly turned into a commodity. Food has become part of a commercial market and less dependent on household labour (cooking, home growing) and availability (seasons, distances and perishability).

“In the development of this food system, foods became more and more like commodities, rather than matters of live and death, or of religious and cultural meaning.” (Tansey & Worsley, 1995, p.47).

Production of food has become increasingly rationalised and mechanised, allowing bulk supplies for lower prices. Retail offers greater variety and amounts of food, making food more commonly available. The growing importance of the market became significant in the practice of food production and consumption. The division of labour in the production and consumption chain means every stage in food production has to be lucrative in order to be viable. The division of labour also means

a division of roles and power. With regard to the public, a 'consumer-role' has evolved. From this role, the kind of food produced can be influenced on issues like price, taste, convenience and habits. Consumers have to take much less effort in obtaining food. Particular knowledge of the products and production methods is not required to eat them. The guiding principle of the food practice is 'more': more production and consumption.

Innovations in the food system are aimed at raising the profitability of food products. Solutions to problems in food production and consumption, concerning health, the ethics of production methods, the environment or the world food supply, are sought in such a way (often through technology, a rise in agrarian productivity) that the income of the food sector remains stable. A lot of effort is often put into solving problems in such a way that the prevalent food production and consumption pattern continues unaffected.

Since the second half of the 19th century industrialisation and rationalisation of food production has gradually increased, there have been objections to the established food production. These objections can be summarized as a desire for more natural food and a method of food production closer to the consumer, less industrial and less processed. Although these objections have been more or less successfully incorporated into the prevalent food practice, the wish for more natural food returned with further industrialisation of food production.

The food we eat is constructed in a dynamic practice of food production and consumption. This is not limited to food in the physical sense, but also incorporates meaning, characteristics and motives concerning food. Food has many meanings and purposes, but developments in the prevalent practice of food production and consumption are mainly structured by the marketisation of food products. Added value is enhanced by further industrialisation of food production.

Food practices provide a status and role to actors, concepts and products and generate guiding principles for developments. With the marketisation of food, the food industry gained a pivotal position in the food practice. This does not mean businesses have the power to act as they please. Their influence on the food practice is prescribed by their relation with consumers and the guiding principles of the food practice. The consumer role arose when the act of eating could be separated from the act of production, as money could be used to obtain food. As described in chapter 4, convenience became a concept that linked the food industry and consumers and guided developments in food production and consumption. The diet-shift described in chapter 5 from mostly plant protein to mostly meat was not simply increased meat consumption; an ordering took place that changed the profitability and role of meat in food production. The practice can discriminate against one product and stimulate another. It favours complex foods that travel through many links in the food production chain and foods with high added value over basic foods.

1.2. Food practice as a frame

The food practice and its guiding principles work as a frame for future developments. It constrains choices and places aspects of food production and consumption out of discussion, because these aspects are made part of normal practice. The pre-occupation with agriculture took the focus of the government away from food matters as a whole. Simultaneously the relative contribution of agriculture in the food chain diminished with the growth of the food industry. The agricultural policy with its focus

on the Dutch export position led to decision-making in which protecting or increasing that position was beyond question, while other ethical, social or environmental problems were made subordinate to the financial agenda of agricultural production. The preceding chapters show that choices made regarding developments in food were implicit political choices, reflecting certain values and interests, while discharging other meanings and interests. Even when developments were merely technical (Howard, 2002). In fact:

“One of the shrewdest political moves in the book is to get *your* problem labelled ‘technical’. That simultaneously gets rid of any contending versions of the problem and de-politicises yours!” (Schwartz & Thompson, 1990, p.139).

Finding technical solutions for problems with health and naturalness in food as discussed in chapter 6, dismissed the questioning of the desirability of further industrialisation of food.

Furthermore, expectations, speculations and plans for the future involve a hypothesis on how this future might be organised (de Laat, 2000) and implies particular subject positions, identities, relations of power and versions of community (Michael, 2000). Therefore, futures are strategic resources in political and technological agenda setting processes (Geels & Smit, 2000).

This means that a certain kind of diet shift with an emphasis on ‘produce more plant products’ or ‘eat less meat’, involves a political choice about what is important with respect to food. The aim of this chapter is to reflect on these ‘protein politics’ and show what policy-makers can do to reach a diet-shift. Both policy activities according to the constructed guiding principles and policy activities of deconstructing the current ordering are possible, so other diets and meanings to food can be made possible. Section 2 will show that the current governmental bias in favour of producing more, can hinder a socially desirable diet shift.

2. The policy role in food production and consumption: ‘produce more’

“Any notion that governments can flick a switch and everything happens is nonsense. Likewise, any notion that governments are completely powerless –as some of the more extreme proponents of globalisation argue – is equally stupid.” (Lang, 1998, p.110)

In the previous chapters, the focus was on activities contributing to the construction, maintenance, and deconstruction of orderings in the food system. Although the roles of policies and policy-makers received special attention, government activities were not isolated from socio-techno-economic-developments. Policies and their aims were not the starting point of the enquiries, but the struggle of (de)constructing orderings and the role of policies in these processes. In this section, I summarize the role of the government and policies in the practice of food production and consumption.

The food shortage of the late 1840s opened a policy window for liberalising the agricultural trade. Despite the fact that the population was starving, the government was mainly concerned with agricultural trade. This concern with agricultural trade remained basically unaltered up to the present. The interests attached to agricultural trade were intensified and broadened over the intervening decades and proved a strong guiding principle for developments in the food practice and an untouchable dogma when problems with agricultural production arose. Although the agricultural crisis of the late 19th century was used as a policy window

for a more protectionist course in agriculture, it was in the interest of agricultural trade. Advantages for the public of the supply liberalisation, variation, and lower prices, disappeared when the agricultural crisis was over. Agricultural trade interest was broadened and intensified by the working of the “OVO”-triangle: policy support for agriculture consisting of education, research and consultation. The “OVO”-triangle pushed developments in agriculture towards specialisation and rationalisation.

Government was not just occupied with stimulation of agricultural trade; there were other interests and goals as well, such as supporting (small) farmers, food supply and health. Stimulation of agricultural trade however, proved to be the field in which the government was most influential. The power of actors is prescribed and limited by their role definition and guiding principles in the food practice. This means policy efforts not in line with the guiding principles were not realised if the definition of roles and ordering of practices stayed the same. The role of the government in the ordering that constructed the food practice had been defined and the guiding principle of trade and marketisation of food was already in place. The ordering grew stronger as a policy community arose with agricultural interest organisations. Agriculture was ordered as a result of the efforts of maintaining agriculture during the depression of the 1930s and the Second World War. The farmer was redefined in the process. Government had prevented agriculture from collapse and would continue to do so when other crises occurred. The saturation of the market for agricultural products which led to diminished agricultural production could be avoided by enlarging the market for agricultural products in forming the European Community. International politics in forming the EEC prolonged the effectiveness of the agricultural policy course. With these actions, government helped intensify and broaden the relation between food and trade. The government contributed to transforming agriculture, raising production and specialisation in those products most profitable on the export markets. This made the production of animal products more politically interesting than the production of plant protein. For decades to come, it would be of political interest to increase meat production and consumption or at least prevent decreases.

Policies stimulating the export position remained strong, and served to obstruct attempts to deal with problems from the 1970s concerning manure surpluses and animal welfare issues. Although not in always intentional, both national and international government acted within the guiding principles of stimulating the growth of intensive livestock production. The desirability of this was questioned at some points; policy makers did not want the rise of the intensive farming industry in some instances, as the risk of animal disease was too high. It was expected however, that the growth of intensive livestock production would eventually cease. Policy makers were unable to effectively act against the historically constructed governmental role in agricultural production and the designed guiding principles. The governmental actions that had the largest impact on the practice were implicit choices inherent in the system (measures that did not have negative effects on sales). Solutions to problems of environmental effects and animal welfare were sought within the guiding principles of production growth. However, the role of the government in agricultural policy making was redefined due to the manure discussions. The ministry of agriculture was not as much part of a representative of agricultural interests anymore and environmental interests were now part of the discussion. Trade as a guiding principle for food regulation remained to be of major importance. Policies that could develop in parallel with food regulation, were more effective.

During the recent crises of animal disease outbreaks, it became clear that a drastic change was needed in animal production, since government, livestock

businesses, and agricultural knowledge institutes realised that the prevalent production was no longer socially accepted. The conclusion was that a one sided financial approach to animal production had led the sector into this fix and other aspects, such as animal welfare, should be taken into account as well. In policy-making however, the financial approach to animal production was not revised by the discussion of the future of animal production. Export and domestic sales remained decisive factors in dealing with animal diseases by the EU and national government. A shift in policy making did not take place. Faced with successive outbreaks of animal diseases, government did not redefine its role in the practice. The Dutch trade position remained protected by revisions in agriculture. Thinking was still biased in favour of animal production sector sales and formed the framework within which solutions were sought. Efforts were taken to restrict damage to the export position due to societal concerns. Questions regarding the amounts of meat consumed were not raised.

The industrialisation of food production, combined with developments in food science and trade, made governmental quality control possible. As a result, food became medicinal and rationalised. Technical measures became available to determine food safety. A law to enable the control of food quality, the “Warenwet” was a consequence of meeting the quality standards of export countries and to protect the health of consumers. At first, the threat for consumers was eating too little of certain substances. When the lack of food no longer formed a health threat, food scientists turned their attention to over-eating of certain substances. The food industry had started to use additives and the government supported research into the harmfulness of these products. Concerns with additives formed a threat for increasing the proportion of industrialised food in diets. This threat was eliminated by hiring food scientists into the businesses and incorporating food science into the food industry. It proved difficult for policy-makers as well as food scientists to promote an ‘eat-less’ message against the increasing marketisation of food. The food industry had obtained a pivotal position in the practice, and was able to redefine problems of naturalness and health in such a way that the food industry could deliver a solution and retain its position. Governmental activity was more effective when its goals were aligned with those of the food industry. Because diets were rationalised in dealing with health effects, the government held on to the narrow definition and technical way of dealing with issues of health and naturalness, by focussing on food safety. When some politicians were pled for eating less meat in order to leave more food for the world population, this message fell mostly on deaf ears.

From 1992, a strategy aimed at a differentiated range of quality products was the new way of improving the competitiveness of the Dutch agro-food industry. Dominant market positions could be reached in specialised niche markets for products identified as healthy, natural, animal friendly or environmentally friendly. In effect the bias of favouring the export position in policymaking, worked out less in favour of bulk production and more in favour of specialised high-value agro-business products.

In conclusion: over the years, government and policies got mostly involved with agriculture out of all the issues related to food. The export value of agricultural products became the guiding principle for policy intervention. Agricultural policy making was institutionalised and it was made normal that government interfered with agriculture. The association of government and agriculture resulted in the easy passage of food-related initiatives when they would benefit agricultural income (rationalisation and intensification of agriculture and stimulating export of agricultural products). The implication was that in policy *effects*, the financial gains of food

production were more important than other aspects. In this process, food became defined more as a source of income than as a means of nutrition. The production of those products most economically viable was not only a business interest, but was also stimulated by public action.

3. Shifting diets

A diet shift can take two forms: emphasis on the production of more plant alternatives to meat, or emphasis on the consumption of less meat. Because the emphasis of the current practice is 'more', the prevalent practice would be biased in favour of the 'production of more plant proteins' option. Although not actively promoting the 'more production and consumption option', governmental action would be biased in favour of the 'production of more plant proteins option' as well, because of their approach to solving food related problems without negatively affecting the economic value of food and the food production sector.

In the previous chapter, problems related to the production and consumption of meat were described. In the first section, it were environmental problems related to meat production and consumption, in the second the societal disapproval of animal production. These problems were dealt with in such a way that the idea of reducing meat consumption was not raised collectively.

“[...] there is no agreement that diet matters for agricultural sustainability, not even that it is a legitimate issue for agricultural policy nor for economic development” (Goodland, 1997, p.190).

On a public level, the emphasis is more often on 'better meat', such as ecologically sensitive or free-range meat, and not on less consumption. For example, the minister of agriculture has considered raising the tax on regularly produced meat to the advantage of 'green' produced meat (Tweede Kamer, 2001). An exception is the issue of the world food supply, where less meat consumption has been debated since the 1970s. For developing countries, the expectation is that consumption of animal protein products will rise and a structural shift toward animal proteins in diets will occur (Vermij, 2001). The consumption of animal proteins in developing countries increased by 50% between the early 1970s and the early 1990s. For developed countries, some argue that over-consumption of animal food products should be discouraged through policies, because of negative health effects or environmental impact (Delgado et al., 1999; Goodland, 1997; White, 2000). Others argue however, that a diet shift of less meat consumption would not solve food supply problems. For example, the Council for Agricultural Science and technology argues that the conversion factor for making human-edible plant products into animal products is 1.4, while animal proteins are considered a factor 1.4 more valuable in nutritional terms. So according to the Council, diverting grains from animal production to direct human consumption would hardly lead to an increase in the world protein supply (Bradford, 1999). Atkins and Bowler consider a widespread adoption of plant based protein intake a revolution in eating habits that is very unlikely in the short term and propose other ways to safeguard the world food supply in the future (2001, 115-116). As in the 1970s, the argument is that less meat production in exporting countries would lead to taking land out of production instead of more plant production (Seidl, 2000).

Individuals have their own reasons for lowering meat consumption (Atkins & Bowler, 2001, p.241). Eating less or no meat is often related to dissatisfactions with the amounts of animal products consumed, the main issues being: environment, animal welfare, world food supply, health, philosophies on life, and variation in diet (Hamstra & Verhoeven, 1995; Spencer, 1993; Beardsworth & Keil, 1993). Only a small percentage of the population choose alternative diets more in line with their attitudes. The great majority follows the guiding principle of consumerism and does not question the current food practice or does not translate citizen concerns into eating habits.

This small number of people is not considered a threat by the food industry, unlike vegetarianism in the 1970s. The food industry sees market opportunities in the vegetarianism trend (Beardsworth & Keil, 1993), because of the promising new of generation meat replacements. These products have a high profit margin, because the raw plant protein materials are cheaper than meat. This means alternative eating habits can now be brought into the principal food chain. Meat replacements can be marketed as convenient quality products and labelled environmentally and animal friendly and healthy. It also means the focus with regard to vegetarianism has shifted from eating less meat to producing more plant protein products.

3.1. Will a diet shift require a transition?

A transition is a cluster of trend ruptures that lead to a structurally altered ordering of society (te Riele et al, 2000). Transition is used as a concept to describe and explain complexity and coherence in broad, structural societal changes. Transition management is process-directed as opposed to goal-directed. In a transition process, the outcome is not clear because along with the development, adjustments and responsiveness occurs. Transitions can be regarded as possible development-routes (Rotmans et al, 2000). Around the turn of the century, the concept of transition became fashionable among researchers and policy-makers, especially of the department of VROM. Also, many researchers from Profetas and its forerunner DTO saw a diet shift as a transition. For this reason, I will discuss the question of whether a diet shift requires a transition.

The answer to this question depends on how this process will be viewed and managed. For a large part, it will depend on the role of government in the process. If government operates as a transition manager, the outcome of the shift will not be certain. This means, a diet-shift could take the form of 'less meat eating' or 'more protein production', or a bit of both. This would require a reframing of the role of government. If government does not actively stimulate a transition process, a technical fix will occur. NPFs will be put forth as the goal for a diet shift and actors will act according their defined roles; scientists with a 'beta-view' on the problem, food industrials, consumers and government all keeping the prevalent ordering in place.

Introducing NPFs as the goal for a diet shift would not be a transition, but a path-dependent development. Introduction of NPFs would follow the prevalent trend of adding value to food through technological innovation and fitting the established practice in which the marketisation and industrialisation of food is essential. Management of such a shift would be goal-directed. Other options are blocked out. It also fits the recent trend to improve agro-industry competitiveness by focussing on an environmental friendly niche product. Roles, frames and power divisions in the food

practices can remain unchanged. From the production point of view, NPFs are mainly a possibility to improve sales. Now that the production of meat has reached a ceiling in Western Europe, mainly the producers of meat products are the ones that explore the markets for these plant products (Aurelia, 2003). For contemporary consumers, NPFs fit the 'eat more' directives (cf. Nestle, 2001). In the case of development and marketing of meat alternatives, such as NPFs, effort is concentrated on more technology, more products and more food, in line with the guiding principles of the food practice. By presenting the production of NPFs as a transition however, it can count on support, because of the popularity of the concept of transition.

The collective avoidance of pursuing an 'eat less meat' strategy to solve problems, shows that a diet shift which involves less meat consumption is not a goal of contemporary power structures. The contributions of the Dutch government show a partiality towards the prevalent food system. Dissatisfaction with the modern food production and consumption described in chapters 6 and 7, shows that from a social point of view, production and consumption could do with a transition that involves a greater social involvement with food. This would leave room for options and solutions not financially profitable to the bio-industrial complex. Such a transition would be vital for promoting the 'eat less meat' option as a solution to problems with meat production and consumption (see section 5).

4. Policy options within the policy frame: 'produce more'

The content of the notion of partially shifting from animal to plant proteins depends on what it is linked to. Broadly, the notion can be linked to major developments in modern food production such as profitability and convenience ('more plant protein production'); it can also be linked to criticism of meat production and consumption ('less meat eating'). What is related to the notion in the process of its realisation, has different consequences for the shape of the notion of a partial diet shift: for who benefits, for which aspects to food production will count in the food production and consumption practice, for the definition of the problems to be solved by a diet-shift, and for the kind of food we are going to eat. The way a diet shift is attempted to be realised has different consequences for the kind of threats, barriers and opportunities encountered. For example, the steps to be taken, the kind of actors to be mobilised and the effort it would cost all come into play.

Shaping the notion of a diet shift is a political process, in which all kinds of hidden political choices are made regarding a future food system. There is not just one possible outcome of shifting a population's diet; between the two extremes of a diet shift contributing to further industrialisation or mobilising *against* further industrialisation, there are several forms which a diet shift could take. There are three possible roles for policy makers in the process in which the notion of a diet-shift takes form, by relating it to certain aspects of food production and consumption and disassociating it from others. The first is probably the role most likely to be played by governmental actors and the role they have presently; they are not directly involved in shaping the notion, but contribute through existing policies in related fields. In the second role, policy makers directly contribute in shaping the notion. In the third, policy makers refrain from shaping the notion themselves and focus on stimulating broader and more equal participation of actors in the process, while also making the political consequences for the food system clear to the public. This third role will be elaborated in section 5.

In this section, the policy roles within the current frame of ‘producing more’ are discussed. Policy options for a diet shift within the current policy frame will be the ‘produce more plant protein products’ option, through stimulating ongoing research and development regarding ‘novel protein foods’.

It is neither likely nor advocated that policy-makers will actively contribute to stimulate a diet shift in the form of NPFs, because this doesn’t fit the approach of Dutch government: leaving developments to the market. This policy role will be discussed in section 4.1., though it is not expected or desired that the government will change its position in the food practice back to more intervention. The way in which current policies would stimulate the ‘produce more plant proteins’ side of a diet shift is by ‘doing nothing’, that is to say, by not changing their current role and activities. This role for policy makers is the most probable and is discussed in section 4.2.

4.1. Government actively promoting ‘producing more plant proteins’

Since the early 1990s, the trend in agricultural policy has been less intervention and more reliance on market forces. Therefore, active promotion of the development and marketisation of NPFs seems very unlikely. New food technology is regarded as a positive development, which could stimulate health (VWS & LNV, 1998) and the economy (VROM et al., 2000). However, it is questionable whether NPFs can be promoted as enhancing sustainable consumption patterns, because the ‘produce more’ option means simply that supply increases. Since this will lead to increased production and consumption, environmental pressure will probably not be reduced. The impact on sustainable protein production would be larger by simply eating less meat.

The market for NPFs and other meat replacements will be a result of the interaction between consumers and food businesses. The market share of modern meat replacements has grown over recent years (Aurelia, 2003). However, the market share of these products is small. A slow, gradual growth of the consumption of these products can be expected.

The policy-role of actively promoting NPFs implies willingness to support the notion of partially shifting from animal to plant foods. Realising the notion becomes a policy goal, and attempts would be made to link the notion to major developments in the food system. Considering the way policies are now involved, the ‘new plant proteins’ aspect of the notion, linking up to developments in food technology and trade possibilities seems the most plausible way policy makers would like to see the notion take form. This has previously been done with agricultural products that have a high added value, such as cheese, dairy, eggs and meat, for which various measures were taken to enhance production.

Government actors could stimulate operationalisation of the notion as a way to link economy, technology and ecology by managing a mutual learning process, which aims at reaching a diet shift through NPFs. With regard to the environment, the manure debate is stuck. The production of NPFs could be a breakthrough, creating a more important role for environment in food production and consumption. This would be viable if lack of economic growth in meat production could be made up by profits from NPF production and if the technology is available. The environmental gains depend on the financial and technological gains. The government could safeguard the link between sustainability, technology and economy, through supplying arguments for NPFs as a goal and communicating this goal. Meanwhile excluding other linkages

and goals: purely profit-making orientations, a purely environmental orientation or a different definition of sustainability. To safeguard the link, consumption of beans or a decrease in meat consumption should be discouraged, because these solutions are not profitable. Technology development has to appear useful from sustainable and economic standpoint. There is no agreement however, on the usefulness and desirability of linking technology, sustainability and economy. NPF production can seem to be a detour for reaching reduction of environmental pressure. The recent 'food crisis' led to the questioning of the all-important economic profitability of food. The success of NPF development as a sustainable solution will depend on making economic, technological and sustainable linkage appear significant.

There is also a role for government in matching the sustainability goal with other values in the food practice. Most important is warranting the safety of NPFs, and monitoring the social acceptability of 'high-tech foods'.

The notion of a diet-shift would be defined as the production and marketing of NPFs; certain aspects of food production (convenience, added value and food technology) would be related to the notion, whereas other aspects (natural, the characteristics of the raw material) would be disassociated, giving the diet-shift a certain form. Actors are to be enrolled into a production and consumption practice that would lead to the realisation of producing more plant proteins. Corresponding production methods, product appreciation and food policies would be mobilised in making new consumption and production patterns normal.

4.2 Government promoting 'produce more plant proteins' by doing nothing

The most obvious role for policy-makers would be to do nothing and not actively participating in shaping the notion of a partial diet shift. This role is most likely since there has not been much recent interest at the policy level. Neither the STD programme nor debates on the future of Dutch agriculture have resulted in an appearance of a partial diet shift on political or policy agendas. The Ministry of Economic Affairs appeared most interested in NPFs, because of the potential contribution to the Dutch economy. The Ministry of Environment looked into NPFs as a creative option for a sustainable food supply; though in the white paper of 2001 with regard to environmental policy ('Nationaal Milieu Beleidsplan 4') there is no mention of strategies for a sustainable food supply, merely of sustainable agriculture (Loeber, 1999; de Kuijer & Wielenga, 1999; van Wijk & Rood, 2002; VROM, 2001).

The way in which policies are involved with the food system however would play a role in shaping the notion. The 'produce new plant protein products' interpretation has an advantage over the 'eating less meat' interpretation. Because of the importance of trade attached to food, research and development stimulated by the government is directed towards innovations that enhance the economic value of food. The white paper on 'ecology and economy', and also white papers on bio-technology, diet and the agro-food complex show a readiness to adopt new ecologically sound products, and safe to consumers' health (VROM et al, 1997; VROM et al., 2000; LNV, 2000; VWS, 1998).

By keeping the ordering in the food practice stable, developments in food and diets will be in the direction of increasing sales. The present trend in production is toward producing quality products for niche markets. The government supports this by stimulating the innovation of the knowledge infrastructure of research and education (LNV, 2001). As is indicated in chapter 7, agricultural production is

increasingly left up to the market. In the market, consumers and producers will define the success of a product. There is a growing market for socially acceptable products that incorporate certain values, connecting to trends as ‘green consumerism’ (Adams, 1990), or part-time vegetarianism. For companies as well as food researchers the consumer is extremely important, because the success of the product depends on whether there is a market (Jongen et al., 1997). Research mapping the preferences of the consumer and adapting product characteristics to those preferences is a vital fortification of the relation between food industry and consumer. The guiding principle for new food products is convenience. The constant need for resetting the relation between industry and consumers to retain a market position leads to further industrialisation of food and still more added values. Meat replacements produced with use of modern food technology could have a larger profit margin than meat.

“Consumenten zijn verder dan we denken. Er is al een ontkoppeling aangebracht tussen voedsel, platteland en landbouwproductie. Dat zien we onder meer aan de stagnatie in de groei van biologische landbouw. Het wordt consumenten door de strot geduwd.” (P. Vereijken in: artikel ‘landbouw verdwijnt uit Nederland’ Wageningen UR 29-05-01).⁷⁶

Government is protecting the boundary conditions for the development of new food production, such as guarding food safety. To be able to monitor the safety of these new products, the EU set out a regulation (258/97) concerning ‘Novel Foods’. Before the product can be brought on the market, accessible knowledge on health effects and a permit are required. Animal research will take approximately one year, and the application procedure could take another two years (Dukel, 2000). This regulation came about in 1997. Before that, EU countries differed in regulations and definitions on new food products, which was a barrier for the free trade between the countries. Together with protecting the health of citizens, restoring free trade was a main argument for regulation on an EU-level. However, a fair amount of uncertainty regarding novel food is still present. Classical toxicological, pharmacokinetic and metabolism research is not sufficient:

“De beoordeling van de geschiktheid van voedingsmiddelen (...), voor de consumptie levert een aantal wetenschappelijke uitdagingen op.”⁷⁷ (97/618/EG).

Because of uncertainties and dependence on available test methods, food safety with regard to NPFs is for the most part a money and time consuming matter for businesses. Large companies could be more ready to launch novel foods than small ones. Because of the narrow frame of food safety, plus the many uncertainties faced, the emphasis of policies is on protecting, rather than improving, consumers’ health and preserving public trust in modern food technology.

Apart from governmental frames and policies favouring ‘more plant production’ opposed to ‘less meat eating’, the current policy frames and policies are also a barrier for promoting ‘less meat eating’. Because of the historical connection with the animal production sector, the issue of eating less meat is a politically sensitive subject, perhaps even taboo. Through actively creating conditions for the

⁷⁶ “Consumers are further than we think. Already there is created a disconnection between food, countryside and agricultural production. We see this amongst other things at the stagnation in the growth of organic agriculture. This is forced upon consumers.” (P. Vereijken in: artikel ‘landbouw verdwijnt uit Nederland’ Wageningen UR 29-05-01, translation MV)

⁷⁷ “Judging the suitability of food products (...) for consumption brings along a number of scientific challenges.” (97/618/EG, translation MV)

growth of the animal production sector, government actions had a role in normalising the consumption of meat and other animal products. In this process of normalisation, certain aspects of animal production such as environment and animal welfare had long been disassociated from the practice of production and consumption. As recent uncertainty shows, it is a problematic process to include these issues into the production and consumption practice. At the same time, aspects like product boards for animal production and knowledge and education were facilitated by the government and structured to promote animal production. Although the tasks of the product boards lessen and the areas of knowledge and education are diverging, the promotion of meat production is still strongly represented in the practice of food production and consumption. Even though insights and attitudes have changed, the existence and activity of the practice keeps the built-up ordering and values inscribed in it in place.

Government and policies have contributed to the prevalent practice by concentrating on agricultural income with regard to food. Concerning this construction, (former) actions of policy makers, interrelated with other actions in the construction of the modern food system, will not stimulate developments that would mean a loss of income to the food sector: for example, a decrease in meat consumption, more sober production and consumption, or more unprocessed foods.

5. Suggestions for widening the policy frame and democratising decision-making with regard to food

5.1. The need for re-framing

Intentional or not, and in spite of different ideas about meanings, desirability and interests with food, orderings that built up the food practice lead to a certain framing of what food is to society. The processes, in which these orderings are constructed and destructed, can be regarded as politics in practice. The historical description revealed these politics in practice demonstrated that the contemporary meat consumption does not stand on itself. Instead, it is normalised within a food practice that favours products with a large market value and discriminates against plant protein products that have a low profit margin and do not fit the definition of convenience. In fact, the term convenience depends on perception of time or lack of time: it is simply assumed by most that we do not have enough time. According to Mintz (1996, p.121), Americans are repeatedly told that they do not have time, in order to increase consumption. Regarding to a possible partial diet-shift, we saw that novel protein foods provide the current food practice with an opportunity to continue the ‘produce more’ development now that meat production has reached a ceiling in Western Europe. Novel plant protein products do have a large profit margin and fit the definition of convenience.

The historical description in the previous chapters also revealed that with the construction of the contemporary food practice and efforts to maintain the ordering by redefining problems and ignoring alternative perceptions, certain problems, discontents and actors were systematically left out of contributing to the design (of the content) of the food practice. In this section, aspects ignored when focussing on maintaining the ordering of the food practice will be discussed, namely over-consumption, further industrialisation, marketisation, and the lack of citizen influence

in the food practice. An explanation of why these aspects should receive more attention and contribute to re-orderings of the food practice will be put forward. Second, ways for government to un-order the food practice will be suggested, namely by widening the current policy frame and democratising decision-making with regard to food.

5.1.1. *Over-consumption*

Woodhouse (2001) mentions the damaging environmental impacts of over-consumption. Overeating forms a serious and growing threat to human health (Nestle, 2002; Tansey & Worsley, 1995, p.53-55). The current food practice is a barrier for getting an 'eat less' message across (Dagevos, 2002).

“Voor het in voedselbeleid en –voorlichting gekoesterde adagium ‘gevarieerd en met mate’ geldt dat ‘gevarieerd’ in het huidige tijdperk in kapitalen moet worden geschreven, en ‘met mate’ naar de achtergrond verdwijnt.” (Dagevos, 2002, p.33).⁷⁸

Although the consumption of less fat and sugar is advocated in food consultation, the Dutch food consultation bureau chooses its formulations carefully. For example, it promotes the consumption of more fish instead of discouraging people from eating fat meat products. Or, it provides brands with a recommendation mark for snacks that are low in fat though still high in sugar. Meanwhile, the product board for livestock, meat and eggs is giving public consultations on the healthiness of its products. In the white paper on policies on diets, there is a policy resolution of reducing fats and sugar, without mentioning actual products.

If marketisation remains as an important guiding principle, eating less will simply have no place in food practice developments. The freedom of choice is a consumer right, part of the consumer role and almost unassailable. Advice for reducing consumption rarely hits home. Commercial for new products expand the freedom of choice for consumers and consumers do not have to change their role (Dagevos, 2001). Especially when 'eat less' messages are reframed as a commercial for a (new) food product: for example those advertised as approved by the Dutch heart society. The commercial advocates of an 'eat more' message have financial means that far exceed the budgets of 'eat less' advocates. For the United States, Nestle (2002) provides an insightful study into how the current food practices transform over-consumption into a problem for which 'eat more' is a solution.

The development of NPFs as a means to reduce meat consumption in Western European countries, is another example of reframing 'eat less' into 'eat more'. This of course does not threaten the current practice and existing roles and frames in the food practice as solutions can run through the market. It remains unclear however, how an increase in NPF production would lead to a reduction in meat consumption. Policy makers and consumer and nature organisations seem optimistic about the Profetas program idea that the introduction of NPFs will lower meat consumption as well as improve the sustainability of future protein supply (Aiking, 2004). In contrast, the societal organisations in the DTO program criticised the assumption that simply marketing one product would reduce the consumption of another (Loeber, 1998; Loeber, 1999).

⁷⁸ “For the adagio in food policies and food consultation ‘variance and moderation’ goes that ‘variance’ nowadays has to be written in capitals and ‘moderation’ disappears to the background.” (Dagevos, 2002, p.33, translation MV)

“[...] people are both eating what they feel they want and buying other food to feel less guilty. They’re eating *them* too”. (Mintz, 1996, p.120)

Meat as well as NPFs have plenty of options in the snack and convenience food market. The suggestion not to market NPFs as meat, but give them a trendy image, will set NPFs aside from meat and will allow their consumption in addition to meat. Additionally, the plan is *not* to direct NPFs towards vegetarians or the alternative circuit. This means that NPFs will not be associated with alternative consumption as an alternative to meat.

5.1.2. Problems with modern food production and consumption

“Our ability to grasp the fact that the economic and political hegemony of our values, and our economic policies, have served to undermine the integrity of other food systems, remains the major challenge we in the North face today. For the spread of the modern food system marks the success of the North’s cultural hegemony, as well as its economic supremacy.” (Goodman & Redclift, 1991, p.256).

As previous chapters indicated, the ongoing industrialisation and marketisation of food has repeatedly encountered opposition. The trend for more natural food and production methods in the 1970s had for one part been made a non-issue by claiming that every food is actually chemical, not just industrialised foods. For another part, it was incorporated by the prevailing production practice by bending the trend to more natural foods, ‘organic’ and ‘simple’ vs. industrialised, in the direction of ‘green’ and ‘simple’ *images* of products on the one hand and reformulating the issue into technical food safety measures on the other (Belasco, 1989; Van der Ploeg & Ettema, 1990). But with regard to highly industrialised foods certain discomfort remained and with further industrialisation in the food chain, the wish for ‘natural foods’ increased. Van Otterloo states that alternative food movements are not simply fashionable, because of the long history of resistance against modernising food production. The lengthening of the food chains and the interdependence of others leads to anxiety, especially with regard to food (1990, p.200-203). Distrust of technology is often treated as irrational and a barrier for development. However, it is often the big businesses and state power, combined with lack of citizen power that leads to this distrust (Bauer, 1995). According to Morgan and Murdoch (2000), the future of the food system will be the result of the struggle between two interests: industrialisation and naturalisation.

NPFs are also subject to distrust of highly industrialized foods. On a policy-level, distrust in new food products is operationalised in food safety measures, protecting consumers’ health and preserving the public trust. Addressing distrust in biotechnology and industrialised food as a food safety measure keeps the wish for more natural food and the question of a socially desirable production off the political agenda. Although food safety is an issue in the media, research, governments and corporations, there is not much known about how consumers regard food safety i.e., in which degree they regard food as (un)safe and why (Dagevos, 2002). Also, sustainable food production is subject to many interpretations. To be able to tackle problems of sustainability issues, it would be helpful to pay attention to various images of sustainable food, instead of framing the problem as a technical problem that requires a ‘produce more’ solution.

By defining societal needs as consumer wishes and translating these wishes into convenience foods, broader societal needs will not be addressed. The wish for sustainable food is operationalised into eco-efficient convenience foods, which dismisses the wish for natural simple foods. Because societal concerns are thus dealt with, consumers can easily go along with the food industry's 'shade of green', the operationalisation has been done for them and remaining in the consumer role prescribes a strict division of labour along the food chain. The constant defining of societal wishes for food and the reinforcement of the consumer role makes it difficult for the consumer to act outside its preset role. By definition, a consumer buys food and leaves the responsibility of production to the food chain.

5.1.3. Lack of citizen influence in the food practice

On the market, in shops and on restaurant menus, there is plenty of choice. The consumer can choose his or her own preferred meal and in this way 'vote' in the democracy of the market (Lindblom, 1962). However, the influence of consumers in the market system does not reach far. The influence of consumers is at most choosing an end product already on the market (Woodhouse, 2002). The consumer is defined as someone who exchanges money for goods and services (Tansey & Worsley, 1995, p. 142). The term consumer is much older, but this role was mainly settled in the first decade after World War II, along with the raising incomes and increased industrialisation of food processing and food preparation. A longer food chain arose, while consumers were less physically involved with food production processes. Consumers are enrolled in the food practice. They do not influence the process of creating the end product, the kind of production processes and choices of what will be produced, because it is not part of the consumer role. When discussing this kind of influence we are talking about citizen interests.

“Nadenken over burgers en consumenten betekent nadenken over de inrichting en organisatie van de samenleving. Met de begrippen burgers en consument wordt naar twee verschillende posities en rollen van mensen in een samenleving verwezen. Het begrip burgers verwijst naar een samenleving en naar het bestuur ervan: de overheid. Het begrip consument naar de markt.”⁷⁹ (Schuurman, 2003, p.137).

Policy makers seem willing to include the citizen in food-issues, but also expect the public to act as a citizen through their consumption-behaviour and to change their own role in the food system. This subsection will be about citizen interests with food: to what degree can citizens influence which products appear on the market and how food is being produced?

A white paper by the ministry of agriculture called 'food and green' (Voedsel en Groen, 2000), announced important changes in agricultural policy. The focus of the ministry will shift from agriculture to 'food and green'. This means that production in the agro-food complex will be left to the market and that policy will increasingly be focussed on the societal demands for producing food. It is noted in this white paper that food production has run against societal, economical and ecological boundaries. A key-concept for future developments of the agro-food

⁷⁹ “Thinking about citizens and consumers means thinking about the construction and organisation of society. With the term citizens and consumer is referred to two different position and roles of people in society. The term citizens refers to a society and the leading of a society: the government. The term consumer refers to the market. (Schuurman, 2003, p.137, translation MV)

complex is socially responsible production, to create a stronger bond with society. Societal worries about food are going to count in decisions on the *who* and *what* of food production.

Several different characteristics of the food practice are imbedded in modern food production as it stands: the interaction between humans and environment, the process from seed to sausage, and political, technological and social developments now. Especially during period just after the Second World War, industrial processing and preparing of food became more important (convenience foods) and the market became important aspects. The process from which an ordering of food production arose is called commodification by Lezaun (2002): the cutting loose of local conditions for production, where actors and merchandise are made to circulate as interchangeable units, while standardisation and enrolment occurs.

Critical reactions of the 1970s and 1990s to the way meat is produced and on the over-consumption of meat were severe enough to attract the attention of those involved with meat production and consumption. However, reactions to the criticism did not lead to eating less meat. Repeatedly, reactions from the production practice were such that the production and consumption had to be only slightly altered. Also, the idea to increase the involvement of citizens with regard to the future of animal production is an attempt to keep the sector as much as possible as it is and prevent a further loss of the citizen's trust in meat production. Along these lines, the white paper 'Voedsel en Groen' states that to stay internationally competitive, it is necessary for the Netherlands to be the first with socially responsible production, so that the Dutch food production can aim at the international market of the future (LNV, 2000). Also, the consumer will sustain her or his buying behaviour and range of relevant production characteristics for buying, as long as possible. It would cost too much effort to weigh pros and cons with every purchase of food. People have a number of cognitive mechanisms to make it as easy as possible for themselves (Baron & Byrne, 1997; De Vries & Van der Pligt, 1991). Although the citizen gets a say in the future of animal production, he or she has an interest in maintaining the role of consumer and retaining the habit of eating currently produced meat at a normal price (Van Dinther, 2000).

The production of new meat alternatives is trying to link up with a public interest with food. In the case of 'novel protein foods' is tried to link up with a wish for 'green' food. At the same time the fixed roles and development paths in the food practice can remain unaltered. Thus a further industrialisation of food and the advancement of economic growth in the food sector is perpetuated (cf. Howard, 2002; Schakel, 1989). This way, the often vague wish for 'green' food is operationalised by consumers, technologists and businesses. In this process, the wish for 'natural' food is removed from the definition of 'green'. To be able to warrant the trust in 'technological green', there is a policy for food safety. With this policy, norm setting, risk analysis, risk estimation and risk management are practiced with use of technological research.

In the entire process, the citizen hardly has a role. It can be said that the operationalisation of green is a way, just as was the case with the reactions to criticism of meat production, to keep the current practice stable, including the consumer role. Other specifications of concepts as 'honest, natural, healthy, simple and green' food could slow down the development of further industrialisation and the increasing of the profit margin on food.

“De overheid zal terugtreden. De consument zal gevraagd en ongevraagd worden geconfronteerd met een vloed aan nieuwe produkten. Met één kenmerk: men zal proberen de consument te overtuigen van het feit dat de nieuwe produkten **beter** of **gezonder** zijn (ondanks dat de kwaliteit veelal slechter zal zijn, evenals de smaak). Presentatie en marketing; dat zijn de begrippen waarom het zal draaien.”⁸⁰ (Bolhuis, 1990, p.54).

The influence of the citizen mostly remains limited to putting problems on the agenda. Problems used to be defined in such a way that they became solvable within the current practice. In this process, the citizen only played a role as consumer and the process made it possible for that role to remain. With the trend towards socially responsible production, the citizen can get more involved with food production. There is an economical necessity for the citizen's trust in food. Because of this, socially responsible production will result equally well in efforts to maintain the intended direction of developments in the current food practice. This means it will not really take away existing criticism. The process of solving problems in such a way that the barriers for progress are removed can be described by the term 'recommodification' (Lezaun, 2002).

In order to obtain a larger role for public interests, not the problem, but the current food practice would have to be redefined. Change would be incremental, but in other directions. The question here is whether an alternative guiding principle can be found that could make logical incrementalism possible in the long term. This will not just be about social acceptance, but about socially reconstructing the food production. This would be the real transition: thinking outside the existing institutional frames and direct actions to this thinking (Vijver & Hoppe, 2002).

For citizen interests to apply to food production and production choices, the role of the consumer would have to be broadened to include more citizen-characteristics (Lang in: Atkins & Bowler, 2001 p.247; Orr, 1992). The consumer will not do this automatically; consumers have proven to be incompetent in their buying behaviour, even when it involves defending their own interests (Woodhouse, 2002). Affect is most important in the buying behaviour of the consumer. The consumer is not a rational acting being when facing the grocery shelves in the supermarket (Dijksterhuis, 2003). Government is focusing on the consumer role to instigate changes. The consumer is expected to change faulty production by buying other products or buying elsewhere (Schuurman, 2003). When buying behaviour does not reflect citizen interests, government and businesses use it as an argument for not acting (Sterrenberg & Dagevos, 2003). Actually, incorporating citizen interests into the practice of food production is pre-eminently a task for the government (Diederer, 2003; Dubbink, 2003).

Woodhouse (2002) proposes the following for democratising consumption. On *how* goods are produced, citizen interests could best be defended by corporate executives. These people direct the process. What if they were paid for guiding these processes in the direction of the public interest? The company's interest will be defended because the board of directors can fire and hire a corporate executive. On *what* is produced he proposes that quasi public 'consumer democratic intermediaries' decide what kind of products and which materials and ingredients, get on the market. These intermediary organisations would consist of consumer-representatives and

⁸⁰ “The government shall step back. The consumer shall - demanded and undemanded – be confronted with a torrent of new products. With one characteristic: it will be tried to convince the consumer of the fact that the new products are **better** or **healthier** (despite that the quality will often be worse, just as the taste). Presentation and marketing; these are the terms where it is all about.” (Bolhuis, 1990, p.54, translation MV)

experts. He mentions disadvantages and difficulties of this solution, but concludes that steps can already be taken to improve the current practice.

A way to further democratise consumption is to widen the variety of production methods. On the level of the end product, this will increase the choice between how and what is produced. This way, possibilities arise to 'vote' for the desired kind of food system that comes along with the purchase. In the terms of Lezaun (2002), this is a process of 'decommodification'. Bruchem (2003) mentions a 'dot' system as a sustainability index for consumers; coloured dots can be used to distinguish between animal welfare and sustainability. Government could provide financial stimulation with a sustainability bonus when a certain amount of dots have been purchased. When defining sustainable food, more attention should be given to problem structuring instead of a one-sided approach of the problem, explicit statements of uncertainties and risks instead of deliberate or unintentional obfuscation, and working interactively from the start with stakeholders (Schön, 1983; Hoppe & Peterse, 1998).

5.2. Widening the policy frame

In the present food practice, the government as well as the public's role are incorporated into the main guiding principle of food developments: marketisation. Because of this, when problems arose with meat production, eating less meat was never put forward as a solution. To be able to serve the goals of long-term sustainability and social acceptability, a transition would be necessary to change roles for the public and government, and change the meaning of food in food production. In that case, a choice between 'producing more plant alternatives' and 'eating less meat' could become unbiased. This research has shown that the bias in food policies in favour of the export position of agriculture worked as a too narrow a framework from which new problems with food were tackled, keeping other viewpoints from the agenda. Orr (1992) for example, gives an account of the characteristics of ecological sustainability (compared to technical sustainability), which involves: humans as limited, fallible creatures; the requirement of active competent citizenry; the use of past practices, folkways and tradition; nature as a model for design; decentralisation; interrelatedness.

If sustainability and long-term social acceptability is the goal of a diet shift, the 'eating less meat' option should be considered equally as an option in addition to producing more plant proteins. Policy makers could try to create a more equal situation for the 'new plant protein production' part of a diet shift on one side, and the 'less meat eating' part on the other. For a large part, this would come down to reducing their interests in the consequences for profitability. This way, other possible interests in food, such as 'natural, simple foods', are not immediately cut off from a partial diet shift. Most important is the deconstruction of the current policy frame. Problems should be approached from a different perspective, so different problem definitions and roles for policy makers would become available. In dealing with the bias of the current practice, policy makers would be aiming at a more divergent food system, with different approaches to food, so that 'new plant protein production' would not necessarily become more normal than 'eating less meat'. Eating less meat would then become an alternative.

The role for policy makers implies they would focus on the *process* of shaping the notion of partially shifting from animal to plant protein foods. Instead of defining

problems and solutions, governmental actors would facilitate the process of problem definition. This role is known as transition management, which is not the management of the transition itself, but instead a process focussed role, ensuring the start and continuation of the process. Government should bring in actors and create conditions for their participation (van Wijk & Rood, 2002, p.18). Also, policy makers should create equal chances to various initiatives. Governmental actors could stimulate variance in shaping the notion of a diet shift by stimulating the co-existence of different kinds of diet shifts, representing dissimilar viewpoints on desirable future food systems, and stimulating the disclosure of these views.

It is easier to link the notion of a diet shift to those aspects of modern food production where importance has previously been attached (convenience, profitability and technological innovations), than it is to link it to criticism of modern food production. Criticism is divergent and can only be related to the notion at the level of individuals or small groups. Representatives of the prevalent food system try to keep everything as stable as possible.

Until now, the government has been predominantly focussed on the supply side of food (Dagevos, 2002). This leads to the emphasis on 'produce more'. The demand side should receive more attention. Also other values (e.g. 'just' production) should become increasingly important. Profitability shouldn't be an issue for the government, since businesses' actions will be guided by financial gains.

In terms of actor-network theory, this would mean policy makers treat the notion symmetrically (Callon, 1986). The 'new plant protein production' option would be considered in the same way as the 'less meat eating' option. This means that 'technical' arguments would not automatically be more plausible than 'emotional' arguments, or that interests of large corporations are not more important than personal interests of the population. The appreciation of one argument or importance of an actor over another in the food system is a consequence, rather than the cause of the construction of the modern food system.

This involves policy makers looking beyond their current policy frame and ordering of the food practice. Taking the interests and power of stakeholders as a starting point for developing a strategy for a diet-shift, would mean keeping to the narrow framework and ignoring how stakeholders relate to the processes that structure collective eating habits such as the processes that defined and set down convenience as a guiding principle for developments. In certain instances it will be required to think about a diet shift from the ordering that give certain powers and interests to stakeholders, instead of starting from stakeholders. Changing collective eating habits can prove difficult if one takes the current underlying structures and the actors involved as given (Callon & Latour, 1981). After reaching the status of a prominent link in the food production chain, everyone that takes part in food industry works at expanding or retaining this position, while leaving out issues and actors who are not.

Wielenga (2001) provides an example of how an alternative frame (he uses the term paradigm), could work for policy makers:

Wielenga discerns four paradigms for the role of knowledge, leadership and the Dutch government in agriculture. First is the instrumental paradigm, for which the world is a technical challenge. This has been the paradigm especially in the period described in chapter 5 (in Wielenga's study the period 1956-1975). Second is the strategic paradigm of economic liberalism, in which the world is an arena revolving around interests and power. In the Netherlands this paradigm came up in the 1990s.

Third is the communicative paradigm, in which actors have to recognise each other's different views of reality and grow toward each other through interaction. The fourth paradigm that Wielenga mentions is the ecological paradigm. This paradigm views the world as a living organism, in which individuals and networks have a part, but where no one can overlook the whole autonomous development. Individual and collective goals are subsumed to finding answers to signals of ecological imbalance. In his study, Wielenga searches for new guiding principles for the future. He describes the perspectives on knowledge, leadership and the role of the government from the first three paradigms and then uses the ecological paradigm to reach alternative conclusions.

The ecological paradigm can be captured by five key concepts: vitality (where a healthy network will develop autonomously toward creativity and task division), input (where every individual gives input based on his own insights and qualities), adjustment (where in adjustment self reproductive patterns can evolve, with task division, standardisation and coherent behaviour), identity (a network needs a strong identity, with recognisable surplus value), responsiveness (a network has to be responsive). Wielenga formulates five principles to guide decision making on normative issues (p.315), and discusses the consequences of working from these principles. The first principle is 'vitality in a network is fed by personal leadership'. This means a change in the attitude of actors. Instead of asking what one's task is and what one has to do, one has to ask what one wants and how to accomplish this. Goals as the single most directive for action are not reliable, because these can become barriers for recognising signals that contribute to the autonomous developments of the network. The second principle is 'relevant knowledge arises in interaction'. This implies a redefinition of consultation and a less prominent role for scientific objective research as a means for knowledge development. Knowledge development cannot be steered and open communication channels are essential. The third is 'leadership is the creation of room for vitality'. Leaders will create room and conditions for vital processes. The fourth is 'structure is useful when the threshold for taking the lead is low'. Structure is seen as the conditions that actors create to order their interaction. The fifth principle is 'a society needs a collective circuit in order to keep socially relevant networks vital'. Organising this collective circuit will be the main task of the government.

It is not a realistic or likely option that government will change its frame or role from stimulating competition on the international food market and monitoring food safety to stimulating breaking of the ordering of the food practice open by letting citizen interests in and new food practices evolve. Furthermore, it is not easy to leave the current policy frame, because it is the established reality. It would require motivation, courage and creativity to broaden the frame. Still, what this study has revealed is that the current policy frame is biased toward certain food products and values. This governmental bias and the ways it affects the food practice are not always conscious or according to policy goals. My effort was to make the workings of the policy frame in food practice visible, so governments could become more conscious of partiality and assumptions underlying their actions to improve sustainability in the food system and clearer about their choices and the implications of certain choices for what food is mainly about.

Samenvatting

Dit onderzoek maakt deel uit van de interdisciplinaire onderzoeksgroep Profetas. Binnen Profetas werd onderzocht of een dieetverschuiving waarbij de proportie plantaardige eiwitten omhoog gaat en de proportie vlees omlaag een zinvolle oplossing kan zijn voor de milieuvervuiling die met de productie van vlees gepaard gaat. Mijn onderzoek richtte zich op de wijze waarop overheidsbeleid van invloed is geweest op de proporties vlees en plantaardige eiwitten in ons dieet. Op het eerste gezicht heeft de overheid amper invloed op onze persoonlijke voedsel voorkeuren. De invloed van de overheid is echter vaak indirect en heeft te maken met welke producten voor consumptie beschikbaar zijn, welke eigenschappen een product tot een succes maken en hoe bepaalde producten of productieprocessen worden beoordeeld over andere. De invloed van beleid op ons dieet is vaak niet gepland, maar een bijeffect van beleid met betrekking tot een ander onderwerp.

De studie richtte zich op het ontwikkelingen in de dagelijkse praktijk van voedselproductie en consumptie en de implicaties van deze ontwikkelingen voor de verhoudingen vlees/plantaardige eiwitten in een dieet. In deze ontwikkelingen vindt een bepaalde ordening plaats en vormen zich een bepaalde manier van kijken naar situaties (frames) en definiëren van rollen en problemen, als ook waarden en regels voor handelen. Op deze manier kunnen bepaalde eiwitproducten in of uit de dagelijkse praktijk van voedselproductie en –consumptie worden georganiseerd. Met andere woorden vindt er een proces van normalisatie plaats, waarin het ene product of productiewijze of consumptiegewoonten normaler zijn gemaakt dan andere. In het creëren van deze ordeningen ligt de ‘eiwit-politiek’ besloten. De onderzoeksvraag voor de historische analyse is:

- ❖ Wat is de eiwit-politiek? Welke definities, frames en richtlijnen organiseren eiwit producten in of uit de voedselpraktijk?

Deze vraag vormt de basis voor de antwoorden op de volgende vragen, die in het laatste hoofdstuk beantwoord zullen worden.

- ❖ Wat zijn de implicaties van de ordeningsactiviteiten voor de operationalisering van een dieetverschuiving?
- ❖ Vereist een dieetverschuiving een transitie?
- ❖ Welke rollen zijn er voor beleidsmakers bij een dieetverschuiving?

De historische analyse begint rond 1850. Rond deze datum kwam de term ‘eiwit’ op. Een publicatie uit 1847 over de noodzaak van eiwitten in de voeding vormt een ideaal beginpunt voor dit onderzoek. De hoofdstukken 2 tot en met 5 (1850-1970) beschrijven hoe ontwikkelingen in de maatschappij, economie en politiek tot op zekere hoogte de voedselproductie en -consumptie ordenden, door de richtlijnen voor verandering, de soort activiteiten en de rollen van de betrokken actoren te construeren. Bij het opbouwen van de ordening, werd voedsel steeds meer handelswaar. Voedsel werd deel van een commerciële markt en had steeds minder te maken met huisarbeid als koken, slachten en verbouwen en met beschikbaarheid (seizoenen, afstand en houdbaarheid). De productie van voedsel werd steeds meer gerationaliseerd en gemechaniseerd, wat het mogelijk maakte om in bulk te produceren tegen lagere prijzen. De opkomst van supermarkten bracht een verscheidenheid aan soorten en

hoeveelheden voedsel met zich mee, waardoor voedsel veel gemakkelijker verkrijgbaar werd. Voedselproductie werd opgedeeld in verschillende stadia, waarvan elke stap een commerciële meerwaarde heeft. De verdeling van arbeid betekende ook een verdeling van rollen en macht in de voedselproductie. Het toenemend belang van de markt voor voedsel had belangrijke consequenties voor de samenstelling van diëten. De nadruk werd gelegd op 'meer': meer producten, meer consumptie. Consumenten hoefden minder kennis te hebben over producten en de productiewijzen om ze te kunnen eten.

Van alle zaken die met voedsel te maken hebben, raakte overheidsbeleid het meest betrokken bij de landbouw. De exportwaarde van landbouwproducten werd de richtlijn voor beleidsinterventie met landbouw. Landbouwbeleid werd geïnstitutionaliseerd en overheidsbemoeienis met landbouw werd genormaliseerd. De vervlechting van overheid en landbouw maakte dat initiatieven met betrekking tot voedsel makkelijker doorgang vonden als ze in het belang waren van het landbouwincome (rationalisatie en intensificatie van landbouw en stimuleren van export van landbouwproducten). De implicatie was dat in *effect* de financiële baten van voedselproductie belangrijker waren dan andere aspecten van voedsel. Voedsel werd dus in de praktijk meer gedefinieerd als een inkomstenbron dan als voedingswaarde. De overheid stimuleerde de transformatie van landbouw: de verhoging van de productiviteit en specialisatie in exportproducten. De vorming van de Europese Gemeenschap verlengde de effectiviteit van de genomen koers. Deze ontwikkelingen maakten de productie van dierlijke eiwitten politiek meer interessant dan de productie van plantaardige eiwitten.

Tussen 1950 en 1970 vond een dieetverschuiving plaats: de proportie dierlijke eiwitten in het menu overtrof de proportie plantaardige eiwitten. Dit veranderde de betekenis van vlees: het werd van een moeilijk houdbaar, aan seizoenen gekoppeld product een bulkproduct van grote economische betekenis. De veehouderij werd geïntensiverd vanaf begin jaren 1960. Eerder waren de afhankelijkheid van de seizoenen en lokale afzetkanalen doorbroken en met de intensivering werd de relatie tussen het aantal dieren en de hoeveelheid beschikbare grond losgekoppeld. De productie werd gestandaardiseerd en gerationaliseerd. Er werden meer dieren per bedrijf gehouden.

Hoofdstukken 6 en 7 (1970-2001) laten de inspanningen zien om de ordening in voedselproductie en –consumptie te handhaven. Oplossingen voor problemen met voedselproductie en –consumptie, met betrekking tot gezondheid, ethiek van productiemethoden, milieu of de wereldvoedselvoorziening werden gezocht (meestal technologische oplossingen) die niet de economische waarde van de voedselsector schaadden en de ordening in stand hielden. Het bleef een politiek belang om de vleesproductie en –consumptie te doen toenemen of op z'n minst om een daling te voorkomen. Zowel het product vlees als de productiewijze van dierlijke producten waren onderwerp van kritiek in het begin van de jaren zeventig. Met betrekking tot vlees was er bezorgdheid onder experts over de voederconversie factor (hoeveel eenheden plantaardig materiaal nodig zijn om 1 eenheid vlees te produceren). Er waren belangenorganisaties, wetenschappers en politici die opwierpen dat het beter zou zijn als er in de Westerse landen minder vlees zou worden gegeten, zodat er meer voedsel zou zijn voor mensen in Derde Wereldlanden. In de media werd aandacht besteed aan dit idee. Een dieetverschuiving werd op twee manieren geoperationaliseerd. Aan de ene kant werd het idee gekoppeld aan kritiek op de moderne veehouderij en de nadruk werd gelegd op het eten van minder vlees. Aan de andere kant werd het idee gekoppeld aan het verhogen van de winstmarge van

voedingsmiddelen en de nadruk gelegd op het produceren van meer plantaardige vleesvervangers. Uiteindelijk vond geen van de uitwerkingen van het idee van een dieetverschuiving ingang, want er was geen brede steun voor de visie dat een dieetverschuiving een oplossing zou zijn voor de verbetering van de wereldvoedselvoorziening.

De vervlechting van beleid en de stimulatie van de exportpositie van de Nederlandse landbouw bleef sterk en stond pogingen problemen van mestoverschotten en dierenwelzijn op te lossen in de weg. Ook al was het niet altijd direct de bedoeling, zowel de nationale als de internationale overheid handelden binnen de geldende richtlijnen van stimulatie van groei van de intensieve veehouderij. Terwijl de wenselijkheid van de intensieve veehouderij op sommige punten werd betwijfeld, was het voor de overheid niet mogelijk buiten de geconstrueerde beleidsrol te handelen.

Tijdens de recente crisis met betrekking tot uitbraken van dierziekten (varkenspest, BSE en mond en klauwziekte), gecombineerd met de dioxine crisis werd het duidelijk dat hier een breder probleem onder lag: maatschappelijke weerstand tegen de moderne veehouderij. Het werd de overheid, veehouderijbedrijven en landbouwkennisinstellingen duidelijk dat de gangbare productie geen maatschappelijk draagvlak meer had en dat een drastische wending genomen moest worden in de veehouderij. De conclusie was dat de eenzijdige financiële benadering van de veehouderij deze sector op een dood spoor had gebracht en dat er ook aandacht moest zijn voor andere aspecten, zoals dierenwelzijn, milieu, het maatschappelijk draagvlak en voedselveiligheid. Het leek duidelijk dat de koers in de veehouderij gewijzigd moest worden en men niet op dezelfde voet door kon gaan. Toch resulteerde de discussie over de toekomst van de veehouderij niet in een andere beleidsaanpak. Het inkomen van de landbouwsector bleef de doorslaggevende rol hebben in beleidsbeslissingen omtrent het oplossen van de problemen met de dierziekten, zowel door de nationale overheid als de EU. Het frame waar vanuit naar oplossing werd gezocht bleef intact. De inspanningen waren erop gericht de exportpositie niet in gevaar te brengen als gevolg van maatschappelijke weerstand. Door de betrokkenen werd vooral veel moeite gestoken om die veranderingen te bewerkstelligen die de vleesproductie en de vleesconsumptie zoveel mogelijk ongewijzigd lieten binnen de grenzen van publieke acceptatie. De vleesconsumptie werd niet ter discussie gesteld, slechts de vleesproductie was onderworpen aan kritiek. Minder vlees eten werd niet naar voren gebracht als een optie voor een drastische verandering voor de veehouderij.

Vanaf 1992 kwam een nieuwe manier op om de concurrentiepositie van de Nederlandse voedselindustrie te verbeteren. Men ging zich richten op het produceren van kwaliteitsproducten voor de gespecialiseerde niche markt. Dominante marktposities zouden verworven kunnen worden met de productie van producten die konden worden herkend als gezond, natuurlijk, diervriendelijk of milieuvriendelijk. Het verbeteren van de exportpositie als richtlijn voor de voedselproductie leidde tot de bevoordeling van een ander soort producten dan voorheen: eerst bulkproducten en nu de gespecialiseerde exclusieve agro-business producten.

In hoofdstuk 8 worden de conclusies en de beleidsmogelijkheden besproken. Het hoofdstuk bespreekt twee soorten dieetverschuivingen: een verschuiving door het produceren van meer plantaardige vleesalternatieven (Novel Protein Foods, NPFs) en een verschuiving door het eten van minder vlees. Er wordt uitgelegd waarom de huidige voedselpraktijk is bevooroordeeld ten bate van de 'produceer meer' optie. Er wordt uiteengezet waarom een dieetverschuiving langs de 'produceer meer' optie

geen transitie is. Ook wordt besproken dat de ‘produceer meer’ optie voorbij gaat aan problemen van overconsumptie, het spanningsveld tussen de consumenten- en burgerrol en kritiek op de moderne voedselproductie. Verder wordt het huidige beleidsframe besproken en de implicaties ervan. Vervolgens worden verschillende rollen uiteengezet voor beleidsmakers: rollen binnen het frame en wat zij kunnen doen om het frame te verbreden, om ontwikkelingen met betrekking tot voedsel te democratiseren.

Dit onderzoek stelt dat besluiten en ontwikkelingen met betrekking tot voedsel nooit neutraal zijn. Bepaalde gezichtspunten liggen ten grondslag aan de praktijk van voedselproductie en –consumptie. Door processen van normalisatie worden deze gezichtspunten onzichtbaar. Diëten en voedselproductie zijn normaal gemaakt in een proces van ordening. Het ontrafelen van waar deze ordeningen in de voedselpraktijk uit opgebouwd zijn en wat ze bij elkaar houdt, laat zien dat dit geen onveranderbare macro-structuren zijn. Het doel van deze studie is de politieke aspecten van deze ordeningen te laten zien, de ordeningen meer transparant maken en duidelijk maken wat ze betekenen voor waar het bij voedsel om draait. De huidige voedselpraktijk vormt een frame van waaruit nieuwe problemen worden opgelost en waarlangs nieuwe ontwikkelingen worden gestuurd. Aan de andere kant discrimineert de praktijk tussen producten en productiemethoden. Voedsel heeft verschillende betekenissen en doelen, maar de ontwikkelingen in de gangbare voedselpraktijk zijn vooral gestructureerd door de commerciële markt voor voedselproducten. De vermarkting van voedsel is vergroot door de verdergaande industrialisatie van voedsel. De overheid en beleid hebben bijgedragen de gangbare praktijk te construeren door zich te concentreren op het (agrarische) inkomen van voedsel. Dit boek legt uit waarom het van belang is om voorbij deze bevoordeling (bias) te kijken. Door de ‘eiwit politiek’ die ten grondslag ligt aan de huidige ordening van de voedselpraktijk zichtbaar te maken, wordt het mogelijk om nieuwe keuzes te maken met betrekking tot voedsel. Dit kan resulteren in overheden die meer bewust zijn van de bevoordeling van producten en productiemethoden en de assumpties die aan hun acties ten grondslag liggen.

Verandering in de proporties dierlijke en plantaardige eiwitten in de voeding in de richting van een meer duurzaam voedselsysteem kan verschillen in vorm, afhankelijk van welke ordeningen zijn geconstrueerd, in stand gehouden of afgebroken in het veranderingsproces. Verschillende processen die een dieetverschuiving vormen, hoewel alle leidend tot een dieetverschuiving in de een of andere vorm, kunnen verschillende effecten hebben op de verdeling van macht, gangbare waarden en productkeuzes in de voedselpraktijk. Ook het soort ‘duurzaamheid’ dat wordt bereikt, wat wel en niet binnen de definitie van duurzaamheid wordt geschaard, verschilt volgens de ‘produceer meer optie’ en de ‘eet minder optie’. Als duurzaamheid en sociale wenselijkheid op de lange termijn doel zijn van een dieetverschuiving, dient de ‘eet minder’ optie meer aandacht te krijgen. Op die manier zijn andere belangen bij voedsel (zoals een wens voor meer natuurlijk voedsel: dichterbij de consument, minder industrieel en minder bewerkt) niet onmiddellijk buiten een dieetverschuiving geplaatst. Hier ligt een rol voor beleidsmakers, maar het zou wel een verschuiving van beleidsframe vereisen als ook een transitie waarbij de geldende frames, definities en richtlijnen kunnen worden verbreed en nieuwe frames, definities en richtlijnen kunnen worden ontwikkeld lang een incrementeel proces.

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