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INTRODUCTION

As a result of agrarian and land reforms, the agricultural sector in Ukraine is getting increasingly stronger. Gross volumes of output are growing, the sector's infrastructure is becoming more efficient, while Ukrainian products are becoming more competitively in the global market. In parallel with quantitative changes, considerable qualitative changes in approaches and methods of operating farming business are getting more observable in the national farming sector. Ukrainian farmers develop their professional qualities and skills recognizing their outmost importance for running viable businesses.

Notwithstanding these notable achievements in farming and agribusiness sectors, there is a great need to further production, financial, and legal relations in the industry. In particular, we are talking here about more and better marketing opportunities for agribusinesses, strengthening finance and insurance services sector, and streamlining regulation of the farm lands market. The first step to address these issues, is to have full and impartial information and undertake deep analysis of the development specifics of farming and agribusiness sectors in Ukraine. Results of the analysis would be instrumental in strengthening the groundwork for adopting policy decisions, which would allow policymakers to address in a timely fashion most pressing issues of agrarian reforms both at the regional and national levels.

Building up on the traditions rooted by the International Finance Corporation in conducting social and economic surveys, in 2004 the Agribusiness Development Project in Ukraine undertook a study of farming and agribusiness sectors in the country. This research was third and the last in a series of social and economic studies, commissioned by the Project (see earlier studies "*Report on Farming and Agribusiness in Ukraine*" of 2002 and "*Development of Farming and Agribusiness Sectors in Ukraine*" in 2003).

Likewise in previous years, a study area of this present survey was a wide range of issues of production, marketing, financing and organization aspects of Ukrainian farms, as well as certain aspects of rural area development. This analytical report offers analysis of data for 2003 calendar year. While scrutinizing findings of the present survey, the report also offers a comparative analysis of farming and agribusiness sectors' performance. This allowed us to track main changes that have occurred in the course of last three years in Ukraine's agriculture and observe trends established in farming and agribusiness sector.

The analytical report is structured in the following way. First section overviews subject of the survey and discusses methodology and the sample formation. The second section of the report, titled "*Farming Operations*" looks at issues of farms' core activity and specialization, discusses technological details of production process organization, specifies equipment and inputs application patterns, and defines problems faced by producers in day-to-day operations.

Specifics of agricultural produce distribution and issues of agrarian marketing are presented in the third section. This section offers readers an in-depth look at distribution channels used by farmers, details of produce delivery, payment schemes, main requirements to marketed produce and some other issues.

Section four presents a comprehensive analysis of farm finance and insurance market development. Particularly, it focuses on such issues as financial standing of farms, main sources of funding available for farmers, purposes for which farmers borrow loans, major obstacles to obtaining loans, volumes and directions of farm insurance, and main insurable risks and insurance rates.

Finally, two last sections are dedicated to managerial and organizational aspects of farming operations, and to the issues of social development of rural areas.

As in previous studies, this report offers analysis of the received findings both in the general sample and by two main categories of respondents: private family farms and reformed agriculture enterprises. In addition, main issues are examined in the regional context.

1. GOAL AND OBJECTIVES OF THE SURVEY

The study "Farming and Agribusiness in Ukraine" is final in the series of three consecutive annual surveys. Its overall goal is to obtain information and undertake a social and economic analysis of a wide range of issues in operational activities of farmers and study some aspects of rural development. Objectives of the survey included the following:

- Identify specifics of production and technological processes at private farms and agricultural enterprise.
- Analyze financial standing and major sources of funding available for producers
- Make a snapshot of the state of the farm insurance services market and understand its development prospects.
- Study specifics of agricultural produce marketing.
- Characterize some main social issues in the development of rural areas.
- Define major problems and obstacles to the development of agrarian business in Ukraine.

Fieldwork and primary data processing were performed by the international company *Taylor Nelson Sofres Ukraine* in the period between January and March 2004. Objects of the survey were represented by two main categories of respondents: heads of private family farms and managers/deputy managers of reformed collective agriculture enterprises. This approach allowed to obtain data compatible with the data of the past years' surveys.

The overall sample consisted of 400 respondents, of which 293 were managers of private family farms and 107 were managers of reformed agricultural enterprises. The sample matched the proportions observed in samples of earlier studies conducted in 2002 and 2003.

The proportion of private family farms to reformed agricultural enterprises in the sample was determined by the actual correlation of these types of farms in the general population. At the time of sample formation, the following parameters were taken into account:

- Aggregate number of private family farms and agricultural enterprises in Ukraine. This information was received based on data of the State Statistical Committee and as of January 16, 2004. Their total number was 56,647 entities.
- Proportion of private farms and agricultural enterprises in Ukraine. According to data of the State Statistical Committee, this proportion is 83% against 17% (or 46,898 private farms against 9,749 reformed agricultural enterprises)
- The number of private farms and agricultural enterprises in each oblast was determined based on their respective proportions in the general population. Respondents in rayons of the surveyed oblast were distributed evenly.

The survey covered 272 enterprises that took part in two previous surveys and 128 new enterprises. It appeared impossible to maintain the panel of the enterprises studied in the three consecutive years, which is caused by a number of objective reasons. These were namely, bankruptcy of respondent-enterprise, managers' absence at the time of interview, and refusal from interview.

The survey is nationwide in nature. It covered all regions of Ukraine, represented by the following oblasts: Kherson (South), Zhytomyr (North), Donetsk (East), Ivano-Frankivsk (West) and Poltava (Center). Distribution of respondents by oblasts of the survey is as follows:

- Donetsk – 91 respondents;
- Ivano-Frankivsk – 40 respondents,
- Zhytomyr – 49 respondents;

- Poltava – 88 respondents; and
- Kherson – 132 respondents;

The survey was conducted by means of *face-to-face* interviews, on the basis of semi-structured questionnaire, which included over 80 closed and open-ended questions. An average duration of interviews was 60 minutes. Based on data of the State Statistical Committee of Ukraine regarding the quantities of the surveyed types of agricultural enterprises as of January 16, 2004, it is possible to derive sample error for each oblast of Ukraine and for the country overall. The sample error for Ukraine is +/– 4,9%.

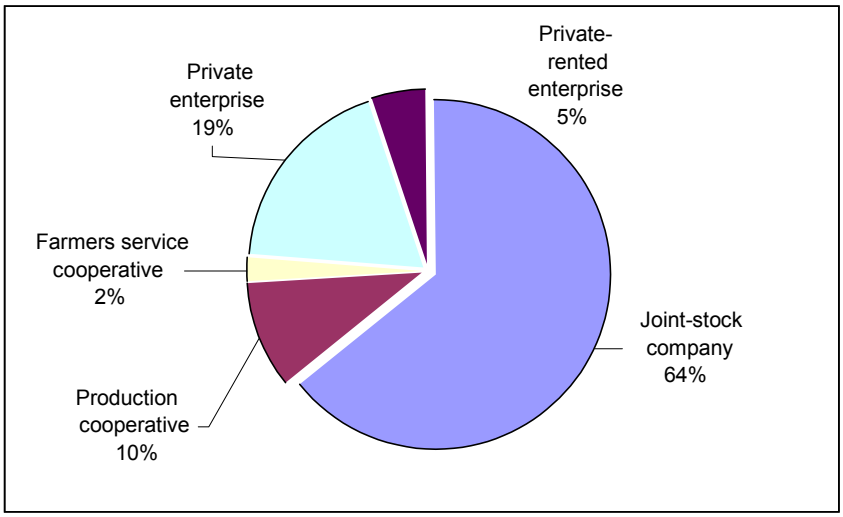
Data collected in this survey representing quantitative values refer to the 12–month period of 2003. However, information of prevalently qualitative nature, for example, problems faced by farmers, farmers' needs for specific skills and knowledge, pertains to the period of the data collection, i.e. early 2004.

2. FARMING OPERATIONS

2.1. Main Organizational Forms and Sizes of Surveyed Farms

Reorganization of collective farms has been widely recognized one of the most important outcomes of agrarian reform in Ukraine. Nowadays, former collective farms exist in a variety of new organizational forms. However, both this survey and results of two previous studies demonstrate that reformed agricultural enterprises are represented prevalently by three main organizational forms: joint-stock companies (JSC), private enterprises and production cooperatives (Figure 1). Almost two thirds of surveyed farms (64%) are joint-stock companies (open or closed). It is important to note, that in 2001 and 2002 portions of these enterprises among the surveyed reformed farms were 39% and 53% respectively.

Figure 1. Main organizational forms of agricultural enterprises, % of the surveyed reformed enterprises.



The second most common organizational form of farming operations is private enterprise. Compared to joint-stock companies they are much smaller both in size and by number of employees. While the median value of the total area of agricultural JSC is 1,700 ha, this value is only 695 ha for private enterprises [1]. Average yearly number of employees in these two types of enterprises also differs – 75 employees in JSCs against 48 employees in private enterprises.

Production cooperatives and private-rented enterprises also should be noted among other organizational forms. The share of these latter forms in the sample of the surveyed reformed enterprises were 10% and 5% respectively.

Reforming of the sector of collective agricultural enterprises and the rapid development of private family farms both brought about new organizational forms of farming operations and effectuated changes in sizes of arable land, and total number of employees.

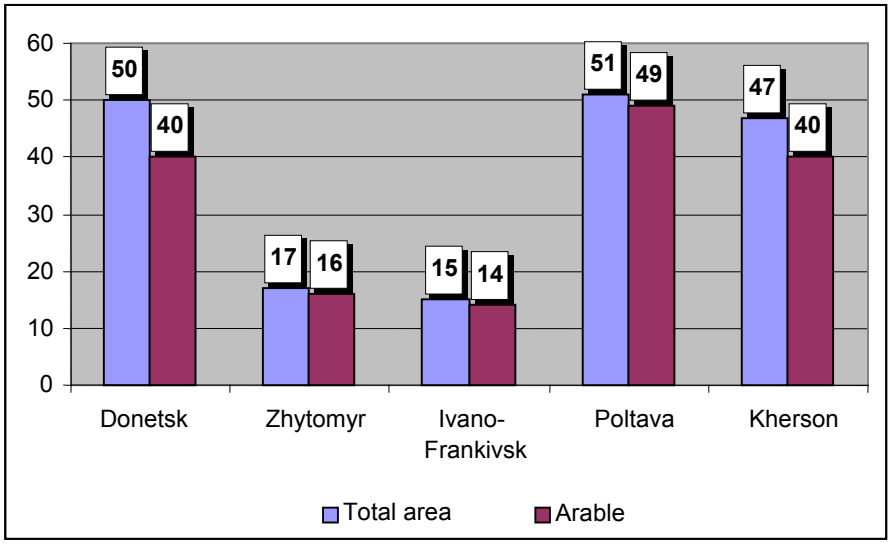
[1] In this survey, in addition to statistical means, we use median values. Median is the middle value in a distribution, above and below which lie an equal number of values. Median value is used in order to level off impacts of maximum and minimum values (outliers), which would be impossible to do should one rely only on values of statistical means.

As demonstrated by survey findings of the last three years, sizes of private farms have tended to grow. By the data of previous surveys, the median value of the total area of surveyed private family farm was 45 ha in 2001, 48 ha in 2002, while findings of the 2003 survey suggest the area was 49 ha. These farms typically grow in size due to farming additional land plots, which they usually lease.

The received data demonstrate that sizes of private farms vary tremendously. While the smallest private farm was only 2 ha in area, the biggest one reached as much as 3,800 ha[2]. Almost half of the surveyed private farms, or 47% of the sample, reported their aggregate area ranged from 50 to 70 ha. Additional 21% of private farms have areas over 70 ha. Growing sizes of private family farms is a good trend evidencing strengthening of this farm sector in Ukraine.

Donetsk, Poltava and Kherson oblast appear to have largest private farms in size (Figure 2). This may be explained, primarily, by abundance of farms specialized in large-scale grain production in. Private farms in the West and in the North of the country tend to run small-scale operations. Coupled with limited size of available land plots, it may explain a greater number of smaller private farms here. In Zhytomyr and Ivano-Frankivsk oblasts, median values of the total area of private family farm are 17 ha and 15 ha respectively. By nature of operations, a lot of such farms in the north-west of the country remain quite similar to individual subsidiary households.

Figure 2. Correlation of median values of overall areas and arable land areas at private farms, ha.



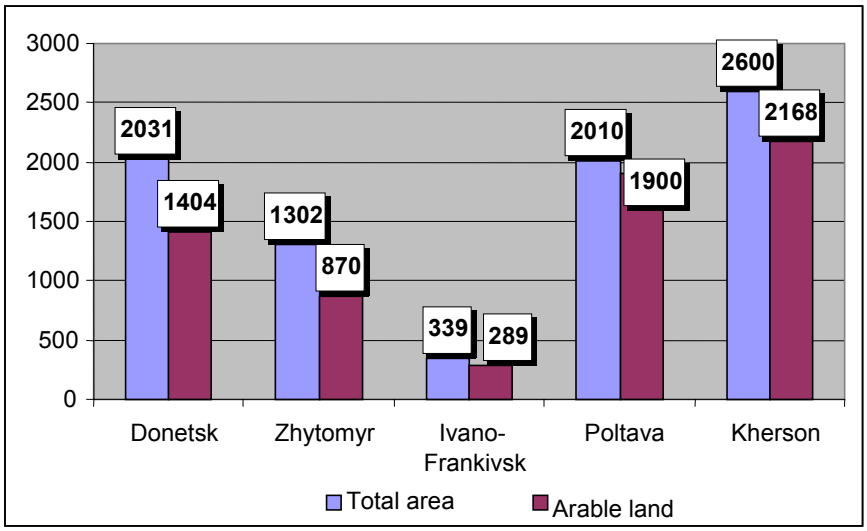
As regards sizes of reformed agricultural enterprises, analysis of the received data suggests that area of farmlands of the reformed sector vary much less. Median value of the total area of reformed enterprise is 1,600 ha. Only a third of such farms have area over 2000 ha.

Likewise in case of private family farms, biggest reformed farms are prevalent respectively, in the central and south-eastern regions of Ukraine (Figure 3). For example, the median value of the total area of reformed enterprise in Kherson oblast is 2,661 ha, which is almost 8 times as big as the median size of such farms in Ivano-Frankivsk oblast. These regional variations may be primarily explained by the production specialization of farm operations. Most farmers in the south-eastern and central regions of the country specialized in growing grain and technical crops tend to be large-scale productions.

[2] The value of the statistical mean of a surveyed private farm is twice as big as its median value, reaching 110 ha.

In addition to identifying average sizes of surveyed farms, this study enabled obtaining data on the weight of arable land as a percentage of the total area of farms. Similar to results of the previous years, this ratio is rather high, reaching 77% for agricultural enterprises and 86% for private farms. Prevailing majority of respondents specializing in crop growing may explain this significant weight of arable land in the total area of farms. However, even taking into consideration this fact, the obtained data may be quite a good demonstration of the statement about dominance of extensive tillage practices in Ukraine.

Figure 3. Median values of the total area and arable land area of reformed agricultural enterprises, ha.



It is important to note that the percentage of arable land in the total area is higher in private family farms. This may be observed across all surveyed oblasts. According to obtained results, farmers till from 80% of all available areas in Donetsk oblast to 96% in Poltava oblast. In our opinion, this high percentage of tillage may be explained by a narrower specialization of private farms and a lack of other categories of land in their use.

2.2. Availability of specialists on staff and the need for agriculture extension services

In parallel with the transformation of organizational forms of farming operations and changes in the size of farmlands, years of agrarian reform witnessed changes in the size of enterprises by the number of employees and level of staffing with specialists.

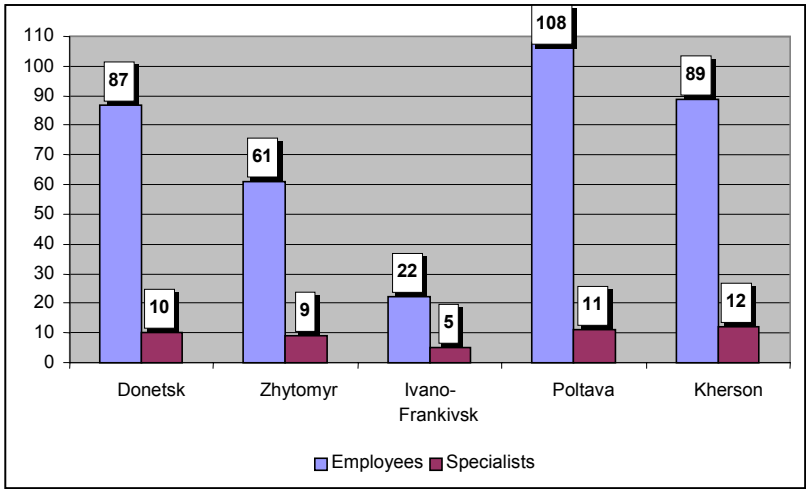
Today, a surveyed reformed enterprise has an average of 77 employees in staff and 10 specialists. As may be noticed from Figure 4, reformed enterprises considerably differ from region to region by the number of employees and by how well they are staffed with specialists. Poltava, Kherson and Donetsk featured largest by the number of employees agricultural enterprises. Presence of such large farms may be explained by both regional climatic conditions determining specialization of farms growing grain and technical crops, and availability in the said oblasts of significant tracts of farmlands.

It should be noted also, that today in central and south-eastern oblasts there are a lot of farms, which by the number of employees are as big as former state collective farms, that existed in mid 1990s. For example, the average number of employees in surveyed agricultural enterprises in Poltava, Kherson and Donetsk oblasts is 470, 360 and 300, respectively.

Although agricultural enterprises in Ivano-Frankivsk and Zhytomyr oblasts are smaller by the overall number of employees, they, nevertheless, are better staffed with specialists. While in Poltava oblast

there is one specialist per 10 workers, in Ivano-Frankivsk oblast, this ratio is 1 to 4. However, this quantitative difference in effective staffing may be explained by considerable qualitative divergences indicative of varying extent of efficiency in usage of human resources in different regions of Ukraine. This difference is a derivative of numerous factors such as specialization of production, level of its mechanization, organizational form of farm etc. But, since the last question was not in focus of this study, it is now difficult to make any meaningful conclusions about efficient usage of agrarian labor in the regional context.

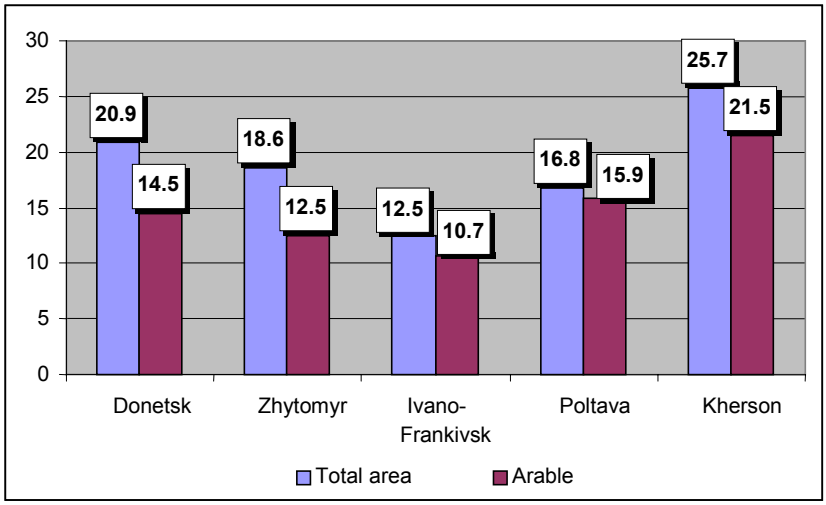
Figure 4. Average number of employees and staff specialists at agricultural enterprises.



As of today, reformed collective farms remain major employers for most part of rural population. On one hand, this helps reduce unemployment in rural area, on the other, it is indicative of inefficient usage of workforce. As a calculated ratio of the overall farm area to the number of employees demonstrates, in Ukraine there are 21 ha of overall land area per agricultural employee, including 16.2 ha of arable land. By this ratio, Ukraine lags far behind countries of Western Europe and North America, where it is 5 to 8 times higher.

In the regional context, Kherson and Donetsk oblast have the highest ratio of farm total lands/arable lands to the average number of workers, while Ivano-Frankivsk oblast – the lowest. As noted before, regional variations in the ratio of total farmlands per employee may be explained by farms' specialization on more labor-intensive output. On the other hand, a lower ratio may suggest wider use of manual labor in Ukraine's agriculture.

Figure 5. Farm land per Worker, hectares.



Private farms appear to fall short of both the total area of farmland and of employees to be as large as agricultural enterprises. In their own operations they tend to rely on their own resources. Here are a few findings of the survey: of 293 private farms, only 118 (or 40%) reported they had full-time hired workers and 165 farms (56%) have specialists on staff. As demonstrated by practice, owners of private farms themselves frequently perform functions of agricultural specialists.

According to the received data, an average size of a surveyed private family farms by the number of agricultural labor is four, two of which are hired workers. Similar to the situation with area of farmlands, private farms vary significantly by the number of workers involved in production process. While the minimum number of employees at such a farm is one, the maximum exceeds 100 workers. Most frequently, largest private farms may be encountered in Kherson and Donetsk oblasts.

It should be noted, however, that although by the area of farmlands private family farms from central and south-eastern regions exceed those from Zhytomyr and Ivano-Frankivsk oblasts manifold, regional variations in the number of employees are not that notable. For example, while the average yearly level of employment at a farm in Donetsk oblast is 5 workers, in Ivano-Frankivsk it is 4 workers. At the same time, we have to mention that this differences say not very much about the level of efficiency of running private farms notwithstanding their small size, they rather evidence limited availability of land resources for running agriculture production in the West of Ukraine. Moreover, one shouldn't forget that specialization of many private farms in the South in vegetable production, which is a rather labor-intensive business, requires hiring additional workforce.

One of the specifics of operating private family farm is active involvement in production process of farm owner's family members. As proven by results of the study, for the majority (85%) of private farms, family members are actively involved in farming operations.

Similar to the two previous surveys, this study attempted to identify how well agricultural enterprises and private farms are staffed with their own specialists. It is commonly known that agricultural production is a rather complex and multi-faceted operations requiring a variety of knowledge and skills. Handling numerous operational problems, a farmer typically relies on him/her only. Given generally underdeveloped at the moment the extension services market, availability of own specialists on staff helps to solve problems more efficiently an in a timely manner.

Naturally, the range of problems facing agricultural producers, and their incidence to a great extent depend on specifics of operations of each farm, its specialization and scale of production process. Agricultural enterprises, as noted above, are larger in scale and more diversified, and therefore, are better manned thanks to more specialists on staff. In most cases, these enterprises employ specialists from former collective farms which chose to remain on staff after the latter had been privatized.

As may be evident from Table 1, a prevailing majority of the surveyed agricultural enterprises have their own full-time agronomists, accountants, engineer-mechanics and economists. Only 3% of respondents admitted they had no specialists on staff at all.

Table 1. Availability of staff specialists, % of the overall number of respondents that have staff specialists.

	2001		2003	
	Agricultural enterprises	Private farms	Agricultural Enterprises	Private farms
Agronomist	91%	25%	87%	25%
Accountant	70%	15%	96%	27%

Engineer/engineer-mechan	59%	16%	75%	12%
Zootechnician	69%	1%	52%	1%
Veterinarian	36%	1%	58%	2%
Economist	40%	1%	66%	3%
Mechanic	13%	6%	65%	5%
Hydrotechnician	6%	1%	12%	1%
Power engineering speciali	7%	–	40%	1%
Builder	5%	1%	24%	1%
Lawyer	4%	1%	21%	1%
No specialists on staff	1%	47%	3%	43%

Along with growing size of private family farms and increasing commodity production, availability of staff specialists is also improving. While in 2001, 47% of surveyed private farms reported they had no specialists on staff, in 2003 the share of these reduced to 43%. Although this change in the level of staffing with specialists is insignificant, moreover, it is somewhat leveled by partial change of the survey sample, it looks like in 2004 farmers have better access to specialists' services. For instance, staff accountants availability increased from 15% in 2002 to 27% in 2003.

In our opinion, this higher level of availability of staff specialists at private farms may be explained by the fact that increasingly bigger number of farm owners, or their family members appear to recognize the need for acquiring specialized education and skills. These allow them to run their farming operations on a higher professional level.

A prevailing majority of agricultural specialists, working at agricultural enterprises, are staff members. Likewise reformed enterprises, farmers use services of part-time/seasonal specialists only on an occasional basis. Meanwhile, private family farms tend to use part-time specialists more often. Particularly, this is the case with services of tractor operators and mechanics, that are used by private farms on a part-time basis.

This survey also tried to identify existing need of agricultural producers for services of specialists other than staff members. Given the limited access to staff specialists, particularly in case of private farms, and the emergence of qualitatively new services, i.e. agricultural marketing, we assumed that there is a considerable unmet demand for agriculture extension services. However, received data demonstrate that the demand remains underdeveloped, and in most cases, agricultural producers satisfy their needs for such services, using their internal resources.

As may be noticed from Table 2, legal services are in the greatest demand. Over one third of surveyed agricultural enterprises (36% respondents) and 11% of farmers admitted they have a great need for legal services. Additionally, 18% and 14% of such respondents recognized they have insignificant need for such services. Great demand for legal services may be explained by the fact that coping with many operational problems requires high-skilled legal advice. Moreover, according to the above data, level of farms' staffing with professional lawyers is not high. This makes farmers seek external legal advice.

Second highest ranking services in demand are those of agronomist. 22% of agricultural enterprises and 26% of private farms said they had a large or not so large need for services of these specialists. Demand for services of other specialists is a lot lower, and may be considered underdeveloped as yet.

Table 2. Agricultural producers' needs for services of outside specialists, % of total responses.

	Agricultural enterprises				Private farms			
	Great nee	Not a great nee	No need	Difficult To answe	Great nee	Not a great nee	No need	Difficult To answe
Agronomist	14%	8%	78%	–	15%	11%	73%	1%
Accountant	9%	7%	84%	–	10%	13%	76%	1%
Engineer/ engineer-mechanic	9%	4%	87%	–	1%	3%	95%	1%
Zootechnician	3%	7%	88%	2%	1%	1%	96%	2%
Veterinarian	6%	7%	88%	1%	1%	2%	95%	2%
Economist	5%	4%	89%	2%	1%	6%	92%	1%
Mechanic	3%	6%	91%	–	1%	4%	94%	1%
Tractor driver	12%	4%	83%	1%	2%	6%	91%	1%
Hydrotechnician	–	4%	95%	1%	1%	3%	95%	1%
Power engineering specialist	9%	5%	83%	3%	1%	1%	97%	1%
Builder	3%	8%	83%	6%	–	2%	96%	2%
Lawyer	36%	18%	43%	3%	11%	14%	74%	1%
Marketing specialis	2%	10%	84%	4%	1%	7%	89%	3%

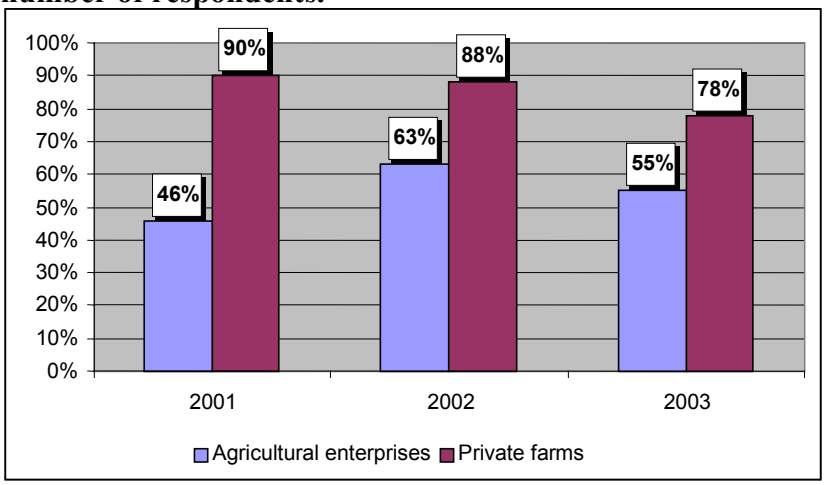
In our opinion, there are two major explanations to this situation. First, as noted before, today due to limited free resources for buying consulting services in the market, agricultural enterprises tend to satisfy their needs on their own. Second, demand for some services is not yet formed. Thus, agricultural producers may not fully recognize the importance of obtaining current prices for major types of agriculture commodities or the need for developing an effective marketing and pricing policy, that might help them enter new markets and use new marketing channels. This seem to be a valid explanation of why a great need for services of marketing specialists was recognized by only 2% of the surveyed agricultural producers and 1% of private farms. Also, it should be noted that many enterprises that took part in the survey admitted they need to expand marketing channels and sales markets for their produce.

2.3. Production specialization of farms and main productivity indicators

For the absolute majority of surveyed producers, agricultural production is the primary source of income. According to this survey data, 78% of agricultural enterprises and 55% of private family farms are involved in no additional activities (Figure 6). Comparing survey findings of the last three years demonstrates that private farms are gradually diversifying their operations, while agricultural enterprises tend to become more focused on agrarian business. Similar to the previous years, the major supplementary types of activity included: grain grinding, baking bread and leasing machinery out. The latter service is particularly frequently provided by private family farms. The portion of the income

generated through supplementary types of activity equals on average 23% for private farms and 13% for agricultural enterprises. This correlates with the data of the two previous yearly studies.

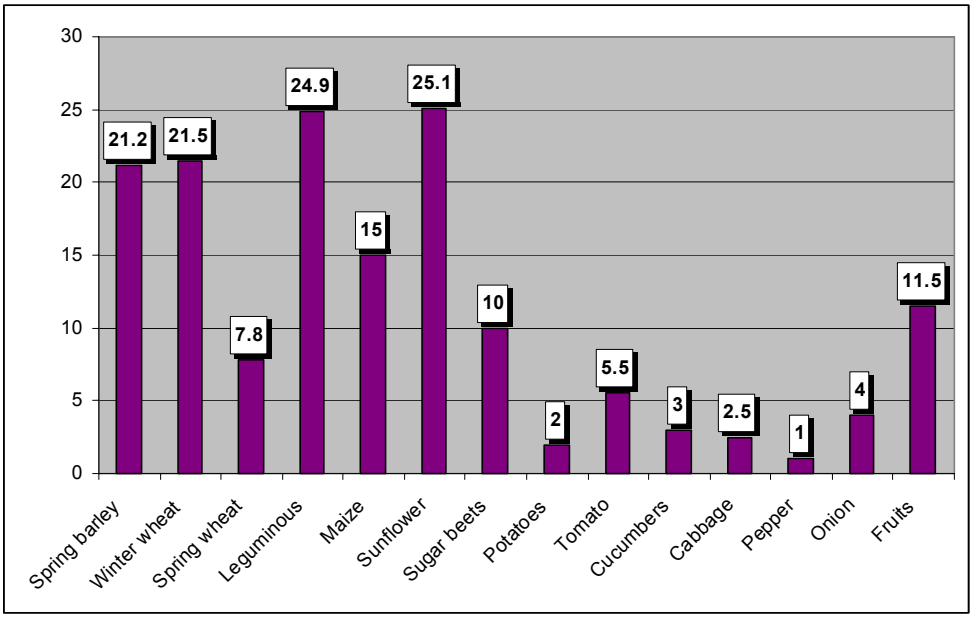
Figure 6. Share of enterprises, for which farming operations represent the only type of activities, % of the total number of respondents.



The objects of this survey are the farms specializing, mostly, in crop growing. As was demonstrated by the received data, majority of the surveyed agricultural enterprises specialize in growing grain and technical crops, while primary crops grown by private farms are grain and vegetables.

Likewise in the previous years, winter wheat appears to be the major grain crop for most producers. 61% of the surveyed private farms and 91% of reformed enterprises are involved in growing this particular crop. In 2003, average seeded area under winter wheat was 434 ha for agricultural enterprises and 21.5 ha for private farms (Figure 7). Meanwhile, 40% of private family farms seed less than 10 ha with winter wheat. Only 9% of surveyed private family farms may be fairly named large commodity producers of winter wheat with the seeded area over 50 ha. In the regional context, the largest seeded areas under winter wheat are concentrated in Donetsk, Poltava and Kherson oblasts, which have traditionally been major producers of grain in Ukraine.

Figure 7. Average seeded areas under major crops at private farms, ha.



Spring barley is the second most commonly grown crop: It is produced by 59% of private farms and 89% of agricultural enterprises. Average seeded areas under this crop are 21.2 ha and 196 ha for family farms and agricultural enterprises, respectively. Comparing the received data with findings of the previous surveys, demonstrates that the areas seeded with spring barley at family farms have a steady growing tendency. It should be noted that in 2003, in each ninth such a farm the seeded area exceeded 30 ha. This may evidence that these farms produce this crop on the increasingly commercial basis.

As for other grain crops, they have second priority. This is, particularly, true for private farms. Agricultural enterprises tend to have more diversified grain production, which is explained, first of all, by their bigger sizes. In addition to the above mentioned crops, a great portion of large enterprises produce grain corn (45% of enterprises vs. 15% of family farms), leguminous crops (42% and 6%, respectively) and spring wheat (respectively, 30% and 7%).

Major technical crops are sunflower and sugar beets. Sunflower is grown equally by family farms and agricultural enterprises. In 2003, 51% of surveyed family farms and 55% of agricultural enterprises seeded this crop. Average seeded areas with sunflower for these two categories were 25.1 ha and 187 ha, respectively.

As regards sugar beets, this crop is produced, prevalently, by large agricultural enterprises: 39% against 13% of private farms. It is important to note, that even family farms located in the main zone of sugar beets production (forest steppe) have insignificant areas under this crop. A possible explanation of this low level of sugar beets production by these farms is that it is a capital intensive business, while many private family farms lack sufficient capital assets to do it. In 2003, average seeded area under sugar beets at private farms was 10 ha (83 ha – for agricultural enterprises). Given small areas of farmlands available for family farms, they may face certain problems with formation of large commodity batches of sugar beets suitable for their further industrial processing.

Traditionally, most family farms are specialized in vegetable-growing. Although generally, by average vegetables seeded areas these lag behind agricultural enterprises, the difference is not so notable, as in case of grain. This is evidenced by the following data. In 2003, seeded area under cucumbers was on average 3 ha per family farm and 12 ha per agricultural enterprise. As demonstrated by practice, family farms today are capable of running profitable production and marketing their vegetable output gainfully.

Three consecutive surveys provided the data regarding changes in the size of seeded areas under main crops at both categories of this survey's respondents. In parallel with larger average sizes of private family farms, which was noted earlier, a clear growth tendency is observed regarding seeded areas. As may be seen from Figure 8, the areas have increased under almost all surveyed crops. The growth was most notable for grain crops with the exception of spring wheat. According to the received data, in 2003, average seeded area under this crop was 7.8 ha, only a half of 14.5 ha in 2002. In our opinion, this essential drop in seeded crop may be explained by the fact that due to winterkilling of winter wheat, the areas were reseeded with spring wheat. This, in its turn, affected the size of the average seeded areas under grain crops.

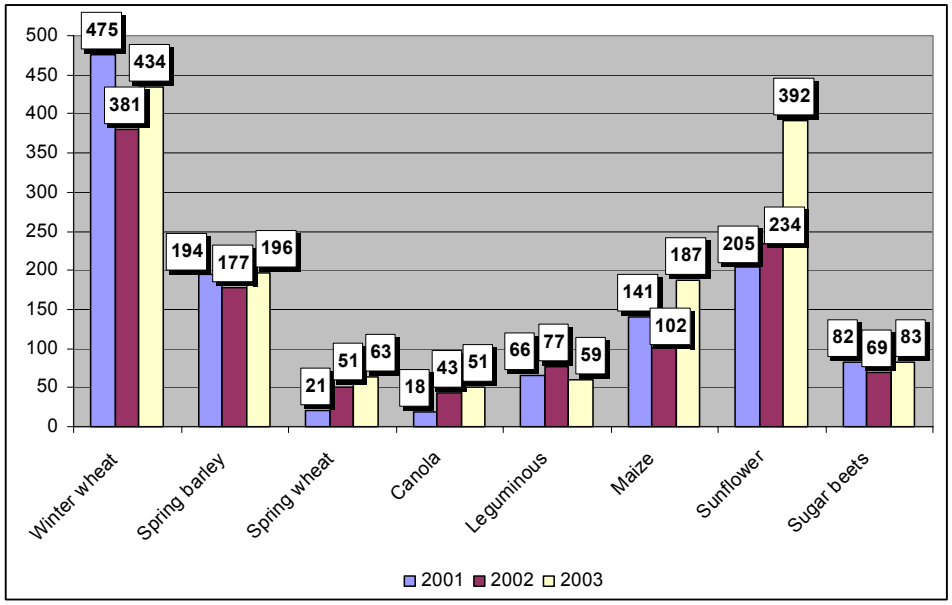
Larger areas under grain crops is an indication that grain production at private farms is gaining commercial basis. Likewise large agricultural enterprises, private family farms, especially those located in the South of Ukraine, begin to play increasingly more important attention in the development of grain market in the country.

Areas seeded by other crops at private farms were growing less rapidly, while in some cases, in addition to stabilization of their sizes, they have contracted. We are referring here, primarily, to the production of sugar beets, the average areas seeded with which have reduced from 14.8 to 10 ha. Given relatively low yields of sugar beets, the production is both labor and capital intensive.

Speaking about sizes of seeded areas at private farms, it is important to emphasize the following. If, on one hand, not so large seeded areas prevent farmers from making up large batches of commodity output, on the other hand, it gives private farms more flexibility in order to organize the production process considering price and demand outlook at the agrarian market.

As opposed to private farms, analysis of the three-year data on seeded areas under grain and technical crops at the surveyed agricultural enterprises, does not allow discerning a clear trend in their size change (Figure 8). Seeded areas have apparently changed under affect of particular situational factors, i.e. market outlook or weather conditions. However, we should note the growing areas seeded with canola and sunflower, the production of which are currently quite profitable. Moreover, in 2003, greater production of canola was the consequence of winter wheat killing with the subsequent reseeding with canola.

Figure 8. Average seeded areas under major grain and technical crops at agricultural enterprises, ha.



In addition to studying seeded areas, this survey also attempted to identify productivity of farming activities, namely, yields of crops, as one of the main indexes of productivity. Availability of three-year data allowed us to undertake a retrospective analysis and make certain conclusions with regard to yields of main surveyed crops.

Data of the previous studies, presented in Table 3, point at considerable difference between the yields obtained by private farms and agricultural enterprises. Yield is a rather complex index, depending on a number of internal and external factors. Quality of inputs, application of effective farming technologies, practical experience of producers, and finally, weather conditions are main components, impacting eventual yield. Unfortunately, due to limited timeline of the undertaken surveys, we cannot speak about steady trends with regard to changing absolute values of crops' yield. For example, in 2003, grain crops yields were unusually low, because of devastating effect on yields caused by the adverse weather conditions.

However, irrespective of the presented arguments, received results allow us to notice evident qualitative differences in changes of productivity between two main groups of producers. Thus, according to the 3-year surveys results, agricultural enterprises appeared to receive higher yield of grain crops (practically,

all grain groups) and technical crops than their private farmers counterparts. The gap between these two groups of producers is specifically notable with respect to the yields of grain corn and sugar beets: These yields received by private family farms tend to be twice as low.

Table 3. Average yield of major agricultural crops, centners per ha.

	2001		2002		2003	
	Private farm	Agricultural Enterprises	Private farm	Agricultural Enterprises	Private farm	Agricultural Enterprises
Winter wheat	24,4	28,8	23,9	25,6	4,2	6,9
Spring barley	18,7	22,3	17,4	20,0	12,3	14,6
Spring wheat	20,7	30,0	19,7	20,4	21,4	17,9
Leguminous	15,3	19,0	13,8	18,2	14,1	15,2
Grain corn	35,5	57,4	26,8	41,8	21,6	40,6
Canola	8,7	13,5	14,5	14,2	3,8	5,1
Sunflower	8,1	10,5	10,9	12,9	10,3	13,3
Sugar beets	182,3	224,3	224,8	187,8	175,7	194,7
Potato	116,7	111,5	119,9	73,3	110,8	107,7
Tomato	162,5	143,4	162,8	153,3	192,8	231,6
Cucumbers	114,7	73,9	88,5	111,8	315,6	330,0
Cabbage	191,7	169,1	144,6	104,1	186,1	110,1
Pepper	172,3	87,4	48,2	77,9	246,0	185,0

As we noted earlier, a clear growing tendency is being observed regarding the size of seeded areas under grain at private farms, as their grain production becomes more and more commercialized. Meanwhile, weaker capital base, lower usage of mineral fertilizers and chemicals coupled with technology incompliance, adversely affect performance of grain crops. No need to say that private farms get much worse yields.

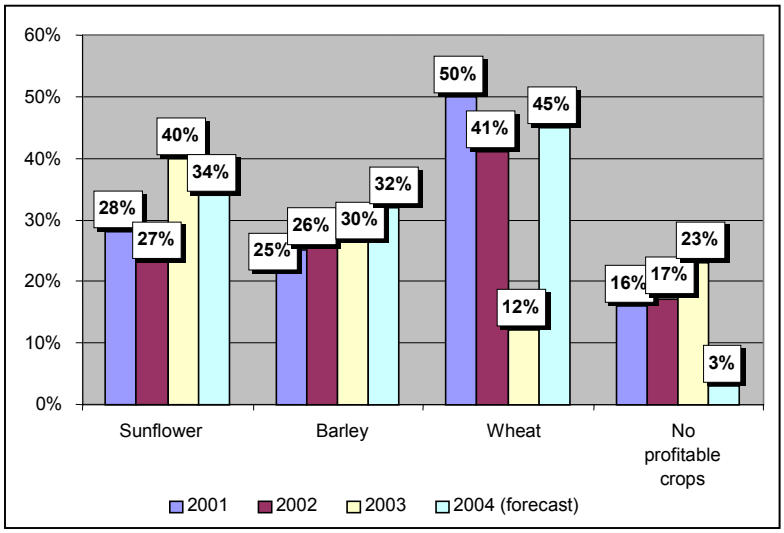
On the other hand, family farms appear to have slightly higher yields of vegetables and potato. This has been observed over all three years of the survey. Production of vegetables and potato is one of the major specializations for many such farms. While being a rather labor-intensive process, it requires certain flexibility from farmers to accommodate market needs, namely, those of processing industry. Obtaining higher yields with comparatively similar sizes of arable areas, and having mastered new approaches of agrarian marketing, private farms may have good prospects to reach leading positions in the vegetable market of the country.

2.4. Profitability of production and major production costs

In present conditions, when funds of the state farm support programs are rather limited, profitability of production is the major factor making farming business viable. In view of that, in the course of the survey we tried to identify crops that have been most profitable in 2003 (Figure 9). Certainly, list of these crops may vary from region to region, from farm to farm depending on specialization, and between the categories of respondents. According to survey data, sunflower appears to be most profitable for 41% of respondents, including for 40% of private farms and 44% of agricultural enterprises. In Donetsk

oblast, the primary region for growing sunflower, the crop appeared most profitable for 73% of the surveyed farms of oblast.

Figure 9. Three most profitable crops of private farms, % of surveyed farms.



Second most profitable crop was barley. It was cited by 30% of private farms and 45% of agricultural enterprises (56% of Donetsk oblast). Finally, wheat will be most profitable crop for 19% of respondents.

Irrespective of the fact that the survey did not obtain absolute profitability figures on some crops, the findings indicate that agricultural enterprises generally have a whole list of profitable crops. This is, primarily, true for major commodity crops. The following example supports this arguments: Only 8% of farmers-respondents against 22% of surveyed enterprises growing grain corn admitted this crop was one of three most profitable crops. Higher profitability of grain crops at agricultural enterprises may be explained by higher yields obtained and greater size of seeded areas, which ensures effective production on the basis of the economy of scale.

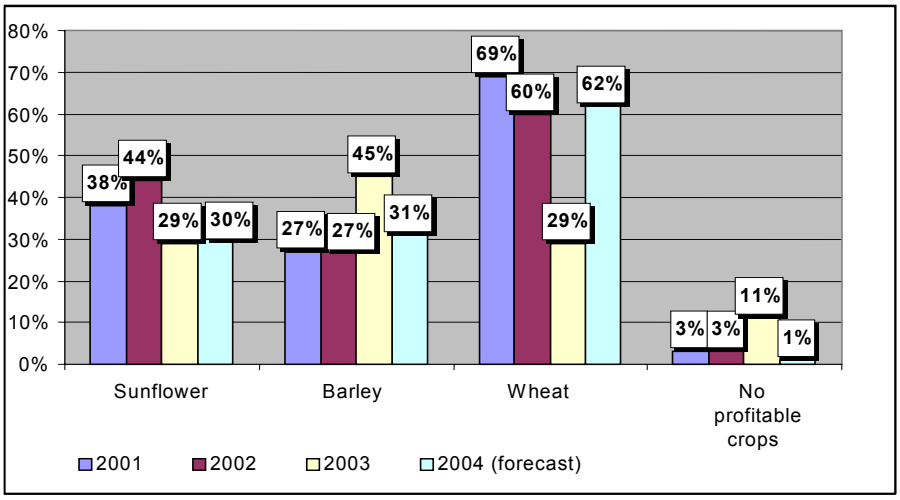
A retrospective analysis of the most profitable crops demonstrates that in the last three years the combination of three most profitable crops remained unchanged for both family farms and enterprises. However, their ranking inside the list did change depending on the price situation and impact of weather factors.

As becomes evident from graphs 9 and 10, for most surveyed farms, wheat appeared to be most profitable. However, in 2003, due to extremely low yields caused by bad weather conditions, a lot smaller portion of respondents included wheat into the “top crops” list. This looks equally true for both private farms and agricultural enterprises. Of note, the number of surveyed family farms having highly profitable production of sunflower is gradually growing while the actual number of agricultural enterprises specialized in it, has dropped lately. A possible explanation to this situation is that many agricultural enterprises can no more increase areas seeded by sunflower. Meanwhile, production of sunflower is a very important area of specialization for many family farms.

One cannot ignore the fact that the portion of respondents stating they had no profitable crops, has grown. While the quantity of respondent-farmers has steadily increased over the last three years of the survey, the number of agricultural enterprises has grown only last year. Thus, while in 2001, only 3% of surveyed enterprises stated they had no profitable crops, last year, their portion has grown to 11%. In our

opinion, low yields and death of a considerable part of wheat harvest may provide a good explanation to this situation.

Figure10. Three most profitable crops for agricultural enterprises, % of the total surveyed enterprises.

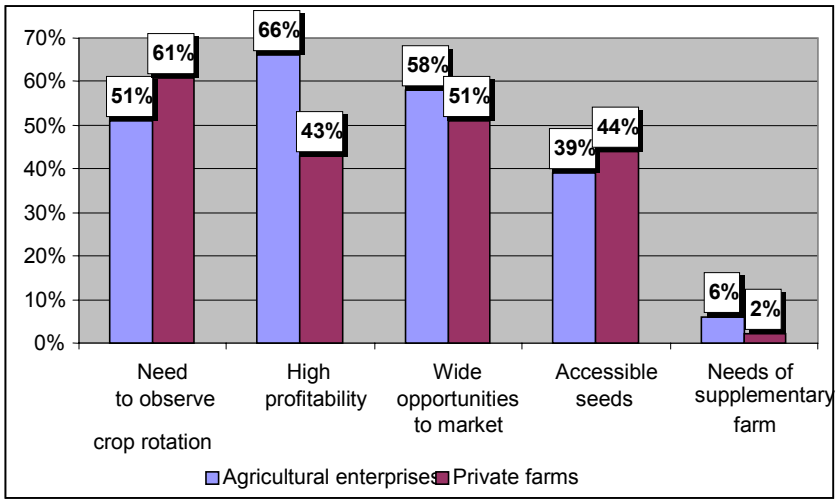


If we discuss prospective changes in the profitability of crop growing, it is important to say, that respondents have rather optimistic expectations. In the opinion of most respondents in 2004, wheat is expected to be most profitable crop. This was cited by 45% of private farms and 62% of managers/deputy managers of agricultural enterprises. The share of enterprises which do not expect their operations be profitable in 2004, has also dropped.

Going back to the question of growing grain, we tried to identify primary reasons for which agriculture producers grow grain crops. As becomes evident from responses, main reasons are: the need to observe crop rotation, broad opportunities to market output, high profitability of production and readily available seeding material.

As may be observed from Figure 11, there are certain variations in responses given by the two categories of respondents. According to two thirds (61%) of respondents among family farms, given limited sizes of seeded areas, the need to observe crop rotation represents an important factor urging them to grow grain crops. For surveyed nerprises, where grain growing is one of the leading areas of specialization, high profitability appears to be main incentive to grow grain.

Figure 11. What makes producers grow grain crops, % of the number of grain farms.

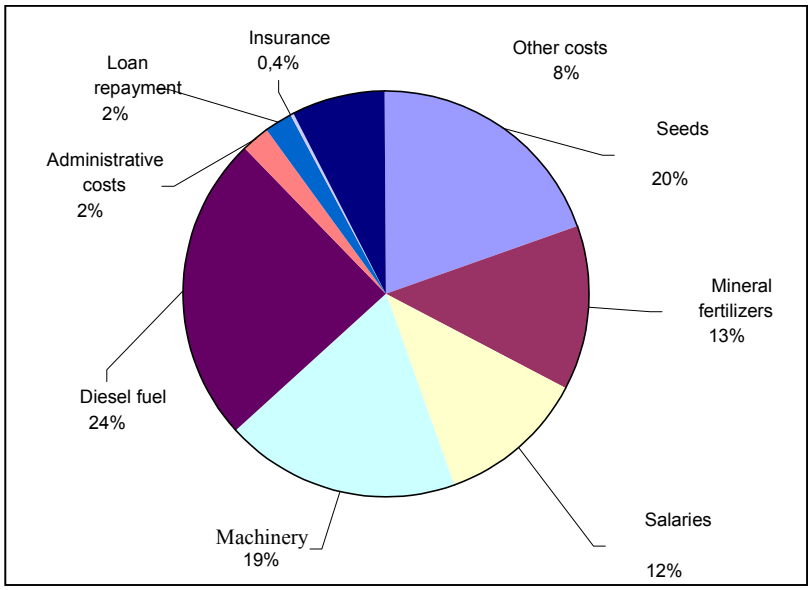


Also, agricultural enterprises noted wider marketing opportunities as an incentive to grow grain. It is important to note, that significance of this incentive is growing from year to year. While in the previous survey, this factor was cited by 39% of reformed farms and 31% of private farms, in this year survey the respective numbers grew respectively to 58% and 51%. This change evidences gradual strengthening of grain market in Ukraine where main elements of infrastructure have been established and marketing channels for grain produce have been identified, including in the world market.

Finally, in the course of the survey we also planned to find out their main production costs per unit of output. It is commonly known that all costs may be divided into two main categories: capital costs (building of production facilities, purchase of equipment etc.) and costs associated with working capital (purchase of production inputs, salaries, loan repayment, administrative costs etc.). In this survey, we focused on the latter, because they represent variable costs, which in the short run are manageable by producer.

As may be noticed from charts presented below (Figures 12 and 13), private family farms and agricultural enterprises have similar cost structure in working capital. Major portion of these costs falls on purchase of fuel, seeds, mineral fertilizers and for maintenance and repair of machinery. Size of these costs as a proportion to the overall costs is 76% at private family farms and 64% at agricultural enterprises.

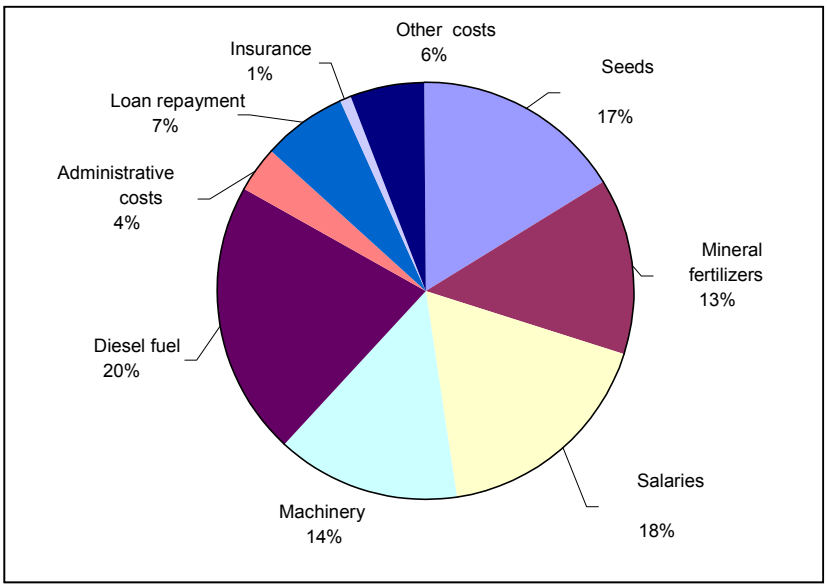
Figure 12. Structure of main costs per unit of output at private farms, % of total costs.



It is important to note that the portion of costs associated with wages is bigger at agricultural than at private farms. An explanation may be found here in private farms using prevalently labor of their owners and family, while agricultural enterprises are much more likely to use hired labor.

What clearly catches one's eye is that the percentage of costs associated with loan repayment is a few times lower at private farms compared to agricultural. This may demonstrate better access of the latter to external funding, which will be discussed in more detail in later sections of this report.

Figure 13. Structure of main costs per unit of output at agricultural enterprises, % of total costs.



2.5. Technology

Our questionnaires traditionally probed into main criteria for preferring a specific crop growing technology. For clearer identification of the role of different production criteria, we divided all agricultural crops into two big groups: grain and oil-bearing, and vegetables (Figures 14 and 15).

As seen from Figure 14, high yields and low production costs remain leading criteria for choosing technologies of growing grain and oil-bearing crops. High yields is particularly important for agricultural enterprises, (78% of responses), while private farms are more concerned about reduction of cost when choosing a production technology (57%). A possible explanation for greater importance of the last factor for private farms is their limited access to inputs.

Figure 14. Main criteria for growing grain and oil-bearing crops, % of responses.

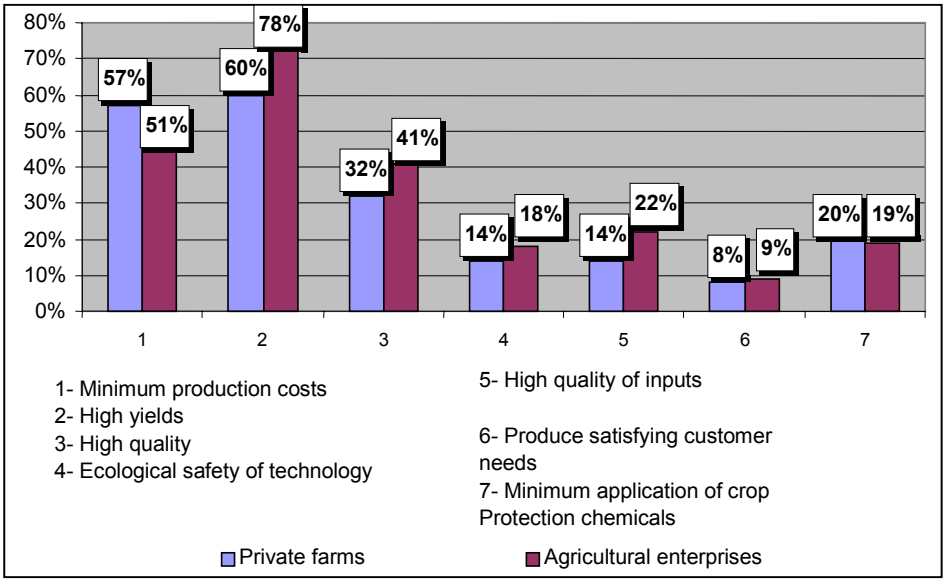
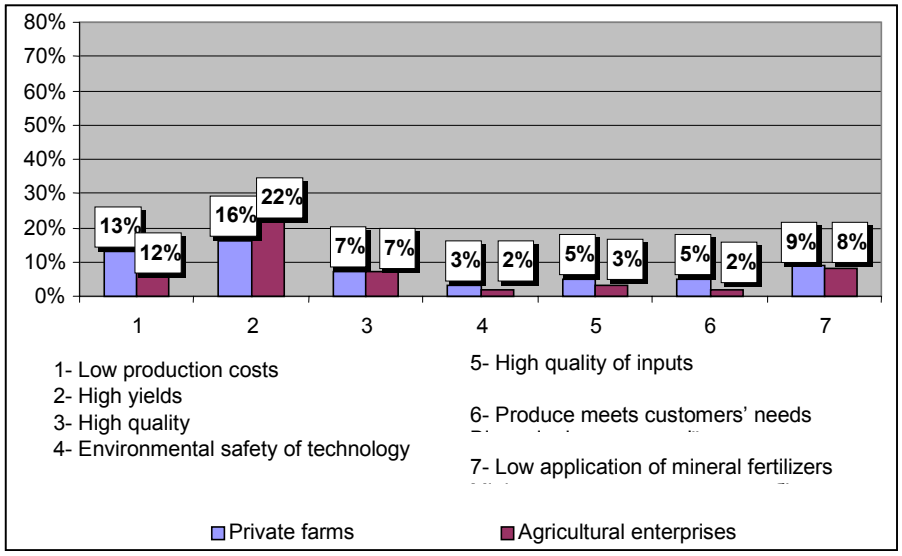


Figure 15. Main criteria for production of vegetables, % of total responses.



Faced with growing competition in agrarian markets, producers become increasingly more cognizant about the importance of ensuring high quality of produce. In view of that, producers pay more and more attention to this factor, which by the survey data, ranks third by the level of importance at the time of choosing a technology. Quality was recognized important criterion by 32% of family farms and 41% of agricultural enterprises.

Likewise in case with grain and oil-bearing crops, producers, choosing a vegetable growing technology, also want to get highest possible yields, which is a particularly pressing issue for agricultural enterprises, and to reduce production cost. It is interesting to note, that low application of crop protection chemicals was the third most frequently cited criterion in this context. Growing importance of this factor may be explained by new requirements to vegetable produce and steadily growing environmental awareness prevailing among buyers of vegetables in the local market, a trend also clearly observed both in European and North American markets.

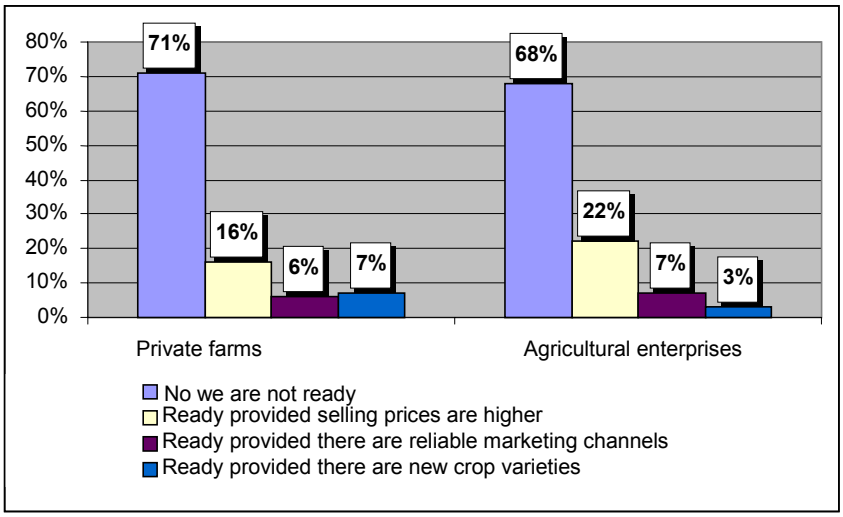
Analysis of findings obtained in the last three years, demonstrates that high yields and low production costs remain main factors impacting choice by producers of certain production technology. However, data of last two years suggest that producers become concerned about other factors, too. This is true, particularly, for quality of produce, and meeting customer needs. These factors allow producers to better position their produce in the market and effectively introduce regional brands and trademarks.

Disregarding growing role of environmental awareness as a criterion influencing the choice of a production technology, today most producers are not prepared to grow organic products, i.e. the products without mineral fertilizers and chemicals. Growing such produce is more expensive, and therefore, less profitable. As may be observed from chart below (Figure 16), only 16% of family farms and 22% of agricultural enterprises declared their willingness to grow organically provided they get higher selling prices.

It is important to note that there are regional variations in respondents' perceptions of their possibilities to farm organically. Producers of Kherson oblast have a somewhat more positive attitudes to development prospects of organic production. Thus, while 54% of respondents in the oblast stated they were not ready to produce organic food (70% of the overall sample), 27% of these were ready to farm

organically provided they could market their output at higher prices. A greater percentage of respondents in Kherson oblast declaring they were ready to produce organic food may be explained by the regional specialization of these farms on vegetables. This is the type of produce that has the best outlooks for contributing to establishing an organic market in Ukraine.

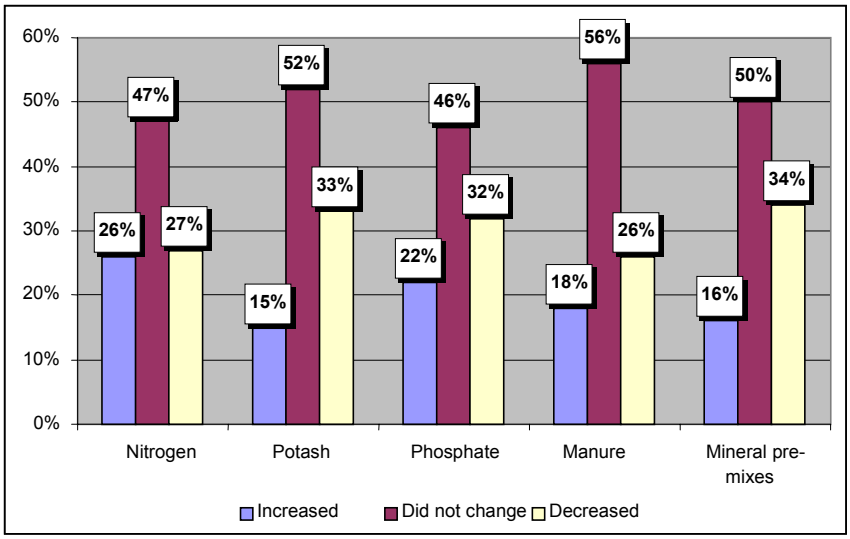
Figure 16. Producers' readiness to grow organic food, % of respondents.



So, assuming that the issue of creating an organic market to a great extent remains the matter of tomorrow, for traditional farming, effective usage of mineral fertilizers remains one of the main factors to raise profitability of production. As in the previous works, in this survey we attempted to evaluate scopes of mineral fertilizers used and changes (if any) in volumes of their use.

Analysis of survey data demonstrates that the general trend in usage of mineral fertilizers is same for private farms and agricultural enterprises. This enabled to present the aggregate data for the general sample (Figure 17). It is important to note, however, that likewise in previous years, general level of usage of mineral fertilizers is higher for agricultural enterprises than for family farms. This is just another evidence of the fact that today due to general lack of capital many family farms cannot afford to buy more production inputs.

Figure 17. Changes in scopes of using main types of mineral fertilizers, % of respondents that use mineral fertilizers.



According to obtained data, main type of mineral fertilizers are nitrogen fertilizers. This is explained by many farms' specialization in grain production. Nitrogen fertilizers are used by 70% of surveyed private farms and 83% of agricultural enterprises. Compared to the previous year, almost half of respondents (47% of the sample, and 50% of family farms and 40% of agricultural enterprises) noted that volumes of fertilizers they used have not changed. Meanwhile, 27% of surveyed farms reduced volumes of fertilizers they applied (25% of private family farms and 32% of agricultural). Speaking about regional variations in the scopes of nitrogen fertilizers used, it is important to note, that 41% of surveyed farms in Poltava oblast (against the general sample's average of 26%) admitted increase in usage of nitrogen fertilizers.

As regards potash and phosphate fertilizers, in 2003, level of their usage was, respectively, 53% (49% of private family farms and 62% of agricultural enterprises) and 57% (53% of family farms and 68% of agricultural enterprises). Although the portion of all surveyed farms reporting no change in usage of potash and phosphate fertilizers is the biggest, the percentage of farms that have reduced application of these fertilizers has exceeded the portion of those that have increased their usage.

Finally, the level of application by enterprises of manure and mineral premixes was, respectively, 64% and 52%. Likewise in the case with other types of mineral fertilizers, agricultural enterprises appear to use manure and mineral premixes in bigger scopes. Speaking about changes in volumes of usage, it is important to note that, similar to the previous case, despite the fact that over a half of farms have not changed usage of these mineral fertilizers, the portion of farms that have reduced the application of the fertilizers, is bigger than the portion of those who increased their application. It should be also noted that the portion of agricultural enterprises that have reduced usage of manure and premixes is greater than the portion of such private family farms. This may be explained by the fact that given general lower scopes of applied fertilizers, family farms have good potential possibilities to increase further volumes of application of mineral fertilizers.

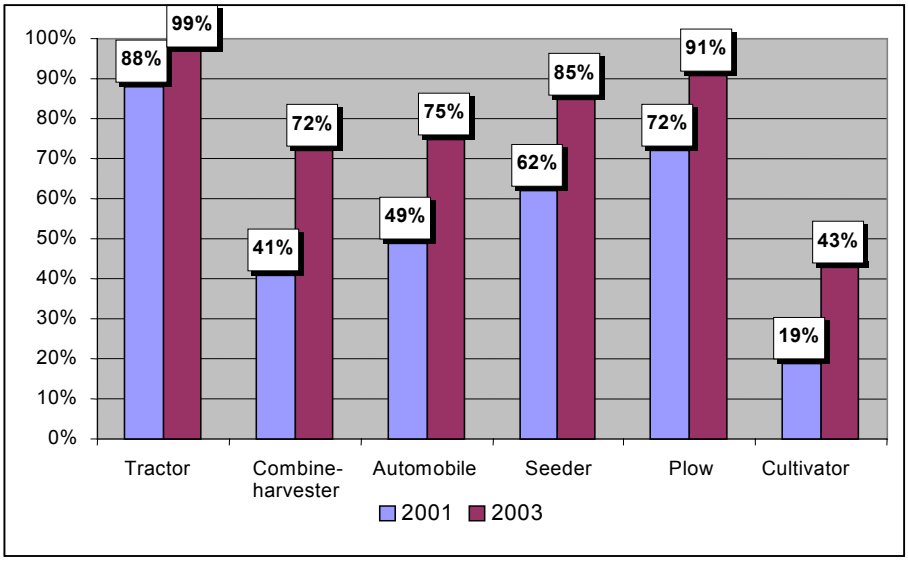
2.6. Inputs and equipment

A separate section of this survey studied how well agricultural enterprises are supplied with major production inputs and assets, and, in particular, with agricultural machinery. How intensely agricultural machinery is used is an important indicator of mechanization of production and one of the factors of the further rising profitability in the farming business. Speaking about general level of mechanization, it is important to note that survey data offer notable variation between the two main categories of producers. Agricultural enterprises have a much better material and technical base of production which, in most cases, was inherited from former collective farms. Moreover, a higher level of mechanization at these farms and their better supplies with production inputs are explained by larger scope of operations, and as a result, bigger need for agricultural machinery.

Irrespective of the lower level of mechanization of family farms, analysis of data of recent years demonstrates that their level of mechanization is growing steadily (Figure 18). To prove this, let us look at the following figures. For instance, while in 2001 only 41% of all surveyed family farms used combine-harvesters, in 2003 the portion of these grew to 72%. Assuming that combine harvesters must be used by farms specializing in grain, this is just another proof that grain production is gaining bigger popularity among these type of farms. Similar growth may be observed in other categories of machinery.

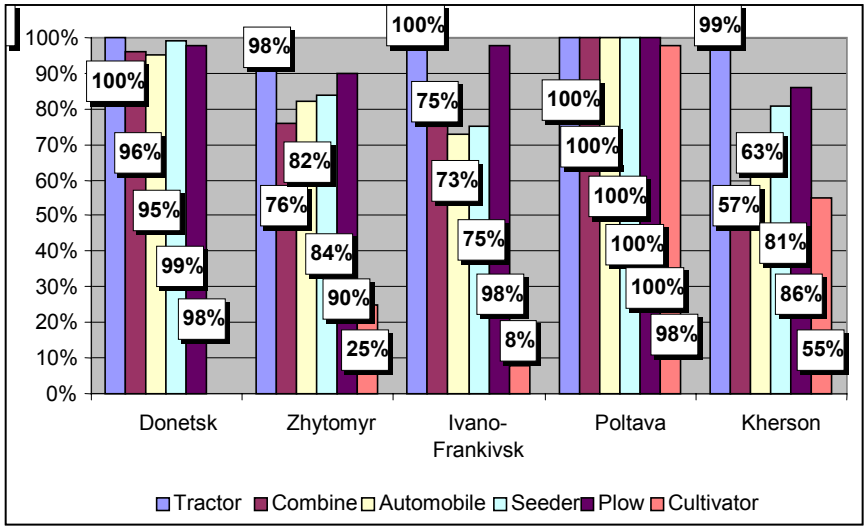
In addition to increasing sizes of private family farms, better mechanization of production processes may serve another demonstration of gradual strengthening of these farms as leading producers of agricultural produce in the country.

Figure 18. Level of production mechanization , proportion of private farms that use agricultural machinery in the general sample of surveyed private farms.



In addition to differences between two main categories of respondents, the level of production mechanization varies also across regions of the survey. This is particularly discernable in the private family category (Figure 19). Private family farms in Poltava oblast, a great number of which have a rather diverse specialization of production, have the highest level of mechanization. Family farms of Ivano-Frankivsk and Zhytomyr are in the bottom of the list. This may be explained by a significant portion of small farms with intensive use of manual labor.

Figure 19. Regional level of mechanization of production, proportion of family farms, which use machinery, in the general sample of surveyed family farms.



Somewhat unexpected appeared the data about usage of machinery by family farms in Kherson oblast. As noted earlier, this region is the place of large private family farms, which are as big in size as their counterparts agricultural enterprises. However, availability in the survey sample of a large portion of

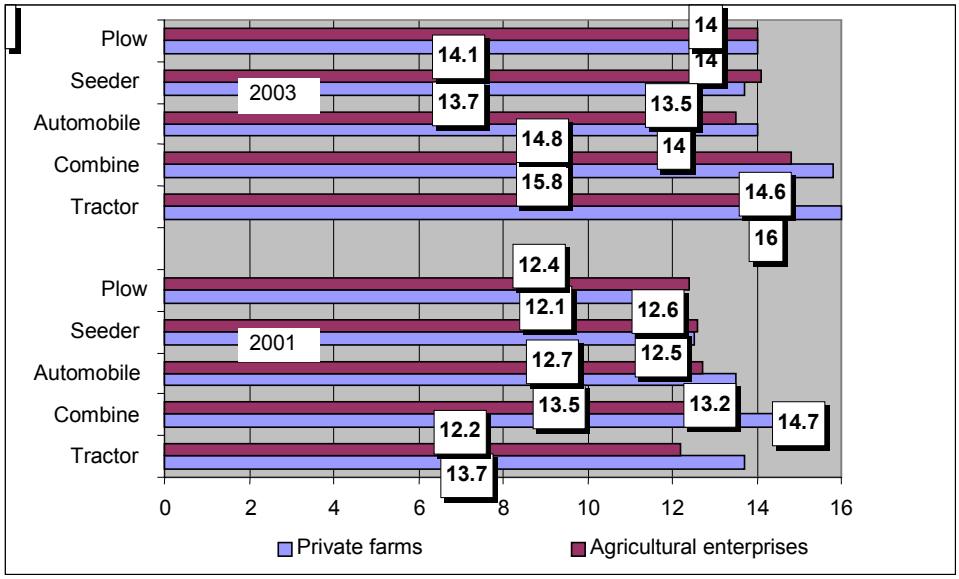
family frams specialized in vegetables and cultivated crops, and intensive use of manual labor, had negatively impacted general level of mechanization of production process in the region.

While the gradual improvement of mechanization is a positive fact, the gradual moral and physical ageing of machinery makes its effective usage doubtful, while cost reduction looks even less feasible.

As may be noticed from the chart below (Figure 20), average age of machinery operated by family farms is higher than the average age of machinery operated by agricultural enterprises. Scarce resources that private farms possess leave them no other option than purchase cheap second-hand equipment which has been long time in use.

The data of 2001 and 2003 demonstrate that both private family farmers and agricultural enterprises experience gradual ageing of the material and technical base of production. This circumstance, however, may pose a significant obstacle to further increase of agricultural output and growth of farms' profitability.

Figure 20. Average age of main types of machinery, years.



In addition to finding out about the level of mechanization and the average age of agricultural machinery, the survey also tried to elicit information about needs of agricultural producers for various types of machinery, which may be roughly equalized with potential demand for such equipment. Respondents were requested to choose one of the following answers: "great need", "not a great need", and "no need". Where respondents were hesitant, they opted for "difficult to answer" variant. Aggregate responses are presented in Table 4 below.

Table 4. Needs for main types of machinery, % of total received responses

	Private farms				Agricultural enterprises			
	Great nee	Not a gre need	No need	Difficult To answe	Great nee	Not a gre need	No need	Difficult To answe
Tractor	45%	17%	36%	2%	64%	21%	14%	1%
Combine-harvester	44%	19%	32%	5%	64%	22%	13%	1%
Truck/van	35%	24%	38%	3%	41%	31%	24%	4%

Seeder	39%	24%	35%	2%	51%	25%	22%	2%
Plow	30%	17%	50%	3%	38%	27%	33%	2%
Cultivator	34%	15%	48%	3%	49%	24%	25%	2%
Sprinkler	15%	12%	71%	2%	14%	13%	72%	1%
Potato-planter	5%	6%	87%	2%	9%	10%	78%	3%

As may be observed from the above table, the two categories of producers experience different needs for agricultural machinery. Despite the fact that private farms are by far not so well supplied with production fixed assets, and in most cases the assets they operate are outdated and worn-out, the these framers' need for agricultural machinery appears lower. For example, 45% and 44% of these farms have a great need for, respectively, tractors and combine-harvesters, while 64% of agricultural enterprises acknowledged the great need for these types of equipment. This difference is clearly visible with regard to other types of machinery. Major explanation of this difference in the size of potential demand lies in different scale of production and its diversification. Agricultural enterprises run bigger and more diversified farms, and therefore tend to have bigger need for a variety of agricultural machinery.

2.7 Production/operational problems

Effective organization of the process of agrarian production depends both on economic environment, which include developed market of finance and insurance services, marketing cooperation, effective government support programs, and on a number of internal factors. Examples of internal factors are farmers' experience, and industry-specific knowledge and skills. Availability or lack of these latter indicate how well an operation is organized and how well it is run. Furthermore, they may give an explanation of great many problems which agricultural producers face.

The survey attempted to identify a circle of problems producers face in their day-to-day activity. Since this survey is third in the row, the survey took particular interest in ranking the gravest problems in 2003 vis-à-vis 2001.

As may be noticed from Table 5, in 2003, in opinion of 32% of private family farmers and 35% of agricultural enterprises, ineffective usage of mineral fertilizers and crop protection chemicals was ranked highest in the list of worst problems. This significant growth from 16% and 23%, respectively, in 2001, may be explained, in our opinion, by increasingly more private farmers becoming cognizant of the need to use mineral fertilizers more effectively.

Table 5. Main production problems facing producers most frequently, % of total responses.

	2001		2003	
	Private farms	Agricultural enterprises	Private farms	Agricultural enterprises
Ineffective usage of mineral fertilizers and crop protection chemicals	16%	23%	32%	35%
Soil erosion	18%	17%	16%	21%
Problems with introduction of land-reclamation measures	15%	19%	18%	19%
Introduction of new crops and new variet	18%	25%	29%	36%
Problem with observation of crop rotatio	11%	13%	10%	12%

Ineffective usage of machinery	17%	26%	12%	26%
Lack/need for additional machinery	5%	2%	2%	3%
Lack of capital	4%	4%	9%	8%
Difficult to answer	5%	7%	10%	4%
No problem	19%	16%	9%	11%

The problem of introduction new crops and varieties also stands acute. It was reported in 2003 by 29% of private family farmers and 36% of agricultural enterprises. Soil erosion and difficulties with application of land-reclamation measures were concerns for, respectively, 16% and 18% of private family farmers and for 19% and 21% of agricultural enterprises.

Finally, among other problems encountered by private farms and agricultural enterprises, we should emphasize difficulties related to crop rotation and ineffective usage of farming machinery.

Analysis of received data enables to notice, that, compared to previous years, proportions of enterprises reporting no production problems are constantly shrinking. Thus, while in 2001 almost each fifth private family enterprise admitted it had no production problems, in 2003, only one in each 10 such farms had problems at all.

The nature of production problems differs between two types of farms, and has also clearly noticeable regional character (Table 6). The portion of respondents facing problem of ineffective usage of mineral fertilizers and chemicals, and difficulties with introduction new crops and varieties is much higher for agricultural enterprises. This is indicative of the fact that the latter have higher level of mineral fertilizers usage and more diversified operations.

Regional variations in the range of production problems may be explained, primarily, by sizes and specialization of farms, as well as by climatic conditions of farming. Moreover, respondents' own vision of the nature and gravity of problems also had an impact on the obtained results. Thus, according to 71% of respondents from Donetsk oblast, the highest ranking problem was ineffective usage of mineral fertilizers and crop protection chemicals. Introduction of new types of crops is a grave problem for farms in Ivano-Frankivsk, Zhytomyr and Poltava oblasts.

When analyzing the received data, it is important to note that over three years of the survey, the portion of respondents admitting they had no production problems, has reduced. Thus, while 2001, no faced problems were reported by 19% of private family farms and 16% of agricultural enterprises, in 2003, the percentages dropped to 9% and 11%, respectively. These changes may be explained not by the growth of absolute quantity of respondents facing various problems, but rather, by their growing understanding of their operations' inefficiencies.

Table 6. Regional distribution of major production problems most frequently faced by producers, % of overall responses.

	Donetsk oblast	Zhytomyr oblast	Ivano-Frankivsk oblast	Poltava oblast	Kherson oblast
Ineffective usage of mineral fertil and crop protection chemicals	71%	26%	51%	14%	13%
Soil erosion	38%	14%	19%	4%	11%
Problems with introduction of lan reclamation measures	32%	29%	51%	14%	32%

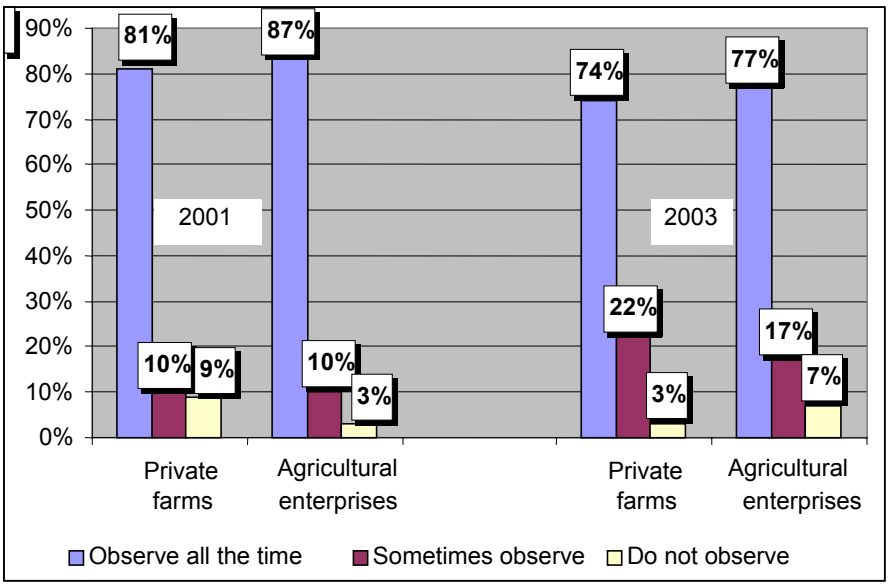
Introduction of new crops and varieties	18%	37%	3%	22%	20%
Problem with observation of rotation	4%	49%	54%	49%	26%
Ineffective usage of machinery	3%	14%	30%	7%	10%
Lack/need for additional machine	1%	40%	41%	14%	11%
Lack of capital	–	–	3%	1%	4%
Difficult to answer	–	9%	–	16%	13%
No problem	8%		8%	6%	14%
Ineffective usage of mineral fertil And crop protection chemicals	1%	29%	7%	8%	11%

One of the problems that still stands out is the one related to observation of crop rotation patterns. This was reported by 10% of private farms and 12% of agricultural enterprises in the overall sample. In Ivano-Frankivsk oblast, this problem was faced by each third surveyed farm.

In 2003, proportion of farms who tend to regularly observe crop rotation patterns were 74% for private farms and 77% for agricultural enterprises (Figure 21). Likewise in the previous years of the survey, private farms are less likely to comply with crop rotation rules on a regular basis, which may have a number of objective and subjective reasons. According to the survey data, each third such a farm failing to comply, reported they had no need to do that. A possible explanation of the situation is that private farms prevalently specialize in the production of single crop on one field, and that they may manage to grow it for several years in a row without harm to yields and soil quality.

Meanwhile, as opposed to agricultural enterprises, private farmers have fewer possibilities to observe scientifically grounded crop rotation patterns. Not only they fail to undertake chemical test of soil, which would allow them to choose the required crop rotation pattern, they also lack required knowledge and understanding of the importance to comply with crop rotation rules.

Figure 21. Observation by producers of crop rotation rules, % of total respondents.



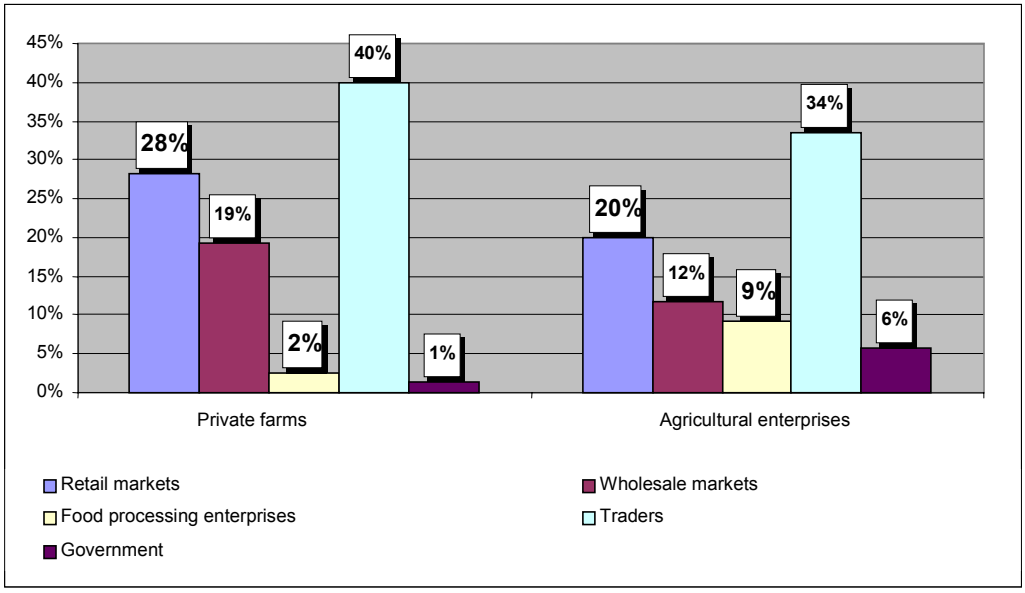
3. AGRICULTURAL PRODUCE MARKETING

3.1. Main distribution channels

In the environment where competition in the existing markets becomes more vigorous giving rise to new promising and more demanding segments of market niches, it would be difficult to overestimate importance of agricultural producers' marketing efforts. In view of that, a whole section of the survey was devoted to specifics of marketing agricultural produce and problems with agricultural commodity distribution channels. Data of the survey were analyzed prevalently with regard to two commodity groups: grain/oil-bearing crops and vegetables, and in the context of two main categories of producers: private family farms and agricultural enterprises.

According to findings of the survey, private family farms tend to employ fewer distribution channels for grain and oil crops than agriculture enterprises (Figure 22). For this group of crops, both categories of respondents use trading and wholesale companies (traders) as their most important distribution channel. In 2003, they sold through traders, respectively, 40% and 34% of the total sales of these crops.

Figure 22. Share of main distribution channels in marketing grain and oil-bearing crops, % of the total sales of these crops.



It should be noted that the second most important distribution channel for these commodities is retail farmer markets: private farmers and agricultural enterprises sold there, respectively, 28% and 20% of total outputs of grain and oil-bearing crops. So, the possibility to get a higher selling price and easy access to this marketing channel may overweigh its main weaknesses, i.e. small volumes of output and possible loss of working time while marking agricultural commodities at such markets.

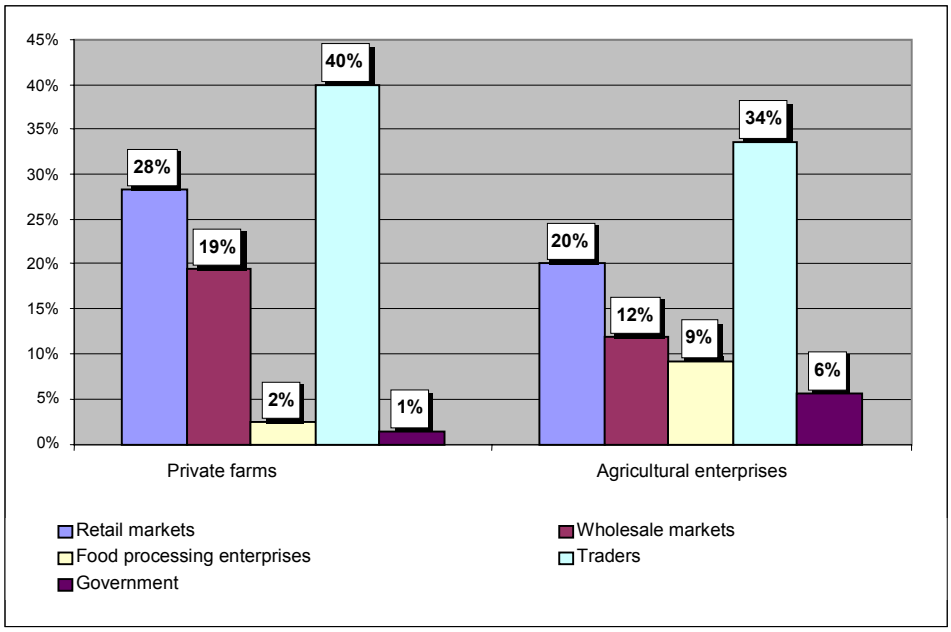
Wholesale markets were recognized by both categories of farmers third most important distribution channel for grain and oil-bearing crops. Surveyed producers sell there, respectively 19% and 12% of their total outputs produced for sale. Results of the survey also demonstrate that agricultural enterprises tend to cooperate with government purchasing organization more closely: 6% of their

output is sold to the government (schools, army, etc.) For private farmers this percentage is lower, totaling 1%.

As survey results show, output volumes of grain and oil-bearing crops sold via other distribution channels (exchange markets, mixed fodder plants, direct export) remain negligible.

Speaking about specifics of distribution of vegetables, the survey results offer convincing evidence that choice of a distribution channel by farmers depends on the overall volumes of produced output (Figure 23). For private family farms which tend to have smaller areas seeded by vegetables than agricultural enterprises, retail and wholesale markets appear to be most important distribution channels. Private farms used these channels to sell, respectively, 29% and 25% of their overall sales.

Figure 23. Share of vegetable produce sold via main distribution channels, % of overall sales.

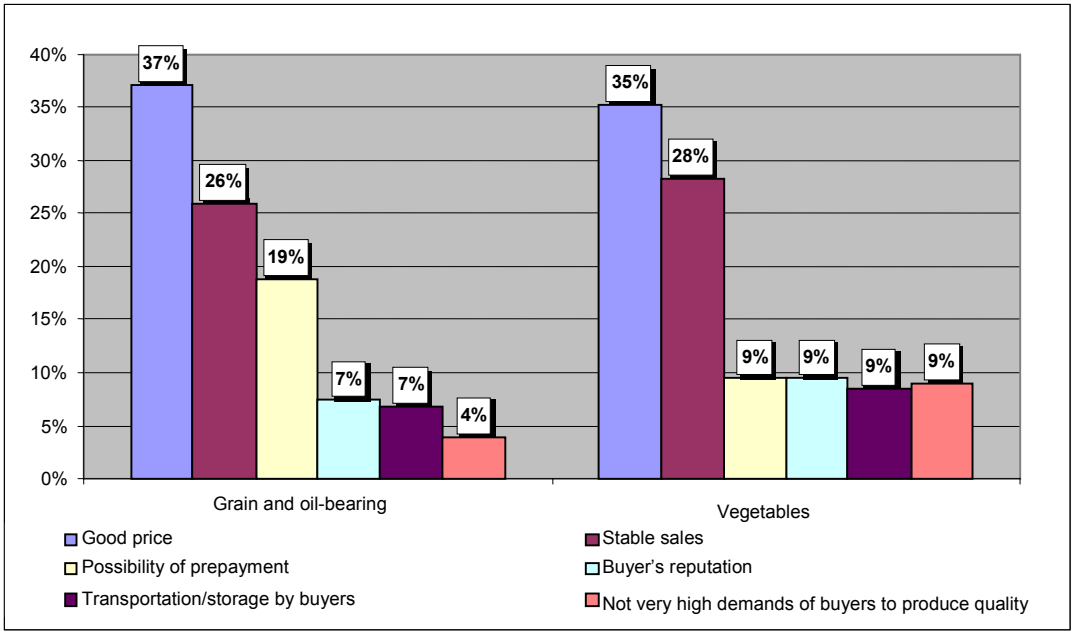


For agricultural enterprises who tend to grow vegetables in larger volumes, food processing companies (32% of the total sales) and traders (25%) represent most important distribution channels. Likewise in the case with sale of grain and oil-bearing crops, overall volumes of vegetables exported and/or sold through exchange markets, supermarkets network, in 2003 did not exceed 1%.

What are the criteria commodity producers use to choose specific distribution channel? For most surveyed businesses, a good price for produce remains the primary criterion for choosing the particular channel: 37% of the surveyed producers of grain/oil-bearing crops and 35% of the surveyed vegetable growers recognized this criterion one of the three most important ones making them sell their produce through a chosen distribution channel (Figure 24).

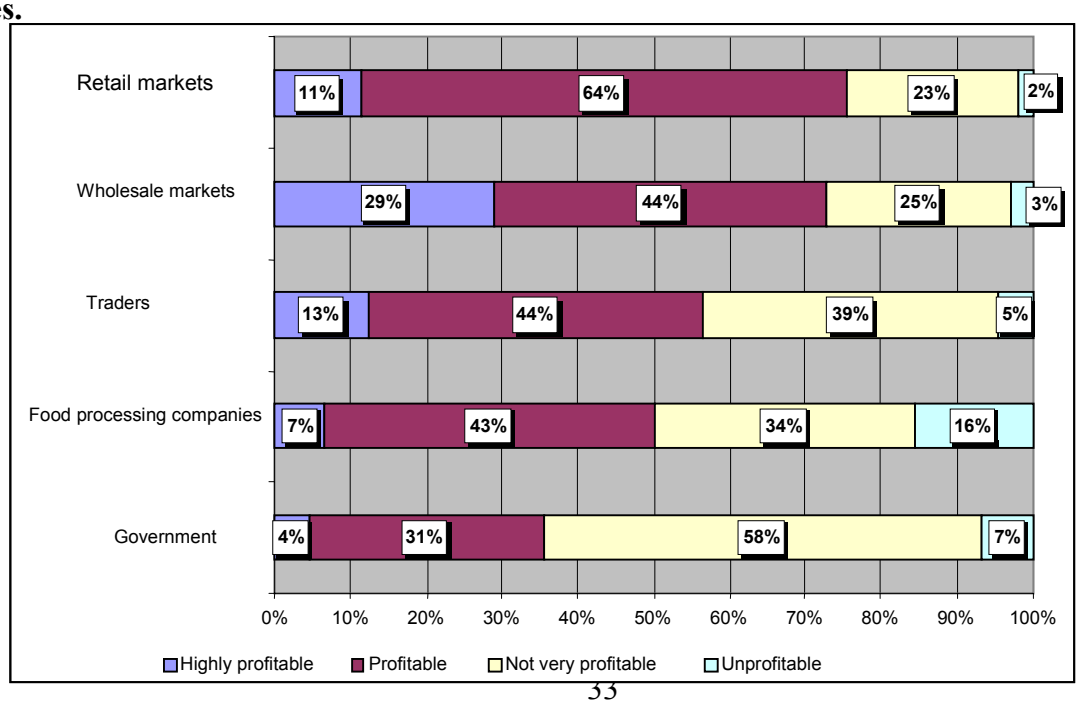
This choice made by producers may be explained by the fact that in most cases cash revenues from sale is practically the only source of their income, while they badly need cash to refill working capital and reinvest into operations. Under these circumstances, other criteria (transportation/storage of produce by buyer, and not very high demands of buyers to produce quality) play a less important role. “Stability of sales” was recognized second most important criterion for choice of the distribution channel. Nearly 26% of growers of grain/oil-bearing crops and 28% of vegetable growers noted this criterion as one of the three most important in choosing particular sales channel.

Figure 24. Criteria for choosing distribution channel by producers, % of overall responses.



Of note is the fact that the importance of other factors influencing the choice of distribution channel is not the same for private family farms and agricultural enterprises. Almost 9% of vegetables growers pointed at the following criteria: "possibility of obtaining a prepayment", "buyer's reputation", "transportation by buyer" and "not so high demands of buyers to produce quality". Since production and distribution of grain, typically, does not ensure consistent receipts of cash, as opposed to vegetables, the "possibility of obtaining prepayment" appears to be more important for distribution of grain and oil-bearing crops than for vegetables. This is why, nearly 19% of producers opted for this factor as the major criterion for choosing the distribution channel for grain and oil-bearing crops.

Figure 25. Profitability of certain distribution channels for agricultural produce, % of total responses.



Considering results of the survey regarding most important distribution channels for agricultural produce, and taking into account the fact that better prices is by far the most important factor for choice of a distribution channel, survey findings regarding respondents' perceptions of each distribution channel's profitability appeared obvious (Figure 25).

In perception of respondents, retail and wholesale markets are most profitable distribution channels for agricultural produce. Thus, 11% of respondents recognize retail markets "highly profitable", while another 64% admit they are a "profitable" distribution channel. As for wholesale markets, respectively, 29% and 44% of respondents called this sales channel "highly profitable" and "profitable".

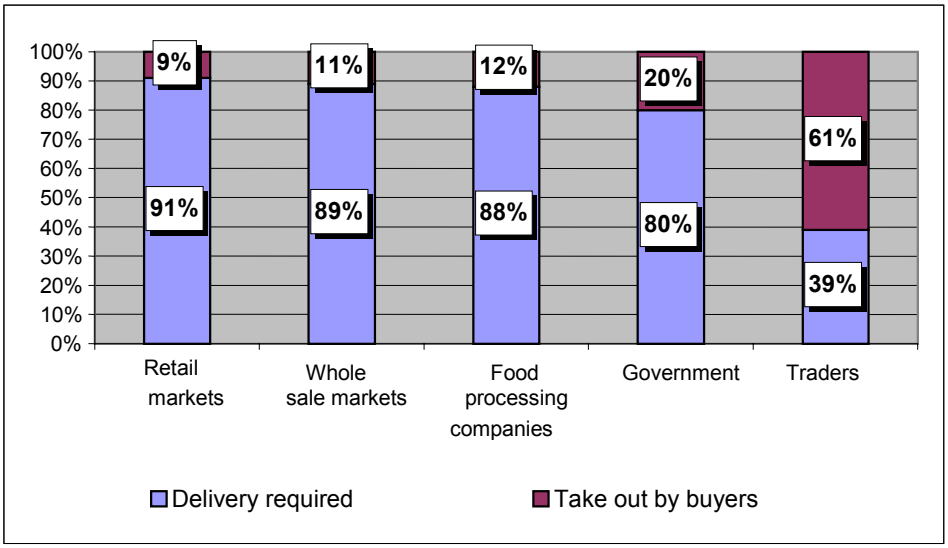
Official statistics supports findings of this survey in that producers obtain best price and highest profit per unit of output when they sell their produce via farmer markets. Meanwhile it is important to remember that it may be more difficult to sell large batches of perishable product via wholesale and retail markets in a short period of time. In these conditions, shipping large quantities to traders and food processing companies may have much better outlook.

According to the survey findings, sale of grown produce to the government was recognized as the least profitable of all: only 4% of respondents called this channel "highly profitable", 31% - "profitable" against 58% and 7% of respondents who perceived this channel "not very profitable" or "unprofitable".

3.2. Specifics of produce delivery for sales

Apparently, commodity producers tend to bear responsibility for the delivery of their shipments of grain and oil-bearing crops. (Figure 26). Particularly, while selling via retail and wholesale markets, and to food processing enterprises, respectively, 90%, 89% and 88% of surveyed producers delivered the commodities at their own expense. While selling to the government, in 80% of cases, shipments were delivered by producers, however, when selling directly to traders, producers were responsible for the delivery only in 39% of instances.

Figure 26. Responsibility for delivery of grain and oil-bearing crops for sales via different channels, % of overall responses.

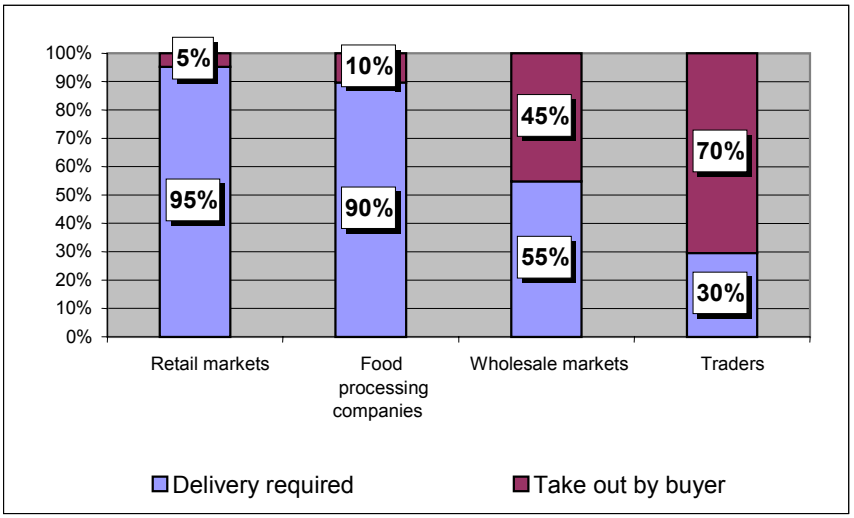


This survey demonstrates the category of agricultural producers (whether it is a private family farmer or an agricultural enterprise) does not practically matter for which party was required to deliver shipments. Manner of delivery was dictated rather by requirements of a particular channel, than by capabilities of producer.

Quite expected appeared results of the survey with regard to specifics of vegetable produce delivery (Figure 27). Thus, 95% of the surveyed producers selling their output via retail markets, delivered it to the site. 90% of respondents who sold their produce to food processors, had to deliver it themselves. Over a half of respondents (55%) delivered their produced agricultural commodities to wholesale markets on their own. However, producers dealing with traders appeared more fortunate, as only 30% of these had to deliver the shipments to the buyer.

Similar to the situation with sales of grain/oil-bearing crops, specifics of delivery of vegetable produce do not differ significantly between private family farms and agricultural enterprises. One may make conclusion that whether a producer is supposed to deliver his shipments to buyer depends on specific requirements of the buyer, rather than on the producer's capabilities.

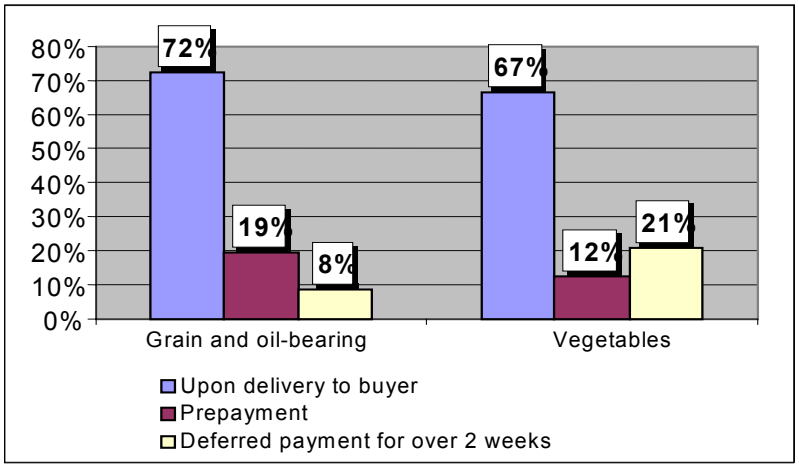
Figure 27. Responsibility for delivery of vegetables for sales via different channels, % of overall responses.



3.3. Payment for delivered product

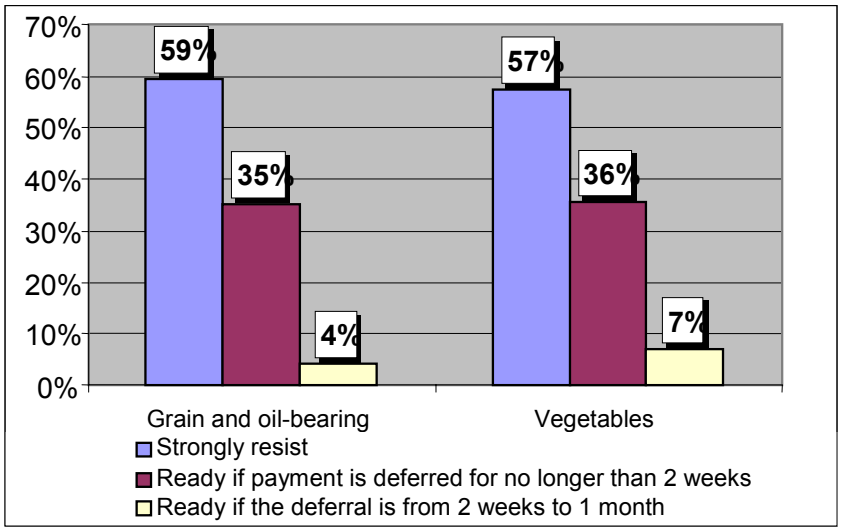
According to survey results, buyers tend to pay faster for shipped grain and oil-bearing crops, than for vegetables (Figure 28). Only 12% of vegetable growers appeared to obtain prepayment (against 19% of grain and oil-bearing crops producers), while 21% of vegetable producers vis-à-vis 8% of grain growers needed to expect payment for shipped produce for two weeks or longer.

Figure 28. Payment schemes used by producers for their produce sold, % of overall responses.



So, what payment schemes do producers prefer? According to the survey data, majority of respondents strongly resisted working for deferred payment. It was the opinion of 59% of grain and oil-bearing crops producers and 57% of vegetable growers (Figure 29). Nearly one third of respondents (35% and 36% for grain and vegetables, respectively) were ready to sell for deferred payment, however, for no longer than 2 weeks. Meanwhile only 4% and 7%, respectively, agreed to sell produce with payment deferred from 2 weeks to one month.

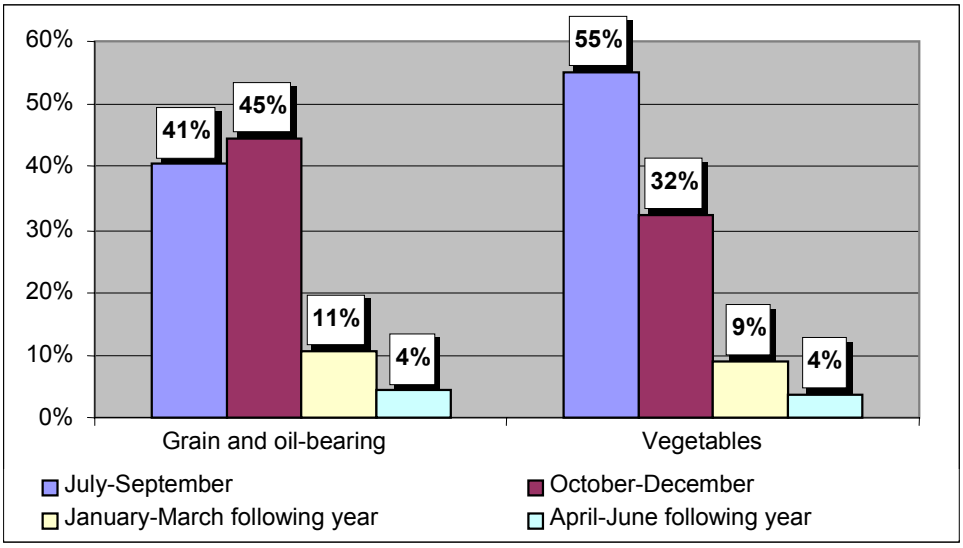
Figure 29. Whether producers are ready to sell their produce for deferred payment, % of overall responses.



Main explanation of why producers are not prepared to sell produce for deferred payment is, naturally, their scarce working capital. Many producers fund their operations at their personal expense, with limited external resources. Under these conditions, deferral or delay of payment even for a short period of time may adversely affect reaching their income benchmark.

Bad need for cash, which producers want to have to pay for inputs and repay loans, is the main explanation why most of produced output is sold immediately after harvest (Figure 30).

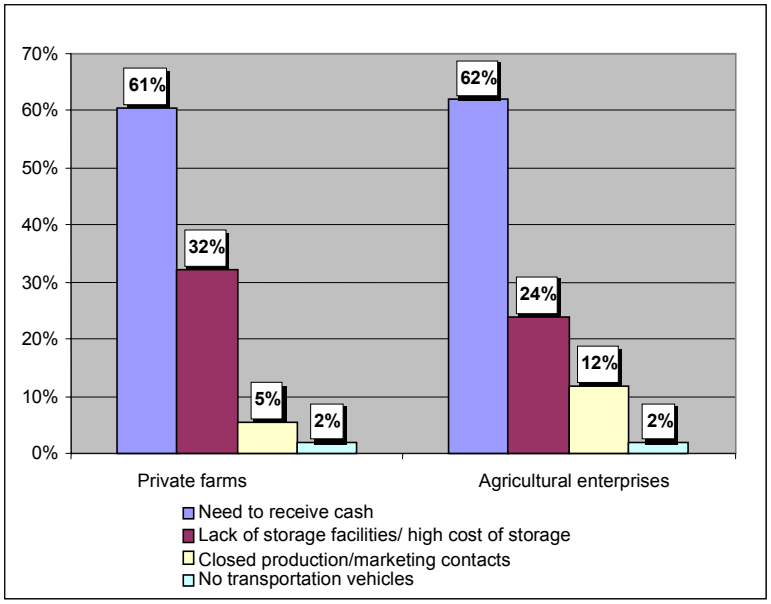
Figure 30. Proportion of produce sold in the course of marketing year, % of overall responses.



It is interesting that notwithstanding much shorter storage period of vegetables compared to grain and oil-bearing crops, break-down of sales of these crops in the course of the year is approximately same. Nearly 86% of grown grain and 87% of vegetables tend to be sold by the end of the calendar year. Only 15% of grain and 13% of vegetables would be sold at the beginning of the following calendar year, i.e. in the period when prices are higher than immediately after harvest.

As noted earlier, the main reason for which produce is sold right after being harvested is the need to receive cash to repay loans and pay for inputs supplied earlier (Figure 31). It was noted by 61% of private family farms and 62% of agricultural enterprises.

Figure 31. Main reasons for selling produce after harvest, % of overall responses.



Second most frequently cited force driving producers quickly sell their produce is lack of storage facilities or high prices for storage services: it was the opinion of 32% surveyed private family farms

and 24% of agricultural enterprises. Finally, on-going contracts closed by producers with buyers appear to be main explanation why 12% of agricultural enterprises and 5% of private family farms sell their output immediately after harvest.

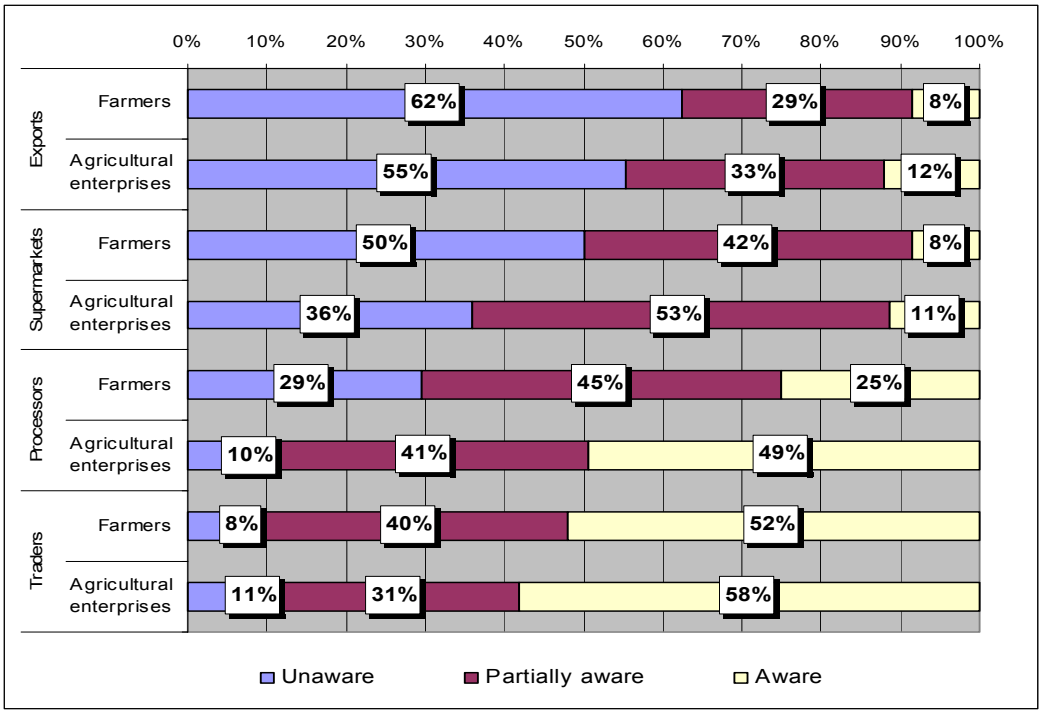
3.4. Main requirements for sale of produce

One of the preconditions of a good cooperation between producers and buyers of agricultural produce is producers' awareness of both buyers' requirements of produce quality, conditions of delivery and specifics of business cooperation in the process of agricultural marketing. Given the emergence of new market segments and distribution channels for agricultural produce, producers are required to dedicate more time, resources and efforts to search information about buyers' and consumers' preferences and establish distribution channels.

The process of exploring and developing distribution channels may appear very expensive for producers, unless they preliminarily learn requirements to contracts and specifics of shipment transactions. In view of that, in the course of the survey we attempted to find out how well producers are aware of requirements to produce marketing. This analysis was conducted in the context of main purchasing organizations. To identify the level of awareness, the survey used the following characteristics: "fully aware", "partially aware" and "unaware".

As may be noticed from Figure 32, producers seem to be least aware of "rules of the game", i.e. list of main requirements, to the export of produce. Almost two thirds of private family farms (62%) and over a half of agricultural enterprises (55%) are not familiar with requirements to agricultural produce export transactions. Meanwhile, 29% of private farms and 33% of agricultural enterprises are partially aware of requirements to export, and only 8% and 12%, respectively, of respondents admitted they were fully aware of export rules.

Figure 32. Producers' awareness of requirements to sale posed by purchasing organizations, % of total responses.



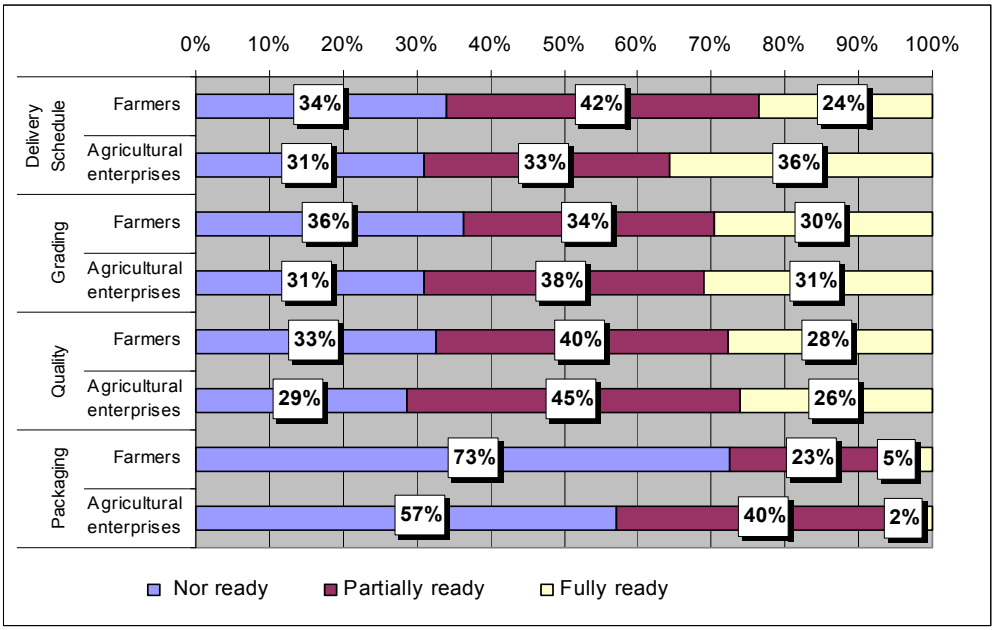
As regards agricultural producers' awareness about requirements to produce delivered to supermarket network, 50% of private family farms and 36% of agricultural enterprises admitted they were not familiar with requirements of supermarkets, 42% and 53%, respectively, were only partially aware, while only 8% and 11% were fully aware of these requirements.

The situation appeared totally reverse when we asked about the producers' knowledge of requirements to produce shipments to processing companies and traders. Only 29% of private family farms and 10% of agricultural enterprises were not familiar with requirements of processing companies, 45% and 41% of two groups of surveyed farmers were aware partially and 25% and 49%, respectively, were fully aware of these requirements. Yet higher awareness was demonstrated by responders with regard to requirements posed by traders. According to results of the survey, 8% of private farms and 11% of agricultural enterprises stated they did not know requirements of traders, 40% and 31%, respectively, admitted they were partially familiar, while the majority of respondents (52% and 58% respectively) appeared to be fully aware of these requirements.

Obtained data clearly indicate that generally agricultural enterprises know requirements of each of the represented types of purchasing organizations much better, than their private family farms counterparts.

In addition to probing into the level of awareness, the survey also intended to find out how well producers are prepared to meet requirements of buyers regarding quality of produce, schedule and size of shipments etc. According to survey findings, producers' attitudes to the need to comply with the schedule of shipments, grading and quality requirements varies, breaking down almost evenly. One third of total responses fall on each of the proposed variants of answers: "not prepared", "prepared" and "fully prepared" (Figure 33).

Figure 33. Producers' preparedness to meet requirements of buyers, % of total responses.



The situation with producers' preparedness to meet buyers' needs regarding produce packaging looks more worrisome. As results revealed, the prevailing majority of private farms (73%) and bigger portion of agricultural enterprises (57%) were not ready to meet these requirements. Only 5% and

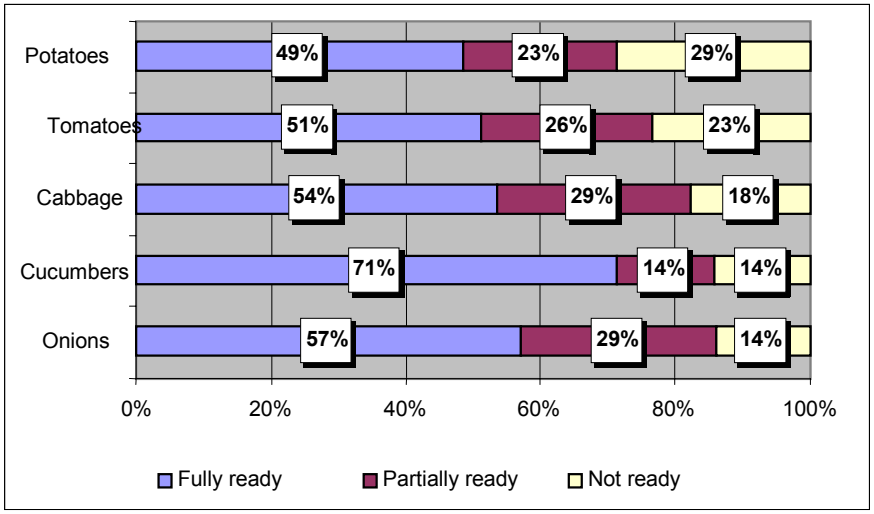
2% were fully prepared to comply with these requirements. In our view, the fact that producers are generally unprepared to observe requirements to packaging may have a number of explanations. First, there is a lack of domestically produced high quality packing material for vegetables at acceptable price. Second, producers can't afford to make significant investment into packaging equipment. Third, properly packaged vegetables are not in such great demand with buyers that would be sufficient to ensure high return on capital investment farmers might make into packaging equipment.

In view of the above, the survey attempted to answer the following question: "Are locally grown vegetables good enough to be sold through supermarket networks or exported?" Today, quantities of vegetable produce, distributed via supermarket networks, are growing year after year. Since these markets present higher quality requirements to fresh vegetables, other buyers tend to perceive these higher quality requirements as standards of fresh vegetables quality generally.

Figure 34 below presents results of the survey with regard to producers' perception of their own produce quality adequacy for being successfully exported or sold via supermarket networks.

According to respondents, cucumbers tend to have most adequate quality for sales via supermarkets and for export: 71% of producers believe that cucumbers are fully OK to be distributed through these channels. As for other types of produce (tomatoes, potato, cabbage and onions), nearly a half of respondents believed their produce quality meets quality standards presented by supermarkets and exporters.

Figure 34. Producers' perception of their vegetables quality as adequate for export or selling them via supermarket network, % of overall responses.



Producers demonstrate worst attitude to the quality of their grown potato. As may be observed from the chart, less than a half of the surveyed producers (49%) believe that quality of this crop allows to organize its sale via these channels. Meanwhile, almost a third of producers (29%) tend to have quite the opposite opinion.

3.5. Problems of agricultural marketing

Selling produce, agricultural producers encounter a number of problems which differ, however, between the two categories of producers, and have regional variations. In the course of the survey, we tried to find out what particular problems framers tend to face and how acutely these problems stand for them. Results are presented in Table 7 below:

Table 7. Main problems with agricultural marketing and their acuteness for producers.

	Private farms				Agricultural enterprises			
	Very big concern	Not a big concern	Not a concern	Difficult to answer	Very big concern	Not a big concern	Not a concern	Difficult to
Lack of large of batches of commodity	12%	22%	55%	11%	13%	26%	53%	85
Transportation problems	17%	31%	47%	5%	6%	38%	52%	4%
Few purchasing organizations	7%	23%	53%	65	12%	22%	65%	1%
Problems with packaging	4%	16%	72%	8%	5%	22%	69%	4%
Lack of information on sales markets	13%	17%	57%	13%	13%	24%	59%	4%
Low demand for produce	13%	26%	48%	13%	16%	33%	51%	1%
Storage problems	31%	29%	37%	3%	20%	26%	51%	3%
Low selling prices	78%	13%	8%	1%	85%	8%	6%	1%

As may be observed from the above results, the problem of low selling prices stands most acute for producers. It appears to be of the biggest concern for 78% of private farms and 85% of agricultural enterprises. Of note, low selling prices were recognized gravest problem in two previous yearly surveys. Thus, in 2001, 79% of private family farms and 91% of agricultural enterprises emphasized this was the largest problem for them.

In our opinion, the problem of low selling prices is a derivative of several factors. Agricultural production is a sector of human activity, where prices for output tend to fluctuate greatly. This is particularly true for crops with domestic prices affected by global market prices. However, we shouldn't neglect the fact that in many instances agricultural producers can't yet enter new markets and take advantage of more profitable distribution channels. This last thing is also the factor directly impacting price of the output.

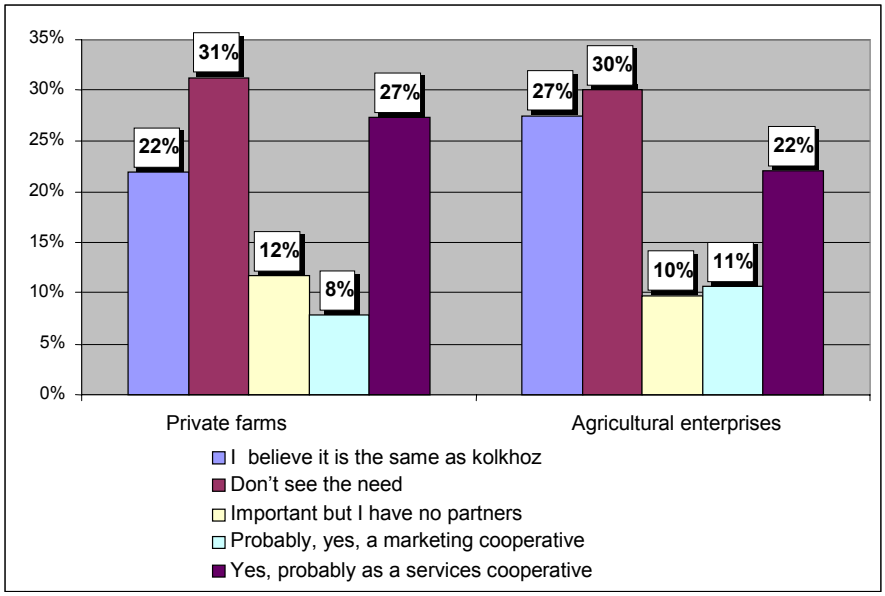
The problem of storage also remains outstanding. Private farms seem to be particularly concerned about storage of their produce. It was reported by nearly a third (31%) of the surveyed farmers. Lack of storage facilities at affordable price forces many producers sell their output right after harvest. As a result, huge supply of freshly harvested produce in the market brings down prices that fall drastically.

According to obtained data, other issues of agrarian marketing, for example, packaging, availability of information on markets and distribution channels do not represent a big problem for farmers. According to survey results, only 4% of private family farms and 5% of agricultural enterprises seem to be restless about produce packaging. Lack of marketing information bothers 13% of the surveyed private family farms and 16% of agricultural enterprises. This distribution of responses reflects the state of development of the agrarian market at the current stage. However, in future, with further establishment of new distribution channels and entry to new markets, importance of proper packaging and information supply will be increasing.

As proven by experience of a few agricultural producers, at this stage of agrarian market development, one of the ways to raise effectiveness and profitability of farming operations may be to pool together resources of individual farmers and establish a marketing cooperative. A cooperative offers significant benefits to its founders as it helps overcome efficiently lots of problems faced by individual farmers. For example, through marketing cooperative its members may purchase wholesale batches of inputs at a discount. Moreover, this organizational form enables members to pool up their funds and jointly invest into building and operating objects of marketing infrastructure (packaging or storage facilities).

Establishing marketing cooperatives seems to be challenging especially for private farms. Therefore, one of the questions of the survey probed into possibilities of founding a marketing cooperative. Another question asked what was producers' attitude to marketing cooperatives. The survey results suggest that private farms and agricultural enterprises share the same attitude to establishing farmer cooperatives. Almost a third of family farmers (31%) and same portion of agricultural enterprises (30%) thus far see no need for themselves to develop marketing cooperation (Figure 35). Moreover, agricultural enterprises seem to treat cooperatives with greater skepticism, calling the latter "*the same thing as kolkhoz*".

Figure 35. Producers' attitude towards agricultural cooperation, % of total responses.



Lack of partners is the obstacle for founding a service cooperative for a tenth of private family farms and agricultural enterprises. However, the idea of setting up a service cooperative looks agreeable for 27% of private family farms and 22% of agricultural enterprises.

Reluctance to engage into agricultural cooperation and even certain skepticism expressed in this regard, may be explained, primarily, by producers' failure to appreciate benefits of service/marketing cooperative. As demonstrated by Ukraine Agribusiness Development Project, producers will be more likely to pool their resources in a cooperative as soon they see a successfully running entity of their colleagues and then follow the lead

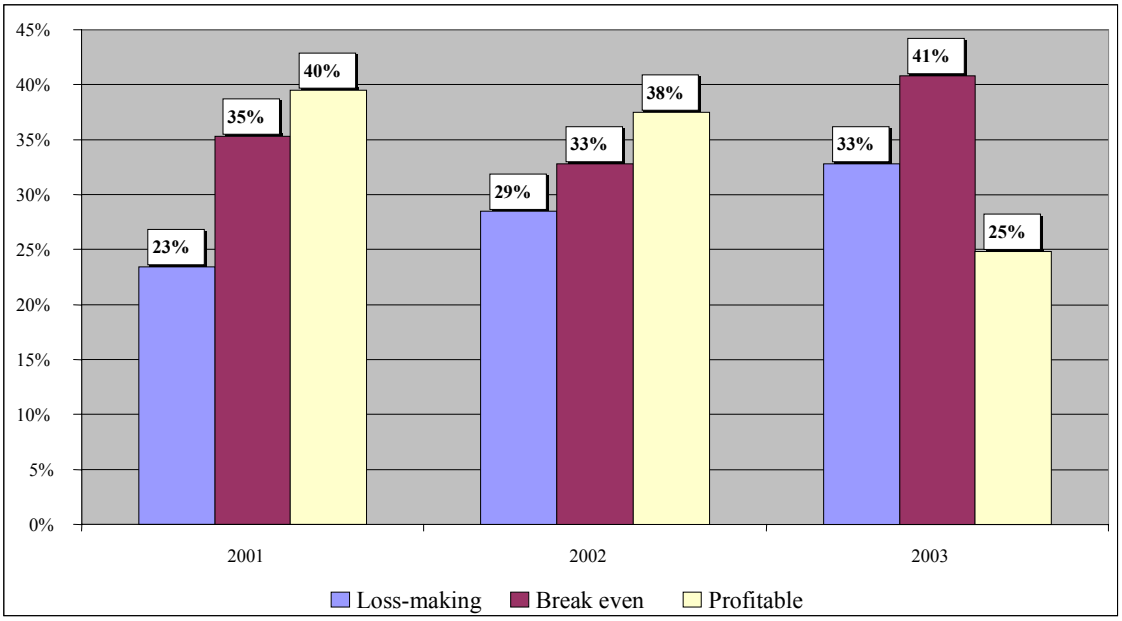
4. AGRICULTURAL LENDING AND INSURANCE IN UKRAINE

Lending and insurance are the issues of utmost importance for agricultural producers. Farms cannot operate efficiently and profitably unless they manage available financial resources effectively and can easily borrow sufficient amount of funds. Insurance is a financial instrument allowing farmers share their risks with insurers in exchange for a certain payment. This enables producer to recuperate a portion of losses incurred as a result of weather-related or other risks. In this section we intend to analyze the state of local farm lending and insurance industries and main problems.

4.1. Financial performance of farms

In 2003, farms were doing financially slightly worse than before (Figure 36). The number of loss-making farms increased by 4 p.p. against 2002, while the number of businesses that ended financial year with profit dropped by 13 p.p. (compare with 2002 survey, where the negative dynamics was only 2 p.p.)[3] However, the quantity of businesses that broke even at the end of the year, has somewhat grown (by 8 p.p.)

Figure 36. Dynamics of financial state of agricultural producers in Ukraine (2001-2003), % of overall responses.

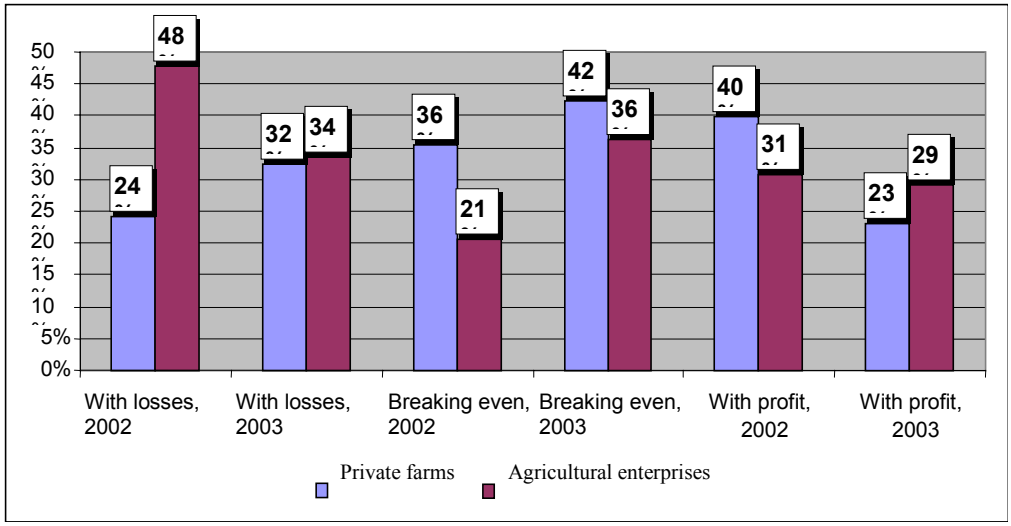


In terms of rate of loss making businesses among the surveyed Ukrainian oblasts, Kherson oblast appeared to have done worst and Donetsk oblast - best with, respectively, 53% and 12% of respondents who ended their year with losses.

According to the survey findings, operational performance results differ between private family farms and agricultural enterprises. Thus, while the portion of profitable private family farms among the surveyed producers reduced by 17 p.p. between 2003 and 2002, the quantity of profitable agricultural enterprises decreased by only 2 p.p. (Figure 37). Also, in 2003, the portion of agricultural enterprises that ended 2003 with losses reduced by 14 p.p., and a part of these farms joined the group of breaking-even farms.

[3] p.p. – percentage points, change in percentage against previous year.

Figure 37. Financial state of private farms and agricultural enterprises) in 2002 and 2003, % of overall responses.



This drastic worsening of the state of private farms may have at least three explanations. First, a lower level of diversification of private family farms' operations, coupled with obsolete technology and outdated machinery, raises risks of financial losses as a result of partial or full death of crops and/or drop of market prices. This makes private farms more susceptible to external risks and damages their competitiveness in the market vis-à-vis agricultural enterprises, which, as a rule, focus on fewer crops, minimizing in this way their production and market risks.

Moreover, large agricultural enterprises tend to have better grain harvesters and their own capacities for primary processing and storage of grain. This allows them to apply newer and more effective production technologies, optimize production costs and distribute their output in the course of the marketing year at better prices. Contrary to agricultural enterprises, farmers are often forced to sell their grain directly off the field at low prices shaped in the period of harvesting in conditions of surplus supply in the market.

Second, farmers experience bigger difficulty with accessing financial resources compared to agricultural enterprises. This frequently results in their lack of financial resources, which, subsequently, leads to impossibility to direct needed funds to the introduction of effective technologies. Moreover, given their limited access to less expensive financial resources, private family farms need to tap on overpriced borrowings which make these resources far too expensive.

Third, private farms have limp financial planning and management.

All these factors reduce private family farms' efficiency and profitability, and consequently, adversely affect their overall financial standing.

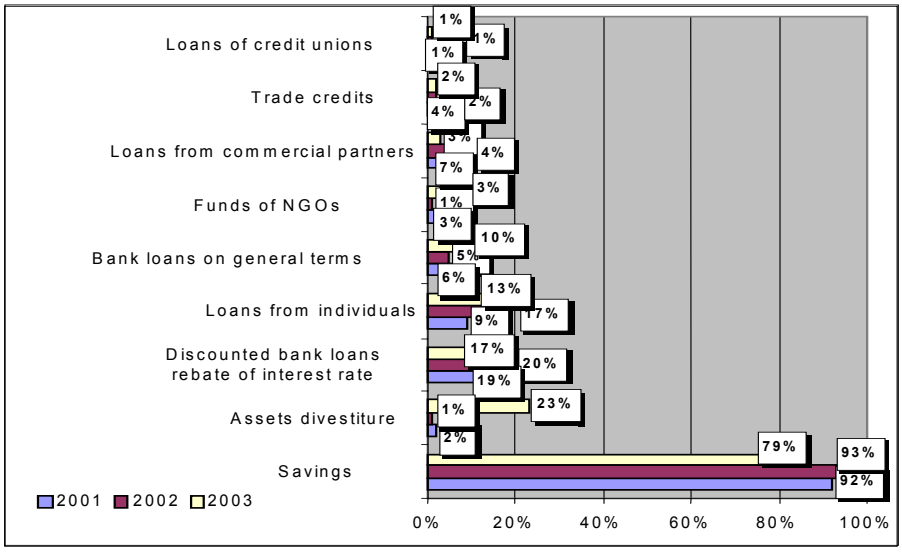
4.2. Main sources of funding

According to survey results, farms' own savings constituted the principal source of funding (Figure 38). However, for the first time in three years of the survey, the portion of respondents who admitted it, has dropped vis-à-vis the previous year (79% against 93%).

Assets divestiture appeared most important source of funding in 2003 (cited by 23% of respondents). This is a rather unexpected result, since in the previous two years of observations, the number of respondents who quoted this source of financing for their operations never exceeded 2%.

Analyzing importance of this source of financing in the regional context, we saw that assets divestiture became primary source of financing for agricultural producers in Donetsk oblast (for 82% of the total surveyed farms in the oblast), and plays a very important role for financing agricultural producers in Zhytomyr and Ivano-Frankivsk oblasts: 18% in both cases.

Figure 38. Evolution of the sources of funding used by farming enterprises in the period between 2001 and 2003.



Third most frequently cited source of financing in 2003 was loans of commercial banks extended with the rebate of interest rate (17% of respondents). However, it is important to note, that importance of this source is gradually decreasing, giving in to loans provided on general terms. Even though the portion of respondents appreciating the latter source of financing in 2003 reaches only 10%, this is double of the 2002 value. It should be noted, that this source of funding has growing importance primarily for agricultural enterprises, and not for private family farms.

Another observation derived from the survey over last three years is that amount of loans provided by credit unions remains invariably low. In 2003, number of respondents that admitted obtaining loans from credit unions, constituted only 1% of the sample (equal to the level of 2001). This is explained by the fact that private family farms and agricultural enterprises do not represent primary customers of credit unions' financial services. Credit unions' core competence is micro loans ranging from Hr 200 to 10-15,000.

The correlation between type of farm and sources of its financing has also preserved (Figure 39). Private farmers are more likely than agricultural enterprises to rely on their own savings (reported by 82% of the surveyed private family farms vis-à-vis 72% of agricultural enterprises managers). However, for both types of respondents, savings remain primary source of financing of their operational needs.

Assets divestiture ranks second as the most important source of funding for both private family farms and agricultural enterprises (reported by, respectively, 21% of private family farms and 29% of

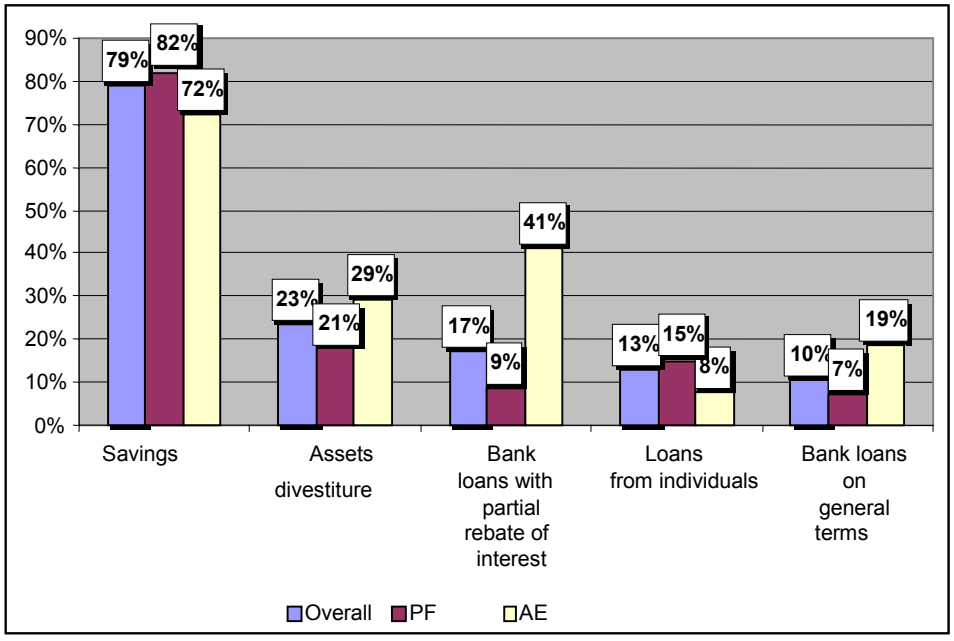
agricultural enterprises). However, we tend to consider this fact as a specific circumstance, related to the timing of the survey, rather than a beginning of trend.

Scrutinizing other sources of financing in 2003, we observe same trends set in previous years. Thus, private family farms are more likely to use loans of individuals (15% of respondents) and less likely – commercial bank loans with partial rebate of interest (9%). Meanwhile, reformed collective farms tend to use discounted loans of commercial banks (41%) and commercial bank loans provided on general terms (19%).

This difference in approaches to obtaining financial resources by private family farms and agricultural enterprises may be explained by a number of factors.

First of all, private family farms tend to have a more limited access to bank loans. They frequently use their individual savings, while managers of agricultural enterprises would hardly agree to fund their farm at the cost of their individual savings.

Figure 39. Types of farms and sources of funding.



Secondly, private family farms tend to be smaller in size than agricultural enterprises, and therefore, they typically do not need big loans.

Agricultural enterprises, normally, cooperate closer with local administrations and local authorities in the name of departments of agriculture at local state administrations, and therefore, have better access to information on terms of lending within government support programs, and have more financial staff. In addition, they have valuable assets to offer as security of commercial banks loans.

Of the 400 surveyed farming enterprises, 132 obtained loans in 2003, constituting 33% of the sample, which is 7 p.p. more than in 2002. Particularly, loans were extended to 58 private family farms (or 20% of the surveyed farmers, a 2 p.p. increase compared to 2002) and 74 reformed collective farms (or 69% of surveyed agricultural enterprises, a 6 p.p. growth compared to 2002). As we see, the portion of agricultural enterprises that received bank loans in 2003 is almost three times bigger that the respective

portion of private family farms. Moreover, the growth rate of loans extended to agricultural enterprises was much higher against 2002, than growth of loans to private farms.

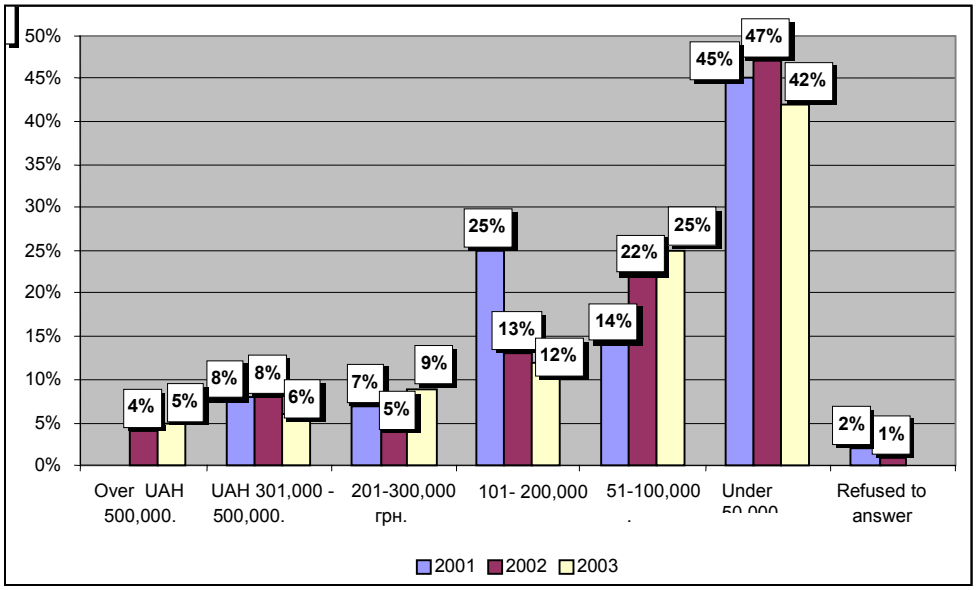
4.3. Purposes of loans

As earlier, the majority of those who experienced needs for loans used them for financing current operational needs, i.e. purchase of fuel and lubricants (59% of respondents), seeds (47% of respondents), crop protection chemicals (39% of respondents) etc. (Figure 40). Portions of these cost categories even grew vis-à-vis the previous years, therefore, positive trends in the area of assets replacement and purchase of machinery, that appeared in 2002, were not continued in 2003.

In our opinion, this situation may have the following explanation. The year of 2001 was a good year for agricultural producers. Thanks to higher yields and, subsequently, better financial performance results, they were able to spend a portion of income for purchase of machinery and equipment. Two following years appeared by far not so good, and farmers could not afford to continue fixed assets replacement.

Saying the above, there is a clear tendency towards spending funds for technology upgrade (consistent growth over last three years, totaling 11%). This trend serves evidence that agricultural producers fully recognize their need for higher competitiveness of their product in the market, which is a positive indication of good development prospects opened before private farms and agricultural enterprises. Meanwhile, we observe sustainable reduction of costs for purchase of brood stock in animal sector: overall by 4 p.p. in three years. As a result, the share of respondents who reported they bought livestock in 2003 equaled only 4%.

Figure 40. Purposes of loans, % of overall responses.



4.4. Size of loans and interest rates

According to the survey results, the number of loans under UAH 100,000 (around 18,800 USD) was constantly growing over the last three years (Figure 41). Particularly, the smallest loans, up to UAH 50,000 grew most rapidly, by 29% in the three years, while loans ranging from UAH 51,000 to 100,000 grew by 11%.

Quantity of farms that obtained bigger loans remained stably low during these three consecutive surveys. Today, majority of farms use loans to meet their needs for working capital, while only a small portion of farms invest them into expansion of operations.

Figure 41. Sizes of extended loans, % of overall sample.

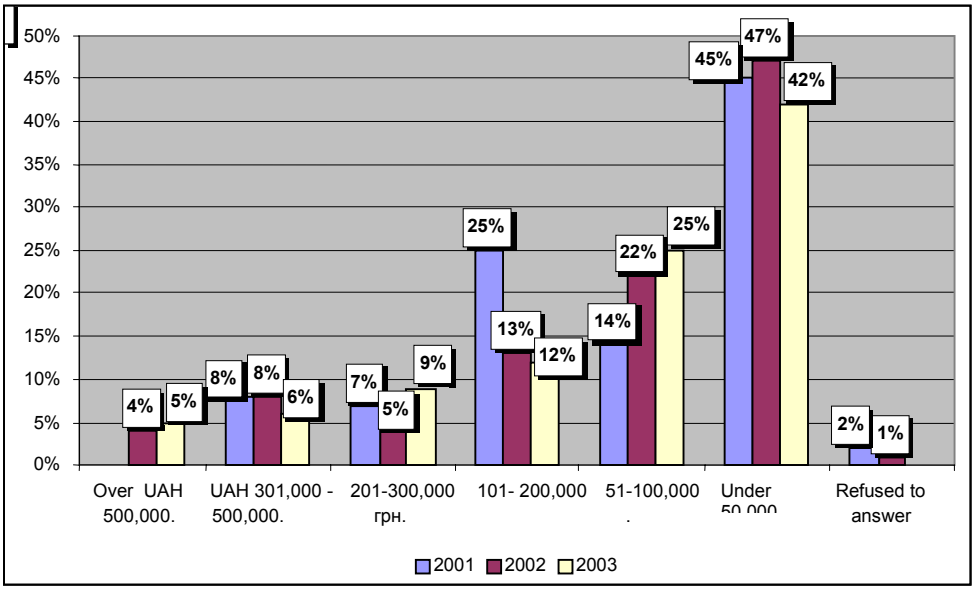
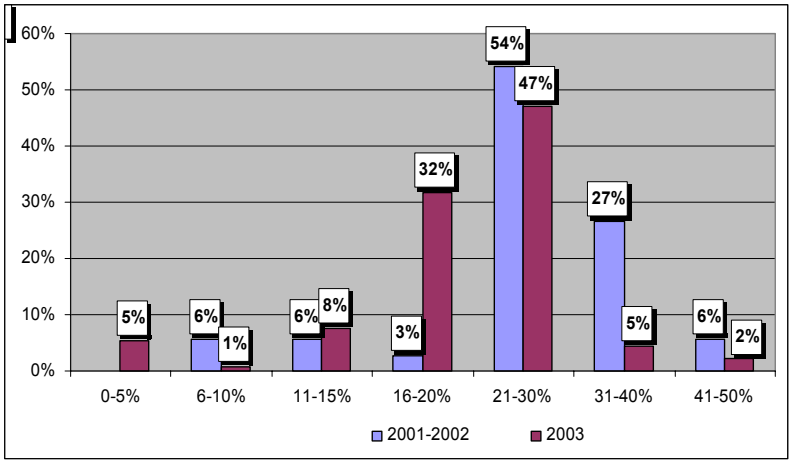


Figure 42 presents data on interest rates for loans obtained by farming enterprises between 2001 and 2003. As may be observed from the figure, in 2003, interest rates were generally lower than in 2001 and 2002. Although the biggest portion of loans (47%) in 2003 was extended under interest rates ranging from 21% to 30%, this is not so many as in the previous two years. Instead, the portion of loans with interest rates from 16% to 20% has grown considerably (by 29 p.p.), thus becoming second ranking category of loans in 2003. Moreover, the percentage of very expensive loans has dropped essentially (i.e. the share of loans with rates from 31% to 40% - from 27% to 5%, and with interest rates from 41% to 50% - from 6% to 2%).

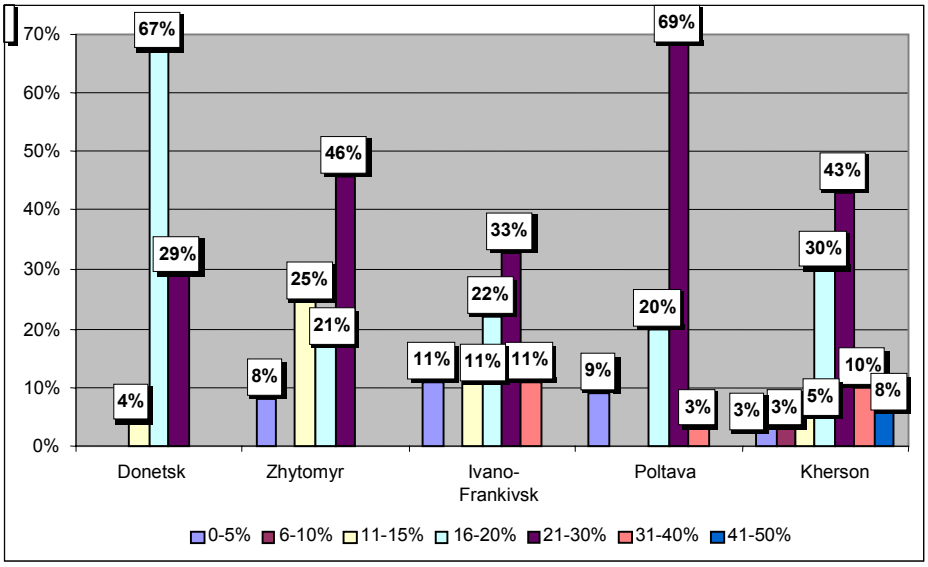
Figure 42. Interest rates in 2001-2002.



Also, it is interesting to analyze regional variations in the level of interest rates on loans obtained by farmers. Figure 43 demonstrates, that Poltava oblast has the biggest share of producers (69%) that

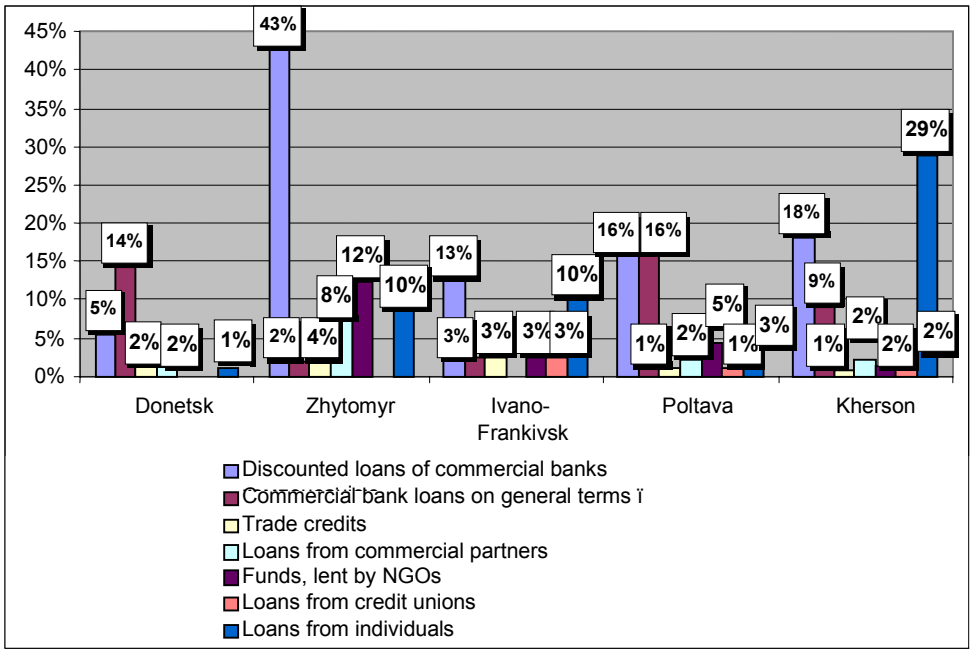
obtained loans with 20 to 30% interest. Nearly 67% of producers in Donetsk oblast obtained loans with 15 to 20% interest rates. In Zhytomyr, 25% of the surveyed farmers obtained loans at 10 to 15% p.a., which is the highest proportion among the surveyed oblasts.

Figure 43. Interest rates on loans obtained by agricultural producers in 2003, in the regional context.



Comparing price for credit resources, extended to agricultural producers, with the cost of other sources, we may analyze the price for various source of funding in the regions. As may be observed from Figure 44 below, Kherson oblast has the largest quantity of producers that used borrowed funds and turned to loans of individuals. These credit resources appear to be most expensive: for 18% of borrowers, interest rates ranged from 30 to 50% p.a.

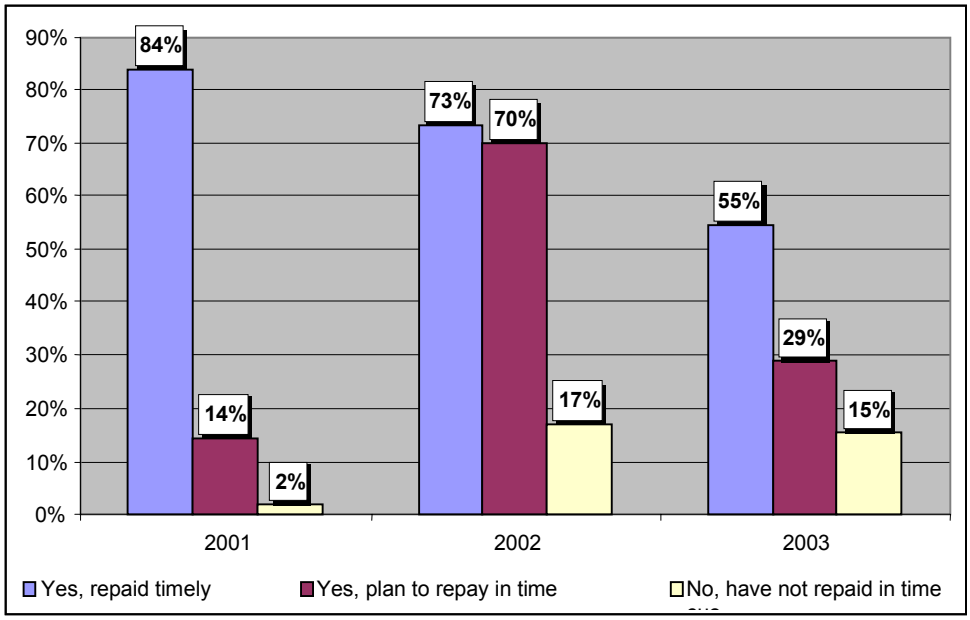
Figure 44. Main sources of credit resources for producers in 2003 in the regional context.



4.5. Loan repayment

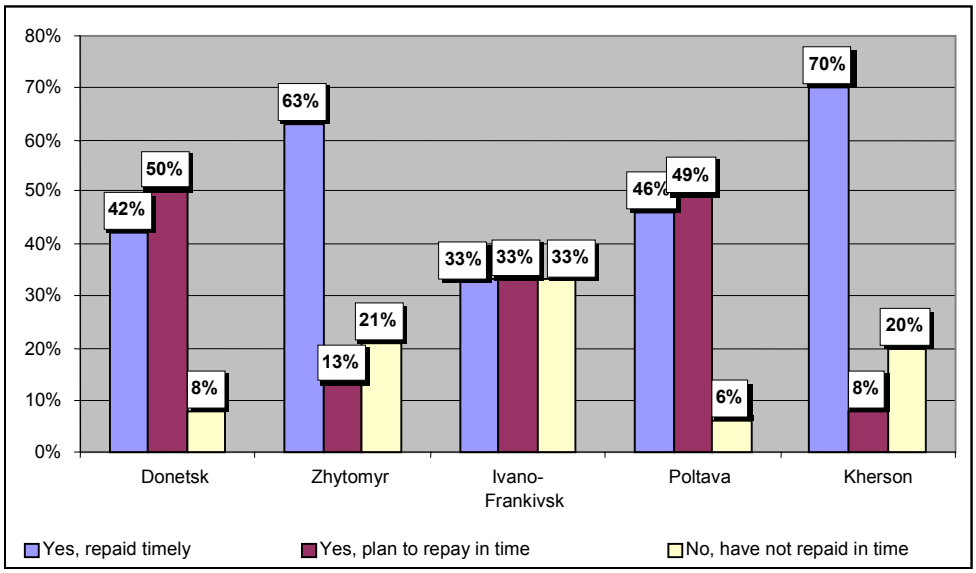
The rate of performance on loans to farming enterprises in 2003 remained nearly same as last year and the year before last (Figure 45). 84% of respondents that use or have used loans, have already repaid or plan to repay loans in a timely fashion. Additional 15% of respondents have defaulted or don't plan to repay loans timely (in 2002, this portion was 17%, and in 2001 – 14%). In 2003, likewise before, private farms were likely to perform on loans better than their agricultural enterprises counterparts.

Figure 45. Dynamics on performance on loans by farming enterprises in 2001-2003.



Of 132 producers that obtained loans in 2003, 20 (or 15%) have defaulted. Of these 20, five were private farms and 15 agricultural enterprises. Major explanation of their failures was lack of income due to low yield (reported by 95% of the surveyed, or 100% of private family farms and 93% of agricultural enterprises). A considerably lower number of respondents (10%) quoted lack of income due to the problems with marketing their output.

Figure 46. Performance rate on loans in 2003, in the regional context.

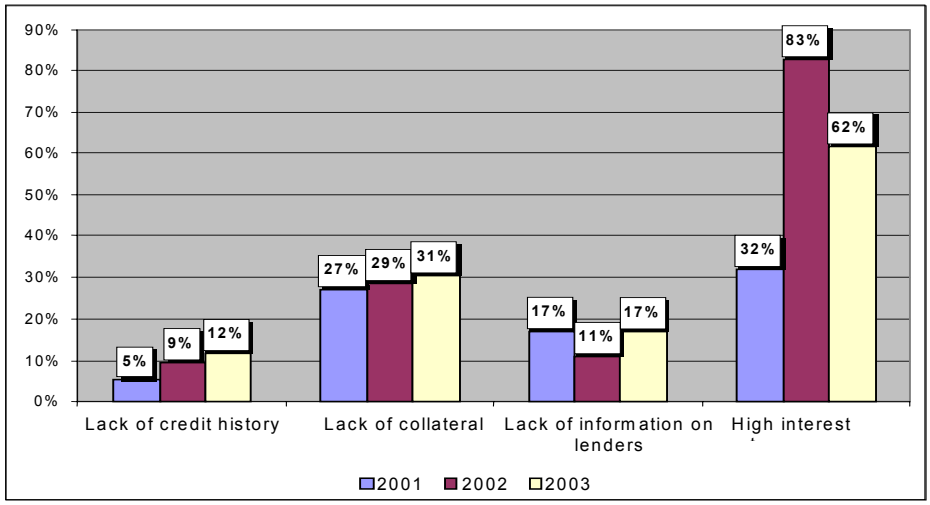


Analysis of regional variations in the rate of performance on loans (Figure 46) reveals that Kherson oblast stands out as best performing on loans, with 70% of respondents having repaid their loans in a timely fashion. The lowest performance rate was observed in Ivano-Frankivsk oblast, with 33% of borrowers defaulting in 2003. Second and third badly performing oblasts were Zhytomyr and Kherson.

4.6. Major obstacles to obtaining loans

Likewise in the previous years, major obstacles to obtaining loans, most frequently cited by respondents, were high interest rates and lack of collateral (Figure 47). However, the percentage of respondents quoting interest rates as a very important obstacles, has dropped compared to the previous year, by 21 p.p. (from 83% in 2002 to 62% in 2003). This is a logical result, since, as we have already observed, interest rates in 2003 were a lot lower than in 2001 and 2002. Portion of those who considered lack of collateral as a very big obstacle, has grown though (from 29% in 2002 to 31% in 2003). Paperwork and formal procedure of bank loan issue was the third highest ranking obstacle in 2003 (quoted by 28% of respondents).

Figure 47. Impediments to obtaining loans, 2001-2003, % of total responses.



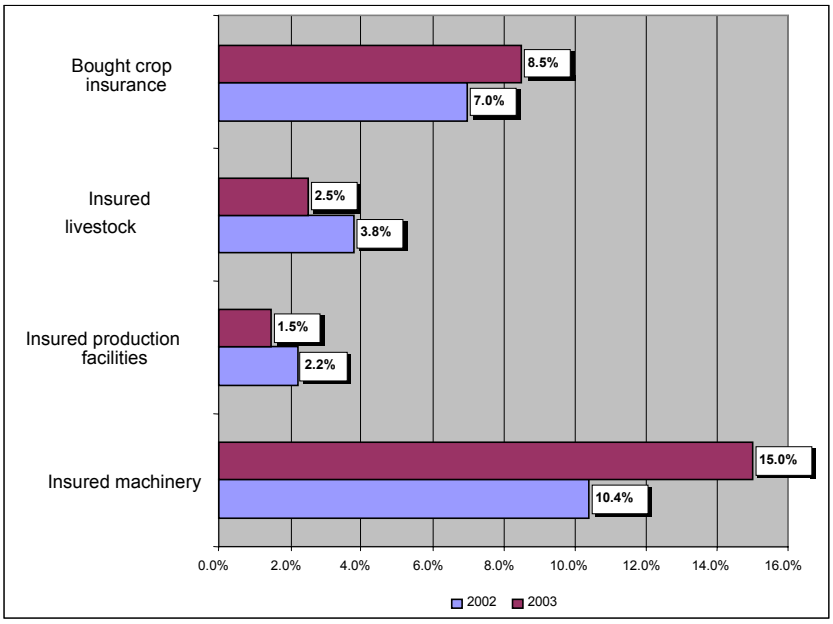
Also, it is important to note that during the three years, respondents became increasingly aware of the importance to have credit history. In 2003, overall 12% of respondents recognized availability of credit history as a precondition to obtaining loans. This is twice as much as in 2001. Lack of information on lenders remain rather acute, too (17% in 2003 is nearly as many as in 2001).

4.7. Main areas of agricultural insurance

According to the survey results, Ukraine is experiencing growth of insurance of farm risks, however, the growth rate is rather slow, and the quality of insurance leaves much to be desired.

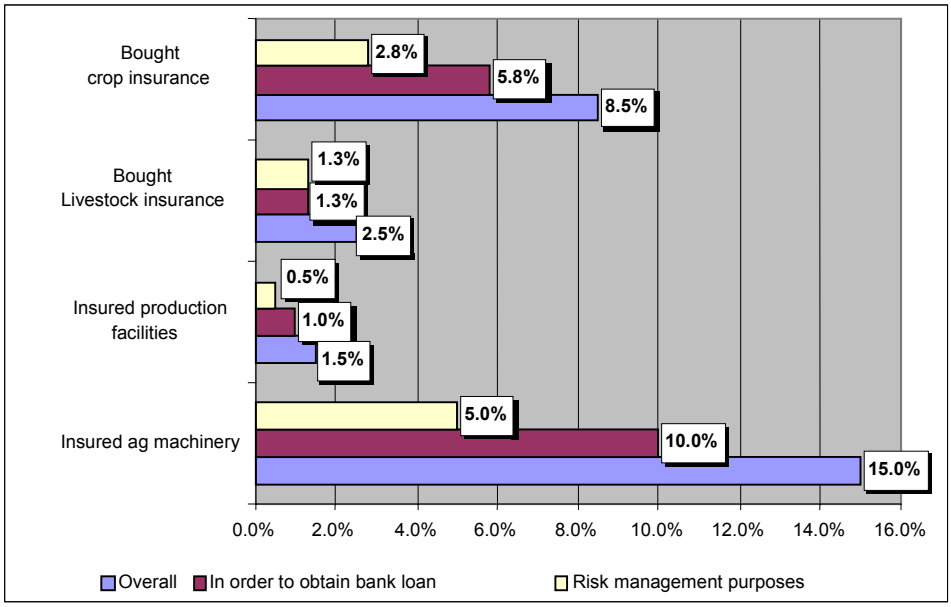
The survey demonstrated the nearly 7% of the surveyed farmers took part in insurance. As may be noted from Figure 48 below, 15% of respondents insured agricultural machinery (including production assets and transportation vehicles), 8.5% - bought crop insurance, 3.8% – insured livestock and 1.5% - production facilities.

Figure 48. Growth of insurance in 2002-2003.



Once again, results of 2003 survey corroborated the fact, that farm risks are insured in Ukraine primarily in order to obtain loan, and not to mitigate risks. Thus, of 8.5% of those respondents who bought crop insurance in 2003, 5.8% did it to secure obtaining funding, and only 2.8% - in an effort to manage risks. (Figure 49).

Figure 49. Main areas of insurance in 2003, % of overall responses.



4.8. Primary insurable risks and rates

What were the premium rates paid by producers in 2003? As may be observed from Figure 50, majority of producers opt for cheapest premium rates. From our experience, it is just one more evidence that producers treat insurance formally, and insure assets they offer as security only to meet bank's requirements. Insurance companies insure these assets against risks with very low probability and at a low premium rate.

Figure 50. Premium rates in 2003, % of insured farmers.

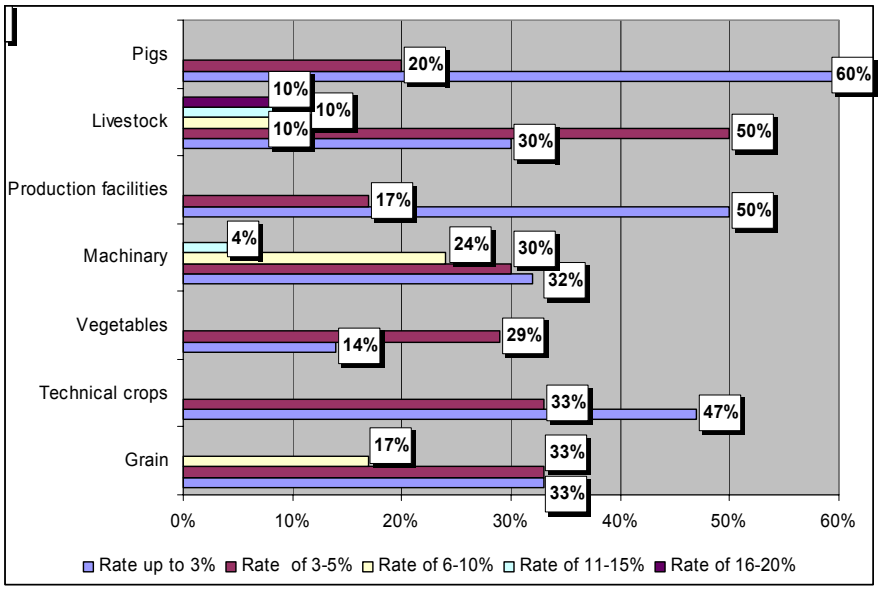


Figure 51 demonstrates farmers' preferences in terms of risks they safeguarded against in 2002 and 2003, and risks they intend to insure against in 2004. As may be observed, multi-peril insurance, although is still on top of the list (33% of those who bought policies in 2003, acquired multi-peril insurance under the program of mandatory insurance), however, has a decreasing tendency. Instead, more farmers appear to be willing to insure winter-killing and drought (in 2004, the number of those rose by 4 and 5 p.p., vis-à-vis 2003).

Figure 51. Farm risks insured in 2002 and 2003 and plans for 2004, % of overall insured.

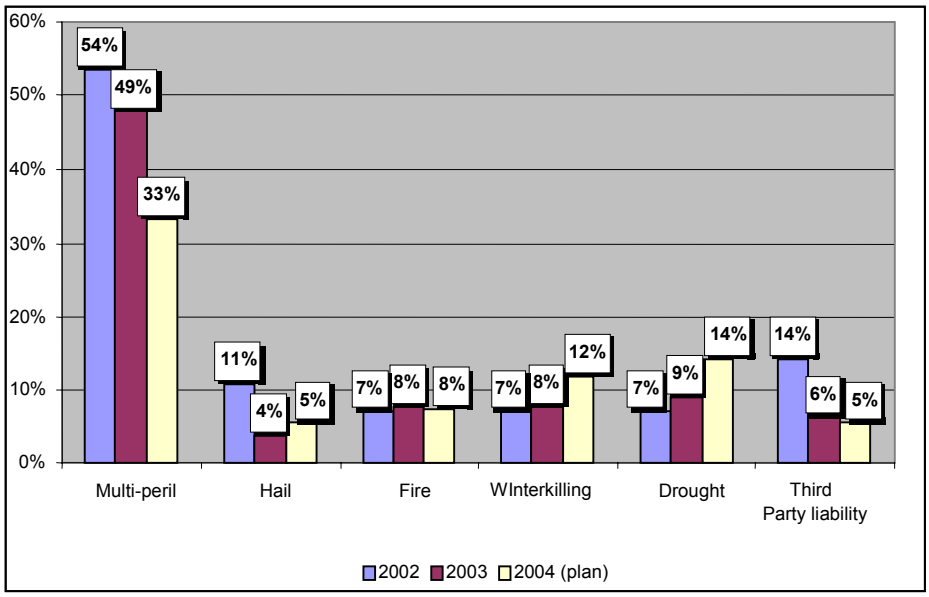
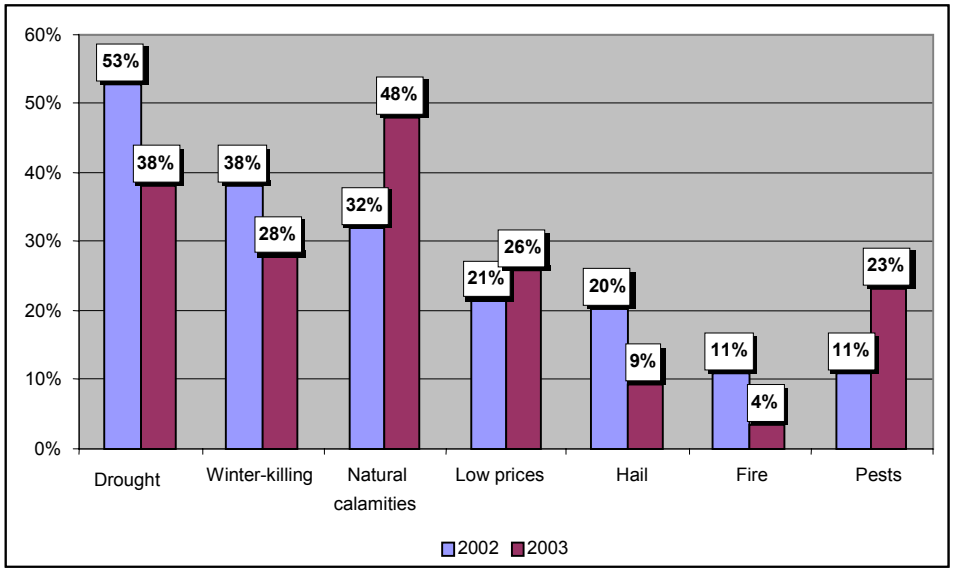


Figure 52 below presents farmers' perception of their biggest exposures, according to findings of 2003 and 2002. Adverse weather conditions and natural calamities pose biggest hazard to producers surveyed in 2002 and 2003.

Figure 52. Risks posing biggest hazard to farming operations, % of overall responses.



Unlike in the previous surveys, instead of the proposed list of risks from which respondents were requested to choose risks, this year survey suggested that respondents specify themselves the risks they are exposed to. On the one hand, it enabled to take a fuller account of respondents' opinions as they were not restricted by the listed risks. On the other hand, it made the data less compatible because it redistributed risks inside the category. Particularly, the category "natural calamities" in 2003 survey appeared wider than in 2002 (it included both adverse weather conditions and natural disasters). This may explain a considerable growth of weight imparted by respondents to "*natural disasters*" in 2003, and a slight reduction of weight they recognized in "*drought*" and "*winterkilling*". This, however, have not affected general result, i.e. drought, winterkilling and natural calamities represent the biggest risks for farmers.

In 2003, the weight of economic risks in producers' perceptions grew too (i.e. low selling prices were quoted by 26% of respondents against 21% respondents last year). This circumstance also proves the need to develop revenue insurance in Ukraine, as we already noted in our previous survey report.

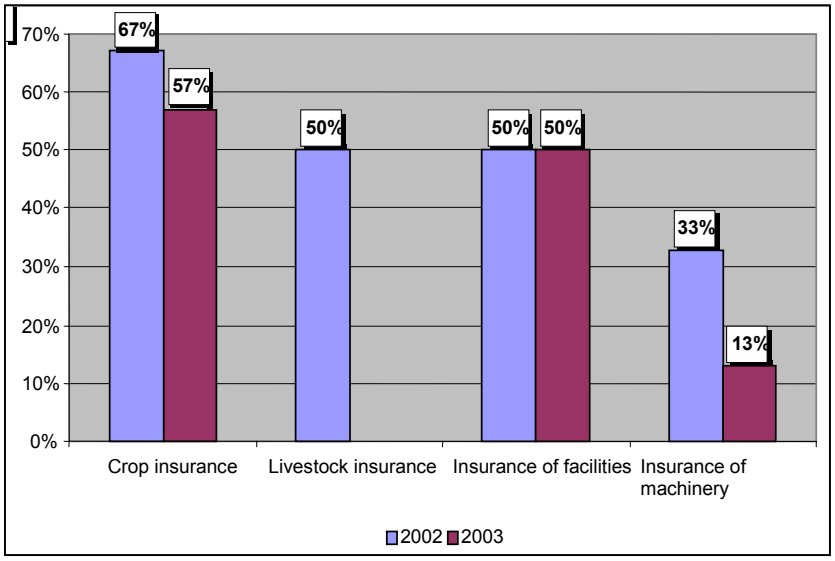
4.9. Claims paid by types of insurance

An important objective of the survey was to find out how insurance companies meet their payment obligations before the insured, as this is a key element of farmers' trust to insurance, and a precondition for stimulating demand for insurance services.

Analyzing answers to on the question how insurance companies meet their payment obligations before the insured, let's look at the following two indicators: (1) level of claims paid (correlation between those who had insurance policies and incurred loss, to those who had policies) and (2) received indemnity as a percentage of total losses incurred (in cases where a farm was insured, incurred losses and received indemnity).

Figure 53 below presents percentage of those who had insurance policies (respectively, in 2002 and 2003) for crops, livestock, facilities and machinery, and was indemnified as a result of insurable event. As may be observed from the graph, in 2003, claims were paid to 57% of those who bought crop insurance and suffered losses. This is 10% lower than the previous year. It is important to note, that in 2003, nearly twice as many respondents as in 2002, suffered insurable events (41%, against 24% of all insured respondents).

Figure 53. Claims paid in 2002 and 2003 by types of insurance, % of those who was insured and received indemnity as a result of insurable event.



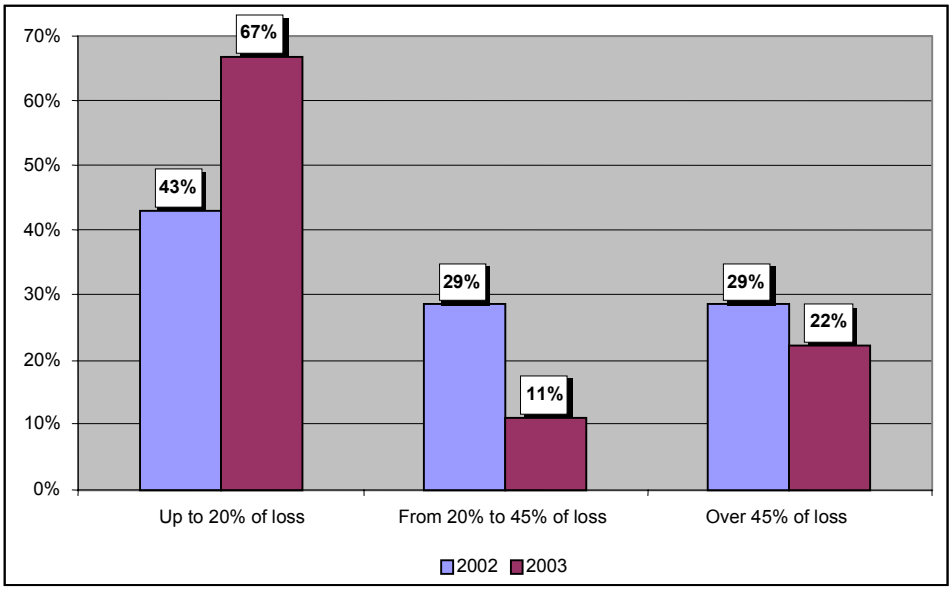
The number of insurable events in the livestock sector has also slightly increased: from 20% of all insured in 2002 to 27% in 2003. However, while in 2002, indemnity was paid to 50% of those who suffered loss, in 2003, none of surveyed respondents who was insured and incurred loss, was indemnified. Claims on insurance of facilities in 2003 were paid to the same extent as they were in 2002 (50%), despite the growing percentage of insurable events (from 22% to 67%). Finally, payments on claims for insurance of machinery have dropped from 33% in 2002 to 13% in 2003 (occurrence of insurable events has slightly decreased, from 15% in 2002 to 13% in 2003).

So, we observe that the level of indemnities paid is not high and has a clear decreasing tendency.

As may be noted from Figure 54, share of losses indemnified to farmers that were insured and suffered a loss also dropped in 2003 against 2002. The percentage of those whose losses were indemnified by 20%, has grown by 24 p.p. (from 43% in 2002 to 67% in 2003). The portion of those who had their claims paid by 20% to 45%, has shrunk by 18 p.p. (from 29% in 2002 to 11% in 2003). The share of those who recuperated 45% of their losses has reduced by 7 p.p. (from 29% in 2002 to 22% in 2003).

So, as becomes clear from survey findings, insurance companies indemnify just a small portion of losses claimed by producers, and this does not encourage farmers to buy more insurance. This statement may be supported by farmers' responses to the question about problems which, in their opinion, hinder the development of farm insurance.

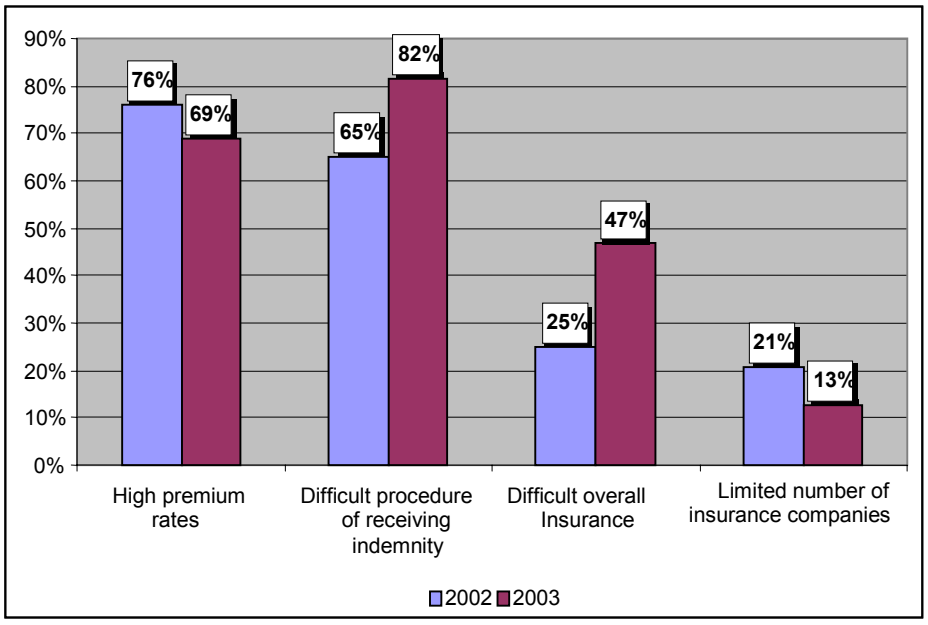
Figure 54. Losses indemnified, % of total number of those who was insured and suffered loss.



4.10. Main problems and development prospects of agricultural insurance

In the course of the survey, we also attempted to identify main issues in the insurance services market. Figure 55 presents results of 2003 survey vis-à-vis 2002 survey findings. As we may note, the problem of high premium rates, which clearly stood out in 2002, became 7 p.p. less important and gave in to the difficult procedure of receiving payment on claim (portion of those who cited this problem as biggest has grown from 65% in 2002 to 82% in 2003). It is also important to note, that in 2003, more producers were concerned about difficult overall insurance procedure (the portion of those who admitted this was a major problem, has grown from 25% in 2002 to 47% in 2003).

Figure 55. Percentage of farmers perceiving graveness of problems of farm insurance.



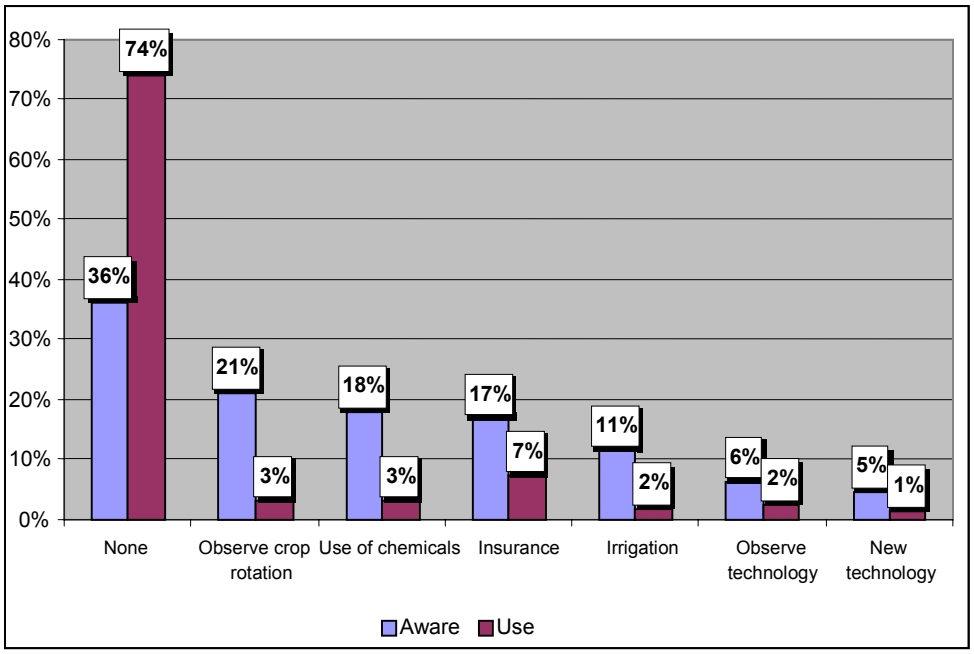
In our opinion, these results expressly demonstrate that a combination of scarce funds available and high premium rates is an effective obstacle preventing producers from taking part in insurance, however, it is not the only and not the major impediment. Instead, as was noted above, farmers are discouraged by lack of insurers' credibility, as they are concerned about complicated and opaque procedure of receiving indemnity, which hardly brings hope that their losses will be repaid fairly.

Moreover, farmers are scared off by the insurance procedure per se, as it fails to give them a clear picture of insurance products on offer, and/or farmers' rights and responsibilities. Thus, further development of farm risks insurance will be possible only if insurance companies make efforts in the following areas: (1) simplified and transparent procedure of risk adjustment and claim payment; and (2) development of insurance patterns and procedures which would be absolutely clear for farmers, and explanation to farmers of the essence of insurance products and procedures.

During the survey, respondents answered an open question about risk prevention techniques they are aware of and commonly use in their activities. Elicited data are presented in Figure 56.

As we see, the biggest portion of respondents admitted they are neither aware of nor use any risk prevention tools (respectively, 36% and 74%). Moreover, they hardly use risk management tools they know about. Namely, only 3% observe crop rotation, 2% use irrigation, 1% applied new technologies, and only 2% observe any sort of agricultural technology! Against this sad background, the situation with insurance looks more than bright: 17% view insurance as a risk mitigation tool and 7% apply it in their operations.

Figure 56. Risk management tools, farmers are aware of and use, % of overall responses.



5. MANAGERIAL AND LEGAL ASPECTS OF FARMING OPERATIONS

The main goal of this sociological annual survey, undertaken by the International Finance Corporation Agribusiness Development Project for the third year in a row, was to study the current state of farming sector in Ukraine, keep track of changes taking place in the sector and their dynamics, and to determine a circle of problems facing agriculture producers. Obtained information and results of the analysis will be publicized and used by policy-makers as a starting point in finding solutions to existing problems, in initiating various proposals by stakeholders and substantiation of needed changes, including in the area of government regulation of the agribusiness sector.

An important element of the survey has traditionally been gathering information on various issues pertaining to managerial and legal aspects of farming operations. Although these issues are not a direct area of production relations, they, however, are usually closely related to them, and to a certain extent, help to understand if and in what degree legal and managerial principles of farming are favorable for raising effectiveness of farming operations.

The list of questions used in the survey was amended during the last three years, however, it did not undergo significant changes. The target group of respondents also remained unchanged, and as previously it was made up primarily of heads of private family farms and managers (deputy managers) of agriculture enterprises, including those, that came into being as a result of reform in agrarian sector having become successors of former collective farms. As was noted before, the general sample of the survey included 400 respondents from five regions (oblasts) of Ukraine. 293 persons of the sample represented private farms (further, the subgroup private farms) while the other 107 – agriculture enterprises (subgroup agricultural enterprises)[4].

Likewise in the two previous years, a portion of the questionnaire was devoted to general organizational principles predominant in agrarian business, another portion dwelled upon land title relations, including rent, purchase and sale of land plots, while the rest of questions were targeted at eliciting information on how well agriculture producers were aware of legal regulations in their sector. Meanwhile, major emphasis in this survey section was placed on identifying problems of land relations. It is the existing terms and procedure of acquiring title to land plots, their transparency and simplicity are the important factors implying how easily framers can access their main means of production, i.e. land. Ultimately, all these things impact sustainability and effectiveness of agrarian business.

5.1. Land relations

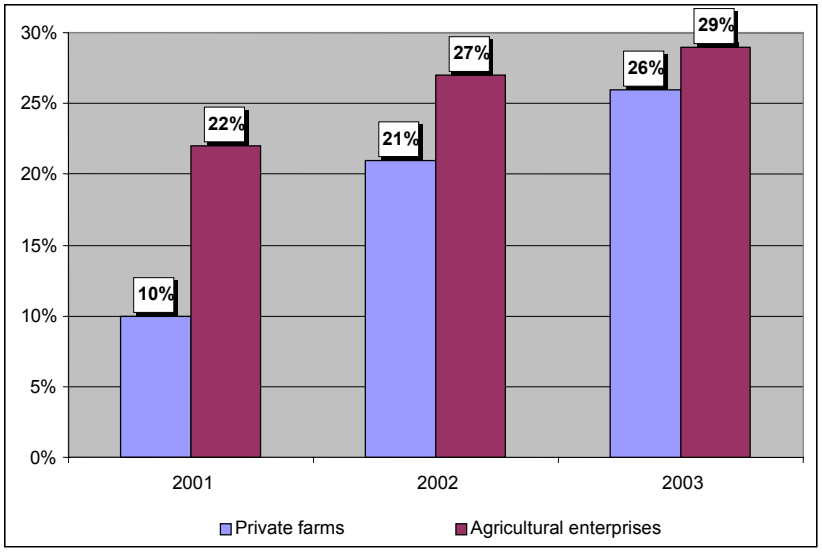
As demonstrated by survey findings, in 2003-2004, the problems in the area of land relations remain as deep as before, while some indicators even demonstrate obvious growth trend. These problems are most notable in relation to lease of land plots and usage

[4] Further throughout the text, in some cases, each of these two groups of respondents may be taken as 100%, in order to identify the share of respondents answering differently in each of the mentioned groups.

of land shares. Thus, while in 2001, rent problems with were reported only by 13% of the general sample, in 2002, the portion of those rose to 22%, and in 2003, it reached 27% (Figure 57). For subgroups private farms and agricultural enterprises, in 2002 these portions were 21% and 27%, and in 2003, 26% and 29% respectively, which allowed us to conclude, that for the both groups problems have aggravated.

A somewhat faster growth of problems observed in the subgroup private farms in 2004 may be partially explained by more active participation in rent, particularly, in view of the approaching date January 1, 2005. It is the date, by which, in accordance with the Transitional Provisions of the Land Code of Ukraine, they must exchange their right to permanent usage for the ownership title or rent title. In the regional context, Kherson and Zhytomyr oblasts look most promising, with 89% and 82% of respondents there reporting they face absolutely no problems with rent of land.

Figure 57. Share of framers that had land rent problems, % of total responders.

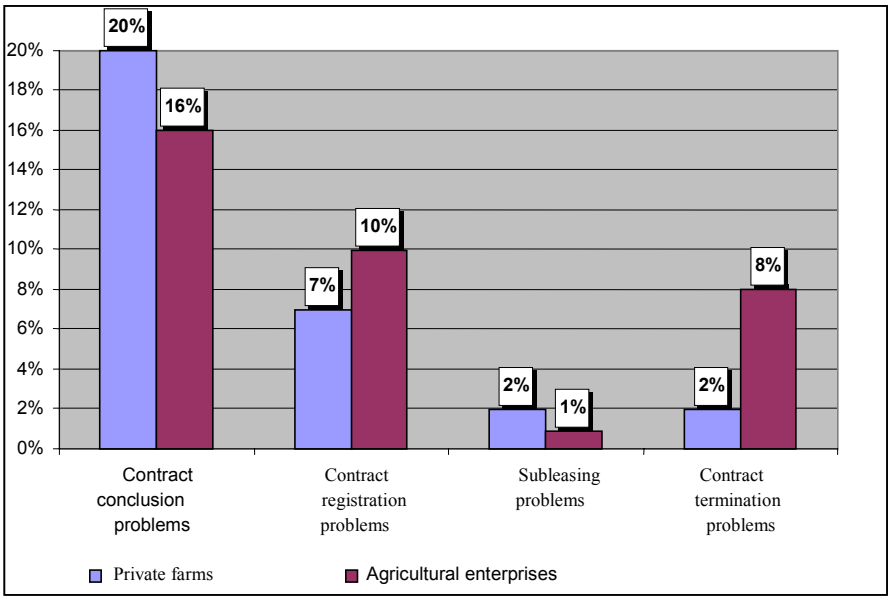


At first glance, such a big share of rent-related problems may be explained by the wide spread and prevalent position of rent against ownership and usage titles at the present stage of land reform. However, this assumption, although it has the right to exist, in our view, does not explain why the level of problems is growing. Generally, in the past few years, the area of rented lands has changed insignificantly.

In order to find another explanation, it is important to undertake a more thorough analysis of the set of rent-related problems. According to the survey results, the most outstanding problem was the one connected to closing rent agreements[5]. Thus, while in 2002 this problem was reported by 12% of the general number of respondents, in 2003, this figure grew to 19%. In the subgroups private farms and agricultural enterprises in 2002, these figures were 11% and 12%, while in 2003 – 20% and 16%, respectively.

[5] It would be absolutely reasonable to assume, that reporting this problem, respondents meant not only obtaining possibility to close agreement, but rather, all related procedural requirements: coordination of terms, writing and signature of agreement, executing it in writing etc.

Figure 58. Main problems that farmers had in land rent relations, % to all responses.



The growth is obvious, although somewhat unexpected, since in October 2003, the Law of Ukraine "On Rent of Land" (further, the Rent Law), underwent major revisions, which have considerably liberalized legal regulation and alleviated major legal obstacles hampering further development of rent relations. The new version of the Rent Law assigned Cabinet of Ministers of Ukraine to approve the Model Agreement for Rent of Land in the two-month term after the adoption, however, in reality the said Model Agreement was approved by the appropriate Government Resolution only five months later, on March 3, 2004[6].

It is important to note, that in accordance with the Commercial Code of Ukraine[7], the Model Agreement is mandatory for use by all subjects of economic relations, i.e. all respondents of the survey. Thus, one can assume, that the most probable reason for growing problems with closing agreement of rent of land, is the lack of prescribed Model Agreement in this five month period, which, has coincided in time with the survey.

Next, by weight, in this survey section was the problem with registration of rent agreements. In 2002, it was reported by 6% of those respondents who admitted availability of problems, while in 2003 this portion grew to 8%. Here we can focus on three reasons behind the growth, with each of them having approximately equal probability.

First of them is collisions in the legal regulations, that arose together with the Commercial Code coming into effect. While the ad hoc legislation, law of Ukraine "On Rent of Land"[8] does not stipulate agreements be approved by a notary, the Commercial

[6] Resolution of the Cabinet of Ministers of Ukraine of March 3, 2004, # 220 "On Approval of the Model Agreement for Rent of Land".
[7] Commercial Code of Ukraine, article 179, paragraph 4.
[8] Article 14 of the Law of Ukraine "On Rent of Land".

Code[9] imperatively mandates they should be. As was demonstrated by practice, this circumstance was in some cases used by registration bodies as an excuse for not registering agreements if they were not approved by notaries, or caused serious delays with the registration.

The second reason is the increased number of various approvals, signatures and assessments parties have to present prior to registration of agreements. In 2003, in compliance with regulations issued by the President of Ukraine[10], Cabinet of Ministers of Ukraine[11] and the State Land Resources Committee[12], a center of the state land cadastre was set up, responsibilities of which included registration of land plots, immovable property and lands titles. Despite the fact, that the Center was recognized the only fully potential registration body to be in charge of registration agreements for rent of land, there were instances where authorities required obtaining additional approvals on top of those stipulated by legislation.

The third reason is the low level of legal awareness and lack of high quality legal services in rural area, resulting in the situation where parties do not observe the contents and form of the Model agreement, introduce provisions contradicting current legislation, and in response receive refusal to have their agreements registered.

A convincing illustration of the plausible conclusions made on the basis of survey findings, and a vivid example of how a timely legal response to the society's pressing needs may reduce the level of problems, is the today's results of the survey with regard to sublease relations. In the last survey report, a comment regarding higher level of problems in subgroup of agricultural enterprises (7%) compared to the subgroup private farms (2%) noted that the most probable explanation was legal limitations, due to which legal entities[13] may not provide for sublease plots of farm land. With adoption of the new version of Rent Law, the limitation was alleviated, and it obviously improved the situation, as is demonstrated by results of the 2004 survey. While in the private farms subgroup the share remains on the same level of 2%, in the agricultural enterprises subgroup the share has dropped and equals 0.9%.

Results of 2004 survey provide a reasonable basis to conclude that the level of problems related to usage of land plots (shares) did not go down vis-à-vis 2002, but rather has a clear growth tendency – 31% against 19% in 2003. For subgroups private farms and agricultural enterprises in 2002 this share equaled 18% and 22%, while in 2003 – 31% and 30%, respectively. Most frequently, problems with land shares annoyed respondents in Donetsk (60%) and Ivano-Frankivsk (45%) oblasts, where figures considerably exceed average numbers in the sample. Situation in Kherson (14%) and Poltava (18%) oblasts appeared to be less tense. Of those who admitted facing problems in 2003, for 16% of respondents they were related to the acknowledgement of their right to land plot, while

[9] Part II article 290 of the Commercial Code of Ukraine.

[10] Decree of the President of Ukraine "On Steps to Set up a Common System for State Registration of Land Plots, Immovable Property and Titles thereof within the Land Cadastre" as of February 17, 2003 #134/2003.

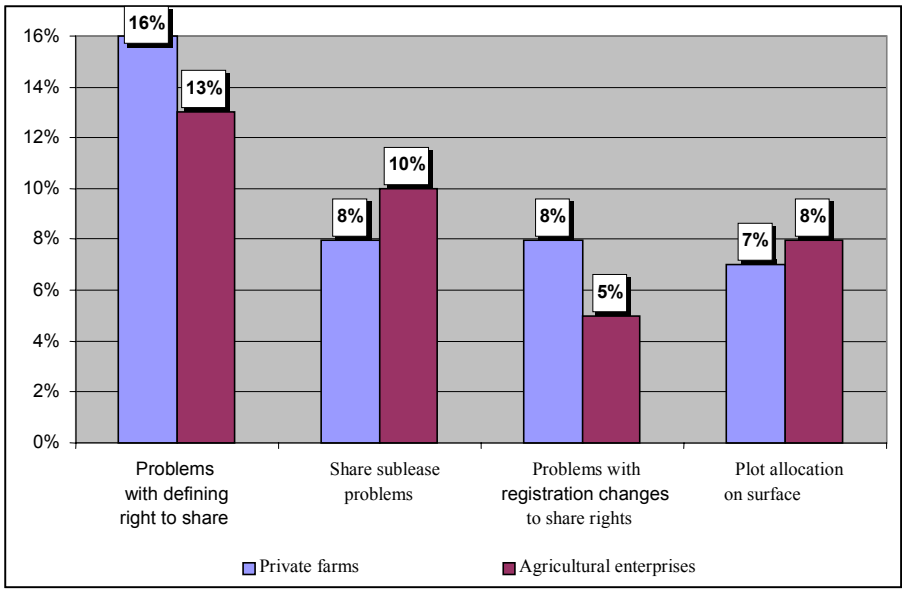
[11] Resolution of the Cabinet of Ministers of Ukraine "On Creation a Common System for State Registration of Land Plots, Immovable Property and Titles thereof within the Land Cadastre of July 17, 2003 # 1088.

[12] Order of the State Land Resources Committee of Ukraine of May 23, 2003, #135.

[13] First of all, corporate entities, like agriculture enterprises, because private farms in most cases have land owned by individual members of private farms, rather than private farm as a legal entity.

another 9% had problems with rent of land shares, and 7% encountered difficulties with the allocation of land plots on the surface or changing title (figure 59).

Figure 59. Main problems of land plots (share) usage, % to the total number of respondents.



All these problems have systemic, interrelated nature and are, to a large extent, an outcome of inconsistent and not concerted agrarian reforms. Thus, the large-scale and quick reform of collective agriculture enterprises formally liquidated previously existing land owners but failed to create new ones. This affected efficiency of managing lands in former collective ownership, while unorganized co-owners (holders of land share certificates) made it impossible in most cases to properly manage of these lands from legal standpoint.

These management functions were increasingly taken over by local governance bodies and rayon state administrations and, ultimately, a portion of these functions was included in the Law of Ukraine "On the Procedure of Allocation on the Surface of Land Shares between Land Plot Owners"[14], adopted in June 2003. Undoubtedly, this approach does not fully comply with main principles of the theory of ownership, however, it was dictated by the desire to make the process more organized and manageable. Meanwhile, the said law authorized local governance bodies and rayon state administration to check lists of persons eligible for land shares. One can assume that specifics of interpretation of this and some other provisions of the law, as well as their enforcement in places entailed in some cases revisions of the results of sharing, which, in its turn, impacted the level of problems at the time of acknowledgement of respondents' rights to land shares.

One shouldn't forget that a portion of responses admitting problems in this segment of the survey may be the consequence of difficulties arising at the time of enforcement

[14] The Law of Ukraine of June 05, 2003, # 899-IV.

provisions of the Land Code of Ukraine regarding privatization of land plots by members of private farms "on the size of land share to which is eligible a member of agriculture enterprise located on the territory of the respective council[15]". In this case difficulties with privatization may be erroneously admitted by farmers as problems with acknowledging their right to land share.

As regards problems with rent of land plots, they are an outcome of, first, flawed land rent concept itself, and second, inconsistent manner of its implementation. Respondents' answers demonstrating growing problems in the said relations, reflect primarily position of the lessee, where their private farms and/or agriculture enterprises find or may potentially find themselves. Considering this, we may with great probability assume that problems arise mostly due to instability of relationship with rent of land shares, and due to lower, compared to the lessor's, level of lessee's rights protection, which creates preconditions for unpunished violation of rights of the lessee.

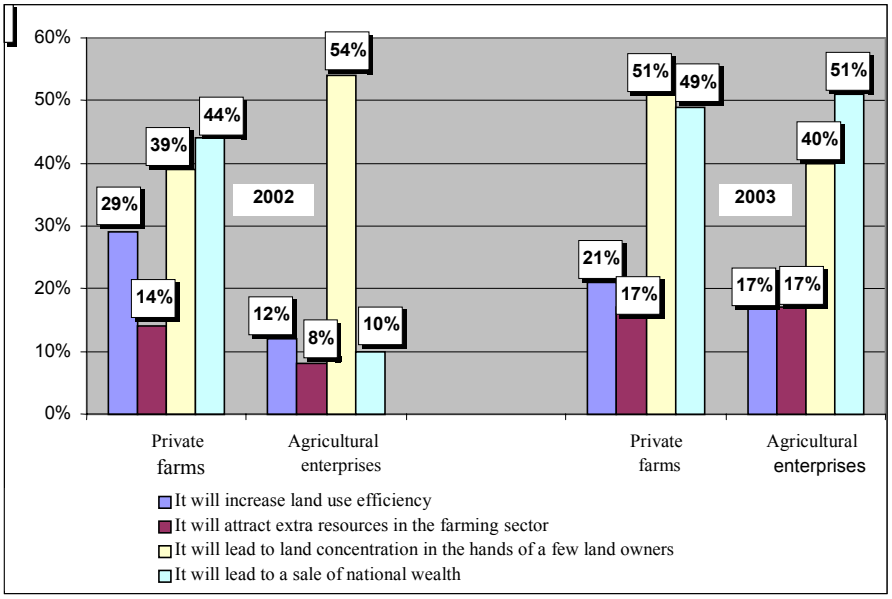
Currently, considering specifics of legal regulation, availability of a rent agreement for land share does not prevent lessor from having it allocated on the surface, while lessee does not have a guaranteed right to retain rent of this same land plot after it has been privatized. Exceptions here are cases where lessee of the land share pays the cost of land organization works, related to its allocation.[16] However, here too, he has precedence for renewal of agreement not unconditionally, but only before third persons. If the former lessor decides to use the land plot on his own, it will mean unilateral refusal from the previously closed agreement for rent of land share.

In assessment of the state of problems arising at the time of acquiring additional areas for farming purposes, we observe a rather stable situation. The number of respondents claiming lack of problems has slightly increased in 2003 to reach 78% against 77% in 2002. Notable is the growth of problems respondents face while going through privatization. While in 2003 it was 8%, in 2002 it reached 13%. Moreover, for subgroup private farms, this figure is 15%, almost double compared to subgroup agricultural enterprises, which is 8%. An explanation behind this situation is the imperfect mechanisms and procedures of land privatization by farm members, prescribed in the Land Code of Ukraine.

Quite pessimistically looks the trend observed in respondents' answers regarding prospects of implementing in Ukraine a fully fledged market of farm lands. As may be seen from chart in Figure 60, 50% of the general sample in 2003 (as opposed to 46% in 2002) are likely to think that this will result in the sale out of the national wealth (question 1), while the other 48% in 2003 and 37% in 2002, respectively, believe that it will lead to concentration of land in hands of a small group of owners (question 2).

[15] Article32 of the Land Code of Ukraine
[16] point 8, Transitional Provisions of the Land Code of Ukraine.

Figure 60. Framers' attitude toward the introduction of the right to land sales, % to the total number of survey respondents.



In 2003, the share of those who believed in more effective usage of land as a result of market circulation, has reduced to 20% from 26% in 2002. Meanwhile, in 2003, the least conservative answers to question 1 were given by respondents in Zhytomyr oblast (42%), and to question 2 – by respondents of Ivano-Frankivsk oblast (35%), however, it must be admitted that these figures are quite high. It is interesting to note that portions of respondents in subgroups agricultural enterprises and private farms choosing different options answering these questions, are almost equal.

This evident growth of negative expectations, although raises a red flag, however, quite probably may depend on some, to a certain extent subjective factors. First of all, one can sense the struggle of opinions, expressed by different political forces in their long-standing discussion of the need (or unacceptability) of implementing the land market and evaluation of benefits (or damage) of such solution.

Second, processes of capital concentration, becoming more dynamic in manufacturing and other sectors of economy, are perceived and projected almost unchanged to land relations. Third, impact of the two previous factors is exacerbated by the low awareness and, as a result, failure to consider specifics of the Ukrainian legislation in this respect. Even today the Land Code contains a number of provisions called to minimized risks of consequences that raise biggest concern. These, first of all include legal requirement of the target usage of land, limited area of farm lands that may be owned by one person, a ban to provide farm lands for ownership by foreign individuals and legal entities, and individuals without citizenship and some other. All these "preventive" measures may be further improved and reinforced.

5.2. Legal awareness of Ukrainian framers

Over 2003, the law-making activity remained on a rather high level. As a result, Ukrainian legislation was complemented by a whole number of legislation acts, needed for further development of the society and which directly concern agrarian sector, specifically, land relations. These are the following key laws (including by not limited to): new Civil[17] and Commercial[18] Codes of Ukraine[19], the Law of Ukraine "On Private Household Farm"[20], the Law of Ukraine "On Mortgage"[21], the Law of Ukraine "On the Procedure of Allocation on the Surface of Land Plots to Owners of Land Shares"[22], Law of Ukraine "On Private Farm"[23], new version of the Law of Ukraine "Rent of Land"[24], Law of Ukraine "On Assessment of Land"[25]. In addition, in 2003, the new Land Code of Ukraine was amended with a number of lower level regulations coming into effect as a result.

It would not be an exaggeration to say that knowledge of rights and duties of subjects in various areas of social relations, and the ability to exercise them properly, especially under conditions of dynamic development of legislation, is the pledge of stability in operating this or that business, including in the area of agrarian business. In view of that, a separate section of the questionnaire was aimed at finding out how well respondents are aware of regulatory acts related to agrarian area, their importance for the sector, and consequently, respondents' perceptions of these regulations. A separate question asked how well respondents are cognizant about provisions of the new Land Code of Ukraine, the truly core act of land-related legislation in Ukraine. As we noted before, level of accessibility for farmers of their main production means, i.e. land, to a large extent depends on how well farmers know terms and procedures of obtaining rights to land, and their ability to properly exercise and protect their rights.

So, what was the situation in 2003 compared to 2002, when respondents were asked about the new Land Code of Ukraine? First of all, a notable fact is that in the general sample, the share of respondents reporting their awareness of the adopted new Land Code has decreased from 18% in 2002 to 8% in 2003. Likewise, the portion of those who did not know the difference between old and new versions: from 6% in 2002 to 3.% in 2003. Meanwhile, the number of those who made efforts to study provisions of the new Land Code has grown. In 2003, the portion of these was 60% against 47% in 2002, with preserved better level of awareness in Subgroup private farms vis-à-vis subgroup agricultural enterprises.

In 2003, these figures were 65% against 46%, while in 2002, they equaled 48% and 40% respectively for respondents from subgroups PRIVATE FARMS and agricultural

[17] Civil Code of Ukraine of January 16, 2003, # 435-IV.
[18] Commercial Code of Ukraine of January 16, 2003, # 436-IV.
[19] Undoubtedly, these two regulatory acts will have an outstanding impact on the agrarian business, however, respondents' perception of these acts within the framework of this survey was not studies, as the mentioned acts came into effect only on January 1, 2004.
[20] Law of Ukraine #742-IV of 15.05.2003.
[21] Law of Ukraine #898-IV of 05.06.2003.
[22] Law of Ukraine #899-IV of 05.06.2003.
[23] Law of Ukraine #973-IV of 19.06.2003.
[24] Law of Ukraine #1211-IV of 02.10.2003.
[25] Law of Ukraine #1378-IV of 11.12.2003.

enterprises. This, undoubtedly, positive and promising tendency may be explained by both longer time span after adoption of this Code, and a massive awareness campaign run by mass media and government authorities, primarily, the State Land Resources Committee, with regard to conceptual guidelines of land reform and legislative and regulatory policies in this area.

As may be noted from Table 8, surveyed respondents demonstrated high level of awareness of other legislative acts regulating social relations in agrarian area. Specifically, respondents in subgroup private farms were better informed about the Laws of Ukraine "On Private Farm" and "On Personal Household Farm", while representatives of subgroup agricultural enterprises paid more attention to the Laws "On Rent of Land", "On Mortgage", "On the Procedure of Allocation on the Surface of Land Plots to Owners of Land Shares". An explanation here is specific needs and methods of operating the enterprises and farms represented by the mentioned respondents.

Table 8. Framers' awareness about the adoption of some laws and the impact of these laws on farmers' activities, in % to the total number of respondents.

	Do respondents know about the adoption of the following laws		Impact of the laws on farmers' activities			
	Yes	No	Negative	Positive	No impact at all	Difficult to answer
Law of Ukraine "On Private Farm"	89%	11%	6%	31%	60%	3%
Law of Ukraine "On Personal Household Farm"	88%	12%	5%	29%	59%	14%
Law of Ukraine "On the Procedure of Allocation on the Surface of Land Plots to Owners of Land Shares"	90%	10%	11%	33%	47%	9%
Law of Ukraine "On Land Rent"	86%	14%	11%	34%	44%	11%
Law of Ukraine "On Mortgage" as of Jun 5, 2003	77%	23%	11%	25%	52%	12%

While results of the survey demonstrated high level of respondents' awareness of the adopted legislative acts, evaluation of their impact on operations of these legal entities, in their perception, appeared rather reserved. Most positively respondents perceived the new version of the Law "On Rent of Land", it was reported by 34% of the sample, or 45% in subgroup agricultural enterprises and 29% in subgroup private farms. The Law of

Ukraine “On Mortgage” was rated lowest among legislation with positive impact, and it is natural, because effect of this law in agrarian area is very limited due to existing moratorium for purchase and sale of farm lands.

First question asked respondents about organizational principles of agrarian business. Thus, 23.7%, or almost one fourth of the sample, emphasized facing organizational issues while doing agriculture business. Moreover, among those respondents, who admitted availability of problems, 14.5% explain them with their own lack of knowledge.

However, this rate may not be considered high, considering, first of all, all proactive steps made by legislator in the new version of the said Law in order to alleviate unjustified limitations and streamline conflicting provisions in the regulation of lease relations, which, eventually, resulted in their considerable liberalization.

Laws of Ukraine "On Personal Household Farm", "On Private Farm" and "On the Procedure of Allocation on the Surface of Land Plots to Land Share Owners" were rated by respondents as having medium importance, they received 29%, 31% and 33% of votes, respectively.

Positive impact of the Law "On Mortage" was ranked lowest by the respondents (25%), which is quite natural in view of a rather limited implications of this legislation on agriculture due to the existing moratorium on sales and purchase of farmlands. Considering this, one may assume that despite its lowest rank among received responses, assessment of this Law's impact may be considered high, as it may demonstrate respondents' optimistical expectations regarding its effect in future once the moratorium is alleviated. It is the Law "On Mortgage" which is called to ensure a wide and sustainable financing of agriculture through the provision of long-term loans to low-risk agribusinesses and by securing borrower's liabilities with mortgage of land.

A separate question to respondents concerned general organizational principles of farming business. Thus, 24% of respondents or almost a fourth of the sample, emphasized they face certain organizational problems while doing large-scale agriculture business. Of note, among those respondents who did admit existence of certain problems, 15% explain they arise primarily, due to their own lack of knowledge. The second and third highest ranking problems, in opinion of respondents, were accounting issues and problems with registration of farms, cited by 6% and 4% respectively.

What ways do the respondent choose to solve the existing problems? The prevailing majority of respondents, 75% of those farmers who admitted availability of problems, made it clear they will make efforts to resolve them on their own. In this group, 77% are private farms and 70% are agricultural enterprises. Another 29% of respondents, in a conflict situation, would prefer to solicit advice of their friends, and 17% would appeal to government bodies.

6. SOCIAL ASPECTS OF RURAL AREA DEVELOPMENT

As in the previous years, this survey focused on a wide array of issues related to social development of rural areas. These, particularly, included how well-off rural residents are, whether they can access services easily, and if they take part in activities of non-government organizations.

6.1. Rural residents' well-being and level of income

In order to evaluate material well-being of agriculture producers we looked at the average level of personal income, respondents' aggregate household income and average salary of employees at surveyed farms.

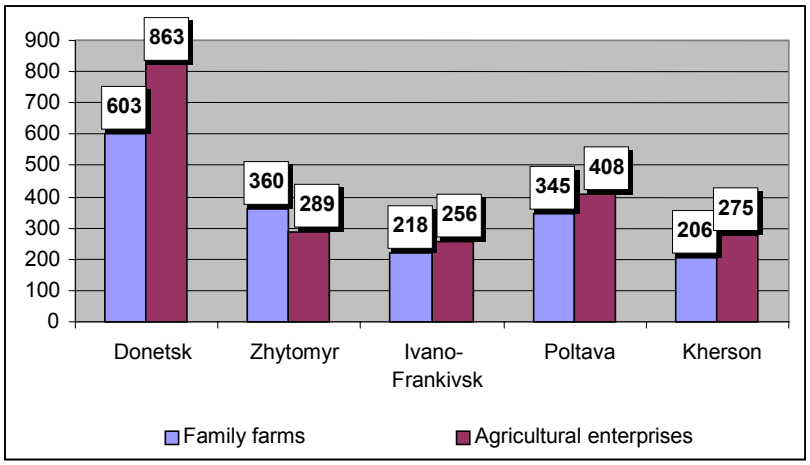
According to the survey data, average personal income in 2003 was 346 Hr at private family farms and 419 Hr at agricultural enterprises.[26] In 2002, these average values were respectively, 263 Hr and 376 Hr. Thus, in 2003, personal income grew in both groups of respondents. Likewise in 2002, personal income of respondents working for agriculture enterprises, was higher than that of private farms' employees.

This difference in incomes may have two major explanations. First, respondents representing agricultural enterprises, were mainly managers/deputy managers, with incomes, naturally, higher than those of their employees'. Second valid assumption is that private family farmers may have purposefully understated their income, having chosen to indicate income reported for taxation purposes rather than their realistic one.

Notwithstanding this existing difference in incomes of employees of agriculture enterprises and family farms, we can't help noticing a positive trend in that the gap is gradually contracting. Thus, while in 2002 personal income of an average respondent from agriculture enterprise was 113 Hr higher than that of a farmer, in 2003, this difference was only 73 Hr.

In addition to the discrepancy in sizes of personal income between the two groups of respondents, there is a considerable variation across the surveyed oblasts (Figure 61). Likewise in the previous years, personal incomes appeared highest in central and south-eastern regions (Donetsk and Poltava oblasts), and lowest in the North-western part of the country (Ivano-Frankivsk and Zhytomyr oblasts).

Figure 61. Average personal incomes of family farms and agricultural enterprises, Hr.



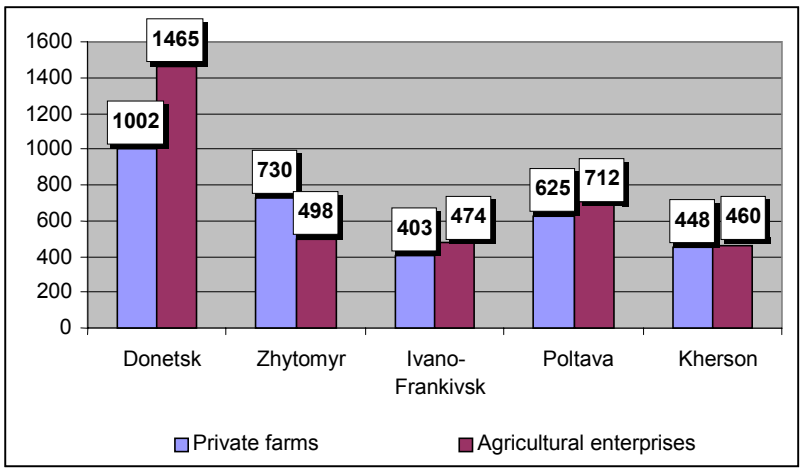
Somewhat unexpected were findings about personal income in Kherson oblast: it was 206 Hr for respondents from private family farms and 275 Hr for agriculture enterprises. A possible explanation

[26] As of September 1, 2004 the exchange rate of the Ukrainian hryvnia (Hr) to the US dollar (USD) equals 5,33 Hr to 1 USD.

may be provided by specifics of the sample and methodology of the survey. Kherson oblast was represented by the biggest number of respondents in the sample. Although results of the survey demonstrate that the oblast maximum personal income was one of the highest among the obtained responses, the big portion of respondents with low personal income dwarfed the average personal income of local agriculture producers.

As was the case with average personal income, the value of average household income also varies between the two categories of agriculture producers and across regions of the survey (Figure 62). In 2003, respondents' average household income was 722 Hr for agricultural enterprise (compare with 576 Hr in 2002) and 641 Hr for private farmers (477 Hr in 2002). Producers in Donetsk oblast appeared to have highest household incomes, while farmers from Ivano-Frankivsk - the lowest ones.

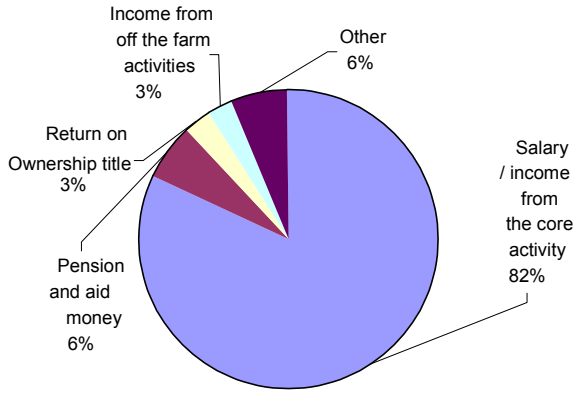
Figure 62. Average aggregate household income in private farms vis-a-vis agricultural enterprises, Hr.



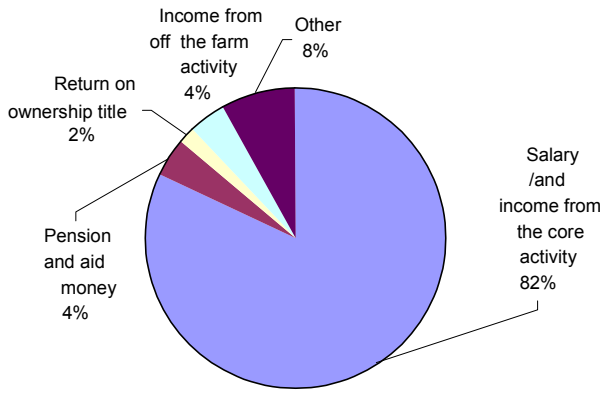
The major source of aggregate household income is salary or/and revenue from the core activity (Figure. 63). The portions of these sources in the aggregate income is equal for both family farms and agricultural enterprises, totaling 82%. Pensions and aid money rank second in the list of income generators, representing 6% of the total household income of private farms, and 4% of agricultural enterprises' household budgets. Weight of the other sources of income, namely, return on ownership titles, is insignificant, less than 4%.

Figure 63. Sources of income of private farms and agricultural enterprises, %.

Private Farms

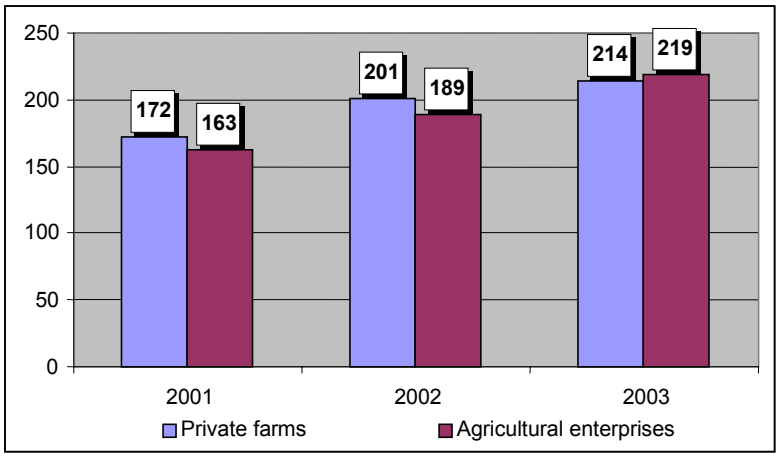


Agricultural Enterprises



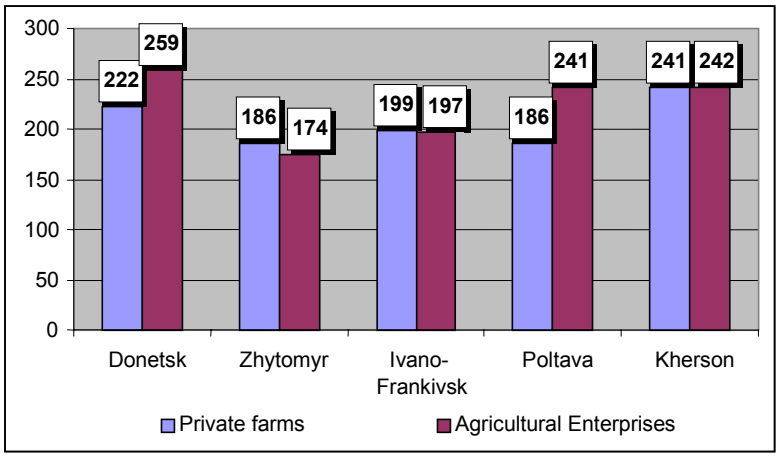
Alongside growing personal and aggregate incomes of main participants of the survey (managers of private farms and managers/deputy managers of agricultural enterprises), salaries of their employees were also increasing. As may be noticed from Figure 64, average size of their salary was 214 Hr at private farms and 219 Hr at agricultural enterprises. It is important to note that wages have grown both at private farms hiring employees, and at agricultural enterprises. Moreover, at the latter, it was rising quicker which is evidence of the better financial standing of the reformed enterprises.

Figure 64. Average wages of hired employees at private farms and agricultural enterprises, Hr.



Speaking about regional variances of the size of salary, staff working for farms in the Southern East and Center of Ukraine, appear to receive the highest salaries, while the lowest seemed to be paid to employees in the North and West of Ukraine (Figure 65). Southern and Central parts of Ukraine can boast of a large number of profitable farms specialized in grain, oil-bearing and vegetable crops; apparently, they may afford to pay higher wages to their employees.

Figure 65. Average monthly wages of hired employees in the regional context, Hr.

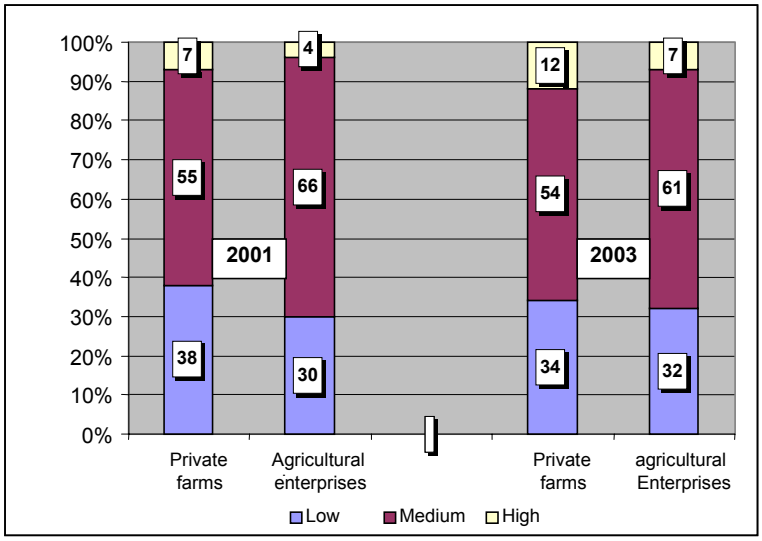


As in the previous studies, this survey intended to estimate agricultural producers' (both private family farms and agricultural enterprises) levels of income. To this end, the survey requested respondents to choose one of the following categories characterizing their income as "low", "medium" or "high". As may be seen from figure 66, most respondents describe their income as "medium". However, the share

of respondents from agricultural enterprises recognizing their income "medium" is greater than the share of respondents from private farms, and equals 61%.

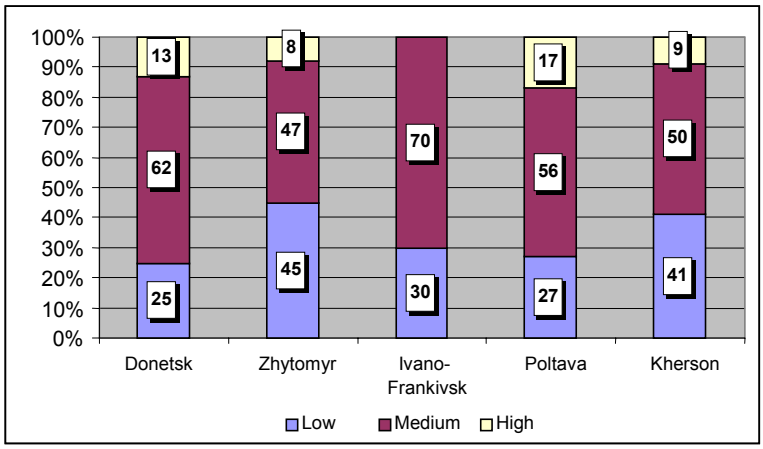
Comparing findings of 2001 and 2003 surveys allows to demonstrate that respondents' perceptions of their income levels have changed. Irrespective of insignificance of these changes, a positive fact is that the share of respondents considering their income as "low" is declining, while the portion of respondents who recognized their income as "high" is gradually increasing.

Figure 66. Respondents' perception of their income, % of the total number of responses.



Regional distribution of assessments of incomes generally matches findings on personal and aggregate incomes of agricultural producers (Figure 67). Thus, producers of Donetsk and Poltava oblasts, where personal and aggregate incomes appear highest, have the greatest shares of respondents recognizing their incomes high.

Figure 67. Evaluation by respondents of their income level in the regional context, % of the total number of responses.



6.2. Development of services market and community-related activities

In addition to income indicators, an important factor demonstrating quality of life in rural areas is rural residents' access to social, consulting, and educational services. In this survey, respondents were requested to describe the extent of access to these services as "accessible", "partially accessible" and "inaccessible". It should be noted that level of accessibility was determined by the possibility to obtain this service. The received findings are presented in table 9.

Findings of the survey demonstrate that level of accessibility of a particular service depends, primarily, on its nature. Thus, professional consulting services (lawyers, agronomists etc.) appear to be least accessible. Only 49% of the surveyed private farms and 51% of agricultural enterprises admitted that such services were accessible. Accessibility of medical services looks somewhat higher with 56% of private farmers and 63% of agricultural enterprises, noting these services were accessible to them.

Table 9. Accessibility level of various services for agricultural producers, % of the total responses.

	Private Farms			Agricultural Enterprises		
	Accessible	Partially accessible	Inaccessibl	Accessible	Partially accessible	Inaccessibl
Consulting services	49%	38%	13%	51%	28%	21%
Medical services	56%	39%	5%	63%	35%	2%
Public transportation	70%	23%	7%	68%	28%	4%
Kindergartens	62%	15%	23%	58%	9%	33%
Secondary schools	87%	10%	3%	87%	13%	-

Although level of accessibility of major services does not significantly vary between two groups of respondents, respondents working for agricultural enterprises, however, seem to have better access to the said services. This may be explained by the fact that employees of agricultural enterprises have better geographical access to objects of social infrastructure, as even today many such enterprises keep social objects on their balance sheets, which considerably simplifies access to them for those employees who need to use them.

One question in the survey concerned producers' involvement with non-government and community-oriented organizations. As in the previous years, this survey demonstrated that the extent of private farmers' engagement in NGOs is greater than that of employees of reformed collective farms. Over a half of the surveyed farmers (56% against 42% in 2002) noted that in 2003 they had taken part in activities of non-government organizations. Farmers, typically, are members of local farmers associations. For respondents working for agricultural enterprises, level of their engagement in community-oriented activity is lower. Only 13% of agricultural enterprises' staff admitted they took part in NGOs' activities.