

Transition to consumer-driven value chains in the Netherlands

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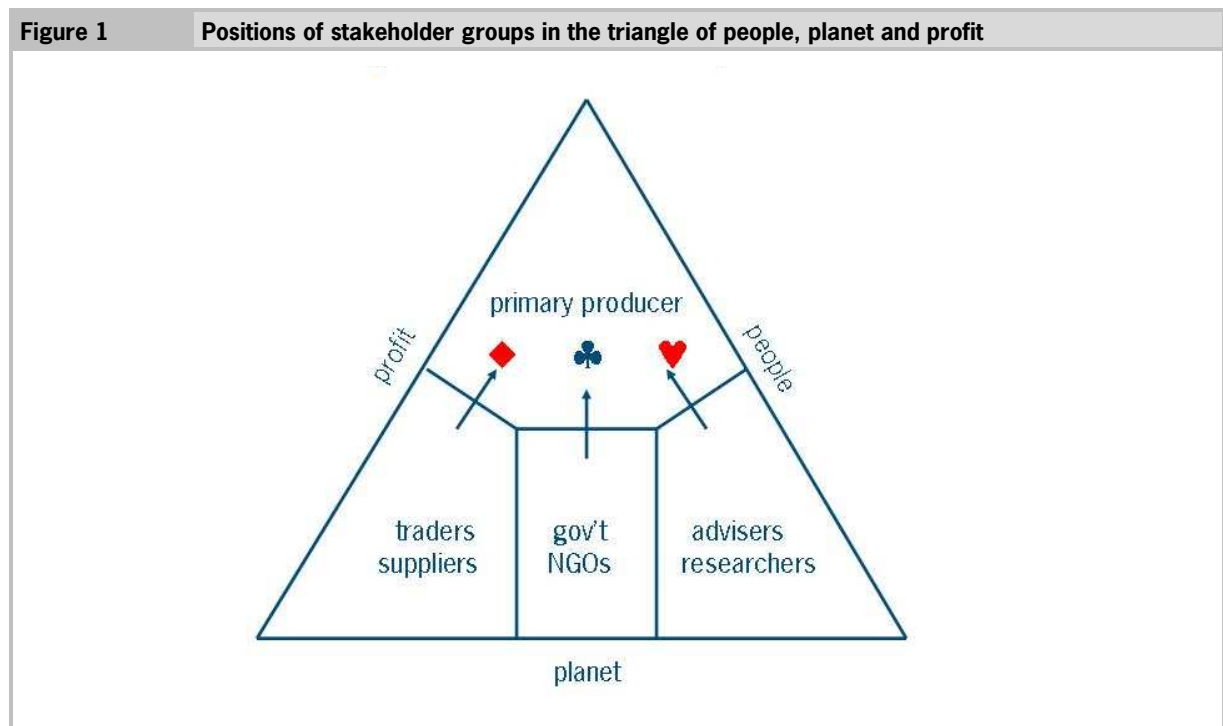
Abstract

Market research and strategic management is a way for horticultural entrepreneurs to perform better in value chains. Consequently, horticultural research can support the sector by conducting market research and providing strategic management tools. However, these research products may lose their value when power relations within value chains or in the public domain are changed. These changes occurred in the Netherlands in the 1990s. The leading role of the Ministry of Agriculture declined and fierce campaigns by NGOs on food safety forced supermarket companies to take the lead in supply chains for vegetables and fruits. This paper shortly describes the methodology applied to reproduce and analyse the public debate on pesticides and crop protection in the Netherlands. The paper also reveals the socio-economic and institutional changes that cleared the way for NGOs to campaign against the government and against supermarket companies for MRL compliance. The supermarket companies were afraid that NGO campaigns would emanate into consumer strikes and took over the supervision on compliance with MRL requirements from the government. They forced the trade companies and the growers to a prompt and complete certification according to GlobalGAP. The transition process described above took place without any market research and strategic management tools. Both government services, supermarket companies and growers' organisations tried to stick to the current relations and practices, but at the end of the day they all had to accept a new 'marketing orientation'. The whims of value chain partners are frustrating the adoption of modern economic, marketing and managerial techniques. Horticultural producers have to meet the requirements of trade companies and retailers. Otherwise they put their supplier positions at risk. The recommendation is therefore that we include societal concerns and social factors in our efforts concerning the development of consumer-driven value chains.

Introduction

This paper sheds light on the importance of the societal dimension in the adoption of modern economic, marketing and managerial techniques in horticulture. The intention is to make colleagues in horticultural economics and management aware of the sociology of innovation. Hitherto the sociological element got little attention in horticultural research. This 'blind spot' may explain why horticultural producers just sparsely seem to adopt mathematical programming, the results and market research and the principles of strategic management. The objective of this paper is to show the impact of changes in society on the position of the horticultural producer in the value chain. A subsequent objective is to challenge horticultural researchers to start from the positions of the various 'value chain actors' when developing concepts and models.

The work on 'sociology of innovation' in Dutch horticulture started in 2002 with a project called 'Innovation processes in practice'. This project focused on the bottlenecks in the transfer of knowledge from research stations to primary producers (Buurma et al., 2003). A crucial finding of the project was that primary producers, traders & processors and researchers & advisers depart from different values, from what they find important for a better future. The three groups take different positions in the triangle of people, planet and profit. The positions are depicted in Figure 1. Primary producers strongly focus on people and profit, traders & suppliers on planet and profit, and researchers & advisers on people and planet. This implies that supply chain partners and knowledge partners come to the primary producer with contrasting objectives and messages. In the above-mentioned project we tried to bridge the contrasts by forming socio-technical networks of the stakeholder involved. The first findings of forming socio-technical networks were described in De Buck and Buurma (2004).



The present paper resulted from analyses of the public debates on pesticides and crop protection in France and the Netherlands. These analyses were conducted within the framework of ENDURE, the European Network for the Durable Exploitation of crop protection strategies. A reconstruction of the public debate in the Netherlands revealed institutional changes in value chains caused by NGOs and supermarkets. In the period 1995-2008 the NGOs in the Netherlands launched a series of campaigns against violations of Maximum Residue Limits (MRLs) in vegetables and fruits. The government persisted in explaining that food safety was not at stake. The supermarket companies feared loss of consumer confidence and decided to enforce compliance with MRLs themselves. In retrospect, we can conclude that societal concerns on MRLs induced a transition to consumer-driven value chains in the Netherlands.



The purpose of this paper is to demand attention of horticultural researchers for the societal dimension of innovation. For that reason the methodology for analysing public debates is presented and the findings of an example in horticulture are shown.

Such analyses provide a better understanding of transition processes and also indicate the role of researchers in transition processes. The ultimate purpose is to bring about a more sociocentric approach in analysing and modelling horticultural value chains and thereby support the co-operation among partners in horticultural value chains.

Materials and methods

In this section the methodology for the analysis of the public debate on pesticides and crop protection is presented. The materials in this case were national newspaper articles and parliamentary questions on pesticides and crop protection in the Netherlands. The documents were retrieved from www.academic.lexisnexis.nl (newspaper articles) and www.overheid.nl (parliamentary questions) by using the search words *bestrijdingsmiddelen* (= pesticides) and *gewasbescherming* (= crop protection) and selecting the years 1995 through 2008. The resulting documents were individually characterised in a spreadsheet in about ten variables (date, newspaper, informant, organisation, search word, subject, theme, et cetera).

Starting from the spreadsheet a descriptive analysis was made, culminating in an overview with numbers of documents classified to themes, years and actor groups. The most important themes in the overview, with regard to horticultural value chains were 'food safety' and 'health effects'. The documents on these subjects were further analysed with content analysis. Content analysis implies a reconstruction of the public debate starting from the core question: 'Who says what, to whom, why, to what extent and with what effect?' (Wikipedia). The findings of the content analysis at hand were summarised in a table showing year, actor/stakeholder, action/campaign, subject/strategy and answers/reactions. The idea behind this table was to consider the public debate as a theatre performance with scripting (story lines and actors), setting (location and discourse), staging (parties involved) and plots (crucial moments). Hajer and Poorter (2005) introduced this dramaturgic approach as a framework for the analysis of organisational processes.

Results

Table 1 represents the results of the descriptive analysis. The table shows a total of 279 documents classified in themes, years and actor groups. The heights of the rows in the table represent the relative importance (in numbers of documents) of the themes. The following major themes in the public debate were successively dealt with: registration policy (89 documents), food safety (50 documents), stakeholder relations (24 documents) and health effects (23 documents). The debate on registration policy and stakeholder relations was dominated by NGOs and agricultural sector organisations. The debate on food safety and health effects was dominated by NGOs and members of parliament. In 1999 a sudden shift in the debate is visible from health effects to food safety. The debate on health effects and food safety was selected for further in-depth analysis.



Table 1 Numbers of documents (newspaper articles and parliamentary questions) classified in themes, years and actor groups

Theme	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total
Invasive species	1	2	0	1	0	1	1	0	0	1	0	2	4	4			17
Genetic modification	2	3	1	2	1	3	0	0	2	1	1	0	0	2			18
Integrated production	0	0	1	1	0	1	1	2	2	3	3	2	0	1			17
Health effects	2	4	1	6	2	0	0	0	3	1	1	0	1	2			23
Food safety	0	0	0	0	2	9	4	3	4	14	6	2	3	3			50
Registration policy	0	6	1	3	17	8	14	6	12	7	4	5	5	1			89
Stakeholder relations	0	2	0	0	3	1	0	3	7	3	5	0	0	0			24
Inspection & certification	1	0	2	2	1	3	0	0	4	2	0	1	0	0			16
Water pollution	3	2	0	2	2	1	0	0	0	0	1	2	0	3			16
Competitive position	1	1	0	0	1	0	1	0	0	2	0	0	2	1			9
Total of documents	10	20	6	17	29	27	21	14	34	34	21	14	15	17			279
Colour of Government	social-liberal			social-liberal			centre-social			centre-social							
Minister of Agriculture	Van Aartsen			Brinkhorst			Veerman			Verburg							
	parliament		parliament + sector orgs		parliament + sector orgs + universities		parliament + NGOs		sector orgs + universities		sector orgs + NGOs						

Table 2 shows the results of the content analysis (dramaturgic approach) of the public debate on health effects and food safety. The table concerned tells a story of NGOs targeting health risks of pesticides (cancers, brain tumours and miscarriages). They were not successful in getting these risks on the political agenda. The scientific evidence for the causal relations between contacts with pesticides and the health risks concerned was not very clear. For that reason they started a series of campaigns on violations of Maximum Residue Limits (MRLs) of pesticides in vegetables and fruits. This time the supermarkets were the target of the campaigns. These campaigns against the supermarkets were quite successful. The supermarkets feared concerns among consumers about the reliability of their products. Subsequently they were very keen on making agreements with the NGOs on compliance with MRLs. The window in the bottom right hand corner of Table 2 shows the turning point in the debate. At that point the supermarkets decided to enforce compliance with MRLs themselves. In fact they took over the inspection on compliance with MRLs from the government and forced their value chain partners (trade companies and growers) to comply with the MRLs.

Table 2		Dramaturgic analysis of the public debate on food safety and health effects (restricted to the years 1995-2002)		
Year	Actor/stakeholder	Action/campaign	Subject/strategy	Answers/reactions
1995	Left wing MPs	Questions to Minister of Public Health	Effects of pesticides on public health; brain tumours, cancer, reproduction	NO causal relationships and/or scientific evidence
1996	General newspaper	Article on scientific report	Oestrogenic effects of combinations of pesticides	Important to investigate cumulative effects
1997	General newspaper	Article on scientific report	Recall of scientific report on oestrogenic effects	Unravel mechanism of oestrogenic effects in mammals
1998	Consortium of NGOs	Campaign on pesticide residues in lettuce	Postcards and posters: head of lettuce = condom; hormone disruption; request to government to immediately ban seven pesticides frequently used in lettuce, strawberries and paprika	No scientific evidence ; NGOs are spreading panic under the general public
1999	Consortium of NGOs	Request to Minister of Agriculture	Immediate ban on vinchlozolin and carbendazim; hormone disruption	
2000	Consortium of NGOs	Campaign on pesticide residues in strawberries	100 boxes of strawberries bought from supermarkets; analysed on residues by well-known laboratory; unauthorised pesticides and exceedings of MRLs; complaint against supermarkets with public prosecutor in Amsterdam	Supermarkets hold strawberry growers responsible; growers refer to pesticide authorisations in Belgium
2000	Consortium of NGOs	Request to Minister of Public Health	Immediately stop the sale of vegetables and fruits with MRL exceedings; each day 50.000 Dutch children get too much pesticides; leading to behavioural disturbances	No scientific evidence ; further research necessary; conclusions of NGOs disputable
2001	Left wing MPs	Question to Minister of Public Health	Exceedings of MRL in vegetables and fruit; risks for public health ; measures against MRL exceedings?	MRL is check on Good Agricultural Practice; levels much lower than for Acceptable Daily Intakes ; Food Inspection Authority monitors compliance with MRLs
2002	Consortium of NGOs	Campaign on pesticide residues in grapes from Greece and Italy	Samples of grapes from supermarkets; analysed by well-known laboratory; two supermarket companies taken to court because of exceedings of MRLs; penalty of €20.000 per violation	Agreement with two supermarket companies ; no selling of grapes with residues anymore; check by independent laboratory; NGOs may publish the results

Figure 2 gives a reflection of discourse of the opponents in Table 2. The NGOs used emotional overtones (dangerous diseases and moral offences) to attract the attention of the general public. The government from their side used defensive routines in order to maintain the existing order. In this case the emotional overtones of the NGOs turned out to be stronger than the defensive routines of the government. At least for the supermarkets, because they feared loss of consumer confidence, and tried to make the best of a bad bargain.

Figure 2 Difference in discourse between NGOs and government in the public debate (1995-2005) on food safety and health effects in the Netherlands	
<i>Consortium of NGOs</i>	<i>Government services</i>
■ brain tumors, cancers	■ scientific evidence
■ human fertility	■ causal relationships
■ lettuce = condom	■ disputable conclusions
■ 50.000 children/day	■ additional research
■ risk public health	■ spreading panic
■ ban immediately	■ registered in Belgium
■ public prosecutor	■ monitoring by VWA
> <i>emotional overtones</i>	> <i>defensive routines</i>

In this section the findings of the content analysis are placed in the context of the changes in horticultural markets and in the political landscape of the Netherlands in the 1990s. In the early 1990s the Dutch greenhouse industry saw very low farm gate prices for tomatoes, cucumbers, sweet peppers, et cetera. Consumers in Germany were dissatisfied with the product quality: tomatoes from the Netherlands were called 'water bombs' in the German press. Importers and retailers in Germany started buying more tasteful tomatoes elsewhere in Europe. This experience indicated that the power in the value chain had moved from producers to importers and retailers. The chain reversal was marked by a report by AT Kearney in 1994: 'Missed the Market'. This report opened the eyes of the sector to consumer interests. Another indication that power relations between producers and consumers had changed, came from the Brent Spar in 1995. Greenpeace organised a consumer strike against the plan of Shell to sink the Brent Spar oil facility in the Atlantic Ocean. The success of the consumer strike revealed that even a powerful multinational like Shell could not disregard the general public.

Also in the political landscape changes took place. In 1995 the NGOs were recognised as representative of the general public in lawsuits against government decisions. This recognition brought the NGOs in legal balance with the chemical industry and gave them access to the courtroom to challenge government decisions. In 1996 the powerful Agricultural Board (the symbol of corporatism in agriculture) was abolished. These changes in the playing field implied an increase in power for the general public and a decrease in power for the agricultural communities. The change in balance of power provides an explanation for the success of the NGOs.



The aforementioned chain reversal also has repercussions for the influence of researchers and advisers at the kitchen table of the primary producer. In a consumer-driven value chain listening to trade companies and retailers is imperative for primary producers. Neglecting their requirements may result in loss of access to the market and loss of cash flow. Disregarding the conclusions and opinions of researchers and advisers will (in most cases) have less drastic consequences. This observation, in turn, has repercussions for the work of researchers and advisers. Neglecting the value chain dependence of the primary producer may result in loss of customers and low adoption rates of research findings. Biased attention for commercial interests of value chains may give controversies with the principals of public research. The solution is to acquire proper knowledge of the perceptions and motives of primary producers and their value chain partners, and share that knowledge with policymakers.

Conclusions

A content analysis of the public debate on non-compliance with Maximum Residue Limits (MRLs) in vegetables and fruits revealed the history of supermarket companies taking over the inspection on compliance with MRLs from the government in the Netherlands. The public debate was raised and kept going by campaigns and lawsuits of NGOs for several years. Government services defended the existing order but the supermarket companies feared consumer strikes and finally decided to listen to the NGOs. In retrospect, the success of the NGOs could be traced back to changes in horticultural markets and in the political landscape of the Netherlands in the 1990s. Due to these changes the power of consumers and citizens increased at the cost of the power of the agricultural community.

The changes in power in horticultural markets and in the political landscape also have repercussions for horticultural researchers and advisers. Modern economic, marketing and managerial techniques should be adjusted to the needs and ambitions of retailers and trade companies in the value chain. Traditionally researchers, and also policymakers, are used to take primary producers as the end-users for research. This paper shows that the primary producers strongly depend on their value chain partners. The paper also shows that emotions can play a decisive role in decision-making in value chains. This is the consequence of the transition to consumer-driven value chains. Proper knowledge of the perceptions, motives and concerns of consumers and retailers is imperative for the design and adoption of modern techniques.

Acknowledgements

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**Literature cited**

Buurma, J.S., A.J. de Buck, B.J. Klein Swormink and H. Drost, *Innovation processes in practice; Foundations for a modern innovation system* (in Dutch). Report 6.03.12 2003. LEI Wageningen UR, The Hague, 2003.

Buck, A.J. de and J.S. Buurma, 'Speeding-up innovation processes through socio-technical networks: a case in Dutch horticulture.' In: *Acta Hort.* 655 (2004): pp. 175-182.

Hajer, M. and M. Poorter, *Vision forming in transition processes; an evaluation commissioned by the Planning Bureau for Nature and Environment* (in Dutch). Report. Amsterdam School for Social Science Research. University of Amsterdam, 2005.

Kearney, A.T., *Missed the market? Owing to limited market orientation perspectives are gloomy for Dutch agro sector*. Report to the Ministry of Agriculture. A.T. Kearney management consultants, Amsterdam, 1994.

Wikipedia. Content analysis. <http://en.wikipedia.org/wiki/Content_analysis>