

# A Review of Organisational Change in the Ukrainian Agricultural Sector

Prepared for           INTAS Project: Supporting the International Development of the CIS  
Agricultural Sector

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# 1. Introduction

The report was prepared as part of the first phase of INTAS project No 04-79-6928. The report presents secondary data outlining the state of the Ukrainian agriculture sector including market drivers and organisational change that has been evident in the sector.

The purpose of the review was to estimate organisational changes in the agricultural sector in Ukraine to set the context for further investigations and to select the specific sector for investigation as part of the second phase of research.

Ukrainian agriculture has great potential which is not fully employed. Whilst agriculture demonstrates recovery, the gross agricultural output remains far below the level seen in 1990. The crop sector seems to be more profitable and attractive for investors than production of animal products, where performance has been lower.

Individual farms and households create the main share of animal products, while there are few highly productive large farms using modern technology. The report also provides an overview of the general state of the agricultural sector.

Although the current level of capital investment in agriculture remains modest, the development of the food industry, level of capital investment and export dynamics in some sub-sectors testify that in the near future the agri-sector has the potential to attract significant investments. Such large investments in agriculture will only be possible if land ownership issues are effectively resolved.

The level of consolidation in some of the food industries is significant enough to suggest maturity in these sectors. For some sectors (like dairy sector) the fragmentation in milk supply (individual farms and households) has become a serious problem. In most business to consumer sectors branding is becoming increasingly prevalent and important.

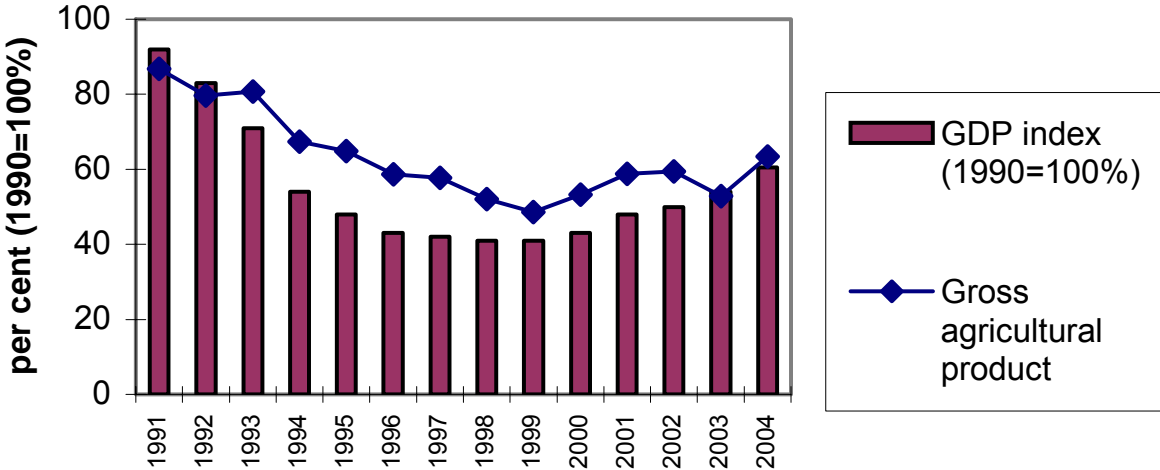
It is recommended that the dairy sector is selected as the sector for further investigation in the next phase of this research.

## 2. Outline of Ukrainian Agriculture

### 2.1 GDP, Gross agricultural output and capital in agricultural sector

Traditionally agriculture has been an important branch of the Ukrainian economy. Presently it produces a significant share (about 11%) of the Ukrainian gross value added and nearly 13% of GDP. It constitutes a considerable part of Ukrainian exports (nearly 10% in 2004). In the early 1990s with the downfall of the USSR, the Ukrainian economy faced a system crisis. Fig. 2.1 highlights decreasing GDP and gross agricultural output during this period. In 1999 both indices had fallen by nearly 50% when compared with the levels seen in 1991.

Fig.2.1 Indices of GDP and GAO (gross agricultural output)



Source: Ukrainian State Statistics Committee

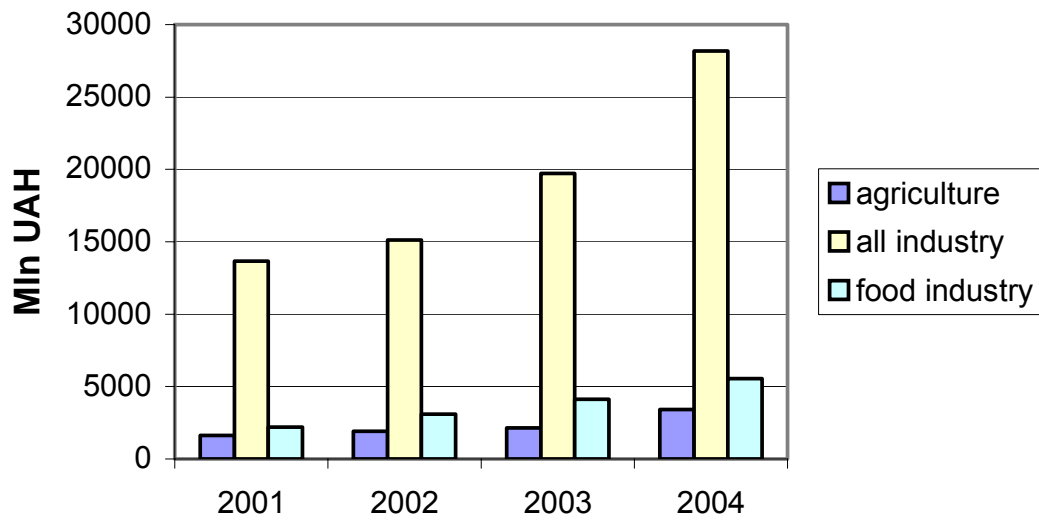
Despite being rich in arable agricultural land (42 mln ha, 70% of which is chernozem) and enjoying the moderate continental climate favourable for growing grains and sunflower, root crops and vegetables Ukraine demonstrated poor and declining performance in agriculture for about a decade. A slow recovery started in 2000 when agriculture grew by about 10%. Since 2000 agricultural output has gradually grown for four years with the exception of 2003 when the output dropped off by about 11% due to extremely unfavourable weather conditions.

Meanwhile the capital investments in agriculture stayed at a very low level, in 2004 the share of capital investments in agriculture was only about 4% of the total investments (Fig 2.2 ) with the proportion of investments in agriculture as a percentage of total investments declining, 18% in 2001, 14% in 2003, (Fig 2.3).

The same situation has been evident for foreign direct investments (FDI) in the agri-food sector. In 2004 only 3% and 13% of FDI in the Ukrainian economy was related to agriculture and food industry respectively (Fig 2.4).

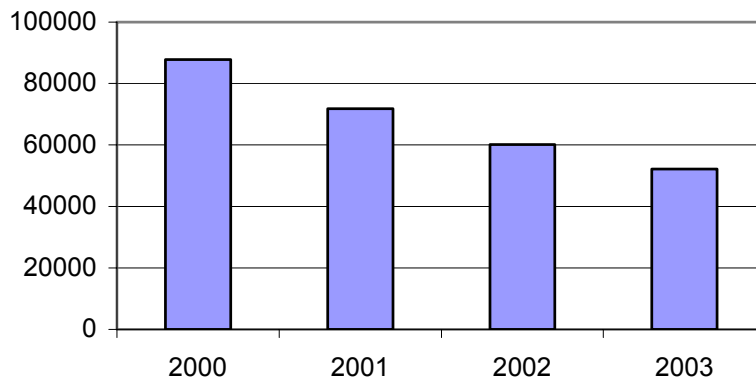
The structure of FDI and the shares of the most important country investors are shown in Fig. 2.5. The increase in FDI in agriculture is expected to grow provided the issue with ownership of land is effectively resolved and investment risks are thereby reduced. Investments are made in the sectors with the highest export potential (grains, sunflower seeds) and where vertical integration with the processing sectors is desirable. The greatest share of investment come from offshore zones and can be related to the Ukrainian capital reinvestments. Growth in FDI in the food industry is expected to stimulate investments in agriculture.

Fig. 2.2 Capital investments



Source: Ukrainian State Statistics Committee

Fig 2.3 Changes in capital in agriculture, mln UAH



Source: Ukrainian State Statistics Committee

Fig. 2.4 Shares of FDI in food industry and agriculture

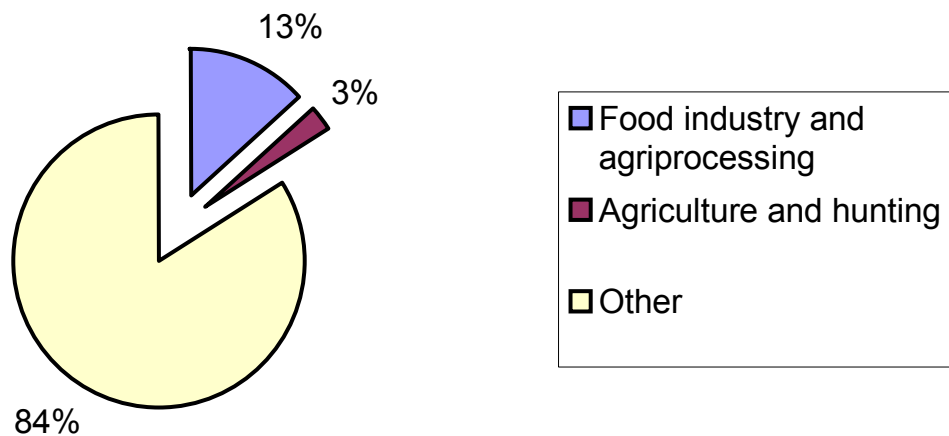
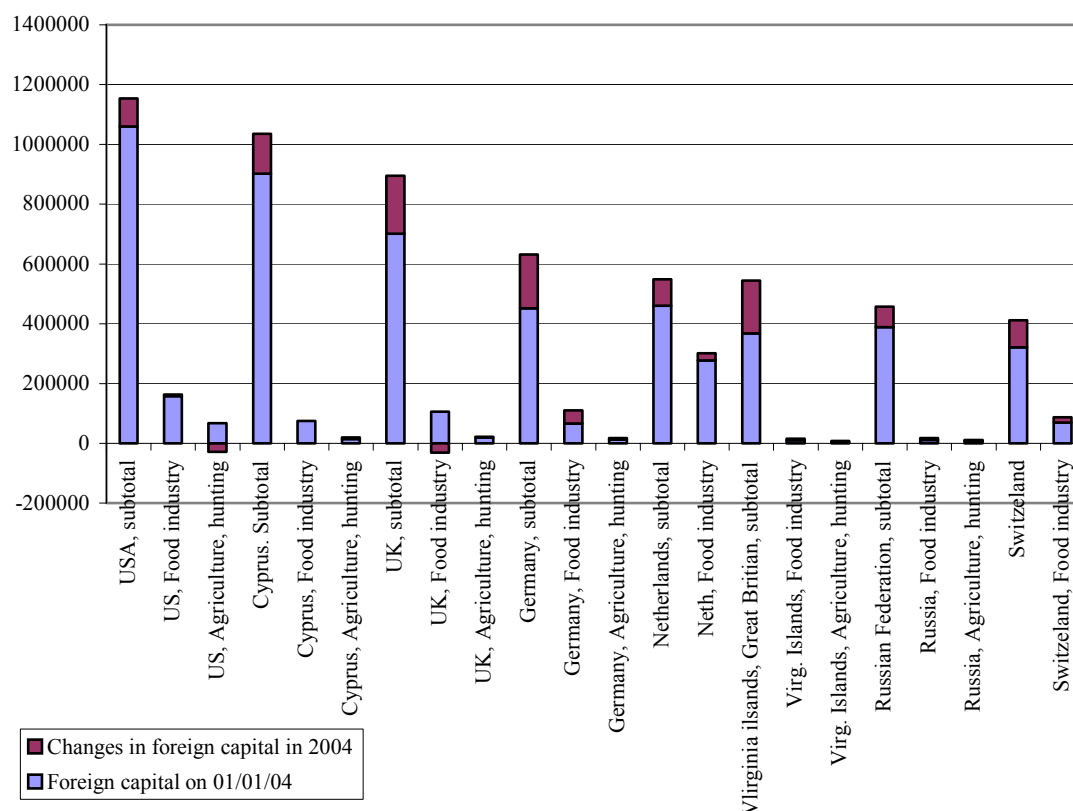


Fig 2.5 Changes in foreign capital in Ukraine in 2004, thou USD

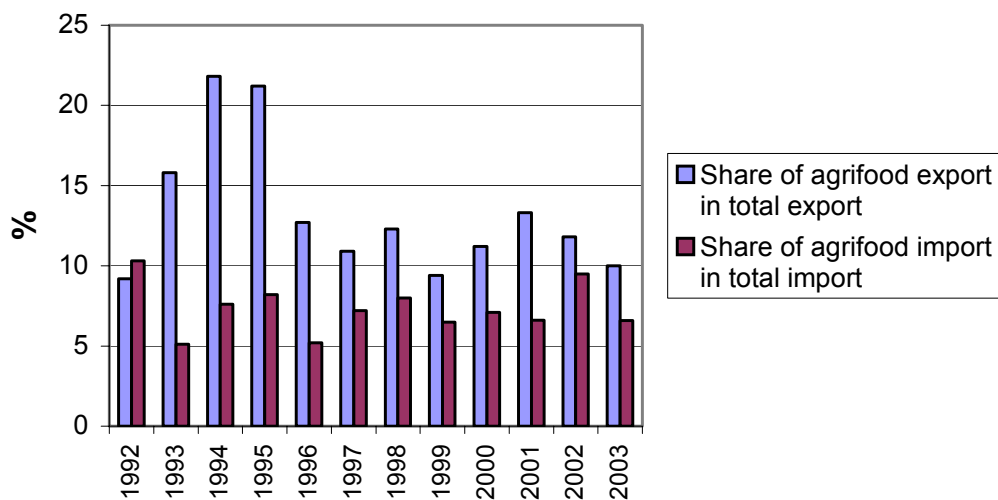


Source: Ukrainian State Statistics Committee

## 2.2 Foreign trade with agricultural and food products

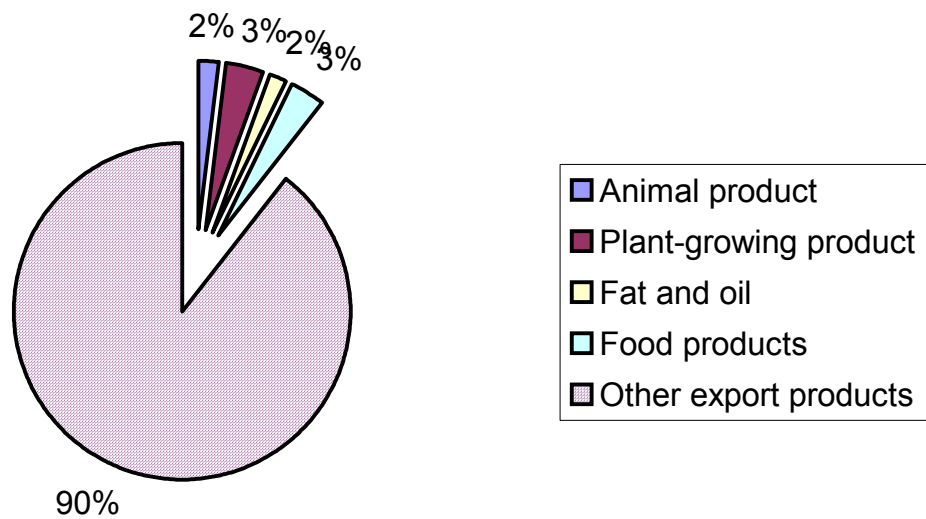
In the mid-1990s agri-food products accounted for more than 20 % of exports (Fig 2.6), compared with approximately 10% in 2004 (Fig 2.7). Ukraine's principal food exports are sunflower seeds and oil, grains, and dairy products.

Fig 2.6 Share of agri-food product in foreign trade



Source: Ukrainian State Statistics Committee

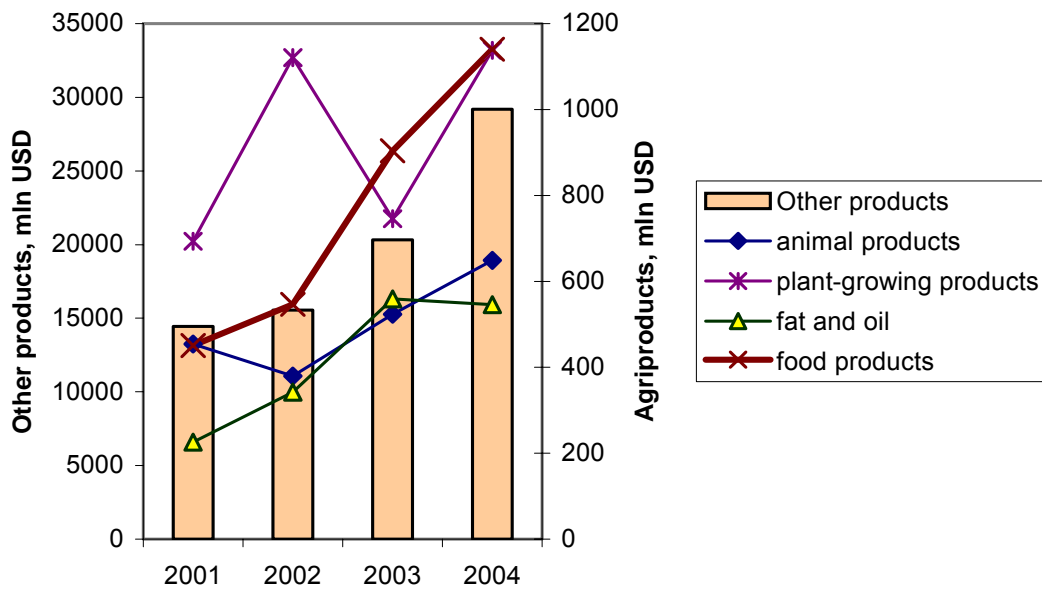
Fig. 2.7 Export structure in 2004



Source: Ukrainian State Statistics Committee

The trends in agricultural and food export are shown in Fig. 2.8. The right axis corresponds to the data related to the export of agri-products and food, while the left axis scales the other products. The export of food has almost tripled over the last four years. Despite some decline in animal reproduction sector, the export of animal products has increased by about 50% since 2002. The drop in crop export in 2003 was due to unfavourable weather conditions.

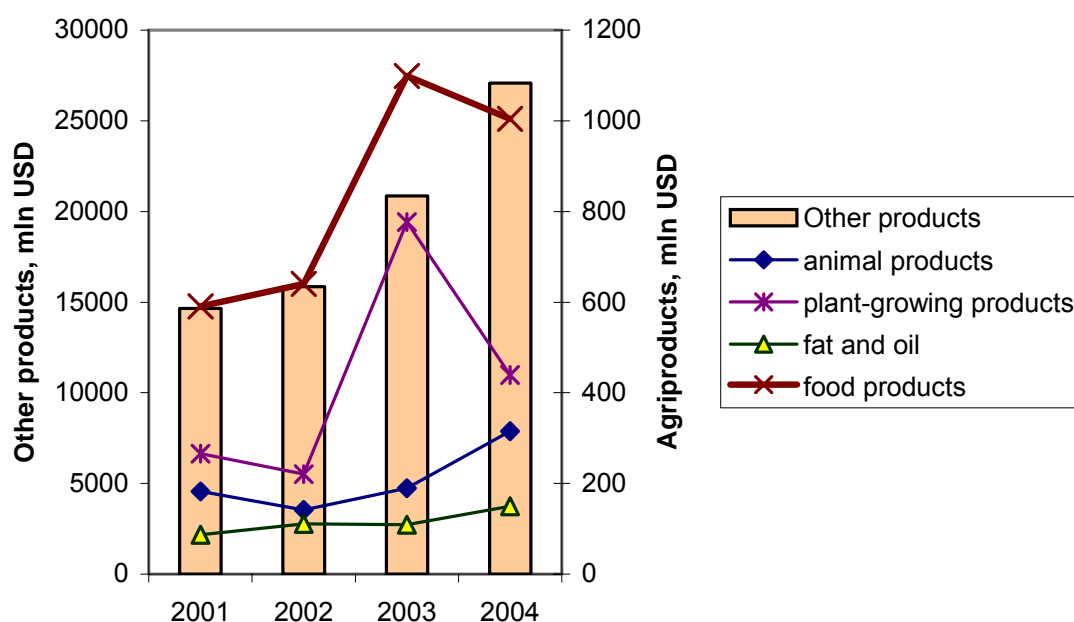
Fig. 2.8 Export of agri-products, mln USD



Source: Ukrainian State Statistics Committee

Fig 2.9 illustrates changes in agricultural and food imports since 2001. Again the right axis presents the scale for the plots related to the agri-products and food import. The left axis shows the scale for the 'other products' histogram. The increase in imports in 2003 can be explained by unfavourable weather conditions. By comparing Fig. 2.8 and 2.9 it is possible to conclude that Ukraine had a positive balance in agri-food foreign trade in 2004.

Fig. 2.9 Import of agri-products, mln USD



Source: Ukrainian State Statistics Committee

Critical factors affecting the volume and structure of Ukrainian exports include:

- (1) Constraints related to direct and indirect trade discrimination still exist particularly in agricultural area. These blocks are expected to disappear after Ukraine joins WTO.<sup>1</sup>
- (2) Problems with VAT refunds for exporters. Although the problems were addressed at the end of 2004, in June 2005 grain traders reported new delays in VAT refunds.<sup>2</sup>
- (3) The need to meet quality control and certification of agricultural and food products in accordance with international requirements.

The most important export agricultural products are grains, sunflower seeds and oil, animal products. Despite the decline in dairy production Ukraine remains one of the world's 10 most important milk producers.

### 2.3 Agri-sector structure

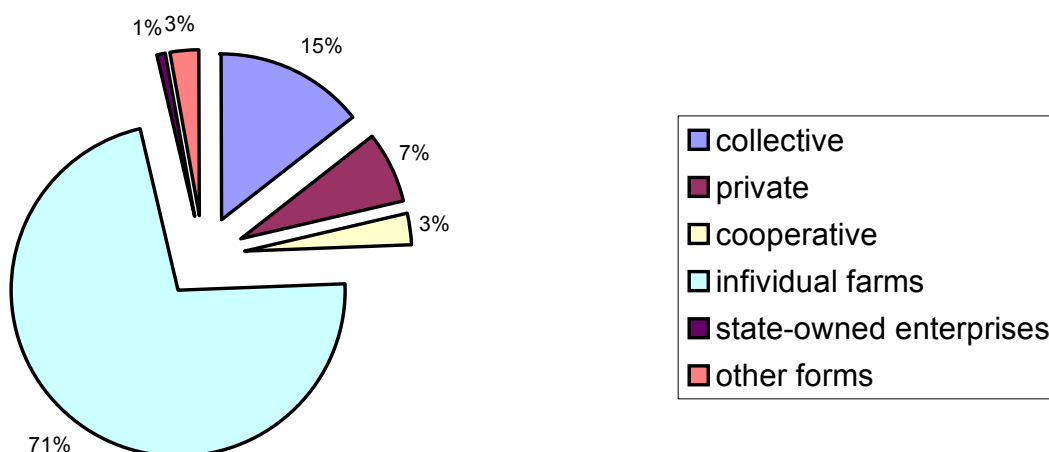
The recovery in agriculture, which started in 2000 became possible as a result of significant structural changes within the sector. The share of private farms and households increased dramatically and with it their share of income started to grow. Fig 2.10 demonstrates the distribution of agricultural entities by legal type in 2003.

<sup>1</sup> Aslund A., "A Foreign Trade Policy Strategy for Ukraine", UNDP, March 2003

<sup>2</sup> *Ibid.*



Fig. 2.10 Agricultural enterprises in 2003 by legal type of business



Source: Ukrainian State Statistics Committee

Research on performance and behaviour of individual farms in five regions of Ukraine was conducted in 2002<sup>3</sup>. As stated in that paper: "Most reformed collective farms (74%) were started up over the last five years<sup>4</sup>, and have not yet acquired much experience of working in the new conditions; 36% of reformed collective farms have worked less than 2 years. As opposed to the new enterprises created from former collective farms, the majority of private farms have operated in agribusiness for much longer periods; 72% of such enterprises have been in business for over five years, and only 10% of those for less than two years.

Farming is the major source of income for the majority of the agricultural enterprises. Production of agricultural output represents on average 86% of the aggregate income of the agribusinesses; moreover, 90% of the surveyed private farmers pointed out that they had no additional revenues. On the other hand, reformed collective farms tend to be involved in other additional activities, provided they have the requisite production capacities; this was true for 54% of the surveyed reformed collective farms.

In addition, reformed collective farms tend to be much better staffed with experts when compared with private farms; 91% of reformed collective farms in the sample had full-time agronomists, 70% had accountants, 69% had a zoo technician, and 46% had engineer-mechanics. As for private farms, only each fourth operation had a full-time agronomist, 15% had accountants, and 10% had engineer-mechanics; 47% of the surveyed private farms had no specialist staff at all.

Lack of machinery and insufficient input supplies represented an acute problem for many farms. Even though the majority of farms owned tractors (99% of reformed collective farms and 88% of private farms) and seeders (62% and 95%, respectively), the condition of the agricultural machinery, was not satisfactory, in many instances being outdated and physically worn-out".

25% of reformed collective farms and 18% of private farms faced a huge challenge while introducing new crop varieties and new types of crops. The problem of efficient use of mineral fertilisers and PPAs was a concern for 23% of former collective farms and 16% of private farms. Other important problems included inefficient use of equipment in operation and soil erosion during tillage.<sup>5</sup>

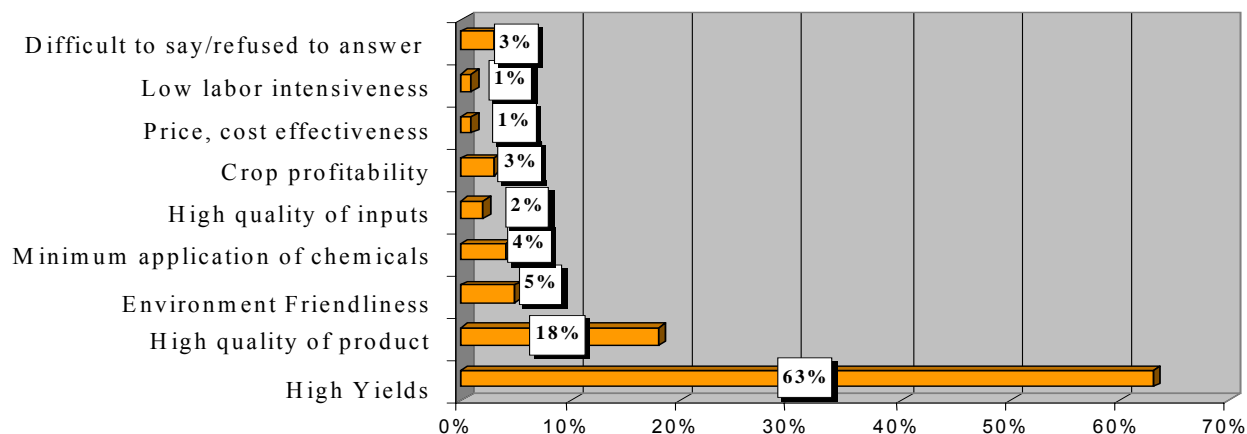
<sup>3</sup> "Report on Farming and Agribusiness in Ukraine", Publication of Agribusiness Development Project in Ukraine, ed by O.Kobzev, Kyiv 2002

<sup>4</sup> After 1997

<sup>5</sup> "Report on Farming and Agribusiness in Ukraine", Publication of Agribusiness Development Project in Ukraine, ed by O.Kobzev, Kyiv 2002

When considering decision making at private farms it is interesting to learn of the results of the survey performed in 2002<sup>6</sup>. Most farmers have no additional sources of income but their farms. Although the report gives no direct results relating to the goals and motivations of farmers, some points are implied in the data (Fig. 2.11).

Fig. 2.11. Primary criteria for choosing crop growing technology, % of the overall number of respondents <sup>7</sup>



#### 2.4 Employment in agri-sector

The share of people working in agriculture has been increasing since 1996, and reached 25.2% in 2002 (Fig. 2.12). There has since been a reduction (down to 23% in 2003) as agricultural enterprises and organisations reduced the number of employees they hired (Table 2.1). Taking into account that the agricultural output constitutes about 13% of GDP, the share of agricultural employment still appears to be too high.

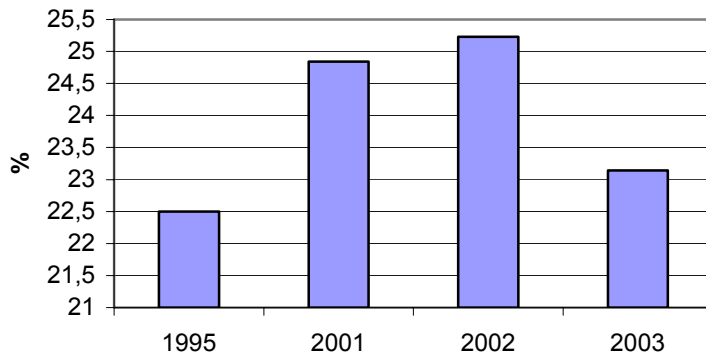
Table 2.1. Employment by type of economic activity (thou)

	2001		2002		2003	
	subtotal	including employees hired at enterprises, institutions, organisations	subtotal	including employees hired at enterprises, institutions, organisations	subtotal	including employees hired at enterprises, institutions, organisations
Total	21015,5	15050,4	21378,6	14566,9	21448,7	14092,5
In agriculture	5220	2378,7	5393,8	2129,9	4963,3	1781,4

<sup>6</sup> "Report on Farming and Agribusiness in Ukraine", Publication of Agribusiness Development Project in Ukraine, ed by O.Kobzev, Kyiv 2002

<sup>7</sup> "Report on Farming and Agribusiness in Ukraine", Publication of Agribusiness Development Project in Ukraine, ed by O.Kobzev, Kyiv 2002

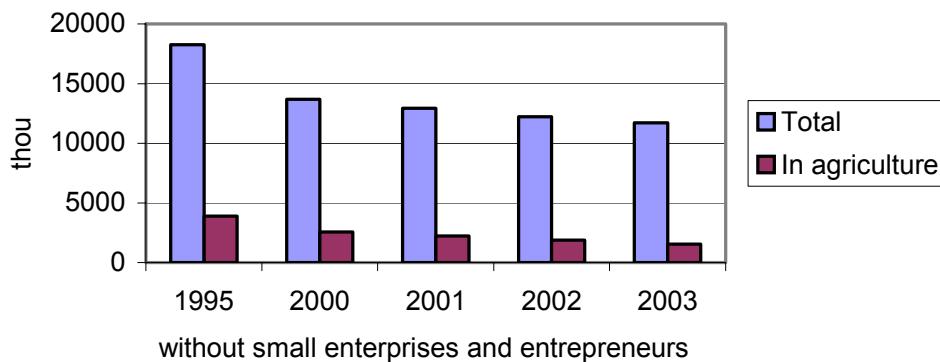
Fig 2.12 Share of agricultural employment



Source: Ukrainian State Statistics Committee

Average annual employment at enterprises and organisations excluding small enterprises and private entrepreneurs has gradually decreased both for the economy as a whole and in the agricultural sector in particular (Fig. 2.13).

Fig 2.13 Average annual number of employees, by type of economic activity



Source: Ukrainian State Statistics Committee

During the period 2000-2003 the share of workers employed in private farms increased by more than 10%. The majority of this increase can be attributed to co-operative farms. The percentage growth rate in the number of small-scale enterprises was higher for agriculture than it was in either industry, or in the economy as a whole.

### 2.5 Profile of farms working in agri-sector

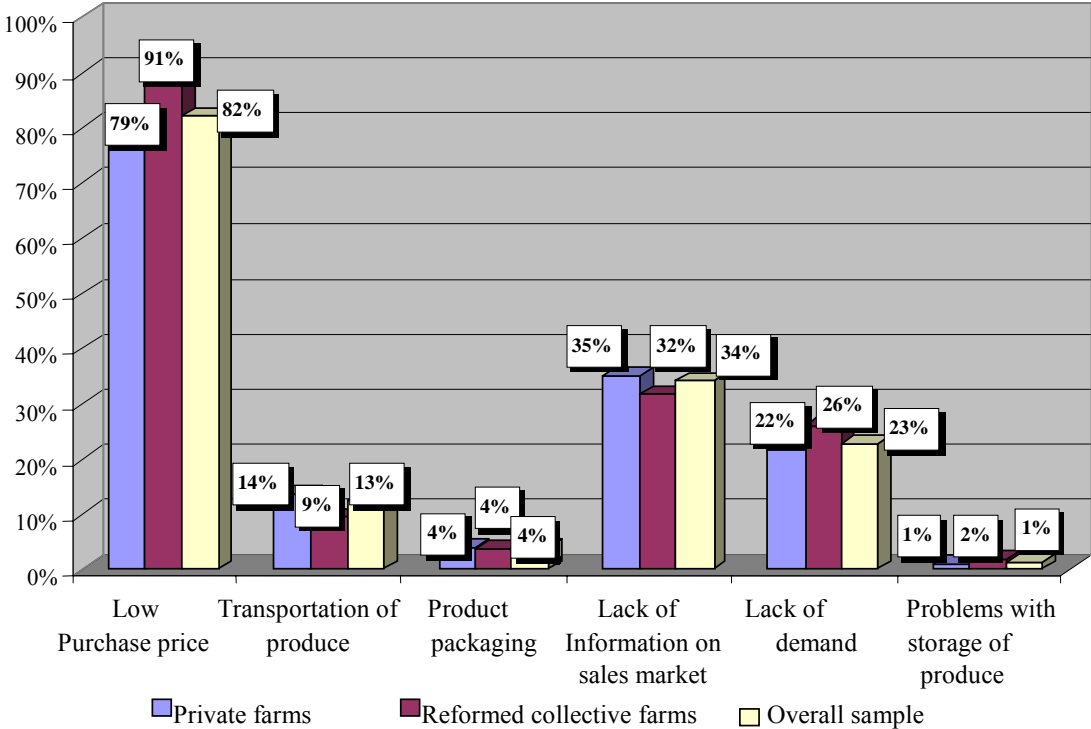
The formal distribution of farm by legal forms of business was discussed above. However, for the purpose of organisational change analysis, it is important to point out that the success and performance of farms depend not on the legal forms under which they are registered, but on the level of management they practise. The strategy, management and behaviour of farms strongly depend on the owners' profile and their background. The formal statistical data, which will be discussed below may give the impression that individual farms and households bringing the main share of animal product, vegetables and fruit are more effective than agri-enterprises, which still lead in growing traditionally 'industrial' crops like grains, sugar-beet and sunflower. However, it is obviously not true. Unfortunately, there is no reliable statistical data depicting the background of agri-enterprises in relation to their productivity, investment capabilities and background.

Most agri-enterprises in Ukraine are reformed kolhozes which naturally inherited both their management and mentality. Some domestic companies having developed businesses in industry and trade created agri-enterprises. Their management is superior, investment capabilities more significant, and as a result these enterprises are usually more efficient and productive. Very often these enterprises have vertically integrated through ownership with processing companies. In some agri-sectors there are enterprises owned by foreign investors who normally also demonstrate a similar business orientation in managing their farms. The most profitable and productive farms are usually characterised by higher investment and better marketing. The number and size of these farms will evidently increase significantly once the current land ownership problems have been effectively resolved.

2.6 Marketing and distribution

Marketing and distribution are specific vary by agri-sector, and as a result they merit further discussion. Generally the individual farms (about 60%) and households use direct sale off the field or off household as their principal distribution channel<sup>8</sup>. About half of the farms sell their products via intermediaries, 31% after seasonal price increase, only 4% are involved in direct export and 1% sell their output through commodity exchanges<sup>9</sup>. 72% of surveyed farmers sell their products exclusively within their oblast area, 18% deliver their output to other regions of Ukraine. When asked what problems they faced when selling their products, the most frequently cited response was "Low purchase price", followed by "Lack of information on sales market" (Fig 2.14).<sup>10</sup>

Fig. 2.14 Major problems with sales of agricultural produce, % of the sample



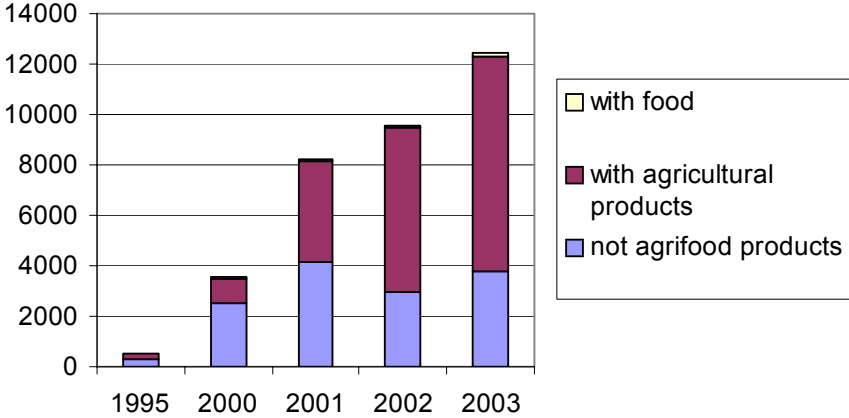
<sup>8</sup> "Report on Farming and Agribusiness in Ukraine", Publication of Agribusiness Development Project in Ukraine, ed by O.Kobzev, Kyiv 2002

<sup>9</sup> Ibid.

<sup>10</sup> Ibid.

Meanwhile the sales of agri-food products through commodity exchanges are steadily growing (Fig 2.15).

Fig. 2.15 Structure of deals made at exchanges, mln UAH



Source: Ukrainian State Statistics Committee

2.7 Agriculture and food sector

To better understand the state of the agri-sector and relations between agriculture and the food industry, it is important to take into account the following facts.

Since 1997-1998 some large traders, who generated capital importing commodities or metal, were looking for new large-scale investment projects related to manufacturing. Some of those companies initiated large investment projects in manufacturing alcohol beverages, sugar, confectionery, dairy products, oil, ice-cream etc. The owners of these companies foresaw that the margin in their trade business was about to fall, return on investment periods became longer, and there were other more general risks related to their business stability. As a result, some of these businesses looking for long-term and stable businesses with a relatively certain level of profitability made investments in agriculture. Some of the new manufacturing companies started to integrate backward purchasing vineyards in Crimea, building grain-elevators, dairy farms, storehouse for vegetables and fruits. Some traders started grain production as a separate business. They rented land, hired agronomists, leased or bought machinery, purchased seeds and chemicals for grain growing.

The behaviour and performance of the new enterprises were different from the former kolhozes, which got used to relying on government support and as a result employed inefficient technologies. Unfortunately, there are no official statistics data available to check the performance of the enterprises. However, some indirect findings proved that private large enterprises are more efficient than small farms<sup>11</sup>.

Although agricultural sub-sectors have their own specific features and performance and as a result it is not possible to draw common conclusions regarding vertical integration, it is nevertheless possible to identify general trends in the manner in which processing companies co-operate with farms. For the sectors where processing enterprises gather raw material mainly from farms (dairy sector, sugar production) the contracting relations have started to evolve. This is particularly evident for larger farms who have tended to benefit stronger bargaining power, and as a result superior treatment.<sup>12</sup>

<sup>11</sup> Malitskaya E., "Who is more powerful, the elephant or the mouse?", Petr Mohyla Mykolaiv State Humanitarian University, 2004.

<sup>12</sup> White, J. and Gorton M., Vertical Coordination in Transition Countries: A comparative study of agri-food chains in Moldova, Armenia, Georgia, Russia, Ukraine", *Report for the World Bank (ECSSD) project on "Vertical*

The need for integration is more evident where food processors require raw material of higher quality, and where there is lack of such raw material competition for it is high. Thus, the speed with which integration is being seen in a sub-sector is determined by the state of the food market, the consolidation of the industry, the growth rate of the market, and the bargaining power of farms.

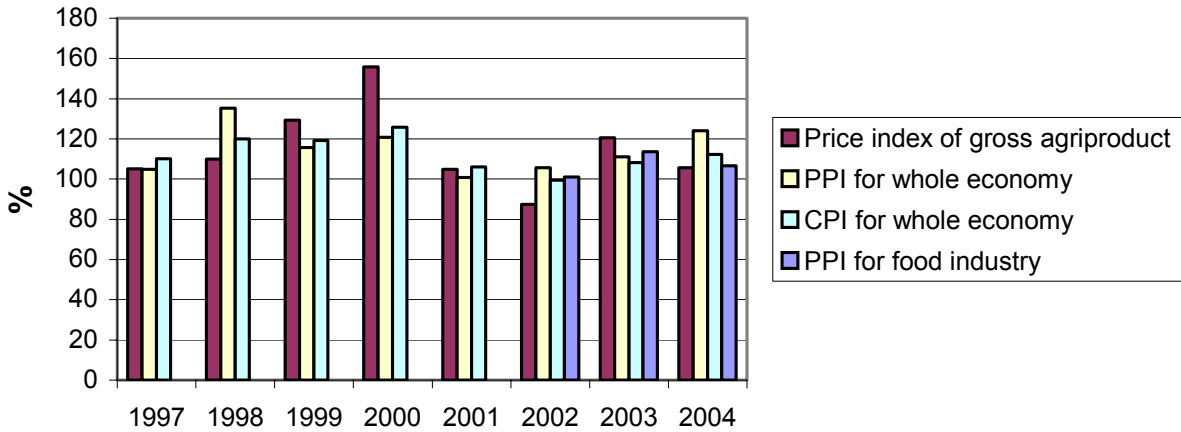
Some companies from the food industry (for example the dairy sector) prefer to buy raw material from independent logistics firms, however most large enterprises with high demand in raw material possess their own procurement departments collecting raw material from individual farms and households. The independent logistic enterprises comprise a new component of the agri-sector, and in the dairy sector in particular.

The sectors manufacturing business to consumer products have to deal with dynamically evolving consumer market, and need to respond to transformations in distribution and retail infrastructure, coupled with changes in consumer preferences. Practically all food sectors have increased the percentage of sales made through supermarket chains. The sectors where there is price disproportion in supply logistic chains (like dairy sector) demonstrate tendency of building a product pyramid developing premium products with a higher margin. The food manufacturers develop product lines and brands to strengthen their positions on the market. Both high consolidation of confectionery, dairy, ice-cream, sunflower oil, soft and alcohol beverages, snack sectors, and slowing down of the market growth for most sectors have made competition more acute. Manufacturers have been forced to invest in marketing, managerial accounting and operations systems striving to maintain sales and to maintain or increase profitability.

2.8 Changes in prices for agricultural products

Fig. 2.16 illustrates changes in price indices for the economy as a whole and the agriculture and food sectors. In 2002 and 2004 the price index for agri-products was lower than other price indices. The increase in 2003 can be explained by poor yield due to unfavourable weather.

Fig. 2.16 Price indices



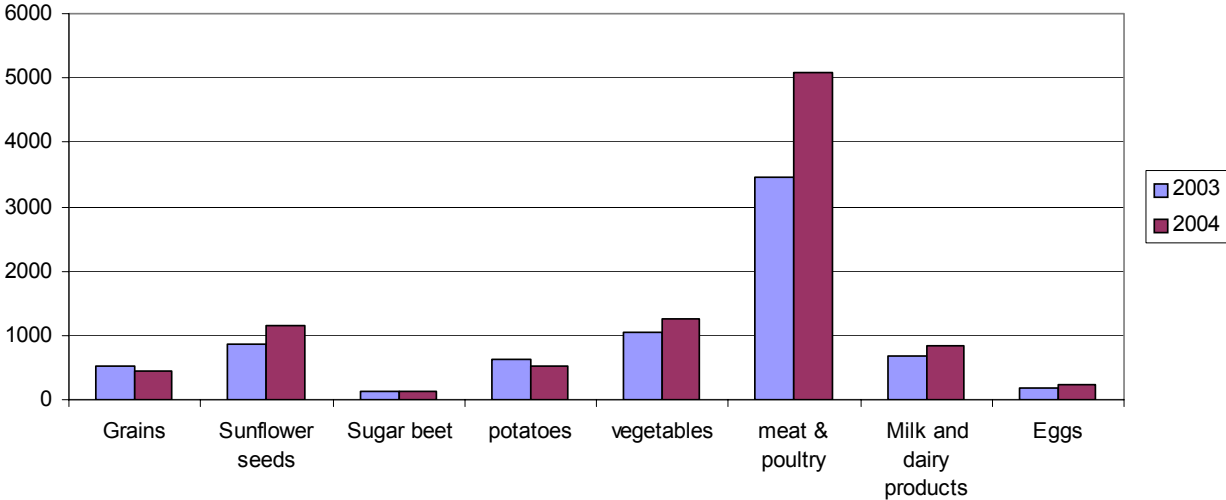
Source: Ukrainian State Statistics Committee

Prices for meat are steadily increasing as shown in Fig 2.17, and in 2005 the increase for meat and milk is expected to continue (Fig. 2.18).

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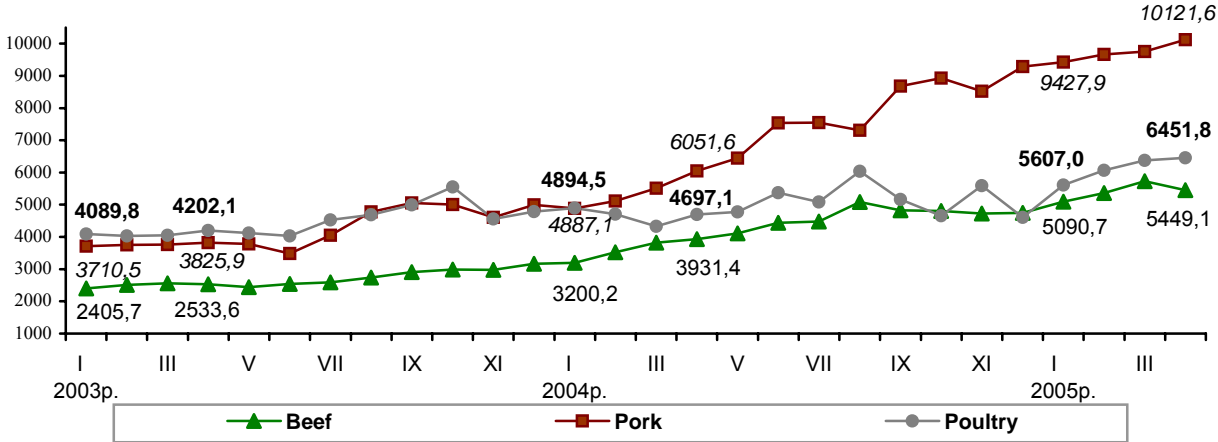
*Coordination in ECA Agri-food Chains as an Engine of Private Sector Development: Implication for Policy and Bank Operations", Sept 2004.*

Fig. 2.17 Average prices for agri-products (UAH/tonne, UAH/1000 pieces)



Source: Ukrainian State Statistics Committee

Fig. 2.18 Changes in price of meat sold by agri-enterprises (averaged by month, UAH/tonne of livestock)

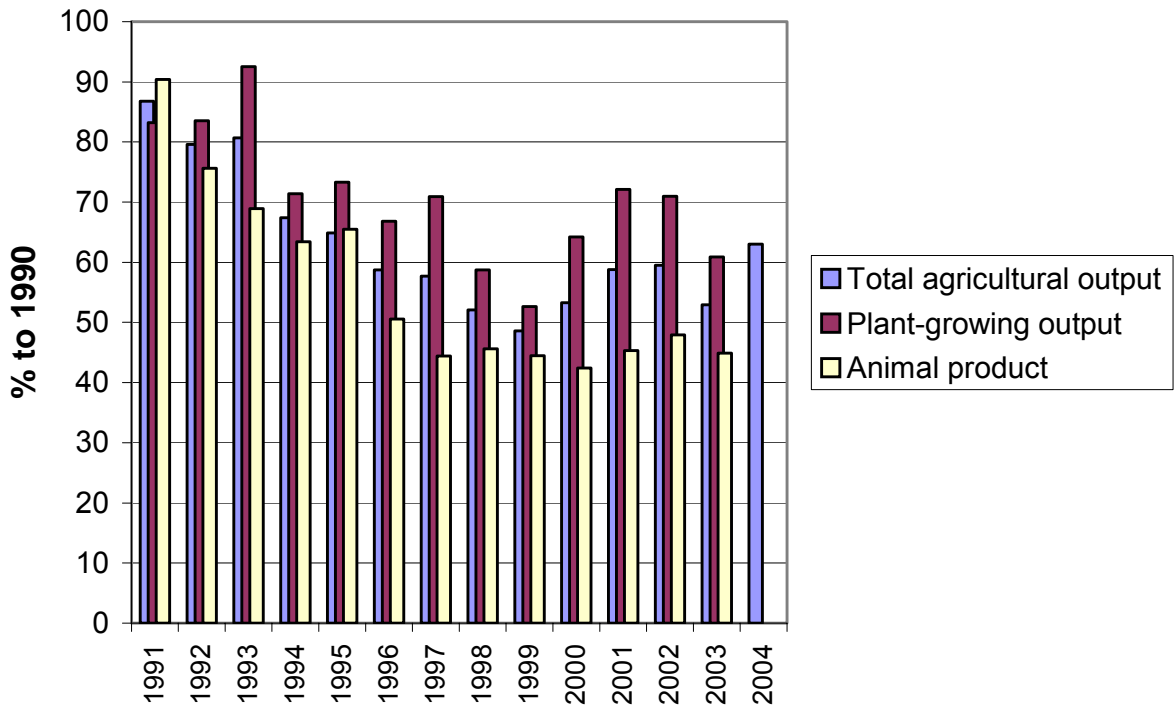


Source: Ukrainian State Statistics Committee

2.9 Agriculture sector performance. A closer outlook.

It is important to note that agricultural production started to recover after 1999 mainly due to the performance of the crop sector (Fig. 2.19), whilst animal reproduction growth was more modest. The contribution of individual farms and households to the production of agricultural produce has become much more significant relative to output from agri-enterprises (Fig. 2.20).

Fig. 2.19 Agricultural production indices



Source: Ukrainian State Statistics Committee

Fig. 2.20-a Agricultural production indices by categories of farms % to 1990

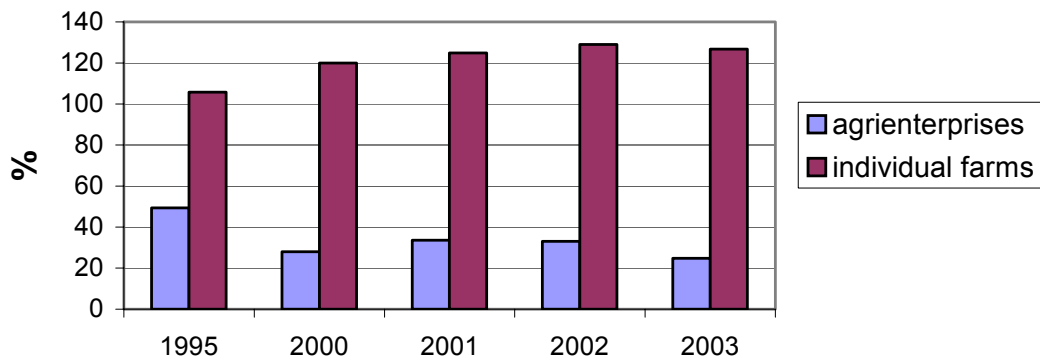


Fig. 2.20-b Agricultural production indices by categories of farms % to previous year

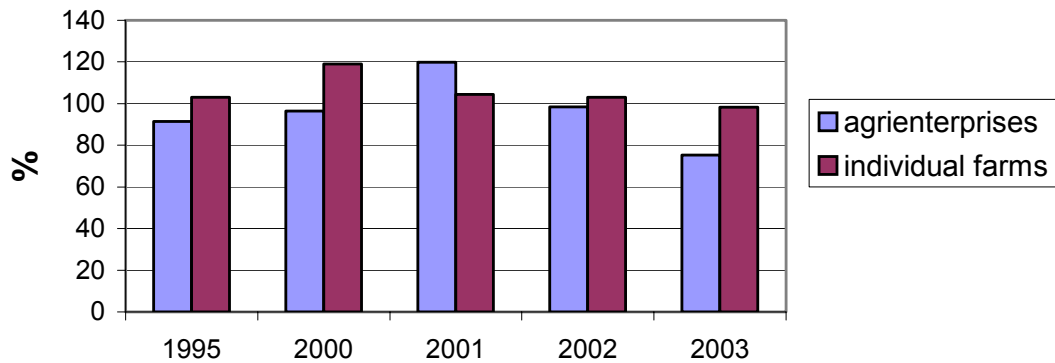
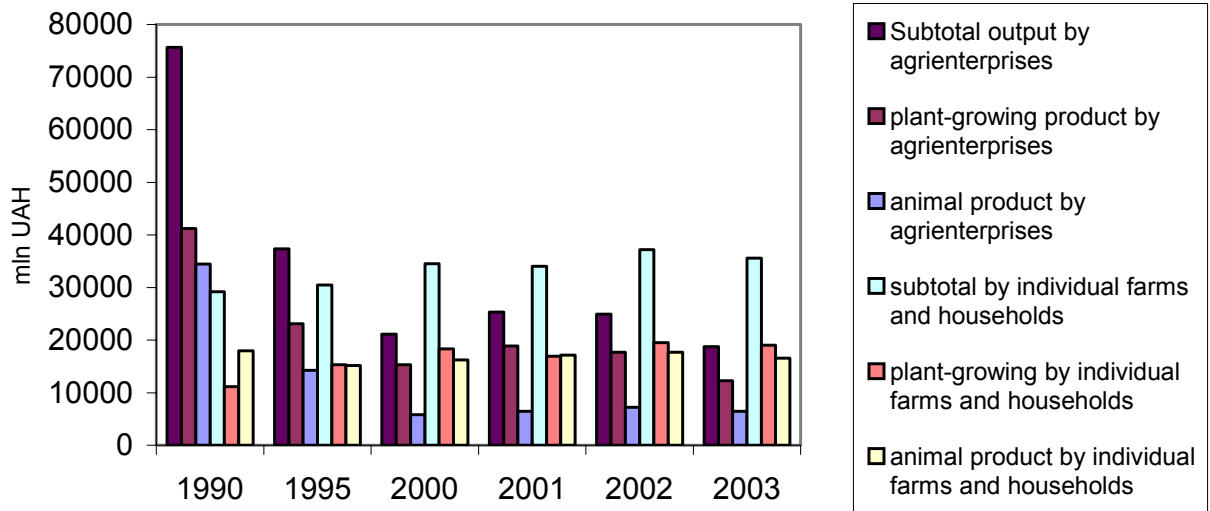




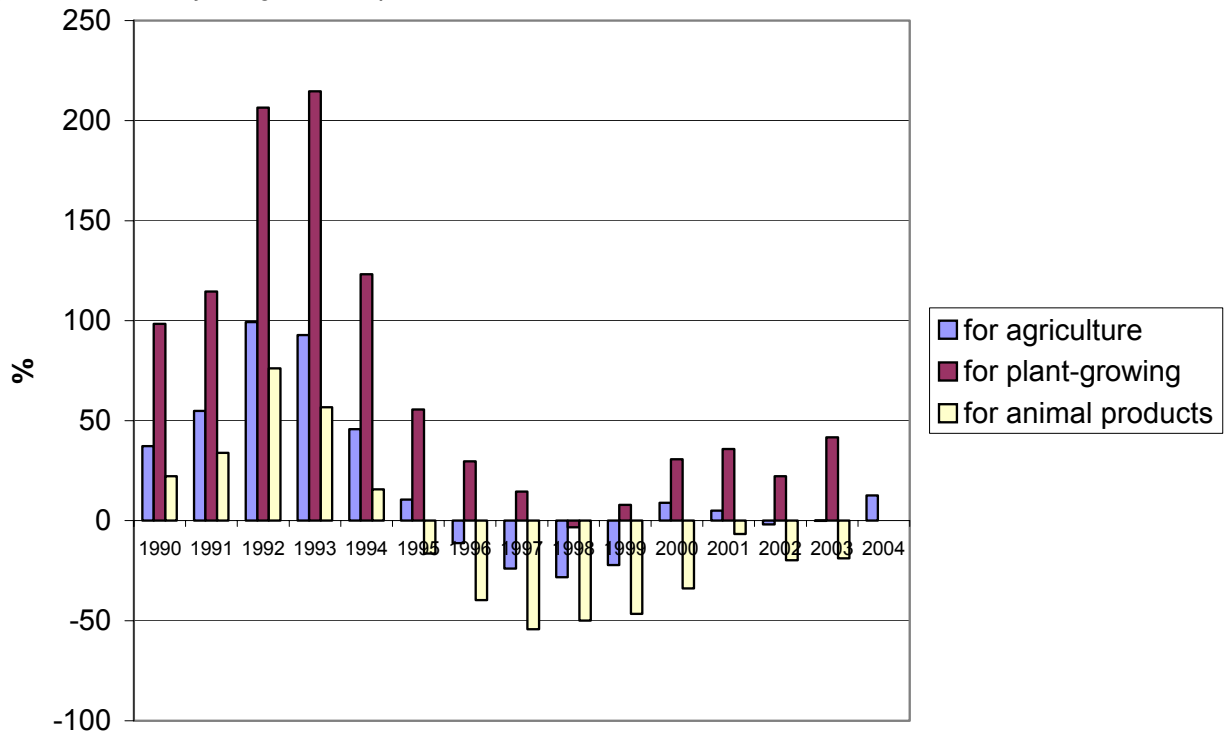
Fig. 2.20-c Agricultural output, by categories of enterprises, mln UAH in comparative prices of 2000



Source: Ukrainian State Statistics Committee

In the early 1990s according to official data both crop and animal reproduction were profitable in Ukrainian agriculture. Since 1995 the on average animal reproduction profitability has been below zero (Fig. 2.21). According to the Ukrainian State Statistics Committee in 2003 profitability in the crop-growing sector was about 47%, while in animal reproduction it was about -19%.

Fig. 2.21 Profitability of agricultural products

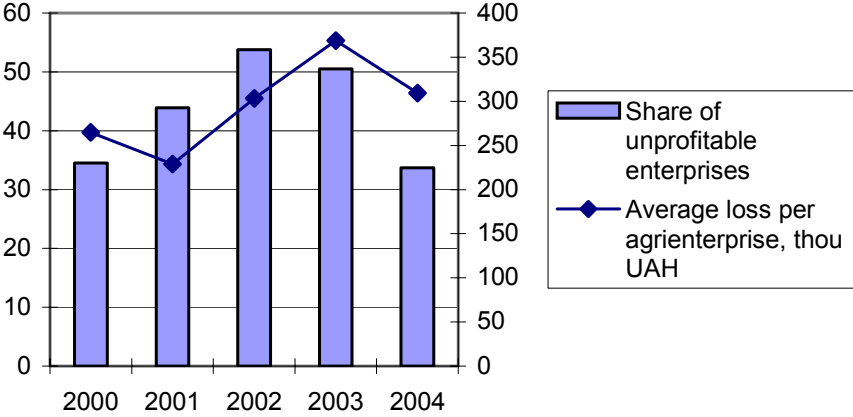


Source: Ukrainian State Statistics Committee

The percentage of unprofitable enterprises has though in recent years decreased from more than 50% in 2002 (Fig. 2.22) to about 34% in 2004. The data presented on profitability is derived from the official data

provided by the Ukrainian State Statistics Committee. The issue of profitability will be discussed in more detail in Section 3.

Fig 2.22 Share of unprofitable agri-enterprises

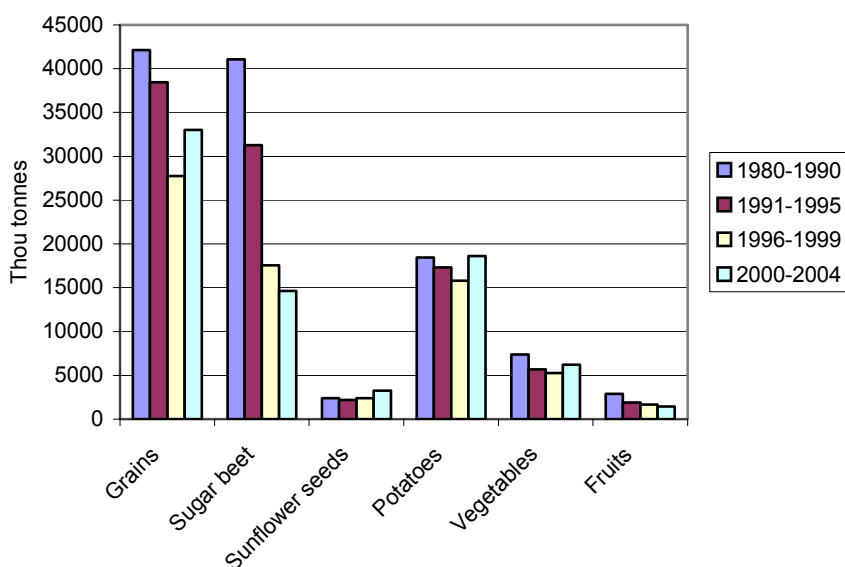


Source: Ukrainian State Statistics Committee

### 3. Crop Sector

As stated above, the crop sector provided the key contribution in the recovery of the Ukrainian agriculture after the decline it faced in the 1990s. Fig. 3.1 illustrates the changes in volume and structure of the crop production since 1980. In Fig. 3.1 the data is grouped, whereas in Fig 3.2 data is provided for every year for the same period. The data are normalised so that it demonstrates volatility of production from year to year for various crops. The corresponding plots for yields of the crops are given in Fig 3.3.

Fig 3.1 Changes in crop production since 1980, thou tonnes



Source: Ukrainian State Statistics Committee

The productivity of growing potatoes, vegetable and fruits is not less than in the years preceding the decline. The productivity of grains is at the level seen in the late 80s, whilst sugar beet productivity is gradually improving, and sunflower seeds productivity is still significantly less than in the late 1980s. The increase in sunflower crops seen in the period 2000-2004 (Fig 3.1) was achieved by increasing the amount of planted land. The grains yield in Ukraine remains below that seen in neighbouring countries like Hungary and Poland.

Due to insufficient technological development in the sector, crop output is critically dependent on the weather. The state retains heavy regulatory presence in the sector, while a number of laws (particularly those related to different aspects of land ownership) have yet to be approved and implemented, and as a result represent a significant constraint on efficiency gains. Commodity handling infrastructure (supplies, storage, export capacity) require radical improvement. The same is true in relation to trading in agricultural goods (exchanges, including futures/forward markets). In 2002, 46% of Ukrainian agricultural companies posted profits, although the industry's net financial result was a loss of USD 55 mil. (as compared to net income of USD 155 mil. in 2001)<sup>13</sup>.

Sunflower was the only crop that did not decline in 1990s and even saw an increase during the period. This increase can be attributed to the fact that it enjoyed the highest profitability and export potential of Ukrainian crops. In 1999 the state introduced an export tariff of 23% on sunflower to stimulate domestic

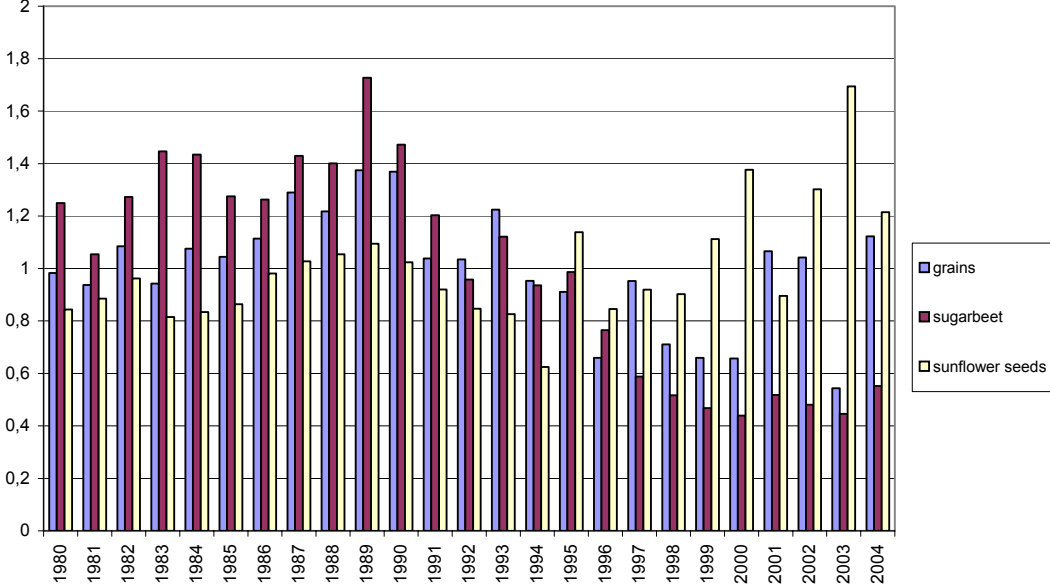
<sup>13</sup> Ukraine's Agricultural Sector, WNISEF, [www.wnisef.com](http://www.wnisef.com)

sunflower oil production and increase the government export income. The tariff led to a 50% reduction in sunflower seed exports. The tariff was decreased in 2001 from 23% to 17%, however sunflower cultivation has not recovered.

Sugar beet production has been in steady decline due to very low profitability. Current sugar beet production is approximately 40% of the level seen in the 1980s. Some increase in yields has however been seen since 2000 as a result of the use of both better seeds and cultivating technology. The government has also taken steps to protect the sub-sector to stimulate sugar beet production even though profitability has fallen (price regulation, import quotas for sugar-cane). There are currently 192 sugar refineries in Ukraine with a processing capacity of 50 million tonnes. As a result of depressed production they only operate for approximately 2-3 months per year, in which time they process roughly 15 million tonnes of sugar-beet.

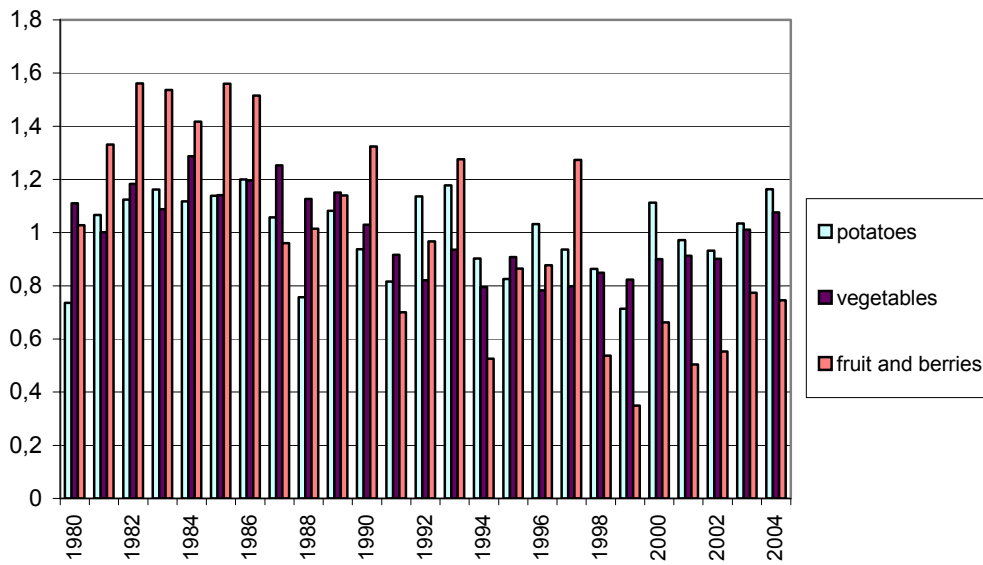
Individual private farms and households are playing an increasingly important role in grain production. They produced 20% of grain outputs in 2001 and 24% in 2002, up from about 3% in 1990<sup>14</sup>. In 2004 the crop output was 42.6 billion UAH, 45.5% of which were contributed by agri-enterprises, 54.5% were produced by individual farms and households.

Fig. 3.2-a Crop production normalised to average value



<sup>14</sup> World bank

Fig. 3.2-b



Source: Ukrainian State Statistics Committee

Fig. 3.3-a Yields of grains, sugar beet and sunflower seeds (normalised to the average value)

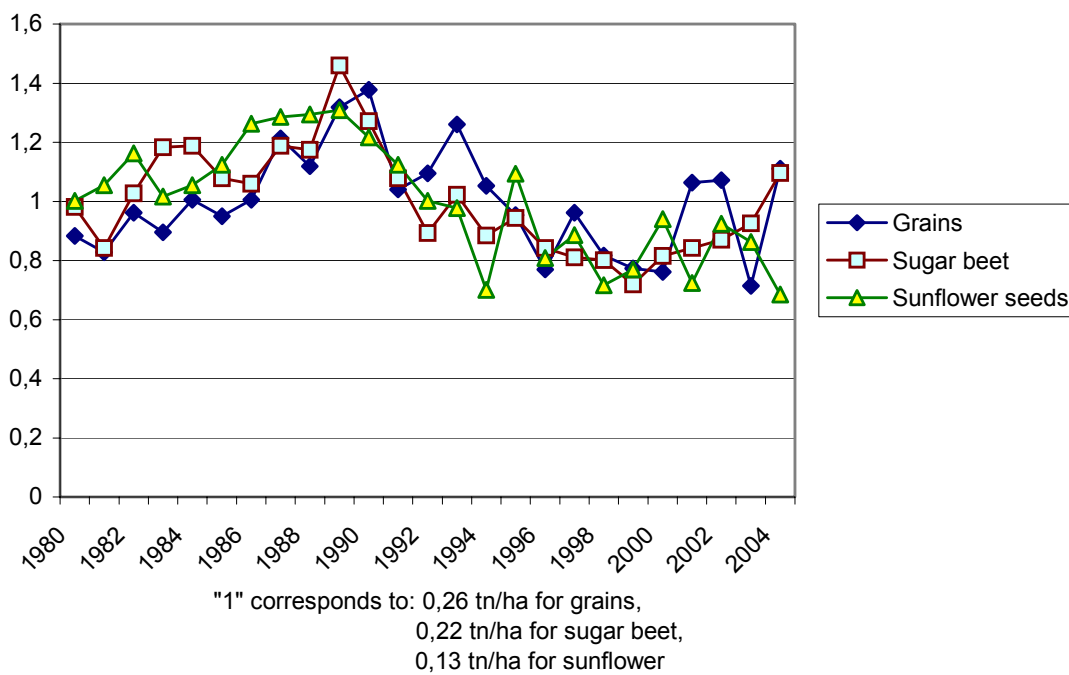
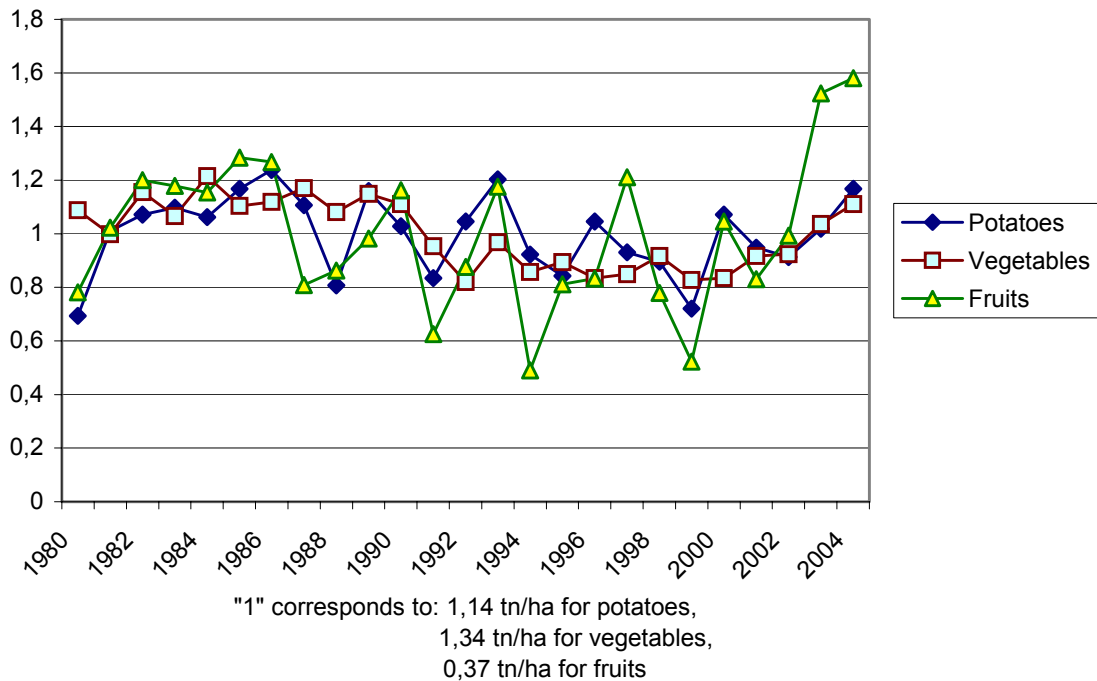


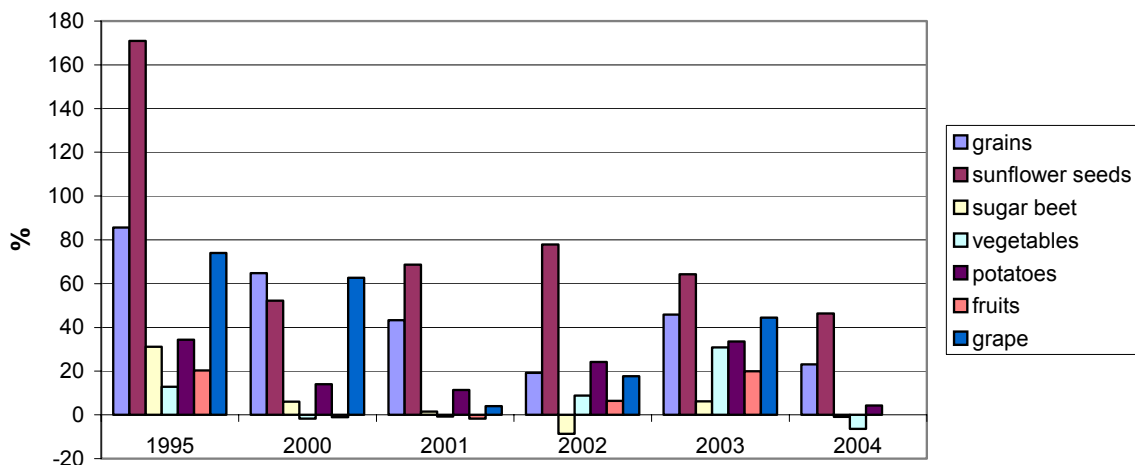
Fig. 3.3-b Yields of potatoes, vegetables and fruits (normalised to the average value)



Source: Ukrainian State Statistics Committee

The data given by the Ukrainian State Statistic Committee on profitability in the crop sector are summarised in Fig. 3.4. The most profitable crop is sunflower growing (approx. 46%), grain production produces nearly 23% profitability, grape nearly 45%, fruits about 20%, potatoes nearly 4.5% (in 2004).

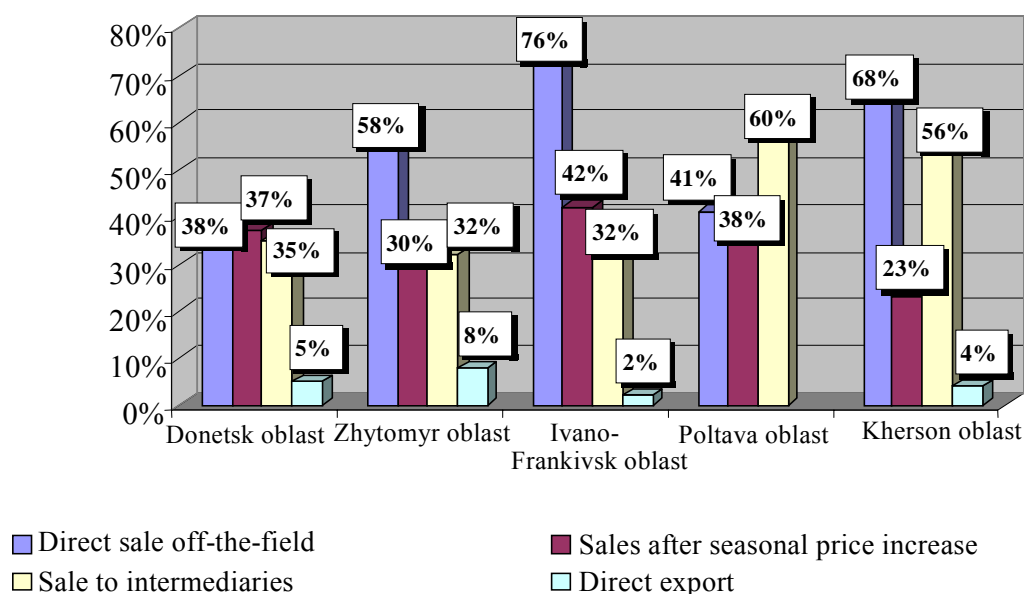
Fig. 3.4 Profitability of basic agri-products



Source: Ukrainian State Statistics Committee

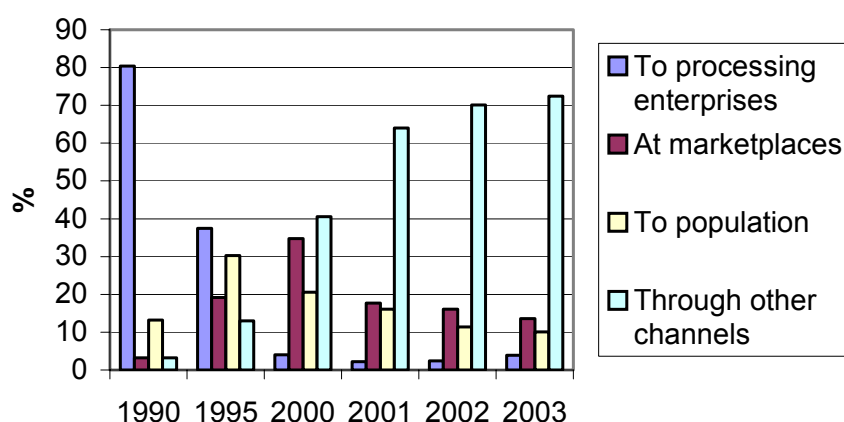
As mentioned above most individual farms prefer to sell their products off the field, however the proportions vary significantly in different regions. Fig 3.5 gives the overall picture of the distribution preferences for 5 oblasts.

Fig. 3.5. Primary sales channels of agricultural produce<sup>15</sup>



According to statistical information, most sales of grains and sunflower seeds are made through intermediaries and exchanges (Fig. 3.6-a,b) while sugar beet is sold mainly directly to processing enterprises. In the sugar sector vertical integration is becoming more prevalent due to growing interdependencies of both sides, farmers and processors. The government is protecting farmers via introducing quotas and import tariffs for sugar-cane. The state has also taken steps to assist sugar refineries helping them to survive, although there is not enough raw material to achieve production capacity acceptable levels of profitability. These refineries are considered important from a social point of view, because they provide jobs to people in rural communities. The government also introduced minimum prices for sugar so as to protect small refineries which are less efficient. In order to maximise sugar beet supply sugar refineries often help farms with cultivation and harvesting, as well as provision of seeds and chemicals.

Fig. 3.6 -a Sales structure of grains



<sup>15</sup> "Report on Farming and Agribusiness in Ukraine", Publication of Agribusiness Development Project in Ukraine, ed by O.Kobzev, Kyiv 2002

Fig. 3.6 - b Sales structure of sunflower seeds

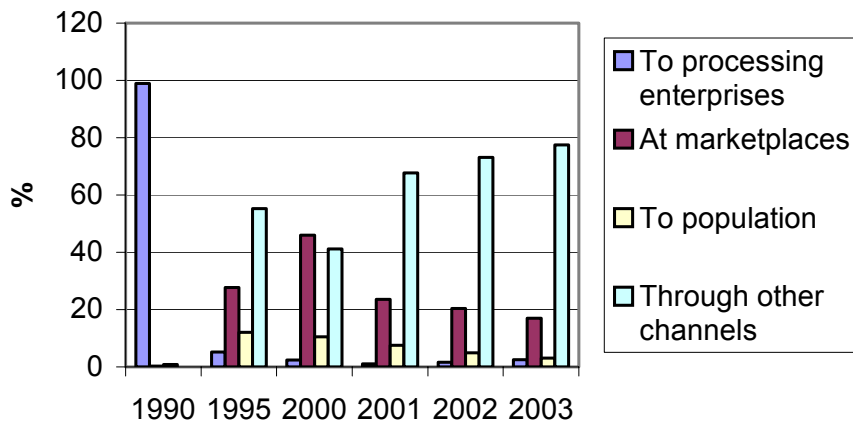
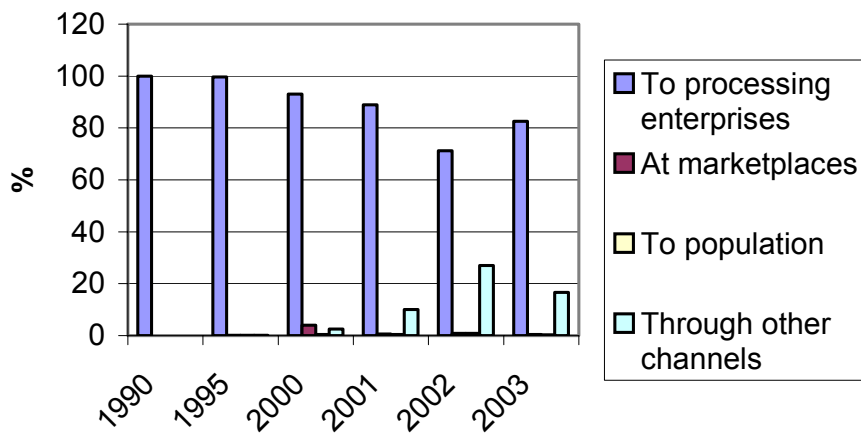


Fig. 3.6 -c Sales structure of sugar-beet



Source: Ukrainian State Statistics Committee

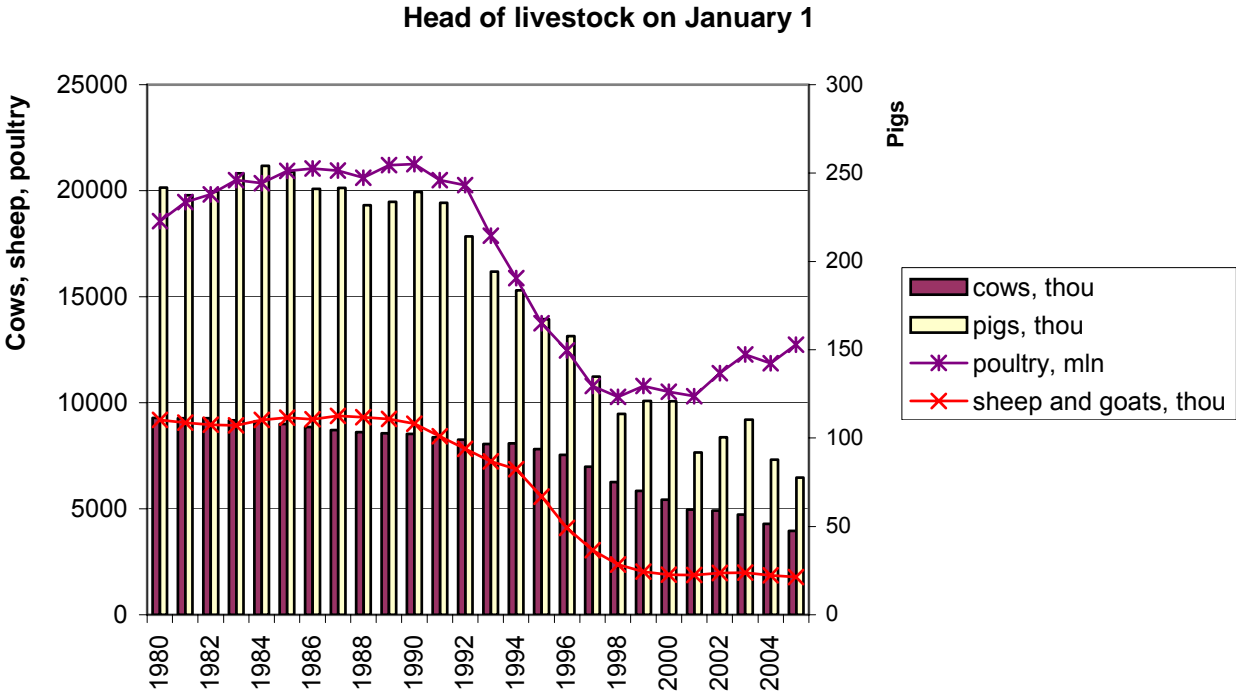


## 4. Animal Reproduction Sector

Animal reproduction has been an important sector of the Ukrainian economy. In 1990 Ukraine output was nearly 25 million tonnes of milk and about 4 million tonnes of meat. Since 1990 the head of livestock started to decrease. Even after the revival of agriculture in 2000, the head of cattle still slowly decreased (Fig. 4.1). There were several reasons for this reduction. Firstly, serious fodder shortages over several years necessitated higher slaughter levels than would otherwise have been the case<sup>16</sup>. However, this did not result in higher meat production as livestock weights also fell. Besides, most of Ukraine's cattle are dairy and dairy-and-meat breeds, while the share of beef cattle totals only 3%. At the same time, in 2003 the fertility rate per 100 cows was down 9%, to 70, and fertility per 100 pigs fell 32%, to 813 heads. Lastly, the share of cows and pigs affected by murrain grew to 1.9% and 6.8% in 2003 from 1.5% and 5.4% respectively in 2002.<sup>17</sup> In 2004 milk production in Ukraine was 13.8 million tonnes.

The dynamics of meat (including poultry) and milk productions are illustrated in Fig. 4.2-4.3. Eggs production (Fig. 4.4) remains the most profitable part of animal products.

Fig. 4.1 Head of livestock on January 1

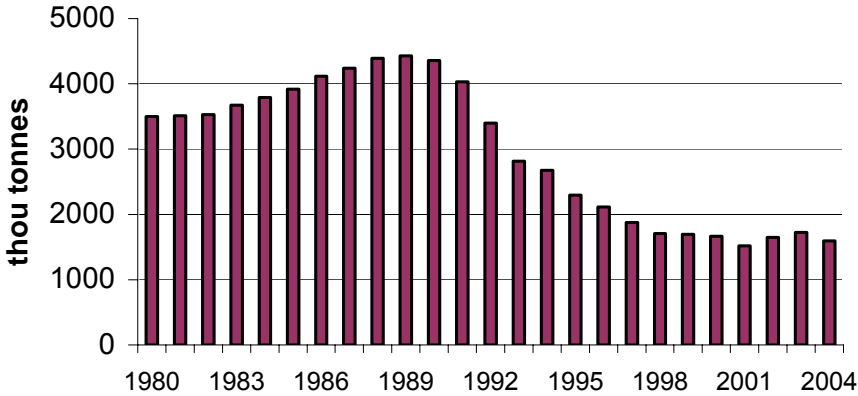


Source: Ukrainian State Statistics Committee

<sup>16</sup> Ukraine's Agricultural Sector, WNISEF, [www.wnisefk.com](http://www.wnisefk.com)

<sup>17</sup> *Ibid.*

Fig. 4.2 Meat production, thou tonnes



Source: Ukrainian State Statistics Committee

Fig 4.3 Milk production, mln tonnes

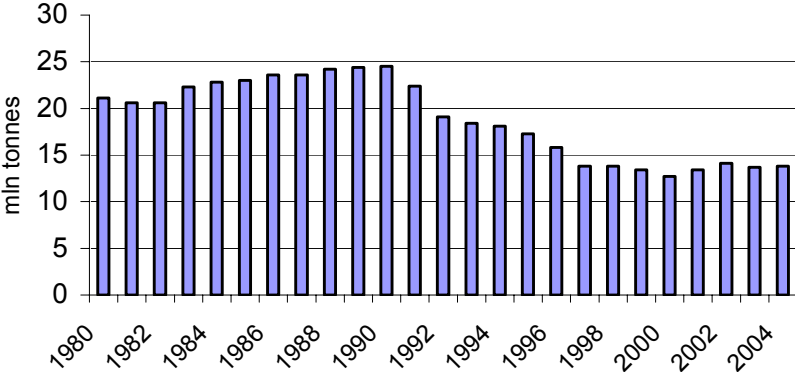
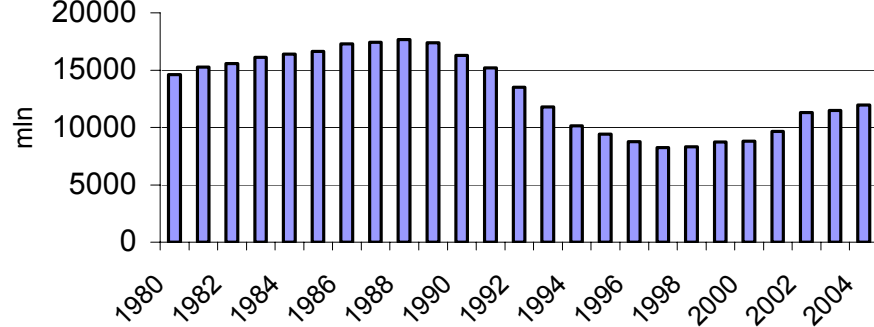


Fig 4.4 Production of eggs



Source: Ukrainian State Statistics Committee

The profitability of the sector remains generally very low<sup>18</sup> (Fig 4.5), while meat production makes up about 20% of agricultural output. The structure of production is such that between 70% and 90% (the share varies for different regions) of milk (Fig. 4.6) and 60% to 80% of meat (Fig. 4.7) is produced by individual farms and households. Most individual farms do not keep records of their costs. Unfortunately, it was not possible

<sup>18</sup> Although it is hard to say how the data on profitability were calculated and how realistic they are.

to find data on profit levels based on the number of farms, their size, ownership and background. We can only suppose that in the animal reproduction sector there are quite profitable enterprises with well-established management.

It is interesting that some large farms established a few years ago, which employ efficient technology, have highly-productive milk cows and modern equipment do not complain of low profitability. These farms benefit from strong bargaining positions which enable them to command higher than average prices for their milk.

The dairy sector is heavily dependent on non-Ukrainian markets. Ukraine exports powder milk, casein, butter, cheese, and dessert dairy products. The main importer is Russia, although its import share is slowly decreasing whilst other CIS countries have increased their purchases of Ukrainian dairy products. Fluctuations in non-Ukrainian sales affect the domestic price of milk. External demand coupled with rapid development of the domestic dairy processing sector in the last two years has resulted in a persistent deficit of raw milk, and as a result the price of milk is increasing year on year.

Milk productivity is higher than it was in 1990 for individual farms, but much lower for most agri-enterprises (Fig. 4.9), whilst average productivity is almost the same as it was in 1990. Despite a decrease in head of milk cows, milk production has stabilised at nearly 14 million tonnes<sup>19</sup>. Unfortunately, milk productivity in Ukraine remains at a relatively low level (about 2000 kl/cow at agri-enterprises and about 3200 in the individual farms). Coupled with the quantity issues highlighted above, most dairy processors have concerns over the low quality of the milk they get from farmers.

The share of milk sold to dairy-processing enterprises was about 80% in 2003 and it looks set to grow still further as processors seek to develop a more comprehensive logistic infrastructure for milk supply. Meanwhile the consumption of milk in Ukraine is increasing (4% in 2001 and about 8.8% in 2002), although it still less than 60% of the per capita consumption level seen in 1990 (373 kl).

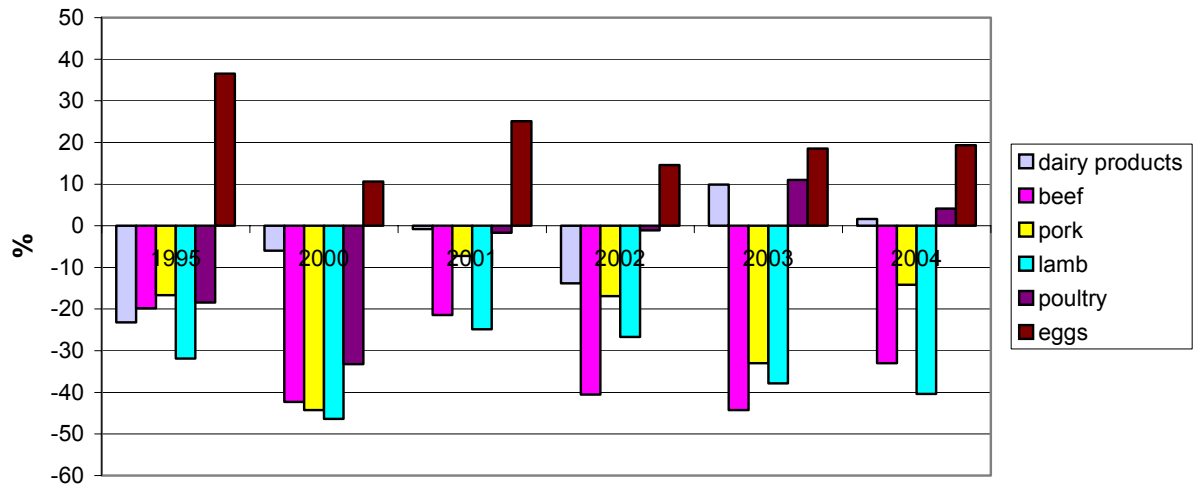
The government concerned with low profitability of the dairy farms started in 2004 to enforce a minimum price at market, thereby providing at least an acceptable level of profitability for the agri-enterprises. This regulation is expected to neutralise local monopolies which exist in some cases, and which have enabled some dairy processors to dictate and demand lower prices for milk. Unfortunately, the new law regulating milk sector softened the standards for dairy products and thereby undermines the general quality of the dairy products produced.<sup>20</sup>

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<sup>19</sup> Ukrainian State Statistics Committee

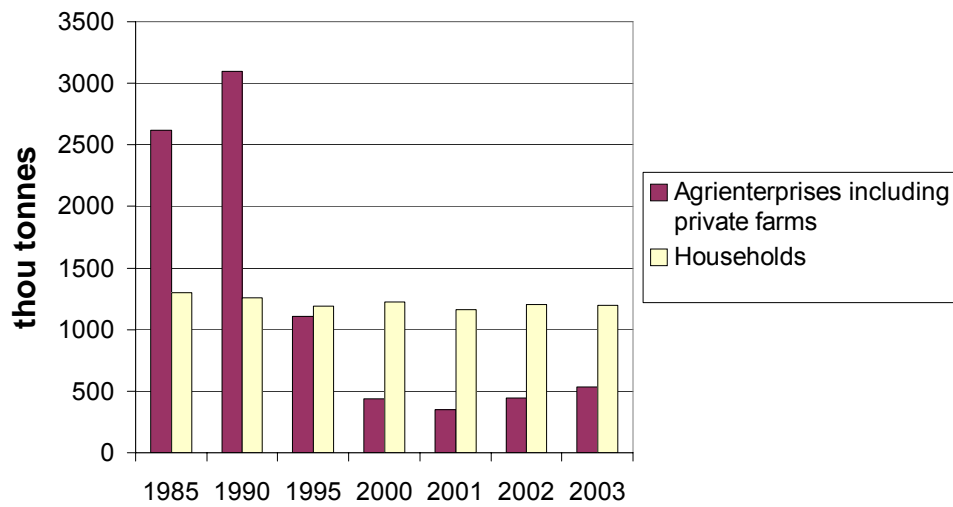
<sup>20</sup> "Закон о молоке лишает нас молока?", Наша держава, Issue №43, 2005

Fig 4.5 Profitability of basic agri-products



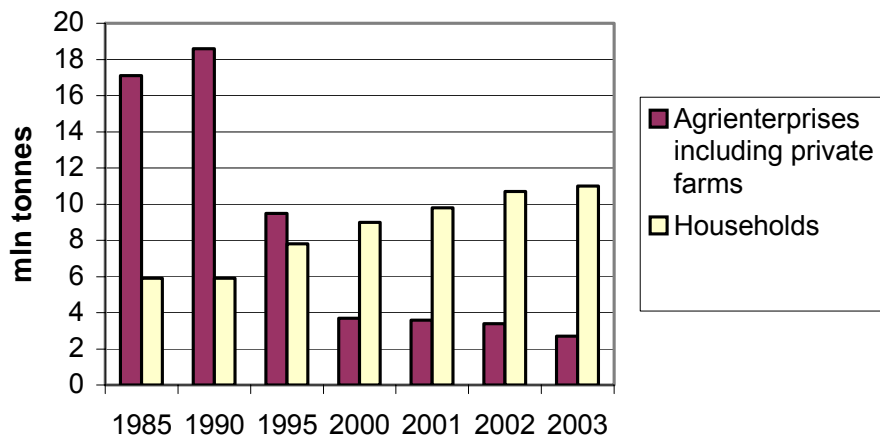
Source: Ukrainian State Statistics Committee

Fig 4.6 Meat production, by category of enterprises



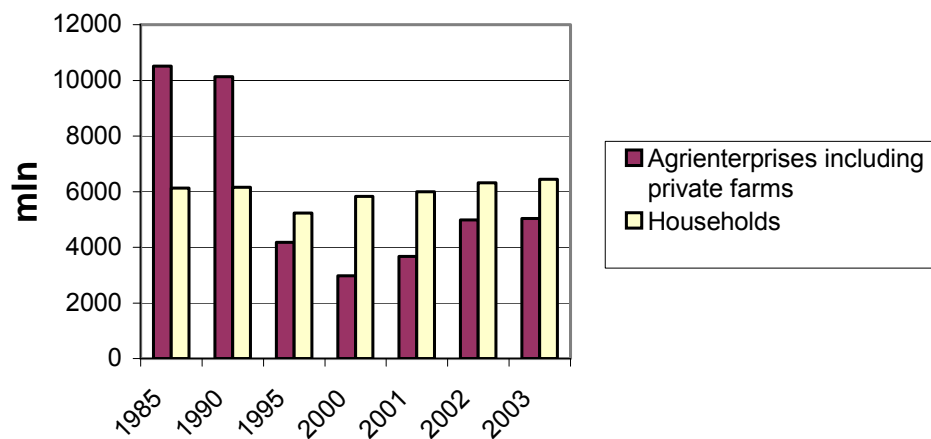
Source: Ukrainian State Statistics Committee

Fig 4.7 Milk production, by category of enterprises



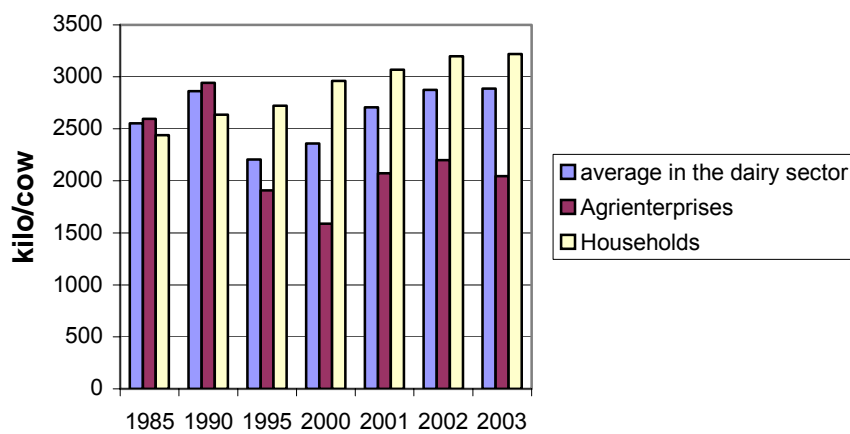
Source: Ukrainian State Statistics Committee

Fig 4.8 Eggs production, by category of enterprises



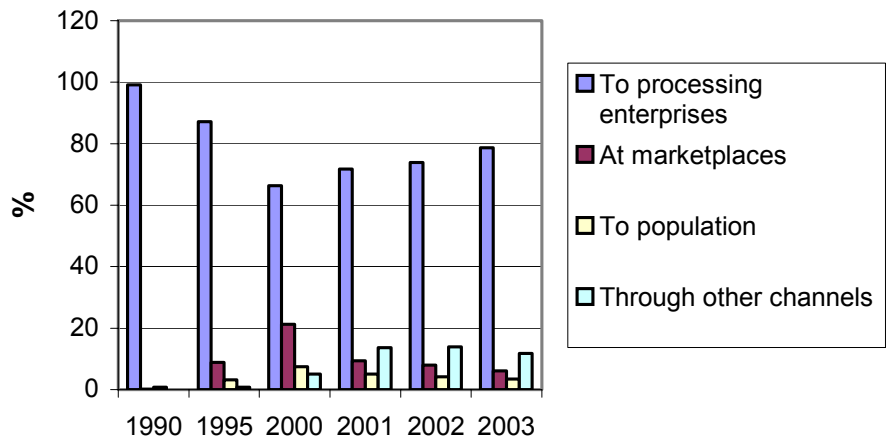
Source: Ukrainian State Statistics Committee

Fig 4.9 Milk yield, kilo/cow



Source: Ukrainian State Statistics Committee

Fig 4.10 Sales structure of milk



Source: Ukrainian State Statistics Committee

## 5. Summary

The survey of publications, statistical data, reports, industry news can be summarised as follows.

- Ukrainian agriculture possesses a high potential for growth both in crop and animal reproduction sectors.
- The individual farms and households share of agricultural output is increasing year on year, although their productivity remains below that seen in other Central European countries. Households produce more than 80% of milk, about 70% of beef, about 80% of pork, and about 50% of poultry. Meanwhile agri-enterprises produce more than 70% of grains, more than 75% of sugar beet, and more than 80% of sunflower seeds.
- Some large enterprises in the agri-sectors demonstrate higher performance and productivity. Their success is based on better management and investment capabilities.
- On the whole, currently the crop sector is much more profitable than animal reproduction and is more attractive for investments. Within these sectors profit levels can also vary dramatically. These variations highlight distortions which exist on the market and within some sectors. These distortions are often sector specific.
- Agriculture development and growth in output is constrained by a number of factors, some of which are outlined below:
  - Legislation. The land law reforms should be implemented to make investments secure and to allow the use land for securing credit.
  - Regulate the government regulation on the market and industry. Some regulating norms, mechanisms, policies, tariffs and standards distort the market and have resulted in decline in some agri-sectors and food industries. Recent (in April-July 2005) events in the Ukrainian food market (meat, sugar segments) have demonstrated that some regulations can produce negative results, rather than the positive results anticipated prior to their introduction. Sounder implementation of macroeconomic theory is needed if the agri-sector is to grow.
  - The norms and laws already approved must be both effectively implemented and observed.
  - Extensive technological development and improvements in agriculture are needed to make production more efficient and less dependent on weather conditions.
  - Well-developed agriculture market infrastructure will make the market more transparent and rational. Many individual farms get less for their products than they could due to a lack of market information and insufficient skills with which to market their products.
- The sectors have individual characteristics conditioned not only by production specific, industry structure, state-of the-art in the processing sector, features of distribution channels, acting legislative and regulating norms, but also by the state of international markets and export incentives. For future research it is therefore important to employ a sector specific approach so as maximise research validity and reliability.
- Of the available sectors, the dairy sector seems to be most interesting for future research, because
  - (1) Presently it demonstrates lower than average profitability, whilst growth potential is high. The head of milk cows is slowly decreasing while their milk productivity is slowly improving (however it is still at a relatively low level). How will the sector develop in the next two to five years?
  - (2) Dairy is important source of Ukrainian agricultural exports, and the sector is affected by the state of the international dairy market. It will therefore be interesting to evaluate the trends in export

development, changes in its structure and the need to balance exports with demand from the domestic market.

- (3) Whilst between 70% and 90% of milk (depending on the region) is sold to dairy processors by individual farms and households, high-technological farms with efficiency levels well in excess of the sector average are starting to appear.
- (4) Continued consolidation in the dairy-processing is likely despite the lack of availability of raw milk. In addition, at present 43% of Ukrainian dairy processing production belongs to foreign investors, with 30% of the sector being controlled by two Russian companies.<sup>21</sup>
- (5) Premium dairy products with higher profitability, higher added-value like cheese and T-milk are sold through supermarkets and discounters. Such products have to compete, and need to be recognisable. There is therefore increasing pressure on manufacturers to develop brands and specific product lines to increase their competitiveness.
- (6) The law approved recently to regulate the dairy sector seems to create more problems than solutions regarding product quality. Manufacturers will have to co-operate more to protect the market and to develop an industry standard.
- (7) There is a need to further develop a framework for setting up prices for the milk the processors buy from farmers or from logistics companies. Will farmers develop an association to increase their bargaining power?
- (8) There should be some development in contract relationships between dairy processors and farms so as to make supply more stable and predictable. The current level of integration does not appear to be sufficient to provide either a sufficient quantity or quality of milk supply.
- (9) Macroeconomic policy forecasts suggest an increase in household incomes which will act to stimulate consumption. How will it affect spending structure? At present a significant share of milk (10-20%) is sold unprocessed to the population through local marketplaces and 'direct delivery' at lower prices. If the shift in consumer demand to higher-quality products keeps on increasing, the quality of raw milk will become more important, and the demand for 1<sup>st</sup> class milk will increase.
- (10) How rational is behaviour of the key groups in the sector? What will be the future trends in the dairy processing segment? Now most dairy processors claim that their margin is getting dangerously low and they cannot increase the price they purchase milk from farmers, while objectively there is evidence that the profitability of dairies can be improved through improved management.
- (11) There are a number of dairy-processing enterprises in the region, competition is acute and procurement policy varies. Some dairies export their produce and as a result they could be interesting organisational case studies for the next phase of this research.

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<sup>21</sup> "Взбить сливки", *Бизнес*, No601, July 2004



## References

1. Achieving Ukraine's Agricultural Potential, Joint publication by the Organization for Economic Co-operation and Development and the Environmentally and Socially Sustainable Development Unit, Europe and central Asia region, the World Bank, 2004 IDRD/The World Bank.
2. White, J. and Gorton M., Vertical Coordination in Transition Countries: A comparative study of agri-food chains in Moldova, Armenia, Georgia, Russia, Ukraine", *Report for the World Bank (ECSSD) project on "Vertical Coordination in ECA Agri-food Chains as an Engine of Private Sector Development: Implication for Policy and Bank Operations"*, Sept 2004.
3. "Report on Farming and Agribusiness in Ukraine", Publication of Agribusiness Development Project in Ukraine, ed by O.Kobzev, Kyiv 2002.
4. Ukraine and the World Economy: Risk Assessment and Policy Recommendations", Publication of Institute for Economic Research and Policy Consulting, Kyiv, 2002.
5. "Ukraine - 2004 IMF Article IV Consultation. Preliminary Conclusions", International Monetary Foundation, August 2004.
6. "Ukraine: Statistical Appendix", International Monetary Fund, Washington DC, 2005.
7. Aslund A., "A Foreign Trade Policy Strategy for Ukraine", UNDP, March 2003.
8. "Статистичний щорічник України 2003 р", State Committee of Ukraine for Statistics, Kyiv, 2004.
9. On-line Publications of State Committee of Ukraine for Statistics, 2005, [www.ukrstat.gov.ua](http://www.ukrstat.gov.ua)
10. Malitskaya E., "Who is more powerful, the elephant or the mouse?", Petr Mohyla Mykolaiv State Humanitarian University, 2004.
11. "Закон о молоке лишает нас молока?", Наша держава, Issue №43, 2005
12. "Взбить сливки", *Бизнес*, №601, July 2004.