



Міжнародна Фінансова Корпорація Проект розвитку агробізнесу в Україні
International Finance Corporation Agribusiness Development Project in Ukraine

DEVELOPMENT OF FARMING AND AGRIBUSINESS SECTORS IN UKRAINE (2002)

Edited by Alexander Kobzev



AUTHORS OF SECTIONS:

GOALS AND OBJECTIVES OF THE SURVEY	Oleksandr Kobzev <i>Project's Economist-Analyst</i>
FARMING OPERATIONS	Oleksandr Kobzev <i>Project's Economist-Analyst</i>
MARKETING AGRICULTURAL PRODUCE	Oleksandr Kobzev <i>Project's Economist-Analyst</i>
AGRICULTURAL LENDING AND INSURANCE	Viktoria Yakubovich <i>Finance and Insurance Specialist</i>
MANAGEMENT AND LEGAL ASPECTS OF FARMING OPERATIONS	Oleksandr Sopilnyak <i>Project's Legal Advisor</i>
SOCIAL ASPECTS IN THE AGRICULTURAL SECTOR AND RURAL DEVELOPMENT	Oleksandr Kobzev <i>Project's Economist-Analyst</i>

ACKNOWLEDGEMENTS

Authors of the report would like to thank everybody who took part in the survey and assisted in the preparation and dissemination of this analytical report.

Our thanks extend to Project team, namely, **Asa Karlberg, Ebbe Johnson, Roman Shynkarenko, Eduard Pikalov and Oksana Varodi**. Their commentaries and insights enabled to make this analytical report more meaningful and interesting.

We are also grateful to **Andriy Andryushko** for his valuable advice with regard to the questionnaire outline and key study areas, and to **Elena Beryozkina and Lidia Warring** for editing and translating services.

In addition, we expressly thank **Oksana Bandurovych**, a leading manager for *Taylor Nelson Sofres* Ukraine, for her coordination of field stage of the survey and primary data handling.

Taking this opportunity we are glad to convey our sincere gratitude to the **Swedish and Canadian Governments**, who have been funding the Agribusiness Development Project during last two years.

TABLE OF CONTENTS

INTRODUCTION	4
1. MAIN FINDINGS OF THE SURVEY.....	5
2. GOAL AND OBJECTIVES OF THE SURVEY.....	7
3. FARMING OPERATIONS.....	8
3.1 Profile of the surveyed businesses.....	8
3.2 Farm Production specialization	12
3.3 Economic and technological specifics of production process.....	14
3.4 Organic farming and usage of mineral fertilizers.....	17
3.5 Inputs and equipment	19
3.6 Production problems	21
4. MARKETING AGRICULTURAL PRODUCE.....	24
4.1 Distribution channels.....	24
4.2 Geography of sales.....	26
4.3 Marketing agricultural produce during marketing year	28
4.4 Main problems and obstacles in agricultural produce marketing.....	30
5. AGRICULTURAL LENDING AND INSURANCE IN UKRAINE.....	34
5.1 Financial performance of farms.....	34
5.2 Main sources of funding.....	35
5.3 Purposes of loans.....	35
5.4 Size of loans and interest rates.....	36
5.5 Loan repayment.....	37
5.6 Major obstacles to obtaining loans.....	38
5.7 Insurance	38
6. MANAGEMENT AND LEGAL ASPECTS OF FARMING OPERATIONS.....	43
6.1 Landownership Relations.....	43
6.2 Impact of Some Legislative Acts on Farming Operations.....	46
6.3 Organization of Commodity Production and Acquisition of Legal Skills.....	47
7. SOCIAL ASPECTS IN THE AGRICULTURAL SECTOR AND RURAL DEVELOPMENT.....	49
7.1 Living Standards of Farmers.....	49
7.2 Services Market and Participation in Non-Government Organizations	51

INTRODUCTION

Accounting for almost 13.4% of the nation's GDP, farming is an important sector of the Ukraine's economy. Reforms in agriculture, which reached its climax at the end of 1990's, have resulted in considerable qualitative and quantitative changes in the sector. Stabilization and gradual growth of agricultural total output, as well as the development of new organizational forms of farming are also outcomes of the reforms in the agrarian sector.

Adoption of the new Land Code in 2001 became an important step in furthering agrarian reforms. This law is aimed at fostering development of landownership relations, including in the agrarian sector, laying new legislative grounds for regulating land market and strengthening legislatively established principles of private ownership in rural areas.

Despite these positive results achieved in the implementation of agrarian reforms in Ukraine, many pressing issues remain unaddressed. The following problems currently have the highest priority: further improvement of finance and lending relations, building of the insurance market, establishing effective marketing channels, and addressing pressing issues of the social development of rural communities. In order to understand positive changes that have taken place in the agrarian sector of Ukraine, and outline most problematic issues facing farmers in their work, in 2003 the International Finance Corporation's Agribusiness Development Project undertook a survey "*Development of Farming and Agribusiness Sectors in Ukraine*".

Conducted for the second time, this survey builds upon a similar survey "*Farming and Agribusiness in Ukraine*" which was presented by the Project in 2002. The subject of this present survey is a wide range of issues of production, marketing, financing and organization aspects of Ukrainian farms. This analytical report offers analysis of 2003 survey findings and compares them against the previous year's survey data.

The analytical report is structured in the following way. First section offers a summary of main findings of the survey. The goal, objectives, methodology of the survey and specifics of the sample formation are discussed in the second section of the report. The third section looks at issues of farms' core activity and specialization, discusses technological aspects of the production process organization, equipment and inputs, the development of organic farming and usage of mineral fertilizers.

Specifics of agricultural produce marketing are presented in the fourth section. This section offers readers an in-depth look at how farm output is sold, especially through distribution channels and different sales markets. Also, issues at obtained data in the context of two main types of farms, the analytical report also studies main issues in the of sales of output in the course of marketing year as well as major problems and hindrances in agricultural marketing are in focus of this section.

Taking into consideration the importance of building a sound market of agricultural insurance and finance services, the situation around the development of lending and finance relations makes up a separate section of the report. Main sources of funding and demands for loans, loan repayment practices, major obstacles to obtaining loans and the development of an insurance services market are discussed in the fifth section.

Finally, management and legal aspects of farm operations and social issues of rural development are analyzed in the two final sections of this analytical report.

This report analyzes survey findings with regard to both general sample and two main categories of respondents: private family farms and reformed agriculture enterprises. These two particular categories of agricultural producers were chosen purposefully, as, they have traditionally represented two prevalent types of farm enterprises varying in size, availability of specialists, production specialization, marketing practices and in some other aspects. With first family farms emerging in late 1980's, most of them today are small-scale production units. Many reformed agricultural enterprises were created as a result of fundamental reforms in the sector of collective agricultural enterprises in the end of 1990's. Having inherited a significant portion of assets and resources from former collective farms, to-date, great many of these enterprises have become large-scale agricultural operations, which capitalize on the advantages of economy of scale.

In addition to looking at obtained data in the context of two main types of farms, the analytical report also studies main issues in the regional context, across the nation's five chief regions.

1. MAIN FINDINGS OF THE SURVEY

Farming operations

In the period of 2001-2002, winter wheat, sunflower and spring barley reported to be most lucrative field crops. Winter and spring wheat were most gainful crops for 53% respondents in 2001 and for 44% in 2002. Respectively, 30% and 26% of respondents include sunflower and spring barley into the three most lucrative crops.

89% of agricultural businesses and 85% of private family farms consider high yield of crops as a major criterion in choosing a crop growing technology. High quality of produce was rated second, it was recognized important by 58% of private family farms and 69% of agriculture enterprises.

Private family farms appear to be more prepared to produce organic crops, provided the purchase price is higher and reliable distribution channels are available. These were reported by respectively 25% and 17% of family farms against 15% and 11% of agricultural enterprises expressing their willingness to produce organic crops.

The biggest concern for agriculture producers appears to be the introduction of new varieties of crops. It was recognized the biggest difficulty by 27% of private family farms and 30% of reformed collective farms. This was particularly emphasized by respondents in Ivano-Frankivsk oblasts where 70% of respondents admitted they did not know how to introduce new and more productive crop varieties in their local conditions

Marketing agricultural produce

Sale of grain and oil crops directly off the field and through local farmer markets is the primary distribution channel for private family farms and second most important channel for agriculture enterprises. This is the channel through which 55% of the surveyed private family farms and 56% of agriculture enterprises market their produce.

Today three forms of payment prevail in produce marketing: payment before seeding campaign, payment at harvest and deferred payment until after purchase. Two last forms are most common, particularly in case of grain.

Over half (53%) of all produced grain (54% with agriculture enterprises and 50% with private family farms) is sold during the first quarter of a new marketing year (July-August). 74% of the surveyed agriculture producers note that they sell grain crops during this period.

Today most of producers sell their output within the boundaries of administrative rayon, where their farm is located. It was reported by 73% of the surveyed private family farms and 75% of agriculture enterprises. Almost two thirds of the produced grain is sold inside the rayon.

Low selling prices were recognized among major obstacles in agricultural produce marketing. This was a concern for 96% of private family farms and 98% of agriculture enterprises. These data correlates with findings of the previous survey, where low selling price was recognized a problem in marketing in Ukraine by 79% of respondents. Low consumer demand was rated as the second biggest problem in marketing.

Agricultural financing and insurance

Farmers' financial performance results in 2002 have worsened against 2001, with reformed collective farms performing worse than their private family farms' counterparts.

Own savings constituted the principal source of funding for farmers taking part in the survey. Reformed collective farms were also actively using loans provided by commercial banks with partial rebate of interest, as well as loans from business partners. Private family farms are more likely to borrow money from private individuals and are much less likely to use loans from commercial banks with partial rebate of interest than reformed collective farms.

As previously, loans are mostly short-term and used for financing day-to-day operational purposes. Long-term goals of farms' operations are financed in the last turn. However, in 2002, farms' capital expenditures have somewhat increased, as farms spent more for technological upgrade and purchase of agricultural machinery and equipment. Meanwhile, their spending for purchase of lubricants, oil and chemicals has reduced.

During 2001-2002 prevalent interest on loans ranged from 21% and 30%, although a significant portion of loans were obtained at 31% to 40% interest.

The portion of those who have repaid or intend to repay loans in a timely manner, is almost equal to that of the previous year totaling 83%. Respondents most frequently explained their inability to repay the loans by lack of revenues due to poor harvest or default of commercial partners, and high interest rates.

Farm insurance was performed primarily as insurance of collateral with the purpose of obtaining loans. However, the data evidence that producers tend to view insurance as a risk management tool rather than a way to obtain loan.

The following were recognized biggest problems for the development of agricultural insurance services market: high insurance premiums, complicated procedure of obtaining claimed indemnity, complex procedure of insuring output and a limited circle of companies offering insurance services.

Almost all agriculture producers are unaware about conditions of the government farmer insurance support program. Therefore it is hard to understand whether farmers are supportive of this program. Meanwhile, more reformed collective farms than private family farms expressed their appreciation of the program.

Management and Legal Aspects of Farming Operations

The majority of problematic land-related issues fall upon problems of regulating rent agreements. Compared to previous year the portion of problematic land-related issues has increased notably. While in 2001 these problems were a concern for 13% of respondents, in 2002 they bother 22%.

The prevailing majority of respondents believes that the introduction of a possibility to buy and sell land plots will result in waste of the national wealth. This opinion was expressed by 44% of private family farms and 54% of agriculture enterprises. In addition, 39% of farms and 29% of agribusinesses believe that unrestricted sale and purchase of land plots will lead to lands concentrated in hands of a small group of owners.

Private family farms appear to be less aware of provisions of legislation impacting farming operations, than agricultural enterprises. Producers from Zhytomyr oblast are the least competent in legislation.

Agriculture producers' attitudes towards certain legislation vary. In the opinion of respondents, the following documents did not have a significant impact on their operations: the Law of Ukraine "*On Grain and the Market of Grain in Ukraine*", Decree of the Ministry of Agrarian Policy of Ukraine, Ministry of Finance of Ukraine, Ministry of Economy and Issues of European Integration of Ukraine "*On the Approval of Procedure for the provision and usage of agriculture financial support*" and Decree of the President of Ukraine "*On additional steps to raise protection of rural population's property rights*".

Social Aspects of Rural Development

In 2002, respondents' average aggregate household income is 472 UAH per month. The farmers' aggregate income is slightly lower than that of agriculture enterprises' managers': respectively UAH 447 and UAH 576.

Salary and/or revenue from the core activity is the main source of households' income. Overall in the sample, this source is the primary income-generator for 81% of households of private family farms and 85% of households agriculture enterprises' managers.

More than half of respondents (58%) regard their level of income as medium, while for agriculture enterprises the respective portion is a bit higher than for private family farms.

Generally producers have limited or no access to many essential services. Particularly, inaccessible for farmers are advisory and extension services. While 38% of respondents called such services accessible, the total portion of those who thinks these services are partially accessible or inaccessible, reaches 57%.

Private family farmers are more willing to participate in activities of farmers' NGOs than staff of reformed collective farms. While only one in five employees of agriculture enterprises take part in the NGOs, the portion of private farmers who do that is 42%.

2. GOALS AND OBJECTIVES OF THE SURVEY

The study “*Development of Farming and Agribusiness Sectors in Ukraine*” is the second survey in a row of three consecutive annual studies. Its overall goal is to obtain information and undertake a social and economic analysis of a wide range of issues. They include such issues as:

- Technical and economic characteristics of farming operations;
- Agriculture producers’ needs for farming equipment and inputs;
- Marketing of agriculture products, major distribution channels and geography of sales;
- Agriculture lending and insurance in Ukraine;
- Management and legal aspects of farming operations;
- Agriculture producers’ needs for new skills and knowledge.

Special attention is paid to determining most pressing problems faced by agricultural producers today and widely recognized obstacles to reforms of the agrarian sector of Ukraine’s economy.

Fieldwork and primary data processing were performed in the period of January and February 2003 by the international company Taylor Nelson Sofres Ukraine, commissioned by the International Finance Corporation’s Agribusiness Development Project. Objects of the survey were represented by two main categories of respondents: managers/deputy managers of private family farms and reformed collective agriculture enterprises. This approach allowed to obtain data compatible with data of the past year survey and the national statistics.

The overall sample consisted of 400 respondents, of which 80% were managers of private family farms and 20% were managers of reformed agricultural enterprises. 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. 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.

The survey is national 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). The number of respondents in each oblast and in the rayons of the particular oblasts was determined based on their respective proportions in the general population. The sample was formed as partially convex, with the booster in Kherson oblast, as this oblast is where the Project takes a particular interest.

Distribution of respondents by oblasts of the survey is as follows:

- Kherson – 139 respondents;
- Poltava – 88 respondents;
- Zhytomyr – 45 respondents;
- Ivano-Frankivsk – 37 respondents, and
- Donetsk – 92 respondents.

The overall sample of 400 respondents in five main regions of Ukraine allowed to minimize the sample error to +/- 5%.

In this analytical report, the quantitative data collected in the survey concern mostly the twelve months period of 2002. However, the data of a qualitative character such as problematic issues, bottlenecks, and farmers’ needs in acquiring specific skills and knowledge is relevant for the beginning of 2003.

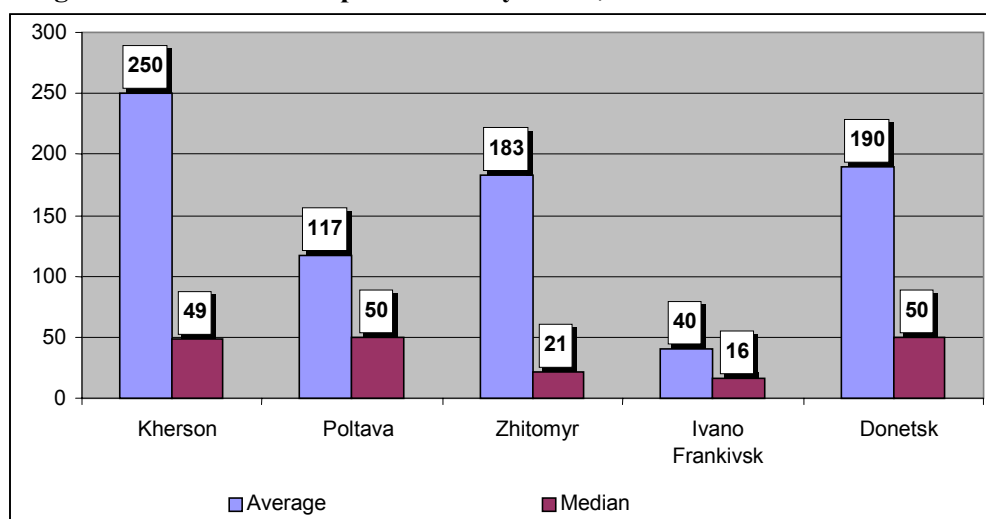
3. FARMING OPERATIONS

3.1 Profile of Surveyed Businesses

Reforms and reorganization processes in agrarian sector, which reached its climax at the end of 90s years, lead to the emergence of a whole range of new organizational forms of agricultural enterprises. According to the survey findings, 95% of the surveyed agricultural enterprises were established in lieu of reformed collective agriculture enterprises. Although reforms in the sector of former collective farms directly impacted the development of private family farms movement, only one tenth of such farms noted that they were established as a result of collective farms reorganization. Despite the fact that these data may evidence that private family farms have longer term of operations than the sector of reformed farm enterprises, the latter still employ many specialists of former collective agricultural enterprises.

An outcome of reforms in agrarian sector was the changed size of agriculture enterprises, first of all, the area of farm lands. Thus, comparing to early 90's, private family farm have increased their areas, while reformed agriculture enterprises have become smaller than their predecessors. The median value of the overall area of surveyed private family farms is 48 ha, while for agriculture enterprise this figure is 1513 ha¹. According to the previous survey, these figures were 45 and 1561 ha respectively. This is an indication that private family farm enterprises are growing steadily². It is interesting to note, that sizes of private family farms vary to a much larger extent, than those of reformed agricultural enterprises. An explanation here is that strengthening of market positions of many private family farms and rapid development of land lease relations enabled private family farmers obtain more required agricultural lands for short and long-term usage. The average and median sizes of such farms are presented below in the Figure 1.

Figure 1. Average and median sizes of private family farms, ha.



Different specializations and availability of free farm lands may also serve an explanation of significant variations in the size of surveyed businesses, particularly, in the regional context. Kherson oblast has the biggest number of larger farms where both reformed agricultural enterprises and large family farms are involved in grain commodity production. In some cases, private family farms exceed agricultural enterprises in size, reaching a few thousand of hectares. Businesses in the western region represented in the survey by Ivano-Frankivsk oblast, have smallest farms. To a large extent, this is a result of the land use specifics in conditions of the limited regional availability of land resources and small-scale commodity operations.

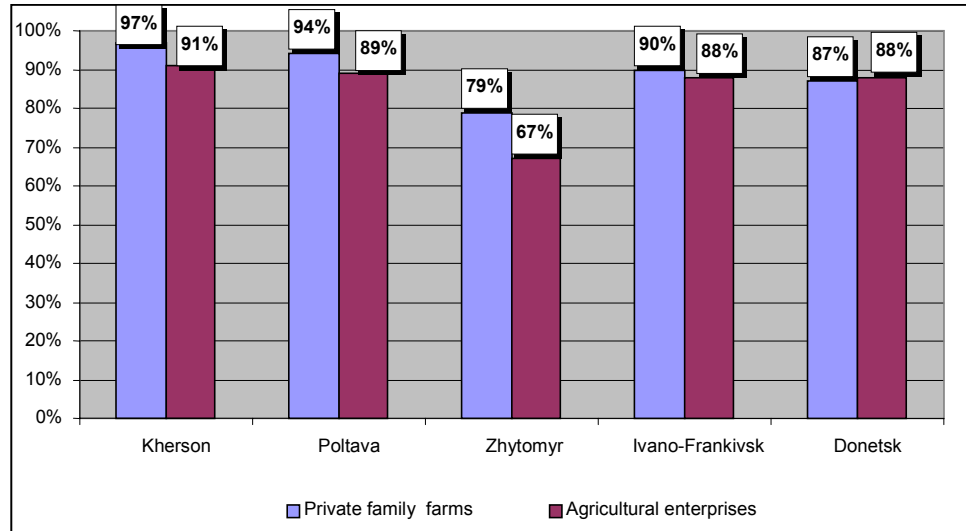
A commonly known fact about farming operations in Ukraine is the high percentage of arable lands in the overall area of an agricultural enterprise. This is a direct manifestation of extensive way of farming, where additional income is generated through farming additional areas of lands. Although the survey primarily targeted crop

¹ As the biggest and the smallest size of farm may give a misleading picture of the average size of farms, in this survey, in addition to the average values we used median values. Median is the middle value in a distribution, above and below which lie an equal number of values.

² Average value of a reformed farm's overall area is 1,691 ha, which is very close to the respective median value.

growing farms, where the share of arable lands is traditionally higher, nevertheless, the received data may be illustrative and may support the abovementioned argument. The average portion of arable lands in the overall structure of farmlands is 93% for private family farms and 84% for agricultural enterprises (Figure 2). Although the share of arable lands in private family farms is higher, it should be said that many such farms have a more narrow production specialization. As a result, the percentage of pastures, hayfields, perennials, and the lands under production facilities in their overall land structure is smaller than that in agricultural enterprises.

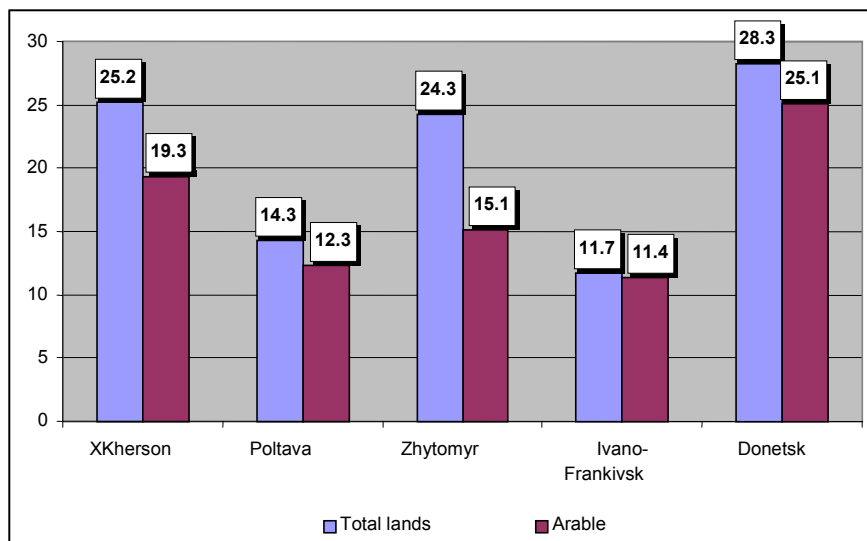
Figure 2. Percentage of arable lands at private farms and agricultural enterprises, % of the total area.



In addition to overall aggregate data, we also broke down surveyed businesses by their sizes. According to the results, almost half of all surveyed private family farms belong to the group with overall land area varying from 20 to 50 ha. As regards reformed agricultural enterprises, over two thirds of such businesses have the overall land area more than 1,000 hectares.

Likewise in the previous year survey, this study was aimed at determining average sizes of businesses by the number of employees. They are: six employees in a private family farm and 104 employees at agricultural enterprise. Businesses in Potava and Kherson oblasts tend to have the highest number of employees: 176 and 121 workers respectively, while Ivano-Frankivsk and Zhytomyr oblasts – the lowest: 68 and 75 workers respectively.

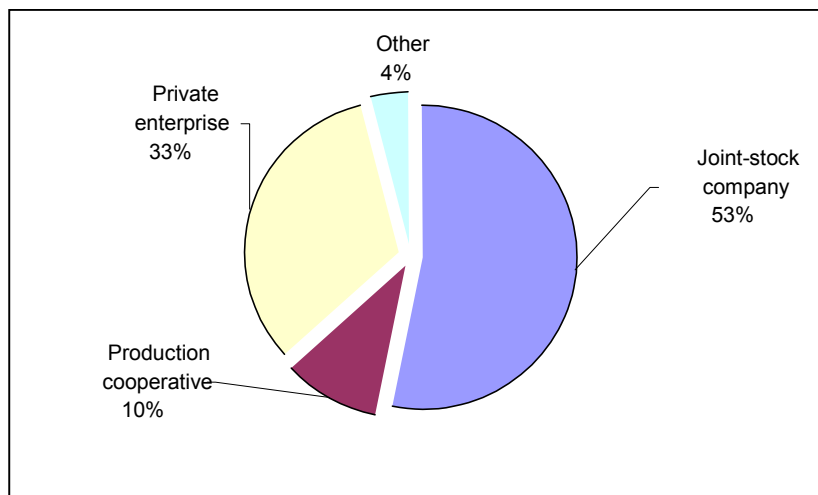
The ratio of farm total lands/arable lands to an average number of workers provides a coefficient of the total agricultural land per a worker. As figure 3 demonstrates, the value of this coefficient is higher in the South and East compared to Ukraine's northern and western regions. However, the analysis of the obtained regional values may demonstrate not only the effectiveness of labor use, but also it explains some specifics in surveyed farms' production activities. Production of labor intensive crop (potato, vegetables, sugar beets) is the main specialization for many farms in Zhytomyr, Ivano-Frankivsk, and Poltava oblasts. It requires such farms to employ more farm workers as compared to the farms that produce grains and sunflower.

Figure 3. Agricultural land per Worker, in hectares.

Similar to the situation with areas of farmlands, private family farms vary significantly by number of employees. While the minimum number of employees in the sample is one worker, the maximum reaches 80 workers³. This may be explained by both specifics of the sample, and existing regional variations. However, when private family farms are grouped by the level of employment, it becomes evident that only a third of those have more than three employees.

Although this survey scrutinizes agribusinesses in the context of two major groups of respondents – private family farms and agricultural enterprises – one of the questions in the questionnaire dealt with organizational and legal forms of surveyed businesses. Today, reformed agricultural enterprises are represented prevalently with three main organizational forms: joint-stock companies, private enterprises and production cooperative (Figure 4).

Private-rented enterprise (entities that farm predominantly leased land and operate leased assets) may be encountered most frequently among other forms of businesses. Joint stock companies may be commonly found in Zhytomyr and Donetsk oblasts, while Ivano-Frankivsk oblast has the biggest portion of private enterprises.

Figure 4. Main organizational forms of reformed enterprises, % of overall number of surveyed reformed enterprises.

Speaking about general characteristics of private family farms and agricultural enterprises, we should note, that in addition to differences in average sizes and number of employees, these entities are also different in terms of how

³ While the average number of employees in a farm is six, the median value is only two.

well they are staffed with specialists. Given the lack of extension service network where producers could obtain needed consultations and advice, the availability of in-house specialists is extremely important for successful handling of many production issues. As may be noticed from Table 1, agricultural enterprises are much better manned than private farms.

Table 1. Availability of staff specialists at private farms and agricultural enterprises, % of the overall number of responses.

	Agricultural enterprises	Private farms	Overall sample
Agronomist	82%	28%	38%
Accountant	95%	34%	46%
Engineer/Engineer-mechanic	78%	17%	38%
Zootechnician	63%	3%	14%
Veterinarian	57%	2%	12%
Economist	57%	5%	15%
Mechanic	64%	7%	17%
Machine-operator	78%	18%	30%
Hydrotechnician	7%	1%	2%
Power engineering specialist	48%	1%	10%
Builder	31%	2%	7%
Lawyer	12%	1%	3%
No specialists on staff	1%	33%	2%

Most surveyed businesses have agronomists, accountants, engineer-mechanics, machine operators, zootechnicians and mechanics in their staff. Over half of such businesses also have staff economists and veterinarians. Despite the fact that many specialists left their jobs after their collective farms had been reformed, the resulting businesses managed to preserve staff specialists.

It appears that private family farmers are not so well manned as agricultural enterprises. According to findings, only one third of private farms have their staff accountant and 28% - agronomist. The portion of private farms having their own machine operator is 18%. As demonstrated by practice, in many cases, functions of such specialists are performed by either farm owners or their family members. It is evident that this low level of staffing with specialists can be explained by some objective reasons: It is not economically sound or expedient for small private family farms to keep their permanent staff of specialists. Taking this into account, we would like to emphasize the need for creation of extension services in Ukraine.

Finally, in the course of the survey, we attempted to determine the level of farm operations diversification, i.e. to understand what activities the respondents are involved in besides farming. Agricultural production is the core activity for the prevailing majority of producers: 88% of private family farms and 63% of reformed agricultural enterprises reported they are engaged in no other activities. Therefore, the latter having better developed complementary operations have more diversified production activity. In addition to core activity, 22% of reformed enterprises provide grain threshing services, 12% - offer farming machinery for lease, 11% - run bakeries. Private family farms tend to generate additional income primarily through leasing agricultural machinery. Leasing activities were noted by 7% of surveyed private family farmers.

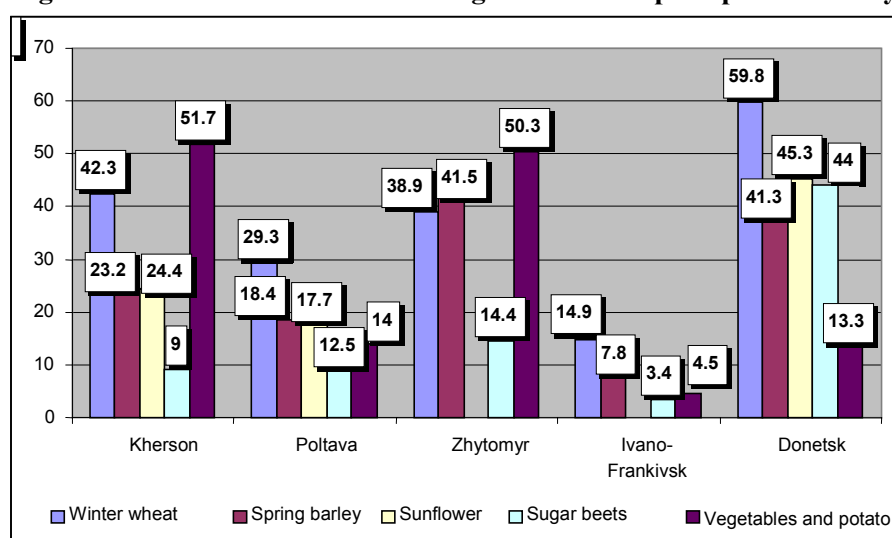
For agricultural businesses engaged in complementary activities, the portion of this generated additional income is 23% of the total revenues. This figure is bigger for private family farms – 29%, while for agricultural enterprises, the portion of additional income is lower, reaching on average 13% of the total revenue.

3.2 Production specialization of farms

In this survey we studied agricultural businesses in crop growing sector. It is commonly known that in crop growing specialization largely depends on agro-climatic conditions, therefore, the range of crops produced by surveyed businesses was determined by their geographical location. However, in addition to legitimate regional variations in the specialization of production, there are variations depending on farm type and productivity indicators. A detailed discussion of this issue is provided below.

Most of surveyed businesses are specializing in growing grain and technical crops. Grain crops are typically presented by winter wheat, spring barley and corn for grain. Winter wheat tends to be the main crop both for private family farms and agricultural enterprises. However, production of winter wheat, likewise, many other grain crops, for the majority of private family farms is small-scale operations, and thus, sown areas under this crop is not large. In almost two thirds of private family farms involved in growing winter wheat seeded areas do not exceed 20 hectares, and only 8% of such farms seed winter wheat on the area over 50 ha. The size of the average seeded area under winter wheat in private family farms is 39.9 ha. This figure appears to be the highest in Donetsk and Kherson oblasts, 59.8 and 42.3 ha respectively, and the lowest in Ivano-Frankivsk oblast – 14.9 ha (Figure 5).

Figure 5. Average size of areas seeded with main agricultural crops in private family farms, ha.



Although this survey did not attempt to measure economic and technological effectiveness of growing certain crops, it would be fair to note that growing grain commodity crops on the restricted area does not allow to effectively reduce the cost of growing and makes the production less profitable. As has been proven by the worldwide experience, under these conditions, small farms may not compete with large-scale commodity operations where grain production has become a highly technological and profitable business.

In the majority of agricultural enterprises, 51% of the sample, seeded area under winter wheat exceeds 300 ha, while the average seeded area is 421.6 ha. Farms in Kherson oblast, one of the major grain oblasts in the country, have the biggest seeded areas, in some case exceeding 2,400 ha.

Spring barley is the second most important grain crop grown by most surveyed private family farms and agricultural businesses. The average size of seeded area under spring barley is 208.6 ha for agricultural enterprises and 27.1 for private family farms.

Technical crops are represented with sunflower, sugar beets and canola. First two crops are the core specialization of many surveyed businesses in Kherson, Donetsk and Poltava oblasts. Donetsk oblast has a few specialized agribusinesses with area seeded with sunflower reaching 1,200 ha (compare against 268.7 ha on average area in the sample). High profitability of this crop encourages many private family farms with limited agricultural lands to seed sunflower as well. Thus, in Donetsk oblast, an average private family farm would seed sunflower on the area of 45.3 ha, while some large-scale enterprises grow sunflower on the area of 650 ha.

While agricultural enterprises account for the major portion of produced grain and technical crops, private farms appear to be main producers of many vegetables and fruit. In our opinion, possible explanations to many private

farms' specialization in vegetables are constrained resources for large scale farming operation. This get them to fill such a niche in agricultural production. This specialization in vegetables allows them not only to survive in the present market conditions, but also to expand their current production. Vegetable production also allows private family farmers to obtain higher margin per hectares as compared with production of other crops, i.e. grains.

Besides, the present practice shows that today many private family farms, particularly in Ukraine's southeast, have a stronger footing in the production of many vegetable produce and fruits than large agricultural enterprises. This fact can be explained by a number of reasons. First, on many occasions large agricultural enterprises experience certain difficulties in setting an effective production of such a labor intensive commodity as vegetable produce. Second, private family farms are more flexible and tend to respond faster to the needs of this marker segment, meeting the existing demand and quality requirements.

Although average areas under vegetables in private family farms is somewhat smaller than in large agribusinesses, the difference is not that significant as in the case with grain production. For example, the average area under tomatoes is 26.8 ha for agricultural enterprises and 10 ha for private farms.

The yields of main agricultural crops were also a focus point of this survey. As known, yield is one of the productivity indicators of agricultural operations. As may be observed from Table 2, yield figures for main crops vary both in the regional aspect and between the two farm types. Meanwhile, it is worthwhile noting that the received data do not allow to firmly state that private farms or agricultural enterprises maintain leadership positions by average yields. This depends first and foremost, on a surveyed oblast and a particular crop. In 2002, for example, yield of winter wheat at private family farms was higher than at reformed enterprises in most oblasts. Private farms in Poltava oblast had the highest yield figures, reaching on average 41.9 centner/ha, while for agricultural producers this figure was 37.6 centners/ha.

Table 2. Yield of main agricultural crops received by private farms and agricultural enterprises, centners per ha.

	Donetsk		Zhytomyr		Ivano-Frankivsk		Poltava		Kherson	
	Private Farms	Agricultural enterprises	Private Farms	Agricultural enterprises	Private Farms	Agricultural enterprises	Private Farms	Agricultural enterprises	Private Farms	Agricultural enterprises
Winter wheat	27,8	26,8	21,7	19,4	28,5	23,5	41,9	37,6	19,5	20,6
Spring barley	17,1	19,9	17,9	17,9	23,5	20,0	24,5	24,6	15,9	14,2
Corn for grain	38,6	30,5	-	-	12,8	-	33,5	34,3	-	52,0
Sunflower	15,7	12,7	-	-	-	-	20,0	23,4	6,1	6,5
Sugar beets	151,6	187,2	231,6	194,5	220,7	166,9	293,9	197,2	57,5	-
Potato	125,0	41,3	104,0	63,8	189,6	186,7	-	-	86,7	-
Tomato	287,5	119,8	-	-	-	120,0	-	155,5	158,3	186,4
Cucumbers	166,8	-	60,0	-	-	-	-	54,0	22,7	162,5

This survey provides evidence that in the last years traditional spatial zones of growing major agricultural crops have been distorted⁴. Thus, for example, sunflower, that used to be typically sown in the steppe agroclimatic zone, was encountered in some surveyed farms of Ivano-Frankivsk oblast. Sugar beets, a crop grown predominantly in forest-steppe zone, has advanced further south and is now grown by Kherson farmers. Private family farms are more likely to engage in growing unconventional crops, than agricultural enterprises. However, sown areas under these crops are not significant, and yield is much lower than in the areas of traditional production. For example,

⁴ See G.V. Balabanov, O.M.Kobzev, G.V. Semenchenko "Transformation of Agricultural Production in Ukraine: Regional Context". Research UAPP/ITAI, issue 10.

the yield of sugar beets in the surveyed farms of Kherson oblast is 57.5 centner/ha, while in Poltava oblast, the region of traditional sugar beets growing, this respective figure is 293.9 centner/ha.

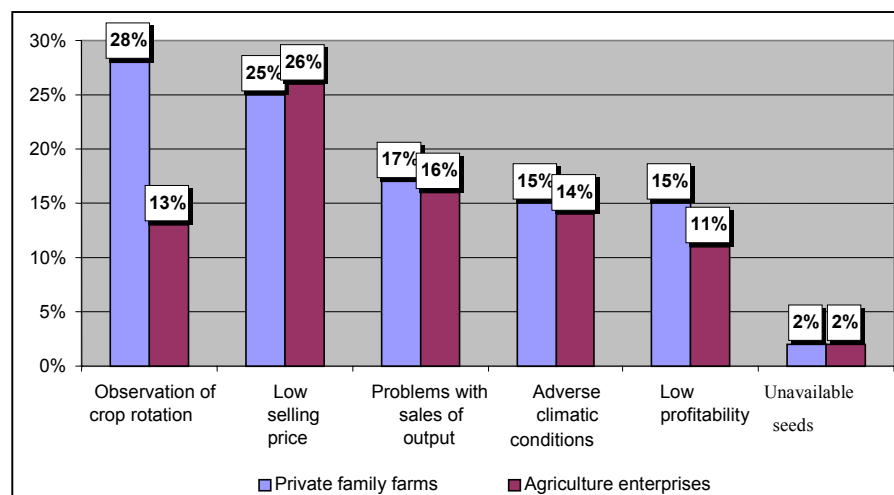
3.3 Economic and technical characteristics of the production process

As noted above, the range of agricultural crops grown today by farms, is quite wide. Such a diverse production activity has positive effect as long as it helps minimize both price and operational risks. In the course of this survey, we attempted to find out what crops were most profitable in 2002, and what crops farmers have given up this year and why.

Analysis of the received data demonstrates that 45% of surveyed businesses have for some reasons quit growing certain crops. Of those who did, private farms prevailed (85%). For example, of 64 surveyed businesses who decided not to grow grain crops in 2002 private family farms constituted the overwhelming majority (62 respondents). Similar situation may be observed with regard to other crops, including technical crops and vegetables. These are typically crops that do not have any main commodity significance for farms and which are not major income generators for respondents.

The need to observe crop rotation was most frequently cited as the reason for farmers to drop this or that crop (Figure 6). Other reasons quoted by respondents (in the order of decreasing frequency in answers) included: low selling prices, problems with sale of output, adverse climatic conditions and low yields. These reasons were equally often cited by both private farms and agricultural enterprises. Let's note, that only 2% of the sample admitted unavailable seeds as the factor influencing their decision to stop producing respective crops.

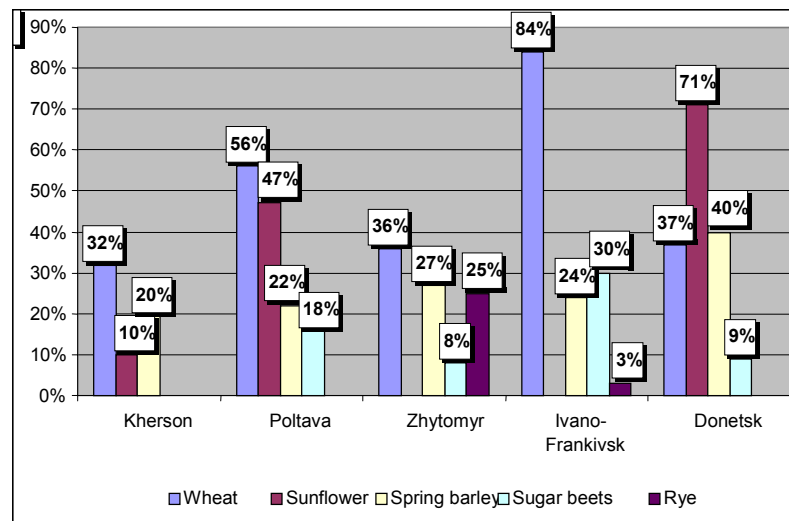
Figure 6. Main reasons for which farmers quit growing agricultural crops, % of the total number of answers .



According to the national statistics, in the last few years, profitability of crop cultivation has significantly grown by major crops⁵. One of the questions in the survey asked about profitability of major crops production. Respondents were requested to quote three most profitable crops in the last two years. In the overall sample, the list of these crops is stable and includes winter wheat, sunflower and spring barley. Winter and spring wheat were most profitable for 53% of respondents in 2001 and for 44% in 2002. Respectively, 30% and 26% of respondents include sunflower and spring barley to the three most profitable crops during 2001 and 2002.

Crop profitability figures vary between farms and between oblasts (Figure 7). Agriculture enterprises, many of which has a very focused specialized production, appear to be more unanimous in their estimations of most profitable crops. It is interesting also to note that in 2002, 17% of private family farms (while in 2001 – 16%) said they had no profitable crops at all. For comparison, only 3% of agriculture enterprises admitted they had no profitable crops. The portion of those who said they had no profitable crops was particularly significant in Kherson oblast.

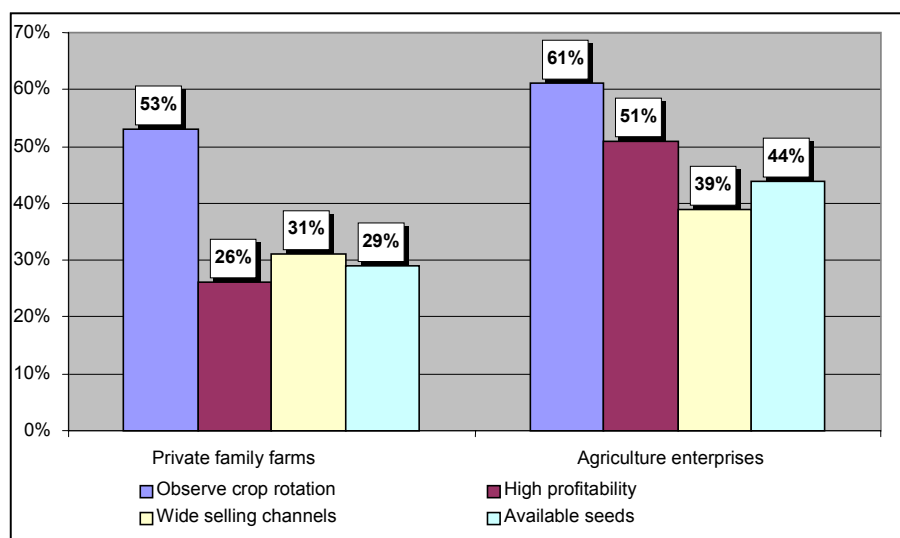
⁵ See Agriculture in Ukraine in 2001. State Statistical Committee of Ukraine. Kyiv, 2002.

Figure 7. Most profitable crops in 2002, % of the overall number of answers.

Speaking about expected profitability, a considerable portion of farmers were hesitant listing crops which in their opinion could be profitable in 2003. The number of farmers which considered wheat the most profitable crop has also reduced from 44% in 2002 to 30% in 2003. Let's note that this data was collected at the beginning of 2003, when grain yield' expectations for 2003 were not that pessimistic and the total grain output turned out much lower than in the last two previous years.

Considering that growing grain crops is the core specialization of many surveyed farms, a separate block of questions was dedicated to grain production. Particularly, respondents were requested to answer: "*What were the main reasons for growing grain crops in 1999 and 2002?*". We selected these years since they present the two peak years of the lowest and highest grain harvests. Likewise in 1999, in 2002, the need to observe crop rotation and high profitability of production were rated as primary reasons for farms to specialize in grain growing. This opinion was expressed by respectively 54% and 30% of all surveyed farmers. It is important to note that the number of those respondents which produced grain due to its high profitability has grown from 28% to 30% for the last three years.

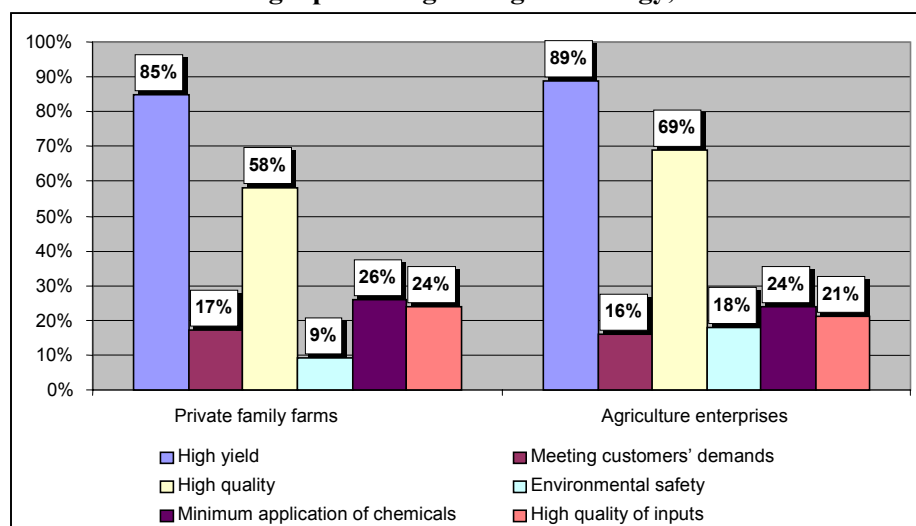
Profitability of production is a serious incentive for the production of grain crops, specifically for agriculture enterprises – biggest producers of commodity grain in the country. Despite the fact that in 2002 pricing situation in grain market was not very favorable for Ukrainian producers, 51% of agriculture enterprises note, that production of grain is highly profitable business. For comparison: this opinion is supported by 26% of private farmers. (Figure 8).

Figure 8. Major reasons for farmers to grow grain crops, as % to the total number of answer

Among other reasons which prompt Ukrainian producers get engaged into grain business, respondents cited wider selling opportunities (33%) and availability of seeds (32% of responses). The last two factors appear particularly important for agriculture enterprises. Commenting on the provided data, one may conclude that more agriculture enterprises than private family farms view production of grain crops as a promising business.

Nowadays when funds under government agriculture support programs are scarce, profitability of production is viewed as a key precondition for farms to stay in business. In view of that, it is no wonder that answering the question “*What criteria do you take into consideration when choosing a specific production technology*”, 89% of agricultural businesses and 85% of private family farms consider high yield of crops as an important factor of profitability (Figure 9). High quality of produce was rated second, it was recognized important for 58% of private family farms and 69% of agriculture enterprises. For comparison: according to findings of the previous study, only 18% of respondents recognize high quality of produce as a high rated criterion for crop growing. In our opinion, growing importance of this criterion evidences that today producers realize: high quality of produce grants more possibilities to sell (including to export) it at premium prices.

Figure 9. Main criteria for choosing a produce growing technology, % of the overall number of responses..

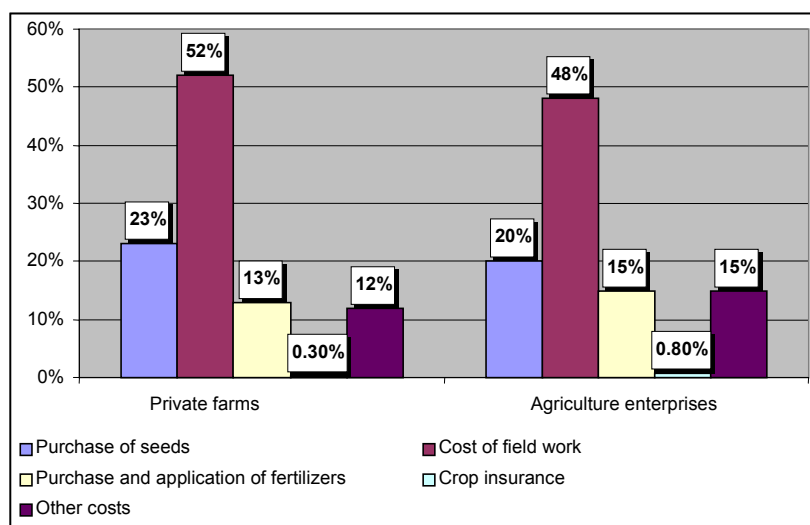


Other priority ranking criteria for the choice of a production technology include: minimum application of agricultural chemicals, the produce meeting consumers' requirements, the availability of high quality of inputs and environmental safety of production. While both private family farmers and agricultural enterprises are unanimous in determining priorities in choosing major production technologies, the issues of environmental safety appear to be a bigger concern for agricultural enterprises than for farmers. At the regional level, environmentally friendly production appears more acute for producers of Donetsk oblast: 26% of respondents from the oblast against 10% of respondents of the general sample.

Finally, an important indicators of effective organization of production process is the structure of main costs. These include expenses borne in relation to purchase of inputs and capital costs related to purchase of agricultural machinery⁶. Disregarding existing variations in the way production is organized by private family farms vis-à-vis reformed agricultural enterprises, the cost structure per unit of production is rather similar (Figure 10). Likewise private family farms, agricultural businesses incur most of their expenses while performing field work: reported by 51% of the general sample. These expenses include capital spendings for purchase and usage of agriculture machinery, which is used for field works.

Cost of field work per unit of output in private family farms appears to be slightly higher than in agricultural businesses. In our opinion, an explanation behind this situation is that private farmers are not so well equipped with machinery, and lack of the economy of scale due to smaller volumes of outputs.

⁶ These expense represent prevalently, cost of inputs, which do not include all capital expenditures (for example, construction of production infrastructure objects, recultivation of lands, etc.) Realizing that this does not fully matches methodological specifics of the definition of production costs, this approach was chosen purposefully, in order to elicit meaningful information from respondents.

Figure 10. Structure of main costs per unit of output, as % to total costs.

A separate cost category is expenses for purchase and application of mineral fertilizers. In private family farms these expenses are slightly lower, which, to a certain extent, can be explained by little lower rates of mineral fertilizers application per unit of area. Almost one fourth of production costs (22%) in the both types of farms fall on the purchase of seeds and conducting sowing campaign. In private farms this figure is a little higher: 23% of the general production cost per unit of output. It is important to note that costs of crop insurance is not significant. They are particularly low in private farmers which is another evidence of the low level of development of agriculture insurance.

Regional figures for production costs do not differ much from the general aggregated data presented above. Certain variations may be observed in costs of purchase and application of mineral fertilizers. Thus, while in Poltava oblast this category represents 27% of the total cost (28% for private family farms and 22% for agriculture enterprises), farmers in Ivano-Frankivsk oblast spend for purchase and application of fertilizers only half of that amount – 13% of the total cost.

3.4 Organic farming and usage of mineral fertilizers

In addition to determining respondents' attitude towards environmental concerns in production, we also attempted to find out how well they are prepared to farm organically. A new and up to now unfilled segment in the vegetable market is the segment of organic produce, i.e. the one grown without mineral fertilizers and crop protection chemicals. However, as proved by a consumer demand market study, undertaken by the Project in 2002, buyers in supermarkets would agree to buy organically grown produce, but they are not prepared to pay a higher price⁷. As for producers' capabilities to grow organic produce, according to the received data, majority of surveyed businesses, or 52% of the sample, are not ready to farm organically.

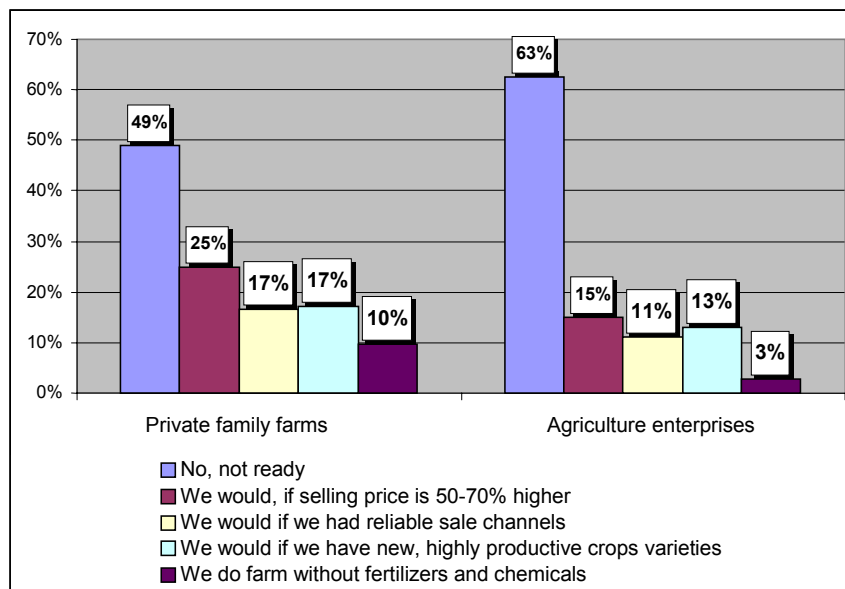
It is important to note, that these data do not correlate with findings of the survey accomplished in 2002. Then, answering the question: "Do you farm organically?", 43% of respondents responded positively⁸. This fact supports our assumption that majority of agriculture producers have erroneous ideas of what is organic farming and ecological produce.

Private family farms appear to be more prepared to produce organic crops, provided the purchase price is higher and reliable distribution channels are available. These were reported by respectively 25% and 17% of private family farms against 15% and 11% of agricultural enterprises expressing their willingness to produce organic crops (Figure 11). Organic produce is a more exclusive commodity produced typically in small amounts and by small production divisions where the production process is more labor-intensive. In the regional context, farmers of Kherson oblast expressed the highest readiness to farm organically. Those were, primarily, farmers specialized in vegetable and fruit growing. Assuming that the consumer demand will gradually grow, this produce has the biggest potential to fill in the niche in the Ukrainian organic market.

⁷ See "Express-survey of Kyiv Supermarkets Customers: Specifics of Consumer Demand for Vegetable Produce". Page 5.

⁸ See analytical report of the survey "Farming and Agribusiness in Ukraine". Section "Equipment and Inputs" pages 14-15.

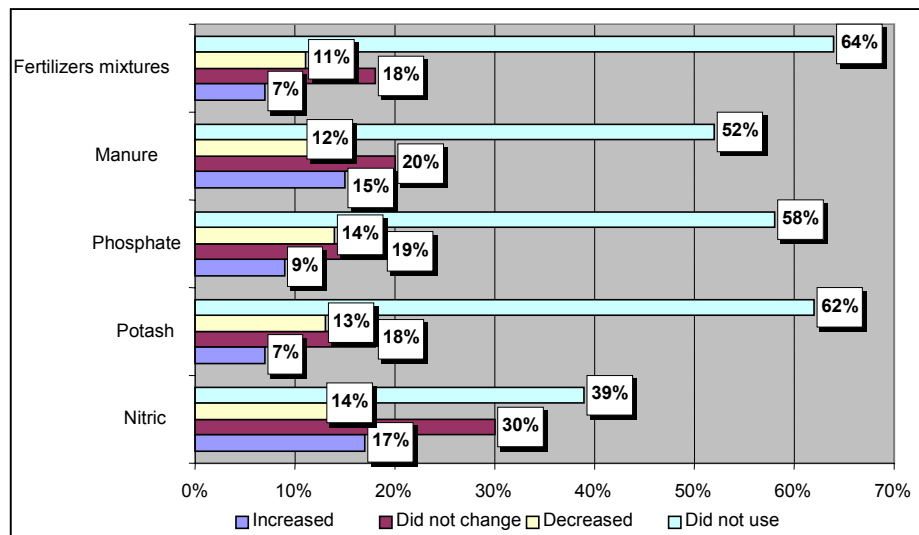
Figure 11. Would farmers agree to farm organically, % of the overall number of responses.



If the development of organic farming and formation of a demand for organic produce remains to a large extent a long-term objective, then effective usage of mineral fertilizers is one of the factors behind the growth of production profitability today. It is widely known, that over the last decade, usage of mineral fertilizers per unit of area by Ukrainian producers has reduced significantly. In the survey, we also tried to monitor how usage of some mineral fertilizers has changed in the recent years when surveys were conducted, and whether we can talk about some positive trends already have been established. Analysis of the survey data, presented in Figure 12, demonstrate that in the last two years, usage rate of mineral fertilizers per 1 ha of arable lands has not changed considerably. However, there are certain variations, both between types of surveyed businesses, and between oblasts. Agriculture enterprises have higher rate of mineral fertilizers used per 1 ha, than private family farms.

According to the survey findings, nitric fertilizers are the primary type of mineral fertilizers used by 61% of the survey respondents: 57% of private family farms and 82% of agricultural enterprises. As regards changes in the amounts of applied nitric fertilizers, 30% of respondents note that in recent years, the amounts did not change. However, 17% of respondents reported increase and 14% - decrease in the amounts of applied fertilizers. Zhitomir oblast has the greatest portion of businesses (30%) which have reduced usage of mineral fertilizers.

Figure 12. Change in the volume of mineral fertilizers application per 1 ha in last two years, % of the total answers.



Producers tend to use potash and phosphate fertilizers to a somewhat smaller extent: respectively 35% and 39% of private family farms, and 54% and 59% of agricultural enterprises. Amounts of applied mineral fertilizers have not changed much recently: only 7% of respondents note that they have increased the application of potash fertilizers, while only 9% say they have increased using phosphate fertilizers.

We should note, that the portion of agriculture enterprises, which have reduced volumes of used fertilizers, is slightly bigger than that of private family farms. For example, 26% of agriculture enterprises said they used less potash fertilizers, against 10% of private family farms. Zhytomyr and Ivano-Frankivsk oblasts have the biggest portions of enterprises which have reduced usage of potash and phosphate fertilizers in 2002 vis-à-vis previous years. However, we tend to believe that the situation may be explained by specifics of farming operations in 2002, rather than represent a steady tendency.

As regards usage of organic fertilizers (manure) and mineral fertilizers mixtures, the tendency here is similar to the above: agricultural enterprises tend to use them in much bigger amounts than their private farmer counterparts. 66% of agricultural enterprises use organic fertilizers and 45% use mineral mixtures against, respectively, 44% and 34% of private farms. In the regional context, the portion of enterprises from Ivano-Frankivsk oblast applying organic fertilizers and mineral mixtures is the biggest equaling 84% and 85% respectively. As known, the level of mineral mixtures application depends on the level of livestock production development. This is evidenced by a higher level of mineral mixtures application in Ivano-Frankivsk oblast, a region with an intensive livestock production.

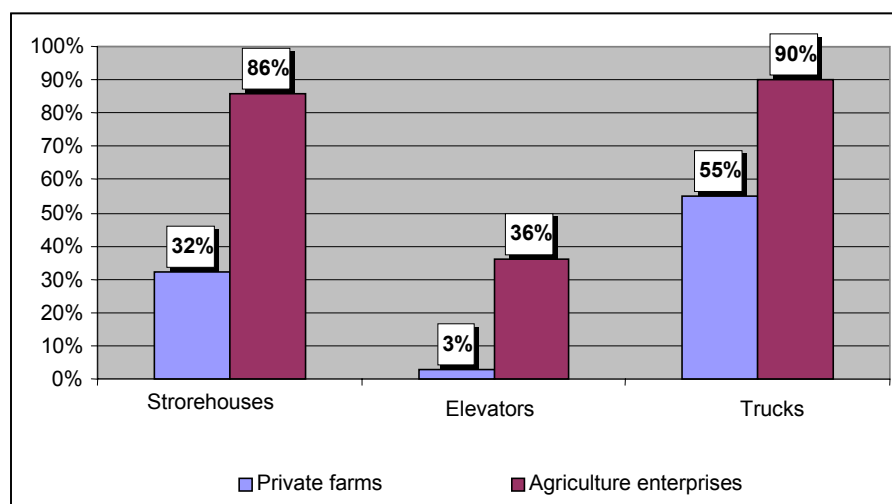
However, these data only partially reflect the level of usage of mineral fertilizers in the country. Quantitative indicators of mineral fertilizers applied per 1 ha of sown area may vary significantly.

3.5 Inputs and equipment

Profitability of agriculture production discussed in the previous sections is a derivative of many factors, where good inputs and equipment, as well as experience in business, play one of the most important roles. Similar to the previous year survey, this research tried to estimate how well farmers are equipped with agriculture machinery and main production inputs.

Availability of machinery and needed transportation and storage facilities give producers greater flexibility in selling the output at better prices. The survey provides information on the availability of storehouses, elevators and transportation vehicles in farmers' ownership. The data clearly indicates that there is a considerable difference between the quantities of machinery and inputs available at private family farms and agriculture enterprises. The latter are much better equipped with objects of production infrastructure (storage facilities and elevators) and transportation vehicles (trucks) (Figure 13).

Figure 13. Availability of production infrastructure objects at private farms and agriculture enterprises, % of the total number of respondents.



According to the survey findings, 42% of the sample have their own storehouses, availability of those in the two categories of respondents is 32% of private family farmers and 86% of agricultural enterprises. The difference is

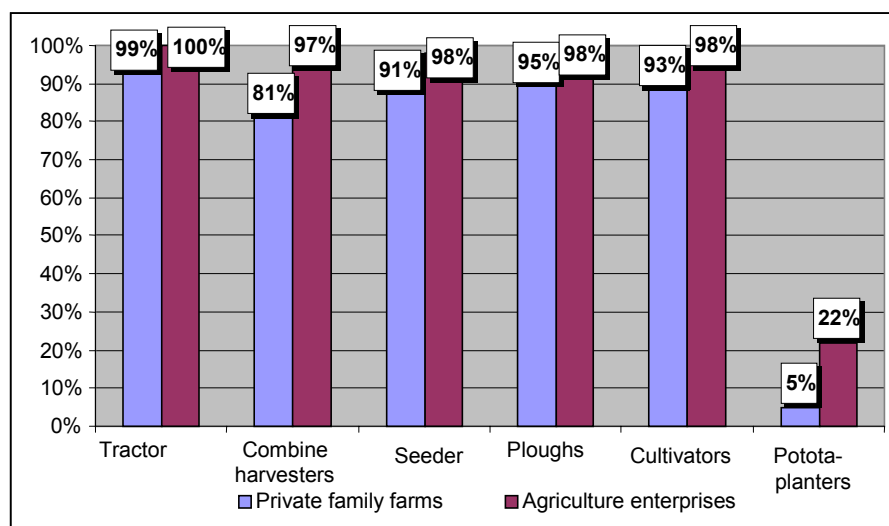
even bigger in terms of elevators owned by respondents. Thus, while 36% of agricultural enterprises have their own elevators, the portion of these among private farmers is only 3%. However, this difference may be explained by objective reasons: farmers do not have a great need for the construction of their own elevators and storehouses as they produce smaller amounts of output.

The availability of transportation vehicles is somewhat higher: 61% of surveyed businesses, including 55% of private family farmers and 90% of agricultural enterprises noted that they have trucks for production purposes. Comparing the data for 2001 and 2002, the availability of production infrastructure objects in surveyed agricultural businesses has risen. Thus, while in 2001, 37% of respondents (43% of them were private farms) noted that they had neither production infrastructure objects nor trucks, in 2002 the portion of these respondents has reduced to 33% (39% – private family farms).

The issue of low procurement of agricultural machineries and their moral and physical deterioration was the subject of the previous year study on the state of agricultural production. The present study attempted to determine the level of usage and existing demands in different agricultural equipments and machineries. The level of agricultural machinery usage says about the mechanization level of national agricultural production and effects its effectiveness indicators.

According to the 2002 study⁹, private farms are not so well supplied with agriculture machinery, and need to rent it. This survey demonstrates that although private farms are not so well mechanized as agriculture enterprises, the difference is not that striking (Figure 14). The only exception is mechanization of potato production. Despite the fact that potato growing is the core activity for many private farms, only 5% of them use automatic potato-planter, against 22% of agriculture enterprises farming potato.

Figure 14. Availability of agricultural equipment on farms, % of respondents.

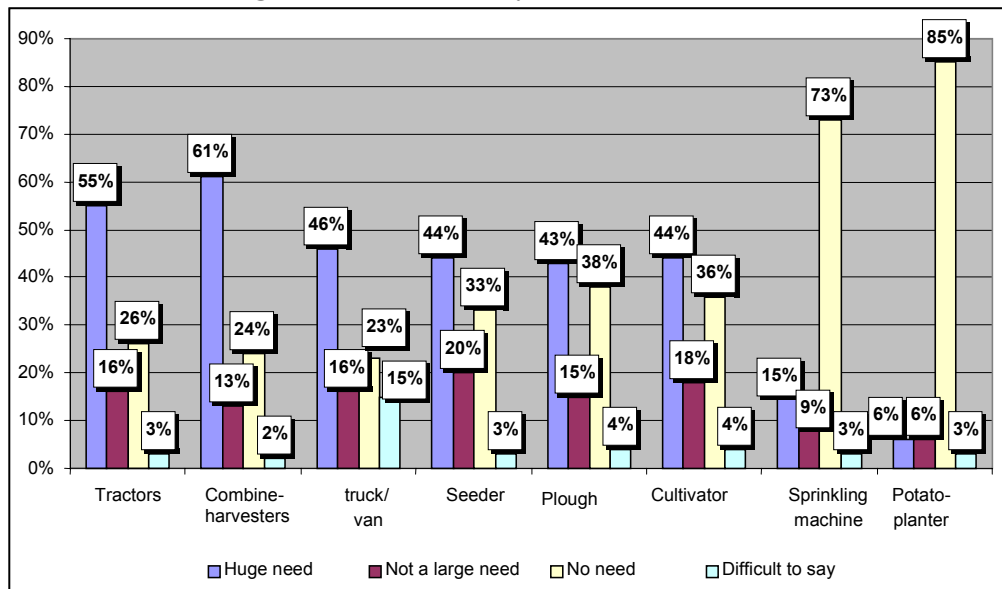


Regional variations in the level of mechanization between agricultural enterprises are not significant. If we compare the data of the general sample, the production looks heaviest mechanized in Kherson and Poltava oblasts, and the lightest – in Zhytomyr oblast. In our opinion, the explanation of this situation is that in the North there are fewer large commodity farms with fully mechanized production process.

Considering data of the previous year study provide clear evidence that most agriculture machinery is physically worn out and obsolete, in this survey we also tried to assess farmers' needs for various types of equipment. As demonstrated in Figure 15 below, today agricultural businesses feel a really great need for farming machinery. This is equally true for agricultural businesses and private family farms. The demand of the latter for separate types of machinery sometimes exceeds that of agricultural enterprises. Private family farms tend to have bigger demand for less complex and less expensive machinery, for example, seeders and ploughs. Thus, while 39% of agricultural enterprises recognize a great need for seeders and 38% – for ploughs, the portions of these among private family farmers were respectively 46% and 44%.

⁹ See analytical report of the survey "Farming and Agribusiness in Ukraine". Section "Equipment and Inputs" pages 14-15.

Figure 15. Farmers' needs for agricultural machinery, % of the total number of answers.



Analysis of the aggregate data regarding the demand for agricultural machinery in the regional context demonstrate that farmers of Kherson oblast have the largest demand for major types of agriculture machinery. While 55% of the overall sample admit the existing huge need for tractors and 44% - for cultivators, the respective portions of respondents in Kherson oblast equal 75% and 60%. Bigger quantity of large-scale enterprises explains a greater regional demand for agriculture machinery and equipment.

3.6 Production problems

Farming is the type of business where agricultural producer must have comprehensive knowledge and good skills in many areas. The importance to have competence in production issues, specifically, in agronomy and technology, undoubtedly is difficult to overestimate. This is particularly true for private farms. At the beginning of private family farms movement, many of such farmers came into this business having scarce knowledge and skills. According to the survey data, it is the lack of needed knowledge that gives rise to most production problems faced by Ukrainian farmers.

Data presented in table 3 demonstrate, that the biggest concern for agriculture producers appear to be the introduction of new varieties of crops. It was recognized the biggest difficulty by 27% of private family farms and 30% of reformed collective farms. This was particularly emphasised by respondents in Ivano-Frankivsk oblasts, where 70% of respondents admitted they did not know how to introduce new and more productive crop varieties in their local conditions. It is important to note that only 8% of respondents from Poltava oblast have such a problem making them stands out from the overall sample. A possible explanation is that according to the survey, Poltava oblast is among the leaders by yields of many agriculture crops.

Table 3. Production problems faced by enterprises, % of overall number of responses.

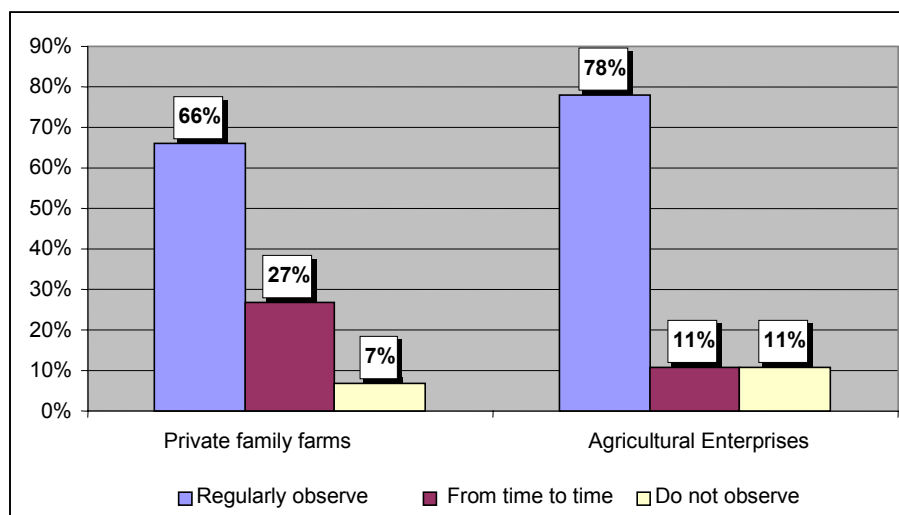
	Private family farms	Agriculture enterprises	Overall sample
Introduction of new crops and new varieties	27%	30%	28%
Problems with observation of crop rotation	29%	14%	26%
Soil erosion during tillage	24%	11%	22%
Problems with introduction of land-reclamation measures	21%	14%	20%
Ineffective usage of agricultural machinery	18%	26%	20%
Ineffective usage of mineral fertilisers	9%	18%	11%
No production problems	14%	21%	15%

Another matter of concern for producers is the observation of crop rotation. Private family farmers face this problem twice as often compared to agricultural enterprises. Overall, 26% of the sample stated it was difficult to observe crop rotation patterns, however, for Ivano-Frankivsk oblast this portion is almost twice as large - 46%. Presumably, to observe the crop rotation is a bigger challenge for smaller farms in the Western region of Ukraine.

In the last years, the problem of crop rotation observation has come to the fore, and in the future it may lead to grave negative outcomes, such as lower fertility and full degrading of soil. According to the survey, even though majority of producers (68% of the sample) are well compliant with the crop rotation, there exist considerable variations both between businesses and oblasts where the survey took place.

Agricultural enterprises are more likely to observe the crop rotation rules: 78% of enterprises vs. 66% of private family farms (Figure 16). Almost half of producers of Ivano-Frankivsk oblast (49%) are regularly compliant with the crop rotation, while the portion of these in Poltava oblast is the highest, reaching 87%.

Figure 16. Percentage of farmers in the sample observing crop rotation patterns.



27% of private farmers stated they observe crop rotation from time to time, while only 11% of agricultural enterprises said they comply with crop rotation rules irregularly. In Ivano-Frankivsk, the portion of producers compliant with the pattern from time to time is the highest among all surveyed oblasts, reaching 43%.

In the majority of cases, producers do not observe crop rotation patterns deliberately due to two most common explanations: the need to grow high profit crops and no need to observe crop rotation rules. The last explanation is most frequently given by private family farmers. We assume that there are a number of objective and subjective reasons that may serve an explanation in the present situation. First, a part of private family farms grow mono-crops, which can be grown within one field for consecutive years without reducing yields and diminishing soil qualities. Second, usually private family farms have constrained resources to cultivate the crops needed to maintain crop rotation practices and do not have an appropriate organization of their agricultural lands. Third, constrained opportunities for conducting soil agrochemical analysis do not allow private farmers to apply the exact crop rotation technique that is the most effective for the agricultural lands at their farm. Finally, the lack of needed knowledge and skills on effective crop rotation should not be ignored as well.

The neglect of regular crop rotation and failure to take important agronomic measures result in soil erosion. This problem faced 22% of the surveyed producers, representing a bigger concern for family farmers: 24% of responding farmers against 11% of agricultural enterprises.

While the above mentioned production problems are applicable to the whole nation, the problem of effective irrigation measures tends to be local in nature. For 39% of respondents of Kherson and 15% of respondents in Zhytomyr oblast, the regions of scarce and excessive moistening respectively, this problem appeared to be a large concern.

The list of problems discussed above may not be considered exhaustive. There exist business-specific problems, pertinent to individual enterprises. Moreover, 15% of the surveyed producers noted they have no production problems (14% of private family farmers and 21% of agricultural enterprises). Better staffing with specialists may

explain a higher percentage of agricultural enterprises in the sample encountering no production problems. However, it is important to keep in mind that businesses that had arisen in lieu of former collective farms, may have not fully realized the scope and acuteness of problems they face today.

4. MARKETING AGRICULTURAL PRODUCE

4.1 Farm Produce Marketing Channels

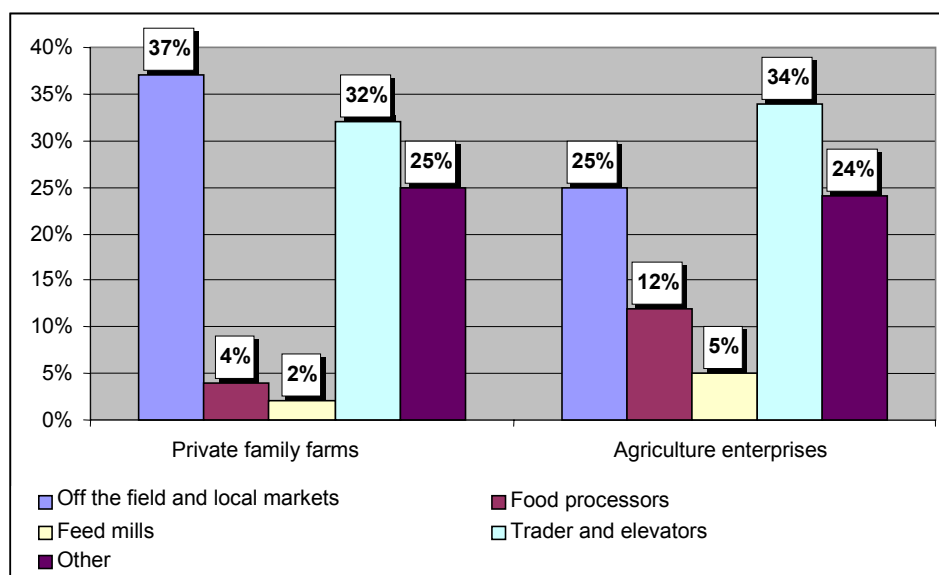
Profitability of farming sector equally depends on the organization of production process, and on how effectively the agricultural output is marketed. In the final account, it is the producer's ability to gainfully sell produced output that is key to his/her farming activity's effectiveness. Prior to answering question *"What and how much produce to grow?"*, Ukrainian producers need to have a clear picture of to whom they shall sell their products and what price they can expect at the market. That's why, finding customers and establishing sustainable marketing channels should be a top priority objective for many producers in Ukraine.

According to the survey findings, majority of producers use a few distribution channels while marketing their output, however, the relative importance of these channels varies. It depends, primarily, on a particular product and a type of enterprise. Meanwhile, a general trend is clearly visible: private family farms tend to employ fewer distribution channels than agriculture enterprises.

In the course of the survey, we obtained data on frequency of usage and weight of major distribution channels in the context of two major commodity groups: grain and oil-bearing crops and vegetables. These two commodity groups may perfectly illustrate specifics of produce marketing by Ukrainian producers in the today's conditions. Running ahead, however, we would like to say that trends observed in the previous year, were reiterated by results of this year survey.

Sales of grain and oil crops directly off the field and through local farmer markets are the primary distribution channel for private family farms and second most important channel for agriculture enterprises. This is the channel through which 55% of the surveyed private family farms and 56% of agriculture enterprises market their produce. As presented in Figure 17 below, the weight of this channel in the overall sales volume for these two categories of businesses is, respectively, 37% and 25%. Ivano-Frankivsk oblast stands out among all surveyed oblasts by this indicator, with 58% family farms and 39% of agricultural enterprises employing this distribution channel. In our opinion, the general unawareness about marketing opportunities along with the fact that selling directly off the field and through local farmers markets allows to minimize marketing costs and transportation expenses make this channel is traditionally dominant. Besides, poorly developed storage infrastructure may serve another explanation in the present case.

Figure 17. Weight of grain and oil-bearing crops sold through major distribution channels, % of overall sale volume.



In addition to marketing off the field, 55% of agriculture enterprises and 40% private family farms also sell grain and oil-bearing crops to trading companies. For agricultural enterprises this channel plays the major role. An explanation to a smaller portion of private family farms using this channel is that more private farms have difficulties in collecting sufficiently large batches of commodity produce. As for the weight of produce sold through this channel, almost one third of marketable grain and oil-bearing crops is purchased by trading

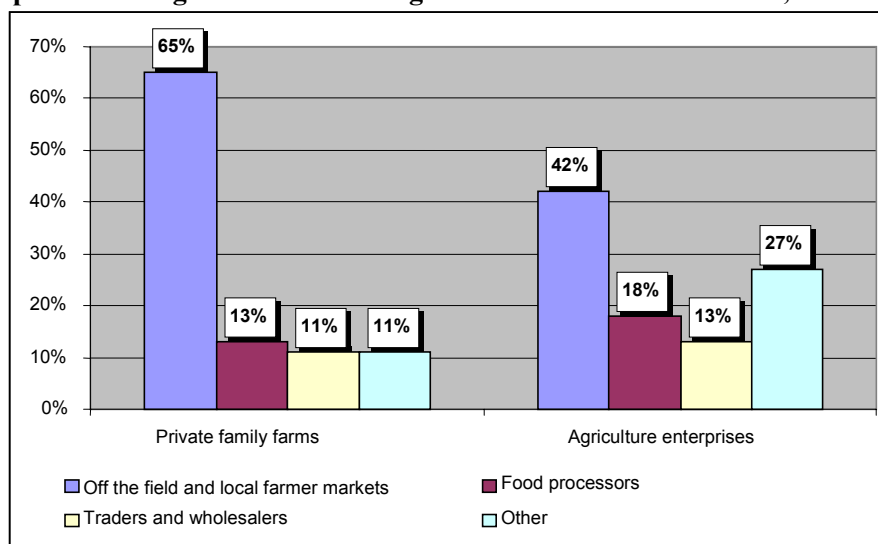
companies (32% of the output of private farms and 34% of the output of agriculture enterprises). Farmers in Poltava, Kherson and Donetsk oblasts, regions that traditionally are major producers of grain and sunflower in the country, most often rely on services of trading companies. It is important to note, that agricultural enterprises in the mentioned oblasts sell respectively, 59%, 42% and 38% of all grain and oil-bearing crops through this particular channel.

Food processing companies represent the third most important marketing channel. 37% of all surveyed agriculture enterprises and 8% of private family farms cooperate with food processors. As the weight of this channel in the total sales volume, 12% of grain and oil-bearing crops grown by agriculture enterprises, and 4% of these grown by family farms, is marketed to processors.

Feed mills and government institutions represent two other distribution channels; however, their weight in the total sales volume is insignificant. 2% of surveyed private family farms and 9% of agriculture enterprises also sell their output through trade houses and commodity exchanges. The portion of produce marketed through these channels is negligible, less than 1%.

Speaking about sales of vegetables, it is important to note that the range of distribution channels is even narrower than that case with grain and oil-bearing crops. Most of harvested vegetable produce is sold directly off the field or through local farmer markets. The portion of this channel in the overall sales volume reaches 65% for private family farms and 42% for agriculture enterprises (see Figure 18). Processing companies are second most important distribution channel. On average, 18% of vegetables grown by agriculture enterprises, and 13% of those grown by private family farms, is shipped to processing companies. In the regional context, this channel is most heavily used by businesses in Kherson and Ivano-Frankivsk oblasts. This may be explained, first of all, by the huge processing operations located in these oblasts, for example, ChumakTM and SandoraTM plants.

Figure 18. Proportion of vegetables sold through main distribution channels, % of overall sales.



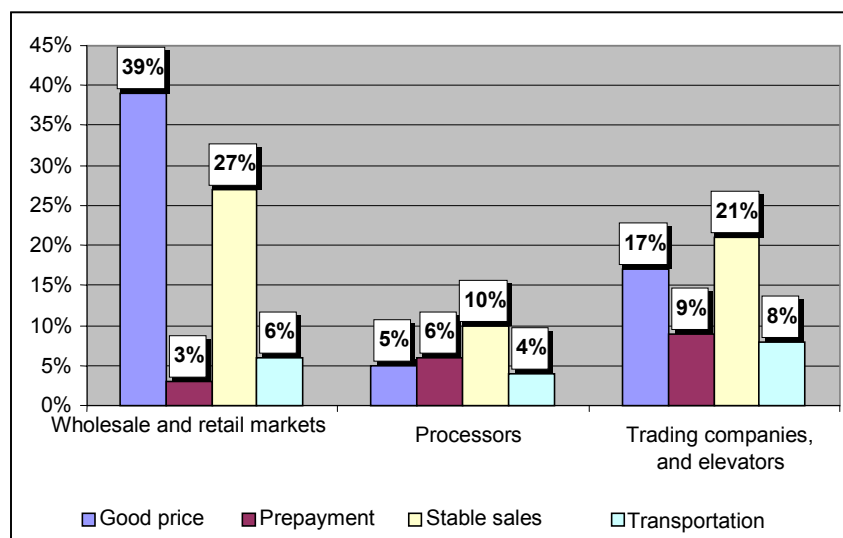
Among other distribution channels, traders and wholesalers play rather significant role: 11% of vegetables grown by private farms and 13% agriculture enterprises is sold to traders. In Zhytomyr oblast, trading companies account for 20% of sold vegetables. It is interesting, that all surveyed agribusinesses practically do not use other distribution channels, i.e. commodity exchanges, trading houses, direct export, sale to supermarkets and government institutions.

What are the factors considered by agriculture producers while they choose distribution channel? According to survey findings, good price, payment arrangements, specifically, prepayment possibility, and stable sales come to the fore as most important factors (See Figure 19). Let's have a closer look at these factors in the context of main distribution channels. Processing businesses appeal to producers with a prevalently stable demand for produce⁹. It was reported by 8% of family farms and 22% of agriculture enterprises. In addition, 16% of agriculture

⁹ More detailed information about produce delivered to processors may be found in the report "Specifics of Farm Produce Processing and Marketing in Ukraine". Agribusiness Development Project in Ukraine, 2003.

enterprises and 4% of family farms value the possibility of prepayment. A bigger portion of agriculture enterprises receiving prepayment may be explained by larger batches of commodity and stable deliveries. The importance of prepayment also evidences the low development of agricultural crediting and high costs of such loans. The factor of good price was quoted by 12% of farmers.

Figure 19. Role of different factors for choosing a distribution channel, % of overall sample.



The factors listed above were cited also as major incentives to deal both with trading and wholesale companies, and with traders and elevators. Particularly, 25% of enterprises and 21% of private farms market their output through this channel as it ensures stability of sales. Likewise with processing enterprises, more agriculture enterprises than family farms – 22% against 6% - are appreciative of the possibility of prepayment. In Kherson oblast, one third of enterprises selling their output via trading companies and elevators, noted the existing possibility of prepayment. In addition to the mentioned above, almost one tenth of private family farms and 4% of agriculture enterprises cite transportation of produce from the farm as one of the incentives to cooperate with trading companies.

Finally, local wholesale and retail markets attract producers with good purchase prices and stability of sales. First factor – good price – was quoted by 39% of respondents. It is clear that selling the produce at wholesale and retail markets gives producers bigger flexibility in terms of selling and establishing prices depending on the market demand. As regards stability of sale, more agriculture enterprises than private family farms regard wholesale and retail markets as a stable distribution channel: 34% vs.26% of responses. In our opinion, this difference may be explained by the availability of transportation vehicles with agriculture enterprises, which may use them to deliver output to wholesale and retail markets. In addition, the availability of large commodity consignments, established working relations, and the presence of own sale points encourage of agricultural enterprises to realize their produced outputs at whole and retail markets.

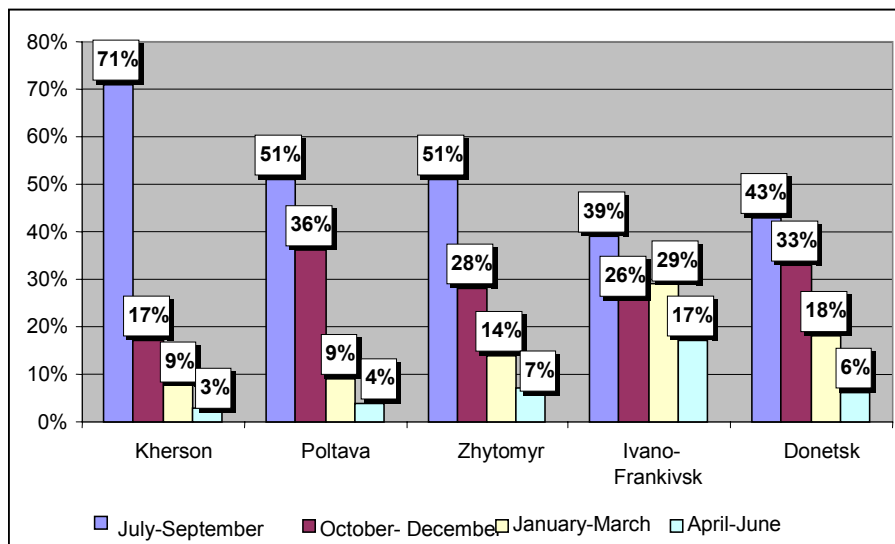
The form of payment is one of the factors influencing producers' decision to sell his/her output through a particular distribution channel. Today three forms of payment for delivered produce prevail: payment before seeding campaign, payment at harvesting (when the produce is delivered from producers to sellers) and deferred payment until after purchase. Two last forms are most common, particularly in case of grain. The weight of each form of payment in the overall payments depends, first of all, on a particular distribution channel. With the goal of generalization, we may say that almost half of producers receive payment at harvest, and another third of producers sell their produce with deferred payment until after purchase. For example, of 181 respondents selling grain through trade and wholesale companies and elevators, 92 (or 51%) noted that they receive payment for delivered produce immediately after harvesting.

4.2 Specifics of farm produce marketing in during marketing year

According to official statistics, a significant portion of output is sold during the first months after its production. This statement is supported by results of this survey. Over half (53%) of all produced grain (54% by agriculture enterprises and 50% by family farms) is sold in the first quarter of a new marketing year (July – September).

74% of the surveyed producers (88% of agriculture enterprises and 71% of family farms) note that they begin selling harvested crops during this period. In Kherson oblast, over two thirds of all grain is sold through the first three months after new harvest. The portion of grain sold during this period by agriculture enterprises of the oblast is even larger equaling 71%. Similar situation may be observed in Poltava and Donetsk oblasts, also two major grain producers, although the portion of grain produce sold during the first quarter of a new marketing year, is somewhat smaller (Figure 20).

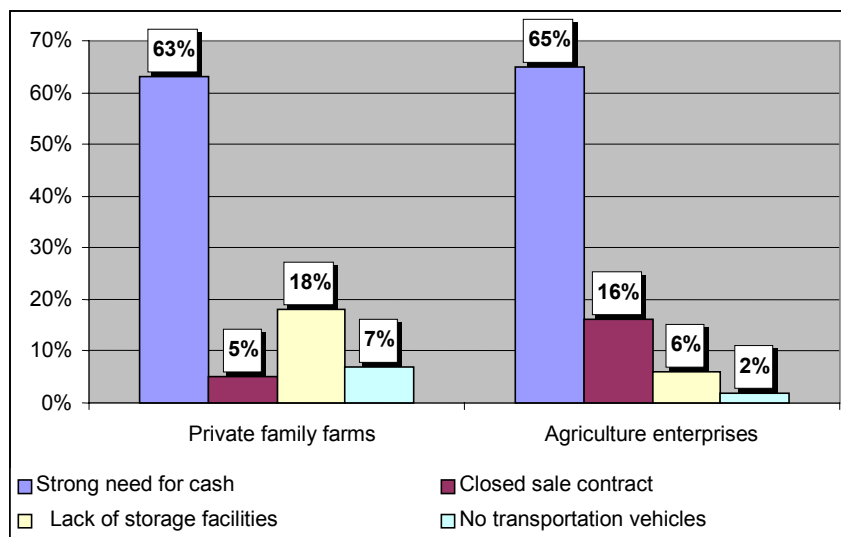
Figure 20. Proportion of grain sold in the course of marketing year, % of overall sales volume.



As for vegetables, almost all of them is sold during first two months of marketing year. In Kherson oblast, where many farms specialize in growing fresh vegetables, 76% of all grown produce is sold from July to September. On the other hand, a bit more that a quarter of produce in Zhytomyr and Ivano-Frankivsk oblasts get to the market in the second quarter.

A strong need for cash was quoted by respondents as the major reason prompting producers sell their output immediately after harvest (Figure 21). It was reported by 63% of family farms and 65% of agriculture enterprises. It is important to note, that Kherson oblast has the biggest number of respondents (77% of the overall number of surveyed in oblast), which sell produce in the first months of marketing year chiefly due to lack of capital.

Figure 21. Major reasons for which producers sell their output immediately after harvest, % of overall responses .



In addition to this, lack of storage facilities was rated as the second most important explanation of why the produce goes to the market right after harvest. As was expected, lack of storage facilities stands more acute for

family farms, than for agriculture enterprises: 18% vs. 6% of responses. In the regional context, lack of storage facilities is a bigger concern for producers in Kherson and Poltava oblasts, where there are many large commodity farms. Respectively, 22% and 19% of respondents in these oblasts selling produce immediately after harvest, are forced to do so due to lack of needed storage facilities.

It is interesting, that only 7% of respondents reported they sell their output in the first quarter of marketing year because they have closed sales contract. Agriculture enterprises are more likely to have sales contracts (16% of such responders vs. 5% of surveyed private family farms), with the majority of these are located in Kherson and Zhytomyr oblasts.

Speaking about the timeframe of sales of produce, particularly, grain, it is important to note, that sale of large volumes of produce in a short period of time, as is the case with most farms, potentially may have a negative impact on the pricing conjuncture of the agrarian market. A good example is year 2002, when prices for grain plummeted as a result of huge supply of grain in Ukraine's internal market. Ultimately it lead to reduced revenues of agriculture producers. From this prospective, the development of a commodity exchange market may become one of reliable tools in agricultural price making as well as price forecasting.

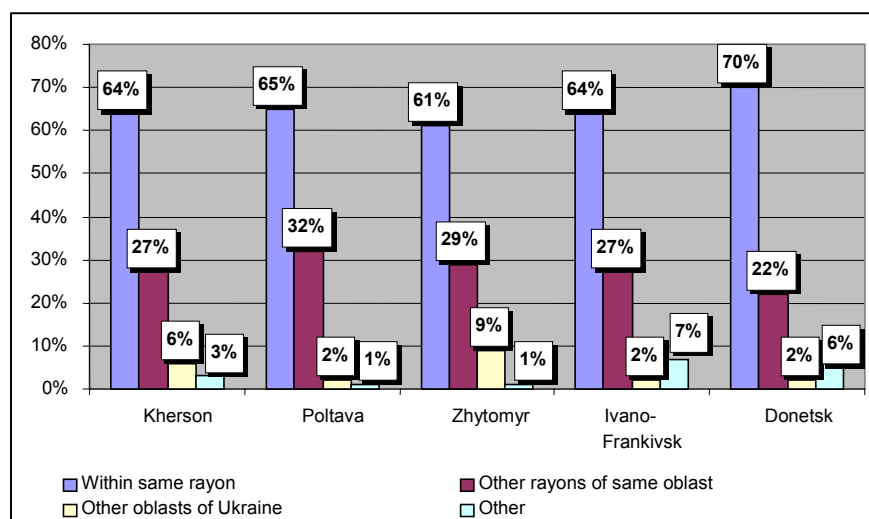
4.3 Geography of Farm Produce Sales

In addition to distribution channels, we also attempted to study specifics of the geography of sales. Results of this survey, likewise the last year survey, demonstrate that geography of sales is rather narrow. Today, majority of producers market their output within the boundaries of their respective administrative rayons (the lowest unit of administrative division in Ukraine). It was reported by 73% of surveyed private family farms and 75% of agriculture enterprises.

Today, almost two thirds of the total grain output is sold by surveyed producers immediately within the administrative rayon. This figure is higher for private family farms than agriculture enterprises: 69% vs 54%. Slightly more than a fourth of produce is taken out to other rayons of the production oblast (26%) and only 5% is marketed in other oblasts in Ukraine. Agriculture producers, which, in general, tend to have their own transportation vehicles have broader sales markets. They distribute 41% of all produced grain in other rayons of the oblast it was produced.

Regional context of the geography of marketed grain is presented in Figure 21. As may be noticed, most grain in all studied oblasts is sold directly in the administrative rayon, from where it is later on shipped through various channels to other regions of the country and abroad.

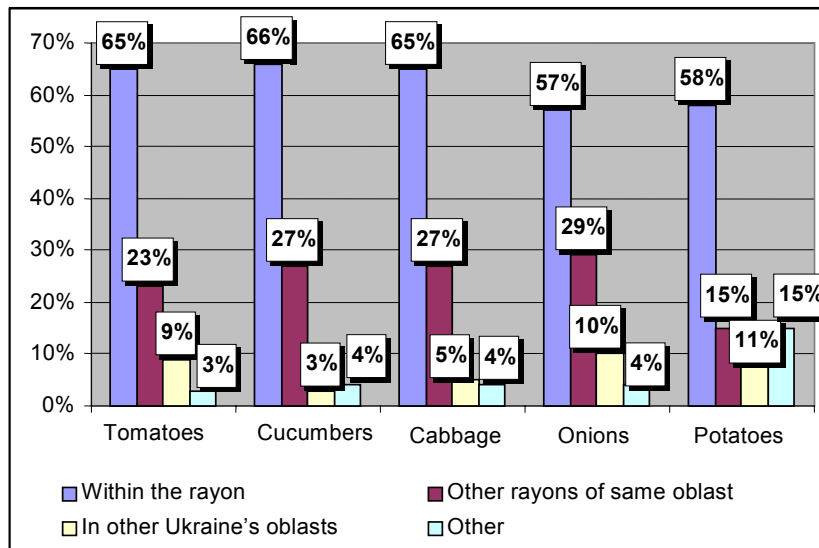
Figure 22. Geography of marketed grain, % of total sales



Although the geography of marketed vegetables is somewhat wider, still it is restricted, typically, with the territory of one oblast. According to results of the survey, almost two thirds of all produced vegetables is sold in the rayon of production: from 57% of grown onions to 66% of cucumbers (Figure 23). In our opinion, lack of transportation means force producers to sell a considerable portion of their produce to nearby processing enterprises and population. Of all different vegetables, onions and potato have the widest geography of sales.

Thus, 14% of grown onions and 26% of potatoes are marketed behind the administrative borders of oblast. Explanations to the wider geography of sales are available transportation vehicles and a longer time of produce storage unprocessed.

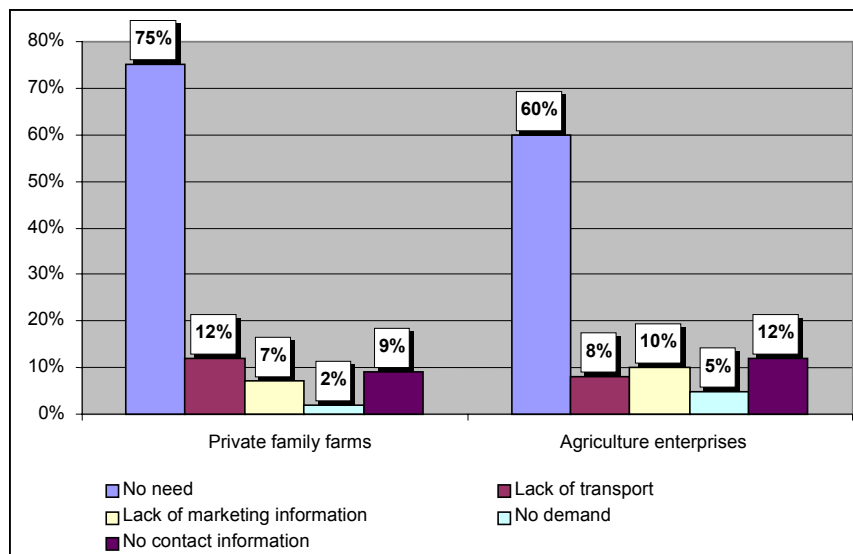
Figure 23. Geography of marketed vegetables, % of overall sales



As demonstrated by results of the survey, underdeveloped sales markets for farm produce may be explained by two major factors: no urgent need to expand geography of sales and enter new markets, and insufficient resources to enter new markets (Figure 24). The prevailing majority of private family farms (72%) and over half of reformed farms (60%) noted they don't need to market their produce in other oblasts of Ukraine. The biggest portion of such respondents was located in Poltava oblast – 83% of responses.

Private family farms are more likely to believe that today there is no urgent need to expand sales markets. In our opinion, insufficient quantities of commodity produce to form large batches for sales in other regions is one of the reasons for which farmers do not want to enter other oblasts' markets. Meanwhile, we assume that in most cases farmers do not realize benefits of wider distribution channels and sales markets. Availability of broader sales markets allows to reduce producers' dependence on a limited circle of buyers and may promise more gainful prices.

Figure 24. Main reasons why producers do not sell produce in other oblasts of Ukraine, % of total responses.



The second group of factors, explaining why producers do not sell produce in other Ukraine's oblasts, include limited resources. First of all, it means lack of transportation vehicles and limited market and contact information.

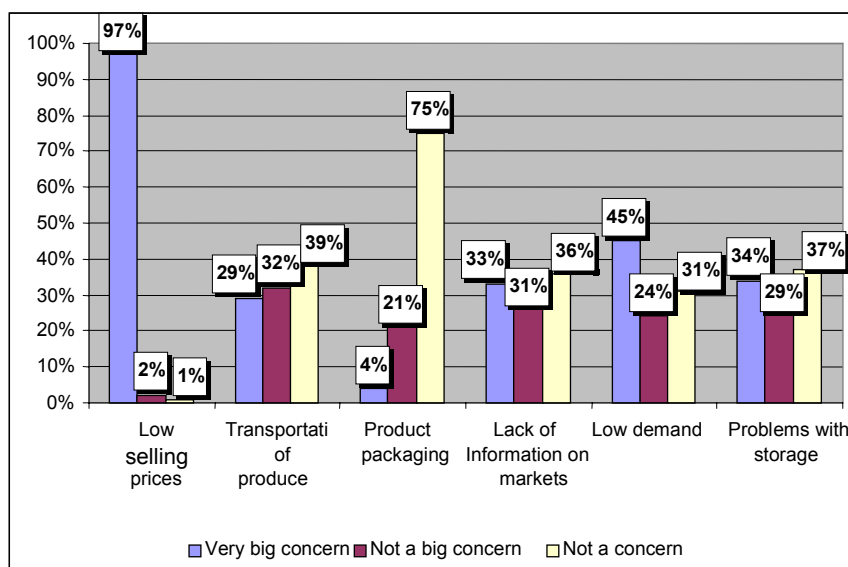
Scarce means of transportation presents a bigger obstacle to expanding geography of sales for private farms. For managers of agricultural enterprises lack of contact and market information is the main hindrance preventing them from entering other markets. Of note, by results of the previous survey, the main sources of marketing information included periodical printed mass media: newspapers and magazines. Only 2% of producers (1% of private farms and 4% of agriculture enterprises) noted that they use special sources of information, i.e. price-lists¹⁰.

4.4 Main problems and obstacles

A separate block of survey questionnaire probed into problems and obstacles of farm produce sale. Analysis of responses demonstrates there are problems of internal nature, i.e. caused by lack of needed resources and skills of producers, and external ones, reflecting specifics of external environment.

Low selling price ranked highest in the list of the problems. It is a concern for 96% of private family farms and 98% of agriculture enterprises (Figure 25). These data correlate with data of the previous survey, where almost 80% of respondents rated low selling prices as the biggest problem for marketing their farm produce in Ukraine.

Figure 25. Main obstacles in farm produce marketing, % of the total number of answers.



In our opinion, the problem of low sales prices is very complicated and is subjective in nature. It's true, that in 2002, good harvest of grain resulted in a considerable reduction of prices. Due to that, many farmers received lower revenue than expected. Meanwhile, one should bear in mind that presently many producers have no idea how to establish effective distribution channels and enter other sales markets. Lack of their own infrastructure (storage facilities and elevators) does not allow them to sell the produce during a marketing year at better prices. Higher production costs of some farm produce, specifically, fruit and vegetables, and heavy marketing expenses may explain where low selling prices stem from.

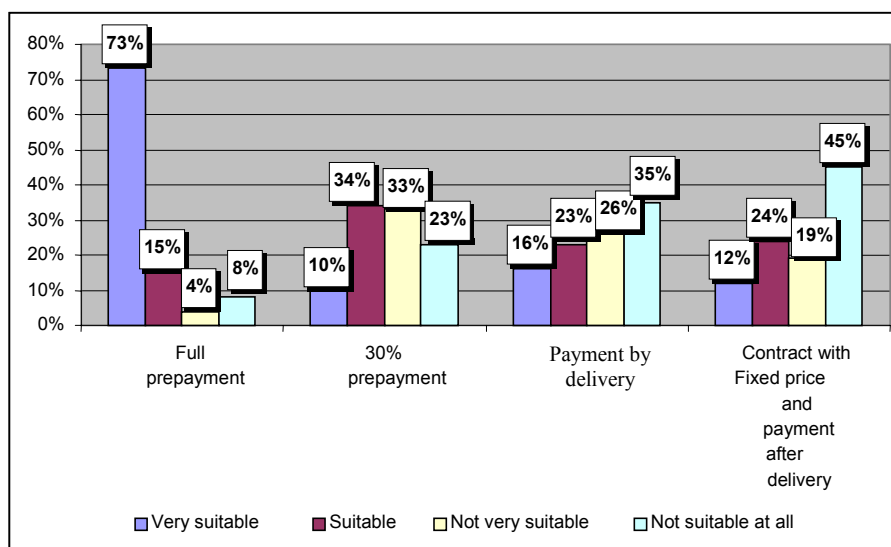
Low demand ranked second in the list of marketing problems. This problem was recognized by 45% of surveyed farmers, and is more of a concern for agriculture enterprises than for private family farms. Specifically, it was reported by 51% of surveyed agriculture enterprises and 44% of private farms. For comparison: in 2002, 22 % of respondents admitted they face the problem of low or no demand for their output.

A bigger portion of agricultural producers facing the problem of low demand, likewise, the problem of low selling price, may evidence that many such businesses experience serious problems with marketing their produce in new market conditions. Cancellation of centralized purchases of farm produce by government institutions at predetermined prices, necessitates orientation towards existing market demand, which in the final account determines the range of produce and sales volumes, and defines prices.

¹⁰ See analytical report of the survey "Farming and Agribusiness Sectors in Ukraine". Section "Farm Produce Marketing. pp.20-21.

In addition to price which is regulated by market conditions, the existence of various forms of payment for delivered produce is another reality of the contemporary agrarian business. However, as demonstrated by results of the study, many surveyed farms are not thus far ready to sell produce using different forms of payment. It is no wonder that when answering the question “What form of payment is most suitable for you?”, most respondents cite full prepayment and 30% prepayment (Figure 26). It is clear, that the need for working capital urges producers that they find contracts which would ensure full or partial prepayment for their produce deliveries. Meanwhile, many producers are not very fond about other forms of payment for shipments. Other forms of payments include, particularly, payment by delivery, closing contract with fixed price and deferred payment until after delivery.

Figure 26. Respondents’ preferences of different payment arrangements for shipped produce, % of the total number of respondents.



It is interesting to note that family farmers and managers of reformed enterprises have different attitude towards forms of payment. Family farms are more likely to close contracts with payment after delivery. While 58% of these describe this form of payment as not very suitable and nor suitable, the percentage of agriculture enterprises who do so, is even higher: 67%. Meanwhile, majority of family farms are of a negative opinion about closing a contract with fixed price and payment after delivery. For 61% of private farmers and 48% of agriculture enterprises this is either “not very suitable” or “not suitable at all”.

Clearly, closing a delivery contract with deferred payment is not as good form of payment as contract with prepayment or deferred payment until after delivery. Meanwhile, it is worth noting that even such a contract can be considered as a factors to reduce market risks in conditions of considerable fluctuations of prices for farm produce. We may assume that one more explanation why farmers have a negative attitude towards the payment upon produce delivery and deferred payment is existing mistrust towards the buyer who may fail to pay the negotiated price.

Going back to other problems with sales of produce, let's focus on problems with storage. As expected, more private family farms face these problems: 38% of responses given by private farms vs. 14% of agriculture enterprises. This is one more evidence that private farms have a more limited access to agricultural equipment and storage facilities. This, in its turn, limits opportunities of produce marketing during a marketing year and causes significant fluctuations of prices in farmers markets. In the regional context, storage of produce stands most acute for producers in Poltava and Donetsk oblasts. Respectively, 44% and 36% of respondents from these oblasts, stated that they are very much concerned about finding a place for storage.

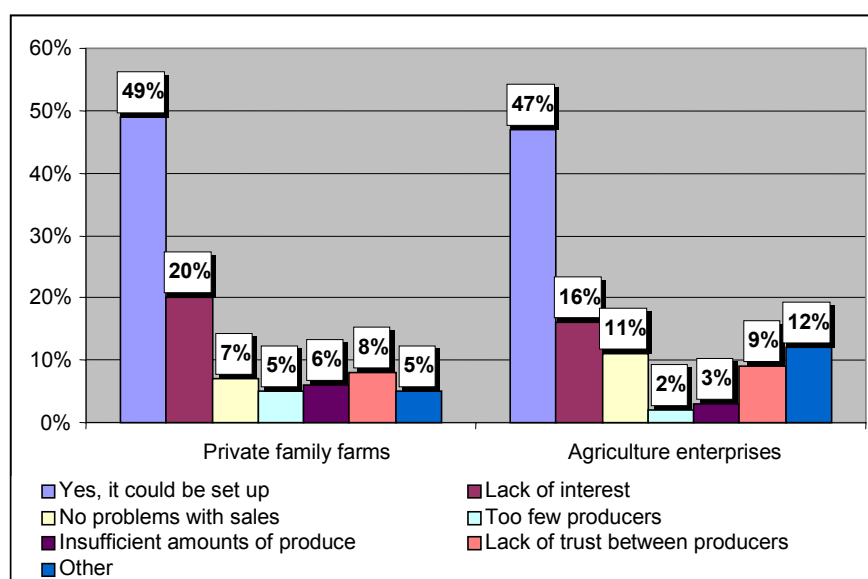
The next problem is lack of information about available markets and distribution channels. One third of respondents noted this problem in their answers. These data fully correspond to results of the last year survey. Moreover, lack of such information tends to be a more acute concern for private family farms, one third of which complained about unavailability of useful information, against 24% of agriculture enterprises. We believe this situation may be explained by a more constrained access of private farms to sources of market information.

A possible way to address these problems could be to have producers join together in an effort to sell their produce. A marketing cooperative is, definitely, is one option of such a union. Marketing cooperatives could benefit particularly private family farms. It would allow them to save costs and receive better profits through buying supplies in bulk at lower prices and selling their produce in bulk at higher prices. The last factor is particularly important if farmers are to enter new markets and expand distribution channels, while reducing their operational expenses.

As may be noticed from Graph 27, almost half of all farmers (48% of the sample) are supportive of the idea to set up a marketing cooperative. Moreover, the percentages of responses in favor of marketing cooperative among private family farms and agriculture enterprises are almost equal. This unanimity of responses may be observed across all surveyed oblasts, except Zhytomyr, where only 34% of respondents are in favor of the idea to set up a marketing cooperative.

In addition, this oblast has the highest percentage of respondents who believed that creation of a cooperative makes no sense because they apparently had no problems with sales. Such regional variations may be explained by lower marketability of locally grown produce and higher percentage of small-scale farms by number of employees in the oblast. Besides, we cannot exclude farmer's wrong understanding of agricultural cooperation as an explanation of this regional variations in opinions.¹¹

Figure 27. Producers' attitude towards a possibility to set up a marketing cooperative, % of the total number of responses.



Respondents frequently cited the producers' lack of interest in a marketing cooperative, as the main obstacle to establishing it. Almost one third of respondents in Donetsk oblast (39%) recognized the lack of interest as the main difficulty to having an operational marketing cooperative. Among other reasons complicating establishment of a marketing cooperative, respondents cited lack of trust between producers and no problems with sales of produce. Analysis of responses in both categories of respondents demonstrates that agriculture enterprises regard the mentioned reasons as a serious obstacle to establishing a marketing cooperative. There are significant regional variations in the number of responses. While only 1% of respondents in Poltava oblast quoted lack of trust between producers as serious limitation in setting up a marketing cooperative, the percentage of such responses in Kherson oblast was the highest, reaching 16%.

It is interesting to note that only 4% of respondents – and this percentage is the [same for both categories of respondents – quoted lack of packaging of produce as one of the obstacles to marketing produce successfully. Meanwhile, it would be fair to note that the task of expanding distribution channels, particularly, when it comes to shipments of fruit and vegetables to wholesale and retail networks, requires that producers pay particular attention

¹¹ Marketability can be presented as a ration of the total output to the output realized at the market.

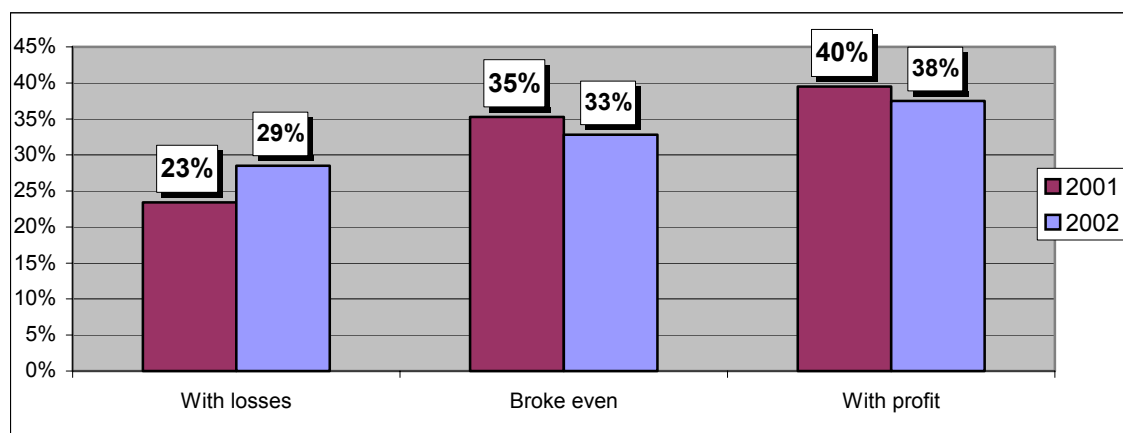
to packaging. Usage of packaging is also one of the major requirements to export of Ukrainian produce. It should be emphasized that lack of packaging makes Ukrainian produce (fruits and vegetables) uncompetitive in export markets despite excellent quality and lower selling prices.

5. AGRICULTURAL LENDING AND INSURANCE IN UKRAINE

5.1 Financial performance of farms

The survey demonstrated that in 2002 agriculture enterprises performed worse than in the previous 2001 year: the portion of those who ended the year with losses has increased by 6 percentage points (p.p.), and the quantity of those who broke even and those who made profit by the year end – each reduced by 2 p.p. (Figure 28).

Figure 28. Dynamics of Agriculture Enterprises' Financial Performance in Ukraine (2001-2002), % of respondents.



According to 2002 survey results, likewise in the previous year, the financial performance of agricultural enterprises was worse than that of private family farms (Figure 29). Dynamics of changes in the financial performance of agricultural enterprises compared to private family farms, in 2001-2002 was also poorer.

Figure 29. Financial performance of private family farms and reformed agriculture enterprises in 2002, % of the total responses.

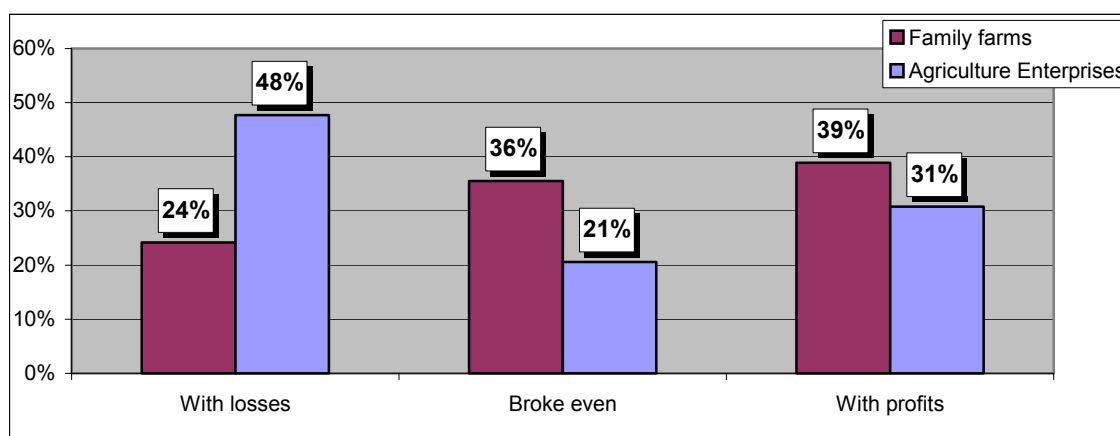


Table 4. Change of financial performance of private family farms and agriculture enterprises in 2002 against 2001, dynamics of the number of responses, in percentage points (p.p.).

	Private family farms	Agriculture enterprises
Loss-makers	+ 4.2 p.p.	+ 8.6 p.p.
Broke even	- 2.8 p.p.	-1.3 p.p.
Profitable farms	- 0.8 p.p.	- 8 p.p.

This fact may evidence that former collective agricultural enterprises, which are now held in private hands, have not learnt to operate effectively. Private family farms are doing a little better because they are not burdened with worn-out production assets and obsolete farm management techniques.

5.2 Main sources of funding

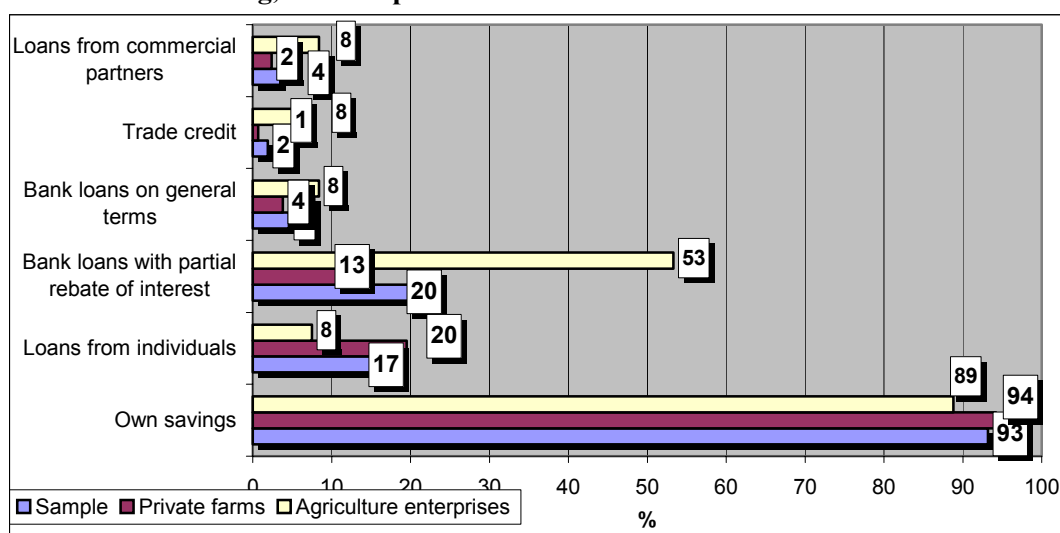
This year survey demonstrated that likewise in the previous years, producers' own savings constituted the principal source of funding. The percentage of respondents giving such answers has even grown as compared to the last year, reaching 93%. Loans extended by commercial bank with the partial rebate of interest, ranked second in the list (20% against 19% in the last year), while the third most common source of funding was loans from individuals (17% against last year's 9%).

The survey revealed a correlation between the type of farming enterprise and the source of financing it chooses for its operations. In particular, besides savings, reported by 89% of surveyed agricultural enterprises as the principal source of funding, these farms relied even heavier than last year on commercial bank loans with partial rebate of interest (reported by 53% of respondents vis-à-vis 46% of respondents in the previous survey) and loans from commercial partners (8% vs. 11%).

Thus, the survey demonstrated that agricultural enterprises had better access to loans with partial rebate of interest than private family farms did, irrespective of the fact that in view of their financial performance results, they operated not so effectively as did private family farms. This evidences that the privileged loans are not distributed on the basis of transparent and unbiased procedures. A number of subjective factors play a defining role whether a farm ultimately obtain such a loan.

As regards private family farmers, 94% of which stated they primarily relied on their own savings, the second most important source of funding was loans obtained from individuals (reported by 20% of respondents vis-à-vis 11% of the surveyed last year), while loans extended by commercial banks with the partial rebate of interest were ranked the third most common source (13% of the surveyed vs. 9% of respondents in the previous year study).

Figure 30. Sources of funding, % of respondents.



Of 400 surveyed businesses, the prevailing majority (297 farms) did not obtain loans in 2002. Only 26% of surveyed farms obtained loans, including 18% of private farms and 63% of reformed enterprises. As may be noticed, given the general low level of agriculture lending, former collective farms appear to have better access to loan resources than private family farms.

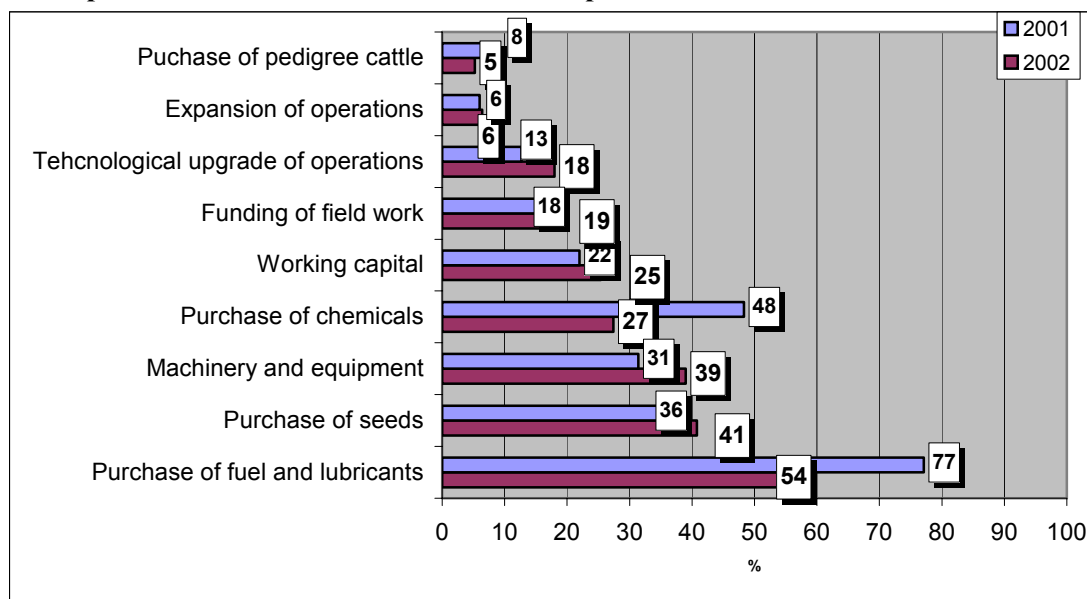
5.3 Purposes of loans

The portion of respondents reporting their need for loans has reduced against 2001 (from 83% in 2001 to 74% in 2002). As before, the majority of those in need of credit, use them to fund their day-to-day operations, i.e. purchase lubricants and fuel (53.7% of respondents), seeds (40.8%), crop protection chemicals (27.4%) etc. Moreover, survey findings demonstrate that long-term development purposes are funded least frequently. Three

lowest ranking purposes in the list are upgrade of production (18% of respondents), expansion of production (6%) and purchase of pedigree cattle (5%).

However, it is important to indicate some positive developments in the area of long-term funding compared to 2001. Particularly, the portion of respondent reporting they used credit funds to purchase equipment and agriculture machinery has increased from 31% in 2001 to 39% in 2002, while the number of those who used loans to upgrade production facilities rose from 13% in 2001 to 18% in 2002. Meanwhile, the number of those who used funds prevalently to purchase fuel and lubricants dropped from 77% of respondents in 2001 to 54% in 2002, and those who predominantly purchased crop protection chemicals – from 48% of respondents in 2001 to 27% in 2002.

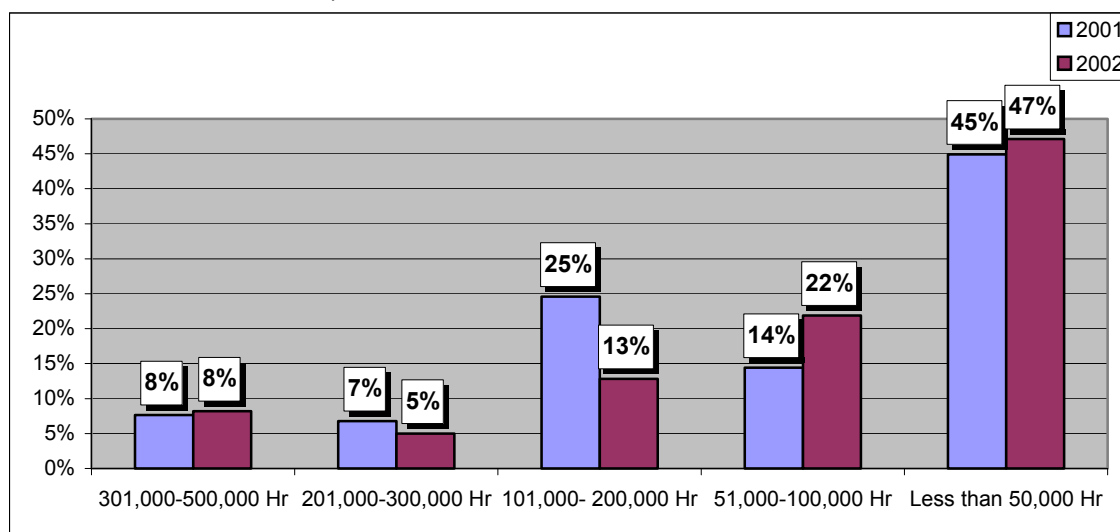
Figure 31: Purpose of loans in 2001 and 2002, % of respondents



5.4 Size of loans and interest rates

Most frequently, Ukrainian farmers obtain loans worth of 50,000UAH (around 9,400 USD) or less. The percentage of agribusinesses that obtained the loans of 51,000 – 100,000 UAH (around 18,860 USD) has increased compared to last year (by 2 p.p for the number of those who obtained loans worth of less than 50,000 UAH and by 8 p.p. – for the number of farms who obtained loans worth 51,000 to 100,000 UAH).

Figure 32. Sizes of extended loans, % of the overall number of businesses

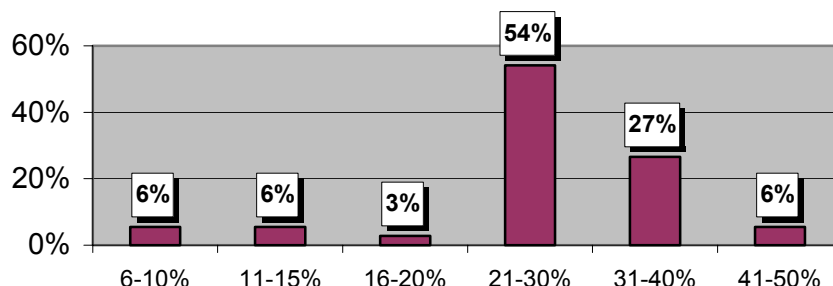


Meanwhile, the number of agribusinesses who obtained loans worth of 100,000 to 200,000 UAH and those who obtained loans in the range between 200,000 and 300,000 UAH has decreased by 12 p.p. and 2 p.p. respectively.

During the survey, respondents were asked about interest rates they were offered for loans during the last two years. Results of the survey are presented in Figure 33 below. Please, bear in mind, that results are provided as percentage of the overall number of respondents, rather than of the quantity of those who received loans.

As we see, during last two years, most loans were extended to agricultural producers under 20% to 30% of interest; 30% to 40% interest rate ranked second. Rest of loans represent a negligible portion, loans under most desirable for producers interest from 6% to 10% constituted only 6%.

Figure 33. Interest rates in 2001-2002.

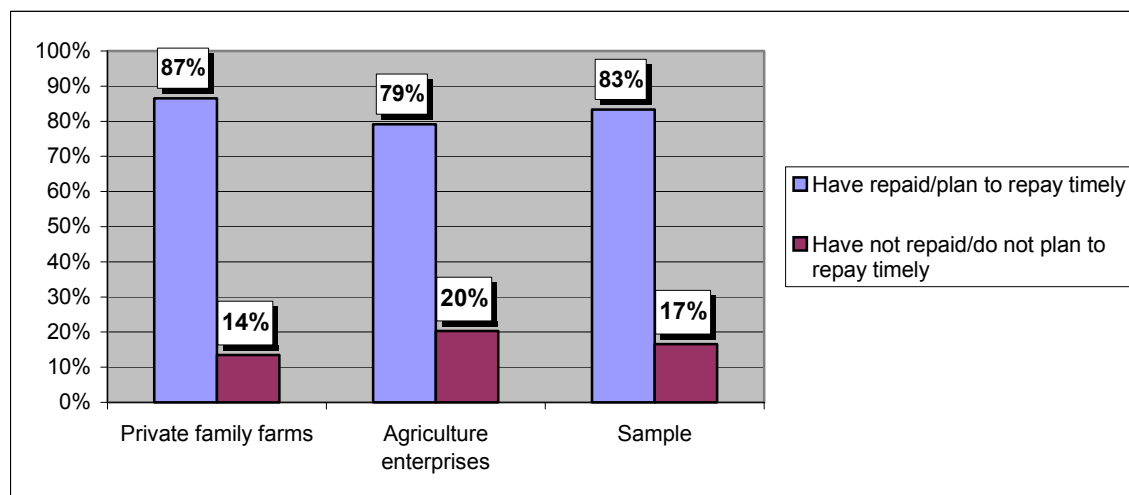


5.5 Loan repayment

83% of respondents who use or have used loans, have repaid or intend to repay them timely (which is the percentage approximately equal to that of the last year, when the similar figure was 84%). Meanwhile, 17% have not returned or do not plan to return loans in time (against last year's 14%)

This year's tendency suggested that private farmers were more likely to timely return loans than managers of reformed collective farms (Figure 34).

Figure 34. Repayment of loans, % of total number of obtained loans.



So, what were the main reasons of non-repayment (untimely repayment) of loans?

It should be borne in mind that the number of producers who obtained loans and have not returned them is insignificant. As we noted earlier, only 26% of the surveyed farmers obtained loans, and only 17% did not return or do not plan to return them timely. Thus, the questions about reasons for non-repayment were answered actually by 18 producers, including 8 private farmers and 10 managers of reformed collective farms. The overall quantity of responses is obviously insufficient to make a meaningful conclusion on the reasons for badly performing loans in Ukraine.

Lack of revenues due to poor harvest ranked highest and was reported by nearly half of respondents. The second major reason, likewise last year, was reported high interest rates. High interest rates appeared to be a much bigger

obstacle for reformed collective farms than for private family farms (recognized an obstacle by less than one third of the surveyed farmers).

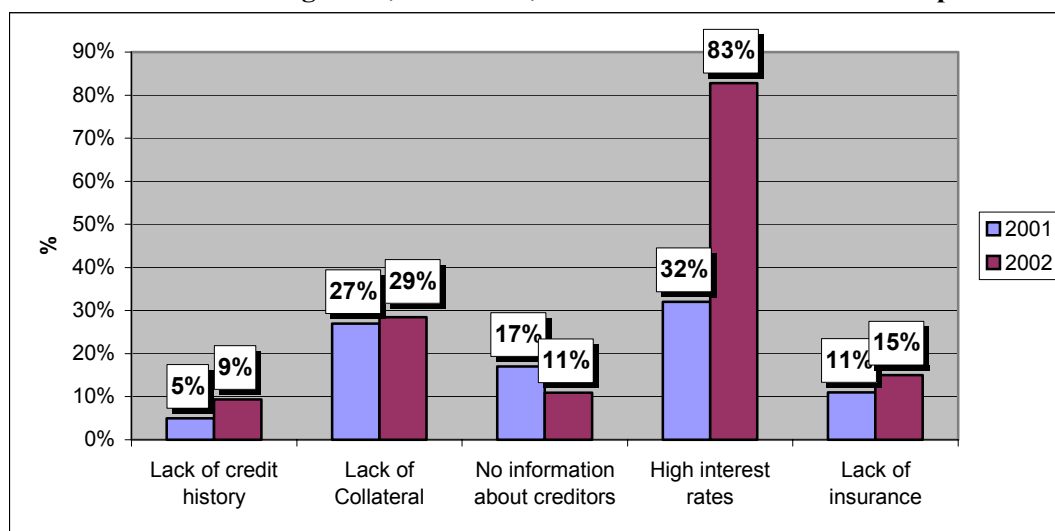
The third obstacle, which was not cited among biggest barriers last year, but which, however, appeared to be so in 2002, was lack of profits as a result of breach of commercial contracts by fraudulent counterparties.

As before, hardly anyone of surveyed producers admitted that difficulties with the return of loans might be an outcome of their ineffective management practices. This year situation looks even worse: while in 2001, 12% of respondents admitted that their inability to repay a loan was a consequence of inefficient usage of the borrowed funds, in 2002 no one recognized that as their own fault. Such result should raise a red flag for both producers and bankers, as it serves evidence of the low level of realization by producers of their own responsibility for effective usage of borrowings.

5.6 Major obstacles to obtaining loans

Similar to previous survey, major obstacles to obtaining loans were cited high interest rates (83% of respondents against last year's 32%), and lack of collateral (29% vs. 27% last year). This is presented in Figure 35 below.

Figure 35. Obstacles to obtaining loans, 2001-2002, % of the overall number of responses.



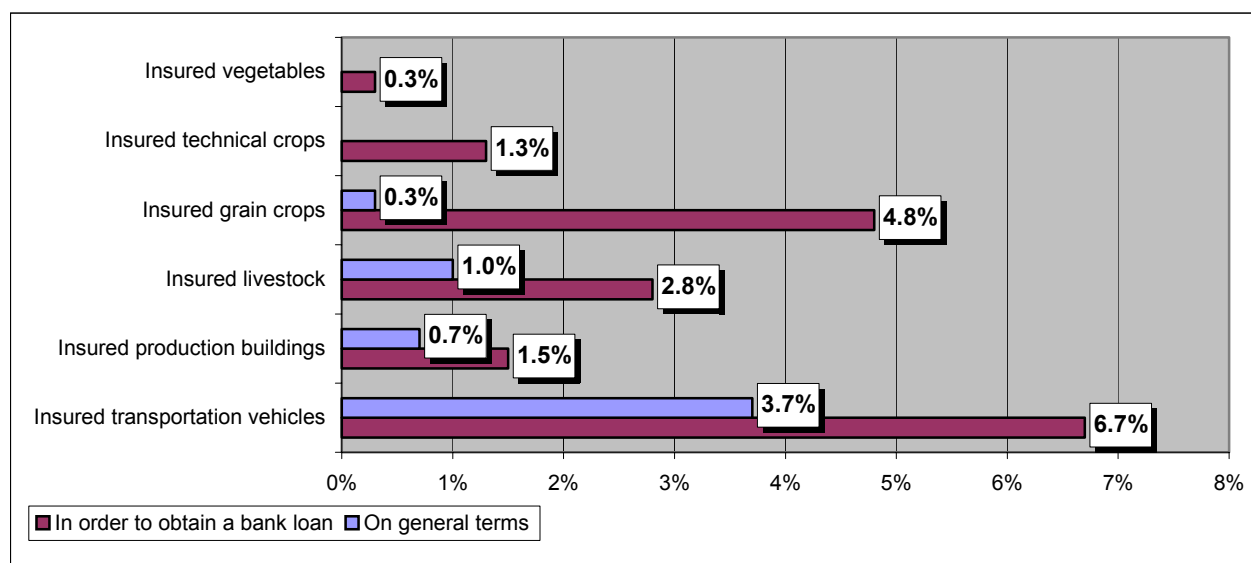
It is important to note that in the 2002 survey, respondents imparted greater significance to such a factor as the availability of insurance coverage: 15% of the surveyed recognized lack of insurance coverage as a barrier to obtaining loan (against 11% of last year). More farms have come to realization of the need to have credit history: 9% of respondents recognized that lack of credit history is a big obstacle to obtaining loans (compared to 5% of last year.)

5.7. Insurance

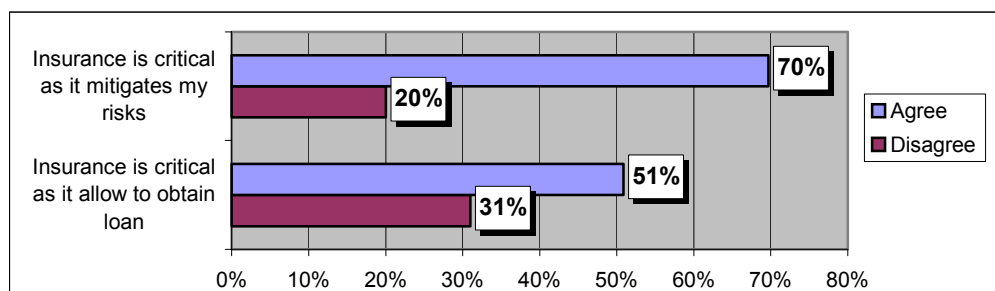
Survey findings demonstrated that the market of insurance services in Ukraine still remains underdeveloped. The vast majority of farm managers taking part in the survey had never insured their operations, nor their farm assets. The major reason forcing producers to take part in insurance is the need to insure collateral while obtaining a bank loan. Therefore, businesses that have used the services of commercial banks largely tended to insure their operations and assets. The percentage of those who bought insurance among borrowers is higher than the respective portion of the sample (Figure 36).

In 2002, 10% of respondents insured their agricultural machinery, of which 7% were those who obtained loans, and 4% were those did not apply for bank credits. Production facilities were insured by 2% of respondents (proportion of those who obtained loans and who did not constituted respectively, 2% and 0.7%). 4% of respondents insured livestock (the respective values are 2.8% and 1%).

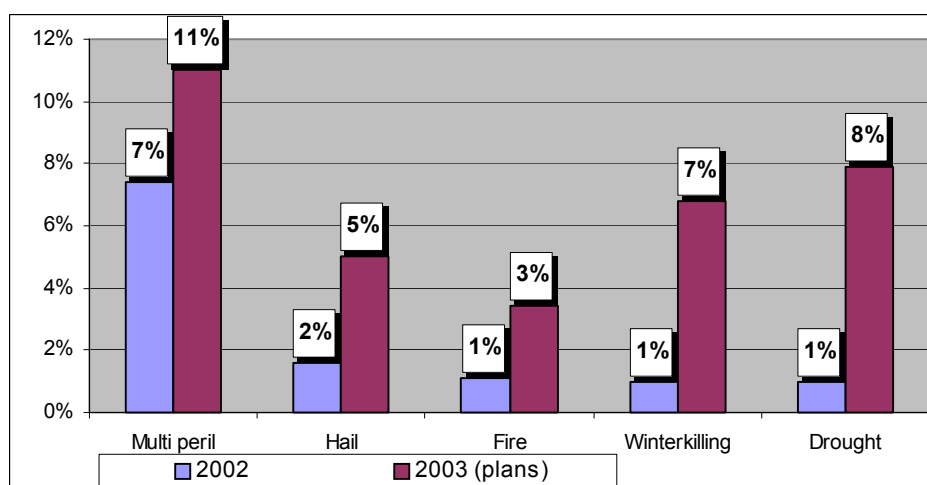
As regards crop insurance, the distinction between those who obtained loans and who did not is even bigger. Particularly, of 5% of those who insured grain crops, 4.8% are represented by those who did that with the purpose of obtaining loans. Technical crops (sugar beets and sunflower) and vegetables were insured exclusively by those who applied for credit (respectively, 1.3% and 0.3% of respondents).

Figure 36. Insurance of farm objects in 2002, % of overall responses

As demonstrated by the survey data, agriculture risks in Ukraine are predominantly insured with the purpose of obtaining loans. However, the obtained data prove that producers do understand value of insurance as a risk mitigation tool rather than a formal precondition to obtaining commercial loans. Further we present data to support this statement (Figure 37).

Figure 37. Main task of insurance

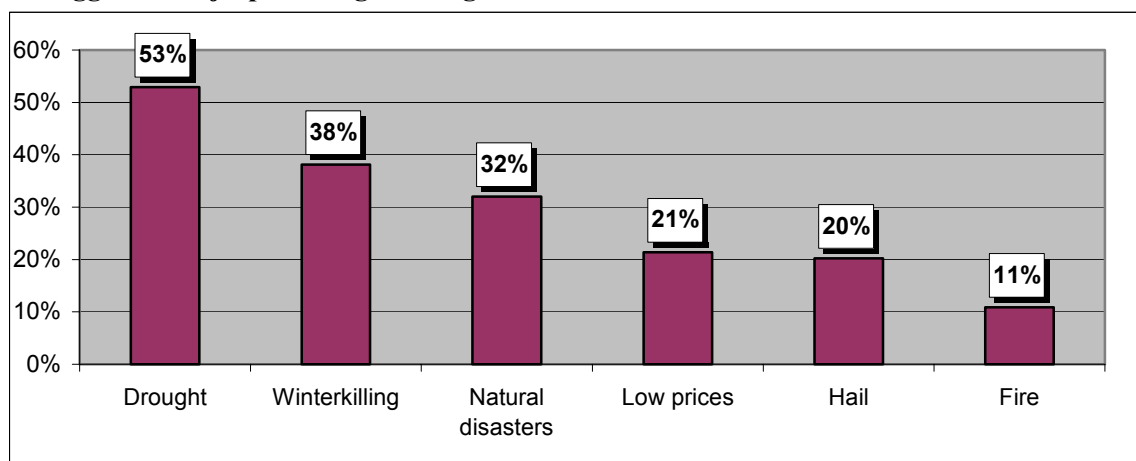
In addition to agriculture producers' realization of insurance value of as a risk mitigation instrument, our data also demonstrate that farmers wish to insure more (Figure 38). Particularly, the percentage of those who would like to insure drought, has grown in 2003 by 7 p.p. vis-à-vis 2002, those who wish to insure the risk of winterkilling – by 6 p.p., and those who bought multi peril insurance – by 4 p.p.

Figure 38. Total crop insurance bought in 2002 and plans for 2003.

Therefore, in our opinion, the statement that no demand for insurance exists in Ukraine's agrarian sector is a big exaggeration. Moreover, if 75% of producers ended their year without loss (40% of which had profits), we may suggest that there is a solvent demand for this services. Of course, it is impossible to say that 100% of producers have to be covered with insurance, moreover such coverage exists nowhere in the world, however, it is possible to say that there exist effective and profitable enterprises which understand the need for mitigation of their production risks and which wish to do it via insurance.

What are the major risks which in the opinion of respondents pose threats for their operations?

Natural perils and adverse weather effects were recognized by respondents as worst risks, with particular emphasis on drought (reported by 53% of respondents) and winter killing (38%). Natural calamities and hail also represent a large concern for respondents (32% and 20% of respondents respectively). Fire and low selling price were quoted by 11% and 21% of respondents among risks not related to weather and climate. As for price risk, the significance imparted to it by agricultural producers, may serve grounds for the introduction in Ukraine, in addition to cost insurance and yield insurance, the insurance of minimum income. This last type of insurance would protect the producers from both lower yields and from lower selling price.

Figure 39. Biggest risks jeopardizing farming sector.

We have noticed from the previous data, that Ukraine has a potential for further development of agriculture insurance services market. However, one of the essential barriers for such development is insurance companies' incredibility in the eyes of farmers. Quite frequently, producers are confident that obtaining indemnity is a very complicated process and of little avail.

According to the survey, 30% of agriculture producers who survived insurable event received indemnification. For 43% of those who was indemnified, the amount of indemnity constituted less than 20% of losses (Table 5).

Table 5. Size of loss indemnity to agriculture producers

	Sample	Private family farms	Agriculture enterprises
Up to 20% inclusive	43%	50%	40%
From 20% to 45%	29%	50%	20%
Over 45%	29%	-	40%

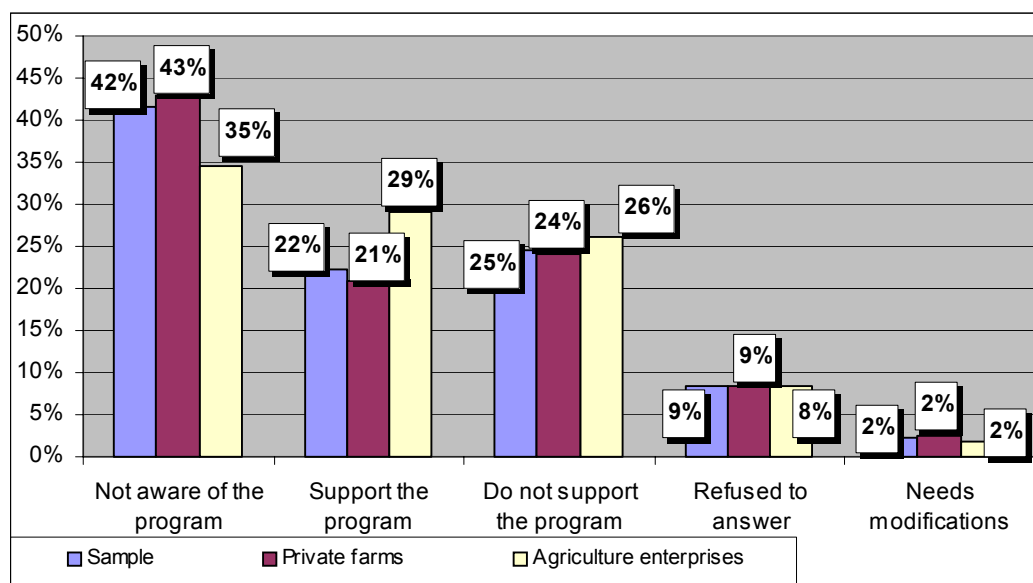
It took half of those who received indemnity from 3 to 6 months to have it paid, another 32% of respondents took less than 3 months and another 18% took more than 6 months.

Thus, successful development of the agriculture risk insurance market to a large extent will depend on whether producers will trust insurance companies. In our opinion, in order to improve their credibility, insurance companies ought to offer their clients simple and understandable products, provide full detail on terms of insurance, clarify rights and responsibilities, and equitably assess any losses incurred by clients. It is better to assume real liability and fulfill it, rather than create ostensibly attractive insurance products, and then find ways to avoid payment of indemnity.

In the course of the survey, we also revealed perceptions by agricultural producers of current problems hindering the development of farm insurance. The obtained responses may be ranked as follows: high insurance rates were rated worst problems (76% of respondents), complicated procedure of obtaining insurance payment was second (64%), while difficult procedure of insurance of output (25%) and limited number of companies offering insurance services (21%) were third in the list.

Finally, during the survey we clarified the producers' attitude towards mandatory insurance introduced by the government in July 2002 for some crops¹² (Figure 40). The biggest portion of responses (42%) indicate that farmers are not aware of such program, while 25% of respondents do not support it considering it additional burden for farmers, and 22% of respondents do support the program believing that it allows to reduce risks.

Figure 40. Agriculture producers' perceptions of the government mandatory insurance program.



The main finding which should be emphasized in relation to this issue, is agriculture producers' poor awareness of the terms of the government program. The fact, that answers in support of and against the program split almost in halves, serves evidence that respondents were hardly familiar with the essence of the program, and while expressing their support or disapproval of the program, they most probably implied different things. The received findings once again underscore different perceptions of private family farmers and agricultural enterprises of

¹² See Resolution #100 of the Cabinet of Ministers of Ukraine of July 10, 2002

government support programs: private farmers are less likely to support such programs than reformed agriculture enterprises. In our opinion, this fact can be explained by the following: First, private family farmers used relying more on their own resources than on the government aid, and, second, they know from their own experience that their access to such programs is more difficult.

6. MANAGEMENT AND LEGAL ASPECTS OF FARMING OPERATIONS

As heads of private family farms and managers of reformed agriculture enterprises were a target group of this survey, one of the goals of this study was to identify a circle of legal and management issues, facing agriculture producers in their business activity.

As this is the second study in a row, it gives an opportunity to track certain dynamics of changes happening in Ukraine's agrarian sector over the last two years when the survey was undertaken. Despite this short timeframe, it is important to note that these changes in legal and management aspects of producers are quite notable.

Likewise in the previous 2002, respondents were broken down into two major categories: private family farms and agricultural enterprises that were formed in place of former collective agriculture enterprises and collective farms, and thus became their successors.

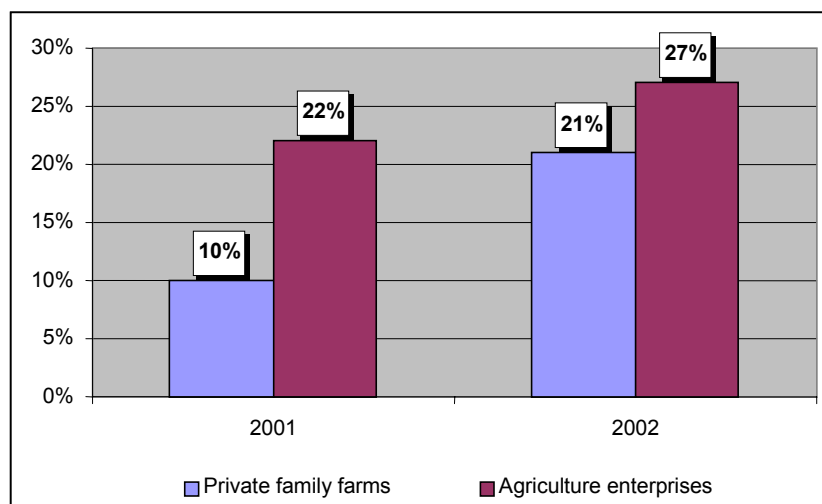
The period 2002 and 2003 is characterized by the enactment of the new Land Code of Ukraine, voted for October 25, 2001, and a number of other normative acts and legal regulations pertaining to landownership relations. Therefore, in the course of the survey we placed particular emphasis on assessing impact of these documents on agricultural producers.

6.1 Landownership relations

Among problems farmers had faced before 2002, a significant portion fell specifically on regulation of landownership relations. As was demonstrated by results of this survey, these problems have not become less urgent in the last period.

A substantial share of problematic land-related issues fall upon problems of regulating lease contact arrangements. Moreover, it is regretful but compared to previous year the portion of problematic issues has increased notably. While in 2001 these problems were a concern for 13% of respondents, in 2002 they bothered 22%.

Figure 41. Proportion of agriculture producers who faced problems related to rent of land, % of respondents



As may be seen from Figure 41 below, even though this portion in the sample has grown from 13% to 22%, the private family farms have demonstrated the highest growth rate of those who faced problems with rent of land. An explanation to this growth may be that the new Land Code of Ukraine (further – the Code) introduced several provisions that have changed status of lands which were earlier used for agriculture purposes.

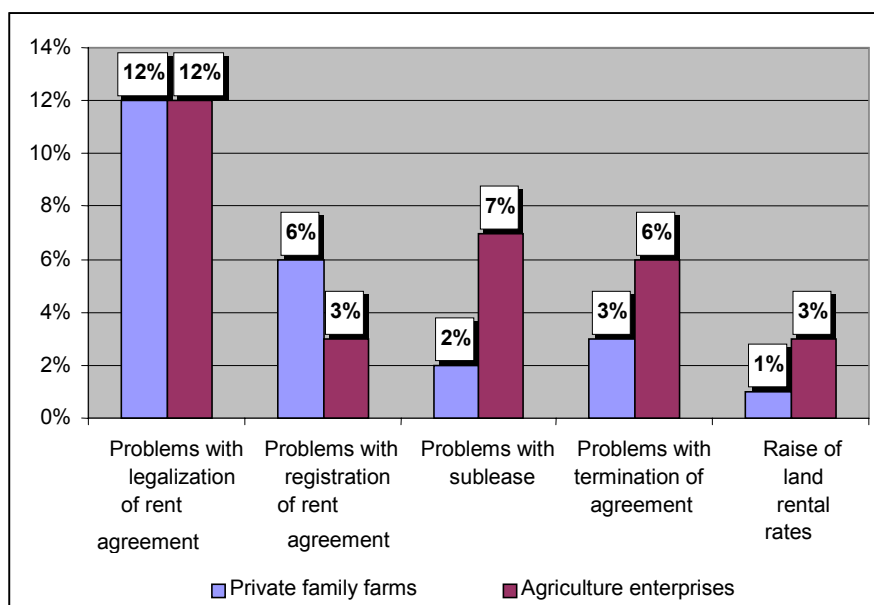
For instance, according to the Transitory Provisions of the Code, persons that have land plots in permanent usage, however, according to new provisions, may no longer have permanent usage title for these lands, need to have their titles legalized by January 1, 2005 as ownership title or rent.

In addition, a significant number of owners of land shares have exercised their right to have their respective land plots allocated and ownership title issued. Moreover, while before they had closed rent agreements for land share, now they have to change those agreements for rent of privately owned land plots.

In the regional context, problems with rent of land plots were most frequently encountered by respondents from Poltava and Zhytomyr oblasts: respectively, 33% and 30%. Meanwhile, Donetsk and Kherson oblasts have the lowest percentages of agriculture producers who had faced such problems: 14% and 17% respectively. In our opinion, such regional variations may be explained by both a slightly higher portion of private family farms among respondents of the last two oblasts, and by extensive informational campaign run there, particularly, by technical assistance projects.

In the survey, we aimed to define the breakup of the problems related to land rent. As may be observed from Figure 42 below, the biggest percentage of problematic issues is represented by legalization of a land rent agreement, its writing and negotiating of disputable clauses. This is equally true for private farms and for agricultural enterprises. It is important to note that while 12% of the sample have problems with legalizing rent agreements, in Poltava oblast the respective figure reaches 20%. One of the reasons for such regional distinctions may be some local specifics in relationship between agriculture producers, local governance and government bodies.

Figure 42. Major problems faced by private family farms and agriculture enterprises while renting land, % of respondents.



Indeed, in order to close a rent agreement, some specific knowledge and assistance of qualified lawyers is needed, otherwise certain problems with the state registration of land rent agreements may arise. This evidences that the next serious concern for farmers is the problem of registration of rent agreements. This is reported by 6% of private family farms, while for larger farmers this figure is twice as less: 3%. Private farmers appear to face problems associated with registration of rent agreements twice as often compared to agricultural enterprises. As regards regional variations, respondents in Ivano-Frankivsk and Donetsk oblasts appear to have encountered no problems with rent agreement registration. Meanwhile in Poltava oblast, the portion of those who did have problems with the registration, reaches 12%.

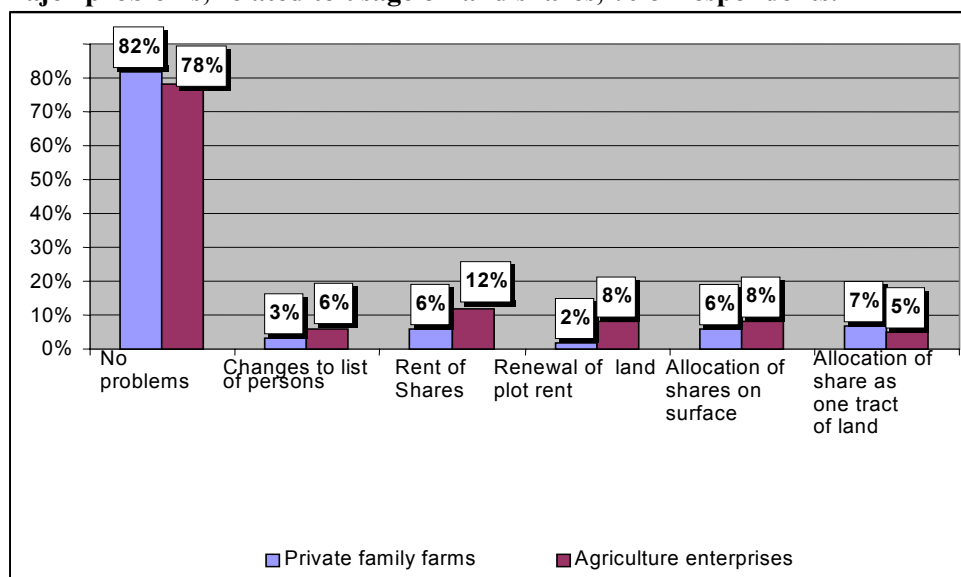
Quite an opposite situation is observed in the area of land sublease. Only 7% of agricultural enterprises and 2% of private family farmers have to deal with problems while subleasing their lands. This situation may be explained by the fact, that under the current legislation, only individuals are entitled to provide farmlands for sublease (for example, members of private family farms), while legal entities (successor of former collective farms) are not entitled to do that. However, results of the survey imply that legal entities have a need to provide land plots for sublease.

As regards usage of land shares, rent of land shares was recognized the biggest problem by all respondents (Figure 43). This problem to a larger extent is applicable to agricultural enterprises – collective farms' successors: 12% of such respondents had to handle hurdles related to rent of shares. In our opinion, an explanation of this situation is the fact that many agricultural enterprises closed rent agreements and had to put up with the fact that

under legislation, a land share owner may at any time have it demarcated on the surface and thus, in essence, unilaterally change the subject of rent agreement. For private farms this figure is 6%.

According to results of the survey, businesses of Poltava and Zhytomyr oblasts are more likely to encounter problems associated with rent of land shares. Thus, respectively, 17% and 11% of respondents in these oblasts reported they faced various difficulties related to rent of land shares.

Figure 43. Major problems, related to usage of land shares, % of respondents.



A conclusion may be derived from the survey that today the issue of finding “vacant” land to farm is not a problem. 77% of respondents stated they never encountered the problems of finding lands for privatization or rent, and additional 8% believe they do not have such a need at all. Although this question was not asked direct, we, nevertheless may assume that the most common problems are those related to providing land for rent. This is explained by the fact that in rural area today we have lots of land share owners reluctant or incapable to farm it on their own (pensioners or people living far from their land plots), and therefore they are forced to hand their land over to other users.

Meanwhile, there are few successful entrepreneurs in rural area today who have sufficient expertise and required resources (equipment, working capital etc.) and who could pay bigger rental fee, thus fueling competition for lands.

It is interesting though, that irrespective of the growing quantity of real landowners (those who received their land plots and landownership titles), the number of those who would like to get rid of their land plot via alienation, has not increased. The survey findings regarding the possibility to buy or sell land plots are presented in Table 6 below. The prevailing majority of respondents believe that the introduction of a possibility to buy and sell land plots will result in waste of the national wealth. This opinion was expressed by 46% of respondents: 44% of private family farms and 54% of agriculture enterprises. In addition, 39% of family farms and 29% of agricultural enterprises believe that unrestricted sale and purchase of land plots will lead to lands concentrated in hands of a small group of owners.

Table 6. Producers’ perception of the possibility to purchase-sell land plots, % of responses

	Private family farms	Agricultural Enterprises
This would facilitate effective usage of land	29%	12%
This would result in additional capital inflow	14%	9%
This would result in lands concentrated in hands of a small group of owners	39%	29%
This would result in sell-out/waste of the national wealth	44%	54%
Other	8%	10%

For comparison: a significantly smaller portion of agricultural producers believe that the land market would assist in more effective usage of land (26% of responses) and help to attract additional investment into the sector (13% of the sample). It is important to note that private family farmers were more eager to vocalize their opinions. Thus, while only 12% of the surveyed agriculture enterprises believe that the possibility to sell and buy land will facilitate a more effective usage of land resources, positive responses to this question were given by 29% of private farmers.

The results discussed above provide additional evidence of conservatism still dominating among a significant portion of Ukrainian agricultural producers as regards the possibility to create a market of farm lands. In our opinion, in many cases the concerns expressed by producers have no solid grounds, as they do not take into consideration economic preconditions and legal framework of the development of landownership relations. The last thesis is strongly supported by results of this survey.

6.2 Impact of Some Legislative Acts on Farming Operations

An important foundation of a stable and profitable business is profound understanding of land users' rights and duties, and rights and responsibilities of parties in contractual relationship. This refers, first of all, to rights and responsibilities fixed by the provisions of the Land Code of Ukraine adopted on October 25, 2001. Article 6 of the Law of Ukraine "On Rent of Land" states that farm lands may be provided for rent only to individuals having skills and expertise required for soundly operating a farm.

In view of that, quite impressive is the portion of surveyed agriculture producers, prevalently heads of private farms, who noted that they were hardly aware of the new Land Code of Ukraine. This was reported by each fifth manager of private farm and each tenth surveyed head of agriculture enterprise. This difference is explained by a stronger influence produced by oblast and raion agriculture departments on large farms.

Speaking about the knowledge of primary clauses and novelties of this document, less than half of respondents seem to have overviewed them: 48% of private family farmers and 40% of agricultural enterprises. In the regional context, farmers of Kherson oblast appear are most cognizant (54% of respondents in the oblast are familiar with certain provisions of the Code), while producers of Ivano-Frankivsk and Zhytomyr oblasts – least aware of them (respectively, 28% and 29% of respondents in oblasts).

This same tendency persists with regard to the awareness about enactment and enforcement of some other legislative acts, regulating landownership relations. These data are represented in Table 7 below.

Table 7. Proportion of respondents aware of the enactment and enforcement of some legislative acts, % of total number of respondents.

Title of the Document	Kherson	Poltava	Zhytomyr	Ivano-Frankivsk	Donestk
Decree of the Ministry of Agrarian Policy of Ukraine № 189 of 02.07.2001 «On the Approval of Methodical guidance to organization and maintaining book keeping and accounting by private farms»	79%	77%	65%	78%	84%
Resolution of the Cabinet of Ministers of Ukraine of April 2, 2002 № 449 «On the Approval of format of the Land Ownership Title (Act) and the State Act on the Right to Permanent Usage of the Land Plot»	84%	92%	77%	80%	81%
Law of Ukraine «On Amending article 13 of the Law of Ukraine "On Rent of Land"	77%	87%	73%	74%	78%
Law of Ukraine "On Grain and Market of Grain in Ukraine"	55%	80%	64%	72%	72%
Decree of the Ministry of Agrarian Policy of Ukraine, Ministry of Finance of Ukraine, Ministry of Economy and Issues of European Integration of Ukraine of June 17, 2002 № 162/426/181 "On the Approval of Procedure for the provision and usage of agriculture financial support"	59%	73%	54%	67%	71%
Decree of the President of Ukraine of August 27, 2002 #774 "On additional steps to raise protection of rural population's property rights"	53%	69%	65%	75%	65%

Private family farms are less aware about provisions of legislation impacting farming operations than agricultural enterprises. An explanation to this situation is that many agriculture enterprises have staff lawyers. As may be observed from the Table above, farmers in Zhytomyr oblast are the least competent in legislation.

It is difficult to think of any other explanation, than varying scope of efforts input by local administrations, agriculture departments and regional mass media (printed publications and radio) into the education of farmers.

It was particularly important to determine opinions of respondents with regard to impacts of separate legislative acts on business activity. Despite a certain amount of subjectivism in the results, they reflect respondents' attitudes towards the government policy. A list of legislation that was suggested to producers for assessment, is presented in Table 8 below.

Table 8. Respondents' perceptions of certain legislation, % of responses

Title of the Document	Negative impact	Positive impact	No impact	Difficult to say
Decree of the Ministry of Agrarian Policy of Ukraine № 189 of 02.07.2001 «On the Approval of Methodical guidance to organization and maintaining book keeping and accounting by private farms»	10%	58%	25%	7%
Resolution of the Cabinet of Ministers of Ukraine of April 2, 2002 № 449 «On the Approval of format of the Land Ownership Title (Act) and the State Act on the Right to Permanent Usage of the Land Plot»	7%	57%	28%	8%
Law of Ukraine «On Amending article 13 of the Law of Ukraine "On Rent of Land"	7%	60%	26%	7%
Law of Ukraine "On Grain and Market of Grain in Ukraine"	16%	32%	40%	12%
Decree of the Ministry of Agrarian Policy of Ukraine, Ministry of Finance of Ukraine, Ministry of Economy and Issues of European Integration of Ukraine of June 17, 2002 № 162/426/181 "On the Approval of Procedure for the provision and usage of agriculture financial support"	8%	34%	48%	10%
Decree of the President of Ukraine of August 27, 2002 #774 "On additional steps to raise protection of rural population's property rights"	9%	39%	40%	12%

Agriculture producers' attitudes towards certain legislation vary. This is evident from responses of both private farms and reformed enterprises. Thus, if we talk about the Law of Ukraine "On Grain and the Grain Market in Ukraine", Decree of the Ministry of Agrarian Policy of Ukraine, Ministry of Finance of Ukraine, Ministry of Economy and Issues of European Integration of Ukraine "On the Approval of Procedure for the Provision and Usage of Agriculture Financial Support" and Decree of the President of Ukraine of August 27, 2002 #774 "On Additional Steps to Raise Protection of Rural Population's Property Rights", then in the opinion of respondents, these documents did have a significant impact on their operations.

Such evaluation of the last three documents with regard to their impact on agriculture enterprises' operations, is probably explained by the fact that these documents aim to regulate the farmers' most pressing issues which have remained unregulated over a long period of time. Effective operations of Ukrainian agriculture producer depend on the successful resolution of property relations in rural area. The issue of grain storage and sale stands no less acute. Today there exist huge discrepancies between Ukrainian and the worldwide grain standardization systems. Ukraine lacks a good mechanism of pledge purchases while producers generally distrust the mechanism of sale via commodity exchange. A painful suspension of these issues settlement undermines farmers' belief in their positive resolution.

6.3 Organization of Commodity Production and Acquisition of Legal Skills

A separate section of the survey included questions related to specifics and problems in connection to organization and running commodity farming operations. The biggest problems arising on the way of effective organization and management of agriculture production operation is the lack of needed legal knowledge. This was a concern for 8% of the surveyed, with a portion of private family farms a bit higher, equaling 12%. The second

biggest concern, reported by 7% of respondents, was record keeping and accounting, which was once again caused by lack of special expertise.

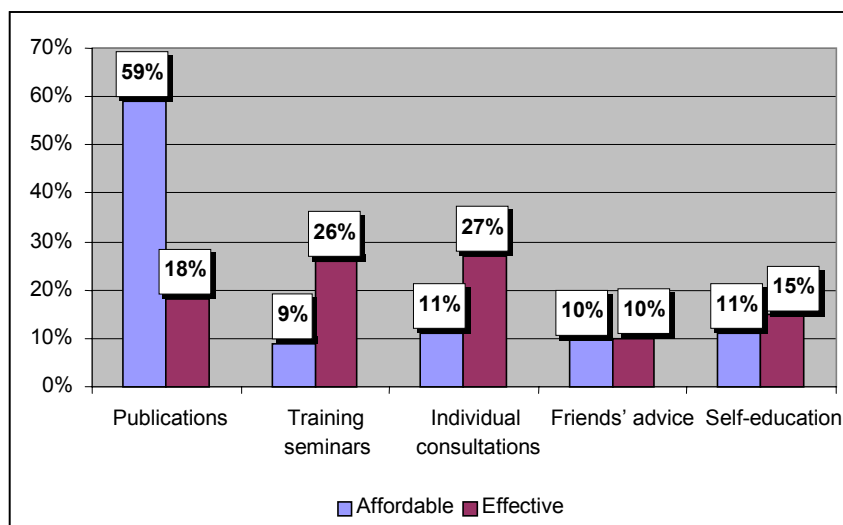
Overall, the survey revealed a quite high legal awareness of agriculture producers. Thus, 20% of all surveyed farmers try to resolve all disputable issues themselves, with the highest portion of these in Poltava oblast, 29%. We believe that this situation may be a result of the following few reasons: farmers' lack of trust to government authorities and bodies of local governance, unawareness of their own rights and duties, and a time-consuming, and frequently, expensive procedure of dispute resolution in court. Existing concerns about court resolution procedures are supported by evidence provided by 3% of respondents.

Even though the possibility to develop agriculture service cooperatives was recognized by almost half of producers (49%) as a good facility to organize production and sell farm output, some sporadic cooperatives, however, have not evolved into a powerful movement. One of the explanation to this situation is lack of needed knowledge and trust among the producers. These statements were supported by the obtained data: 12% of respondents noted they cannot find reliable partners to join them in a cooperative. Many of the surveyed do not distinguish between a cooperative and a collective farm, and do not recognize the value of cooperation. More detailed information about the development of marketing cooperatives and obstacles to the development may be found in the section "Marketing Agriculture Produce" of this report.

In the course of the survey we also attempted to determine the best ways of raising farmers' awareness about applicable legislation. Therefore we put two interrelated questions to them: "What forms of raising your awareness about legislation are most affordable to you" and "What forms of raising your awareness about legislation are most effective". As proven by the survey findings, responses to these two questions do not coincide.

Publications in mass media were recognized the most affordable forms of obtaining legal knowledge by the absolute majority of respondents: 59% of the sample (this appears to be true for many other sectors as well). However, most of the surveyed are not always able to find all they need exclusively from mass media. Therefore, no wonder that most efficient forms of legal education were recognized individual consultations and participation in educational seminars. These opinions were expressed by respectively, 27% and 28% of respondents (Figure 44).

Figure 44. Agriculture producers' attitudes towards efficiency of different forms of legal education, % of responses.



It is interesting that managers of large agricultural enterprises tend to prefer seminars to individual consultations – 36% vs. 24%, while managers of family farms appear to be more in favor of individual consultations: 28% against 20%.

It is clear, that training seminars and individual consultations are two most expensive forms of education. However, considering their apparently highest effectiveness, in most cases it makes sense to encourage and support these training and advisory forms.

7. SOCIAL ASPECTS OF RURAL DEVELOPMENT

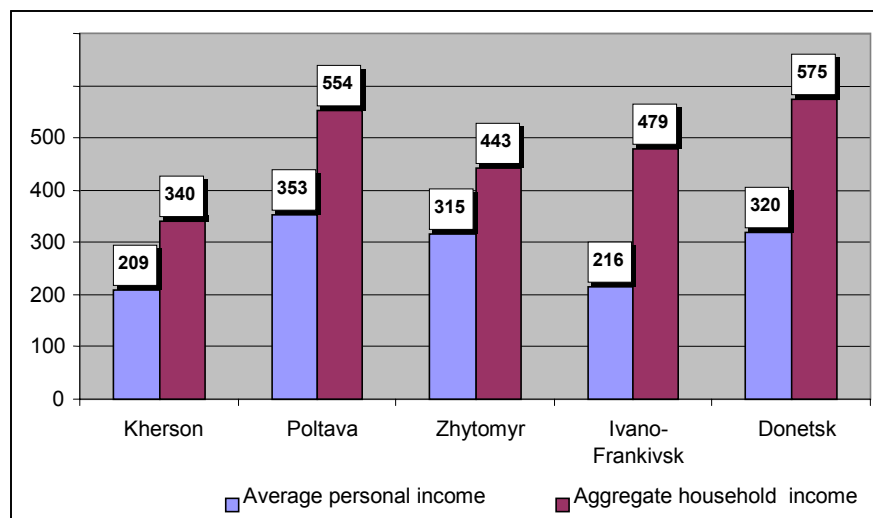
One of the key objectives of agrarian reform is to address social problems of rural communities and improve lives of rural residents. In view of that, this section of the survey focuses on issues of rural community's social development.

7.1 Material well-being of agriculture producers

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.

In 2002, respondents' average aggregate household income was 472 UAH per month (median income was UAH 390). The biggest income was 3,500 UAH. The aggregate income of heads at private family farms is slightly lower than that of managers of agriculture enterprises: respectively UAH 447 and UAH 576. As shown on Figure 45, in the regional context the highest average aggregate income is in Donetsk oblast (UAH 575) and lowest in Kherson (UAH 340). This lowest average aggregate income in Kherson oblast may be explained by specifics of selection of the survey sample. Thus, a significant portion of private family farms with lower income in Kherson oblast affected the general picture of the aggregate income in the oblast.

Figure 45. Average personal and aggregate household incomes of agriculture producers (private farms and agricultural enterprises), UAH.

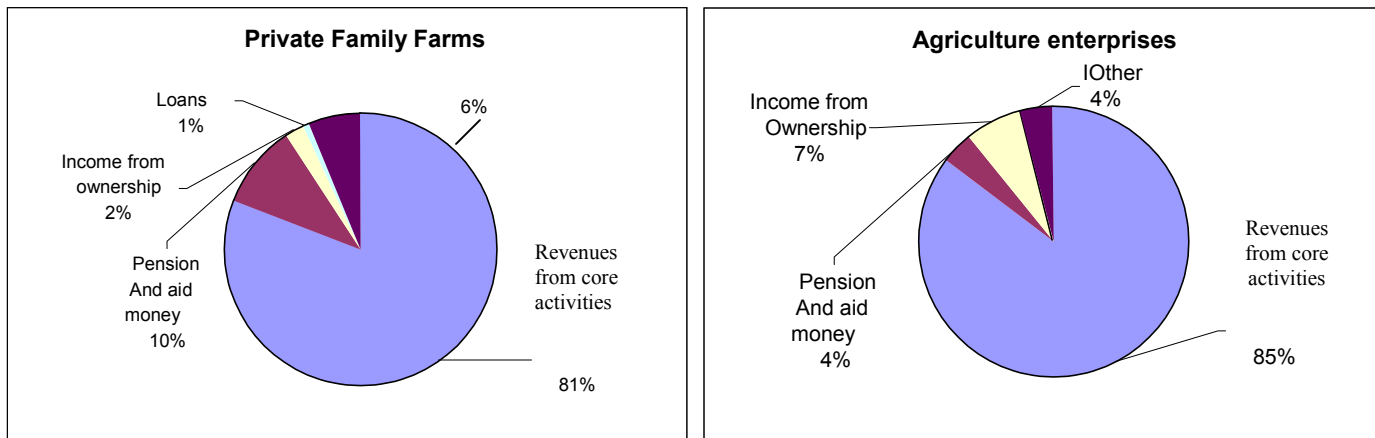


There is a difference between levels of personal income in private family farms and for managers of reformed agriculture enterprises. Personal income of the latter is also higher equaling UAH 376 (against family farms' UAH 263). Likewise in case with aggregate household income, incomes of producers in Eastern and Central regions are higher than those in Northern and Western areas.

Salary and/or revenue from the core activity is the main source of households' income (Figure 46). Overall in the sample, this source is the primary income-generator for 81% of private family farms and 85% of agriculture enterprises. Pensions and welfare funds rank the second most important source of income for family farmers, and third in the household budget for employees of agriculture enterprises.

For employees of agriculture enterprises, the income generated by ownership titles also plays an important role. The weight of this source of income of this category of farmers is 7% (2% of incomes of private family farms). In our opinion, a bigger weight of income from ownership titles in agriculture enterprises staff's household incomes may be explained by broader opportunities of the latter to obtain additional income by leasing land plots and assets out.

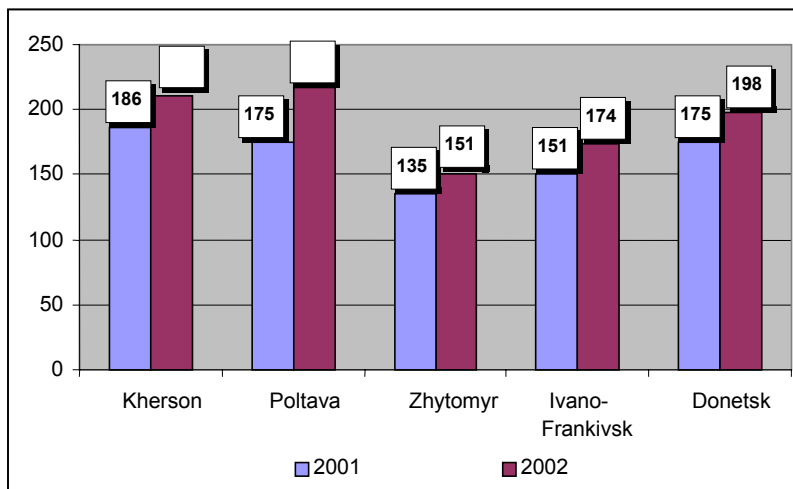
Figure 46. Main sources of household incomes, %.



In addition to data on farmers' income, the survey also elicited information about average salaries of private family farms' and agriculture enterprises' employees. In 2002, average salary of a family farm employee was UAH 201 (in 2001 – UAH 172), while of an agriculture enterprise's employee's – UAH 189 (in 2001 – UAH 163). As proven by the obtained data, despite certain growth of absolute values, average salary of workers in agriculture sector remains one of the lowest among other sectors of the economy.

Over last two years, growth of salary could be observed across all surveyed regions (Figure 47). However, obtained data demonstrate that there exist regional variations in wages of farm workers. Salary is highest in farms of southern and central regions, where the large scale operations concentrate, and the lowest – in the North and West of the country. For example, in 2002, salary of farms' employees in Zhytomyr oblast only reached two thirds of the salary of that of agriculture workers' in Kherson oblast.

Figure 47. Average salary of agriculture producers in 2001 and 2002, UAH.

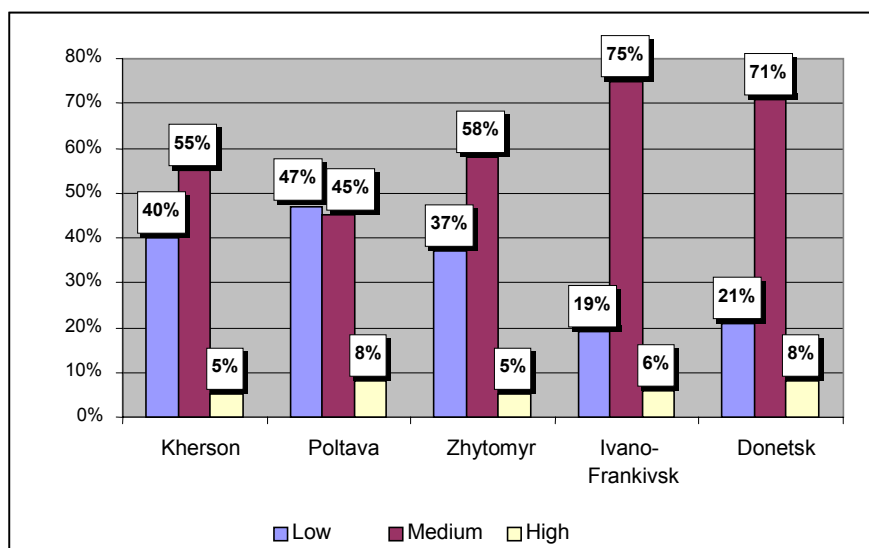


Finally, this survey allowed to obtain farmers' self-assessment of their well-being. Respondents were asked to assess their level of income as "low", "medium" and "high". More than half of respondents (59%) regard their level of income as medium, while for agriculture enterprises the respective portion is a bit higher than for private family farms: 57% against 68%. Of those who perceive their income level as low, the percentage of family farmers is higher equaling 36% as compared with 28% among managers of reformed agricultural enterprises. This situation may be explained by both low levels of aggregate income among private family farms, and a considerable portion of managers of agriculture enterprises among respondents in this category of agricultural enterprises. Considering this fact, we assume that material well-being of the latter is better than the aggregate income of plain workers of agricultural enterprises.

Somewhat unexpected were results with regard to perceptions of respondents at the regional level. The portions of respondents in the South and Center, that perceive their well-being low, is bigger than in Western and Northern

oblasts (Figure 48). Possible explanation here is that respondents from the latter regions assess their material well-being, based on lower general level of income in the oblast.

Figure 48. Respondents' perception of their income level, % of the overall number of respondents.

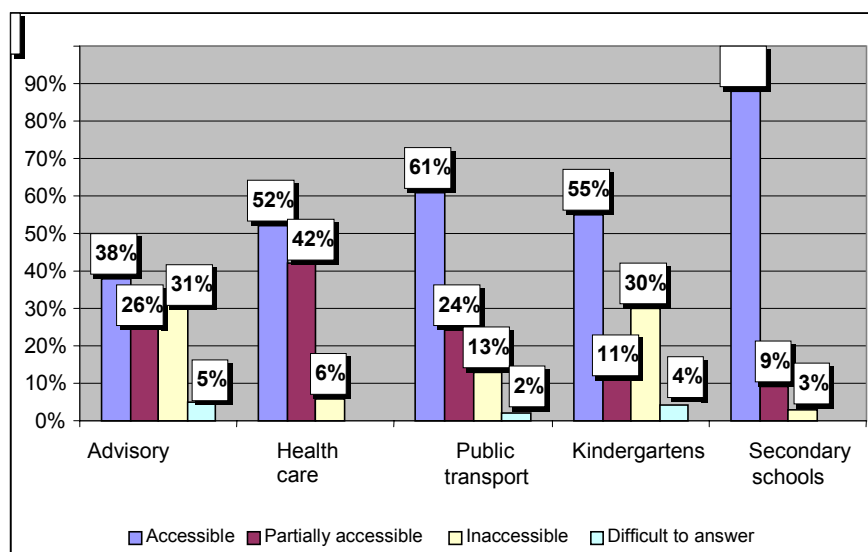


7.2 Development of services market and participation in activities of NGOs

A commonly known fact is that the level of accessibility of various services in rural area is much lower, than in urban area. Agriculture producers have limited or no access to many vital services. This statement is supported by results of this survey. (Figure 49).

In the course of the survey, we asked respondents to determine accessibility of services as: accessible, partially accessible and inaccessible.

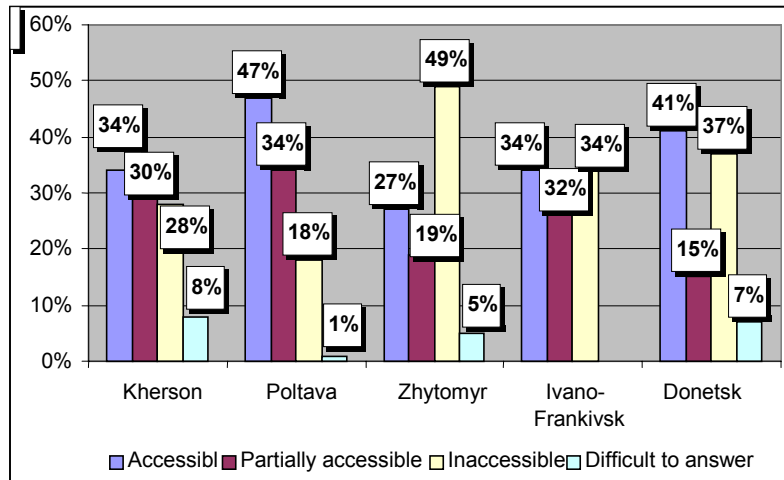
Figure 49. Accessibility of various services to agriculture producers, % of the total number of responses.



Particularly, inaccessible for farmers are advisory/extension services (Figure 50). While 38% of respondents called such services accessible, the total portion of those who thinks these services are partially accessible or inaccessible, reaches 57%. Agriculture enterprises have better access to advisory services: these services are accessible for 36% of family farms and 44% of agriculture enterprises. More specialists in staff of agriculture enterprises translate into more available expertise and provide an explanation to their better access to advisory services.

Of all surveyed oblasts, farmers of Zhytomyr oblasts have the worst access to advisory services, while those in Poltava and Donetsk oblasts – the lowest. This situation may be explained by both low level of agriculture producers in Zhytomyr oblast, and a more proactive approach of consulting centers, particularly, within the framework of technical assistance projects, namely, Poltava and Donetsk oblasts.

Figure 50. Accessibility of consulting services for agriculture producers, % of total number of responses.



As for other services, most accessible appear to be educational services, particularly, secondary education, and public transportation services. Over half of respondents (52% of the sample) noted also that they have access to medical services, while another 42% of respondents said that these services are partially accessible. Comparing level of accessibility of services for private family farms and agriculture enterprises, it is important to say that generally the latter have easier access to various services.

Finally, in the course of the survey we tried to estimate how actively farmers are involved in activities of NGOs dealing farming activities. As demonstrated by results of the survey, private family farmers are more willing to take part in NGOs than staff of reformed collective farms. While only one in five employees of agriculture enterprises take part in the NGOs, the portion of private farmers who do that is 42%. Family farmers typically belong to local farmer associations.