

## **The Farm as a Pedagogical Resource: Background for and evaluation of the co-operation between agriculture and primary school in the county of Nord-Trøndelag, Norway**

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*“When can we come to you next time, Tormod?” This question is one that Tormod has heard many times when meeting pupils from the local school outside of school hours. Tormod has taken over his ancestor’s dairy farm in Northern Trøndelag and has widened its range of activities in co-operation with the local school. This has led to the creation of school lessons, which are now held at his farm. “Why are the boys always so nice when they’re at the farm?” a girl in the fourth grade asked her teacher. The children take part in the barn work and follow production at the farm. They have a lot of questions for Tormod and send him drawings and little stories. The way the children care for the animals and their intense interest and enthusiasm are important for him. From Tormod’s point of view, the farm has a new source of income, but also more meaning. He has children in school himself and he knows that the pupils seldom look forward to the next lessons.*

Tormod is one of the participants in the project “The Farm as a Pedagogical Resource” in Northern Trøndelag, a region which lies just north of Trondheim in Norway. The project attempts to facilitate development of pedagogical work on farms in a co-operation between farmer and teacher.

### **Introduction**

In Norway there is a growing movement to develop collaborations between farms and schools with a common interest. The project, “The Farm as a Pedagogical Resource,” is the most important meeting place and source of inspiration for the movement. In this article we will give the background for this project and refer to summary results of an evaluation of the project undertaken by the Høgskolen i Nord Trøndelag (Northern Trøndelag University College). We will then discuss the possibilities and challenges for “The Farm as a Pedagogical Resource,” as a source of income for the farmer, as a pedagogical platform for teaching, and as a source of identity for a population which is farther and farther removed from farming and primary production.

### **The Development of the Project**

“How can we contribute to fostering hope, courage and resolve in children so that they may participate in a productive way in shaping their surroundings?” This was the question a group of teachers and students posed at the Agricultural University of Norway (AUN) in 1995. More precisely, the goal was to create pedagogical spaces in which committed, caring and continuous work with nature could go on, enabling an experience of connection and belonging.

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This was the start of the national project “Living School” (1995-2000) in which examples of such spaces were developed. One component consisted of eight schools using the school grounds as an extension of the classroom – with gardening as an essential part. Another component consisted of eight farms which developed an intensive co-operation with neighboring schools to allow the pupils to participate in taking care of nature on a larger scale.

The eight selected farms in “Living School” were spread over the whole of Norway. The University assisted in making contact with schools and regional authorities, the latter regarding economic support. Conferences gathering all participants plus a newsletter enabled the exchange of experience and further development. Each farm developed its own “model” in respect to the needs and financial frames of their school partners as well as their own possibilities – both agriculturally and with regard to human resources. The common goal was to facilitate continuous contact between the pupils and the farm so that a “matter-of-fact” familiarity in relationship to the animals and the work at the farm could arise. Close contact with the teachers was cultivated so that the activities on the farm could really become a part of the regular curriculum.

In contrast to what school-farm connections have been in the past, this was not seen as an opportunity to disseminate information about farming. Nor was the goal to let the children see a demonstration of agricultural work and life. The emphasis was placed on participation over time that allows a greater identification and provides an alternative arena for children with differing capabilities to use their talents.

The Norwegian government, mostly through the Ministry of Education and Research and the Ministry of Agriculture, granted 1 million Euros to this project. The school authorities welcomed this initiative especially because they were in the process of renewing the school curriculum in the direction of more “outside” work involving direct experience and participation in practical tasks.

Results from these five years were presented in two Norwegian publications summarizing the experiences with school grounds as well as with farm-school co-operation (Hugo 2000, Parow 2000). We will focus here primarily on the work between farms and schools as this is the work that has given rise to a regional intensification of the project, “The Farm as a Pedagogical Resource”.

### **The Farm as a Pedagogical Resource**

The pilot project farms and their partner schools found different economic solutions. Yet there remained a pressing need to find local and regional models for financing such school-farm links. Development of such models began in spring 2002, in the region of Northern Trøndelag. The project here has a full-time project leader and an Executive Board.

The advisory work with the eight farms and schools in “Living School” has been a main foundation for the development of systematic training courses. This has made it possible to utilize their experience in assisting new initiatives. Since 1999, accredited courses have existed for farmers and teachers who wish to work together.

The training courses are also based on long experience with continuing education courses for teachers, farmers and consultants at AUN. Earlier courses have shown that a pre-condition for satisfactory learning and use-oriented course results for the participants is a focus on their own work experience and

goals connected to their everyday work tasks. This means that there should be a good portion of course time set aside to presentation of the participants own experience and project ideas. Further, the course material should be directly related to the participants' world of experience and projects and presentation of material should be formed in an accessible language with concrete examples. The best strategy is that the participants do projects at their own work place which are connected to the theme of the course and that there is extensive consultation given in connection to planning and execution of the projects. It is important that the participants are followed up and encouraged and given advice to improvements in the evaluation of the projects.

Thus, these training courses are built up around the following principles:

#### 1. Co-operation between Farmer and Teacher

The farmer and the teachers draft a pedagogical plan for the pupils at the farm. The intention is to find a foundation for the project and the pedagogical activities both at the farm and at school. The pedagogical activities are directly connected to "L97," The Curriculum for the 10-year compulsory education which forms the legal basis for the Norwegian school system.

#### 2. A Common Vision

The goal and the gist of the pedagogical activities takes its point of departure in visions for both the farm and the school which are to be developed by the farmer and the teacher. While the farmer is concerned with economic development, communicating traditions and values in agriculture, as well as creating new activities and significance regarding the work at the farm, the teachers are concerned with how practical and concrete experience from agriculture can facilitate learning for the pupils. The course emphasizes creating a common vision for the school and the farm through the projects. The connection between the utilizing of local knowledge, experiential learning and a reconstruction of local identity is a natural point of departure for such a vision.

#### 3. Practical Implementation

In the course of one year, the farmer and the teacher have the task of planning a concrete project, executing the initial stages and evaluating their experience. A sketch of a project is the entrance ticket to the course, i.e. concrete plans for a "pilot project" for each farmer-teacher team. The first session begins with a description of the pre-conditions and frames for the project (for example, a description of the farm and its production, the school community and school grounds, etc.). A presentation of all the course projects is made at the end of the course year. Thus the core of the course work is comprised of the contents of each individual project plus the experience the participants bring with them from what they have done between the course sessions. Through implementing and evaluating a pedagogical endeavor, the teacher and the farmer can illustrate and develop their ideas for utilizing a farm as a pedagogical resource – for themselves, for the pupils, for the school, for the local government and the local community. The intention is also that the spectrum of practical experience the participants bring with them creates a common space for reflection as well as support for the development and execution of the individual projects (see Schön 1987). In this way, the course members are co-workers in the continuous development of new examples which enrich the project flora of "The Farm as a Pedagogical Resource".

#### 4. Experiential Learning

The course has experiential learning as a basic principle, both for the participants and for their pupils (Dewey 1938, Kolb 1984). Through practical work with the development of each individual project, the course teams are engaged in making their own experiential basis. The principle of experiential learning is also relevant for the pupils who receive both practical understanding of where food comes

from, what goes on and is produced in their small town, as well as why it is important to learn theoretical subjects such as science and mathematics. The principle of teaching is phenomenological, according to Merleau-Ponty (1962), who maintains that consciousness is originally not about “I think that...” but about “I can...” According to contemporary teachers, the conscious use of all senses and physical abilities is a vital factor in motivation for environmental education (O’Loughlin 1998: 293).

The course also offers the opportunity to try different forms of art (such as singing, drawing, painting, etc.) and hand work (binding of wreaths, extraction of tar, etc.), which can be done with the children as a method of working with and through their experiences on the farm.

#### 5. Close Advisory Work

Advice and counseling concerning the organization and financing of each project is an essential part of each course. The advisors are available between the sessions and the participants send reports through the network communication system to be read and commented on by the advisors before the next course session.

#### 6. Differential Approaches for Varying Age Groups

The success of the work at the farm is dependent on finding the right tasks and the appropriate approach for each age group. Each course session attempts to work with a portrait of an age group. Thereafter, the participants are given concrete exercises in relationship to age related needs and modes of understanding. The intention is to insure that both the farmers and the teachers will be better prepared to look not only the work at the farm and the requirements of the curriculum, but also the age-related needs of the children when designing the sessions at the farm.

Participants in the courses write a paper about their goals, plans, implementation and evaluation of the pedagogical project, for which they can earn credits at AUN.

There are several different modes of assisting the participants during the course. We have already mentioned the advisory work done on a one-to-one basis. In Northern Trondelag there is established an organization of pilot project districts in which facilitates anchoring the project to the local governments. Once local governments were willing to support the farmers engaged in the project “The Farm as a Pedagogical Resource” (2002-2005) financially over several years, the region achieved the status of a pilot project district. These districts now receive modest economic support from the project. The coordinator of the project arranges meetings between the school administration and representatives of the local government to facilitate organization and financing as well as regional connections.

In addition there are network meetings of those who have completed the course at which they can exchange experiences, develop co-operation and receive inspiration through new ideas and viewpoints.

### **Who are the participants?**

The farmers participating in this project have predominantly mixed dairy farms, although there are many exceptions with, for example, pig production and sheep farms. The average size of the farms is 15 hectares, but there is rented acreage, which comes in addition to the farm itself. The average age of the farmers is 43 years of age. It is not unusual that an older “retired” generation, which still lives on the farm, is also active during the school activities.

The schools are predominantly primary and junior highschools from the first to the tenth grade, but there are also examples of kindergardens and highschool (11<sup>th</sup> to 13<sup>th</sup> class) being involved at the farms. The teachers who accompany the children to the farms are usually general education teachers with class teacher responsibility. Specific subject teachers can be involved at higher levels, for example a natural science teacher at junior high school level.

More concerning the educational goals of the schools and concret examples of cooperation follows under the heading “A pedagogical alternative?”.

## Evaluation

The point of departure for evaluation of the project, “The Farm as a Pedagogical Resource” is connected to an “income” perspective for agriculture and a “pedagogical” perspective for schools. The income perspective is here intended to register the financial issues for those farmers who commit themselves to mutual school-farm co-operation. The pedagogical perspective encompasses a documentation and registration of the effects of the project as regards the goals of the school.

The evaluation is based on qualitative interviews with the individual farmers and teachers in Northern Trondelag who have taken part in the first and second courses. The interviews were conducted during the fall of 2002 on the farms of each farmer and at the schools of the individual teachers.

### *Why do farmers and teachers join this project?*

Research carried out in Trondelag shows that farmers have become more dependent on extra income in agriculture and forestry since the middle of the 1980’s. Earnings from work outside of the farm are the most important and have increased most, but also income connected to agriculture has increased (NILF 2002). In spite of this, only a few of the farmers say that they participate in the project for purely economic reasons. The background for their participation is generally more complex:

*“Finding work to fill out the seasons at the farm and achieve a better balance during the year is important to increase the profit margin. At the same time, I must be patient and think long-term, because I want to work with children.”*

Several of the farmers indicate that they are unsure about the economic aspect of the project. One farmer emphasizes that it is important to receive economic compensation; otherwise, the project will not be taken seriously.

One other farmer expresses his ambivalent relationship to the income side of the pedagogical project when he asks: *“Must this generate income?”*

In spite of the fact that economics is obviously a basis for the farmers in developing pedagogical work at the farm, it is clear that participation in the project and the contact with active and interested school children puts farming in a new perspective.

Several have characterized the collaboration between farm and school as a “lift” which is positive for their own feeling of worth. They have another type of contact with people in the local community when their children have been on the farm, as one farmer says:

*“I come in contact with people in a completely different way when their kids have been on the farm. It’s great when they come into the store and want to talk. I get to know the children.”*

Many of the teachers have a connection to farming either through having grown up on a farm, being married with a farmer, having been a “hobby farmer” themselves, or through a combination of these things. When teachers describe their pedagogical motivation for participating in such a project and taking a course, there are some of them who point out that this is a way to fulfil the goals of the curriculum. Most of the teachers state the reason for their participation as seeing that the pupils have use for and enjoy experiencing things concretely, that all children should have contact with animals, that it is important to experience the cycles of life on a farm and that the pupils need to come out of the classroom. Agriculture as a part of the pupil’s local environment is also given as a reason, as well as the values which are to be found in the cultivated landscape.

### *The course*

The participants in the course emphasize the role of the course as a source of motivation and inspiration to further develop the ideas of school-farm collaboration. Meeting others with the same interests, both farmers and teachers, and having the opportunity to exchange ideas and thoughts, are the aspects which are mentioned most often. The course creates a feeling of fellowship around the practical pedagogical work at the farm (see: Lave and Wenger 1991) and generates interest for the new possibilities which co-operation opens for the farm, the school and the pupils.

Everyone who participates in the course becomes a part of a network. Through network meetings it is possible to hold contact with the others in the region who are involved in farm-school co-operation. These meetings are also appreciated for the opportunity they provide participants to exchange ideas and learn from each other. Some people refer to the meetings as “vitamin pills”.

### *Economy, Contracts and Continuation of the Project*

A common phenomenon of rural development projects during the last 40 years, is that the projects die out a short time after the project period has run out. Without economic support from projects and practical support from the coordinators of the project, there is the tendency for organized activities to dry up and local interest to disappear (Pretty 1997). According to Pretty’s analysis, the solid anchoring of the project locally and the social contact which characterizes “The Farm as a Pedagogical Resource”, should insure the continuation of the project. Still, with such tendencies in mind, it is logical that adequate economic compensation be an important foundation for the project to develop beyond the project period.

Of the 17 farmers there are twelve who have made contracts with the local government or the school. Three of these twelve farmers have been employed as teachers at the local schools in positions varying between 15% and 50%, along with having a contract for the use of the farm’s resources and facilities. The nine others are paid by the hour for the time that the pupils are on the farm. For the last five farmers the economy is still more uncertain.

Among the teachers the economy is also a source of frustration. It’s frustrating not to know if you can run the project next year, and all of the teachers express a wish to do so, because they feel that “the Farm as a Pedagogical Resource” has values which are important for the school and the pupils.

Pretty (1997) points out that viable projects are those that are characterized by local engagement and ownership. Local ownership is able to influence the political will to grant funds for compensation to farmers after the project period, something which is an important basis for the continuation of the work. Both teachers and farmers who participate in “The Farm as a Pedagogical Resource” are enthusiastic about the results of the pedagogical projects and the possibilities for integrating farming as a part of the life of the school and the local identity. There is still the challenge of getting the philosophy and potential of the project across to the rest of the teachers at the schools and to the school administration in addition to the local municipal administration.

### *A pedagogical alternative?*

Activity in the Norwegian school system is guided by “L 97”, The Curriculum for the 10-year Compulsory School, comprised of one document containing a general statement of principles and another document containing descriptions of concrete subjects. The state curriculum begins with the following statement of goals:

“The goal of education is to equip children and youth to be able to encounter tasks in life and to tackle challenges together with others. Each pupil should acquire abilities to take responsibility for himself and to direct his life, and at the same time have resources and will to help others” (page 15, L 97).

The basic principles of education are described under seven headings: The human being who searches for meaning, the creative human being, the working human being, the well educated human being, the cooperative human being, the environmentally aware human being and the integrated human being. These principles serve as guidelines in all schools and lay great emphasis on the importance of the local community as a learning arena for the pupils and stress the importance of utilizing the local community actively. It is also considered important to strengthen knowledge about and connection to nature as a means of earning a living and regarding traditions and the way people live in the local area. At the same time, emphasis is placed on practical work and the connection between theory and practice.

Within the project there is a goal that the activities on the farm should be an integrated part of the schools life and education. They shall not be in addition to the other things they normally do at school. The primary educational tool is experiential learning, learning-by-doing.

At most schools, goal-oriented work with the curriculum has been done such that parts of the subject-matter for the different classes are allocated to the work at the farm. The activities at the farm become a part of the ordinary year plan, and the preparation and “digestion” of the events at the farm are done at the school. In this way, several of the participants try to connect the practical work on the farm to the school subjects. The teachers and the principal can become involved through pointing out how the goals of the curriculum may be met in practice by using the farm as a pedagogical resource and how the pupils may be inspired to learn the school subjects in different ways.

As a concrete example we can look at the activities of the 3<sup>rd</sup> grade class at a pilot project farm in Aurland. The pilot project in Aurland is located in the western part of Norway and was established through the national project “Living School”. A similar project is developed in Meraaker in Northern Trøndelag.

In the course of the fall months the class will have several visits at the farm. They partake in the shearing of the sheep (they will follow the sheep through a whole year) and the collecting and sorting of the wool. Wool will be taken back to the school where the pupils will clean it, comb it and use it to weave a rug or a bag. They are also at the farm to pick apples, press them for juice and also dry them and bake

applepie. During the winter months the pupils will come back to the farm to participate in the birth of the lambs. In the spring they follow the sheep to pasture and set out salt stones. This school has also a school garden where the children work in both spring and fall.

In addition to goals from the general part of the curriculum such as understanding work as an essential part of life, cooperating with others in work situations, becoming aware of environmental questions and understanding man's roll in relationship to domesticated animals, the school has also defined subject goals from the subject curriculum in the following subjects:

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|---------------------|--|
| Norwegian:          | - listen to Nordic myths and legends and other folk stories<br>- listen to stories from earlier times with following discussion  |
| Natural science:    | - observe lifecycles of plants and animals, sow, plant and cultivate<br>- become acquainted with some common animals and talk about the relationship of man to animals |
| Social studies:     | - plan and execute an outing and make rules for how to work  |
| Physical education: | - be out in nature at different seasons in different landscapes<br>- find activities and ways to play in nature  |
| Arts and crafts:    | - learn basic ways of making textiles: f.ex. sewing, braiding, weaving   |

The eighth grade at the same school is involved in a 2-3 week project at an old farm where they will participate in cultivation of the landscape, care and reparation of the tools, a study of the buildings and architecture. They receive instruction in swimming and first aid before they learn to set fishing nets and prepare fish from the fjord. They bake "flat bread" on stoves at the farm and participate on a historical fieldtrip on the farm, guide tourists who visit the farm and learn traditional Norwegian dances. Integrated in this project are the following subjects:

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|------------------------|---|
| English:               | - use English for communication in written and spoken form  |
| Norwegian:             | - make an oral presentation of a subject for the class<br>- use folksongs and dances to dramatize history                         |
| Natural science:       | - learn to know minerals and soil types through field work with vegetation  |
| Environmental studies: | - learn about forms of building and ecological consequences   |
| Social studies:        | - learn to see connections between natural surroundings and culture<br>- what one needs to know about nature and how we change it |
| Arts and Crafts:       | - receive an introduction to village dances and music<br>- learn songs which have to do with folklore                             |
| Physical education:    | - learn first aid for swimming<br>- learn to use the local environment for physical activity                                      |

There will always be a great deal of work in the classroom before and after activities on the farm as an essential part of the farm/school cooperation. How much time and which subjects are engaged, will be choices which the teachers make in planning the work at the farm together with the farmer.

The basis for evaluation of the educational goals is the observation which the teachers do on the farm and the pupils' reports. There is a broad consensus in relationship to implementation of the 7 basic principles in the general part of the curriculum (L 97). This seems to be well supported by the experience of the participants. As to evaluation of specific subject goals, emphasis is laid on the value of common field experience for the teachers and pupils as a foundation for classroom work. Math



skills such as addition and subtraction, weights and measures, ground surface calculations are trained at the farm through, for example, work with the animals (how many lambs to sheep, liters of milk per day etc.) baking bread (kilos and desiliters) and making food.

The integration of the activities on the farm in the classroom work is also a process of learning for the teachers. Several teachers have emphasized the importance of preparation and follow up work in utilization of the farm experience. It demands both independent work and pedagogical insight to develop the farmwork as a pedagogical tool.

### *The opinion of the teachers and the parents of the pupils*

The attitude of the parents to the work on the farm has been charted using questionnaires (Lyngstad 2003). Thus far, the results from five schools show overwhelmingly positive opinion on the part of both the teachers and the parents that agree on following points:

- They are not worried that the farm work is done at the cost of theoretical learning. Quite the opposite, they strengthen the fact that their children and pupils have a chance to acquire practical “pegs” on which to hang their more theoretical learning.
- Both teachers and parents wish that the co-operation with the farm increase, and that this must be a priority for the school and the local government.
- Both teachers and parents see the value of the children’s participation in practical work and that they receive values which a traditional school day can not give them.

The attitude of the parents is most likely a “mirror” of the standpoint of their children. When the youngsters look forward to the work at the farm, it is natural that also the parents are positive to it. The parents’ relationship to the project and the pupils’ experience seems to be important for the project’s success and its foothold in the local community. Activating and involving the parents can give support to the claim that “The Farm as a Pedagogical Resource” is something quite different from traditional farm visits.

## **Conclusions: Identity and Rural Development**

What do the pupils learn when the classroom is moved to the farm? Are there greater advantages for learning as compared to in the classroom? It is too early in the process of evaluation to say anything decisive about this, but the teachers are convinced that pupils do learn from their work at the farm. Many teachers stress the importance that pupils learn “other” things. The pupils see and do things in practice, they learn to work together, they become acquainted with a profession they may not be familiar with and they have contact with several generations.

The most serious barrier to the further development of the project is the depleted economy at the local governmental level. The schools are forced to cut their budgets and it is difficult to find financial support for new projects. Just the same, the overwhelmingly positive results with “the farm as a pedagogical resource” has caused politicians in several areas to set this as a priority. In Northern Trondelag the project is not considered primarily as a source of income for farmers, but as an agent to facilitate connection, identity and lifeskills at a local level.

The philosopher Martin Heidegger (1977) maintained that human beings create meaning through “stepping into the world.” The construction of meaning occurs through action, through a “handling”

contact with the world which surrounds a human being. Without any form of prior participation, one has nothing over which to reflect. Reflection will be empty or completely speculative. "It's not enough to have concepts to think with. One must also have something to think about" (Hylland Eriksen 1993: 45). Through sowing, weeding and harvesting in the garden at the farm, learning about plants and science can become more relevant. Taking care of rabbits and experiencing lamming gives food for thought about the cycles of life which can be a motivating factor in studying biology and the environment.

Those who are both teachers and farmers feel that the youngsters have a need for another type of school day (see: Tiller 2002). They notice that some of the children get a "kick" out of doing practical work. They also experience that it is positive for the children to be able to follow the life-cycles of plants and animals at the farm, and that, in this way, they achieve a greater understanding of the processes in nature around them. One farmer emphasizes this and adds that it looks as if the children also enjoy it. As he says, "*It's good to do things in practice when one has time for it – it leaves traces in the body.*"

When learning connects to the physical body, as knowledge-in-use, learning is at the same time connected to lived experience and to place (Molander 2000, Krogh 1995, Jackson 1996). If school stretches out its boundaries to include activities in the local community, the pupils also build up their identity in connection to a sense of place. This foundation and an experience of meaningful "rooting" will follow the pupils throughout their education and professional lives. In spite of increasing mobility, most Norwegians choose a primarily local base when they settle down to have their own family. If they have had meaningful experiences of integration into their local community as children, the probability will increase that they move back and choose the place they grew up in as their residence. "The Farm as a Pedagogical Resource" can contribute to impeding even greater more depopulation of Norwegian small towns. There, they need, above all, young people with go-ahead spirit and new impulses coming in from outside.

"The Farm as a Pedagogical Resource" is also a good example of a new kind of job within a society which, in to an ever greater degree, demands experience and a sense of identity. In the post-modern society, farmers, like all others, are forced to build up and develop their own identity (Giddens 1990, 1991). While their identity within an industrial society has been connected primarily to production of raw materials for food factories, completely different possibilities are opened by communicating history, stories, knowledge, skills and experiences, all of which are sought after in the post-modern identity-seeking society, "The Dream Society" (Jensen 1999). Production of raw materials gains another value, and, when farming reaches out and affects the local community and society at large, the farmer can see himself as an important contributor to a new understanding of society. The farmers express the significance and importance of these dimensions of the project in different ways.

The industrialization of agriculture and the development of The Dream Society are common traits of the western world. "The Farm as a Pedagogical Resource" is one way to meet the increasing need for re-creating connection to nature, to agriculture, to practical skills and to work. Thus, the possibilities to generalize the experiences from the project for use in other western countries should be obvious.

The project is also part of a commitment within the field of cultural economics, which focuses on how local knowledge of nature, food and culture can be converted into actual resources for local development (Ray 1998). Several of the farmers see the project as a foundation for school "businesses," where the products of the pupils' work could be sold at the farm along with other local products coming either from the farm or elsewhere in the small town. This, in turn, opens up to new visions of uses and possibilities for the resources at the farm, for example in the restoration of old buildings.

This “cultural economics” approach has also a political dimension. When one builds on what already is there, on the local history, the people who live there and the activities they pursue, the local population will have a chance “to localize economic control – to (re)value place through its cultural identity” (Ray 1998:3). But this demands increasing attention in rural development to new private and public markets which need services with their origins rooted in local characteristics.

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