

# **PDFlib PLOP: PDF Linearization, Optimization, Protection**

**Page inserted by evaluation version  
www.pdflib.com – sales@pdflib.com**

# Gender and Work in Norwegian Family Farm Businesses

Hilde Bjørkhaug\* and Arild Blekesaune

## Abstract

The traditional way of organising agricultural production in Norway has been through family farming. A family farm is defined by the ownership of the farm through kinship over a number of generations. This article examines structural changes on Norwegian family farms based on the impact of increased competition and falling prices and subsidies. The strategy traditionally employed has been to increase total household income on the farm through working off-farm. We map changes in income allocation and work strategies on Norwegian family farms over time, changes in income allocation and work strategies among men and women on family farms over time and we show income allocation and work strategies among men and women as farmers and as farmers' spouses. Through a quantitative analysis of data on Norwegian farmers from 1987 until 2004, we show that there are continuing changes in work and income allocation on Norwegian farms. The trend is a higher dependence on off-farm income. However, this development is not only explained by more off-farm work by farmers – which is an indication of lower value of farm work itself – but to a large degree this is a result of the increasing off-farm work of farm women. While at the same time more women are entering agriculture as farmers, we find clear evidence of differences in the organisation of farms operated by men and women. While male farmers are professionalising as 'one-man farmers,' female farmers to a larger degree depend (voluntarily or not) on their partner's assistance in the farm work.

## Family farming in Norway

How a family farms and to what extent family farming exists, might be a question of definition. Traditionally, researchers have focused on the farm rather than the household as the unit of investigation (Buttel *et al.* 1984). From the 1980s onwards the focus of family farming studies has changed towards looking at the relationship between the farm as an enterprise and the family farm household. Increased attention to the changing roles of women in agriculture is one important reason for this (Almås *et al.* 1983; Gasson 1989; Almås and Haugen 1991; Whatmore 1991; Haugen 1998; Brandth 2002), as is the interest in the increasing numbers of farm women working outside the farm (Buttel *et al.* 1984; Rognstad 1991; Blekesaune 1996; Jervell 1999).

Even though 'family farming' as a concept represents many qualitative aspects of agriculture, the term usually refers to a farm owned and operated by a family (Blekesaune 1996, p. 7). One definition of the 'farm family business' suggests it consists of six elements:

- Business ownership is combined with managerial control in the hands of business principals.
- These principals are related by kinship or marriage.
- Family members (including these business principals) provide capital for the business.
- Family members, including business principals, execute farm work.
- Business ownership and managerial control are transferred between generations with the passage of time.
- The family lives on the farm. (Gasson and Errington 1993, p. 18).

Gasson and Errington (1993) emphasise that claiming ownership and control of the farm was more important than the number of working hours spent in farming. This recognises that technological improvements in agriculture have increased efficiency and reduced the need for human labour input. The work claim, in Gasson and Errington's (1993), view is therefore of less importance than ownership and management for the definition of the family farm. If the combination of ownership and control of the farm is situated in the family, family farming is a sustainable institution in an institution dominated by part-time farms or farms run by only one person. A serious objection to a definition that gives giving no weight to family work is that it makes it possible to consider a farm in which all farm work is done by hired labour is still, in fact, a family farm. Djurfeldt (1996) disagrees with Gasson and Errington (1993), arguing that do not understand that the comparative advantage of the family farm is that family work essentially has a non-fixed cost. Thus, states Djurfeldt (1996, p. 344) Gasson and Errington (1993) muddle the crucial Chayanovian interface between family and farming.

Other objections have been raised against Gasson and Errington's (1993) definition. Hill (1993, pp. 360–361) argues that with no labour claim in the definition, 'nearly all farms in the European Community would be classed as "family"'. Hill (1993, pp. 361) suggests a focus upon family labour in order to differentiating family farm from other farms: family farms where unpaid labour contributes all, or almost all, of the work on the farm; intermediate farms where farm work is supplemented by hired labour but family still contributes with more than half and non-family farms where hired labour contributes the majority. Djurfeldt (1996) also argues that as an ideal type of family farming, Gasson and Errington's (1993) definition is too broad. He is, however, not satisfied with a purely labour-based definition of family farming.

Djurfeldt (1996) and Djurfeldt and Waldenström (1996) aim for a definition of family farming that can be used in studying developments over time and for making comparative studies of family farming and agrarian structures. Djurfeldt (1996) develops a definition which, to a large extent, draws upon the centrality of family labour in the farm operations, but also on a criterion of reproduction. This ideal type

of a family farm family is characterised by an overlap between three functional units: the unit of production (the farm), the unit of consumption (the household,) and the unit of kinship (the family). The notional family farm is characterised by requiring family labour for its reproduction that is, labour (not only managerial work) performed by members of the family or household (Djurfeldt 1996, p. 341).

It can be argued that Djurfeldt's (1996) definition of a 'notional family farm' and his subsequent calculations are problematic. Part-time or pluriactive farm strategies are excluded from his definition of family farms due to the lack of labour input on-farm compared to off-farm income generated by the farming family. Given this, Djurfeldt's (1996) definition of farming might be of value when the aim is to map differences between regions and over time, as he suggests. However, we do not find his aim of challenging different understandings of family farming very useful, as the concept of family farming itself might be contextually bounded across cultures and history.

Such a narrowing of the concept of family farming can imply, as Blekesaune argues 'a lack of analytical separation between the farm and the family' (Blekesaune 1996, p. 9). Blekesaune (1996) further argues that

it is necessary to operate with an analytical distinction between the family as a social decision-making unit and the farm as a production unit in order to see the interdependency between these structures. (Blekesaune 1996, p. 9)

Using this analytical distinction between the farm as a unit of production and the household as an interrelated decision-making unit, Blekesaune states that it is possible to uncover how the household allocates resources between farm and non-farm activities in order to satisfy their consumption needs and the needs for labour input on the farm. The analysis of changing family farm structures in this current article builds implicitly on these assumptions, giving weight to Gasson and Errington's (1993) broad definition, but also assuming that most farm work is executed by family members.

The intention of this article is to explore and discuss the dynamics of changing patterns of work and income allocation on Norwegian farms in an environment where farm succession is mainly carried out through inheritance within families, a tradition protected through the Norwegian Allodial Act. Norwegian farms are normally handed over to new successors on allodial rights. The Allodial Act ensures the firstborn child the right to the farm. In 2004, in 83 per cent of Norwegian farm ownership was based on either the farmer or his or her spouse's allodial right (Rye and Storstad 2004).

Through a quantitative analysis of several datasets on Norwegian farmers collected from 1987 to 2004 we reveal some important changes in the structure of Norwegian family farming. We highlight the changes in the work dispositions of men and women (as farm operators or spouses) and the allocation of income on the farms and map the changes in income allocation and work strategies on Norwegian family farms over time, and the changes in income allocation and work strategies among men and women on family farms over time. We show contemporary work strategies among men and women as farmers and as farmers' spouses and discuss how these changes affect the position of family farming in Norwegian agriculture.

## Restructuring Norwegian family farming

Traditionally, Norway has had one of the world's most comprehensive systems of agricultural subsidies. The goal has been to maintain agricultural production, not only to maintain agricultural areas and food supply, but also to sustain the population and employment in rural areas. Due to external pressure from the EU and World Trade Organisation (WTO), and internal pressure due to the growing influence of liberal political parties and increasing consumer demands for food quality and lower prices, Norwegian agriculture is facing new imperatives. In 2007 there were about 50,000 farmers, which is less than one-third of the number farming 1969 (Norsk Landbrukssamvirke 2007). Several strategies have been employed by the remaining farmers to maintain their positions and different concepts have been developed to describe their strategies: pluriactivity, part-time farming, one-person or combination farms and hobby farms, among others.

Research has showed that one of the most important strategies for dealing with decreasing farm incomes is off-farm work. Off-farm income is of increasing importance for the welfare of farm households in most European countries (Jervell and Løyland 1998). In recent decades income from work outside the farm has been growing in importance in Norwegian farm family households and part-time farming can be seen as a stable strategy for farm families that need off-farm income due to the inadequate revenue received from full-time farming (Blekesaune 1996, p. 49). By 1980 the wage income from off-farm work exceeded farm income on an average Norwegian farm (Jervell and Løyland 1998).

This may be taken to mean that part-time work or pluriactive strategies are symptomatic of small, uneconomic farms or lower incomes in agriculture (Jervell 1999), but this is not always the case. Research has shown that there are many reasons for adopting these strategies, such as to continue a career that was established before the farm was taken over. Further, combinations of on-farm and off-farm work, or pluriactivity, are not new in Norwegian agriculture. Traditional farming in combination with forestry, fishing or hunting has historically been a common strategy among many farmers, especially in areas of low production (Hetland 1986; Flø 1998; Almås 2004).

Different phases of agricultural restructuring have brought about major changes in the traditional gender patterns of farm families. Almås and Haugen (1991) noted two major shifts in agrarian production that altered gender roles in production. The first phase started when livestock products increased in importance as a source of income. With this, women lost power in the production process. The second shift came with the introduction of milking machines, when associated technologies shifted milking into the realm of men's work. Until the middle of the nineteenth century women were more often present in agrarian production. In many rural districts women ran the farms while men were out fishing and hunting, or were engaged in forestry in combination with farming (Berggreen 1982; Brandth 2002). Paid female labour left agriculture due to mechanisation and rationalisation. From the 1960s female kin such as aunts and unmarried sisters left the farm. This period is also known as 'the rural exodus' (Almås 1983, p. 6). From the 1960s onwards the farmer's wife also left farm work. This process of women leaving agriculture has been described as masculinisation; agricultural work is executed by men. Among those

women who are left on the farm their role has changed to that of 'the man's assistant' (Almås 1983, p. 22). Almås and Haugen (1991) argued that mechanisation of agriculture was the most important factor in pushing out superfluous labour in the first phases, while new labour market opportunities emerged as important pull factors from the 1970s. An important outcome of this was that women achieved new positions and status in the paid non-agricultural labour market (Brandth 2002).

Work on farms has been, and is still, gendered with women being responsible for housework and caring, while men are responsible for the farm work (Brandth 2001). Even when working off-farm, women tend not to reduce their housework hours. Blekesaune and Haugen (2002) found that women from farm households spent more hours on housework than other women, while men from farm households, on the other hand, did less housework than other men. According to Blekesaune and Haugen (2002) unpaid work in farm family households is of crucial importance to the livelihood of the family.

Although the masculinisation hypothesis of Almås (1983) suggested that women were leaving Norwegian agricultural work, changes in the Allodial Act of 1974 (given retrospective force to 1964) gave firstborn girls and boys equal rights to become successors. Before these changes boys held the allodial right. Female successors now had the opportunity to choose to become farmers in their own right. There is now a group of modern female farmers who have managed to construct an identity partly built on tradition and partly on their modern role as professional farmers (Haugen 1998, p. 59). The number of female farm operators is very slowly rising. Approximately one out of four successors are women and they constituted a total of 13 per cent of the farmers in 2004 (Rye and Storstad 2004). However, the number of 'professional' female farmers, in Haugen's (1998) meaning of the term, has not been found to be growing substantially (Bjørkhaug and Blekesaune 2007). The following analysis explores how these women manage their time and income in Norwegian farming.

### **Analyses of work and income allocation on Norwegian family farms**

Analyses in this article are based on several sources. Data showing income and time use on-farm and off-farm between 1987 and 1999 are collected from published survey data from Statistics Norway (Statistics Norway 2006a, 2006b, 2006c). Data from 2002 and 2004 are based on our own analysis of two surveys of representative samples of Norwegian farmers carried out by the Centre for Rural Research in Norway and are called 'Trend-data' (Rye *et al.* 2002; Rye and Storstad 2004). This is a survey of Norwegian farmers that is planned to be carried out every second year, starting from 2002. From 2002 the survey consisted of data from 1,678 Norwegian farmers. In 2004 1,712 Norwegian farmers responded to the survey. An analysis of the representativeness and validity of the data has shown that the data are of high quality (Rye *et al.* 2002; Rye and Storstad 2004).

In Trend-data the respondents received an initial inquiry about completing the survey and the main user of the farm was encouraged to respond to the questionnaire. We believe that most of the respondents followed the instructions. In 2002 men answered 88 per cent of the questionnaires received, and in 2004 this figure was 87 per cent. We call them male farmers while the female informants represent the

Table 1. *Share of net income of farmer and spouse allocated on farm in 1987, 1997, 2001 and 2003 (%)*

	1987	1997	2001	2003
More than 50%	45	43	36	33
Less than 50%	55	57	64	67
Total	100	100	100	100
N	97,415	78,907	1,563	1,681

Source: *Statistics Norway* (2006a) and authors' analysis of trends, 2002 and 2004

female farmers in the following analyses. These farmers reported data on their spouses' behalf (husband/wife/partner). In 2004, 83 per cent of the male farmers had a spouse, as did 84 per cent of the female farmers. Twelve per cent of the male farmers reported that they were single, whilst the figure for female farmers was significantly lower at 7 per cent. The others were divorced or separated or were widows or widowers. As Trend-data were collected in 2002 and 2004, the respondents reported on activities in the previous year, and therefore the analyses reflect income and time use in 2001 and 2003.

The analysis in Table 1 shows a decrease in the share of income to agricultural households coming from agricultural work through the whole period from 1987 to 2003.

The number of farms depending on on-farm income decreased considerably through this time period, from 45 per cent who depended on more than 50 per cent of their income from farm work to 33 per cent in 2003. This is a continuation of an ongoing trend found in analyses of agricultural statistics before 1989. In the early 1980s more than 50 per cent of Norwegian farm households earned less than half of their income from farm work (Jervell and Løyland 1998; Rognstad 1991).

A reasonable assumption would be that working hours outside the farm correspondingly increased in the same period. Table 2 shows the working hours on-farm and off-farm for male farmers and male spouses in three different surveys conducted in the 1990s. The reason for separating men and women was to discover whether the changes in working hours on Norwegian farms can be explained by the off-farm working hours of the farm spouses, mainly women.

There were not substantial changes in the working hours of male farmers and spouses on-farm and off-farm in the 1990s. A weak tendency is for male farmers to work a little more on-farm by the end of the decade than at the beginning. At the same time, men worked less off the farm by the end of the decade. Changes in income from off-farm work cannot be explained by increasing working hours off-farm by men. Several explanations for this can be offered. It might be a result of increasing production on farms corresponding to a general decline in farm profitability (Norwegian Agricultural Economics Research Institute 2003) and the availability of better wages outside farming. An additional explanation is the increasing number of women entering the non-agricultural labour market.

Table 2. Working hours per year on and off the farm by male farmers and male spouses in three periods of the 1990s (hours and percentages of total hours)

	1989–1990		1994–1995		1998–1999	
	Hours	%	Hours	%	Hours	%
Male farmers and male spouses						
Work on farm	1,271	60.9	1,294	61.8	1,428	64.2
Work off-farm	816	39.1	801	38.2	792	35.8
Total	2,087	100.0	2095	100.0	2,225	100.0
Female farmers and female spouses						
Work on farm	712	59.8	672	51.8	692	47.2
Work off-farm	478	40.2	625	48.2	774	52.8
Total	1,190	100.0	1,297	100.0	1,466	100.0

Source: *Statistics Norway* (2006b, 2006c)

Table 3. Working hours per year on and off-farm by farmer and spouse analysed by gender (average hours in 2003)

	Work on farm by farmer		Work on farm by farmer's spouse		Work off-farm by farmer		Work off-farm by farmer's spouse	
	Hours	N	Hours	N	Hours	N	Hours	N
Male farmers	1,425	1,416	422	1,079	885	1,404	959	1,119
Female farmers	1,020	215	973	186	728	204	1,255	176

Source: Trend-data 2004 (authors' own analysis)

Women's relative participation on Norwegian farms, declined by 13 per cent in the 1990s. Their working hours off-farm increased and add up to a higher number of hours in income-generating work for women in this period. The results show a continuation of the developments described in earlier studies (Almás 1983; Blekesaune 1996; Jervell 1999; Rognstad 1991). The tendency could be a generational phenomenon, implicating a new generation who are bringing new working strategies into agriculture. Additional analyses of Statistics Norway's (2006b, 2006c) data on the agricultural population showed that the changes in the distribution of working hours occurred in all age groups (excluding pensioners) among both women and men. This could be an indication of an ongoing masculinisation process in agriculture. The format of data from Statistics Norway did not allow us to separate main farm users and spouses. To provide a better insight into the process we continue the analyses of farmers' labour using Trend-data from 2004.

The pattern described in Table 3 shows a continuation of the trend identified in the data from the 1990s. Men work more hours than women in agriculture. However data from 2004 reveal differences between gender and managerial status on the farm. Male farmers work on average more hours in farming than female farmers, and



Table 4. *Farmers' dependence on labour by farmer's gender in 2003 (%)*

	Male farmer	Female farmer	Difference
Farm work			
Farmer	87	73	14*
Spouse	29	66	37*
Other family members	20	20	0
Hired labour	23	18	5
Off-farm work			
Farmer	55	49	6
Partner	57	57	0

\* Significant at 0.05

Source: Trend-data 2004 (authors' own analysis)

female farmers' spouses work more than the spouses of male farmers. Off-farm work does not differ much between male and female farmers, but it does differ between male and female spouses. The spouse of a female farmer works more off-farm than a spouse of a male farmer.

A general explanation has been that a woman leaves farm work to benefit from work off-farm (Almås 1983; Blekesaune 1996; Haugen 1998; Jervell 1999). Our analysis implies that this trend is continuing. On the other hand, our results do not show any evidence of equal adjustments between male and female farmers. On the contrary, it appears that female farmers are highly dependent on their spouse's assistance in farm work.

One interpretation of the results in Table 3 could be that male spouses are more independent in relation to work than female spouses. According to Blekesaune and Haugen (2002), previously reported findings show that there are major gender differences between women and men in farming households in the time spent on housework. An additional explanation could be that male spouses have more time available to take on wage-earning labour than female spouses do.

The following analysis delves deeper into this question and reveals differences in male and female farmers' dependence and independence in relation to assistance on their farm. On-farm and off-farm work is distinguished with a minimum of 200 hours work a year – on-farm and off-farm work of fewer hours than this was not recorded.

Table 4 shows that most farm operators do contribute with work on their own farm, but there are significant differences between male-operated and female-operated farms. Of the male farmers 87 per cent report on working on their own farm in 2003, three out of four female farmers did the same. The most striking difference was their dependence on their spouses. While 29 per cent of the male farmers co-operated with their spouse in farm work, 66 per cent of the female farmers reported that they did so. The analysis does not, however, reveal any significant differences in the tendency of male and female farmers to use other family or hired labour. The numbers of farms where the farmer or spouse work off-farm do not differ significantly either.

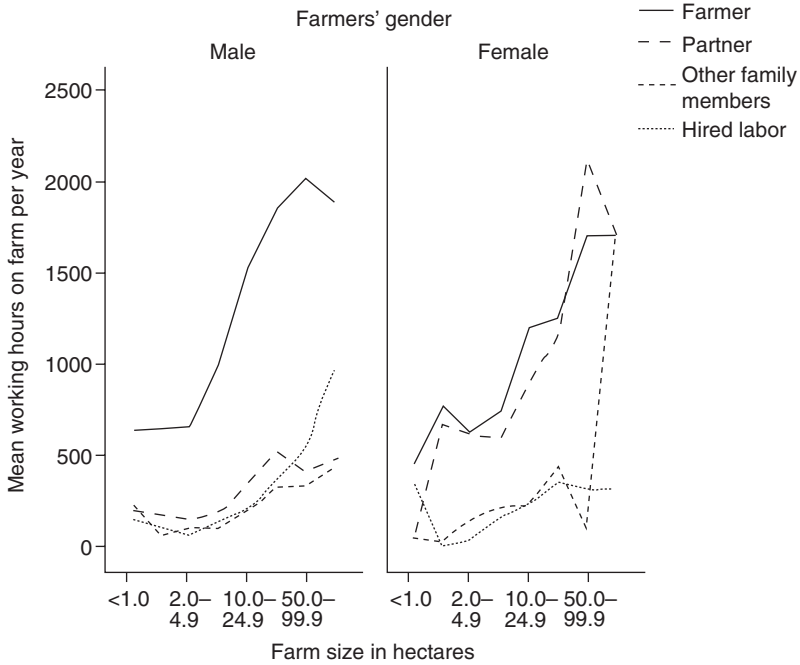


Figure 1. Working hours per year on farm by farmer, spouse, other family members and hired labour, analysed by size of agricultural land and farmer's gender  
Source: Trend-data 2004 (authors' own analysis)

It is also common to hire labour (as 80 per cent of the respondents do) but half of these hired workers work a maximum of 200 hours a year on the farm. Figure 1 illustrates how the pattern of using your own and additional labour on the farms may differ according to the farmer's own workload. The figure also shows how this pattern changes with the amount of cultivated land.

The correlation between hired work and farmers work is linear, meaning that farmers hire labour when they do a great deal of work themselves. The workload increase with the size of the land under cultivation. There were hardly any farmers who based their production on a hired workforce in 2004.

### Realities of work and income on Norwegian family farms

The sources of income on many Norwegian farms have changed from the profits of farm work to the profits of non-agricultural work. Off-farm income now represents a growing share of household income. The average working hours on Norwegian farms are rising, probably as a result of the farms being larger and production more intensive. A higher share of income is coming from off-farm work, but this does not correspond to increasing average hours of off-farm work among farmers in general.

The lower value of farm work due to the changes in public subsidies and the price of farm products in general can explain much of this. These results can look rather depressing on their own, and they are easily and frequently used in negotiations between agricultural organisations and government. Why continue farming if it does not pay off? Is the farm first and foremost a place to work, or is the farm and farming a way of life or a leisure project?

Our analysis showed a great variety of work strategies among Norwegian farmers. There is a correlation between off-farm work and on-farm work. Full-time off-farm work necessarily prevents the farmer from farming full-time. On the other hand, there are many farmers who would never give up off-farm work (Rye 2002). Several explanations for this can be proposed. Many farmers might have educational skills and experience from other work before taking over the farm and their occupational identity might be strongly connected to that work (Jervell 1999; Rye 2002; Bjørkhaug 2006). Other reasons are connected to the quality of life, the need for social relations and social feedback in business and personal life. With the reduction in the rural population and the numbers of farms, there has been an increase in reports of lonely farmers who lack colleagues and friends, especially in intensive production (Fjeldavli and Bjørkhaug 2000). In addition, part-time farmers are reported to be more satisfied with their everyday life than have full-time farmers (Rye 1999).

The reasons for keeping the farm, despite poor economic results, can be based in these farmers' bonds to the farm or their traditions. They want to farm because their identity is strongly connected to that specific farm through kinship. These farms can be regarded as hobby or leisure projects, but we should not label them all that way. As one farmer once put it: 'You play football, build your model aeroplane, or go to your cabin in your leisure or spare time. Leisure is when you don't do either farm or off-farm work.'

With a growing number of farms that are not dependent upon a family workforce we might also see an increase in the number of one-person farms, referring to the number of persons working on the farm. A more accurate notion would be one-man farms, since this development is most often connected to male-operated farms. This process can be understood not only as a process of masculinisation, but also as a process of the professionalisation of the farmer when the farm is more of a workplace for one man than a family labour project. In their analysis of mobility patterns of Swedish farming households, Djurfeldt and Waldenström (1999, p. 335) note: 'One-person farms are an interesting phenomenon, since their existence goes to show that modern farming to some extent has broken the age-old link between the family and the farm.' As discussed earlier in this article, a definition like this one, attached as it is to labour, will not provide insights into the relations within the family farm household. Although the co-dependency of the household and the farm might be weaker on these farms, due to the strong connection to farms through place and family traditions we argue that linking the definition of family farming to kinship and not just to the amount of labour input in on-farm compared to off-farm work and the major source of income, gives a good picture of the Norwegian family farm system. This understanding is of no less importance when we return to our findings of the work habits of women, both as farmers and as farmers' spouses.

### Conclusion: continuing gender differences on Norwegian family farms

An analysis of changes in the proportion of time used on work by men and women in agriculture shows that:

- Men's relative work-time on farms has risen over the period, while women tend to work less on Norwegian farms.
- At the same time, men work less outside the farm.
- Women work more outside the farm and their total working hours have also risen.
- Female farmers, employ their partners to work on the farm more often than male farmers.

We found evidence of gender inequalities related to work dispositions on Norwegian farms on two levels:

- Spouses of female farmers work more hours off-farm than spouses of male farmers and
- Spouses of female farmers work more hours on farms than spouses of male farmers.

Finally, we can identify two parallel processes in Norwegian family farming: the exit of spouses of male farmers as farm labour and the entry of new female farmers.

We support the view that there is a continuation of a masculinisation process on Norwegian farms in Almås' (1983) sense of it. However, this happens only on male-operated farms in Norway. If women contribute to farm work on male-run farms, they never work more than the farmer himself.

The statistics used in this article have not enabled us to examine additional working hours in the farm household such as housework, childcare and looking after elderly kin. This is an unfortunate drawback of much agricultural statistics. We do, however, know from other studies (Blekesaune and Haugen 2002) that this work has been, and most probably still is, mainly the responsibility of women. According to Blekesaune and Haugen's (2002) analysis, women in farm households do more hours of housework than other women, and their spouses contribute to this work less than other men do. This is evidence of a delay in a development of equality of status among men and women in Norwegian farming households. Within such a masculinity discourse, farming is a male occupation, a development that is also connected to a 'crisis in masculinity' where men are pictured as 'backward, lonely, vulnerable and marginalised' (Brandth 2002, p. 191). Nevertheless, with their entry into the non-agricultural labour market women are building their work careers and gaining independence through their contribution of income to the farm household economy.

When we shift the focus to female farmers, we can argue that female farmers are spouse-dependent. The work pattern of men and women on female-operated farms revealed in our analyses indicates that the traditional role interpretation of male and female work is still applied. Women may own and operate the farm in practice but they remain positioned according to the traditional script (Silvasti 1999). Women do some farm work, like taking care of the animals while their partner handles the

machinery and drives the tractors (Brandth 2001). Such interpretations are handed over to new generations, putting pressure on the need for legal female successors to take into account both their own qualities as farmers, like the need for high educational skills in agriculture and their possible prospective partners before being able to, or advised to, take over a farm (Heggen and Bjørkhaug 2006). Nevertheless, the number of female farmers is rising in Norwegian agriculture. If this continues the structure of farming might change again. The growing number of female farmers may be able to make or create an equal position for themselves as farmers. Studies of the future of family farming and a focus on changes within the family structuring of responsibilities concerning labour, economy and empowerment is still of great importance.

## Note

\* Corresponding author.

## References

- Almås, R. (1983) Maskulint og feminint på bygda i dag Bygdeforskning notat no. 3, 1983. (Masculinity and femininity in rural districts today) (University of Trondheim: Centre for Rural Research)
- Almås, R. ed. (2004) Norwegian agricultural history (Trondheim: Tapir Academic Publishers)
- Almås R. and M.S. Haugen (1991) Norwegian gender roles in transition. The masculinization hypothesis in the past and in the future. *Journal of Rural Studies* 7 (1/2) pp. 79–83
- Almås, R., K. Vik and J. Ødegård (1983) Women in rural Norway. *Recent tendencies in the development of the division of labour in agriculture and the participation of rural women on the labour market* (Trondheim: Centre for Rural Research)
- Berggreen, B. (1982) Det tradisjonelle Bygde-Norge og arbeidsdeling mellom kvinner og menn under 1800-tallets kulturskifte. (The gender division of labour in traditional rural Norway during the 1800s) *Dugnad* 8 (2–3) pp. 87–106
- Bjørkhaug, H. (2006) Sustainable agriculture in the Norwegian farmers' context: exploring farming habitus and practice on the Norwegian agricultural field. *International Journal of Environmental, Cultural, Economic and Social Sustainability* 2 (4) pp. 123–131
- Bjørkhaug, H. and A. Blekesaune (2007) Masculinisation or professionalisation of Norwegian farm work – a gender neutral division of work on Norwegian family farms? *Journal of Comparative Family Studies* 38 (3) pp. 423–434
- Blekesaune, A. (1996) *Family farming in Norway. An analysis of structural changes within farm households between 1975 and 1990* (Trondheim: Centre for Rural Research)
- Blekesaune, A. and M.S. Haugen (2002) Landbrukskvinner bidrag til husholdets leve kår – arbeid og inntekt i et komparativt perspektiv. (Farm women's contribution to households' living conditions, work and income in a comparative perspective) Pp. 141–154 in R. Almås, M.S. Haugen and J.P. Johnsen eds, *Bygdeforskning gjennom 20 år* (Trondheim: Tapir Academic Publishing)
- Brandth, B. (2001) *The gender of agriculture* (Trondheim: Centre for Rural Research)
- Brandth, B. (2002) Gender identity in European family farming. *Sociologia Ruralis* 42 (3) pp. 181–200
- Buttel, F.H., W. Gilbert, and G.W. Gillespie Jr (1984) The sexual division of farm household labour: an exploratory study of the structure of on-farm and off-farm labour allocation among farm men and women. *Rural Sociology* 49 (2) pp. 183–209

- Djurfeldt, G. (1996) Defining and operationalising family farming from a sociological perspective. *Sociologia Ruralis* 36 (3) pp. 340–351
- Djurfeldt, G. and C. Waldenström (1996) Towards a theoretically grounded typology of farms: a Swedish case. *Acta Sociologica* 39 (2) pp. 187–210
- Djurfeldt, G. and C. Waldenström (1999) Mobility patterns of Swedish farming households. *Journal of Rural Studies* 15 (3) pp. 331–344
- Fjeldavli, E. and H. Bjørkhaug (2000) Ensomme bønder – myte eller virkelighet? (Lonely farmers – myth or reality?) *Landbruksøkonomisk Forum* 17 (1) pp. 5–15
- Flø, B.E. (1998) *Institusjonelle ordninger retta mot forvaltning av rurale ressursar. Sikfisket i Femund*. (Institutional systems to improve the management of rural resources. Gwyniad fishing in Lake Femund) (Trondheim: Centre for Rural Research)
- Gasson, R. (1989) *Farm work by farmers' wives*. Occasional paper 15 (Wye: Wye College)
- Gasson, R. and A. Errington (1993) *The farm family business* (Wallingford: CAB International)
- Haugen, M.S. (1998) *Women farmers in Norway*. (Trondheim: Centre for Rural Research)
- Heggem, R. and H. Bjørkhaug (2006) *Kvinner i landbruket – tilpasning til eller utfordring av en etablert mannlig driftskultur?* (Women in agriculture – adaptation to or challenging an established masculine work culture?) (Trondheim: Centre for Rural Research)
- Hetland, P. (1986) Pluriactivity as a strategy for employment in rural Norway. *Sociologia Ruralis*, 26 (3/4) pp. 385–395
- Hill, B. (1993) The 'myth' of the family farm: defining the family farm and assessing its importance in the European Community. *Journal of Rural Studies* 9 (4) pp. 359–370
- Jervell, A.M. (1999) Changing patterns of family farming and pluriactivity. *Sociologia Ruralis* 39 (1) pp. 100–116
- Jervell, A.M. and J. Løyland (1998) Endringer i jordbrukshusholdenes inntekt utenfor bruket 1986–96. (Changes in farm households' off-farm incomes) *Landbruksøkonomisk Forum* 15 (4) pp. 63–75
- Norwegian Agricultural Economics Research Institute (2003) Driftsgranskinger i jord- og skogbruk – Regnskapsresultater 2001 (Statistics for Agriculture and Forestry 2001). Available online at <http://www.nilf.no/Publikasjoner/Driftsgranskinger/Bm/2003/Innhold.shtml> Accessed 27 February 2008
- Norsk Landbruksamvirke (2007) Aktuelle tall (Current figures). (Federation of Norwegian Agricultural co-operatives)
- Rognstad, O. (1991) Stadig flere bønder arbeider utenom bruket. *Sammfunnsspeilet* 3 (1) pp. 30–33
- Rye, J.F. (1999) *Økonomi og livskvalitet blant landbruksbefolkningen. En kausalanalyse*. (Economy and quality of life among farm households. A causal analysis) (Trondheim: Centre for Rural Research)
- Rye, J.F. (2002) *Heltid eller deltid? En gjennomgang av bonders preferanser* (Full-time or part-time? A review of farmer's preferences) (Trondheim: Centre for Rural Research)
- Rye, J.F. and O. Storstad (2004) *Trender i norsk landbruk. Frekvensrapport*. (Trends in Norwegian agriculture. Frequency report) (Trondheim: Centre for Rural Research)
- Rye, J.F., O. Storstad and B.E. Flø (2002) *Trender i norsk landbruk. Dokumentasjonsrapport*. (Trends in Norwegian agriculture. Documentation report) (Trondheim: Centre for Rural Research)
- Silvasti, T. (1999) Farm women, women farmers and daughters-in-law – women's position in the traditional peasant script in Finland. Paper presented to the conference on gender and rural transformations in Europe, Wageningen 14–17 October
- Statistics Norway (2006a) Available online at <http://www.ssb.no/emner/00/minifakta/no/arkiv/2001/arkiv/2001/17.html#5> Accessed 5 November 2006
- Statistics Norway (2006b) Available online at [http://www.ssb.no/emner/10/04/10/nos\\_jordbruk/arkiv/nos\\_c708/tab/7.6.html](http://www.ssb.no/emner/10/04/10/nos_jordbruk/arkiv/nos_c708/tab/7.6.html) Accessed 5 November 2006

- Statistics Norway (2006c) Available online at [http://www.ssb.no/emner/10/04/10/nos\\_jordbruk/arkiv/nos\\_c708/tab/7.7.html](http://www.ssb.no/emner/10/04/10/nos_jordbruk/arkiv/nos_c708/tab/7.7.html) Accessed 5 November 2006
- Whatmore, S. (1991) Life cycle or patriarchy? gender divisions in family farming. *Journal of Rural Studies* 7 (1-2) pp. 71-76

**Hilde Bjørkhaug\***

Centre for Rural Research  
Norwegian University of Science and Technology  
7491 Trondheim, Norway  
e-mail: [hilde.bjorkhaug@rural.no](mailto:hilde.bjorkhaug@rural.no)

**Arild Blekesaune**

Department of Sociology and Political Science  
Norwegian University of Science and Technology  
7491 Trondheim, Norway  
e-mail\_ [Arild.blekesaune@svt.ntnu.no](mailto:Arild.blekesaune@svt.ntnu.no)