Patterns of resource use on Danish organic farms: aspects of farm-based rural development

Pia Frederiksen*

Department of Policy Analysis,
National Environmental Research Institute,
P.O. Box 358, Roskilde DK-4000, Denmark
E-mail: pfr@dmu.dk
*Corresponding author

Vibeke Langer

Department of Agricultural Science,
The Royal Veterinary and Agricultural University,
Agrovej 10, Taastrup DK-2630, Denmark
E-mail: vl@kvl.dk

Abstract: The diversity in the Danish organic farming sector in terms of patterns of human resource use is investigated. Based on the total time allocated to agricultural activities almost half the organic farms are full-time farms, one third part-time and the rest hobby farms. Spouses contribute little time to agricultural activities and 75% of them has full- or part-time jobs outside the farm. Half of the organic farms engage in Other Farm-based Activities (OFAs), with 40–50% of these being of some or major economic importance and with direct sales being most frequent. Full time farms pursuing a size enlargement strategy seem to engage in OFAs like other full time farms, indicating that enlargement and diversification are not exclusive. Diversification of resource use into off-farm work and OFAs seems to be an integrated part of organic agricultural strategies, more than a pathway away from agriculture. The potential contribution of such strategies to rural development is discussed.

Keywords: diversity; pluriactivity; organic farming; Denmark; resource use; rural development; gender roles.

Reference to this paper should be made as follows: Frederiksen, P. and Langer, V. (2008) 'Patterns of resource use on Danish organic farms: aspects of farm-based rural development', *Int. J. Agricultural Resources, Governance and Ecology*, Vol. 7, Nos. 1/2, pp.96–109.

Biographical notes: Pia Frederiksen is a Senior Researcher in the Department of Policy Analysis, National Environmental Research Institute in Denmark. She received a PhD in Geography from Roskilde University. Her key research areas are: sustainable development, assessment of land use and environmental change, the interaction of natural resources, rural livelihoods and agri-environmental dynamics.

Vibeke Langer is an Associate Professor in the Department of Agricultural Sciences at the Royal Veterinary and Agricultural University (KVL) in Copenhagen, Denmark. She received an MSc in Horticulture and a PhD in Agricultural Entomology. Her main research areas are nature management,

structure and intensity of organic farms, and pest management and intercropping in Organic Agriculture. She is in charge of KVL's courses in Organic Agriculture.

1 Introduction

Agricultural restructuring takes place all over Europe as economies of scale still force a change towards larger farms. However, the Common Agricultural Policy of the European Union is in a process of changing the subsidy structure from production support to area support and is increasing the share of the budget allocated to Rural Development support schemes. This development has broadened the possible development pathways that an agricultural enterprise may take and enhanced the options for seeking alternatives to the agricultural modernisation and find new responses to the cost-prize squeeze (Ilbery and Bowler, 1998; van der Ploeg and Renting, 2000). Present European rural development policies describe three development axes: the agro-food economy, the environment and the broader rural economy and population – viewed as the products of the multifunctional role that farming plays in European agricultural landscapes (EC, 2005). Thus, while rural development is a process involving actors from many sides, a crucial role is still foreseen for the farmers. Consequently, a need arises to conceptualise the specific contributions to rural development that farms and farmers provide: farm-based rural development.

Organic farming has been promoted as stimulating rural development, directly through enhanced employment and indirectly through environmental improvements (Dabbert et al., 2004). Organic farming is however not a single strategy, as organic farm households – like conventional farm households – combine different patterns of resource use, potentially resulting in the contribution to various societal goals in relation to the rural development. Not much is known about the types, scale and importance of the contribution to farm-based rural development of Danish farms. In this paper, we discuss approaches to farm-based rural development and how organic farming has been seen in this context. Results from an empirical analysis of the patterns of use of human resources on Danish organic farms are presented.

2 Background

In the latter part of the period of agricultural modernisation (1960–1990) farm incomes came under pressure due to overproduction within the European Union. Some scholars even go so far as to call it an agricultural crisis associated with growing health risks, environmental loss, overproduction of low quality products and decline in number of producers and farm workers (Marsden et al., 2001). One of the responses to this was an increased awareness of the creation of additional income sources for the farmers and policies directed at diversification of core farm business appeared. In 1999 the second pillar of the CAP was introduced through the Rural Development Regulation. This included support for agri-environmental measures as well as diversification of agricultural activities, encouragement for tourist and craft activities and marketing of

quality agricultural products. The recent CAP reform strengthened this approach, by allocating a larger share of the support to second pillar activities, focussing on competitiveness in agriculture and forestry, environmental issues, quality of life and diversification (EC, 2005). While literature discusses the relative importance of external and internal drivers for diversification, no firm conclusions on this aspect have been drawn (Turner et al., 2002).

The farm structures and income sources that farm households pursue were extensively mapped over a number of European countries already in the late 1980s (Bryden et al., 1992) showing that off-farm incomes or non-agricultural farm-based activities were taken up by 63% of all farms surveyed and that the importance of these activities were increasing. A large number of studies have since provided evidence of the diversification of farms and of farm household strategies across Europe (e.g. De Vries, 1993; Djurfeldt and Gooch, 2002; Eikeland, 1999; Jervell, 1999; McNally, 2001; Meert et al., 2005; Turner et al., 2002; Walford, 2003). These studies highlight a number of issues related to diversification and the up-take of off-farm incomes, such as the increased need for supplementing farm income with income from non-agricultural activities (De Vries, 1993), the stabilising effect of off-farm income (Meert et al., 2005) and the changed role of the spouse following the increase in double income households (Jervell, 1999; Melsted, 2004). Based on an extensive mapping of farm diversification activities, Lobley and Potter (2004) pointed out the large diversity in responses and the links to both farm type, location and the wider rural economy context.

These different farmer responses to the agricultural crisis were discussed by Ilbery and Bowler (1998) and conceptualised as different farm development paths. They stressed the appearance of alternatives to the traditional industrial model of farm business development, such as agricultural or structural diversification (the latter being introduction of non-agricultural activities on the farm), off-farm occupation, extensification with reduced capital input or semi-retirement as hobby or part-time farmers.

Analytical approaches to this development need however to consider the different approaches taken in studies of diversification and the implications for analytical categories. Thus, diversification is in itself a concept with many competing definitions. The diversification of core agricultural business was formerly conceptualised as pluriactivity – meaning the combination of agricultural with other economic activities (Fuller, 1990). Pluriactivity is however sometimes reserved for off-farm income (Kinsella et al., 2000), while non-agricultural farm-based activities may be termed alternative farm enterprises (Evans and Ilbery, 1993; Ilbery and Bowler, 1998) or simply Other Farm-based Activities (OFAs). In a recent survey of farm diversification in UK Turner et al. (2002) argues that a general consensus exists on diversification being business activities that are run on the farm or are dependent on farm-based land and capital assets. In this definition off-farm incomes are not included in diversification, but are treated as a separate category.

Whereas pluriactivity and diversification express the resources used for non-agricultural activities by farm households, part-time farming is a different conceptual entrance to this issue, focussing on the time spent for agricultural activity. But as Evans and Ilbery (1993) notes it is not always clear, whether part-time farming implies the existence of off-farm incomes or only characterises the extent of agricultural resource use. Furthermore, when investigating the time spent on agricultural activities, the focus may be on the farm household or only on the farmer's use of time. Some studies do not

make explicit the role of the spouse in the development of pluriactive farm households and pluriactivity may be defined as the participation of either spouse or farmer in off-farm activities. Consequently a farmer may work full-time on the farm but still be part of a pluriactive farm household. It has been argued that the off-farm work of the spouse express the agricultural version of the general societal development of the dual-income households (Jervell, 1999), helped by the mechanisation of farm work. In that case, the farm should still be considered as a full-time farm. For the sake of exploring the different patterns of resource use and their role in rural development processes, it is important to make a distinction between the role of the farmer and the spouse respectively, in farm household strategies. Also, a clear approach to the way time is used for different activities needs to be considered.

While the analytical approaches discussed above concerns the household patterns of resource use, the wider implications for rural development is interesting from the point of view of how different farm household strategies may contribute to the local development and quality of life in rural areas and how policies may be targeted to different types of strategies. Van der Ploeg and Renting (2004) describe farm-based rural development in terms of three processes. One is *deepening* of agricultural activities, in terms of more value added generated per unit of product. This would encompass on-farm processing, high quality production including organic farming, direct sale or marketing through short marketing chains. Another is *broadening* of activities (structural diversification) including non-agricultural farm-based activities such as agri-tourism, nature and landscape management. The third is *regrounding* – mobilising resources through 'farming economically' (van der Ploeg, 2000) or off-farm incomes. This perspective allows the existence of hobby and part-time farming to be viewed as a part of the broader rural development and as entities with potential roles in rural development, which should be evaluated empirically.

In a rural development context, strategies involving diversification or pluriactivity are often seen as alternative to and exclusive of an expansive strategy, for example, 'traditional restructuring', often characterised by size enlargement (Lobley and Potter, 2004). However larger farms may have both the resources, flexibility and entrepreneurship needed to take up new activities (Turner et al., 2002) and complementarities and coexistence should not be excluded.

Despite an expectation of the potential of organic farming to contribute to rural development there is little empirical knowledge in the field. As a framework for their extensive survey on the impact of organic farming on rural economy Lobley et al. (2005) listed a range of areas in which organic farming may contribute to rural development in ways distinct from conventional farming. They found evidence suggesting that compared to non-organic farms, organic farms have the potential to enhance employment as well as to increase the generation and retention of value in the local rural economy through trading activities. They also suggest that social networks fostering innovation are more prevalent within the organic farming community. However, they do point out that organic farms cannot be assumed to achieve all these, but that it depends on farm types and degree of specialisation.

The above discussion of past research leads to following questions, which were addressed in the present study:

1 Which types of organic farms exist, in terms of resources used for agricultural activity and what are the roles of farmer and spouse respectively?

2 Given various farm types, how are these combined with other types of income activities on organic farms?

3 Are the different farm household strategies mutually exclusive, coexisting or complementary and what are their roles in the wider rural development?

3 Data and methods

Categories for empirical analysis are discussed by Knickel and Renting (2000), who argue that different rural development processes may be explored at different levels, like farm, farm household, region and global levels. They emphasise that strategies, patterns of resource use, interrelationships and networks should be dealt with at the household level, as done in the study of Irish farming livelihood strategies by Kinsella et al. (2000). This approach is also adopted in the research presented in this paper, where resources used for off-farm, other farm-based activities and agricultural activities and their economic importance are mapped for Danish organic farming households.

Information on resource use for the three types of activities was collected through structured face-to-face interviews in 2002 in 11 case-areas, in which all organic farmers were approached (response rate: 75%). A total of 347 farmers were interviewed and 341 subsequently included in the analyses. These farms covered approximately 10% of all organic farmers in Denmark and represented the national distribution of farm types among organic farms: 25% of dairy farms covering half of the total area, 41% of arable farms covering lesser than one third of the area and the rest, mixed and small farms. The case areas represented major landscape types of Denmark and areas with a relatively high density of organic farms.

Respondents listed their involvement in OFAs by type and estimated time used for agricultural activity and OFAs for farmer and spouse in four categories: on an average less than 10 hours/week (cat. 1), 10–20 hours/week (cat. 2), 20–37 hours/week (cat. 3) and more than 37 hours/week (cat. 4). Moreover estimated levels of off-farm work for farmer and spouse were recorded as well as the estimated economic importance of OFAs. Farmers are in Denmark predominantly males and spouses females. Ancillary data on farming households, background and history on farm, as well as land use and management, collaboration and participation in professional networks were also collected.

To investigate the household patterns of resource use, farm household categories were defined according to the total time used for farming by farmer and spouse (see Table 1) and these categories were analysed in terms of combination with off-farm work, type and extent of OFAs pursued, additional employment on farm and gender roles.

The off-farm activity level of the farm household was defined as the combination of the farmer's and the spouse's activities. The off-farm income level of the farmer was defined at three levels: main income, minor income or no income. These three groups were again subdivided according to the spouse's off-farm workload divided into high (full or part-time off-farm job), and low (minor or no off-farm work) (Table 2).

Table 1 Farm types based on estimated total time used for agricultural activities by the farmer and his/her spouse

Farm type	*Workload*
Hobby farm	Less than 10 hours/week
Part-time farm	Between 10 and approximately 40 hours/week
Full-time farm	More than approximately 40 hours/week

Table 2 Off-farm categories

Off-farm code	*Farmer's income from off-farm work*	*Spouse's level of off-farm work*
FmajSmaj	Main	Full or part-time
FmajSmin	Main	Minor or none
FminSmaj	Minor	Full or part-time
FminSmin	Minor	Minor or none
FnoSmaj	None	Full or part-time
FnoSmin	None	Minor or none

OFAs were grouped into three groups, according to deepening, broadening and regrounding activities:

- deepening: farm shops and other direct sale, processing of farm produce
- broadening: farm tourism, leasing of hunting rights, riding schools and horse pensions, crafts, business located on farm, paid childcare, let out of buildings, sale of energy from windmills
- regrounding: contracting and other agricultural services.

To explore whether a traditional size enlargement strategy seemed exclusive of on-farm diversification, changes in farm size within the different farm types between 2001 and 2004 were investigated, and farms enlarging their area were further analysed for their OFAs. Farm size changes could be followed on the 261 organic farms still to be found in the registry of organic farms in 2004.

4 Results

The first part of the analysis is the identification of farm types with similar resource use for agricultural activities. The second part of the analysis explores whether these farm types have implications for off-farm involvement and the up-take of other farm-based activities.

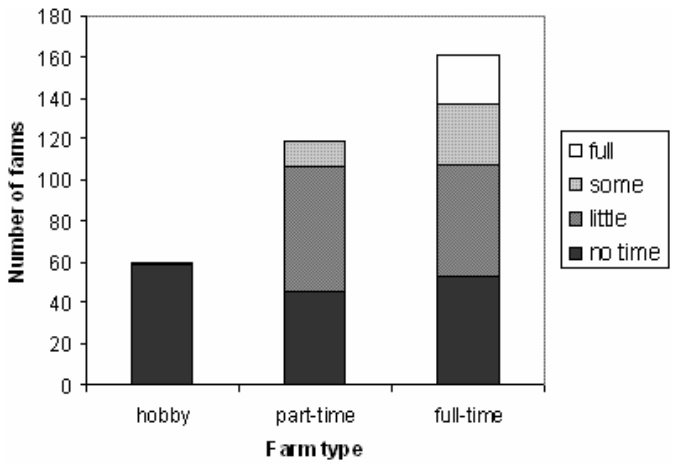
4.1 Resource use for agricultural activity

Based on the time used for agricultural activities by the farmer and his/her spouse, 47% of the farms were classified as full-time farms, while part-time farms made up 35% and

hobby farms 17% of the sample. The time allocation to agricultural activity by spouses was low – typically lesser than 10 hours/week, except for the traditional family farms on which farmer and spouse both worked full-time on the farm (5% in total). Figure 1 shows the frequency of the different farm types and the contribution of spouses to the agricultural workload within these types.

Time used by employed staff was not included as a resource here. Employment was almost exclusively found on full-time farms, with 24% of the full-time farms employing one or more persons on the farm full-time.

Figure 1 Frequency of farm types and spouse time contribution to agricultural activity on these. 'Little time' is lesser than 10 hours/week, while 'some time' is between 10 and 36 hours/week ($n = 340$)



4.2 Off-farm work

More than half (54%) of the organic farms were managed by a farmer who had his/her main income from off-farm business. For most of these farms (44%), not only the farmer but also the spouse drew the main income from off-farm work. On the remaining 10%, the spouses had no or little off-farm activity. The rest of the farms (46%) were managed by farmers with no or minor off-farm incomes and varying engagement by spouses in off-farm employment (see Table 3). A total of 75% spouses had full- or part-time jobs (>20 hours/week) outside the farm.

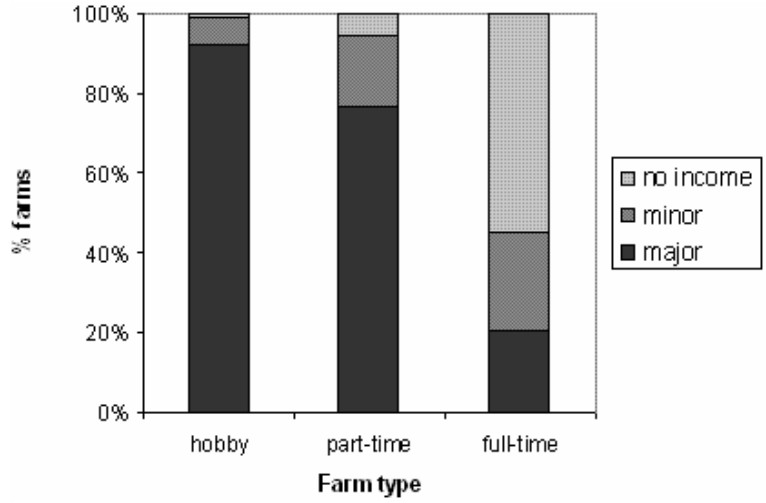
Table 3 Off-farm activity levels of 338 farms 2001 (legend, see Table 1)

Off-farm activity level	*No. of farms*	*Percent of farms*	*Size of farms, in ha*
Fmaj Smaj	150	44	23
Fmaj Smin	35	10	28
Fmin Smaj	39	12	75
Fmin Smin	22	7	65
Fno Smaj	65	19	84
Fno Smin	27	8	105

Farm size differed significantly ($p < 0.01$) between the two farm groups, in which the main income source for the farmer was off-farm income, and the four groups in which the farmer had no or minor off-farm incomes. The level of off-farm work of the spouse was only weakly related to farm size.

Off-farm incomes played a different role on the different farm types. On almost all hobby farms and on the majority of part-time farms, farmers drew their main income from off-farm activity. Of the full-time farms, that is, those where farmer and spouse together use full-time or more, 18% of the farmers still had major off-farm incomes (Figure 2).

Figure 2 Farmers' off-farm income levels by farm types (n = 340 farms)



4.3 Engagement in other farm-based activities

OFAs were undertaken on 49% of the farms, but were not found on the remaining 51% of the farms. 9% of the farm households engaged in more than one OFA on the farm. (Table 4)

The level of engagement in other farm-based activities differed among farm types. More than half (53%) of the part-time and the full-time farms had diversified their core agricultural business, while only 33% of the hobby farms were involved in such activities. More than one activity was found on almost one third of the full-time farms, while this was seldom found on hobby farms and part-time farms.

The single most frequent activity was running farm-based shops and direct sale (f.i. meat sale at farm gate or at off-farm place of work), representing short marketing chains. Both part-time and full-time farmers were engaged in different kinds of direct sale, whereas processing of agricultural produce was mainly done on full-time farms. Leasing hunting rights or buildings were also frequent activities taken up by farmers. While leasing buildings were relatively more often found on hobby farms, leasing hunting rights was more frequent on full-time farms. Professional activities on the farm (like medical care, lawyers office, import of wine) were almost exclusively seen on part-time farms, like day care of children. Overall, deepening and broadening type

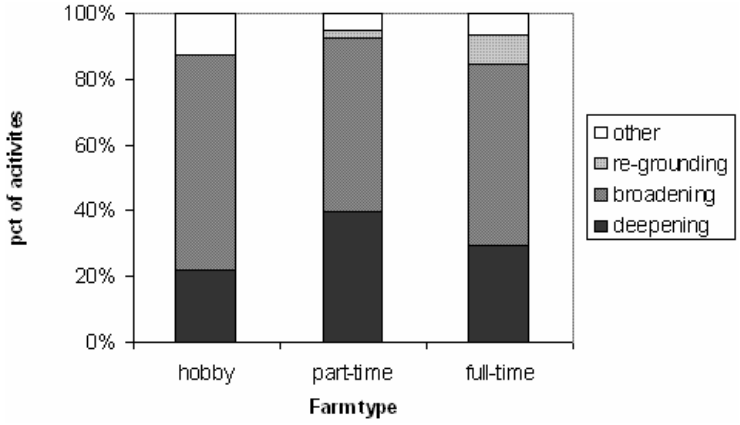
activities were the most prevalent on all farm types, whereas almost exclusively full-time farmers were engaged in regrounding activities like contracting (Figure 3).

Table 4 Other farm-based activities on 168 organic farms ($n = 231$)

Type of OFA	*% of OFA*
Farm-based shop, other direct sale	22
Processing of agricultural produce	8
Total deepening	*30*
Letting of hunting rights	14
Renting out buildings	14
Rural tourism	6
Business	6
Crafts	5
Sale of renewable energy	5
Professional child care	3
Riding school, horse pension	2
Total broadening	*55*
Contracting	7
Total re-grounding	*7*
Other	8
Total other	*8*

On 21% of all farms OFAs were characterised as having some or major economic importance for the household. Of farms with OFAs, 48% of part-time farmers and 41% of full-time farmers stated that they were of 'some' or 'major' economic importance, while this was true only for 11% of the hobby farmers. Among the activities, farm-based shops, other direct sale as well as leasing buildings were often of 'some' or 'major' economic importance and business or day care were almost always of 'some' or 'major' economic importance.

Figure 3 Type of OFAs by farm type



4.4 Changes in farm size 2001–2004

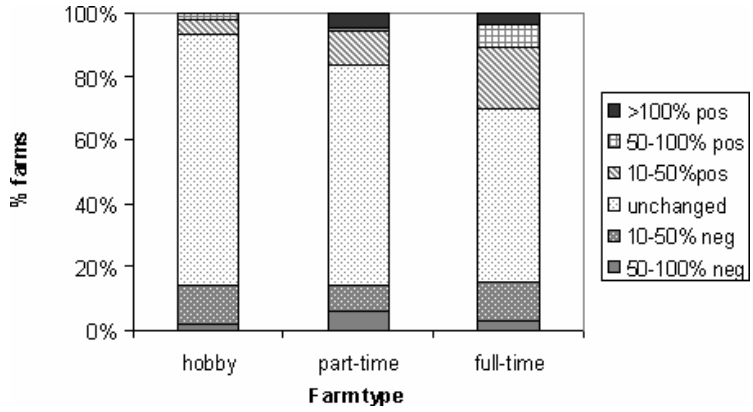
Mean farm sizes differed between the three farm types (Table 5) with full-time farms being significantly larger than both part-time and hobby farms.

Of the farms still found in the organic registry in 2004, 64% remained unchanged in size, that is, increased or reduced their farm area with less than 10% between 2001 and 2004 (Figure 4). While the share of farms reducing their farmed area was similar in all three farm types, twice as many full-time farms as part-time farms enlarged in the period, indicating a strategy of scale enlargement. Among hobby farms more farms reduced than enlarged their area.

Table 5 Size of farms for each farm type (n = 340)

	Hobby farms	*Part-time farms*	*Full-time farms*
Percent of farms	17	35	47
Mean farm size, in ha	16	26	82

Figure 4 Changes in farm size between 2001 and 2004, for each farm type (n = 261)



To elucidate whether size enlargement seemed to exclude the engagement in other farm-based activities, we looked at the full-time farms which increased their size by more than 10% between 2001 and 2004. On these farms the frequency of OFAs was slightly higher than on all full-time farms: 58% of them were engaged in OFAs. However, the activity types differed: regrounding activities amounted for a larger share of all activities, while both deepening and broadening activities were less frequent. Regarding employment almost half of the enlarging farms but only one third of all full-time farms had employed farm help.

5 Discussion

Based on the time which the farmer and his/her spouse use on agricultural activities, almost half the Danish organic farms could be characterised as full-time farms, with only

5% being farms where both the farmer and the spouse work full-time on the farm. One third was part-time farms and 17% hobby farms and contributions to agricultural activity by spouses – being predominantly female - were low on all farm types.

With more than 3/4 of spouses working more than 20 hours/week outside the farm, the majority of organic farm households relied economically on off-farm incomes from spouses and were – as most other households in Denmark – dual income households. In addition to the off-farm engagement of the spouses, more than half of the organic farmers themselves derived their main income from outside the farm. When these farmers were asked about their future strategy, only a small minority (<10%) answered that they considered stopping farming or reverting to conventional farming during the next five years, indicating that such farm households consciously build on off-farm incomes to sustain a rural life with farming as an important component. This supports the recent research results showing off-farm work as a condition for sustaining farms and furthering their development, rather than as a hindrance for farm development and a first step out of agriculture (Meert et al., 2005; Turner et al., 2002). In a rural development context, off-farm incomes of farm households may be seen as a transfer of resources from the urban to the rural economy and as such as securing the basis for maintaining local services (van der Ploeg et al., 2002).

Half of the organic farms engage in OFAs. There are considerable differences in both the level of engagement and the preferred type of OFAs between hobby farms, part-time farms and full-time farms. Van der Ploeg and Renting (2004) suggested that diversification may lead to reorganisation of households, for example, allowing spouses to return to the farm. However, in our material, there are no signs that the up-take of OFAs change the organisation of work within the household in such a way that spouses give up their off-farm employments. Only few Danish organic farmers (5%) engage in farm-based tourism, which is low compared to the 40% of UK organic farmers as reported by Lobley et al. (2005). Engagement in tourism would traditionally involve spouses more and this may be an area for further development, which could change household structure in the directions discussed by van der Ploeg et al. (2004).

Short marketing chains like farm-based shops and direct sale was the single most frequent activity type and thus play a large role on Danish organic farms. Lobley et al. found organic farmers to be more involved than conventional farms in local and direct sales routes. They also noted that farms involved in direct sales are associated with a significant potential rural development impact (Lobley et al. 2005). Direct selling seemed to often generate informal links between farmers and was frequently combined with processing of farm produce – either their own produce or the produce of other farmers – thus potentially contributing to network building among producers. Lobley et al. (2005) however point out that because not all farms are well suited to adopt a direct sales strategy, engaging in direct marketing is not a model which can simply be copied to advance rural development.

The farm types engage in OFAs in different ways. Organic hobby farmers do not rely on the farm income and engage considerably less than the other farm types in other farm-based activities. When engaging in OFAs, broadening activities, especially leasing buildings, are most frequent. This is not surprising, given that the definition of hobby farmers used here only allow one person to work a few hours on the farm/week, making the group consist of households choosing to live in the countryside, but with a very low agricultural engagement. Contrary to this, although more than 80% of the part-time

farmers have major off-farm incomes, more than half of them also engage in OFAs. Direct sale and processing of farm produce are frequent and often economically important activities. The range of other activities found on part-time farms is large and frequently not related to the agricultural production (broadening), for example, business activities or day care located on the farm are almost exclusively found on these farms. Full-time farms engage in OFAs with the same frequency as part-time farms, but the activities taken up on full-time farms are frequently either deepening and regrounding activities which in some way depart from agricultural production. For more than a third of the full-time farmers with OFAs, the activities are of 'some' or of 'major' importance for the household income. The results from this study show that organic full-time farms, to a large degree, combine farm income with off-farm income – mainly provided by the spouses – and with a variety of OFAs, mostly processing and marketing of agricultural products and the use of production means on other farms.

Diversification has been seen as an alternative to traditional expansion strategies. The results show that a considerable share (around 30%) of organic full-time farms expanded their utilised area during the period from 2001 to 2004. This recent size enlargement trend among organic farms was even more striking when changes were analysed in a cohort of organic farms who converted in 1997 and stayed organic until 2004 (Langer et al., 2005). Here, 75% of all farms and 80% of farms larger than 50ha expanded their farmed area by more than 10%, with one third expanding by 50% or more between 1997 and 2001. Investigating whether expansion coexisted with diversification among the Danish organic farms surveyed in this study, we found that the level of engagement in OFAs on farms having enlarged within the last five years did not differ much from that of other full-time farms. Diversifying as such does not seem to be in contradiction to expansion of the agricultural production. It seems however, that farms expanding in size frequently engage in specific OFAs, for example, contracting activities, exploiting their agricultural production means beyond their own farm.

Surprisingly, more than half of the OFAs seem to be undertaken without giving rise to substantial economic contributions to the household. Engaging in activities, which are not very time-consuming, for example, leasing fishing rights etc., may be a choice by the farmer for other than strictly economic reasons. Farm businesses operate on a different economic logic than most other businesses, for example, a small group of diversifying UK farmers regarded their diversification as little more than nurturing a hobby (Turner et al., 2002). For some organic farmers engaging in activities securing face-to-face contact with consumers or providing community access to farmland nature may be highly valued and continued in spite of low economic returns. However, the considerable proportion of activities which fail to contribute economically may also be due to lack of support for sufficient development of activities, for example, of farm-based shops with sale of regional quality products or of agri-tourism, of which the latter was found on surprisingly few farms. Both these activities have the potential to be a development option for organic farms, but policies and institutions tend not to view the full range of resources available to the farm household as the basis for advice and development. With rural development as a main policy objective in the CAP and an expected increase in funding for the 'second pillar', the local policy environment in which farmers operate will change, giving rise to new needs for targeting policies to an increasingly diverse group of land managers.

Acknowledgements

We wish to thank two anonymous reviewers as well as Ika Darnhofer for very useful suggestions and comments. The authors also thank the Danish Agricultural and Veterinary Research Council and Danish Research Center for Organic Farming (DARCOF) for funding this work.

References

Bryden, J.M., Bell, C., Gilliatt, J., Hawkins, E. and Mackinnon, N. (1992) 'Farm household adjustment in Western Europe 1987–91', *Final Report on the Research Programme on Farm Structures and Pluriactivity*, Luxembourg, Commission of the European Communities.

Dabbert, S., Häring, A.M. and Zanoli, R. (2004) *Organic Farming: Policies and Prospects*, Zed Books, p.169.

De Vries, W.M. (1993) 'Farming with other gainful activities in the Netherlands', *Sociologia Ruralis*, Vol. 33, No. 2, pp.190–202.

Djurfeldt, G. and Gooch, P. (2002) 'Farm crisis, mobility and structural change in Swedish agriculture, 1992–2000', *Acta Sociologica*, Vol. 45, No. 2, pp.75–88.

EC (2005) *Annex to the Proposal for a Council Decision on Community Strategic Guidelines for Rural Development*, SEC(2005) 914, Commission of the European Communities.

Eikeland, S. (1999) 'New rural pluriactivity? Household strategies and rural renewal in Norway', *Sociologia Ruralis*, Vol. 39, No. 3, pp.359–376.

Evans, N.J. and Ilbery, B.W. (1993) 'The pluriactivity, part-time farming and farm diversification debate', *Environment and Planning A*, Vol. 25, No. 7, pp.945–959.

Fuller, A.M. (1990) 'From part-time farming to pluriactivity: a decade of change in rural Europe', *Journal of Rural Studies*, Vol. 6, No. 4, pp.361–373.

Ilbery, B.W. and Bowler, I. (1998) *From Agricultural Productivism to Post-Productivism. The Geography Of Rural Change,* London: Longman.

Jervell, A.M. (1999) 'Changing patterns of family farming and pluriactivity', *Sociologia Ruralis*, Vol. 39, No. 1, pp.100–116.

Kinsella, J., Wilson, S., de Jong, F. and Renting, H. (2000) 'Pluriactivity as a livelihood strategy in Irish farm households and its role in rural development', *Sociologia Ruralis*, Vol. 40, No. 4, pp.481–496.

Knickel, K. and Renting, H. (2000) 'Methodology and conceptual issues in the study of multifunctionality and rural development', *Sociologia Ruralis*, Vol. 40, No. 4, pp.512–528.

Langer, V., Frederiksen, P. and Jensen, J.D. (2005) 'The development of farm size on Danish organic farms – a comment on the conventionalisation debate', in U. Köpke, U. Niggli, D. Neuhoff, P. Cornish, W. Lockeretz and H. Willer (Eds). *Researching Sustainable Systems, Proceedings of the First Scientific Conference of the International Society of Organic Agriculture Research (ISOFAR)*, Adelaide, pp.321–325.

Lobley, M. and Potter, C. (2004) 'Agricultural change and restructuring: recent evidence from a survey of agricultural households in England', *Journal of Rural Studies*, Vol. 20, pp.499–510.

Lobley, M., Reed, M. and Butler, A. (2005) 'The impact of organic farming on the rural economy in England', *Final Report to DEFRA. CRR Research Report No. 11*, University of Exeter, Exeter.

Marsden, T., Banks, J., Renting, H. and van der Ploeg, J.D. (2001) 'The road towards sustainable rural development: issues of theory, policy and research practise', *Journal of Environmental Policy and Planning*, Vol. 3, No. 2, pp.75–83.

McNally, S. (2001) 'Farm diversification in England and Wales – what can we learn from the farm business survey?' *Journal of Rural Studies*, Vol. 17, No. 2, pp.247–257.

Meert, H., Van Huylenbroeck, G., Vernimmen, T., Bourgeois, M. and van Hecke, E. (2005) 'Farm household survival strategies and diversification on marginal farms', *Journal of Rural Studies*, Vol. 21, No. 1, pp.81–97.

Melsted, A. (2004) 'Alternative strategier i norsk landbruk' [Alternative strategies in Norwegian agriculture]', *Tidsskrift for samfunnsforskning*, Vol. 44m, No. 2, pp.203–233.

Turner, M., Winter, M., Barr, D., Fogerty, D., Errington, A., Lobley, M., Reed, M. and Whitehead, I. (2002) 'Farm diversification activities: benchmarking study 2002', *Final Report to DEFRA*, Centre for Rural Research, University of Exeter and Rural and Tourism Research group, University of Plymouth.

van der Ploeg, J.D. (2000) 'Revitalizing agriculture: farming economically as starting ground for rural development', *Sociologia Ruralis*, Vol. 40, No. 4, pp.497–511.

van der Ploeg, J.D., Long, A. and Banks, J. (2002) 'Rural development: the state of the art', in J.D. van der Ploeg, A. Long and J. Banks (Eds). *Living Countrysides: Rural Development Processes in Europe: The State of the Art*, The Netherlands: Elsevier, pp.8–17.

van der Ploeg, J.D. and Renting, H. (2000) 'Impact and potential: a comparative review of European rural development practises', *Sociologia Ruralis*, Vol. 40, No. 4, pp.529–543.

van der Ploeg, J.D. and Renting, H. (2004) 'Behind the "redux": a rejoinder to David Goodman', *Sociologia Ruralis*, Vol. 44, No. 2, pp.233–242.

Walford, N. (2003) 'A past and a future for diversification on farms? some evidence from large-scale, commercial farms in South East England', *Geografiska Annaler*, Vol. 85B, No. 1, pp.51–62.