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PRIVATE FARM STATISTICS

Document submitted by the Ukrainian Ministry of Statistics

1. Ukraine has recently been undergoing a difficult entry into the market. One component of its economic transformation has been agrarian reform, a key area of which has been the emergence of a new pattern of ownership in agriculture - the small peasant (private) farm.
2. The development and integration of this new type of agrarian unit into the existing economic system has taken place against an economic background of scant resources and inflation. Peasant (private) farms began to be set up in Ukraine as long ago as 1989. By 1 January 1990, local Soviets had registered 43 private farms, and by the time the Peasant (Private) Farms Act was passed (December 1991), there were already rather more than 2,000.
3. An addendum to the Peasant (Private) Farms Act was passed in 1993, defining a peasant (private) farm as an undertaking by Ukrainian citizens who have indicated a desire to produce agricultural commodities and concern themselves with their processing and sale. Once a tract of land has been allocated in the countryside (locality), a State deed conferring ownership, permanent or temporary use of the land has been issued and State registration accorded, a peasant (private) farm acquires the status of a body corporate, obtains a seal bearing its name and address, and can open current and other accounts with banking institutions and enter into relations with businesses, institutions and organizations. The peasant farmer is recognized as an independent producer by State bodies and the local authorities.
4. Title to or the use of tracts not exceeding 50 ha of arable land and 100 ha in total (100 ha of arable land in districts experiencing labour shortages in the settlements) may be accorded for the purpose of operating

peasant (private) farms. In order to create farms of a sensible size, Ukrainian citizens running private farms may also rent additional tracts for productive purposes.

5. Under the law, new peasant (private) farms are exempt from taxes on land and profits for three years (five in districts experiencing labour shortages).

6. Peasant (private) farms must keep books on their operations over the financial year and submit statistical returns.

7. In 1992 the Ministry of Statistics introduced two mandatory returns for peasant (private) farms: the "Final report on returns from sowing for harvest during the current year" and the "Report on peasant (private) farm activity". Both have to be submitted once a year.

8. Since 1991 the Ministry has also conducted seven comprehensive and two sample surveys of various aspects of peasant (private) farm activities.

9. The comprehensive survey programmes have included such matters as number of workers; numbers of each type of livestock, and livestock products output; availability of various kinds of farm equipment and types of land use; output of each of the principal crops; production-related income and expenditure by private farms; sales of the principal kinds of farm produce; types of collaboration with collective and other categories of agricultural undertaking; the physical location of private farmers' land; housing and communal services on private farms and other social questions. A survey of capital construction has taken place every other year.

10. According to surveys by statistical bodies, three quarters of private farms are based around single families, about a quarter around two or three families, and 8% around four or more. A breakdown by age reveals private farmers to be mostly (70%) in their most productive years, between the ages of 31 and 50. Three quarters of the heads of private farms have worked in agriculture before, while almost a quarter are urban dwellers who have decided to try their hands at farming. Some 40% of private farmers have a background of special agricultural education, while only a quarter have undergone specialized agricultural training. By the beginning of 1995 private farms employed 48,000 workers, 12% of them under labour agreements or contracts. Additionally, a third of all people in permanent employment have done seasonal work on private farms.

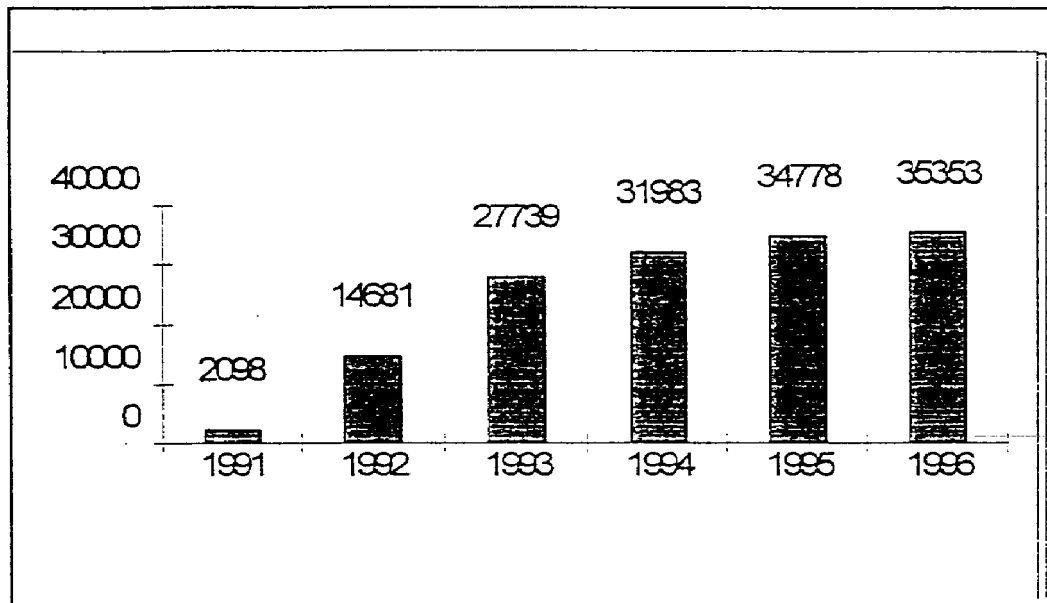
11. The majority of private farms grow crops for sale. The absence of start-up capital (credit, investment) does not make for the creation of productive fixed assets, the acquisition of cattle or livestock production generally. For the time being, the insignificant quantities of livestock kept are for farmers' own use.

12. A number of other factors hamper the establishment and growth of private farms: the small size of the tracts of land, difficulties with obtaining supplies, and the lack of legislative safeguards and bank support. But the farms are continuing to make headway. On 1 January 1997 there were 35,000 peasant (private) farms in independent operation,

working 835,000 ha of agricultural land (2% of all the farmland in Ukraine) including 765,000 ha of arable land. On average, each farm occupies 24 ha of farmland and 22 ha of arable land.

13. The formation of peasant (private) farms on the traditional pattern has slowed markedly in recent years. Whereas 27,000 farms (78%) were set up between 1991 and 1993, only 7,000 were in 1994-1995, and rather more than 500 in 1996.

PRIVATE FARM CREATION IN UKRAINE



14. In the process of reorganization of farm businesses, farms of a variety of different administrative and legal kinds have recently come into existence, among them private and private leasehold farms with an average of 1,800 ha of farmland. These, like the small peasant (private) farms, belong to the private sector, but this makes for difficulties in the statistical monitoring of this category of enterprise.

15. The steady growth of peasant (private) farms and emergence of new kinds of administrative and legal ventures demands detailed statistical investigation, and this is the reason for the changeover to the new surveying methods. For reliability's sake, Ukraine is at present using both the traditional, comprehensive-survey method and sample observations, which are the most efficient means of gathering statistics.

16. In the interests of a more thorough investigation of the activities of peasant (private) farms, a register was established at the Ministry of

Statistics in 1996 on the basis of the Single State Register of Organizations and Enterprises, enabling all individual farmers to be taken into account and serving as a means of selecting farms for sample surveys, while in effect becoming an automated bank of data on such farms.

17. The register of peasant (private) farms operates at the State and regional (*oblast*) levels. It is updated every quarter. It includes full address data on the economic units in operation in the geographical entity surveyed, and their land areas.

18. An experimental sample survey (20%) of peasant (private) farms in six Ukrainian *oblasts* was conducted in November 1996. The principal indicator used to select farms for sampling was land area in hectares. The task was to obtain a correct sample by means of a random selection from the register. Hence units for the survey were systematically selected in decreasing order of land area.

19. The survey programme covered various aspects of peasant (private) farm activity. Data were gathered by asking the heads of farming establishments to fill in questionnaires, and the data were collected within the time allocated. Checks on the accuracy of the answers given were performed to provide quality-control information for the final calculations. Much of the checking was devoted to verifying the consistency of the data, by analysing the relationships between indicators used within the questionnaire. Arithmetic checks on the data were performed as mistakes were identified during the logical checking. Data were input manually, using a display, by the agricultural departments in *oblast* statistical offices. The information was processed automatically at the State level.

The sample mean was calculated using the formula:

$$\hat{U} = \hat{Y}_{sy} = \frac{\sum_{i=1}^n y_i}{n}$$

Extrapolated values were obtained using the formula:

$$\hat{T} = N\hat{U}$$

The coefficient of variation for each indicator was calculated as follows:

$$CV = \frac{\sqrt{\hat{V}(N_y)}}{\hat{T}}$$

and to calculate $V(N_y)$

the formula used was $(N_y) = N^2 \left(\frac{S^2}{n} \right) \left(N - \frac{n}{N} \right)$

where

N = size of the total series

y_i = value of the feature in the i -th unit in the sample

n = sample size

\bar{y} = average value of the feature in the sample

S^2 = variance of the feature in the sample.

20. The results obtained from this sample survey of peasant (private) farms in Ukraine are reproduced in part in table 1.

Table 1

<i>Oblast</i>	No. of farms		Cereals and leguminous crops - total			
	on 1/10/96	surveyed	area harvested, ha		gross intake (x 100 kg)	
			T	CV	T	CV
Volynsk	557	112	4 571	0.11	79 198	0.13
Donetsk	2 270	454	13 421	0.07	155 336	0.08
Ivano-Frankovsk	665	134	3 152	0.14	41 883	0.15
Kiev	939	193	13 654	0.10	194 452	0.10
Lvov	1 195	240	7 939	0.07	146 243	0.07
Nikolaevka	4 959	947	26 149	0.05	210 829	0.07

22. The findings reveal that the standard error and, hence, the limits of accuracy depend on sample size, the relative size of the selection n/N , and the variation in the feature in the total series and the size of that series.

23. In early 1997 the Ministry of Statistics obtained the data from the comprehensive survey of (small) private farms; comparing these with the figures from the sample survey suggests that the sample data obtained were representative. For example, the deviation for gross intake of cereals and leguminous crops is 0.03, for sugar beet is 0.01, for potatoes is -0.15, and for cattle numbers is -0.01.

24. Since Ukrainian experts have not had enough practical experience, under a programme of cooperation between the Ministry of Statistics and the United States National Agricultural Statistics Service (NASS), experts from the United States have been taking part in the conduct of the survey and analysis of the findings.

25. When the definitive results are available, the approach taken to the statistical monitoring of peasant (private) farms and other questions relating to agricultural statistics will be reviewed and the relevant software upgraded. Sample surveys will be conducted in all regions, account being taken of the district level.

26. If these new monitoring methods are to be successfully introduced, besides setting up the register of peasant (private) farms and developing software there is a great deal of training of *oblast*- and regional-level experts to do. For this purpose, a seminar is to be held on the planned sample survey, possibly with participation by experts from the United States. Plans have also been drawn up for the upgrading and renovation of communications and technical infrastructure at the *oblast* and district levels, in order to permit faster and better data processing, analysis and dissemination of the findings to a wide range of users, together with comparisons - geographical and regional - with the findings of earlier surveys, and to offer an indication of the outlook for the future.
