

8.5.4. Resilience of peasant households during harvest fluctuations and crop failures in Nineteenth century Sweden – a micro study based on peasant diaries

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By

Maths Isacson, Department of Economic History, Uppsala University

Mats Morell, Department of Economic History, Stockholm University and the Uppland Museum

Iréne A. Flygare, The Uppland Museum

Tommy Lennartsson, Swedish Biodiversity Centre, The Swedish University of Agricultural Sciences

Anna Dahlström, Swedish Biodiversity Centre, The Swedish University of Agricultural Sciences

Marja Eriksson, Department of Economic History, Uppsala University

Corresponding auhtor: Maths.Isacson@ekhist.uu.se

Introduction

In pre- and early-industrial society the majority of people lived on the countryside, strongly dependent on their yearly production of food on farms or cottages. Disturbances caused by drought, wet weather, late and cold springs, wars and epidemics threatened health and living conditions. Peasant households were normally not pure subsistence producers. They had to sell surplus products in order to be able to pay taxes, salaries to craftsmen and farmhands, and to be able to buy goods they could not produce owing to shortage of raw material, lack of knowledge and capital for investments in handlooms, forges, mills, etc. New demands induced by fashion and new products for sale also created a need for money. The level and fluctuation of prices on essential goods could imply both threats and possibilities for households. When demand increased prices rose, but such processes could also initiate economic development. According to Jan De Vries the industrial revolution was preceded by an industrious revolution. People worked more, in order to be able to procure new merchandise available on increasingly integrated markets. The changed behaviour during the 18th and 19th century paved the way for mass production of goods in factories.¹

The economy of peasant households in pre-industrial time was mostly built on many and varied occupations carried out by most members of the households. In a plain land district the economy was often highly dependent on surplus production of cereals that could be sold to urban populations, people in woodlands with deficit, and, as in Sweden, mining companies and ironworks which had to feed working-class families. The price level was vital for the plain land farmer's possibility to acquire necessary monetary incomes.

It was essential for peasant households to spread the risks and develop strategies of how to balance variations in food production caused by epizooties, and weather fluctuations. Methods of tackling more moderate harvest variations which regularly occurred, were well developed, but how did peasant households handle more infrequent and less predictable disturbances as total failure of the crops, animal disease, a predatory animal attack, dramatic changes of prices on products they intended to sell or products they should buy

In Sweden, as in most countries in pre-modern Europe, institutions were constructed in order to balance weather fluctuations and mitigate the effects for suffering families and individuals. The poor relief system made the landowners of the parish responsible for the care of the poor. Children were taken from their families, boarded out and used as cheap labour on farms. A system of parish storehouses (or "grain banks") was organised through a law in the middle of 18th century. The farmers of a parish delivered a share of their harvests for coming years in order to collectively balance bad and affluent harvests and they received interest on their savings, which people who borrowed from the store had to pay.² Since the Middle Ages landowners were by law obliged to pay a yearly fee to the district (hundred) fire insurance cooperation. From the 1820s local saving banks were started in the countryside and in towns. Individuals could open a savings bank's account where they saved money for coming needs, or against a little interest borrowed money in case of emergency or larger purchases.³ In order to reduce unemployment and poverty the Swedish government in the 1830s and 1840s initiated large relief work projects involving reclamation (drainage of wetlands and lowering of lakes) and the construction of roads and canals.⁴

¹ De Vries 2008.

² Berg 2007.

³ Petersson 2001. Largely the semi-public savings banks served to concentrate savings from smallholders, in order for local elites (leading the banks) to mobilize capital for various investment projects)

⁴ Utterström 1957:1, pp 383-393.

Research design

The research question of this paper is whether, and if so to what degree, peasant households in two economically and ecologically distinctly different Swedish regions were affected by the disturbances caused by a couple of well documented periods of weather related crop failure and crises during the 19th century and how they acted to diminish the effects of these disturbances. Our focus is on a small number of peasant households, chosen because they have left posthumous peasant dairies. By reading the voluntary written daily notes we have been able to analyse the level of disturbances at household level and the adaptive capacity of the households. Our point of departure is the concepts *resilience* and *social-ecological systems*. Resilience is defined as a measure of how far the interlinked system of people and ecosystems “could be perturbed without shifting to a different regime”.⁵ Stress, shocks, cascade effects on one side and the adaptive capacity of humans and environment on the other are in focus in resilience studies. In this paper we are, first of all, interested in how the investigated peasant households, as agents, used their labour, land and animals on the farm and how they acted regarding the market and the available “welfare institutions”.⁶

In this paper we do not discuss the effects on the environment of demonstrated actions, although this is an important topic in our research project.⁷ Our theme here is the *immediate effects* of and *actions* among peasants during a couple of trying weather periods. We also want to understand if formal and informal institutions gave possibilities to handle disturbances or restricted such handling.⁸ Furthermore, we support the view that “resilience ideas do not comprise a theory intended to explain the behaviour of social-ecological systems”. Instead we prefer the term *resilience approach* when analysing the dynamics of social-ecological systems.⁹

Periods of severe disturbance could lead to social, gender and generational conflicts in the households and in villages, that is conflicts between husband and wife, generations, owners and servants and between neighbours. Alcohol could dampen worry and anxiety, for the moment. Crime or migration could be a last resort for some people. In a social-ecological study it is important to include the possibility of inner conflicts in households and villages. The conflicts could impair and destroy the household’s possibility to survive, or be the starting point for a renewed use of its resources.

The *individual peasant household* might use its resources in different ways in order to balance an acute situation. Theoretically it could,

1. Reduce the labour force and utilize the remaining labour heavier in order to save food and money. Grown up children could be forced to leave home to find work somewhere else, and the number of paid farmhands and maids could be reduced. Instead young children could take over some of their duties. These possibilities were however somewhat limited depending on

⁵ Walker et al 2006.

⁶ Ecology & Society 11, 2006.

⁷ The main aim of this interdisciplinary project is to study the interface between land, man and society during a period of significant economic, social and environmental change, 1750-1900, using a micro-historical approach. The name of the three year research project is “Resilience of subsistence – the agrarian households between society and nature 1750-1900” with researchers from the Department of Economic History at the universities in Uppsala and Stockholm, the Swedish Biodiversity centre at the Swedish Agricultural University and from the Museum of Uppsala county.

⁸ North, 1990.

⁹ Anderies et al 2006.

the production on the farms, on the number of servants in the household and on whether the family youth was able to find work elsewhere. Furthermore, the servants were employed on yearlong contracts, which lasted from November to October¹⁰, and finally the intensified work efforts of those remaining could at times approach self-exploitation.¹¹

2. Reduce the number of cattle through slaughter or by selling of livestock. During years of general crisis in a region owing to hard weather it would be difficult to sell cattle in the local community. The price might fall because of increased output. Slaughtering the farm animals gave only temporary increased access of food and soon a shortage of milk, butter, cheese, and meat could develop. On the other hand, lesser livestock meant that those kept on the farm could be better fed despite reduced supply of hay from meadows.

3. Collect leaf, reed and horsetails from lakes for fodder and even dilute the fodder with mosses. As a last resort take bark from forest trees could be mixed into the flour to make it last longer further.

4. Sell or lease out part of the land to a neighbour. This could yield some money or foodstuffs, but was difficult during hard years, which affected other farms in the home-village as well. .

5. Reclaim, buy or lease new arable land, change-over to other crops or turn arable land to meadows or vice versa. These possibilities did not solve the immediately requisites but were conceivable in order to balance coming disturbances; earlier disturbances in a region might have taught the peasants how to use different crops and land to balance coming disturbances. Reclaiming of new land was possible in regions with easy access to cultivable land, as in part of the late 19th century Russia where the peasantry could extend and diminish the size of the arable land to balance the size of the households.¹² If the farm had access to forest, timber cutting, selling of firewood or charcoal burning could be a possibility, if there was demand for such products.

6. Increase and/or change the market activities. Diversified households could shift focus between their resources, particularly if the crisis was partial in as much as some crops failed while others did not. Some could enlarge their production of textiles, iron and wood products – if there was demand for such and if the households had enough raw materials, labour with the right skills. It was also possible to use the horses and labour in transportation of goods between workshops, and between forges and harbours. On the other hand, during bad years many peasants asked for this kind of work; it was, as we will see, then difficult to get this kind of paid work.

7. Acquire help from relatives, neighbours, influential and well off people, both for assignments and for loans. Gifts, change of work duties, return of favour and other social activities without payment could partially diminish the burden.

The members of a village, a church, a parish and a hundred (härad) could also use *collective actions* to mitigate tough disturbances. Peasants turned to the county governor, to their elected members of the Swedish parliament and/or to the King with written requests for reduction of taxes, or for support with grain, money-gifts or loans in emergency situations.

There were other collective options as well: actions, based on religious beliefs, to mitigate the weather Gods and cultural activities aiming at strengthening the local unity and identity. In our sources there are few traces of such activities.¹³

¹⁰ Harnesk 1991.

¹¹ Chayanov 1986.

¹² Chayanov 1986; Netting 1993.

¹³ Gomez-Baggethun 2012.

Two regions

The two investigated Swedish regions are Folkare hundred (härad) in southern Dalarna and Torstuna hundred in the Västmanland-Uppland borderland. We have added data for a household in a parish further to the west in the Mälare valley. Both regions were, until the mid-19th century, part of a common supply-demand area in which the farming communities to the south supplied the mining villages in Bergslagen, but also Stockholm with grain.

The two regions exhibit distinct ecological characteristics that created different conditions for ecosystem services and differences in land use and supply. Folkare is rich in forest and wetland and strongly influenced by the river Dalälven with its outflow in the Baltic Sea. Torstuna is more dominated by arable land and pastures with some forest. Folkare hundred had before the industrial revolution at the end of the 19th century a diverse supply pattern with mining companies and ironworks as major players, leaning on the easy access to forest. Charcoal-making, transport and forged products and from the 1700's metal, wood and textile crafts supplemented arable and livestock farming.¹⁴ Transportation of charcoal, iron ore, bar iron, copper products and timber was carried out during winter seasons when lakes were frozen and the land was covered with snow. That explain way snowless and mild winters could be as disastrous as a bad harvest.¹⁵ From the beginning of the 1800s arable land, agricultural production and population increased, while a social stratification developed. Three-course rotation and more advanced convertible husbandry systems with fodder cropping were spread early. From the 1850s the peasant miners closed their small cooperative operated forges and blast furnaces. Instead they concentrated their attention on farming and forestry, while new large ironworks/steelworks and saw mills were established. In the mid-1870s railroads were built through the countryside and urban areas. Meat and milk products became important sales commodities for the farmers. Dairies were built to provide the populations in the new industrial centers with food.

In Torstuna hundred the village settlements are situated along small valleys. A large common in the north provided firewood and timber to the farmers. The villages were small and most of the farms were free holdings. The hundred has been an important grain growing district since medieval times but dairy production became significant during the second half of the 19th century. Until late 19th century cultivation was performed in two-course rotation. Rye and barley were the principal marketable products. By the late 19th century the trade with grain was re-directed towards the neighbouring growing towns, Stockholm the capital close to the Baltic Sea, and Vasteras, an important commercial town with a large harbour and with water connection to the Baltic Sea through Lake Mälaren. The population size was stable or stagnating during the 19th century, with exception of some areas in the north of the hundred where factories for tile production and agriculture equipment were established by the late 19th century. Socially, peasant households dominated, but during the 19th century the numbers of crofters and other landless classes rose, to equate that of peasant households.¹⁶

Sources

The main source for this paper is a number of peasant diaries from our two regions. Diaries are unofficial written sources with a personal (tendentious) style (diaries are often analysed and published by linguists). The statements – what is described and what is not and the way the experiences are reformulated – need to be handled with source criticism. Diaries have to

¹⁴ Isacson & Magnusson 1983.

¹⁵ Edvinsson, Leijonhuvud & Söderberg 2009, p.116

¹⁶ Flygare ???

be read with utmost care in combination with available local contemporary documents in a hermeneutic process.¹⁷

Our chosen diaries are written by men, focusing on the author's daily work, problems and social activities. However, diaries often directly or indirectly recognise the labour division within the household. Agrarian households were founded on specific gender- and generational regimes. Diaries sometimes reflect the conflict between the individual constraints and the collective cultural attitudes.¹⁸ Diaries can also undermine the idea of the household or family as a collective executor. (When every sheaf is accounted for, but not a single litre of milk, or when every move on the field is recorded but not a word is mentioned about handling the cattle, suspicion must be raised whether women's participation in the domestic tasks was regarded as something apart.¹⁹ The dairies we have used demonstrate in various degrees work and other kind of activities performed by women.

Periods

Two periods are above all in focus in this paper, chosen because they are known for remarkably harsh weather conditions leading to very bad harvests. The first period is 1845-1848, the second 1867-1869, the "last years of famine" in Sweden. With railway constructions and industrialisation from the beginning of the 1870s the possibilities – and necessity – to transport cereals and meat from surplus regions to deficit areas increased immensely. However, we start our investigation already during some years of great weather and harvest fluctuations at the beginning of 19th century. From this period we have only one diary from Torstuna hundred and no one from the Folkärna. From the 1840s we have several informative diaries from Torstuna but only scattered notes and data from Folkärna. On the other hand Torstuna suffered harder during the 1840s while Folkärna and Dalarna County had very hard years at the end of the 1860s. From our last period we have used three detailed diaries from Folkärna, one from Torstuna hundred and also one diary from an area further to the west, with strong socioeconomic and ecological similarity to Torstuna, the parish of Medåker.

Weather variation and harvest in pre-industrial Sweden

A recently published economic-historical study of weather, harvest and prices in Sweden from the beginning of 16th century up to the middle of 20th century provides a good general picture of weather variations, its causes and effects on harvest and prices. The researchers have combined information from a number of sources (notices on when the Baltic seaports were freed from ice, for mariners, annual rings on trees, mining and ironworks archives, weather notes, tax levy/tenth lengths, and harvest estimations). For the 17th century it is possible to find a trustworthy connection between volcano eruptions and cold summers, especially the years 1601-1603, after the eruption of volcano Huaynaputina in Peru. Similarly the Tambora eruption in Indonesia 1815 had approved effects on temperature in many European countries; 1816 is mentioned as "the year without a summer". However, available sources give no evidences that Sweden was hit by this large-scale eruption; the summer of 1816 was just slightly colder than normal.²⁰

The researchers moreover proved a surprisingly weak connection between climate and harvest. One of their main conclusions is that "humans can influence the connection by

¹⁷ Ricoeur 1996.

¹⁸ Flygare 2009.

¹⁹ Isaacsson 1968.

²⁰ Edvinsson, Leijonhufvud & Söderberg 2009, p. 118.

cultivating different crops which cover themselves against the weather effects.”²¹ The north and south of Sweden shows however a different pattern. Harvests in the north (from Dalarna and northwards, including Folkare hundred) were favoured by hot summers, while a cold and rainy summer was good for the harvest in the south (including Torstuna hundred in Västmanland County, our second research region). Warm summers in the southern part of Sweden gave poorer harvest while warmer winters led to higher yields.

One possible explanation for the weak connection between weather and harvest is connected to the yield-seed ratio. With a ratio of four yielded corns to one sown, which was rather common, one fourth of the harvest must be used for the next year's sowing. A failed crop often necessitated the consumption of the next year's seed corn and therefore lesser sowings and repeated bad harvest (despite improved weather and improved yield ratio).²² To prevent this negative harvest yield spiral the construction of the system with parish magazines started in the middle of 18th century. This diminished, but did not completely solve the problem, of lacking seed grain after a bad harvest. Another reason why “bad” weather was not so clearly correlated with total harvest failures was that different crops fared differently from the weather fluctuations. A long dry summer could be disastrous for the hay productions, while not so bad for the winter rye. Winter rye was on the other hand sensitive to harsh winter conditions, which did not affect other crops.

Fluctuations 1795-1814

No general crop failures occurred in the studied regions around the turn of the 18th century and the first decade of the 19th, but fluctuations were substantial. According to contemporary qualitative statements of weather and harvests, collected by Gustaf Utterström several partial crop failures occurred in the lake Mälaren area in 1798 (a dry year with failing hay harvest, and frail harvest of spring crops), 1804 (failing hay harvest), 1805 (weak harvests of hay, spring grain and winter grain), 1806 (wet year with failing hay and rye harvest), 1808 (dry year with dramatically failing spring grain and hay). 1806 and 1808 stand out as the worst years.²³

One diary from Thorstuna hundred from this period has been studied. It was written by Pehr Jansson, born 1781 in the small village of Mälby, Vittinge parish. The relevant part of the diary stretches from 1795 to 1814 and is regular from 1798, five years before Pehr succeeded his deceased father as head of the household. Pehr also wrote a manuscript description of the village. A linguist, August Isaacson, published both the description and the diary in 1968.

Pehr lived with his mother and younger brother and two orphan children until he married Christina Persdotter from a neighbouring village in 1805. Their first child, a girl was born in 1806, and by 1813 Pehr have five children. By then the orphans left, and the death of Pehr's mother in 1812 was followed by the recruitment of a maid. Thus the household held four adults (two men, two women), 1-3 children below 10 years and 1-3 infants. Thus the normal case is that the household holds a permanent workforce of two women and two men.²⁴

To the household belonged roughly 4,5 hectares of arable and undivided shares of meadows which for Pehr's part equated around 5 hectares. As two-course rotation (slightly modified as oats was sown on parts of temporarily converted meadows) was practiced roughly half of the arable was sown annually. As commonly was the case the fenced in meadows and the

²¹ Edvinsson et al 2009, p. 121.

²² Edvinsson et al 2009, p.132.

²³ Utterström 1957:II, pp.437-439

²⁴ Pehr Jansson's village description, in Isaacson (1968). Catechical registers in Vittinge Ecclesiastical archive 1804-1810,, 1812-1820, Uppsala district archive.

separately fenced arable fields were grazed after hay harvest/grain harvest. The villagers cooperated in fencing. Other than that pastures were found in the unfenced forest areas belonging to the villagers in common. The common forest measured 129 hectares and Pehr's proportion was around 24 hectares. Following a great storm in 1795, the forest mainly consisted of young pine and firs, and according to Pehr it barely sufficed for firewood and fencing. Wood from the hundred's common was to be used only for building of bridges and other public constructions. There was also a lake, Vittingesjön, but Pehr it seems not to give much fish.²⁵

There was certain flexibility in land resources. Additional land was sometimes temporarily leased from neighbours. In 1798 Pehr's father and three fellow peasants bought the growing crop of an Ian Olsson in the neighbouring village of Säby for the market value of 12 barrels of rye. In May 1806 Pehr bought the growing crop from Lars Persson in the village Grimle and the same month he leased, for two years, a third of a lot in the neighbouring farm in the village, which had just been inherited by a Maja Lisa Ersson (in accordance with inheritance legislation her brother inherited twice as much, 2/3 of their deceased father's farm).²⁶

Predominantly Pehr's household grew barley, rye and mixed grain (a fodder crop composed of barley and oats). Some oats were sown occasionally, sometimes the household grew beans while turnips, hops, flax and hemp was always sown. During the period the potato became a standard crop. The diary reports the fodder collecting (including hay, straw, chaff, leaves etc.) but documentation of the maintenance of animals or of the animal stock is lacking. It may be assumed that the animal stock was similar to the one Pehr Jansson had when he died at fifty years of age on a neighbouring farm of similar size which he bought in 1821 (while his younger brother took over the home farm). The probate inventory listed two horses, 7 cows, one heifer, one calf, 10 sheep and 7 lambs, two grown pigs and three piglets. The diary notes on slaughter are not fully consistent, but normally a couple of pigs were slaughtered in November and each year some sheep and one young head of cattle were slaughtered. Live animals, but not meat, were sporadically sold.²⁷

Judging from his diary Pehr Jansson was a true entrepreneur. Like many other peasant diary writers in pre industrial society he had public commitments. He was lay member of the hundreds court, he took on setting up probate inventories, at a time he was responsible for the parish grain storehouse. He regularly travelled to neighbouring parishes in Uppland County and bought small quantities of grain. In 1798, following a disastrous rye harvest, 10 barrels of rye was bought obviously for fulfilling household needs. Otherwise he bought on average 9 barrels a year and this was used for distilling alcohol. He sold vodka both in retail (which was forbidden) and in greater quantities to customers in Stockholm (some 90 kilometres away) and Uppsala (40 kilometres away). When he leased more land for cultivating grain that was not for the direct household subsistence, nor for getting more unrefined grain to sell, but for getting more grain to distil. It can be shown, that given his access to cheap firewood, the refinement of the grain to alcohol was economically advantageous. He normally got c. 3.5 times the value of a barrel of grain when it had been distilled to alcohol. Admittedly transport costs should be added, but vodka was much more convenient to transport than grain was.

The stereotype pre industrial plain land peasant household north of lake Mälaren grew a surplus of grain, notably rye, which it sold (or delivered as rent payments) to iron works in the mining area further to the north, or to Stockholm. The base of its farming system was a

²⁵ Pehr Jansson's village description, in Isaacson (1968).

²⁶ Pehr Jansson's diary, in Isaacson (1968).

²⁷ Pehr Jansson's diary; Proabate inventory after Pehr Jansson 6 May 1831, Torstuna hundreds court archive, Uppsala district archive.

transmittance of energy and nutrients (draught power and manure) from fodder producing land to the arable land via cattle and draught animals. Thus a certain balance between fodder producing areas and arable land mostly used for grain had to be upheld. It is moreover argued that this balance was threatened as peasants tended to transfer fodder land to arable in order to produce more grain. Population growth causing rising demand for grain induced peasants to do this conversion. Agronomic writers of the 18th and 19th century incessantly discussed how to improve meadows and whether crop rotations with clover and other fodder crops sown on the arable provided the solution.²⁸ A steady fall in real rent payments from peasants during the 18th and early 19th century²⁹ had left peasants with more surplus to market by themselves, and to choose in what way. Pehr Jansson's household was not alone in his choice of distilling (like other households in the area it also bartered grain for Baltic herring with Baltic sea fishers who travelled up streams the rivers from the lake Mälaren). According to a report in 1843 from the hundreds' sheriff in the neighbouring hundred Lagunda, 70 % of the surplus grain in the area was exported as vodka, and only 30 % as unrefined grain.³⁰ Nonetheless the same mechanism may have been at work. Market production favoured a behaviour that threatened the basis of the taken-for-granted way of performing agriculture. It is not surprising that the fodder supply proves to be the weak point for Pehr Jansson's household. Apart from threatening the households' access to milk and meat, crises in fodder production risked to spill over to the grain sector.

The local harvests from 1802 onwards in the Vittinge parish are indicated by notations of average yield-to-seed ratios for the major crops provided by the parish priest. The rye yield was low but stable, 5-6 each year. Two years stand out with low yield: 1811 1,5 and 1813 4. For barley the variation was somewhat larger (4-7) with 1813 standing out as low (1,5), while 1813 (3) is the only real bad year for mixed grain on parish level.³¹

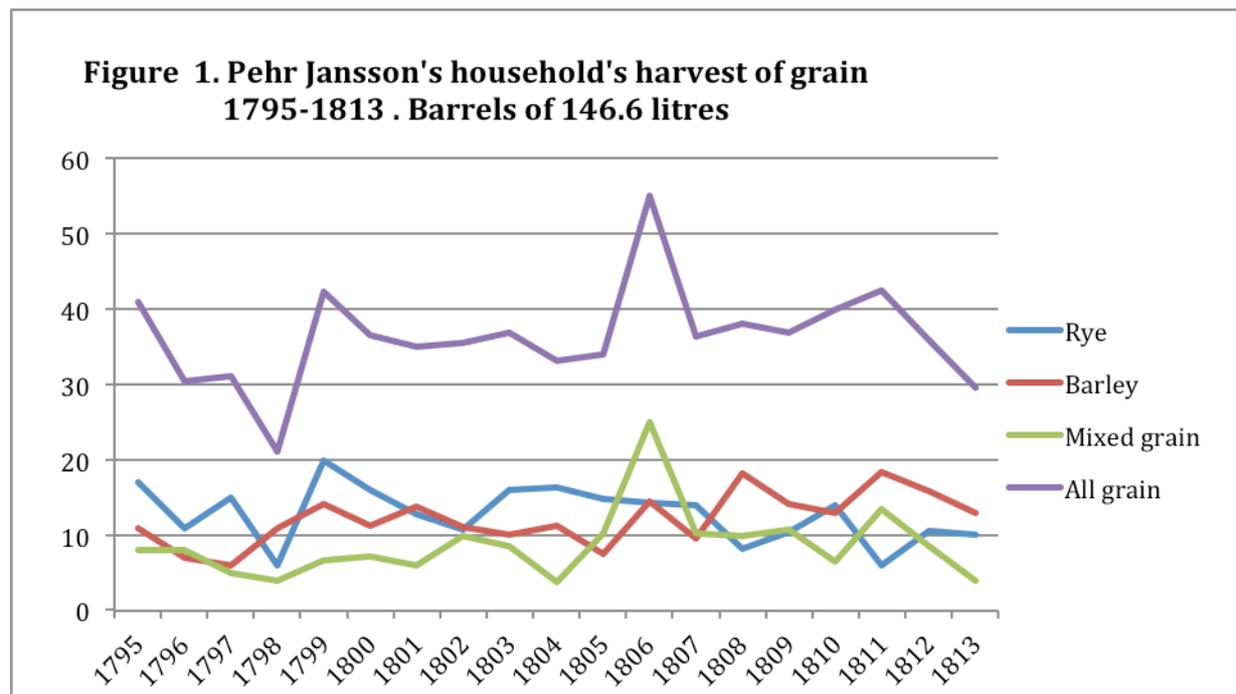
Pehr Jansson gives very few comments on weather, but his harvest figures are regular and consistent. The grain harvests of Pehr Jansson's household varied as shown in the following figure. Marginal harvests of oats and wheat are not shown separately. The leased acreages of 1806 and 1807 are omitted.

²⁸ Morell 2013.

²⁹ Olsson 2005.

³⁰ Ulväng 2001, p. 41.

³¹ Statistical table G 1, Vittinge Church archives 1802-14, Uppsala Districtal archives.

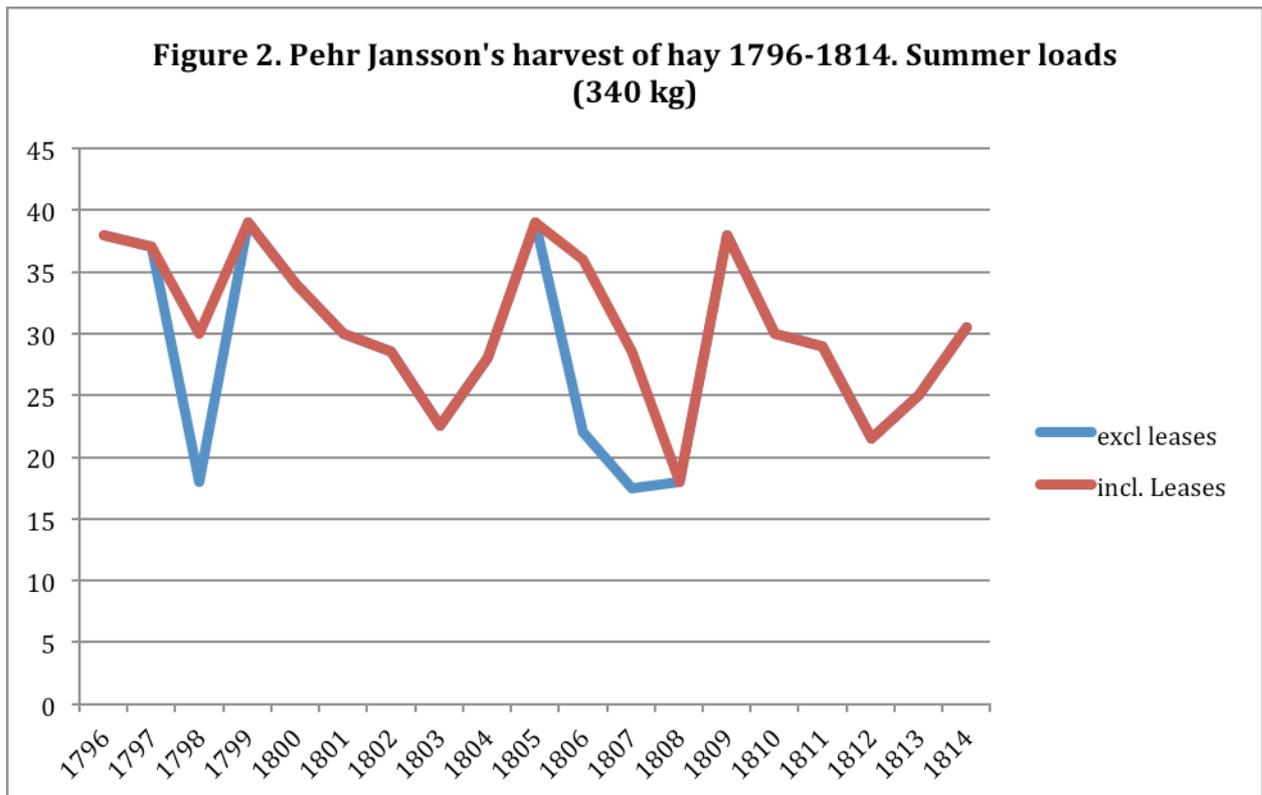


Source: Pehr Jansson's diary in Isaacson 1968.

The figures shows failing rye crops in 1798 and 1811 and failing crop of mixed grain in 1804 and 1813, but it is the bumper crop of mixed grain in 1806 that stands out. Adding the leased acreages that year, exclusively devoted to mixed grain gave a mixed grain harvest of 34 barrels that year, and a total harvest of 84 barrels. Apart from that positive surprise, it might be held that total grain harvest varied rather moderately (C.V. is in the range 29-34 for the three common crops).

The fodder supply varies in a much more precarious way. Pehr accounts for the total harvest of hay (in summer loads, which may be approximated to 40 *lispund* or c. 340 kg³²), but he also notes the number of loads from each meadow or field (this is natural meadows, and not sown grass, clover was for example not sown). He also registers the loads of fodder from the lake – reeds and horsetails (*equisetum*) – as well as the collection of leaves. Moreover he sometimes bought fodder, hay and straw as well as chaff. In the years with the most affluent harvests (when he leased extra land), he on the other hand sold straw (but not hay). Most of the hay came from four rather large meadows. The harvest of the four principle meadows largely co-varies, so the different harvest areas did not really mitigate the impact of weather related fluctuations. On the other hand small amounts of hay regularly came from a large number of locations, some of which was not used every year. Figure 2 shows great fluctuations. A number of years most probably were precarious, namely 1798, 1803, 1806-1808 and 1812. Adding the leased land 1798, 1806-1807, only three years remain really troublesome 1803 1807 and 1812. The real hardship occurred in the spring the years after the harvest, thus in 1804, 1808 and 1813.

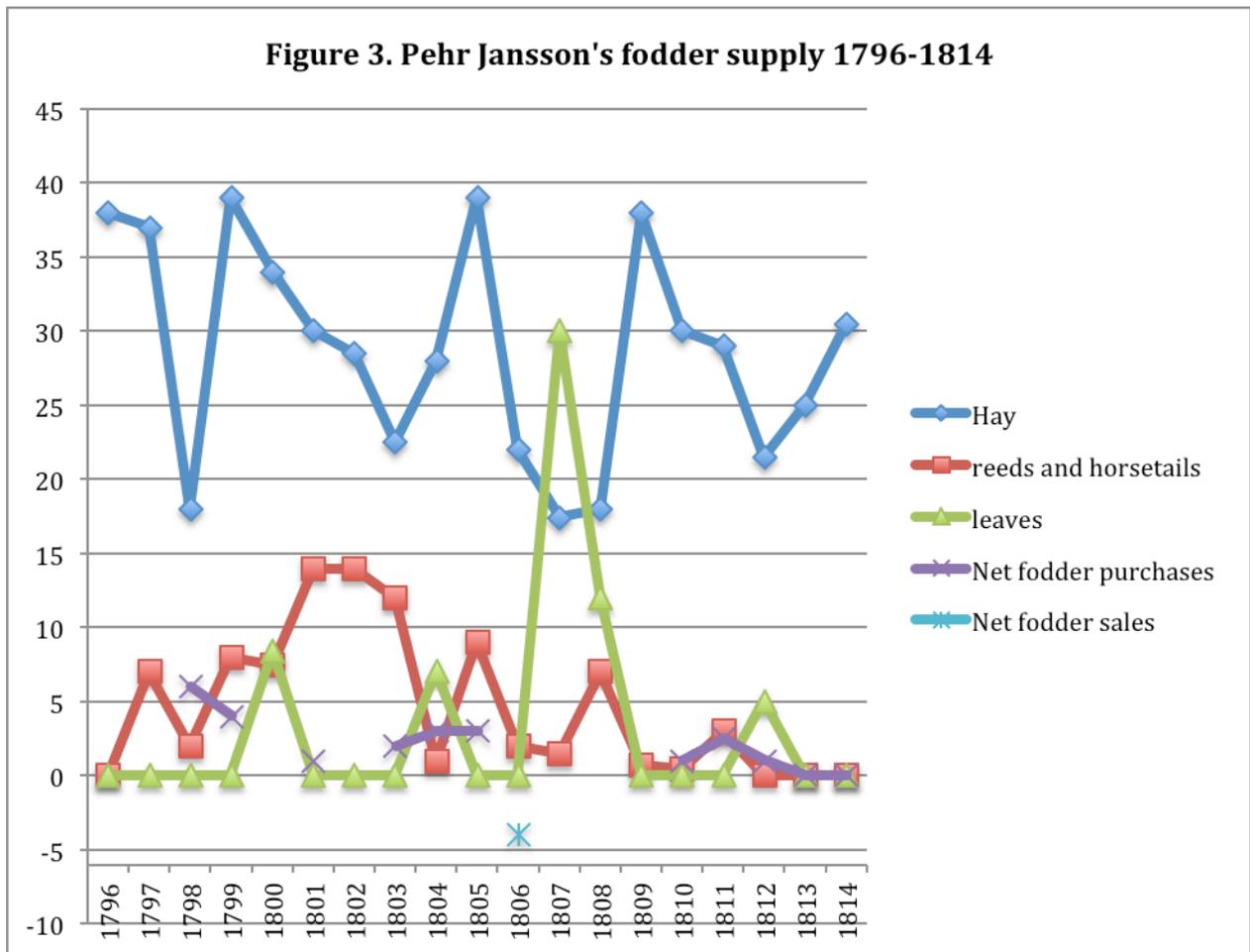
³² See information from Eric Andersson's diary commented further on in this paper.



Source: Pehr Jansson's diary in Isaacson 1968

The hay was stored in different barns, some of which were located away in the fields others at home by the farmyard. One indication of the fodder situation is the date when Pehr opened the spring hayloft. The earlier he had to resort to that loft, the more precarious a situation is indicated. Normally it was opened in March, in 1811 even in early April, but in 1804 it was opened on 1 February and in 1808 on 12 February, indicating weak hay harvests in 1803 and 1808. For 1798-1800 and 1812-13 there are no note about this. The spring 1804 seem to have been the worst period. Pehr notes in April that he mixed *sörpa*, a liquid mixture based on rye straw, which was hard to digest, for the horses.

To mitigate the variations the household collected reed and horsetails from the lake and sometimes also leaves. In figure 3 the loads of lake fodder and the scores of leave sheaves collected each year is displayed along with the net purchases/sales of fodder.



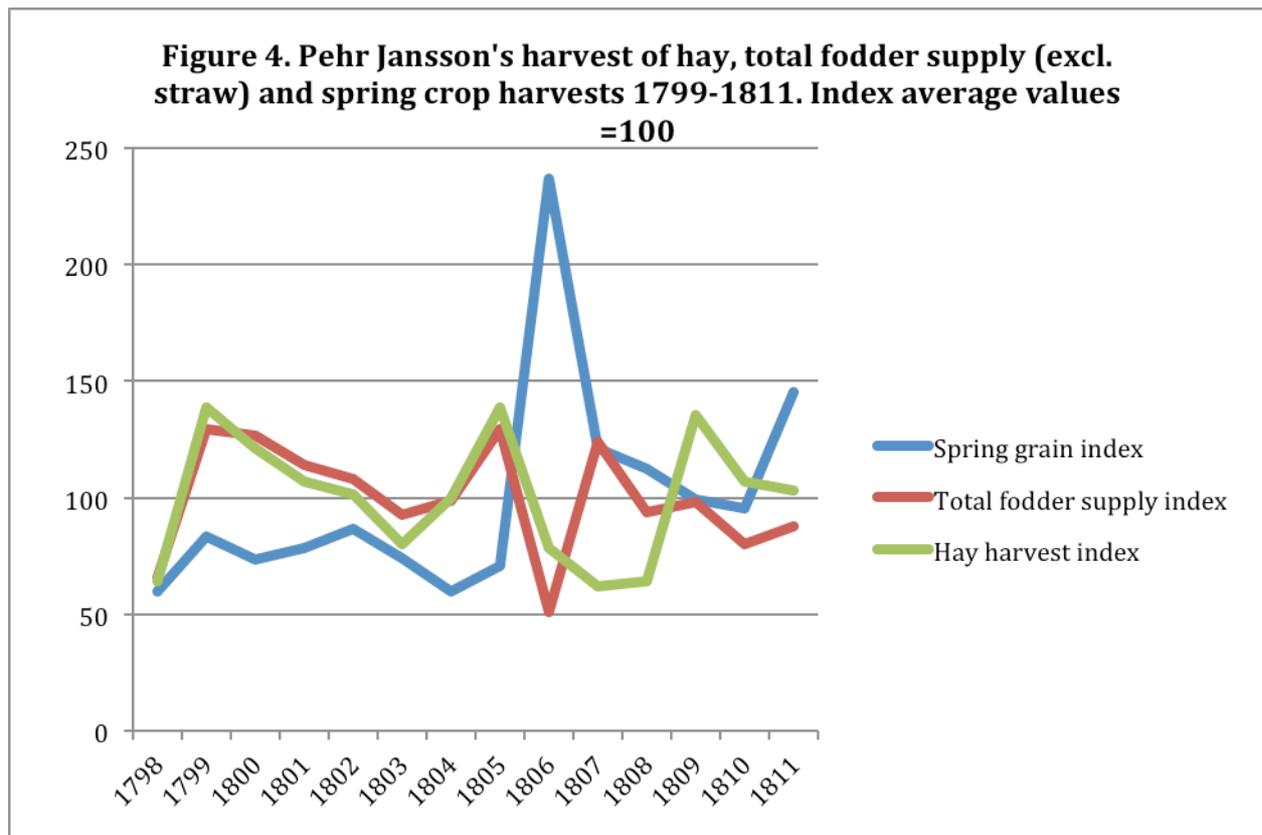
Source: Pehr Jansson's diary in Isaacson 1968

It is quite evident that the use of fodder from the lake, and in particular the collecting of leaves was complementary to hay, and resorted to when hay harvests were weak. Moreover net trade in fodder (hay, straw, chaff) was, as might be expected, related to the varying supply of hay.

The same crisis years remain, with one exception: Much fodder from the lake was collected in 1803, but none in 1804. Therefore 1804 suddenly stands out as an even worse year than 1803. Consequently leaves are collected in 1804 but not in 1803. Much leaves are also collected in 1807, 1808 and 1812.

To buy fodder was thus an obvious way of adapting to the variation, but it was not an easy way out: If Pehr's hay harvest was bad, it is likely others' in the neighbourhood also was, and therefore little hay was on sale and prices rose. Another way of evening out the ups and downs was to resort to feeding animals with straw (foremost straw from spring grains). The following figure shows the co-variation between spring crops and hay and also the co-variation between the sums of other fodder resources lumped together³³ and the harvests of spring grain (indexed). The index of spring crop harvest should be indicative of the supply of straw digestible as fodder.

³³ Figures are only indicative here as we have admittedly added apples and pears. Loads of chaff and straw is equated with loads of hay as is scores of 20 sheaves of leaf.



Source: Pehr Jansson's diary in Isaacson 1968

The harvest volume of spring crops and hay co-varies to some extent, but there are distinct exceptions. The hay harvest is weak 1806-1808, while the spring crop harvest is good 1806 (even exceptional) and 1807. There is a good spring crop in 1811 as well, while the hay harvest is declining for several years in the early 1810s.

Thus the fodder situation in the worst years was mitigated by the use of straw, reeds and horsetails, collecting of leaves and net purchases of fodder. It seems likely that hay (possibly along with chaff) was considered the best fodder that straw came next, then reeds and horsetails and lastly leaves. Anyhow, the impression of precarious fodder situation in 1803/04 and 1808/09 remains.

To conclude, the household of Pehr Jansson was partially commercialized. The bulk of what was consumed was produced on the farm, but the household managed to sell small regular surpluses of animal products (meat). The household also traded in grain and sold vodka. It is probable that this grain trade provided most of the monetary incomes of the household. Therefore the household strove to increase its supply of grain. Grain harvest variations were moderate in the years 1798-1813. An alternative was to lease more land in order to get more surplus to sell, another was to simply buy grain. The household's welfare was, however also dependent on the animal husbandry and the farm practices presupposed draught power and manure. Thus the fodder supply was crucial. The hay harvests varied strongly from year to year, with a couple of seemingly severe crisis years in the period. The household's strategies to meet to these variations were multiform. 1. It tried to lease more land in order to secure supply; 2. It resorted to supplementary fodder of lower quality: straw, reed, horsetails and leaves – such resources were less used in good harvest years; 3. It acted directly on the market and bought fodder. At no point does it seem that the precarious fodder supply necessitated any un-normal extent of slaughtering to make the fodder suffice.

The disturbance during the 1840s

The 1840s was a turbulent decade with revolutions and rebellions all over Europe. The whole society was on the move with social groups questioning the old order. 1845 was a year of bad harvest in many European countries. That year was followed by an economic recession with famine. Well known is the bad harvest of potatoes on Ireland with a high mortality and mass emigration. The bad years of harvest and recession was followed by riots and revolutions in cities like Paris, Berlin and Budapest in the beginning of 1848.³⁴

Also Sweden suffered from bad harvests, recession and riots during the 1840s. Especially the agricultural districts in central Sweden were hit by rain and bad harvest of cereals and potatoes.³⁵ The potato pest was spread in many Swedish districts, and remained from then on more or less endemic. Both 1844 and 1845 were harsh years in Västmanland's County. The County governor wrote in full detail about the difficult situation in his five-year report to the Swedish Government.³⁶ Because of rainfall the crop became to "a great deal damaged" in 1844. The seed of new rye and new wheat in the autumn that year were "not good" and the seed of old rye and wheat "could not be sown in enough quantities". The failure of the rye crop could be foreseen already before midsummer 1845. The spring-sown corn had in May grown good but owing to continuous drought the hope for a middling harvest had faded away by the end of June. The peasantry in some of the parishes announced in the middle of June the problem of "bread and butter" to the county governor. The parishes in Torstuna hundred as well as some of the neighbour hundreds were stricken by the drought and the situation worsened during the end of summer and the beginning of autumn. Relief means (loans without interest and direct money transfers without obligations to repay) had to be granted a couple of times to the worst stricken parishes during the second half of 1845. The money was distributed through special relief committees. Merchants in the harbour city of Västerås took upon "in prescribed short time" to get settled amount of cereals to their magazines which could be sold at current prices to inhabitants in the County of Västmanland. In addition to the 223 000 Riksdaler Banco the Government granted up to the beginning of 1846 about 45 400 Riksdaler were on a voluntary basis collected in Sweden and sent to the needy parishes in Västmanland. Furthermore, in 1845 the peasants were granted respite with their taxes and work for the many unemployed had been arranged. To provide work for the unemployed the Government organised large relief work-projects as road works, lowering the surface of lakes and cultivation of bog lands.

The Governor wrote rather proud in his five-year report that the "deserving" help from the Government and the Swedish people had met the need among the destitute people in the county of Västmanland. The farmers got enough seed for sowing both during the autumn 1845 and spring 1846 and grain for baking bread were distributed. People could survive up to the new "favourable harvest" and "the begging was not very much exceeded" more normal years.

The five-year report 1843-1847 from the County governor of Dalarna does not indicate disturbances more than the usual ones. "...bad harvest and injurious trade condition, which the county not infrequently is subjected to..." Distress was common, especially in the northern woodlands. From the 1830s measures had been taken to mitigate the emergency (relief expenses fund, relief work, and other kind of poor relief). The official adjusted county market prices on cereals, however, indicates that 1845 also in Dalarna must have been a year with a bad harvest. The price of one barrel of rye was more than 50 percent higher than the previous

³⁴ Hobsbawn 2000.

³⁵ Utterström 1957, pp. 388-389.

³⁶ BiSOS, Befallningshavandes femårsberättelse 1843-1847, Västmanlands län.

year, while the prices of barely and oats were about 70 percent higher. Furthermore, the prices of these three important crops remained high in 1846 and 1847, even though they fell somewhat.³⁷

The five-year report from the county of Västmanland has a long description of the bad situation and what has been done to relieve the need. The bad harvests hit the population in some parishes very hard – and to some part this explains the price increases in the neighbouring county of Dalarna, as some of the Västmanland grain was sold there. 1845 this was not possible.

Torstuna during the failure of crop 1845

The local sheriff Ekblom in Torstuna gave a more detailed and not as positive report about the situation as the county governor in Västmanland. The decade started, he writes, with bad years of harvest and culminated with the failure of crop in 1845. The rain fell heavily during the late summer 1844, the “rye malted the spring-sown corn was nearly useless, the potatoes were stricken by sickness”. 1845 was a dry year “and after all rain that fell in the previous year the ground became nearly impossible to cultivate.” The situation worsened in the beginning of 1846 owing to the farmer’s amount of debt. Shortage of money to pay credits aggravated the economic crisis. Salaries fell when the farmers could not afford to employ servants. The prices on farm property collapsed and many farmers went bankrupt. Relief work started in Torstuna.³⁸

The difficult situation is reflected in a diary written between 1844 and 1859 by Anders Pehrsson in the village Myrsjö in Torstuna hundred. The farm was located in a grain district but had a rather diversified production even though rye and mixed crops were cultivated for the market. Sweet water fish, butter, pork, beef and mutton were other products that went to the market.

The diary is rather special. Anders wrote daily notes mostly in verse with subtle framing, often with reflexions about people around him. He was born in 1781, married with Anna Jansdotter. Together they had a son, Anders. At the time when the diary starts the farm had been taken over by the young son Anders and his wife Elisabeth, in the diary named Lisa. The young ones also had a son. The old couple Anders and Anna lived in a small cottage with household of their own. The retirement contract gave the old parents right to a stipulated quantity of food from the farm. The parents of the young Anders worked almost daily on the farm, helping the young couple. That’s why the farm had no salaried servants. The diary gives much evidence of daily quarrels about goods and advantages as well as about work efforts and organisation of work. The conflicts between the generations worsened after the death of young Anders. These conflicts stem from different temperaments; different views how a farm should be managed, and how the available resources should be used. It was a conflict between an old man and a younger woman married into the farm, with another kind of living than the old couple. During the years of bad crops the quarrels about the use of the scarce resources is well reflected in the diary notes.

Anders Persson’s notes during 1844 1845 and 1846 are written in a low voice with few poems. He is reticent about the problems in the neighbourhood and despite his role as superintendent of the parish magazine he did not write about the withdrawals, even though they must have been many. Instead he made notes about the farm work and how to feed the cows and economize with the limited resources.

³⁷ Kongl. Maj:ts befallningshafvandes uti Stora Kopparbergs län, femårs-berättelse för åren 1843-1847.

³⁸ Ekblom 1872, pp. 11-13.

During these years of famine the religious riots in Torstuna culminated. A young man with the name Erik Jansson was the unifying force. Anders was well-informed about this religious disturbances; a couple of times he was called as a witness in the parish hall. The maids throw their religious book in the fire and farmhands told the priest that Good the father was too old. In 1846 the group called “erikjansarna” after Erik Jansson, the charismatic prophet, left Torstuna and moved to America where they established an utopian communist community with the name Bishop Hill (after the name of Erik Jonsson’s birth place). Among the emigrants was the neighbour family of Anders Pehrsson. Economic insolvency explained, according to Anders, in this case this move.³⁹

The old Anders also had a commission of trust in the parish, which in the beginning of the diary sometimes took a couple of days each week.⁴⁰ During the years of bad crops he had other things to do and makes notes about. In the diary we can, despite the low voice, follow the work and problems he had during the trying weather years in the middle of 1840s. In the middle of August 1844, after a late haymaking, he writes that had never during his 44 years as a farmer witnessed such a difficult year. “Water and dirt” delayed and worsened the work on the fields. In the autumn 1844 he wrote about the constant rain. It was difficult to gather the corn-shocks and it took long before the farm had got the crops in, with bad result. All work in the fields had to be done in wet clay. Seed for sowing was borrowed and the farm went into debt.

The rainy year was followed by a year of draught, interrupted with thunderstorms. Anders worried about the coming shortage of feedstuff for the animals. That is why he in the beginning of July tore bog moss to the animals. Furthermore, as the amount of straw was limited he harvested peat to the animals.

In the 19th century most rural people in Torstuna in Västmanland except the nobility and other big landowners, lived within narrow margins. Bad harvests and recession could easily lead to poverty and bankruptcy. The diary of Anders Pehrsson is permeated with the view that the resources had to be economized; never take out more than you need! He criticized neighbours who materially stood out. He expresses the old society’s view of the *bounded good*; those who take out too many resources do that at the cost of all others! If you have too much it might have to do with supernatural forces. Women were supposed to have such strengths, according to Anders. On the other hand, his hope that everyone should be careful with the resources was an expression of a wish to maintain the balance between the human need and the supply of natural resources. The failure of crops in the middle of 1840s clearly shows the fragility in the life of the peasantry.

It is not usual that peasants in their diaries explicitly wrote about moral matters as Anders Pehrsson did. Indirectly it is however possible to get information about the authors’ conceptions and points of view, as well as the living conditions. This can be seen in another diary from the same region as Anders Pehrsson. The author of this third diary was a former corporal, born 1791. His name was Anders Fasth and he lived with his wife on a cottage, a small farmstead. As a former soldier, about 55 years old, he received a small pension. In 1845 he married Lovisa Hägg who had been a maid in the household after the death of Anders first wife in 1840. The household consisted of three persons including a newly hired maid. Two related households were living nearby; Anders’ old father lived on his own and the son of Anders had quite recently established a household. The first grandchild was born in 1844.

³⁹ Flygare 2012.

⁴⁰ Flygare 2012.

Anders Fasth's household ran an intensive small holding with at least two cows and pieces of land, owned and leased, scattered in the village Boglösa. The household cultivated potatoes, rye, barely, wheat and mixed grain, all in small quantities. The figures Anders Fast has put in the diary do not reveal particularly bad years in the middle of 1840s, even though 1844 shows a decline in the crop with about 25 percent. In 1845 the harvest was on the normal level again. Anders Fast writes about what the family cultivated but he does not give exact figures or comment on the amount of harvest. In the middle of the 1840s he had to buy both hay and straw, which indicates narrow fodder resources in relation to the stock of cattle. Hunting for straw was much intensive in the winter 1846-1847. The cottage's household seems to have had a high self-sufficiency of vegetables, dairy products, cereals, and eggs and berries. However, this was not enough to meet the needs. Anders and Lovisa had to sell goods on the market. Eggs were most important, but they regularly sold cows, pigs, geese and on and off potatoes and cereals in Stockholm. In the middle of 1840s Lovisa regularly travelled to Stockholm in order to sell more than 1000 eggs. Some of the eggs were probably bought from other producers nearby and sold at a higher price in the capital. Anders and Lovisa Fast thus acted as intermediaries, a manner to survive in hard times.

However, in the diary of Anders Fasth there is little direct evidence of crop failures and severe disturbances in the middle of 1840s; this is more obvious in the diary of Anders Pehrsson. The Fasth's household had a very diversified production. Besides what was possible to receive from the cottage, and the small pension, he on and off sewed and sold clothes, cleaned and heated the church while his wife Lovisa wove to order. Through many occupations the household could balance good and bad years. One or two years with failure of crops were tough but possible to balance through savings and cautiousness and other kind of activities, possible via old social and market contacts. However, indirect, there are notes that are possible to interpret as consequences of a disturbance in the local society. In November 1846 the Fasth's house was inflicted twice within a week by burglars who stole food. The diary unfortunately does not say anything about how these disturbances influenced the living conditions.

The failure of crop 1867-1869

The end of 1860s is in Sweden known as "the last years of famine". The need was especially severe in the northern counties. In the north the crop failure was aggravated by the very early and long winter 1867/68, which meant that ships with grain from surplus regions in the south could not reach the northern ports, because of ice. People and cattle died of starvation while others left their homes and moved to a town or a village in other well-fed counties. On the national level the disastrous years 1867-69 initiated a long period of mass emigration from Sweden. National mortality rates were not affected but nuptiality seemingly was: never since the national data series started in 1749 was nuptiality lower than in 1868-70, there was also a clear fertility response to the crisis.⁴¹

Money was collected on a voluntary basis in Sweden and sent to the needy. The Government gave allowance and loans to the worst stricken regions.⁴² The county of Dalarna was one of eight counties, which received support from the Government. The inhabitants in this county were far from the worst suffered in Sweden but the inhabitants in the northern parishes suffered from hunger. Some of the parishes in the south of Dalarna did also receive smaller grants and loans in order to tackle to difficult situation. Besides money grants the county

⁴¹ *Historical statistics of Sweden* 1, 1955, table 28, p. 95.

⁴² BiSOS, Kungl. Maj:ts befallningshafvandes femårsberättelser 1866-1870, p. 25.

agronomist started an education program to teach the peasantry how to “bake bread of lichen”.⁴³

1868 and 1869 were also years of food shortage. In 1868 grants and loans were distributed especially among the people in the county of Dalarna. This surprised the county governor who in his five-year report wrote that loans and gifts were sent to, and distributed among those who were hit by starvation, despite the efforts in 1867. Bread was again baked with lichen added to flour. The tradition with bark bread was however not in use for humans any longer. The number of inhabitants in the county had increased with 800 from 1866 to 1867. During the coming three years the number diminished with nearly 2000 persons (1,2 percent) because of death and emigration. At the same time the population in the three small county towns increased.⁴⁴

The pattern of decline was the same in many other counties. During the years 1866 and 1867 the number of inhabitants in the Swedish countryside increased with nearly 60 000 and in the towns with 22 800 persons. The next two years of famine and initiated emigration the population diminished with 46 000 in the countryside and increased with nearly 10 000 in towns. The reduction of population was strongest in the west coast counties and the provinces of Småland and Värmland, two regions in the southern parts of Sweden with many small farms and large forests.⁴⁵

The 1867-69 crop failures as reflected in the peasant diaries

1. Folkare hundred, Dalarna

Three peasant diaries from Folkare hundred have been investigated. One is from a rather large farm in Hyttbäcken in the parish of Grytnäs. The second was written on a medium-sized farm in Strandmora in the parish of By, at the boarder of River Dalälven. The third farm, situated in the parish of Garpenberg, had the least arable land, but on the other hand it had a quite good access to forest.⁴⁶ All three farms were located in a region with mines and ironworks. This gave opportunities to earn money during the winter season through production of charcoal, transportation of iron ore from mines to blast furnaces and final products to the newly built stations along the railway line Gävle-Falun (inaugurated 1859). It was still some years to come before the railway line through the Folkare hundred was opened for heavy transportations. In the end of the 1860s most carriages had to be performed by peasants and horses during winter seasons when lakes and rivers were frozen and land was covered by snow. The opportunity to earn money through sale of charcoal and transportations of goods with horses and sleighs were dependent both on the international demand for Swedish iron and the competition among the peasants for this kind of work. Bad harvests increased the number of peasants who competed for the desirable freights and diminished the possibilities to earn much. During years with falling international demand for iron the prices decreased on charcoal and transportations.⁴⁷

The bad weather of 1867-1869 affected all three farms in Folkare, but in somewhat diverse ways and with different effects on the households. The spring of 1867 was cold and lasted very long. The small lakes and river Dalälven were frozen up to the end of May, three to four

⁴³ BiSOS H, Femårsberättelser 1866-1870, Kopparbergs län, s. 4-5.

⁴⁴ Kongl. Maj:ts befallningshafvandes uti Stora Kopparbergs län. Femårsberättelse 1843-1847, Stockholm 1950

⁴⁵ BiSOS A, Befolkningsstatistik 1869;

⁴⁶ Svenske 1987.

⁴⁷ Geijerstam & Nisser 2011.

weeks longer than usual. Erik Johansson in the village *Hummelbo*, Garpenberg parish, known as “Backåkers Erik”, wrote in his diary the last day of May that the whole month, “except the two last days, has been nearly winter cold, and much snow is still in the forests. It looks dark for the farmer, who neither can sow nor get pasture to the animals”. One week later he let out the cattle to grazing. The late spring put pressure on the household with Erik and his wife Charlotta (Lotta), a two years old son, one maid and one farmhand.

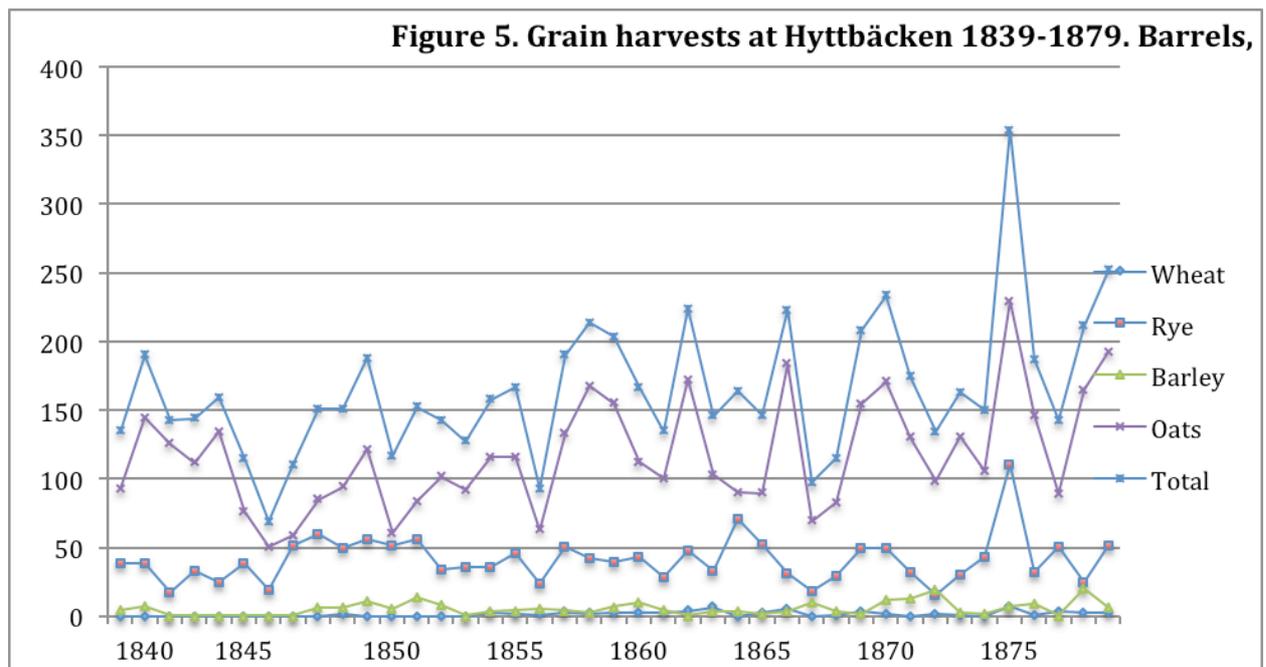
In the village *Strandmora* along the river Dalälven, Anders Ersson and his wife Christina on the farm named “Mattsesgården” had similar problems, which Anders made notes of in his diary. The 14th of May he writes that “the ice still covered lakes Besingen and Lisjön, no old people can remember such an unusual late year as this year.” He added that the price on rye, a cereal he usually had to buy, had gone up greatly, which worried him a lot. The cold northerly wind lasted up to the end of May, but the household (two adult men, one young son, and four adult women, including two maids) made the spring sowing in a short time, from the 25th to the 29th of May. The animals were put to grass at the 8th and 13th of June, two to three weeks later than normally.

In *Hyttbäcken* the farmer Anders Jansson and his wife Anna Stina had a large staff of labourers. With the farmer and his wife, the labour force included five grown-up men and five women. The household at that time had six children, of which at least one son and one daughter ought to have worked on the farm during summertime. Also in Hyttbäcken the spring was late in 1867. Sowings started the 25th of May and went on for a long period.

June and beginning of July 1867 were rainy. On the 28th of June, Anders Ersson in Strandmora, writes that the river stands high and will be even higher. “It looks only confused to get any hay from the lake meadow this year. No elderly person can remember the river so high in this time of year.” Two days earlier Backåkers Erik in Hummelbo wrote that “only some few ears can be seen on the rye”.

Hay-making and harvest started very late on all three farms, three to four weeks later than usual. Potato harvesting was about two weeks delayed. None of the three investigated peasant diaries provide enough data to give a reliable picture on the yield of hay and cereals during the 1860s. For Hyttbäcken, the largest of the three farms, it is however possible to construct time series of the yield of cereals. 1867 stands out as a year with a bad harvest, clearly the worst during the 1860s. Oats, the most important seed, and rye gave very low yields. Furthermore, from Hyttbäcken we have access to grain harvest’s data from a very long period, from 1839 up to 1879 showing that 1845 was even worse than 1867. On the other hand the harvest trend is increasing during the 40 years and was typically higher during the 1860s than 20 year earlier.

Also other years gave bad harvest, above all 1844, 1846 and 1856. The last year was on the other hand preceded and followed by good harvest years. So, according to the figures from Hyttbäcken, two periods during the four decades stands out as really bad, 1844-1846 and 1867-1868. This conclusion is most likely valid for the whole Folkare hundred, while the first period might had been worse in Torstuna.



Source: Hyttbäckendagboken, Nordiska museet, SBD 1.

If 1867 was a wet year the following year was very dry. The spring came early. Cultivation started by the end of April in Hyttbäcken and the first week of May in Hummelbo and Strandmora. Anders Ersson in Strandmora summaries the first sixth months of the year with the following sentence: “green Walpurgis night, brown Midsummer”. Backåkers Erik in Hummelbo wrote the last day of June that “the month has been unusually dry some days just heat, the grass completely grown and dried away – the spring-sown corn thin and the rye in some places precocious, it looks seriously for coming years... the prices of cereals and flour ... have gone up again – since the snow melted in spring it has rained only 2 or 3 times...” The summer hay-making and harvest was settled early and fast. In spite of the dry spring and early summer Backåkers Erik wrote in the end of August that the “month was warm in the beginning, as the three previous – but the weather changed around the 23rd so we have had some rain and cooler weather – generally (in the village, our addition) they have harvested the grain and finished the autumn sowings.”

Despite this somewhat more positive statement the notes during the autumn 1868 and in the beginning of the following year demonstrate that the supply of food for humans and cattle was scarce at Backåkers in the village Hummelbo. Spring came early in 1869 but did alternate between warm days and windy and cold days. This year’s crops were rather normal according to the notes in the diary. Still, the economy of the farm was poor because of a debt Erik and Charlotta had taken over from Erik’s parents in 1854 when they became masters of the farm.⁴⁸ The wet and cold 1867 and warm 1868 had not given Backåkers Erik and Charlotta a chance to balance the old, troublesome debt. It had rather increased. Measures were needed to reduce liabilities.

In Hyttbäcken the incomes from the farm went down during 1868 but were very low also in 1867 and in 1869. The decline was profound for cereals, lesser, and in 1868 not as grave, for livestock production, the traditional and important female sphere on the farm. In 1868 the cowshed to some part compensated the drop in cereal production. Not so in 1869. 1867 and 1868 are the only years in the period 1860-1874 this household bought cereals. In 1869 the returns from the meadows and fields increased but the incomes were still lower than normal.

⁴⁸ Götling 2002, p. 98.

In May 1868 the farmers in Strandmora, as probably in many other villages in Folkare – had problems as the level of the river Dalälven rose and sank many times. The lowland was regularly flooded and this delayed the sowing. June came with drought. By Midsummer, the 24th of June, Anders Ersson wrote in his diary that “it has not been a real soaker during the whole summer, not since we sow the corn The late sown fields are snow-white on the knob... everything is unusually feeble.” Especially the higher fields, he wrote when he summarized the year in December, gave a very poor and thin yield, it “was an unusually warm summer this year, we haven’t seen such a thing since 1826, the old people tells us, but the corn was despite this firm and pithy, but unusually little of everything...”

1869 gave a better harvest in Strandmora, “it became a prolific year, the first spring-sown gave a complete harvest but the late sown corn did not become ready, because of frost... Nowhere on the farm did the hay become good enough to eat “because of much wet... and difficult harvest-weather...” The meadows close to the lakes and river gave very poor yields of hay.

How did the households handle the failure of crops?

All three peasant households in Folkare experienced disturbances with sharp declines in the yield of hay, cereals and potatoes in the second half of 1860s. Since we have not access to reliable and figures for all three farms we are not able to say if the disturbance was harder on one or two farms or (nearly) the same on all three farms. The figures from Hyttbäcken shown in figure 1 probably give a good picture of the decline during the troublesome weather years, with 1867 and 1868 as the worst ones. Since the economic resources varied among the farms with Hyttbäcken as the large and economic stronger one and Backåkers as the smallest and poorest the behaviour during and after the disturbance varied.

All three households tried to survive during the years of disturbance through cutting in the expenses and substituting through other activities that gave incomes. This is obvious in the accounts from Hyttbäcken; Anders Jansson and Anna Stina “tighten the belt of the household” through diminishing the purchases. What else did they, and the other two peasant households, do to survive promptly and did the disturbance give birth to new behaviours in order to stand stronger in future?

In 1868 there are six notes about leaf picking in the diary of Hyttbäcken, and only one during the nearby years. Also in Strandmora the household gathered leaves in the autumn 1868. In the diary there is no information about this kind of extra fodder during the next few years’. In the diary from the small farm in Hummelbo gathering leaves was on the other hand a standard activity, mostly for women, from the end of August up to two or three weeks into September. The figures on the amount of leaves are not given but the number of days increased a little during the years of disturbance.

In the summer of 1867 it was an annoying lack of oats at Backåkers in Hummelbo. In July and in the beginning of August there are regularly notes about searching for oats in the local society. Charlotta, the housewife, was unsuccessfully asking for oats in the nearby villages. It was an obvious lack of oats everywhere. However, in the beginning of September Erik himself was able to borrow half a barrel of oats in one of the villages. In 1867 the harvest, after all, might not have been as bad at Backåkers in Hummelbo as in Strandmora and Hyttbäcken. Due to the varied landscape, with pastures and fields both on lowland, close to a lake, and higher up on hills it was partly possible to balance dry and wet years. In the cold and wet summer 1867 Backåkers could thus harvest hay and corn on the hills and in the warm year 1868 the yield was better near the lake. Besides, Erik as well as Anders Ersson in Strandmora, regularly gathered, reeds and grasses from the lake. In Strandmora the River

Dalälven occasionally spilled over and reduced the possibility to use this recourse, as in 1867. Backåkers Erik alone or with a helping hand from the household or village, used the possibility to fish in the nearby lake; they caught quite much fish every spring and summer. However, the lake and the land did not produce enough food for the Backåker household. Erik and Charlotta had to produce goods partly for the market in order to buy food. The diary has regular notes about prizes on various foods. For Backåkers it was essential to sell goods to get money for such purchases. The same was true for the two other investigated households in Folkare, but two varying degrees. For all three, charcoal was an important product, which required many workdays in the forest during winter seasons. But the price was not always satisfactory according to Backåkers Erik. He complains regularly over the price for charcoal and about ironmasters who every now and then bought too little charcoal from him because of the large supply, particularly during years with weak international demand on iron, as in the end of the 1860s. In February 1867 Backåkers Erik emphasized the importance of a stable delivery of charcoal, "... our chief income..."

Anders Ersson in Strandmora was also highly dependent on charcoal supplies and did probably increase the production and deliveries at the end of 1860s. Moreover, the household tried to earn money through more transportation of iron ore and other heavy loads from and to the ironworks. In the beginning of the years of disturbance he made many notes about transportation of heavy loads, but the weather was sometimes a problem. He summarizes the year 1869 in the following words: "In 1869 it was a weak snow-winter, weak for sleighing, very poor earnings ... in the beginning of February it became a large thaw, we couldn't conduct any transport within 14 days since the ground was snow free..."

For Backåkers Erik in Hummelbo the failure of crops was after all not so troublesome since the household to some degree could balance the outtake through land of different degree of moisture and temperature (this was partly also possible in Strandmora). The hay-making and harvest in 1867 and 1868 did however aggravate the economy. What to do? There are notes about women's work, such as weaving which was performed regularly and during many days. Our source does not tell us if all textiles were consumed in the household or if some of the textiles were sold, a possibility that can't be excluded.

Nevertheless, in the beginning of autumn 1867 Charlotta walked to the nearby ironwork and sold butter and eggs at a rather good price. In the beginning of January 1868 Erik consider to sell a horse which he soon also tried. It took a month with various attempts before he had found a buyer, in the diary with a quotation of regret due to the low price. He used the money to pay at the local inn, a place he on and off visit, drinking too much alcohol. Moreover, in the autumn of 1867 Erik bargained with a foreman at the neighbouring ironworks about a cupboard he wants to sell, a deal that was difficult to realize. At that time another way out of the economic problems had come up in Erik's head. His solution was to sell land to reduce the debt. This idea is mentioned already in January 1867 in connection with a demand letter from his largest creditor. The creditor gave Erik the proposal to settle the large debt via selling land to a neighbour. When the possibility to deliver charcoal also seems rather difficult because of an exchange of owner at one of the larger ironworks this idea grow even stronger. However, it took some time and much effort before this deal was settled. Besides, the money he received did not cover more than half the debt. Furthermore, he immediately leased this land from the buyer and used it as before except that he annually had to pay a rent.⁴⁹

Another opportunity during difficult times was to reduce the number of employed servants. That is what Backåkers Erik also did. In November 1868 the farmhand Anders, who had performed many responsible tasks during his tree years as employed, left the farm without

⁴⁹ It is difficult to decide when this business was settled. The topic is mentioned many times in the diary during

anyone taking his place in nearly one and a half year.⁵⁰ Similarly the number of maids in autumn 1868 decreased from two to one at Anders Ersson's in Strandmora. Here it took until October 1871 before the household hired another maid.⁵¹

Since the prices for meal, cereals and other necessary foodstuffs increased the households had to diminish the expenses, borrow money from wealthier people or find profitable work outside the farm. This was partly possible in Folkare owing to the many old ironworks, new sawmills and wealthier people. Farms with large forest resources could always produce charcoal and sell to the ironmasters and use their horses and sledges to perform transport services.

It is obvious that all three farms tried to compensate the yield losses through an increased production of charcoal and the selling of transport services. In short run this was not as important in Hyttbäcken as in Hummelbo and Strandmora. In Hyttbäcken only small incomes arose from transportations. More important was selling of charcoal from the farm's forest but this did not increase during the crisis, in fact this work diminished in 1867 and 1868. From the beginning of 1870s the incomes from this kind of work increased substantially, probably a way to arrange a stable income when the local iron industry went through a fast modernisation and expansion. At the same time the incomes from the sale of milk, butter and animals – the female sphere – went down after the disturbance. This is a bit surprising, since this happened about the same time as a dairy was opened nearby Folkare and while the demand for milk products increased in the wake of the industrialisation. The forest became a more important source of income in Hyttbäcken when the demand for charcoal and timber increased. In 1873 Anders Jansson was able to sell timber with good profit to the railway construction.

Moreover, he compensated the losses from the farm through increasing the official duties in the local society. This was indeed not an opportunity for everyone, but for Anders Jansson in Hyttbäcken. He was a trusted lay assessor who during the years of disturbance was chairman of the parish council. The revenue from the work for the municipality increased. In fact, in 1867 and 1870 he earned more from this kind of work than from the production of charcoal. In 1869 this income was only slightly lesser than the earnings from selling charcoal. From the beginning of 1870s the income diminished below the level before the disturbance.

2. Västmanland County

No diary from Torstuna hundred has been studied for the crisis 1867-68. Instead a diary with fairly detailed harvest figures from Medåker, a parish some 200 km further to the west, but still north of lake Mälaren have been used. The diary from the medium size farm Väster Tveta, was written by Erik Andersson, born in 1831. It starts in 1851 when Erik still lives with his siblings and widowed mother on a neighbouring farm, Sör Tveta. Already by then, however, the family cultivated the Väster Tveta holding. Erik married Kajsa Lisa from another village in the area and they set up a household of their own in Väster Tveta in 1854. Later they bought a lot in Sör Tveta, and by the end of the 1860s they had access to a lot in Kajsa Lisa's home village and a lot in another village in the neighbourhood.

We have concentrated on the period 1864-71, in order to cover the crisis years. At that time the household consisted of the married couple, four sons, out of which two approached working age, and a younger daughter. However, the diary bear witness of an intensive cooperation between neighbours and not least among relatives. Therefore the household/farm had access to a substantial amount of low cost labour (kinship labour) on top of the family and

⁵⁰ Garpenbergs kyrkoarkiv, Dalarnas län. Husförhörslängder, A I: 14, 1863-1872. Riksarkivet/SVAR.

⁵¹ By kyrkoarkiv, Dalarnas län, 1866-1875. Riksarkivet/SVAR.

the hired farm hands. The farm also leaned on the more or less regular (paid) labour from 1-2 persons belonging to the group of landless in the parish.

In addition to the arable land the Tveta family had access to some forest, from commons, which had recently been privatized in the enclosures. The household used these resources and the labour resources to develop a diversified market oriented economy. In the late winters (February, March) the young Erik Andersson took grain (mostly rye) in commission and delivered by sledge to the small borough of Kopparberg, in the ironworks' and mining area, roughly one day's travel to the north. In return he transported pig iron usually for 45-50 öre per *centner* (42,5 kg) and delivered to the close-by town of Arboga. By the late 1860s however, the farm was more dependent on selling its own produce. Moreover, a market outlet for oats seem to have opened in Arboga, and the household sold substantial amounts of oats (but also rye) in Arboga, while hay and straw was still delivered to the iron making area. Erik, Kajsa or other members of the household normally went at least once a week to Arboga (a short trip with return the same day), or to the market in the town of Köping. They bought necessities and sold clover and timothy seed, firewood, butter, veal, beef, live pigs and sometimes cattle. However grain was the most important marketed item.

Erik's diary does not offer subjective statements about weather, harvests, economical or personal problems, but the impact of the crisis years of 1867-68 on the household's situation and behaviour may be traced in three ways: by checking the harvest figures; by checking the notes on the timing and content of the field works and by a study of how the household related to the market, i.e. to what extent the structure of its sales was altered during the crisis years.

Harvest figures are largely deficient before 1865. There is information of the number of sheaves of oats and rye, from each field but figures are not fully consistent adequately summarized and complete. Moreover we get data on the number of barrels threshed (the household used an oxen driven threshing machine in cooperation with neighbours), but there are not always any proper final accounts. From 1865 and 1866 respectively data for rye and oats are available. From 1867 to 1870 harvest figures are seemingly complete Harvest figures are summarized in figure 1:

Table 1. The grain harvest of Erik Andersson's household in Medåker 1865-1870 barrels of 146,6 litres.

Year	Wheat	Rye	Oats	Barley	Peas	Grain total	Rye and Oats
1865	na	83.00	na	na	na	na	na
1866	na	58.00	83	na	na	na	141.00
1867	3.00	25.00	103.00	8.00	1.75	140.75	128.00
1868	5.00	60.00	56.00	1.25	1.50	122.75	116.00
1869	7.00	110.00	94.00	3.00	6.00	220.00	204.00
1870	10.00	78.00	130.00	8.00	6.75	232.75	208.00

Source: Eric Andersson's Dagbok, SBD 167, Nordiska museet.

Clearly both 1867 and 1868 stands out as bad years, the former for winter crops (rye and wheat), the latter for spring crops, most notably oats. This is in line with the general picture in the district provided by the statistics collected by the county agricultural Society. Weather in the area was wet and cold in the autumn of 1866, and this delayed the sowing of winter seed, sowings were smaller than normal. Spring in 1867 was late, wet and cold and sowings were delayed. Harvesting was also affected by persisting wet weather. However the autumn was dry and winter grain sowings seemed to work out fine. Spring in 1868 was early and April and May was rainy, helping the growth of plants. However, from then on, as in Dalarna, a persistent drought affected the harvest, notably of spring grains and grass for haymaking.⁵²

The most dramatic crop failure in Väster Tveta concerns rye in 1867. However, it must be noted that this household probably had wide margins although it might be questioned if 25 barrels of rye was really enough for domestic consumption when the obligations of delivering grain to the priest (tithe) and to relatives (retirement contracts) had been fulfilled. But provided that other grains (oats) could be used as supplement and given that the household could get monetary incomes from other products there should not have been an acute problem.

Besides grain the harvest of winter fodder, normally hay but also oat straw, and occasionally leaves were of importance, both for the animal husbandry on the farm and for marketing. There is no complete figure of the number of animals on the farm, but scattered notes in the diary makes clear the household held six oxen and one horse, occasionally two. If the stock of animals had the same composition as in the parish at large⁵³, six oxen implies that the farm held two horses, perhaps one bull, 12 cows, six heads of young cattle including calves, six sheep and three swine. From sales figures however, it seems likely the Tveta household held more pigs.

Hay was normally harvested from mid July to early August. Figures are provided from separate fields but they are mostly inconclusive. For 1864, they indicate a total harvest of 90 cart loads (*lass*) of hay. Erik sold hay by weight and normally the weight of one load ranged from 40-50 *lispund* (à 8,5 kg), and thus 340-425 kg. The 1864 hay harvest should thus have been 31-38 metric tonnes. This was hay from sown grass on the arable, hay from meadows played little role for Erik's household and indeed in Medåker parish at the time.⁵⁴ The diary talks of several "meadows", but it is clear that these were already transferred to arable land the term "Meadow" (or *äng* in Swedish) is used merely to identify a particular field. It is also noted regularly that clover or timothy is sown in to the growing rye (both in early spring and in late autumn). However clover was also sown for harvesting seed grain, which was marketed. This clover was harvested (and threshed) very late in the autumn and is not counted in the total hay harvest figures. It is likely that this added only marginally to the fodder resources. Straw was more important. Only straw from spring grain (practically only oats) was used as fodder, and this fodder resource was thus proportionate to the harvest of oats.

For 1867 there are not usable volume figures for hay, but it is noted that haymaking started by end of July, thus much later than usually. However 1868 should have been a more problematic year for hay, due to the drought. Haymaking started 13 July, which was normal. It ended by 5 august, although the seed clover was harvested only in mid October. Approximately 60 cartloads of hay seem to have been harvested, that is roughly two thirds of the 1864 harvest. An indication that the situation was somewhat pressed is that the household

⁵² BiSOS N, 1867-1868

⁵³ BiSOS N, 1870.

⁵⁴ Cf. BiSOS N, 1865-71.

collected leaves. On 13 September 1867 12 *tjog* (scores of 20 sheaves) of leaves were collected. In 1868 131/2 *scores* were collected on the lot at Gålåta 6 of August and 2 cart loads of leaves were fetched in Gålåta in February 1869. Moreover it is noted that the household collected “a little” leaves, in the week 12 to 17 September in 1868. Notes on collection of leaves were rare in this dairy, but occurred also in 1864 (10 *tjog* on 17 August) and this might indicate that the hay harvest of 1864 was *also* less than normal. There are no regional figures for hay harvest to compare with, but as hay was a voluminous good, which normally could not be profitably transported very far, regional hay price figures might rather well indicate regional harvest volumes. Officially adjusted market prices collected by end of years show very small variations in hay prices for Västmanland county in the 1860s, with two exceptions: Prices were very high in 1868 (58 % higher than the average for 1860-69) and very low in 1869 (27 % lower than the average for 1860-69)⁵⁵. Thus a very bad hay harvest is indicated from 1868, a good one for 1869, whereas nothing speaks of any major fluctuations on county level during the rest of the 1860s.

To sum up, harvests were bad for rye in the wet year of 1867, but rather low also in the dry year of 1868. Harvest of oats and hay were very bad in 1868.

The sowing of spring grains, oats and barley normally started in early May and was finished around 20 May. Sowings were significantly earlier in 1869 and later in 1867. In many other places in the district it was reported that spring sowings were not finished until mid June. Winter rye was sown from late August and winter wheat from mid September. Autumn sowings started early in 1867 and ended early the following year. With some exceptions it is possible to trace the number of barrels (à 146,6 litres) sown. See table 2:

Table 2. The grain sowings of Erik Andersson’s household in Medåker 1864-1870. Barrels of 146,6 litres

Year	Wheat	Rye	Oats	Barley	Rye and oats
1864		na	13.000	0.250	na
1865	0.750	9.500	14.750	na	24.250
1866	1.000	8.000	11.000	na	19.000
1867	0.750	8.625	na	1.625	na
1868	1	8.875	16	0.500	24.875
1869	na	na	11.500	1.000	na
1870	1.375	11.500	19.000	0.750	30.5

Source: Eric Andersson’s Dagbok, SBD 167, Nordiska museet.

⁵⁵ Jörberg 1972:1, p. 209.

This enables the calculation of yield-to-seed ratios (table 3).

Table 3. Yield-to-seed ratios for different crops at Väster Tveta 1864-70.

Year	Wheat	Rye	Oats	Barley
1865		8.7		
1866		7.3	7.5	
1867	4.0	2.9		4.9
1868	5.0	6.8	3.5	2.5
1869			8.2	3.0
1870	7.3	6.8	6.8	10.7

Source: Eric Andersson's Dagbok, SBD 167, Nordiska museet.

For the significant crops, rye and oats, the low yields for 1867 and 1868 respectively stand out. Low total harvests these years were thus not a result of reduced sowings but of bad yields. Moreover, table 2 indicates that the rye sowings in 1867 (producing the harvest of 1868) was not notably affected by the bad harvest of 1867. To some extent "old rye", that is, rye harvested earlier, latest 1866 was used for the sowings. On the other hand, the sowings of oats in 1869 was *possibly* affected by the failing crop of 1868.

There is little documentation in the diary of actions specifically responding to the crisis, at least as land use is concerned. The notable exception is the collecting of leaf fodder in 1867 and 1868 indicating that in Medåker fodder was – despite fodder cultivation on the arable – still a weak point. Tentatively it is possible to conclude that the household did not reduce its stock of cattle in 1868/69 despite the bad harvest of hay and of straw. In Medåker parish at large however there was a 12,5 % reduction in the number of milk cows held by end of 1868 compared to 1867 and a trend of increasing number of cattle was temporarily broken.⁵⁶ It seems likely that Erik Andersson's households had margins enough to support the cows and horses with hay and oats, while the sheep in bad years might have had to get on with leaves during winter.

The bulk of what the household consumed (or the raw material for these goods) were produced on the farm – milk, butter, pork, beef, veal, mutton but also wool and flax for textiles, hides for leather and ultimately shoes and furthermore turnips, carrots and potatoes (although a few barrels of potatoes were often bought). Of consumption goods in particular salt, herring, coffee and sugar stands out, but quantities are small. Diversification meant that the household sold surpluses of various goods, but did not lean on any one particular good. It is likely that the crop failures, which were partial, affected at the same time affected the household's market behaviour, altered the composition of its sales, and also reduced total sales. Table 4 lists the sales of major items in household 1864/65 to 1869/70.

Table 3. Erik Andersson's household's revenues from sales 1864/65-1870/71. Major items. Riksdaler

⁵⁶ BiSOS N 1866-71.

Year	Rye	Oats	Hay	Straw	Meat	butter	Live pigs	Total
1864/65	65	68	72	8	340	5	17	773
1865/66	298	222	60		58	5	0	939
1866/67	118	20	166	44	55	20	68	888
1867/68	0	137	22	49	36	4	50	379
1868/69	194	58	0	360	35	7	20	941
1869/70	124	170	115	18	82	0	51	800

Source: Eric Andersson's Dagbok, SBD 167, Nordiska museet.

It is obvious that the failing harvest of 1867 affected the monetary income of the household. Admittedly the oats crop was substantial and rather much oats could be sold. But the regular surplus of rye had vanished and there seem to have been little hay to sell as well. In 1868, when the rye harvest was affluent, while the harvest of hay and oats failed, incomes are kept up by a single sale of a large post of 10,2 metric tonnes of straw, without which the revenues that year had also been far below average. The household thus made use of the steeply rising fodder prices in the face of bad hay harvests in entire mid Sweden. They sold the straw for 35,29 riksdaler per metric tonne in Stockholm. The officially adjusted market prices attest that the price of fodder straw in Stockholm county rose from 14,70 riksdaler per tonne in 1865 and 1866 to 23,53 riksdaler in 1867 and 35,29 riksdaler in 1868. Moreover prices in the Stockholm area were almost exactly twice as high as those in Västmanland County where Eric lived.⁵⁷ This made the transport of this bulky good worthwhile, for once.

It seems normal for Erik's household to retain roughly 80 barrels of oats and 50 barrels of rye for domestic use and for the regular deliveries to the church, to relatives with retirement contracts and to landless people or workers with marginal access to land, such as soldiers or crofters who regularly or occasionally worked on the Tveta. Those persons also often received hay and straw. Still, more oats seemingly could have been sold in 1867/68, when the rye crop failed, but perhaps there was some complementarity between the two grains on such an extreme occasion, so that more oats were retained for human consumption when the rye harvest did not suffice. Barley, wheat and peas were sown in small quantities and normally only for domestic consumption. Sales of meat, live pigs and butter were regular and steady, but not as significant as the sales of oats and rye. From 1869 to early 1871 some charcoal was sold, not to ironworks, but to local blacksmiths. Firewood was also regularly sold but in small quantities.

It is evident that the household compensated for the harvest failures foremost via the market. The farm was commercially well located with access to the iron making areas in the north and wider markets via the ports in the nearby towns of Arboga and Köping. The diversity of resources was used to counter misfortunate harvests as those of 1867 and 1868. Normally the household sold foremost oats, rye and hay. In 1867 the sales of oats increased as there was

⁵⁷ Jörberg 1972:1, pp. 221, 223.

little rye and hay to sell, and in 1868/69, when not much else at all was left to sell, the household profited from the high fodder prices and sold off straw (presumably from the bumper oat crop of 1867). On other occasions the sales of charcoal could be quite substantial, and the small revenues from meat, live animals, (cows and oxen irregularly, pigs regularly), butter, hides, clover seeds, charcoal, taken together was quite as important as the grain sales. In all likelihood the household had rather wide margins. It was socially and economically resilient thanks to its diversified production structure, its intensive market connections and its ability to shift focus from one major item to another when something failed. However the crop failure of 1867 left the household with much lowered monetary incomes, the Tveta family was not un-affected.

Conclusions

None of the studied households were unaffected by the fluctuations and weather related crop failures. For some of them, most notably Backåkers Erik's household the situation turned very problematic. Others had distinctly wider margins and the final effect was rather mildly reduced incomes.

It is clear that the 1867-68 crisis was much more severe in Dalarna than in the lake Mälaren valley while the opposite is true for the 1844-45. In Torstuna in particular, rather extreme social, cultural and religious unrest followed on the crisis, and it culminated with the emigration of the group of dissenters to "Bishops Hill" in the United States. It is not likely that this was solely "caused" in any simple way by the crisis in itself. Rather the crop and resource crisis, which did cause massive unemployment, bankruptcies etc. functioned as a catalyst blowing up the dimensions of latent contradictions, both on household and societal level. To some extent this is evident in the Myrsjö diary where the gender/generation conflict, more or less permanently taking the form of an intra household fight for fodder resources, was aggravated in the crisis years. Clearly the survival and resilience of such households are threatened in such situations and it is not far fledged to suppose that the inner conflicts of the households, as well as the social turmoil between them spilled over and affected land use performance.

Most types of actions listed in the introductory part of the paper were utilised by the households in order to mitigate the impact of weather related crop failures and adapt to fluctuations. Both Backåkers Erik and Anders Ersson in Strandmora temporarily reduced the hired labour force to reduced costs. While there are no clear examples amongst the diaries of households reducing the heads of cattle in response to the problems acquiring winter fodder, all of them to some extent resorted to the gathering of crisis fodder from outlying land. They all collected leaves and/or reed and grasses from lakes. In some households, like the one in Hummelbo, the resort to such fodder was recurrent- it was resorted to even in "normal" years", although Backåkers Erik had an advantage in the quite widely differing altitude of his fields (some dry, some wet). In other households the resort to such fodder was seemingly a truly crisis adaption and in one case, Vittinge in the early 19th century it even seems as if the author felt a shame to report in his diary about the gathering of leaves – he actually wrote these notes using runic language that very few people would be able to read.

Backåkers Erik also tried to get order in his crisis-stricken economy by selling some land and renting it back. This seemed a rather short sighted solution which in fact in the long run probably contributed to the threat of the integrity of the household. Conversely Pehr Jansson in Vittinge strove to increase (temporarily or permanently) his land resources. These efforts were probably not related primarily to the harvest fluctuations, rather it gave him opportunity to receive more grain for his trade activities. However it did serve to mitigate the fluctuations

of the fodder supply, which was the weak point in his economy. Similarly the Tveta farmers in Medåker used family relations to systematically increase their land resources. This was a long term expansion strategy, but it arguably left them less and less vulnerable to crises.

Clearly several of the diary writers tried to change their behaviour vis-à-vis the market. One might even say that market related relations was the chief way by which households tried to accommodate to the fluctuations. Backåkers Erik sold fish and tried more or less desperately to sell charcoal and offer transport services, while Charlotta wove and walked to sell egg and butter at a nearby ironwork. The Tveta family was very market oriented and diversified. They combined transport services, sale of hay and straw, meat, butter and live pigs, rye and oats, and occasionally also charcoal in varying proportions depending on the supplies they could mobilize and the prices offered on the market. They also actively searched for outlets on rather distant and alternative markets for their products.

Finally there is no direct evidence that the diary households asked for, or received help in the form of gifts or exchange of work duties from neighbours which was directly related to the crises. But it may be held that pooling and exchange of labour resources at least in some of the cases were part of the system within which they were normally acting and this kinship and neighbour related labour pooling probably helped the individual households to mobilize the products of alternative land resources (from forests and lakes) in order to mitigate fluctuations and survive crises. The most clear-cut examples of this are from Vittinge in the first decade of the 19th century and from Medåker in the 1860s. In Medåker in particular, the cooperation between neighbours, relatives and landless people (who occasionally were offered some relief in the form of grain and straw fodder) was particularly developed. In Myrsjö, Torstuna on the other hand, the relations between households, at least in the 1840s seem to have been more strained.

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