A case of endogenous development in the Netherlands

Environmental co-operatives: a farming strategy with potential

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Endogenous rural development is often a movement away from the 'modernisation paradigm' in agriculture. In the Netherlands and Europe such movements towards more localised agriculture are also taking place. This article is the first in a series of cases on endogenous development in Europe documented for the Compas programme, presenting the experience of a group of Dutch dairy farmers in the North Friesian Woodlands.

The movement towards endogenous rural development in the Netherlands encompasses many different strategies. Examples include creating direct links between producers and consumers, organic farming, on-farm processing of primary products, farmers' management of nature and landscape, and agro-tourism. A common characteristic is the innovative use of the available resources, which often results in multi-functional farm enterprises.

The ability to innovate requires farmers with creativity as well as a pioneering spirit. Establishing new alliances, based on changing needs of society, is a crucial part of the strategies. Sometimes the activities build on a historically rooted but marginalised cultural tradition. In other cases they are generated by highly innovative responses to new ties emerging between town and countryside.

Farmers felt trapped

The North Friesian Woodlands, formerly a rather poor region, has a unique landscape characterised by small plots of grassland surrounded by hedgerows and belts of alder trees. Farming in this small-scale eco-system is labour intensive, and implies relatively high production costs. At the end of the 1980s the dairy farmers experienced increasing tension between the restrictions on farming emanating from new environmental policies on the one hand, and growing economic pressure on farming on the other. The environmental regulations aimed at diminishing the nitrogen losses from livestock production, in order to protect valuable landscapes from problems such as 'acid rain' and groundwater pollution. This implied severe restrictions for the farmers, however.

The regulations prescribed exactly how farmers had to reduce the loss of nitrogen, and required costly investments. Further intensification of the production system to cover the investments was no option, since this was incompatible with the small-scale landscape. The farmers felt trapped. How ironic that the unique landscape, largely the result of their active management, now threatened their own livelihood! However, they decided not to sit back and wait.

Environmental co-operatives

In 1992 two environmental co-operatives were founded: VEL (Vereniging Eastermar's Lânsdouwe) and VANLA (Vereniging Agrarisch Natuur- en Landschapsbeheer Achtkarspelen). The farmers started to develop their own answers to the problems. In addition to compliance with the ecological requirements, the aim was to ensure that as many families as possible could continue farming with a decent income. Creating a sense of belonging, unity and

Typical landscape with ponds, hedgerows, belts of alder trees and grazing areas in the North Friesian Woodlands. The cooperatives invented new forms of nature and landscape management.

Farmers experimenting with soil fertility developed the 'cycle system' with improved nitrogen efficiency in plant, soil and animals.

solidarity among the local people was seen as a pre-condition to survival.

Interest in the co-operatives was wide. One year after the start, around 85% of the local farmers had joined. As Boukje Nijboer, a female member, explained: *"It is an interest group for regional level issues, led by people who know exactly what is going on. For farmers it makes sense to become a member. The co-operatives are more progressive than the farmer's union when it comes to farm development; they link it to the local conditions and opportunities. The farmer's union, which is nationally based, still sticks to one general advice for all farmers. Their message is that you need to grow, become bigger. Well, we think such a strategy is too risky here. You build up a lot of debts and you need to work very hard. For us, cost reduction and limited growth are better options."*

Boukje Nijboer: "Cost reduction and limited growth are better options".

Today, some 12 years later, there are also other important gains for the members: a broader view on farm development, increased knowledge and skills, better incomes, a larger social network and more self-esteem. This new élan is stimulating young people to start with farming in spite of the difficult conditions. Farming is once again believed to offer prospects.

Core activities

Within the co-operatives various activities are undertaken to make farming more sustainable, both economically and ecologically. Core elements are the 'nature and landscape track' and the 'mineral track'.

The *nature and landscape track* entails nature conservation and landscape management by the farmers. Prolonged negotiations with the government resulted in exemption from the national ecological guidelines. In exchange, the farmers restored 240 kilometres of alder tree belts and 220 pools. They also stimulated the biodiversity in 80 hectares of farm plot edges, and meadow birds are actively protected in 240 hectares. A financial incentive was also negotiated for this work: the better the quality of the nature conservation, the higher the compensation for the farmers involved.

For this the co-operatives designed their own methods of control by means of an 'inspection committee'. This committee monitors the progress and quality of the landscape management efforts of each individual farming household, and checks if they comply with the contract between co-operatives and government. The relatively high number of women in these commissions has been a deliberate choice. According to Geale Atsma, director of the management board of the co-operatives: *"It is far more effective that women express criticisms. Men argue less and are more willing to accept the comments when women are the messengers."* For the women it provides paid work, which can easily be combined with their work on the farm and in their home.

Creation of new resources

Involvement in these activities has had a positive impact on the existing local resources, and has created new resources as well. The new resource in fact is the landscape and its inherent nature. Geale Atsma: *"You could say the co-operatives invented agricultural nature- and landscape management. It was in fact the fulfilment of a need of the Dutch people. Today, you can also find it in other areas where farming is difficult due to natural hindrances. We have set the trend for the whole country. Nature and landscape management has created employment in the area, or at least has diminished the underemployment on our farms."*

Nature conservation and landscape management have thus improved the incomes of the farming families in the area. It is estimated that about 10% of their income is now generated by means of nature programmes financed by the European Union and the national government. These activities have also improved the biodiversity, which has had positive effects on the health of their cattle, thus indirectly adding to their income. Fokke Benedictus, one of the founders of the co-operatives explains: *"When you do it well, biodiversity increases. For instance, you get more grass species that positively affect the cow's health. And careful maintenance of the tree belts attracts more birds. They eat the insects that destroy the roots of the clumps of grass. So the more birds, the less insecticide you need. Nature- and landscape management is therefore economically advantageous. That is what I learned in the course of time."*

The nature conservation and landscape management efforts also pay off at regional level. The potential for rural tourism has increased considerably. Moreover, in the VANLA area, extra energy is put into the restoration of old sandy paths that now function as walking trails or cycle-tracks. Possibilities for water tourism (canoeing) are being explored as well. According to member Albert de Haan: *"The potential of the region is increasing and many farmers explore the prospects that recreation or tourism can offer. But it will take quite some time, creativity and endurance to turn this into a source of income. You need to find a good marketable product or service."*

The mineral track

The activities related to the mineral track originated in the government regulation that forbids the application of manure to the surface of the soil. Instead, it is obligatory to inject the liquid cattle 'slurry' (manure and urine together) into the soil, to prevent nitrogen losses to the environment. This method didn't fit the local farming conditions, as the small plots and the high groundwater levels did not allow for the heavy machinery required for slurry injection.

Negotiations with the government on this specific point resulted in temporary exemption from the rules and an experimental status. In 1995 farmers signed an agreement with the government that they would actively explore alternative ways to reduce nitrogen losses. After 1998, when the government decided that exemption from the generic rules was no longer possible, the farmers were allowed to continue with this experiment within the context of scientific research. This resulted in the Nutrient Management Project, in which 60 farmers and scientists of various disciplines at Wageningen University participated.

In the high-productivity dairy system, with high levels of protein and low levels of fibre in the feed of the animals, the manure is of low quality for the soil, and contains high levels of nitrogen. Moreover, the health of the animals is affected due to the super-production required of them. Within this project the farmers, supported by scientists, developed the 'cycle system' with improved nitrogen efficiency in plant, soil and animals. The assumption was that better quality manure can prevent nitrogen losses, improve the nitrogen efficiency of the soil, and thus reduce the need for chemical fertiliser.

The manure quality was influenced by several means: by adding an additive to the manure, by raising the levels of fibre (by cutting the grass at a later stage), and reducing the levels of protein in the feed. The adapted cattle feed resulted in an improved manure quality, which was applied to the soil by surface application using self-designed light machinery. These combined measures resulted in better grass quality, improved quality of the soil and improved grassland production. The changed fodder content had positive effects on cattle health as well as on the quality of milk (less urea). Thus, the cycle was 'closed': the improved manure, improved soil quality, and the improved cattle feeding and health were linked together in a new balance.

This farmer-driven research has opened up new knowledge and enlarged the skills of the farmers. The application of these skills has resulted in higher levels of ecological sustainability, less dependency on external resources, and better incomes for the farmers. As Boukje Nijboer clarifies: *"Participation in the nutrient mineral management project has opened our eyes to new farm management strategies. We have learned that changing the fodder ration and using less fertiliser lowers the production costs whilst it doesn't affect the grass yields. I think that we now save at least 2 eurocents per litre of milk. We sell about 430,000 litres a year, so it is not difficult to calculate our profit. Cost price control is the core of our strategy. This is definitely different from the mainstream strategy, which focuses on maximising output."*

The improved cattle feed resulted in better quality manure which was spread on the soil by surface application. Special exemption from the government environmental regulations was required for this experiment.

Human and social resources

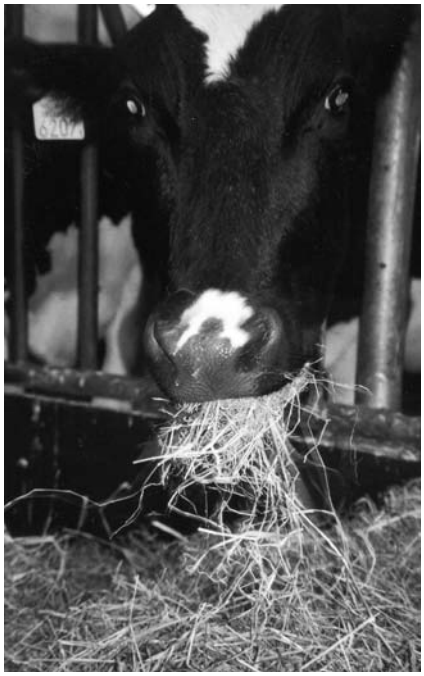
The importance of the VEL and VANLA co-operatives goes beyond improving the local natural and economic resources. The activities have had a positive influence on human and social resources as well. Farmers appreciate the co-operatives in the creation of new knowledge and practices. Membership has raised their self-esteem and enlarged their understanding of and influence on political processes.

The co-operatives use different methods for the generation of new knowledge, such as courses on nature conservation and landscape management, designed by the farmers in collaboration with experts from nature organisations. Excursions to farms of colleagues is another popular method. This leads to broadening of perspectives and identifying new opportunities. 'Learning by doing' of each farmer is combined with exchanging working experiences within small study groups. The common research project of farmers and scientists of different disciplines proved important for the generation of new knowledge.

Worldviews and values

There are several reasons that can explain the success of these environmental co-operatives in the North Friesian Woodlands. In the first place, the presence of knowledgeable farmers, who, as pioneers and leaders, have been capable of motivating and activating other farmers, has been crucial. Secondly, shared social values, such as the sense of 'belonging to the same community' have played an important role. The farming families felt unjustly treated and considered their farms at stake as a result of the state-enacted rules on manure treatment. This touched upon a shared history: the huge sacrifices of their ancestors to found farms on these poor soils would all have been to no purpose. *'Nobody can just take away our farms'* is their motto.

The same sense of common history is related to the specific landscape of the area, which is perceived as the outcome of local farming practices of the



The improved feed resulted in better health of the cattle and reduction of veterinary expenses.

Geale Atsma (centre) and Fokke Benedictus (right), two farmers who initiated the VEL and VANLA co-operatives, receive the award for nature-farmers 2002 from a representative of the farmers'union.

past and present generations. Though one might expect that the farmers experience the landscape as an obstacle for improving their farming results, they primarily feel connected with it. According to Geale Atsma, one of the leaders: *"We cherish the landscape, it is part of our identity."*

The feelings of social cohesion are further based on the historical custom of supporting each other in difficult situations. Previous generations would not have been able to survive without mutual help. Though the technological developments on the dairy farms have decreased the need for co-operation, some patterns of solidarity have remained, such as labour exchange and the sharing of machinery. In times of need the farming families could easily fall back on their traditional forms of solidarity.

Autonomy and liability

Another element in the worldview of the farmers in this region is their sense of autonomy. They define themselves as a '*free people that cherish autonomy*'. Self-supportiveness, self-sufficiency and reliance on their own capacities are important values. Too much state interference had triggered resistance. In the case of the government manure enactments, local farmers were totally excluded from the policy formulation process. Policy makers used national aggregated data to draft generic rules from behind their desks. The specific situation in separate regions was ignored, including the way these new rules would affect the local farming perspectives.

Another shared value is reliability, or the commonly shared perception that once made, agreements must be kept. Geale Atsma: *"Farmers here need time to decide whether they commit themselves to something or not. But once they have made the decision to join, you can be assured that they will keep their promises."* On the basis of this value, the farmers involved in the nutrient management project were reliable partners.

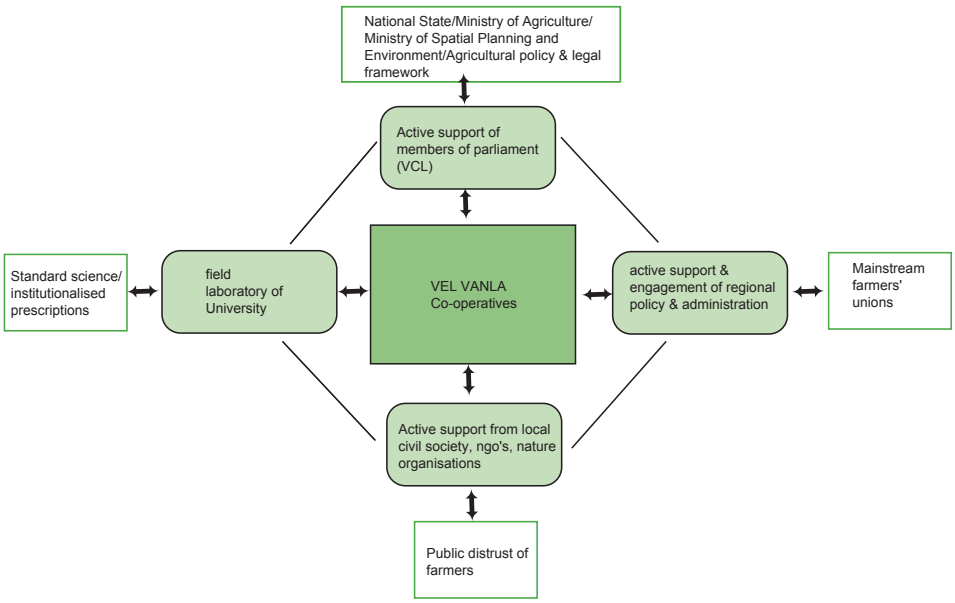
Farming gently

Another major element of the farmers' worldview is that, despite a variation in farming styles, basic principles in the farming practices are shared. The concept of *kreas buorkjen*, or 'farming gently', contains five social indications of what is considered to be good farming: (1) Using one's own experiences and intuition in decision-making about farm management and development. (2) Establishing a balance between the ecological and economic sides of farming; farming with minimal levels of pollution. (3) Farming as a free enterprise, not overburdened with debts, and as self-sufficient as possible. (4) Certain indicators to observe that the farmer is taking good care of the farm: colour of the grassland, the exterior of the cattle, the condition of farm buildings and farmhouse, and the appearance of the yard and garden. (5) Finally, the farm needs to be well balanced, in line with its environment, and present a clean, 'aesthetic' exterior.

Not surprisingly the co-operative initiatives described here are strongly inspired by these commonly shared values. Farming gently is a direct reflection of the social coherence amongst the farmers and their notions of 'autonomy', 'reliability' and 'pioneering spirit'. This feeds into an integrated process: the natural, social, human and economic resources are combined in a new way, creating a more effective balance.

This strengthens the income at farm level, which in turn strengthens the regional economy. The 17 farms that have integrally adopted the VEL-VANLA approach have added a gross added value of 225,000 Euros extra to the local economy. The economic potential of this approach is thus promising, both at farm and regional level.

Figure 1 The support structure of VEL and VANLA



Stewardship

The notion of stewardship is a direct reflection of, and in turn feeds into 'farming gently'. The Friesian farmers interpret stewardship, or 'taking care of nature', in different ways. For most of these predominantly Christian farmers stewardship has a religious connotation: what God has given must be handled carefully, and passed on to the next generation. Some farmers link this concept explicitly to the soil: their main concern is to reduce the nitrogen levels, in order to prevent groundwater pollution and to improve soil quality.

For other farmers, protecting the wild plants and meadow birds are important elements in their interpretation of stewardship. This draws heavily on traditional local knowledge built up by generations of farmers for whom the hedgerows and alder trees were an inherent part of their farm. The environmental co-operatives took advantage of this knowledge and designed a system to further disseminate it among other farmers.

Stewardship is thus translated into more biodiversity and enriched landscapes, which then emerge as new income opportunities. Similarly, the co-operatives themselves are powerful resources that stimulate learning, enhance participation and influence political decision making processes at various levels. The co-operative thus allows for improved stewardship at regional level.

An enabling environment

Figure 1 synthesises the institutional pattern in which the VEL and VANLA co-operatives are operating. Three levels are distinguished. The inner circle is the 'experimental space' of the two co-operatives, within which the patterns of endogenous development are moulded. The outer circle refers to the prevailing 'regime'. It corresponds with the major interest groups and dominant institutions: the national farmers' union, the general public with its tendency to distrust farmers, standard scientific institutions, and the various ministries of the national government. At different levels, the strategies of the co-operatives are at odds with the logic of these reigning structures.

What is crucial then is the 'intermediary circle': the network of institutions, actors and mechanisms that have allowed VEL and VANLA to find their own way forward. They have created an enabling environment for these initiatives. Several members of parliament have supported these farmers in defending and regaining the required political space. A group of researchers

During a meeting of the VEL and VANLA co-operatives, new forms of agriculture are discussed with the Minister of Agriculture (2nd to the left), a scientist from Wageningen Agricultural University and a representative of the farmers' union (right).

at Wageningen University have turned the VEL/VANLA experience into a 'field laboratory'. This implies that both farmers and scientists participate in the research, to provide and generate specific kinds of knowledge. Moreover, the research agenda is strongly farmer-driven: twice a year the research agenda is jointly discussed and decided upon.

Another important 'intermediary actor' is the provincial authority, which has effectively shielded the co-operatives from severe attacks by the national farmers' union. Last but not least, various NGOs, such as the nature and environmental movements, have supported the co-operatives. Strategic partnerships with these organisations have been helpful, for example, in negotiating the required exemption from national legal frameworks.

Keeping the countryside alive

It is quite intriguing to note that the farmers that integrally adopted the VEL-VANLA approach appear to have the smallest farms. An explanation could be that smaller farms seem to have more room in terms of labour and their working schedules to fine-tune their production process, and to experiment with innovations.

Meanwhile it has become clear that the VEL and VANLA co-operatives also represent a turning point in Dutch rural history. Since their establishment in 1992 more than 300 similar rural co-operatives have started throughout the country; four in the same region. The merging of VEL and VANLA with these four into one large environmental co-operative, the Noardelike Fryske Wâlden, is the most recent development. This regional co-operative aims to extend the approach of VEL and VANLA to the whole region.

This example shows that endogenous development in the Netherlands is an ongoing process that contributes to a 'living countryside'. VEL and VANLA co-operatives combine the new needs that have arisen within Dutch society with the local economic, ecological, social, cultural and political resources. In this way it is creating economic and ecological win-win situations, which allow the farmers in the Northern Friesian Woodlands to remain on their land.

References

Ploeg J.D. van der, Long A. and Banks J. (Eds), 2002.
Living countrysides. Rural development processes in Europe: the state of the art. Elsevier bedrijfsinformatie b.v., ISBN 9054391170

Struik P. and Wienk J. (Eds), (2003).
Rethinking environmental management in Dutch dairy farming: a multidisciplinary farmer-driven approach. NJAS, Wageningen Journal of Life Sciences, vol. 51, numbers 1-2, pages 1-217, September 2003.

Wiskerke J.S.C. and Ploeg J.D. van der (Eds), (2004).
Seeds of Transition. Essays on novelty production, niches and regimes in agriculture. Royal van Gorcum, Assen.

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