

Work and income patterns of men and women of Norwegian family farms: Masculinisation, feminization, or professionalisation of farm work?

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Abstract

The traditional way of organizing agricultural production in Norway is through “family farming”. A family farm is defined by a principle of ownership of the farm through kinship in generations. The focus of our paper is directed towards changes *within* family farms, not *between* family farms and other ways of organizing farm production. A strategy on Norwegian family farms, in order to meet increased competition and falling prizes and subsidies, has been to increase total household income on the farm through working off-farm. In this paper we a) map changes in income allocation and work strategies on Norwegian family farms over time, b) map changes in income allocation and work strategies among men and women on family farms over time, and c) show income allocation and work strategies among men and women as farmers and as farmers’ spouses “today”. Through quantitative analyses of data on Norwegian farmers from 1987 until 2001, we show that there are continuing changes in work and income allocation on Norwegian farms, towards a higher dependency on off-farm income to the farm households. 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 women’s increasing off-farm work. One implication of this is a higher amount of one-man farms in Norway. Despite the fact that more women enter agriculture as farmers, we also find clear evidence of differences in the organization of farms operated by men and women. When male farmers are “professionalising” as one-man farmers, female farmers to a larger degree depend (voluntary or not) on their partners “assistance” in the farm work.

Introduction

Traditionally, Norway has had one of the worlds most comprehensive systems of agricultural subsidies. It has been a goal to uphold agricultural production not just to maintain agricultural areas and food supply, but also to sustain population and employment in rural areas. Due to external pressure from the EU, WTO, and internal pressure due to a growing influence of liberal political parties and increasing consumer demands towards food quality and lower prices, Norwegian agriculture is facing new realities. One strategy employed on Norwegian family farms in order to meet these challenges is to increase total household income on the farms through working off the farms.

In this paper we are using an inclusive definition of family farms, which rest on a principle of ownership and kinship. In our Norwegian sample we treat all farms with agricultural production as family farms. The focus of our analysis is directed towards changes *within* family farms, not *between* family farms and other ways of organizing farm production. The aim of the paper is to a) map changes in income allocation and work strategies on Norwegian family farms over time, b) map changes in income allocation and work strategies among men and women on family farms over time, and c) show income allocation and work strategies among men and women as farmers and as farmers’ spouses “today”.

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Family farming in Norway

Family farming is the dominant way of organizing farming in Norway (Blekesaune and Almås 2002). Agricultural production in family farming can be distinguished to other forms of industries because as an institution it has survived even though capitalization and rationalization has captured the industry in general.

How a family farms and to what extent family farming exists, is set by definition. Traditionally, researchers have focused on the farm rather than the household as the unit of investigation (Buttel, Gilbert and Gillespie 1984). From the eighties and hereafter the focus of family farming studies has been changed towards looking at the *relation* between the farm as an enterprise *and* the family farm household. Increased attention to the changed role of women in agriculture is one of the important reasons for this (Almås, Vik and Ødegård 1983; Gasson 1989; Haugen 1990; Pfeffer 1989; Ravn and Bak 1982; Whatmore 1991), and the documentation of the increasing amounts of farm women working outside the farm (Blekesaune 1994, 1996; Buttel et.al. 1984; Jervell and Løyland 1998; Jervel 1999; Rogstad 1991).

Even though “family farming” as a concept represents many qualitative aspects of agriculture, the concept usually covers a farm owned and operated by a family (Blekesaune 1996:7). One popular definition is the “farm family business” of Gasson and Errington (1993). Their definition consists of following six elements: 1) Business ownership is combined with managerial control in the hands of business principals, 2) these principals are related by kinship or marriage, 3) family members (including these business principals) provide capital to the business, 4) family members including business principals do farm work, 5) business ownership and managerial control are transferred between the generations with the passage of time and 6) the family lives on the farm (Gasson and Errington 1993:18). Gasson and Errington (1993) still emphasize that a claim of ownership and control of the farm is more important than work time spent on the farm (fourth claim). Due to rationalization and mechanization the amount of labour input has decreased and the work claim is therefore of less importance in the definition of a family farm. Work outside the farm is of growing importance of Norwegian agricultural sustainability, but does that mean family farming as a concept or business is over? A mechanized one-man farm (Baily 1973), should fit into the definition of Gasson and Errington’s (1993) farm family business when the combination of ownership and control of the farm is situated in the family. In this way, Gasson and Errington (1993) state that family farming is economically sustainable within a farm structure dominated by part-time and one-man farms.

A key critique of using this definition is put forward by Djurfeldt (1995). Djurfeldt criticizes the use of this definition or ideal-type of family farming because it is too contextually bound to contemporary British farming, to be useful when the purpose is to compare farm structure development, and the likely future of family farming over time or between countries.

Studies of family farming can be entered at two main levels, qualitative and quantitative. Each gives valuable contributions to the understanding of position of family farming. An entry to the field is the study of family farming’s position compared to other ways of organizing farming. As an advocate for this entry point, Djurfeldt has developed a definition of family farming which to a large extent draws on family labour for its operations and reproduction: the “notional family farm” which 1) - is characterized by an overlapping between three functional units: a) the unit of production (i.e. the farm), b) the unit of consumption (i.e. the household, and c) the unit of kinship (i.e. the family). 2) For its reproduction the notional family farm requires family labour, i.e. labour performed by members of the family/household (not referring only to managerial work) (Djurfeldt 1995:2). Use of this definition maps Swedish family

Kommentar [AB1]: Er det ikke slik at de som skriver engelsk bruker komma også foran and og or når de binder sammen tre eller flere punkt?

farm structure with 14 percent notional family farms (fulltime by family members), 20 percent dependent family farms (fulltime by family members, but additional income from off-farm work) and 15 percent one-person farms, which totally adds up to 49 percent farms, “which would be the estimate of the family farm” (Djurfeldt and Waldenström 1999:335). Part-time or pluriactive farm strategies are excluded from Djurfeldts definition of family farms because of lack of labour input on farm compared to off-farm income by farm family.

Djurfeldts (1995) definitions and operationalisations of *farming* can be of great value when the aim is to map differences between places and countries and within places historically. However, what is lacking in usefulness, is his aim to challenge or replace different understandings of *family* farming, as the concept itself is contextually bounded to nations and in history. Mainly, this is summed up to be an argument about the content of “family farm” and we do disagree in Djurfeldts (1995) narrowing of the family farming concept. Such a tightening of the concept of family farming does imply, according to Blekesaune (1996:9) “... a lack of analytical separation between the farm and the family” and Blekesaune argues that “it is necessary to operate with an analytical distinction between family as a social decision making unit and the farm as a production unit in order to see the interdependency between these structures”. By this analytical distinction between the farm as a production unit and the household as an interrelated decision-making unit, we can uncover how the household allocates resources among farm and non-farm activities in order to satisfy their consumption needs, and the needs for labour input on the farm.

With a broad and inclusive definition we will treat all farms with agricultural production in our Norwegian sample as family farm businesses. Such a definition is also supported in studies of changed patterns of family farming in Norway conducted by Jervell (1999).

Work and income in Norwegian family farming

Other sources of income (than from farming) are of increasing importance for the welfare of farm households in most European countries (Jervell and Løyland 1998) and through the last decades income from work outside the farm is also of growing importance in Norwegian farm family households.

According to Blekesaune and Almås (2002), a traditional way is to explain the increase in work outside the farm as a compensation of the steady decrease in farm incomes. Most Norwegian farms are small and an essential amount of income now comes from wage labour outside farming (Blekesaune and Almås 2002; Løwe 1998; Rognstad 1991; Rye 2002). By 1980, wage income from off-farm work exceeded farm income on an average Norwegian farm (Jervell and Løyland 1998). As a result, other strategies than full-time farming have become more important in family farming households in Norway. Several labels have been developed to describe these strategies: Pluriactivity, part-time farming, one-person or combination farms and hobby farms among others. The different labels could be understood as if farms are too small to supply full time employment and full family income or as a symptom of lower incomes in agriculture (Jervell 1999), but as Jervell (op.cit) discusses, this is not always the case. There might be many reasons for choosing these strategies like a continuation of an already established career before taking over the farm. Further, combinations of on- and off-farm work, or pluriactivity, are not new in Norwegian agriculture. Traditional farming in combination with forestry, fishing and/or hunting has historically been a common strategy among many farmers, especially in areas of low production (Hetland 1986; Flø 1998; Flø and Bjørkhaug 2001).

Changes in work and income allocation create changes in traditional gender patterns of the farm families. According to Blekesaune (1996) and Jervell (1999), the changing patterns of family farming are to a large degree, related to changes in the employment of farm women.

Until the middle of the nineteenth century, agrarian production in Norway was female dominated to a much greater extent than it is today (Berggren 1982 in Brandth 2002). In many rural districts, women ran the farms while men were out fishing, hunting and/or doing forestry in combination with farming (Brandth 2002). Two major shifts in agrarian production altered the gender roles in the production. Almås and Haugen (1991) describe the first phase starting when livestock products increased in importance as a source of income, where economic viability wrested control of women. The second shift came with the introduction of milking machines, when milking shifted to become men's work (Brandth 2002).

Different work on farms has been and is still gendered. Women are responsible for housework and care, while men's responsibility is the farm work. Lately, women have also combined this with work on the paid non-agricultural labour market (Blekesaune 1996; Brandth 2001; Haugen 1998; Jervell 1999). Still, when working outside the farm, women tend not to reduce their housework but their farm work. Blekesaune and Haugen (2002) found that farm women spent more hours on housework than other women, while farm men on the other hand did less housework than other men. Women farmers spent 3 times more time on housework than male farmers did (Blekesaune and Haugen 1998, cited in Blekesaune and Haugen 2002). Unpaid work in farm family households is of crucial importance of the livelihood of the family household (Blekesaune and Haugen 2002).

Women's exit from farm work has started a process of masculinisation of agriculture and agricultural work in Norway (Almås 1983:7). Almås (1983) describes how Norwegian farm women left agriculture through three phases after the Second World War. In the first phase that lasted until 1950s, paid female labour left agriculture due to mechanisation and rationalisation. In the second phase, female kinfolk like aunts and unmarried sisters left the farms. This happened during the 1960s, a period also known as "the rural exodus" (Almås 1983:6). The last phase Almås describes is when the wife also leaves farm work, a process which started in the 1960s due to rationalization within agriculture. Later a fourth phase has been identified, where daughters are also leaving the farm and the rural community, leaving the boys behind (O'Hara 1998 cited in Brandth 2002). Among women left on the farm the role has changed to a role of "the male's assistant" (Almås 1983:22).

Almås and Haugen (1991) argue that mechanization of agriculture was the most important factor in pushing out superfluous labour in the first phases, while new labour market opportunities emerge as important pull factors from the seventies. An important implication of this is that women achieve new positions outside farming (Brandth 2002), and achieve a professional identity within that (Almås and Haugen 1991).

Not all women are leaving Norwegian agriculture. Norwegian farms are handed over to new generations on allodial rights. In 1974 (given retrospective force to 1964), women and men gained equal rights to become successors. From being in a position of marrying to the farm, female farmers now have the opportunity to choose to become farmers in their own right (Haugen 1998).

Analyses of work and income allocation on Norwegian family farms

Our analyses are concentrated in two parts. In an analysis of income and working hours on Norwegian farms over time, we have used published data from Statistics Norway from different periods between 1987 and 1999. We have also used data from a survey of a representative sample of Norwegian farmers to complete time series data with more information about from where income is allocated and how working hours are spent on farm work and off-farm work by Norwegian farmers and their spouses in 2001. These data are called "Trend-data" and were collected by the Centre for Rural Research in 2002. Trend-data contains questionnaire data from 1678 Norwegian farmers (Rye, Storstad and Flø 2002).

Analysis of data from Statistics Norway between 1987 and 1997 show a decrease in the share of income to agricultural households coming *from* agricultural work.

Table 1. Share of net income of farmer and spouse allocated on farm 1987 and 1997. Percent

	1987	1997
At least 90 percent	27.7	22.0
50 – 89.9 percent	17.8	21.2
Less than 50 percent	54.6	56.9
Sum	100.0	100.0
(N=)	(97 415)	(78 907)

Source: Statistics Norway 2003a

This is a continuation of an ongoing process found in analyses of agricultural statistics from before 1989 (Rognstad 1991). Trend-data from 2002 also showed that this development has continued, 64 percent reported that more than half of their income from 2001 was achieved outside the farm (Rye et.al. 2002). Correspondingly is there an increase in amount of farmers working off-farm. Even in the early eighties over half of Norwegian farmers got less than half of their income from farm work (Jervell and Løyland 1998).

An assumption would be that working hours outside the farm was increasing correspondingly in the same period. In table 2 we show working hours on- and off-farm for male farmers and male spouses in three different surveys in the 1990s. A reason for separating men and women is the interest in knowing whether the changes in working hours on Norwegian farms can be explained by spouses, mainly women's, working hours outside the farm.

Table 2. Working hours on and off the farm by male farmers and male spouses in three periods of the 1990s. Hours and percentages

	1989/90		1994/95		1998/99	
	Hours	Percent	Hours	Percent	Hours	Percent
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
Sum	2087	100.0	2095	100.0	2225	100.0

Source: Statistics Norway 2003b

There have not been substantial changes in the working hours of male farmers and spouses on and off the farm in the nineties. A weak tendency might be that male farmers worked a little bit more on farms by the end of the decade than at the beginning. At the same time men did work less outside the farms by the end of the decade. Changes in income from outside the farm can then not be explained by increasing working hours off-farm by *men*. Several explanations can be forwarded. It can be a result of farms increasing size of production corresponding to a general decline in farm profitability (NILF 2003) and better wages outside farming. An additional explanation is the increasing number of women entering a non-agricultural labour market, which is shown in table 3.

Table 3. Working hours on and off the farm by female farmers and female spouses in three periods of the nineties. Hours and percentages

	1989/90		1994/95		1998/99	
	Hours	Percent	Hours	Percent	Hours	Percent
Work on farm	712	59.8	672	51.8	692	47.2
Work off-farm	478	40.2	625	48.2	774	52.8
Sum	1190	100.0	1297	100.0	1466	100.0

Source: Statistics Norway 2003c

Women's general participation on Norwegian farms is declining with 13 percent in the 1990s. Working hours outside the farm is increasing and adds up to an increased total of working hours in income generating work for women in the period. The results show a continuation of the development described

in earlier studies (see i.e. Almås 1983; Blekesaune 1996; Blekesaune and Haugen 2002; Jervell 1999; Rognstad 1991). The tendency could be a generation phenomenon implicating a new generation who are bringing new working strategies into agriculture. Further analyses of Statistic Norway's (Statistics Norway 2003b, 2003c) data of the agricultural population shows that the changes in the disposition of working hours are valid in all age groups (not analysing pensioners) both among women and men. Is this an indication of an ongoing masculinisation process in agriculture? To provide a better insight in the process we will continue the analyses of farmers' labour using the Centre for Rural Research's Trend-data from 2002.

In our further analyses of Trend-data we use a 'technical' definition of male and female farmers. When respondents received inquiry about completing the survey, *main user of the farm* was encouraged to respond on the questionnaire. We do trust the greater part of the respondents followed the instructions. Men answered 88 percent of the received questionnaires. We treat them as *male farmers*, 12 percent were women, and we call them *female farmers* in the following analyses. Further, when we use the notion *male farm* or *female farm*, it is only related to the gender of the main user of the farm, not to a specific quality of the farm itself.

Farmers also reported data of their spouses (husband/wife/partner). Therefore, spouses who perceive themselves as equal farmers, do not have an independent say in this analysis.

Table 4 shows results of analysis of time spent on income generating work outside the farms in 2001.

Table 4. Share of time spent on work outside farm by male and female farmer and spouses

	Share of time spent on work outside farm	Standard error	(N=)	t-value	p-value
Male farmer	36.7	0.945	(1362)		
Female farmer	37.0	2.841	(168)		
Difference (Male – Female)	-0.3	2.994		-0.118	0.906
Male spouse	60.0	1.220	(995)		
Female spouse	52.4	2.779	(141)		
Difference (Male – Female)	7.6	7.676		2.253	0.024

Source: Trend-data

Table 4 shows that there is no significant difference between male and female *farmers* in the average share of their time spent on work outside the farm. However, we do find a significant difference between male and female spouse's share of work off the farm. On average, male spouses have a higher share of their work time tied up to work outside the farm compared to female spouses. An interpretation of the results in Table 4 could be that male spouses are more independent in relation to farm work than are female spouses. According to Blekesaune and Haugen (2002), findings of major gender differences between farm-women and -men in time spent on housework, a better explanation would be that male spouses are less committed to housework than female spouses.

In a discussion of masculinisation processes and/or gender differences in Norwegian agriculture, our findings could indicate that there is no difference between male and female farmers in time allocation of work on farms because the numbers indicate equal dispositions of on- and off-farm work among farmers. Instead of a talking about masculinisation we could talk about professionalisation of the farmer independent of his or her gender and of spouses independent of the farm work, especially male spouses.

We will step back to our introductory analyses of share of household income coming from off-farm work and go beyond the numbers through our Trend-data. In 2001, 64 percent of farm households got more than 50 percent of their income from work outside the farm. The difference between male and female farmers is significant. While 62 percent of male farmers got more than 50 percent of their income from off-farm work, the percentage among female farmers is 76. The amount of income from on-farm and off-farm work correlates significantly with time spent on work on and off farm both by farmer and

spouse on farms run by male and female farmers. Corresponding analysis of household income from the farm and total household income, showed that farms operated by female farmers had significant lower farm income than male farms, but when total income was calculated there was no longer gender differences. In our further analyses we will explain how female and male farmers have a different adaptation together with their spouses to the farm work and to off-farm work.

Table 5. Working hours on and off farm by farmer and spouse analysed by gender. Average hours

	Work on farm by farmer		Work on farm by spouse		Work off-farm by farmer		Work off-farm by spouse	
	Hours	(N=)	Hours	(N=)	Hours	(N=)	Hours	(N=)
Male farmers	1459	(1392)	484	(1089)	904	(1388)	899	(1125)
Female farmers	1045	(172)	979	(149)	661	(177)	1258	(150)

Independent Samples t-test for Equality of Means: Work on farm by farmer: $t = 5.835$, $df = 1562$, sig. (2 tailed) < 0.001 , Work on farm by spouse: $t = 8.823$, $df = 1236$, sig. (2 tailed) < 0.001 , Work off-farm by farmer: $t = 3.503$, $df = 1563$, sig. (2 tailed) < 0.001 , Work off-farm by spouse: $t = -5.555$, $df = 1273$, sig. (2 tailed) < 0.001 .

Source: Trend-data

Even though the share of time spent on farm work is equal between male and female farmers, the time spent in hours are quite different. However, the total number of average working hours spent on farms run by male or female farmers are distributed in a way that they end up equal using averages. Further, male spouses work more than female spouses do on-farm. Added to the female farmers it gives a total amount of work hours equal to a farm where the farmer is male and the spouse works on farm. The same but differently distributed pattern is off-farm work on male and female farms. On male farms, the farmer himself works more off the farm than the case is on farms run by women. Correspondingly, a spouse of a female farmer works more off-farm than a spouse of a male farmer do, but the numbers could indicate that average work hours off the farm are equal on male and female farms.

A general explanation has been that a woman leaves farm work for the benefit of work outside the farm (Almås 1983; Blekesaune 1996; Jervell 1999; Haugen 1998). Our results support that this development is continuing. On the other hand, our results do not show any evidence of equal adjustments between male and female farmers. It does on the contrary look like female farmers are very much “dependent” on spouse’s assistance on farm.

According to Trend-data, the majority of the Norwegian farmers worked between 200 and 2550 hours in 2001, 12 percent did hardly any farm work, 43 percent worked between 200 and 1700 hours and 45 percent worked more than 1700 hours on their farm in 2001. Based on the same data. Table 6 shows how different work strategies on Norwegian farms are distributed among female and male farms.¹

Table 6. Work on farm by farmer and spouse, analysed by gender. Percentages

Spouse	Male farmer				Female farmer			
	0-200 hours	200-1700 hours	1700 + hours	Total	0-200 hours	200-1700 hours	1700 + hours	Total
0-200 hours	100.0	65.8	41.9	57.2	38.2	12.7	11.1	18.4
200-1700 hours		3.6	46.4	36.7	58.8	69.0	52.8	62.4
1700 + hours		0.7	11.7	60	2.9	18.3	36.1	19.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(N=)	(100)	(450)	(528)	(1078)	(34)	(71)	(36)	(141)

Pearson Chi-Square, 2-sided: Men: Chi-Square = 166.986, $df = 4$, sig < 0.001 , Women: Chi-Square = 20.754, $df = 4$, sig < 0.001

Source: Trend-data 2002.

Men work more hours on the farm, both as farmer and as spouse. The pattern of work strategies of farmer and spouse are different on farms operated by male and female farmers. Our analysis shows that

¹ 1391, or 84 percent of the farmers in our material reports to be married or have spouse. In these analysis 12 percent of these are missing because of missing values on one or more of variables used in analysis. The total share of fulltime farmers then counts 46 percent in this multivariable analysis.

male farmers work more independently of their spouse than female farmers do. On farms where male farmers do little or no work (9 percent), nobody has reported on the spouse's work. These farms can be regarded as non-operative farms, leisure or hobby projects or just a place to live. A higher amount of female farmers are in the category of working 0-200 hours, almost one out of four. The difference though is the working hours provided by spouses. On 62 percent of these farms spouses do work. The share of no-work farms is then equal, 9 percent.

The second most popular strategy among men is the category of working 200-1700 hours, 42 percent of the male farmers are in this situation while 50 percent of the female farmers. Again we can see that male operated farms are different from female farms. 66 percent of male farmers in this category work alone, whereas only 13 percent of the female farmers do the same.

50 percent of the male farmers and 25 percent female farmers are fulltime farmers. While 42 percent of men are fulltime farmers alone, 11 percent of the female farmers do the same. The majority of female fulltime farmers have a partner working on the farm, 36 percent a fulltime-working spouse. 11 percent of male fulltime farmers have their spouse working fulltime on the farm.

Even though our previous analyses showed that women work fewer hours on Norwegian farms, they are still providing a substantial portion of farm work as spouses on 43 percent of male farms. 47 percent of the farms can be categorized as one-man farms, only 9 percent can be regarded as one-woman farms. Spouses, then, provide labour on 81 percent of the female farms, evidence of very different strategies and with that, different work prospects, on male and female farms. Additional analysis controlling for age-differences showed that spouses worked less the younger the age group of the male farmer. On the other hand, on female farms we found no generational differences. We know that, on average, men work more hours outside the farm than women, both as farmers and as spouses. 60 percent of male farmers work off-farm, 46 percent of these fulltime. 54 percent of female farmers work outside the farm, 76 percent of these are in some way occupied in part time work. Table 7 shows further distribution of work off-farm by farmer and spouse, analysed by gender.

Table 7. Work off-farm by farmer and spouse. Percentages

Spouse	Male farmer				Female farmer			
	0-200 hours	200-1700 hours	1700 + hours	Total	0-200 hours	200-1700 hours	1700 + hours	Total
0-200 hours	42.9	21.5	18.3	29.3	33.3	15.5	16.7	23.9
200-1700 hours	47.4	67.2	55.8	56.1	33.3	31.0	33.3	32.4
1700 + hours	9.7	11.3	25.9	14.6	33.3	53.4	50.0	43.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(N=)	(445)	(354)	(301)	(1110)	(66)	(58)	(18)	(142)

Pearson Chi-Square, 2-sided, Men: Chi-Square = 98.302, df = 4, sig < 0.001, Women: Chi-Square = 7.655, df = 4, sig = 0.105
Source: Trend-data 2002.

Analyses provided in table 7 shows a positive correlation between farmer's work off- farm and spouse's work habits off-farm on male farms. The pattern is most evident in the categories of little or no work outside the farm and on fulltime farms. Still, spouses of male farmers are most often found in part-time work strategies like female farmers. Spouses on female farms do not follow a specific work pattern related to the farmers work situation outside the farm.

Why are these findings interesting in a discussion of changed patterns of family farming in Norway? Men make up the major group of farmers, 88 percent according to this data. The number is decreasing, but slowly, and in a period it was shown in analyses that there was a consolidation in the number of full-time female farmers (Blekesaune 1996). Before further discussions of the possible implications of these results, it is of value to look at the development in recruitment of male and female farmers in Norway. Taking the decline in number of farms into consideration, the share of new farmers coming into

agriculture is relatively stable (Statistics Norway 2003d). Table 8 shows changes in amounts of men and women coming into farming in different time periods, based on Trend-data.

Table 8. Year taking over the farm by gender. Percent

	1970 and before	1971-1975	1976-1980	1981-1985	1986-1990	1991-1995	1996-2002	Total
Men	97.6	95.3	90.0	92.3	88.3	86.4	77.0	88.6
Women	2.4	4.7	10.0	7.7	11.7	13.6	23.0	11.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(N)	(166)	(171)	(251)	(233)	(273)	(221)	(282)	(1597)

Pearson Chi-Square = 63.534, df = 6, sig < 0.001

Source: Trend-data.

The share of women taking over the farm has risen over time. Rogstads (2002) analyses of agricultural data also showed that the amount of women taking over a farm on allodial right increased from 9 percent in 1969 to 22 percent in 1999. According to our data, which reports on farmers still in agriculture, a large proportion of women coming into agriculture in 1969 have now leaved. An explanation of this is the fact that women inherit the farm as widowers late in life. They rarely keep the farm very long and they do not become *farmers* (Rogstad 2002:15). Analysis of Trend-data show that 6 percent of the “new” female farmers (taking over the farm after 1995) are over 60 years compared to 4 percent of the male farmers. 55 percent women are under 40 as arte 61 percent of men. We do recognize that a substantial proportion of women are coming into Norwegian agriculture, and we believe that this number is rising. With that, female farmers will contribute to a diversification of the working strategies in Norwegian family farming.

Realities of work and income on Norwegian family farms

The source of income on many Norwegian farms has changed from being the profit of farm work to the profit of non-agricultural work. Off-farm income is growing its share of household income. Average working hours on Norwegian farms is rising probably due to larger farms and more intensive productions. But a higher share of income is coming from off-farm work does not correspond to increasing average hours of off-farm work among farmers in general. Lower value of farm work due to changes in official subsidies and prices on 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 of the agricultural policy. Why continue farming if it does not pay off? Is the farm first and foremost a place to work, or is the farm and the farming a life or leisure project?

Our analyses showed a great variety in work strategies among Norwegian farmers. Still, many would like to work more on their farm (Rye 2002). There is a correlation between off- and on-farm work. Full time off-farm work will necessarily prevent the farmer to farm full time. On the other hand, there are many farmers who never would give up off-farm work (Rye 2002). Several explanations 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). Other aspects are connected to quality of life, the need for social relations and social feedback in business and private. With the reduction of farms and rural population there has been an increase in reports of “lonely farmers”, farmers lacking colleagues and friends, especially in intensive productions (Fjeldavli and Bjørkhaug 2000). In addition, part-time farmers have been reported to be more satisfied with their every day life than full time farmers (Rye 1999)

The reasons for keeping the farm despite poor economic results can be based in farmers bonds or traditions on the farm. 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 a farmer put it: “you play football, build your model plain or go to your cabin in your leisure or spare time. Leisure is when you don’t do neither off nor on farm work”.

With the growing amount of farms not dependent upon a family workforce we do also see an increase in the amount 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 mainly is connected to male farms. This process can be understood not only as a process of masculinisation, but also as a process of professionalisation of the farmer when the farm is more of a workplace for one man than a family project. In their analysis of mobility patterns of Swedish farming households, Djurfeldt and Waldenström says: “*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 family and farm*” (Djurfeldt and Waldenström 1999:335). As discussed earlier in this paper, such a labour-attached definition will not provide an insight to relations within the family farm household. We will therefore argue that keeping the definition of family farming to kinship, not to labour input in the farming itself gives us a more proper understanding of the Norwegian family farm system. This understanding is of no less importance when we return to our findings of work habits of women, both as farmers and as farmers’ spouses.

Conclusion: Continuing gender differences on Norwegian family farms

Analyses of changes in proportion of time used on work by men and women in agriculture showed that

1. Men’s work-time on farms has risen over a period while women tend to work less on the Norwegian farms.
2. At the same time men do work less outside the farm, yet their total working hours has risen
3. Women do work more outside the farm and their total working hours have also risen
4. Analyses also showed equal share of time used on farm and non-farm work by female and male farmers. Still, this was not a proof of gender equalities on Norwegian farms because a) spouses spend their work time differently on male and female farms: male spouses work more hours outside agriculture than female spouses and b) male spouses work a lot more on farms than female spouses.

In our final discussion we will focus on two parallel processes in Norwegian family farming: The exit of female spouses as farm labour and the entry of new female farmers.

We can undoubtedly support the process of “masculinisation” (Almås 1983) on male driven farms in Norway. If women attend farm work on male farms they never work more than the farmer himself. Using the label “assistant” on those women who are still contributing to the work on the farm might not always suit their own comprehension of their position, but might work as an analytical category. Our analyses have been concentrated on working hours in farming. Because of a lack of data, we have not been able to add additional working hours in the farm household like housework, childcare and looking after elderly kin. We know from other studies (Blekesaune and Haugen 2002) that this work has been, and most probably is, women’s main responsibility. According to Blekesaune and Haugen’s (2002) analysis did women in farm households work more hours of housework than other women did, and their spouses contributed to this work less than other men did, an evidence of a delay in a development of equality of status among men and women in Norwegian farming households.

In this “masculinity discourse” farming has turned into a male occupation, a development also connected to a “crisis in masculinity” where men are pictured as “backward, lonely, vulnerable and marginalised” (Brandth 2002:191). Nevertheless, women are with their entry into the non-agricultural labour market

building their work careers and do with their contribution of income to the farm household economy gain independence.

When we shift focus to women farmers, we can in a way say that female farmers are spouse-dependent, an opposite situation of what is happening on male farms. It would then not suit the reality to describe this as a process of feminisation, still it is not fitting into the masculinisation debate above. The work pattern of men and women on female farms uncovered 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 remain positioned according to the traditional script" (Silvasti 1999 cited in Brandth 2002:196). Women can do the "soft" farm-work 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 lawful female successors to take both their own qualities as farmers, like the need for high educational skills in agriculture and possible prospects of partners, into consideration before being able, or advised, to take over the farm.

Nevertheless, the amount of female farmers is rising in Norwegian agriculture. With that the structure of farming might again change if the growing amount of female farmers are able to make or create an equal position as farmers. It is possible that changing agricultural policy, shifting its focus onto other values of farming than sole agricultural production like the multifunctional role of agriculture, landscape care, "green care" and organic farming, might attract more women.

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