Important findings of the sampling survey conducted on farms in the CR under Phare ACE project

Hlavní poznatky výběrového šetření v zemědělských podnicích ČR v rámci projektu Phare ACE

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Abstract: The paper is based on a special sampling survey of farms that was conducted under EU PHARE ACE research project P97-8158-R "Micro-economic Analysis of Farm Restructuring in Central and Eastern Europe" in 2000 in one of the NUTS 2 regions of the CR – in the South-East region. The region involves two administrative regions – Vysočina and South Moravian NUTS 3 and consists of subregions with different natural and market conditions (of hilly, lowland and suburban type) representing the conditions of agricultural production in the Czech Republic as a whole. The main results of the survey focused on farms of three different categories are presented: farms as legal entities (separately agricultural production cooperatives, joint stock companies and limited liability companies), officially registered individual farms of different size (formally licensed to business activities) and unregistered individual farms including small farming units – households with self-sustaining agricultural production.

Keywords: transformation process, farm restructuring, farm categories, individual farms, household members, farm as legal entities, financial situation, realization of products, production industries, prospects of production expansion

Abstrakt: Příspěvek je založen na speciálním výběrovém šetření farem v jednom z regionů (NUTS 2) ČR – v regionu Jihovýchod, uskutečněném v roce 2000 v rámci výzkumného projektu EU Phare ACE P97-8158-R, „Mikroekonomická analýza restrukturalizace zemědělských podniků ve střední a východní Evropě (CEEC)". Vybraný region zahrnuje dva kraje (NUTS 3 – kraj Vysočina a kraj Jihomoravský) a skládá se z podoblastí s odlišnými přírodními i tržními podmínkami (kopcovitého, nížinatého a příměstského typu), které reprezentují podmínky zemědělské výroby v České republice jako celku. Příspěvek obsahuje hlavní výsledky uvedeného šetření u tří odlišných kategorií farem: charakteru právnických osob (zvlášť u výrobních zemědělských družstev, akciových společností a společností s ručením omezeným), úředně registrovaných individuálních farem různé velikosti (s formálním oprávněním k podnikatelské činnosti) a neregistrovaných individuálních farem, včetně malých zemědělských jednotek - domácností se zemědělskou výrobou samozásobitelského charakteru.

Klíčová slova: transformační proces, restrukturalizace zemědělských podniků, kategorie zemědělských podniků, zemědělské podniky fyzických osob, členové domácností, zemědělské podniky právnických osob, finanční situace, realizace výrobků, výrobní zaměření, perspektivy v rozšiřování výroby

INTRODUCTION

Even though the structure of property rights in the CR agriculture sector has undergone fundamental changes in the ongoing transformation process (after 1989), the restructuring in the farm segment of this sector has not terminated yet. It is documented by a majority of farms as legal entities and by a relatively low proportion of family farms, by an extremely high proportion of "land owned by someone else" (leased land) or by separation of property right to used land from its usufruct, etc.

EU Phare ACE research project P97-8158-R "Micro-economic Analysis of Farm Restructuring in Central and Eastern Europe" was implemented to elucidate the changing structure, economics and behavior of farms in selected post-communist countries of Europe including the CR. The present paper is based on the results of this project concerning Czech agriculture.

The above project was implemented in the CR in the form of a specific survey (conducted in 2000) of two basic categories of farms: farms as legal entities and individual farms. The first group of farms involved its major components – agricultural production cooperatives, limited companies and joint stock companies. The second group consisted of two subgroups: registered individual farms (formally licensed to business activities) and unregistered individual farms including small farming units – households with self-sustaining agricultural production.

As the financial resources were limited, the survey of farms of these categories was not conducted in the whole CR agriculture sector but in one of the regions (NUTS 2) only – in the South-East region. This region comprises two administrative regions – Vysočina and South-Moravian NUTS 3. It consists of subregions with different natural and economic conditions for agriculture of hilly,

lowland and suburban (in the proximity of the town of Brno with 380 000 inhabitants) type that represent the farming conditions in the CR as a whole. Respondents were selected according to the method recommended by Prof. A. Sarris that is described in ACE project documentation (random sampling when the size of individual farms is taken into account). The sample size was 400 respondents – registered individual farms, 200 respondents – unregistered individual farms (data from 198 questionnaires were processed) and 105 respondents – farms as legal entities (data from 102 questionnaires were processed: 42 from cooperatives, 23 from joint stock companies and 37 from limited companies).

FARMS AS LEGAL ENTITIES

Farms of this type represent a majority in the Czech agriculture sector: according to the 2000 Agrocensus statistics they have almost ¾ of the total area of used agricultural land and more than ¾ of arable land, 80% of cattle, 89% of pigs and 83% of poultry kept by all respondents of the census concerned. The proportion of farms as legal entities in the total number of full-time workers in agriculture amounts to 82%. Partnerships of two types – limited companies (s.r.o.) and joint stock companies (a.s.) along with agricultural production cooperatives account for highly dominant proportions in the above-mentioned and other indicators. A supplementary survey in the framework of Phare ACE program (focused mainly on individual farms) devoted to the farm category concerned was also aimed at these three businesses and existing substantial differences between them.

Farm size and type of their production

Joint stock companies were found to have the largest average size according to the number of hectares of used agricultural and arable land and according to the number of full-time workers; they are followed by cooperatives with smaller average size and by limited liability companies the size of which is considerably smaller. In comparison with limited companies, the joint stock company has on average a twofold area of used agricultural land and a fourfold number of full-time workers. Maximum area of agricultural land (5 135 ha) and maximum number of full-time workers (555) per farm were also reported among the joint-stock companies.

The farm size is also reflected in the concentration of animal production – especially in cattle and pig stock densities. Logically, limited liability companies have the lowest average number of farm animals per respondent. Higher specialization of production is typical of Czech agricultural limited liability companies. This fact is confirmed by data in Table 1: the proportion of farms with animal production is lower among the limited liability companies (only 49% of these companies have a pig industry while more than 88% of cooperatives produce pigs).

Table 1. Basic data on farms as legal entities included in the survey

Indicator	Coops	Joint stock companies	Limited liability companies (Ltd.)
Average area of used land (ha)[1]			
– agricultural land (a. l.)	1,472	1,837	876
– arable land	1,277	1,650	795
Proportion of arable land in used a. l. (%)	86.8	89.8	90.8
Average number of full-time workers	82	122	30
Worker number converted per 100 ha a. l.[1)]	5.7	6.8	3.6
Area of a. l. per worker (ha)[1)]	17.6	14.7	27.6
Proportion (%) of			
– cattle farms	85.7	87.0	56.8
– dairy farms	85.7	82.6	56.8
– pig farms	88.1	87.0	48.6
Average number of animals[2]			
– cattle	1,061	856	562
– dairy cows	389	317	222
– pigs	1,627	2,679	882
Proportion of farms with non-agricultural activities (%)	28.6	52.2	16.2

1) Calculated for farms using agricultural or arable land
2) Calculated for farms with respective industry.

Data from this survey were used to assess production specialization. The number of crop and animal production industries (16 in total according to the selected aggregation[1]) represented in the categories of farms as legal entities was from 6 to 13. The proportion of farms with two lowest frequencies of industries (6–7) was on average 10.8% while the same proportion was largely different for the particular categories of farms: 0.5% in cooperatives, 8.7% in joint stock companies and 18.9% in limited liability companies. On the contrary, the proportion of farms with two highest frequencies of industries (12–13) amounting to 21.6% on average is 16.7% for cooperatives, 56.5% for joint-stock companies and only 5.4% for limited companies. Specialization of farms as legal entities is relatively low in general. Among the joint stock companies the proportion of farms with 10 industries is 18.9% and with 11 industries 32.4%.

In general, specialization is higher in limited liability companies than in the other two categories of farms. It is evidenced by the relatively highest proportion of farms

[1] Grains in total, legumes, potatoes, sugar beet, oil crops, grapes, vegetables, fruit, flowers, forage crops (on arable land and in grasslands and pastures), dairy cows, other cattle, pigs, sheep and goats, poultry, horses.

Table 2. Respondents, farms as legal entities with secondary (non-agricultural) activities

Farm category	Proportion of farms with secondary activity (%)[1]	Proportion of farms with specific type of secondary activity (%)				Structure of annual turnover of secondary activities (%)				
		food processing	other industrial activities	sale of processed products – foods (shops)	other services	food processing	other industrial activities	sale of processed products – foods (shops)	other services	total
Cooperative	28.6	7.1	14.3	11.9	11.9	41.5	27.2	21.0	10.3	100.0
Joint stock company	52.2	13.0	21.7	21.7	21.7	42.7	4.6	43.1	9.6	100.0
Ltd.	16.2	–	2.7	2.7	10.8	–	23.5	2.8	73.7	100.0
Total	29.4	5.9	11.8	10.8	13.7	40.1	13.6	33.1	13.2	100.0

1) Farms with more than one type of secondary activities were included only once.

Table 3. Respondents, farms as legal entities with secondary (non-agricultural) activities

Production area	Proportion of farms with secondary activity (%)[1]	Proportion of farms with specific type of secondary activity (%)			
		food processing activities	other industrial products – foods (shops)	sale of processed	other services
More favorable	30.3	12.1	12.1	21.2	6.1
Less favorable	25.5	3.6	14.5	7.3	10.9
Suburban	42.9	–	–	–	42.9
Total	29.4	5.9	11.8	10.8	13.7

1) Farms with more than one type of secondary activities were included only once.

with either crop or animal production among the limited liability companies: 21.6% of them have a crop industry only while among the cooperatives and joint stock companies this proportion is 0.3% on average.

Diversification of production activities in a wider sense can be evaluated on the basis of proportions of nonagricultural activities (Table 2). The proportion of respondents with nonagricultural activities is 28.6% in agricultural cooperatives, 52.2% in joint stock companies and 16.2% in limited liability companies. The most frequent nonagricultural activities are activities of industrial nature (including the food industry), services and business activities such as sale of own products. It is evident (Table 3) that the highest proportion of farms with nonagricultural activities is situated in suburban areas (42.9%, only the activities in the category other services). The proportion of farms with nonagricultural activities is lower in hilly areas (25.5%; other industrial activities) than in lowland areas (30.3% of respondents; production and sale of foods); it is rather a surprising finding (it is to assume that farms as legal entitities in less favored areas will have a higher proportion of nonagricultural activities and incomes).

Other services are services rendered to individual persons including services for the members/stockholders/partners of agricultural farms as legal entities. A higher number of farms provides individual persons with mechanization services (87%), catering services (canteens – 56%) and repair services (48%). Market prices are charged for the bulk of these services except for catering services (68% of respondents with these services). On the other hand, a part of administrative, extension and financial services are free. None of the respondents provides health care or nursery schools that were typical of "collective farms" in the communist regime. The proportion of limited liability companies in all types of services is lowest; it documents their specific character in comparison with cooperatives and joint stock companies.

What do the above-mentioned data document? An explanation could be sought in the "bottom-up" establishment of farms or restructuring of capital and activities on farms of the type Ltd. during the reform period contrary to the "top-down" transformation of other farms as legal entities. In other words, the behavior of cooperatives and joint stock companies that was very similar in the process of adaptation maintained "collective, social" methods of farming unlike the limited liability companies whose behavior corresponded to individual farming methods. Currently, a higher proportion of nonagricultural activities in cooperatives and joint stock companies than in limited liability companies can be explained by the tradition of these activities and by a "hereditary syndrome" in the former socialist categories of farms.

Workers and their property structure

The farms as legal entities are relatively big firms in Czech agriculture. It is evident from this survey: nearly a

Table 4. Workers and members (stockholders, partners) on farms as legal entities

Indicator	Number of persons per farm				Proportion of persons above 60 years of age (%)			
	surveyed farms in total	of this			surveyed farms in total	of this		
		coops	joint stock company	Ltd.		coops	joint stock company	Ltd.
Working members – full-time	43.0	59.1	71.8	6.8	4.6	6.7	1.8	2.0
– part-time	3.3	6.9	1.9	0.1	68.9	74.3	36.4	–
Hired workers – full time	29.4	23.3	49.8	23.6	3.5	5.2	2.3	3.3
– part-time	4.4	3.4	8.8	2.7	40.9	38.5	33.2	60.0
Full-time workers in total	72.4	82.4	121.6	30.4	4.2	6.3	2.0	3.0
Part-time workers in total	7.6	10.3	10.7	2.8	52.9	62.4	37.7	58.8
Non-working members	145.0	132.7	400.0	0.6	55.2	60.7	51.9	19.0
Members in total	191.3	198.6	473.6	7.4	44.0	45.1	44.3	3.3

half of the respondents employ more than 50 full-time workers and almost a quarter of them employ more than 100 workers of this type.

The proportion of members (stockholders, partners) in the total number of full-time workers is 59.4%. That means hired workers without property rights to farms account for more than 40% of all full-time workers.

The structure of workers is different in the particular categories of farms (Table 4). The proportion of members in the total number of full-time workers in cooperatives amounts to 71.4%; the proportion of stockholders in the total number of workers of the given category in joint stock companies is 59% and the proportion of partners in the total number of workers in limited liability companies is 22.4% only. These relations are indirectly proportionate to the property concentration or to the frequency of owners in the particular categories of farms. A major part of workers usually have property rights to their firm on farms with distributed property. The "firmness" or "usefulness" of these relations is questionable.

A lower proportion of workers with property shares in joint stock companies than in cooperatives are obviously a result of the specific position of stockholders. Most joint stock companies originated by transformation of cooperatives. Some non-members of original cooperatives – owners of property shares they received on the basis of property right transformation of cooperatives in 1992–1993 also became partners (stockholders) of joint stock companies. These persons became stockholders of agricultural joint stock companies without any working relations to these companies. It is evident from a different proportion of nonworking members (stockholders) to the total number of members (stockholders): 66.8% in cooperatives and 84.4% in joint stock companies. Nevertheless, the proportion of nonworking partners is lowest in limited companies – 7.6% only.

In the category of farms – legal entities, limited liability companies are subjects with the most concentrated property. That means only a limited number of persons, on average 7 in s.r.o. included in the survey, possess the basic property rights (right of tenancy, usufruct and right of disposal) and derived powers of decision contrary to 199 members in cooperatives and 474 stockholders in joint stock companies. It is to assume that different concentration of property or frequency of owners can create various "purpose functions" and various behavior patterns of the particular categories of farms as legal entities.

The survey provided information on the membership in respondents' farms in the period from farm establishment until now. The data document a surprising (at a glance) increase in the number of members (stockholders, partners) on these farms (on average by 2.7%). The reason is obvious: the number of stockholders in joint stock companies increased by about 17.7% in comparison with the number of founder members. But it is not surprising that the present number of members in cooperatives is substantially lower than the number of their founder members (nearly by 12%). The number of partners in limited companies also decreased (by 3.2%).

Two features describing the age structure of workers and members (stockholders, partners) on the farms as legal entities (Table 4) are interesting. First, it is a relatively high proportion of part-time workers above 60 years of age (on average 52.9%, 74.3% in coop members). Second, the proportion of coop members or stockholders in joint stock companies in the same age category is also relatively high (45.1% and 44.3%, respectively). It is another evidence of debilitation of the self-employment syndrome in these categories of farms; it may facilitate their adaptation and restructuring in future.

Production inputs and capital endowment

Out of the total value of inputs purchased throughout the year, 11.6% accounted for seed and planting stock, 1.4% for fodder grains, 31.9% for concentrates, 26.7% for fertilizers and chemicals, 17.5% for fuels, 0.1% for irrigation water (used by 5% of the respondents only) and 10.8% for other inputs on average for the farms as legal entities.

Table 5. Endowment of farms as legal entities with farm assets[1)]

Farm category	Assets per farms (thousand Kč)			Assets per 1 ha of used a. l. (thousand Kč)			Proportion of machinery and equipment assets in total assets of buildings and structures, machinery and equipment (%)
	buildings and structures	machinery and equipment	farm animals	buildings and structures	machinery and equipment	farm animals	
Coop	34,206.3	10,381.6	9,933.4	23.2	7.1	6.7	23.3
Joint stock company	57,037.4	20,163.1	6,430.8	31.0	11.0	3.5	26.1
Ltd.	12,823.3	4,907.1	4,570.3	14.6	5.6	5.2	27.7
Total	32,983.9	10,659.8	7,232.5	24.6	7.9	5.4	24.4

1) Book value of assets.

Table 6. Comparison of actual values of farm assets on farms as legal entities expressed in a different way[1)]

Farm category	Relation: A/C*100			Relation: B/C*100		
	buildings and structures	machinery and equipment	farm animals	buildings and structures	machinery and equipment	farm animals
Coop	67.9	102.4	103.8	373.6	459.2	147.3
Joint stock company	81.7	103.2	106.5	290.0	289.5	155.2
Ltd.	101.1	105.4	100.0	690.3	474.6	144.4
Total	78.5	103.2	103.6	377.2	386.1	148.4

1) A = estimate of the present value of farm assets in case they were sold
B = estimate of value of existing assets in case they were replaced by new assets
C = book values of farm assets.

Calculated only for respondents, who stated all three ways of evaluation for each kind of assets

As assumed, the proportion of own products in the total volume of used inputs was highest in the item hay and other feeds where the consumption of all farms was fully covered by own production. This proportion for fodder grains was 88% in cooperatives, and 98% in both a.s. and s.r.o., and analogically for seed and planting stock 40%, 35% and 41%. The "self-sufficiency" in concentrates ranged from 10% (s.r.o.) to 31% (coops). Chemicals, fertilizers, fuels and irrigation water were exclusively purchased inputs. The farms sold a part of production inputs to other subjects; agricultural cooperatives and joint stock companies traded in (purchased) inputs such as fertilizers and fuels.

Many farms as legal entities use services of external experts, mainly of veterinarians (88.2% of respondents), and paid services of accountants, tax advisers and economists (55.9%). The proportion of all these services is lower in limited companies than in cooperatives and joint stock companies. These services are provided by private firms for the most part except the services connected with land-use planning and environment conservation.

Capital assets (farm assets) of farms as legal entities per 1 ha of used agricultural land were the highest in joint stock companies except the item farm animals (Table 5). It could signal a shift of this farm category to crop production.

Data shown in Table 6 can be acquired if other methods of assets valuation are used. The present book value of machinery and farm animals is considered by the farms as almost identical with the selling value of these items. But analogical assessment of buildings and structures is on average by more than 20% lower except in limited liability companies. If farm assets were replaced by the new ones, the "coefficient of replacement" is estimated as very high. E.g. replacement of machinery would increase the present value of this item nearly four times ("coefficient of replacement" = 3.861) without taking into account much higher performance of new machines.

Property shares in other firms are an important part of the assets of farms as legal entities. It is surprising how high is the proportion of respondents with capital interest in other firms, particularly in cooperatives and joint stock companies (80–90% of respondents). In comparison with a much lower analogical proportion of limited liability companies, this phenomenon is apparently connected with the holding structure of many a.s. and cooperatives (involving their affiliated firms – subsidiary companies) and with their penetration into the chain of

other linked firms on the side of inputs and outputs (in spite of many problems in these links).

Capital participation of other firms offers a different view on the owners' structure of the capital of farms as legal entities. Such capital participation is scarce, except the shares in equity capital possessed by other agricultural subjects (it can be explained by inverse relations in the holding structure).

In general, the capital of farms as legal entities is burdened with debts of three categories: (i) old debts that originated before the reform and were taken over from the preceding cooperatives or state agricultural enterprises during transformation; (ii) transformation debts (e.g. transformation shares of cooperative nonmembers); (iii) new debts – bank credits (also with government guarantee). The first category of debts is a specific one and it should be dealt with as soon as possible.

The survey shows that more than 26.7% of the farms have old debts (cooperatives 29.3%, joint stock companies 30.4% and limited companies 21.6%). The respondents with old debts suggest these possibilities of debt settlement: 70.4% of respondents assume to settle the debts from future profits, 18.5% believe the debts will be written off by the government, 3.7% expect the debts will be settled by a foreign investor and 3.7% of respondents expect the old debts will be paid by new members (stockholders, partners).

About 75% of farms as legal entities, more than 80% of cooperatives and joint stock companies, have new credits (loans) that were granted during the reform and have not been paid yet. A majority of these liabilities (more than 90%) are bank credits with the government guarantee (about 70%) or with subsidized interest (80–90%).

Respondents' prospects of production expansion

The frequency of positive responses of farms as legal entities to questions about the enlargement of agricultural land used by these farms is somewhat surprising. More than 82.4% of all respondents intend to enlarge their crop area: this intention is slightly above average in cooperatives and joint stock companies and slightly below average in limited liability companies. It is also interesting that larger farms are more interested in the enlargement of crop area: average size of the farm that intends to enlarge the area of used agricultural land is about 1 425 ha while the average size of farms not interested in the enlargement of crop area is about 840 ha. The highest proportion of respondents who intend to enlarge the crop area (90.5%) is in the category of the largest farms with more than 2 000 ha of agricultural land.[2] This fact could be explained by the effort of larger farms – usually cooperatives or joint stock companies – to cope with overemployment or overinvestment connected with the behavior of farms with collective methods of farming.

In this context, there are some differences between the regions included in the survey. The highest proportion of respondents who intend to enlarge agricultural land (87.3%) comes from regions with less favorable soil and climatic conditions (potato, potato-oat production areas and mountain areas). The same intentions were presented by 85.7% of respondents from suburban regions and only 75% of respondents from regions with more favorable soil and climatic conditions (corn and sugar beet production areas).

Similar differences like in the intention to enlarge the used agricultural land were found between the farm categories in the intention of production expansion. Only 12.9% of farms as legal entities did not intend to expand their production (11.9% of cooperatives, 4.3% of joint stock companies and 19.4% of limited liability companies). Larger farms are usually more interested in production expansion (average size of farms with such intention is 1 453 ha of agricultural land or 79 full-time workers while the average size of farms that do not intend to expand is 658 ha and 34 workers).[3]

The respondents' structure is very interesting when they answered a question what agricultural or nonagricultural industry they would choose in case they could expand their business activities. About 44.6% of farms as legal entities consider their crop production as the most promising. An analogical indicator for their animal production is 32.7%, its value for nonagricultural activities is 16.8% and for other activities (e.g. establishment of a new agricultural entity) 5.9%. In spite of long-term agriculture non-profitability the respondents preferred agricultural activities to nonagricultural ones. It is to assume they prefer the activities within their domain with adequate know-how.

Quite a surprising finding is that limited companies prefer animal to crop production for the future period. These companies are mostly engaged in crop production, therefore their major interest in this industry would be expected. The contrary result can be explained by short-term factors: the survey was conducted in 2000 after a two-year significant decrease in producer prices especially of crop products (price indexes of crop commodities: 94.6% in 1998, 85.0% in 1999; respective indexes for animal products 105.7% and 89.5%). It is evident that price development was more favorable for animal production.

INDIVIDUAL FARMS (REGISTERED AND UNREGISTERED ONES)

Contrary to farms – legal entities, the survey of registered individual farms (RIF) and unregistered individual

[2] The figures are statistically significant, verified by two-sample (according to an intention/no intension to enlarge and according to the five size groups of farms as legal entities) t-test with inequality of variances.

[3] These figures are also statistically significant, and verified by two-sample t-test.

farms (UIF) was aimed not only at the characteristics of these farms but also on the respective characteristics of relevant households.

Basic characteristics of respondents

Origination of individual farms

The respondents answered that the registered individual farms originated most frequently on the basis of primary restitution (40.5% of respondents), as a continuation of agricultural activities in the past (continuation of a small-size crop or animal industry that existed before 1989: 20.3% of respondents), acquisition (purchase or lease) of property from other persons (so called second restitution: 13.2%) and privatization of farm property except land (13.2%). The remaining RIF (12.8%) were established in a different way (e.g. inheritance, donation). Restitutions after 1989, i.e. return of property to original owners or their heirs, are obviously a prevailing way of establishment and further development of individual farms. It applies to primary and secondary restitutions – sale or lease of the property belonging to original owners. The number of farms that existed before 1989 is also important (former small independent farmers including part-time farms).

Size structure and production industries

Agricultural land is used by 97% of the registered individual farms: of them 88% use arable land, 44% permanent grasslands (meadows, pastures), 25% orchards and gardens and 18% vineyards. Average size of RIF included in the survey is 55 ha a. l., 53.6 ha arable land, 12.1 ha permanent grasslands, 1 ha gardens and orchards and 3.3 ha vineyards.[4] The largest area of a. l. (and also of arable land) reported by respondents is 1 805 ha. This indicator for permanent grasslands is 236 ha, for orchards and gardens 25 ha and for vineyards 40 ha. The proportion of RIF with animal production amounts to 75.8%; they have in average 13.8 dairy cows, 26.8 head of cattle in total and 72.4 pigs per respondent with the respective animal industry.

Approximately 98% of unregistered individual farms use a certain area of agricultural land. The average area of a. l. used by these farms (households with agricultural production) is 1.57 ha (the used land also includes a temporary set-aside). About a quarter of households of this category have less than 0.5 ha a. l. 78.8% of these respondents use arable land of average area 1.24 ha, 33.3% of respondents have orchards and gardens of average area 0.28 ha and 20.7% have vineyards 0.42 ha on average. More than 3% of UIF have glasshouses of the average size 25.67 m^2. Cattle industry is in 20.7% UIF, dairy cows are kept by 10.6% UIF, pigs by 74.7%, sheep and goats by 14.6%, poultry 74.2% and horses are kept by 4% of these farms only. The average number of farm animals on unregistered individual farms is relatively low: 2.4 head of cattle, of them 1.2 dairy cows, 2.6 pigs, 3 head of sheep and goats, and 16.8 individuals of poultry.

Household members of individual farmers

Individual farms are usually closely tied to respective households and their members. The average number of household members (of all age categories) is 2.9 in registered individual farms and 3.4 in unregistered farms. Two- to four-member households account for 69.2% of the households of RIF included in the survey and for 76.3% of the UIF households.

Table 7 shows the structure of household members according to the main sources of incomes. Agriculture is the main source of incomes for 45.8% of household members in registered individual farms (work on the farm for 38.7%); it is followed by other sources of incomes (25.7%) and nonagricultural activities (20.1%). The proportion of household members with agriculture as the main source of incomes increases with farm size; it amounts to more than 60% in the largest farms. A slight decrease in this proportion (including the proportion in relation to the work on the farm) in the category of the largest individual farms (with more than 200 ha) in comparison with the size category of 100–200 ha would require a more detailed research (an explanation is that the activities on the farm are separated from other activities in households in the highest category of farms).

Other important incomes in unregistered individual farms – households with agricultural production are old-age pensions (due to the age structure of these households) and other social benefits (e.g. scholarships, unemployment benefits, etc.). Social benefits are in general the main source of incomes for most household members (36.1%), followed by nonagricultural activities (29.7%) and agricultural activities (23.1%, farming accounts for 3.1% only).

The analysis of age structure shows that most household members in registered individual farms with the main source of incomes from agriculture (Table 8) are in the age categories 36–50 years (44.2%, farming persons 43.4%) and 51–60 years (23.6%). A similar structure was found in UIF except the fact that most farming persons are older than 60 years (58.8% contrary to 9.5% in this age category for the whole set). It is evident that young people engaged in farming seek job opportunities outside the farms.

In the education structure of household members of registered individual farms with the main source of incomes from agriculture (Table 9) the respective proportions are as follows: members with finished secondary

[4] The data are relevant for respondents with land only – with respective crop industry. That means data on the average area of particular crops cannot be added up. The same applies to the respective numbers of farms.

education (43.3%), members with secondary professional education without A-level exam (35.2%), members with university-level education (12.3%) and members without education or with primary education (9.3%). The higher level of education is reflected in a higher number of members working as managers/experts on other farms (usually on farms – legal entities. In the education structure of household members of UIF with the main source of incomes from agriculture, the proportion of members with finished secondary education is the highest (52.3%), followed by members with secondary professional education without A-level exam (29.4%), members with

Table 7. Structure of household members according to the main source of income (%)

Source of income	Unit	RIF – size groups according to the area of used a.l.(ha)								RIF in total	UIF in total
		0	> 0 ≤ 2	2 ≤ 5	5 ≤ 20	20 ≤ 50	50 ≤ 100	100 ≤ 200	≥ 200		
Agriculture											
– own farm	%	12.5	23.1	21.3	30.8	47.0	56.6	63.3	55.3	38.7	3.1
– private and cooperative sector											
– manager/expert	%	6.3	1.9	1.9	3.0	1.9	1.3	0.0	3.5	2.3	7.5
– manual worker	%	3.1	6.7	7.5	2.3	1.5	0.0	2.0	1.2	2.9	9.2
– state and public sector											
– manager/expert	%	0.0	1.9	1.9	1.0	3.0	0.0	0.0	0.0	1.4	1.8
– manual worker	%	0.0	0.0	0.6	1.3	0.4	0.6	0.0	0.0	0.6	1.5
Agricultural sector in total	%	21.9	33.7	33.1	38.5	53.8	58.5	65.3	60.0	45.8	23.1
Own non-agricultural business	%	0.0	5.8	8.8	2.3	0.8	1.9	0.0	1.2	2.9	2.7
Non-agricultural private and cooperative sector											
– manager/expert	%	6.3	5.8	4.4	4.0	4.5	5.7	2.0	3.5	4.5	6.2
– manual worker	%	15.6	8.7	3.8	5.7	5.6	1.9	0.0	1.2	4.9	9.0
Non-agricultural state and public sector											
– manager/expert	%	18.8	7.7	6.9	4.3	4.1	1.9	4.1	3.5	4.9	7.0
– manual worker	%	3.1	6.7	1.9	5.7	0.4	2.5	2.0	0.0	2.9	4.8
Other paid work	%	3.1	9.6	10.6	11.7	4.5	7.5	10.2	4.7	8.3	11.2
Other source of incomes[1)]	%	31.3	22.1	30.6	27.8	26.3	20.1	16.3	25.9	25.7	36.1
Total	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Number	32	104	160	299	266	159	49	85	1 154	546

1) Freelance occupation, student, unemployed, pensioner, etc.

Table 8. Age structure of household members of RIF with the main source of incomes from agriculture (%)

Age	Unit	Source of incomes[1)]					Total
		1	2	3	4	5	
Below 25 years	%	8.6	11.1	9.4	12.5	28.6	9.1
25–35	%	14.0	11.1	12.5	31.3	14.3	14.3
36–50	%	43.5	48.1	50.0	43.8	57.1	44.3
51–60	%	24.1	29.6	21.9	12.5	0.0	23.6
Above 60 years	%	9.9	0.0	6.3	0.0	0.0	8.7
Total	%	100.0	100.0	100.0	100.0	100.0	100.0
	Number	444	27	32	16	7	526

1) Source of incomes:
1 – work on own farm
2 – work in private and cooperative agriculture sector – manager/expert
3 – work in private and cooperative agriculture sector – manual worker
4 – work in state and public agriculture sector – manager/expert
5 – work in state and public agriculture sector – manual worker.

Table 9. Finished education of RIF household members with the main source of incomes from agriculture

Education	Unit	Source of incomes[1)]					Total
		1	2	3	4	5	
Without education	%	0.7	0.0	0.0	0.0	0.0	0.6
Primary	%	9.2	3.8	6.1	6.3	14.3	8.7
Secondary professional without A-level exam	%	37.1	0.0	42.4	12.5	57.1	35.2
Finished secondary general	%	8.7	15.4	15.2	6.3	0.0	9.3
Finished secondary agricultural	%	20.8	26.9	21.2	6.3	28.6	20.8
Other finished secondary professional	%	12.3	30.8	12.1	18.8	0.0	13.2
Agricultural university	%	9.8	19.2	3.0	43.8	0.0	10.8
Other university	%	1.1	3.8	0.0	0.0	0.0	1.1
Postgraduate[2)]	%	0.2	0.0	0.0	6.3	0.0	0.4
Total	%	100.0	100.0	100.0	100.0	100.0	100.0
	Number	447	26	33	16	7	529

1) Source of incomes:
1 – work on own farm
2 – work in private and cooperative agriculture sector – manager/expert
3 – work in private and cooperative agriculture sector – manual worker
4 – work in state and public agricultural sector – manager/expert
5 – work in state and public agricultural sector – manual worker
2) Including scientific and pedagogic attestations.

university-level education (12.7%) and members without education or with primary education (5.6%). Similarly like in registered individual farms, the higher level of education is reflected in a higher number of UIF household members working as managers/experts on other farms.

Managers in the households (or their married partners) in 68% of registered individual farms devote more than 80% of their working capacity to work on the farm. The larger the size group of registered farms, the higher the proportion (beginning with the size group 20–50 ha this proportion ranges from 81 to 100%).

Agricultural inputs

The proportion of leased land in the total area of agricultural land used by registered individual farms increases with the size groups of these farms. It is e.g. 7.6% in the group 2–5 ha, 19.4% in the group 5–20 ha while it is 73.9% in the group 100–200 ha and 86.3% in the group above 200 ha.

A third of RIF intends to lease someone else's land (approximately 70% of farms above 50 ha); the number of UIF with such intention is very low (1% of respondents). The respondents who intend to lease land speak about some barriers. The difficulty in finding an owner who would lease out the land seems to be the main barrier. Other barriers are lack of money or too high rent and unsuitable lands. On the other hand, only 5.5% of RIF and the same proportion of UIF would intend to lease out their own land if possible. These farms belong to the smaller-size category and their main argument why they do not lease out their land is lack of interest of potential leaseholders. Another reason is low effectiveness of agricultural production. None of the respondents considered the problems of physical identification of lands as a barrier.

The proportion of registered individual farms that bought land in the last 3 years is 13.3% and the proportion of respondents who sold land in the same period is 2%.

The main methods of soil cultivation in RIF:
– machines: 93.2% of respondents with average area of 59.9 ha a. l.;
– draft animals: 0.8% of respondents with average area of 10.5 ha a. l.;
– manual: 6% of respondents with average area of 2.8 ha a. l.

The methods of soil cultivation in UIF differ according to the area of cultivated a.l. Respondents with less than 0.5 ha a.l. use manual cultivation (65.9% of households in this category) while respondents with more than 0.5 ha a. l. employ mechanical cultivation of soil (69.4% of households in this category).

The endowment of respondents with farm machinery is relatively high, especially in registered individual farms. The total number of all types of machines is higher in these farms than the number of farms possessing farm machinery. It is true only about tractors in unregistered individual farms. In other words, 1 RIF possesses in average 2.2 tractors and 1 UIF has 1.15 tractor (in physical units – regardless of performance).

In the year when the survey was conducted, RIF respondents purchased cattle (25.3% of respondents), farm machines and equipment (19.3%) and they invested in the construction of farm buildings and structures (12.1%), refurbishment or purchase of houses or flats (10.4%) and in children's education (10.3%). UIF households pur-

chased cattle (45.3% of respondents) and they invested in the modernization or purchase of houses and flats (19%), in children's education and training (14.7) and in the purchase of trees for planting or other planting stock (7.7%).

Own money was almost an exclusive financial source for investments in RIF and UIF (93.2% in RIF and 99.3% in UIF). Other resources such as bank credits were used by the largest RIF only (with the area above 200 ha). The proportion of respondents with outstanding loans increases with the farm size. While the relevant proportion was in average 25% for all farms included in the survey, this proportion amounts almost to 59% in the size category 100–200 ha a. l. and to 67% in the category of farms above 200 ha a. l. It is obvious that the investments of larger farms in their businesses (use of external sources, particularly bank credits) and/or the burden of old state loans for these farms or redemption of privatized property are higher.

Especially registered individual farms use large volumes of external material inputs. The most frequently used input in RIF is fuels (93.5% of respondents), followed by seed, planting stock (87%), chemicals (84.3%) and fertilizers (84%). The rank of the most frequently used inputs in UIF is seed and planting stock (83.8% of respondents), fuels (65.7%), chemicals (59.1%) and fertilizers (58.6%). The proportion of respondents using purchased seed and planting stock is somewhat surprising if the signal information on a minimum input of this item on Czech farms is taken into account.

Registered and unregistered individual farms purchase the inputs from private suppliers most frequently. An important role in the provision of inputs at a given locality is played by own production (particularly in UIF) and by local agricultural cooperatives or companies. A surprising finding is that the weight of processors or firms buying final agricultural products is low.

As for labor inputs in RIF, 92.8% out of the total number of permanent hired workers are employed on larger farms (above 50 ha, of them 70.7% on farms with more than 200 ha). The number of full-time workers converted per farm naturally increases with farm size and ranges from 0.33 in respondents without land (or 0.60 in farms above 2 ha) to 8.70 on the largest farms with more than 200 ha. Registered individual farms frequently use external experts who provide specific services (e.g. services of accountants, tax and economic advisors are used nine times more than on UIF and services of agricultural engineers six times more).

Realization of crop and animal products

A major part (70%) of respondents – registered individual farms with crop production and all farms with animal production supply their products to the market (the respective proportions in UIF are 25% and 30%). The proportions of respondents' positive answers to selected questions about agricultural product marketing were as follows:

Question	Positive answer	
	RIF	UIF
Is there a sufficient number of customers buying your products?	79.9%	83.7%
Are the customers' payments often delayed?	65.1%	37.0%
Is it too costly to put products on a more important market?	53.7%	49.5%
Are your products little durable for successful marketing?	26.4%	19.6%
Are you well informed about prices?	87.0%	78.5%
Do you have to sell your products to a certain customer?	34.4%	21.3%
Do your customers require too high quality of products?	79.1%	69.6%

About 20% of all respondents mentioned the lack of customers and almost two thirds of RIF complained about delayed payments for their products. The proportion of respondents who believe they are well informed about prices (87% and 78.5%, respectively) is relatively satisfactory. On the contrary, a high proportion of respondents considering the requirements for product quality as too high (79.1% and 69.6%, resp.) can reflect producers' problems to satisfy the quality standards on the market.

The most important way of crop product realization in RIF is sale to processors (41.8%), followed by sale to private trading firms (27.7%, the frequency is increasing with farm size). Sale on local markets or direct sale on the farm accounts for 13.4% while on-farm processing accounts for 5.3%. Sale on local markets, direct sale on the farm and on-farm processing are more frequent in RIF of small size categories (below 20 ha).

In unregistered individual farms the most important way of crop product realization is sale to private trading firms (36.4%), followed by sale on local markets or direct sale on the farm (in total 29.6%). On-farm processing accounts for 10.2%.

The main reason why registered and unregistered farms use contracts of sale in crop products is guarantees of realization of these products (65.5% and 71.4% of respondents, resp.). The frequency of other reasons is insignificant.

Absolutely the most important way of cattle realization in registered individual farms is sale to slaughterhouses (72.7%), followed by "other ways of realization" (15.9%). Cattle sale to slaughterhouses is also the most important way of cattle realization (55%) in unregistered individual farms but the unspecified "other ways of realization" account for 28.3% (it is not possible to deduce from the responses whether self-sustaining is not included in this category). Similarly like in crop products, the main reason why registered and unregistered farms use contracts of sale in cattle is a guarantee of realization (72.1% and 60% of respondents, resp.). About 40% of UIF expect that contract prices will be higher than possible future prices (these responses cannot be generalized due to a small number of relevant respondents).

Sale to processors (68.2%) is the most frequent way of realization of animal products (milk, eggs, etc.) in registered individual farms, followed by sale on local markets and direct sale on the farm (22.7%). Sale on local markets and direct sale on the farms prevail in unregistered farms (80%). Sale on local markets and direct sale on the farm are more frequent in animal products than in other agricultural products.

Financial situation of households of individual farmers

Tables 10 and 11 show evaluation of the financial situation of households of registered and unregistered individual farmers at the moment of survey in comparison with their financial situation in 1989 or 1995. In comparison with 1989, 37.8% of inquired RIF consider the existing financial situation of their households as better and much better (this proportion increases with farm size) and 31.3% as similar. But 31% of RIF evaluate their situation as worse and much worse (the proportion slightly decreases with farm size). Among the UIF, 27.3% consider the actual financial situation of their households as better and much better, 45.4% as similar and more than a quarter as worse and much worse. Such evaluation is quite satisfactory and does not correspond to a general opinion about the life quality impairment in the countryside in the nineties of the last century. In comparison with 1995, the data on registered and unregistered farms are very similar to those in relation to 1989, except a shift from the classification "better and much better" to a 39.2% proportion of RIF evaluating the financial situation of their households as worse and much worse. A similar shift occurred in UIF households to the classification "similar" from the situation "better and much better". The two shifts reflect general opinions of households about uneasy development of agriculture and countryside in the given period (apparently in connection with unprecedented decrease in prices of agricultural products in 1999 – the survey was conducted in the following year)

As a result of close relations between farming and relevant households, the evaluation of economic situation (profitability) of agricultural activities in 2000 in comparison with 1995 is slightly less positive than the evaluation of financial situation of households 2000/1995 (Table 12). It can be explained by the trends of household incomes from other sources (e.g. social funds) that were better than incomes from farming.

Most households (58.1% of registered and 64.1% of unregistered individual farms) consider their incomes as sufficiently high to provide for an adequate (decent) style of life (Table 13). An approximately third of all households considers their incomes as sufficient to provide for the necessities of living only. The data document that households with higher proportion of incomes from farm-

Table 10. Financial situation of households in comparison with 1989 (%)

Situation	Unit	RIF – size groups according to the area of used a. l. (ha)								RIF	UIF
		0	> 0 ≤ 2	2 ≤ 5	5 ≤ 20	20 ≤ 50	50 ≤ 100	100 ≤ 200	≥ 200	in total	in total
Much better	%	0.0	2.6	5.9	6.5	7.5	5.8	25.0	14.8	7.3	1.0
Better	%	33.3	28.2	35.3	23.4	32.5	30.8	31.3	44.4	30.5	26.3
Similar	%	33.3	35.9	29.4	39.3	23.8	30.8	25.0	22.2	31.3	45.4
Worse	%	33.3	25.6	13.7	25.2	28.8	21.2	18.8	11.1	22.9	25.8
Much worse	%	0.0	7.7	15.7	5.6	7.5	11.5	0.0	7.4	8.1	1.5
In total[1)]	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Number	12	39	51	107	80	52	16	27	384	194

1) Calculated for respondents who answered the question: 384 RIF, 194 UIF.

Table 11. Financial situation of households in comparison with 1995 (%)

Situation	Unit	RIF – size groups according to the area of used a. l. (ha)								RIF	UIF
		0	> 0 ≤ 2	2 ≤ 5	5 ≤ 20	20 ≤ 50	50 ≤ 100	100 ≤ 200	≥ 200	in total	in total
Much better	%	0.0	0.0	3.8	1.8	2.4	1.9	0.0	3.7	2.0	0.5
Better	%	16.7	17.5	22.6	14.7	20.2	15.1	35.3	25.9	19.0	15.9
Similar	%	58.3	52.5	39.6	50.5	31.0	32.1	35.3	14.8	39.7	60.5
Worse	%	25.0	22.5	28.3	29.4	35.7	35.8	29.4	40.7	31.4	22.1
Much worse	%	0.0	7.5	5.7	3.7	10.7	15.1	0.0	14.8	7.8	1.0
In total[1)]	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Number	12	40	53	109	84	53	17	27	395	195

1) Calculated for respondents who answered the question: 395 RIF, 195 UIF.

Table 12. Economic situation (profitability) of farming in comparison with 1995 (%)

Situation	Unit	RIF – size groups according to the area of used a. l. (ha)								RIF in total	UIF in total
		0	> 0 ≤ 2	2 ≤ 5	5 ≤ 20	20 ≤ 50	50 ≤ 100	100 ≤ 200	≥ 200		
Much better	%	0.0	0.0	2.0	0.0	0.0	0.0	0.0	7.4	0.8	0.0
Better	%	0.0	18.2	18.0	15.9	24.1	21.8	37.5	14.8	19.5	8.9
Similar	%	66.7	39.4	44.0	39.3	22.9	25.5	18.8	14.8	32.4	65.7
Worse	%	22.2	30.3	24.0	38.3	42.2	41.8	37.5	48.1	37.4	23.7
Much worse	%	11.1	12.1	12.0	6.5	10.8	10.9	6.3	14.8	10.0	1.8
In total[1)]	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Number	9	33	50	107	83	55	16	27	380	169

1) Calculated for respondents who answered the question: 380 RIF, 169 UIF.

Table 13. Respondents´ structure according to their own evaluation of household incomes

Evaluation	Unit	RIF – size groups according to the area of used a. l. (ha)								RIF in total	UIF in total
		0	> 0 ≤ 2	2 ≤ 5	5 ≤ 20	20 ≤ 50	50 ≤ 100	100 ≤ 200	≥ 200		
Not sufficient for living necessities	%	8.3	2.5	13.0	5.5	10.7	7.1	0.0	0.0	7.0	0.5
Sufficient for living necessities only	%	16.7	32.5	38.9	37.6	32.1	32.1	11.8	22.2	32.6	33.8
High enough for decent living [1)]	%	66.7	62.5	44.4	55.0	53.6	60.7	88.2	77.8	58.1	64.1
They can have all that they need [2)]	%	8.3	2.5	3.7	1.8	3.6	0.0	0.0	0.0	2.3	1.5
In total	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Number	12	40	54	109	84	56	17	27	399	198

1) They cannot afford any comfort (more expensive things).
2) Without any limit.

ing evaluated their situation "less optimistically" than households with lower proportion of incomes from farming (e.g. UIF).

Food expenditure of households are lower in registered and unregistered individual farms because they use their agricultural products for self-sustaining. These commodities account for the highest self-sustaining proportion in total production:
– potatoes: 59% in RIF and 76% in UIF;
– pork: 50% in RIF and 74% in UIF;
– eggs: 43% in RIF and 74% in UIF;
– vegetables: 36% in RIF and 49% in UIF;
– fruits: 30% in RIF and 46% in UIF;
– poultry: 22% in RIF and 29% in UIF;

Prospects of individual farms in expansion of agricultural activities

Nearly a half of the registered individual farms (48.8%) intend to expand their agricultural activities; but it is about 80–90% of the largest farms with land area above 100 ha. A very low number of respondents (7%) from unregistered farms expect to expand agricultural production. The most important barriers (the barriers the respondents ranked at the first place) to carry out these intentions are: lack of own financial resources, failure to get more land, low prices of agricultural products, failure to get a loan and high prices of inputs. These barriers are considered as decisive in 85.6% of individual farms that intend to expand agricultural production.

A significantly higher interest in the expansion of agricultural business is typical of larger registered individual farms. This tendency is reflected e.g. in a much higher interest of the largest RIF in leasing more land.

As the main barrier to expand their activities, RIF indicate lack of own financial resources (34.5% of respondents), failure to get more land (24.2%, especially in the medium-size categories of 50–200 ha) and low prices of agricultural products (13.4%). Low marketing prices are considered as obviously the second most important barrier of expansion. The lack of own financial resources is also the main barrier of expansion in unregistered farms.

A half of the registered individual farms and 93% of the unregistered ones do not intend to expand their agricultural activities (Table 14). The main reasons are lack of farming profitability (57.7% of RIF respondents, 36.2% of UIF) and age (18.9% of RIF, especially in small-size categories with less than 20 ha; 27.6% of UIF). The third reason in UIF is a possibility of getting more money in nonagricultural activities. The problem of farmers-successors is mentioned only in the size categories from 2 to 50 ha in RIF (6–9% of respondents).

Another view on the prospects of farmer households is provided by the data on the use of potential superfluous financial resources. Almost 60% of RIF respondents,

Table 14. Respondents' structure according to the most important reason for lack of interest to expand agricultural production activities[1] (%)

Reason for lack of interest	Unit	RIF – size groups according to the area of used a. l. (ha)								RIF in total	UIF in total
		0	> 0 ≤ 2	2 ≤ 5	5 ≤ 20	20 ≤ 50	50 ≤ 100	100 ≤ 200	≥ 200		
Private farming is not profitable	%	50.0	40.7	53.3	53.2	80.0	68.4	100.0	0.0	57.7	36.2
We are too old	%	10.0	33.3	20.0	27.3	0.0	5.3	0.0	0.0	18.9	27.6
We do not have a successor or a child who would take over the farm	%	0.0	0.0	6.7	9.1	5.7	0.0	0.0	0.0	5.5	3.2
We can earn more money in a different way	%	30.0	11.1	3.3	5.2	0.0	0.0	0.0	0.0	5.5	22.2
We do not need money	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
Land is in a protected area	%	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.5	0.0
Other reasons	%	10.0	14.8	10.0	3.9	11.4	26.3	0.0	100.0	10.4	2.2
No reasons	%	0.0	0.0	6.7	0.0	2.9	0.0	0.0	0.0	1.5	8.1
In total	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Number	10	27	30	77	35	19	2	1	201	185

1) Calcualted for the respondents who do not intend to expand agricultural production activities

Table 15. Household structure according to the choice of the most profitable activity[1] (%)

Type of activity	Unit	RIF – size groups according to the area of used a. l. (ha)								RIF in total	UIF in total
		0	> 0 ≤ 2	2 ≤ 5	5 ≤ 20	20 ≤ 50	50 ≤ 100	100 ≤ 200	≥ 200		
Crop production on own farm	%	0.0	0.0	20.0	27.0	22.5	29.4	47.1	36.0	23.6	5.0
Animal production on own farm	%	9.1	8.3	11.1	25.0	30.0	33.3	23.5	24.0	23.3	7.5
Own nonagricultural activity	%	18.2	16.7	17.8	6.0	11.3	5.9	5.9	8.0	10.1	9.4
Wage employment in agricultural cooperative (company)	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3
Wage employment in state sector	%	0.0	22.2	8.9	10.0	6.3	5.9	0.0	4.0	8.5	18.9
Wage employment in private sector	%	0.0	8.3	4.4	5.0	1.3	3.9	0.0	0.0	3.6	15.1
Wage employment in another part of CR	%	0.0	0.0	0.0	1.0	0.0	0.0	5.9	0.0	0.5	5.0
Wage employment in a foreign country	%	54.5	25.0	24.4	17.0	16.3	15.7	5.9	8.0	18.4	28.9
Initiation of nonagricultural activity	%	18.2	8.3	6.7	3.0	11.3	5.9	11.8	20.0	8.2	4.4
Other activity	%	0.0	11.1	6.7	6.0	1.3	0.0	0.0	0.0	3.8	4.4
In total	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Number	11	36	45	100	80	51	17	25	365	159

1) In case the expansion of gainful activities were possible.

especially in the medium and larger size categories, would invest the superfluous financial resources in the purchase of other agricultural factors of production, mainly land and farm machinery. The same indicator in UIF accounts for about 11% only. Among the investments in nonagricultural property, investments in house repairs would be the most frequent (10% in RIF, 40% in UIF). In savings, financial and other (nonagricultural) investments, both categories of individual farms prefer bank deposits; RIF also indicate investments in nonagricultural activities and loan redemption. All these data document obvious business intentions of medium-size and larger RIF unlike the "focus of interest in the household" in UIF.

The results in Table 14 are in some contradiction with respondents' answers to the question what activities would be the most advantageous if their expansion were feasible (Table 15).

Own agricultural production would be the most preferred activity in about 50% of registered individual farms, followed by employment in another country (18.4%) and own (current or new) business activity outside the agriculture sector (18.3%). These attitudes can be explained by the fixation of households upon their own present gainful activities. The relatively high proportion of households that would expand or initiate their own business activities outside agriculture is promising for the future rural development.

CONCLUSIONS

Thanks to the Phare ACE project, a relatively copious source of information on the present situation, structure and operation of farms of all basic categories in the CR is available. The information acquired in the South-East region (Vysočina and South Moravian administrative regions) confirms a very heterogeneous farm structure in the present Czech agriculture sector. The data analyses help identify and classify different types of farms and provide background materials for the orientation of agricultural policy and rural development policy. Currently, these policies are targeted, requiring to respect differences between the farm categories. These aspects become important if necessary changes in Czech agricultural policy are taken into account; the policy should be aimed at the measures and instruments of EU Common Agricultural Policy in the context of expected accession to the European Union.

These four fundamental categories of farms can be identified in the CR conditions from a comparison (on the basis of statistical data) of different types of farms in terms of their legal personality, size, concentration or distribution of property rights, etc.:

– cooperatives and joint stock companies as representatives of large collective farms with enormously high number of owners;
– individual farms with more than 100 ha of land and limited companies as representatives of large and "capital" oriented farms based on individual property or partnership of a small number of partners;
– medium-sized farms with 5-100 ha of land representing family farms, market-oriented and based on the work of the manager and members of his/her family;
– small registered individual farms (maximally 5 ha) and unregistered individual farms as representatives of households with agricultural production, oriented to self-sustaining.

Animal production is pursued more frequently in cooperatives and joint stock companies than in the other categories of farms. It obviously reflects the process of adaptation during the reform (after 1989). Animal production was a less profitable (or a more unprofitable) industry during the reform period than crop production. Other farms adapted their production industries and capital structure and shut down less profitable (or unprofitable) activities. These farms – particularly registered individual farms as well as many limited companies – underwent a "bottom-up" adaptation that means they relied on market forces and restructuring of capital assets. On the contrary, large collective farms that inherited many features from the past were forced to choose an opposite "top-down" way and to maintain e.g. job opportunities for their members/stockholders in (unprofitable) animal production.

So called "self-employment syndrome" typical of the transformation period of agricultural cooperative in 1992-1993 is apparently outdated. The proportion of nonworking members/stockholders in the total number of owners in collective farms is very high: according to the survey almost 70.3% in cooperatives and almost 84.8% in joint stock companies. This new situation could enable faster restructuring and adaptation, mainly in a.s. Nevertheless, the number of owners of collective farms is excessively high (on average 199 in coops and 474 in a.s.) and does not match the expectations of capital concentration, particularly in joint stock companies, as a method of transformation to an individual-partnership form of agricultural enterprise.

Prediction data indicate that the farm structure in the CR will maintain its peculiarities in the future, such as clear-cut dual character, high proportion of (leased) someone else's land and hired (non-family) workers, etc. The data also signal some structural changes, particularly gradual concentration of ownership in farms as legal entities and greater diversification of the activities of registered individual farms. Unregistered small farms or households with self-sustaining agricultural production will be an important component of the farm structure in Czech agriculture. Their size will stagnate, but their existence will be irreplaceable for the maintenance of rural atmosphere.

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