Farms of northern Finland

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This paper studies the structural development of farms with more than one hectare of arable land in northern Finland and explores the reasons behind the development. The paper relies mainly on agricultural census information and farm register statistics, focusing on the period after World War II.

Agricultural settlement expanded in northern Finland well into the mid-1960s due to active policy measures. The period of extensive rural population was short-lived, however. A number of unfavourable factors emerged roughly simultaneously and the number of active farms declined from nearly 60,000 in the 1960s to about 10,000 in 2000. Finland's entry into the EU in the mid-1990s gave further impetus to the development toward fewer but larger farms.

Today, active farms are several times as large as their predecessors 40–50 years ago. About 50 percent of all active farms in northern Finland are dairy farms, whose impact is considerably larger than their mere number would suggest.

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Introduction

Being located between the 60th and 70th parallels, Finland is the northernmost country in the world alongside Iceland (cf. Rikkinen 1992: 7). The area of the country is 338,100 square kilometers, but it has a population of only 5.2 million. By European standards, Finland is thus a very large country in terms of area, but small in terms of population. With densely built areas amounting to less than three percent of the total area of the country (STV 2000: 99), Finland can be characterised as being mostly countryside. Finland comes second after Norway in the OECD listing of the most rural countries in Europe (What future… 1993: Table 2).

As only eight percent of the country is arable land, rural Finland has to be looked upon as a more or less natural landscape with little human influence, particularly in the north and in the east. The population centres are located in southernmost Finland and along the western coast, the most fertile areas of the country (Alalammi 1982; Häkkilä 1984). The north and the east have very little to offer by way of conventional countryside with settlement and farmland, found mostly on riverbanks and lakeshores.

Agriculture and forestry are the mainstays of rural Finland, which is rather exceptional considering the country's geographical location. The Gulf Stream, however, raises the temperature by about 3–4 degrees centigrade (°C) above the average in these latitudes (Kettunen 1997: 8). In spite of that, climatic conditions vary considerably across the country, because Finland extends about 1,100 kilometres from south to north. In southern Finland, the growing season is 170–180 days, but only 100 days in the north. There is great variation in the effective temperature sum as well: in the south it is over 1,300 degree days, but only about 500 in the north (cf. Kolkki 1966; Alalammi 1987: 9).

Northern Finland comprises the provinces of Oulu and Lapland, constituting 48.5 percent of the country's area and 12.5 percent of its population. About half of the area lies north of the Arctic Circle. Northern Finland includes the present Employment and Economic Development Centres of Lapland, Kainuu, and North Ostrobothnia (Fig. 1). Northern Finland comprises 74 municipalities, which amounts to 16.5 percent of the national total. Some of these municipalities are exceptionally large. The prime example is Inari, in northern Lapland, which is larger than most southern regions. In addition to Finns, Inari and its neighboring municipalities are home for the majority

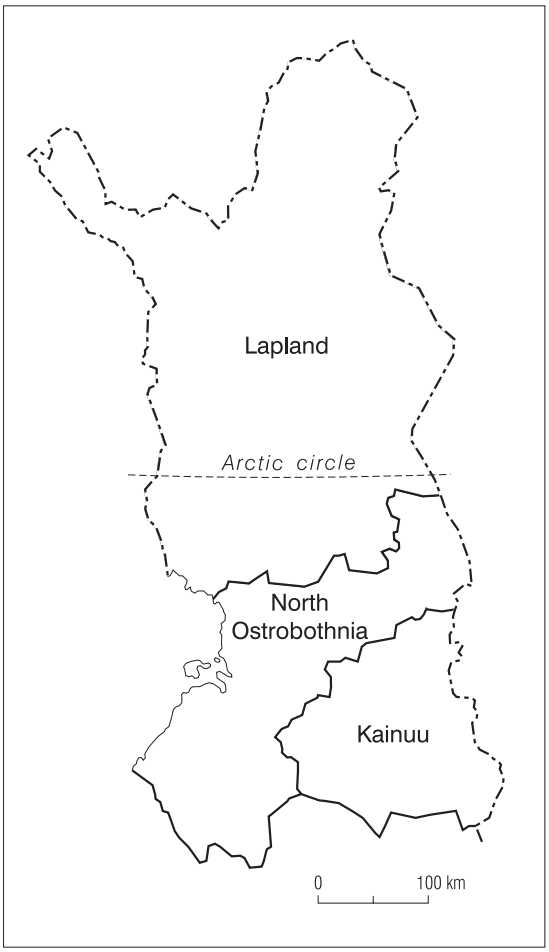

Fig. 1. Northern Finland and its division into the Employment and Economic Development Centres.

of the approximately 7,000 indigenous Sami people in Finland (cf. Raento & Husso 2002).

The natural conditions and therewith the preconditions for human activities vary considerably in northern Finland. Nowhere are the conditions better than in the western coast with its flat, lowlying landscape furrowed by rivers that empty into the Bay of Bothnia. Toward the east and northeast, the altitude rises from sea level and the relief becomes stronger (see Tikkanen 2002: CD-Fig. 1). Settlements tend to follow rivers, other waterways, and main roads leaving large tracts of land completely uninhabited (Rusanen et al. 1997). This is reflected in population figures, which reveal that the national population density is 17 persons per square kilometre, while the corresponding figure for northern Finland is only 4.3 persons/km^2. At 2.1 persons/km^2, Lapland is even more sparsely populated, with the municipality of Savukoski in the northeastern Lapland bringing up the rear with 0.2 persons/km^2 (STV 2000: 80).

Only 2.4 percent of the land area of northern Finland is arable land (STV 2000: 36). There are great regional differences, however. For example, in North Ostrobothnia the proportion is 6.8 percent, but in Lapland only 0.73 percent. A considerable proportion of the mineral soils in northern Finland are overlaid by peat deposits: in places peat bogs comprise over 60 percent of the land area (Ilvessalo 1960: Map 13). It thus comes as no surprise that over a quarter of all fields, in some areas over one half, is cleared on peat bogs, the exception being the southernmost part of Oulu province (Kurki 1972). The most important natural resource, however, are the forests that have played a decisive role in the lives of the rural population (e.g., Kuusela 1974; Seppälä 1976; Häkkilä 1977, 1988). They have influenced town life as well, as great wood processing plants have sprung up, particularly in towns located at the mouths of rivers.

During the past few decades, the economic life in northern Finland has diversified considerably. Regardless, the primary sector still employs a relatively larger amount of people in the north than in the country as a whole. The overall contribution of northern Finland to the national gross domestic product was 10.7 percent in 1997. The economic activity in northern Finland centres heavily on the west coast, spearheaded by the city of Oulu that is known internationally as a stronghold of technology. It is therefore no surprise that the city and the six adjoining municipalities account for more than a third of the gross domestic product of northern Finland (STV 2000: 291).

The foundation for the rural population of northern Finland was laid during centuries by settlers who built their homesteads along the rivers. The abundant fishing waters and hunting grounds, along with the prospect of tar burning, encouraged them to set up farms far from their home villages. These farms were largely established without any direct contribution by the state, but the government has repeatedly exerted an immediate influence on the structure of settlement, as the following discussion will show.

The number of farms was on the rise until the mid-1960s, although farms in southern Finland experienced a downturn a decade earlier. North-

ern Finland followed suit in the 1960s. This trend has continued to the present day and appears to do so even as Finland has joined the EU. On the other hand, modern farms are much larger than their predecessors.

The present paper examines temporal and regional aspects in the development of agricultural settlement in northern Finland primarily after World War II. The research material stems mainly from the general agricultural census carried out at about ten-year intervals. In 1971 these counts were replaced by a farm register, maintained by the National Board of Agriculture. As keeping the register up-to-date proved difficult, a census was conducted again in 1990 and 2000.

Farms and active farms

In Finland, *farm* originally denoted a homestead with at least one hectare of field (in official statistics from the 1969 agricultural census onward). A growing percentage of farms has gradually become uncultivated, although the farm register still quotes them as independent farms. As a result, since 1990 official agricultural statistics have used two different concepts: *farm* and *active farm*. The introduction of the new term has not influenced the definition of the old one; rather, the new one complements it. An *active farm* is a farm with more than one hectare of arable land that practices agriculture or other entrepreneurial activity (SVT 1996: 7). Forest is an integral part of the Finnish farm and nearly all farms, active or not, have a forest holding, which is often considerably larger than the fields, up to tenfold in the north (Häkkilä 1991: 42). In the year 1998, all Finnish farms had an average of 16.3 hectares of arable land and 44.3 hectares of forest land, whereas the figures for Lapland were 7.8 hectares and 81.8 hectares, respectively (STV 2000: 136–137).

The 2000 census registered only active farms, because most of the uncultivated farms could no longer be characterised as farms. Agricultural activities had stopped years or even decades ago, and in many cases the fields were overgrown with bushes. On the other hand, a number of farmers had rented their fields to neighbours who still worked the land. The last time both terms appeared in statistics was in 1998, when northern Finland boasted 30,944 farms with more than one hectare of arable land, but a mere 11,076 (35.8%) of them qualified as active farms. At that time, northern Finland accounted for only 12.9 percent of all active farms in the country, but comprised 20.2 percent of all farms with more than one hectare of arable land. Nationally, the average area of cultivation of these farms was, as mentioned above, 16.3 hectares, while the figure for northern Finland was 11.5 hectares. The corresponding figures for active farms were 25.0 hectares and 24.0 hectares, respectively (SVT 2000c: 46).

From settlement to depopulation

The majority of farms in northern Finland are results of the division of the independent family estates created during the so-called *Great Partition* in the eighteenth and nineteenth centuries (e.g., Talman 1987: 225; Rikkinen 1992: 51). The purpose was to gather the farms that had become dispersed as result of the earlier plot system into a smaller number of integral units (Riihinen 1963: 8).

For a long time, agriculture provided the basis for the expansion of settlement (Talman 1987: 225; Westerholm 2002: CD-Fig. 1B). At the beginning of the twentieth century, Finland was primarily an agricultural country. The population had grown relatively faster than the number of farms, however. Large farms had rented allotments to crofters in exchange of labour service, but there was also a recently-emerged new form of labour force, farmhands, who had no farms of their own but hired out to others for a meagre pay.

To solve the problems of the crofters and, later, those of other landless workers, the state became increasingly involved in rural settlement following the independence of Finland in 1917. The aim was to create family-owned farm properties capable of providing an adequate living (Talman 1987: 225). The state was active in increasing the number of farms both before and after World War II (e.g., Jutikkala 1958; Palomäki 1960; Smeds 1962; v. Soosten 1970; Varjo 1977; Siuruainen 1978; Hämynen & Lahti 1983; Rikkinen 1992). By 1959, the state had contributed to the foundation of 140,802 new farms, 22,506 (16%) of them in northern Finland (SVT 1962: Table 10). Not all of these farms fulfilled the current minimum size for a farm, however.

The newly independent state first intervened in the formation of farms in 1918 by issuing the Leasehold Property Laws, which allowed tenant farmers to acquire the land they had farmed at a modest price. A host of other laws concerning the

leasing and settlement of land followed. About 7,000 farms sprung up in northern Finland in the aftermath of the Leasehold Property Laws, while the actual settlement laws enforced before the outbreak of World War II resulted in the creation of about 6,000 farms (SVT 1962: Table 10).

After World War II, farming land was allocated to families that had been evacuated from areas annexed by the Soviet Union, but veterans, war widows, and orphans also received allotments. Some 423,300 people, 11 percent of the total population in 1945, were evacuated from the territories ceded to the Soviet Union, containing some 12 percent of Finland's cultivated area. The majority of the evacuees, 406,800 persons, came from Karelia. 250,000 of all refugees were members of farmer families (Talman 1987: 225).

The overriding principle in the settlement of the evacuees was that parish and village communities should be maintained as far as possible. In addition, an effort was made to settle people from a particular district in the same area and to maintain the position of the parishes in the north–south direction. This was done to ensure that living conditions in the new home would resemble those in the evacuated areas to the highest degree possible. Consequently, the great majority of the evacuees were settled in the south.

The majority of the holdings formed in northern Finland were established for veterans. The 1959 agricultural census indicates that evacuees were allotted 2,252 farms in northern Finland (SVT 1962: Table 10). The corresponding figure for other groups (veterans, etc.) was 6,705. Thus a mere 7.6 percent of all farms established for the evacuees were in the north, while the corresponding figure for other groups was 20.8 percent.

All told, at the turn of the 1960s, 63 percent of the over 58,000 farms with more than one hectare of arable land in northern Finland were freely created, while 37 percent were formed through settlement policy either before or after World War II. With a mean arable area of 6.1 hectares (Fig. 2), these farms can be characterised as small holdings. The average size of the farms in the whole country in those days was 7.8 hectares or in Uusimaa, in southernmost Finland, 12.3 hectares (SVT 1962: Table 10). The state was (and still is) a significant landowner in northern Finland and especially in Lapland, and so the great majority of the settlement holdings were formed on government lands.

Rural settlement continued in northern Finland throughout the 1960s and in some remote municipalities even at the beginning of the 1970s. This is remarkable at a time when the number of farms had already taken a downturn in southern Finland and also in the southern part of northern Finland. In the north, rural settlement expanded to previously unpopulated areas. Geographically, the post-war settlement programme and the associated setting up of new farms is regarded as the last stage in the conquest of the wild virgin lands in Finland (Smeds & Fogelberg 1967).

The holdings formed through post-war settlement policy in northern Finland were generally

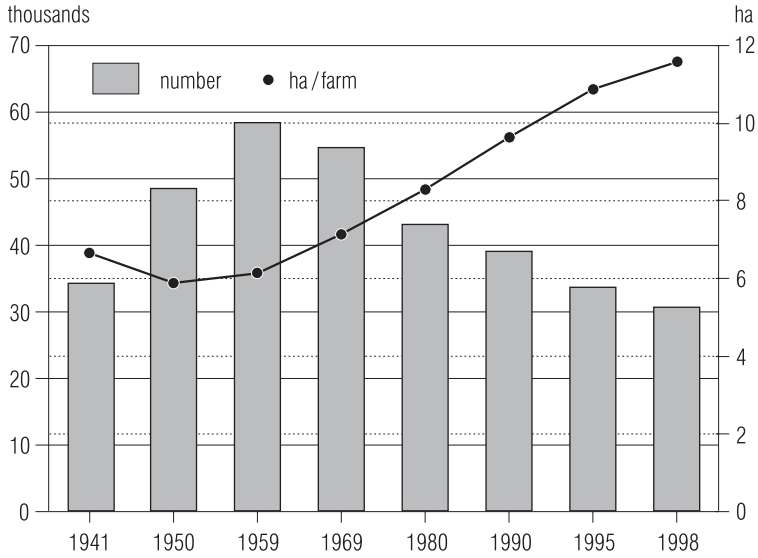

Fig. 2. Number of farms of over one hectare of arable land and their mean arable areas in northern Finland, in 1941–1998 (SVT 1954, 1962, 1971, 1983, 1992a, 1996, 2000a).

so-called *cold farms*, in other words, they had no arable land when established and the farmers themselves had to clear the fields and construct the buildings (Mead 1951; Palomäki 1960). These farms were set up to compensate for the loss of arable land ceded to the Soviet Union. At the same time, they provided labour to logging sites. The idea was that the farms would be only partially self-sustaining so that a portion of the farmers' income would come from secondary sources, such as logging.

According to Tykkyläinen and Kavilo (1991), the settlement policy period after World War II was the last episode in a long-standing development strategy of national self-sufficiency, which repeated the structural policy outlined in the connection of the liberation of tenant farmers in 1918 and even earlier. Social policy aspects and a view of society that emphasized the value of rural life were also involved in this policy, which similarly included the aim of mobilising resources in economic marginal and border areas.

The rural transition period occurred fairly late in Finland compared with other Western countries, such as Sweden (Häkkilä 1984: 123). Determining the exact point of time when the number of farms started to decline is no easy task, for an agricultural census was carried out only every ten years. In 1969, farms with more than one hectare of arable land numbered about 55,000 in northern Finland (SVT 1971: 12), which is 6.6 percent less than ten years earlier. Nationwide, the decline was 10.2 percent (SVT 1962, 1971). The reasons behind this trend in the north are manifold. First of all, it had not yet been possible to make the northern Finnish farms viable since the development of society had started to take a totally different turn, above all, with the technological progress that contributed to the emptying of the northern Finnish countryside (e.g., Siuruainen 1984: 60–62).

The mechanisation of forest work and the changeover to professional forest labour were particularly fatal, as they deprived the rural population of their most important source of secondary income, seasonal forest work (Häkkilä 1988). In the 1960s, agricultural overproduction also became a problem and the restrictive steps taken to cut back this overproduction (Häkkilä 1991: 44–46), as well as the anti-agricultural atmosphere that these measures involved, hastened the abandonment of agriculture and the migration from country to town. The northern Finnish countryside began to empty with an ever-increasing speed.

Regional features of the changes

The expansion and retreat of agricultural settlement started late in northern Finland compared with the southern parts of the country. Neither did the turning point between the increase and the decrease in the number of farms occur at the same time everywhere in the north. As a general rule, it happened earlier in the southern parts of northern Finland.

The settlement laws went simultaneously into effect in the entire country, but their enforcement in northern Finland began first and proceeded most rapidly in the south-western corner of the province of Oulu, particularly along the coast. Several factors account for this progress. The area was, in conditions of northern Finland, relatively densely populated, with an established infrastructure and fields that could be ceded to the newcomers. Resettlement was markedly slower in the hinterlands of Kainuu and Lapland, where it commended more often as cold farming in previously unsettled locations, forcing the settlers to clear the forests and build the farms from scratch.

Interestingly, the abandonment of agriculture followed the same pattern by starting in the southwest, where distances were short to population centres capable of offering other work. The mechanisation of forestry reached the hinterlands gradually in the 1960s and 1970s, depleting the need for seasonal labour. As a result, also the hinterlands began to empty, as people moved not only to the towns of northern Finland, but also to the south of Finland and Sweden in growing numbers. Another step in this direction was taken by the introduction of the Field Reservation System created in 1968 to restrict agricultural overproduction. Recompensing farmers for not cultivating their lands often encouraged them to abandon their occupation altogether (Jaatinen & Alalammi 1978; Häkkilä 1984).

These temporal and regional features of the structural development in the countryside of northern Finland are presented in a series of maps (CD-Fig. 1–3) that depicts the development of the number of agricultural farms on the basis of statistics and other information provided by the general agricultural census and the farm register in 1950–1980.

The map for 1950–1959 (CD-Fig. 1) shows that

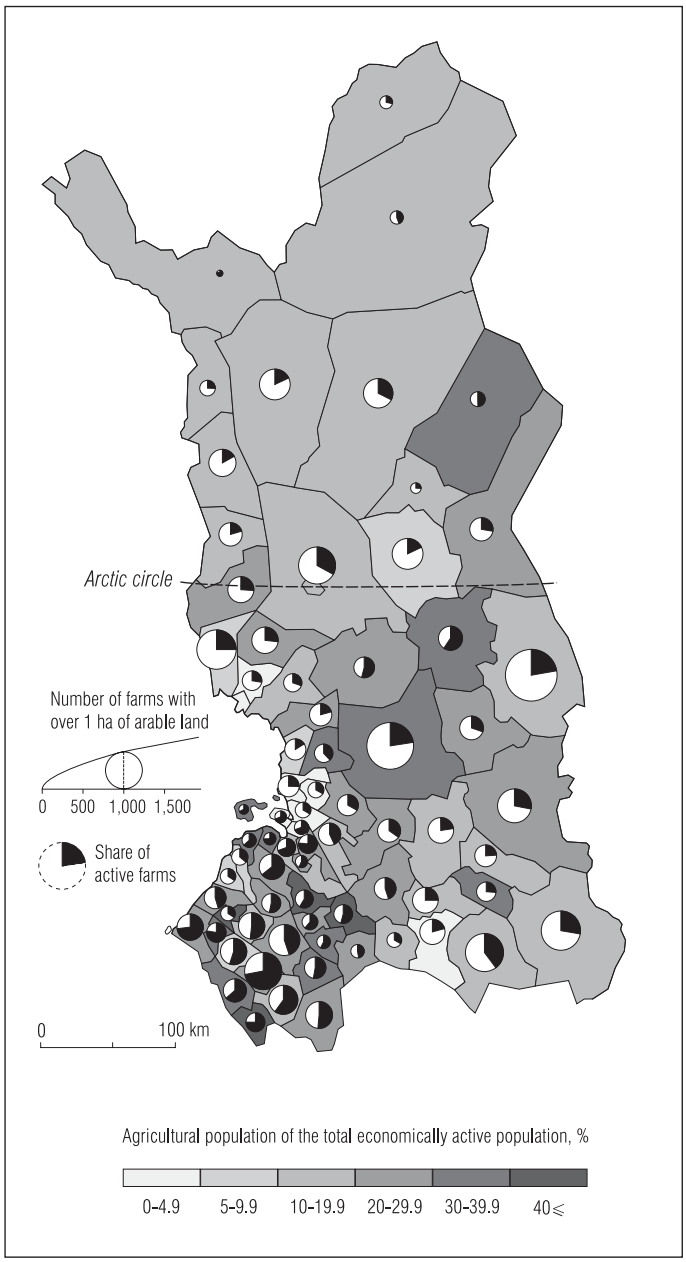

Fig. 3. Number of farms of over one hectare of arable land and the proportion of active farms in the municipalities of northern Finland, in 1995 (SVT 1996).

the number of farms was still on the increase in northern Finland as a whole. This period represents the fastest progress of settlement practised in accordance with the Land Acquisition Act of 1945 (e.g., Palomäki 1960; Siuruainen 1978) in most northern Finnish municipalities. The map also indicates that in the coastal area to the south of Oulu, the number of farms increased only negligibly during this period and in some municipalities not at all more, whereas in Kainuu and Lapland the number of farms still increased greatly during the given period, 27 percent and 43 percent, respectively.

During the period 1959–1969, a remarkable depopulation of the countryside had already started in North Ostrobothnia, in most of the munici-

palities of Kainuu, and in many parts of Lapland (CD-Fig. 2). In spite of this, the number of farms still grew in some municipalities in Lapland and Kainuu. During 1969–1980, however, the figure for farms declined sharply in every municipality in northern Finland (CD-Fig. 3). The Field Reservation System and other measures to limit production were in use at the time, migration from country to town and emigration to Sweden were intense, and, partly for these reasons, the appreciation of agriculture was at its lowest. After 1980, the downturn has continued throughout northern Finland without exception.

Noteworthy in the delay in the development of agricultural structure in northern Finland is that, regardless of the considerable decrease in the number of farms with more than one hectare of arable land, northern Finland increased its share of their national number. This trend continued unabated up until the late 1990s. The figure for 1950 was 15.9 percent, while that for 1998 was 20.1 percent. The explanation is that since the 1970s, when farms were falling into disuse even in the north, they were only slowly deleted from the farm register. This is evidenced by the statistics for active farms, which quote much smaller figures, 15 percent for 1990 and 12.8 percent for 2000 (SVT 1992a: 1; Agricultural Census 2000, advance information).

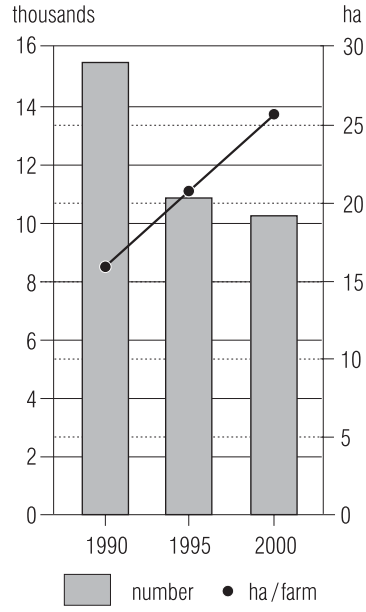

Fig. 4. Number of active farms and their mean arable areas, in 1990, 1995, and 2000 (SVT 1992a, 1996; Agricultural Census 2000, advance information).

Effects of the EU membership on rural development

Finland joined the European Union together with Sweden and Austria at the beginning of 1995. The rural population in Finland, by and large, had opposed the idea in advance, and farmers in the north had been particularly doubtful. In the debate that had continued through the first half of the 1990s, particular fears were expressed concerning the Union's ability to appreciate the specific difficulties facing farmers in the harsh Nordic conditions, especially as most farms in the area are small relative to those in the EU's central areas.

In the year 1995 the average size of active farms was 21.7 hectares in Finland (SVT 1996: 31), 31.7 hectares in Sweden (SÅS 2001: 94–95), or, for example, 38.5 hectares in France (STV 1998: 5). In principle, the arable areas of Finnish farms should be at least double compared with those in the central EU countries, for the Finnish yields per hectare are only about a half of that in those countries (Kettunen 1992: 6; Häkkilä 1993: 72, 2001: 93).

Figure 3 shows the number of farms in northern Finland in 1995 when the country joined the EU. Only a third of the 33,000 farms with more than one hectare of arable land were active. There was a deep concern for the future of agriculture in the area, which was reflected in the decreasing number of active farms during the first half of the 1990s (Fig. 4). The decline continues today, but it has slowed down. Having recovered from the initial shock, many farmers even in the north of Finland have come to realise that the agricultural policy of the EU does not spell the end of Finnish farms, provided that they continue to be developed and their sizes enlarged.

All told, abandonment of agriculture exceeded the national average in northern Finland in the 1990s. The number of active farms dropped by 50 percent in Kainuu and Lapland and by about 40 percent in North Ostrobothnia, but only by 38 percent in the entire country (SVT 1992a: 1; Agricultural Census 2000, advance information). A look at municipal statistics reveals an interesting finding, however: the number of active farms has actually increased in some municipalities in

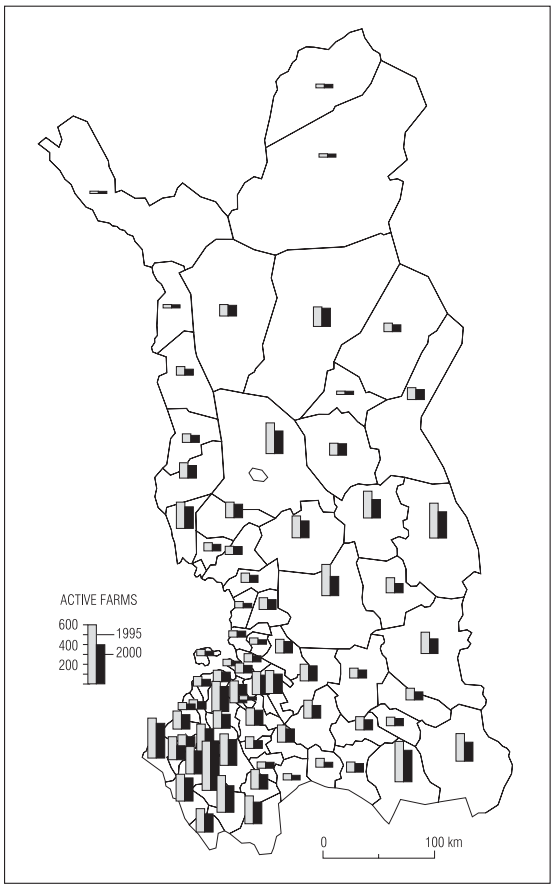

Fig. 5. Number of active farms in the municipalities of northern Finland, in 1995 and 2000 (SVT 1996; Agricultural Census 2000, advance information).

northernmost Lapland during the period 1995–2000 (Fig. 5). This is because numerous farmers have started to recultivate their fields to grow hay in order to provide winter fodder for reindeer. They have thus responded to the EU support system based on cultivated arable land area. It must be borne in mind, however, that these municipalities have a negligible effect on agriculture in the region as a whole.

While the number of active farms has diminished, their arable areas have grown considerably. Having been about 15 hectares in 1990, the size of an average northern Finnish field exceeded 26 hectares in 2000. The figure is a mere two hectares smaller than the national average. Generally, only the largest farms have remained active, and the owners have purchased and rented fields from those who have abandoned agriculture. In addition, the EU has induced farmers to turn forests into fields. Also remote patches of arable land that have been uncultivated for a long time have been recultivated. This is due to the fact that subsidies in the EU's support system are largely paid according to field area.

The EU has exerted little direct influence on the farms' forest economy. Indirect effects, however, include the continued busy restructuring among private forest owners, caused mainly by rural depopulation and discontinuation of farming. As a result, forest ownership has shifted to urban areas, to the south of Finland in particular, mainly through inheritance. This phenomenon can be traced back decades (e.g., Reunala 1974; Häkkilä 1981), but it has shown little signs of abating since Finland's entry in the EU. Farm forest holdings tend to be rather large in northern Finland. On the other hand, the average growth of forest per hectare in the north is only a third of the mean growth of forests in southern Finland (Häkkilä 1977: 42–46). According to the Ninth National Forest Inventory, the mean annual increment on forest land was in the southern half of the country 5.3 cubic metres per hectare but 2.0 m^3/ha in the northern half. In Lapland it was only 1.5 m^3/ha (SVT 2000b: 70). Hence, their economic significance is smaller than the farms' forest areas suggest.

Dairy production as the leading agricultural enterprise

The northern location of Finland and the resulting climatic conditions limit the agricultural production of northern Finland mainly to grass fodder and feed grain. Grass fodder crops are utilised first and foremost in dairy farming, which continues to be the dominant branch of agricultural production in northern Finland (Talman 1978; Häkkilä 1984). In addition, beef production is usually associated with dairy farming. Agriculture is more diversified in the southernmost part of North Ostrobothnia. The area supports sizeable farms specialising, for example, in the production of grain or potatoes. Reindeer herding supplements agriculture in many cases in Lapland as well as in northern Kainuu, although some of those practicing reindeer husbandry do it as their sole source of livelihood.

Dairy farming was the common line of production throughout the country as late as in the 1950s and 1960s. At the beginning of the 1950s, approximately 95 percent of all farms had dairy cattle (SVT 1954). Dairy cattle were first abandoned in south-western Finland, and the tendency proceeded towards the north and northeast (Häkkilä 1987). Southern Finland sports a great number of large farms in terms of the national average. Since distances to towns and cities are generally shorter than in the north, farmers find commuting easy. As a consequence, they have abandoned laborious dairy farming and concentrate on grain farming which enables part-time cultivation. Some of the crops suffer from a limited geographical range, but grass can be grown almost equally well in central and northern Finland (Varjo 1977: 70). As southern farmers have largely abandoned their milk cattle, the focus of dairy farming has shifted northward.

Today, dairy farming is concentrated in the middle parts of the country. This heartland of dairy farming includes the southernmost parts of the province of Oulu. Membership in the EU has enlarged the number of cattle per farm to the extent that northern Finland in 1998 had caught up with the national average, 13.2 cows per farm (SVT 2000c: 77–78). In 2000, the average dairy farm in the area already had 16 cows.

At the moment, almost one half of all active farms in the whole of northern Finland and more than half in Kainuu and parts of Lapland are dairy farms. As Figure 6 indicates, dairy farming is undeniably the most important production sector even in North Ostrobothnia. The significance of dairy farming for northern Finland's agriculture is even greater than the map indicates. According to reports by Elintarviketieto Oy (Food and Farm Facts Ltd., a research institute of food economy and agriculture), income from the production of milk and beef accounts for more than 80 percent of the gross income of the area's farms. As dairy farms constitute merely 50 percent of all active farms, but produce the majority of the income, other forms of production clearly play a subsidiary role.

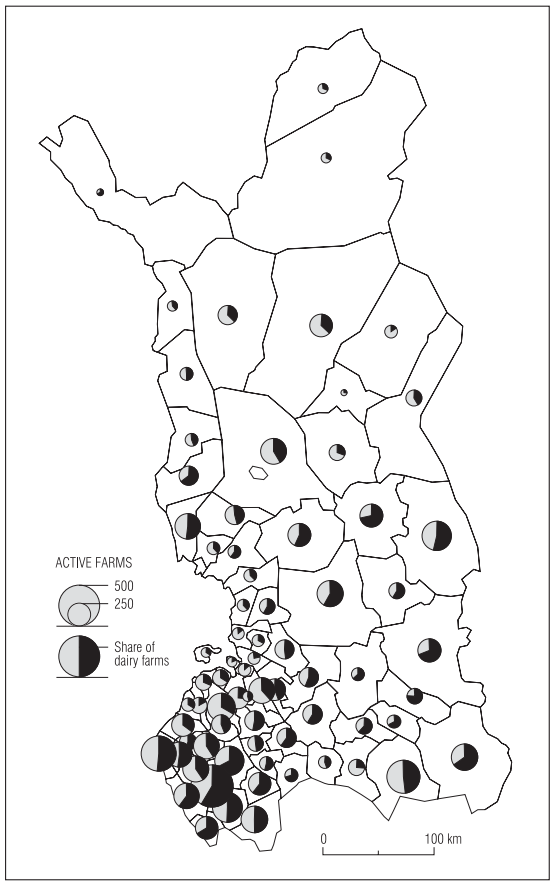

Fig 6. Number of active farms and the proportion of dairy farms in the municipalities of northern Finland, in 2000 (Agricultural Census 2000, advance information).

Clean special production from the North

The Finnish agriculture produces fairly clean foodstuffs. The country's cool climate is favourable in this respect, because many plant diseases or noxious insects do not thrive in a cool climate. Various kinds of pesticides are used in very small amounts as compared with many other EU countries (OECD environmental… 1989). In several Central European countries, authorities are, with the help of the Union's environmental subsidies, aiming at methods which are already in use in the regular cultivation in Finland (AIC 31 March 1994).

Pesticides or artificial fertilizers are not used at all in organic cultivation. The purpose of organic production, as compared with conventional production, is to produce clean, tasty, and healthy foodstuffs so that environmental considerations have been observed. On the other hand, it demands more work than conventional cultivation

and the mean yields are smaller (Koikkalainen 1999: 72).

Like in the rest of Finland, in northern Finland many farmers have changed over to organic production, with the consequence that the country is currently at the forefront of this development (Ahvenjärvi & Häkkilä 1997). Measured in terms of the proportion of arable land under organic cultivation of the whole arable area, Finland with its 6.2 percent was the second of the EU countries in 1999, only Austria with its 8.4 percent being clearly ahead (SVT 2000c: 253).

A central reason for this shift has been the extensive debate on the environmental effects of agriculture which pervaded much of the 1990s and changed farmers' attitudes toward environmental considerations. Moreover, the authorities started to subsidise natural production in Finland by introducing a new national agricultural policy in 1989. EU membership with the accompanying economic support systems has further prepared the ground for the growth of organic production by reducing the difference in profitability between organic and conventional farming (Koikkalainen 1999: 71). That crop or yield volume is no longer decisive for the subsistence of the farmer in the EU support system favours a more extensive method of production.

Organic cultivation has increased most in North Ostrobothnia and Kainuu over the past years. In both regions, the proportion of natural farms of active farms was approximately 7.6 percent in 1999, whereas the corresponding figure for the country as a whole was 5.9 percent. Organic production area as proportion of the total arable area was 6.2 percent in the entire country, but 10.2 percent in Kainuu and 8.8 percent in North Ostrobothnia. In Lapland it was 6.9 percent (SVT 2000c: 153–154).

Reindeer herding in the Nordic countries is practised mainly in those areas that have a Sami population (see Raento & Husso 2002: CD-Fig. 1). It is only in Finland that this activity extends over a considerably larger area than present-day Sami settlement (Aikio 1978: 273). Reindeer herding is permitted in a designated reindeer husbandry area comprising Lapland as well as the northern parts of the Province of Oulu. Nevertheless, in Finland as well, reindeer husbandry is most important in the Sami areas, where it allows people to earn a living in this vast, sparsely populated terrain. It is also among the strongest pillars of Sami culture (Rikkinen 1992: 75).

The total number of reindeer owners was approximately 6,700 in the reindeer herding year of 1997–1998. The number of reindeer totalled 196,300. Of these, 89,700 (45.7%) were slaughtered (SVT 2000c: 149). Some of those practising reindeer husbandry do it as their sole source of livelihood, but it is generally a subsidiary occupation alongside farming (Aikio 1987: 337). Reindeer husbandry is the main source of income for about 700 households in Finnish Lapland, while it is an important secondary occupation in about 1,500 households (Ala-Orvola 2000: 15).

To control the number of reindeer, the Finnish Ministry of Agriculture and Forestry imposes restrictions based on the estimated feeding capacity of reindeer pastures. Presently, natural pastures provide roughly half of all reindeer food, while the other half must be supplied with hay, especially as pastures are depleted or frozen. The southern parts of the reindeer husbandry area, where the number of active farms is higher, have suffered from occasional conflicts between reindeer owners and farmers, caused mainly by damage inflicted by the freely roaming animals.

Also fur farming has some significance in northern Finland, especially along the coast. The stronghold of this activity, however, lies on the west coast of Finland south of the province of Oulu.

Future prospects

Farming keeps the countryside populated. Together with food production, this has to be considered the main purpose of agriculture. The farming area of northern Finland is about 14 percent of all the cultivated land in the country. That means that farming in this area, especially in Lapland or Kainuu, is not particularly important for the national agricultural production. Regionally and locally, however, farming is important in several aspects (cf. Wiberg 1986: 136) – it helps to maintain employment, landscapes, cultural and economic traditions, and a certain production capacity in order to meet emergency needs in a crisis situation. A rural, agricultural population maintains rural roads, buildings, and other forms of infrastructure, which are also important for other industries, like forestry and tourism.

Until recently, it has been assumed generally that dairy farming has the greatest chances of survival also under the altered circumstances brought

about by the EU. From the northern Finnish perspective, dairy farming is in a key position, because it offers a means of committing people to their farms. Modern dairy farms in the north of Finland are fully comparable to their counterparts in the south in terms of cattle size. Moreover, they are on equal terms with the rest of the EU as far as production per animal is concerned. As a consequence, there is reason to believe that particularly the southern parts of the province of Oulu will remain at the core of milk production in Finland. More remote areas may face a grimmer future, however. For example, as the number of farms continues to decline, the collection of milk from farms in sparsely populated areas may prove to be problematic.

The preservation of dairy farming also serves the further expansion of organic farming with the promise it holds for the future of farming. The demand for naturally grown products exceeds their supply. Organic farming, being a labour-intensive branch, is well suited to northern Finland, which suffers from unemployment. In the future, the basis of the competitive ability of northern Finnish agriculture may well be foodstuffs that are free from various kinds of pesticide remnants.

The chapter on rural policy in the EU's Agenda 2000 communication (Agenda… 2001) seems promising from the point of view of northern Finland. The communication states that

> growing demands for a more environmentally sensitive agriculture coinciding with the increasing use of the countryside for recreation create new obligations and opportunities for agriculture. The commission favours giving a more prominent role to agri-environmental measures, especially those which call for an extra effort by farmers such as organic farming, maintenance of semi-natural habitats. Other aspects of sustainable rural development will be pursued by a reorganisation to make existing structural policies more targeted.

Be it a question of conventional agricultural production or organic production, active farms keep growing in size while their number declines. It has been predicted that by 2005, the number of active farms in Finland will have been reduced by more than one half from 1995 (Niemi & Linjakumpu 1996: 134). If this is the case in a few years and if the same reduction applies to the entire country, the number of active farms in northern Finland will fall to 5,000–6,000, or to one-tenth of the figure in the 1960s' culmination period. Those farms that continue to be active will be, of course, far larger than their counterparts 40 years ago.

The technological development of agriculture and forestry and the expansion of agricultural production units do not guarantee that agriculture and forestry alone will be capable of maintaining countryside's vitality. They must be complemented with other sources of income, either on farms or elsewhere.

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