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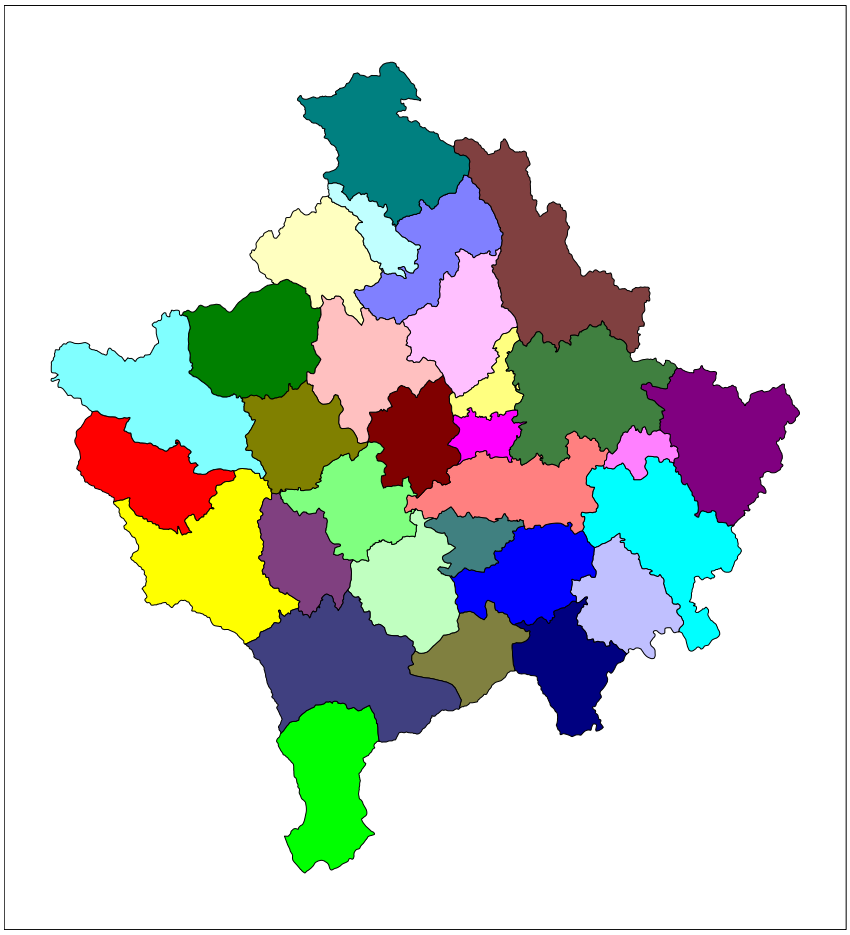
Agricultural Household Survey 2004



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Preface

This is the fourth time that SOK, respectively Department of Agriculture and Environment Statistics conducted the Agriculture Household Survey. The aim of this survey is ti collect reliable statistical data on the agriculture sector in Kosovo.
The results of the Agricultural Household Survey 2004, as presented in this Publication provide an important source of information on the current agricultural situation in Kosovo.
Further improvements in data reliability can be expected once an Agricultural Census and Farm Register are conducted in Kosovo.

This publication is a result of cooperation between the Statistical Office of Kosovo (SOK) and the Ministry of Agriculture, Forestry and Rural Development (MAFRD), through joint working groups.
The whole activity was supported by the European Agency for Reconstruction (EAR), financed Project 'Complementary Services to the Agricultural Statistics and Policy Advisory Unit Kosovo (ASPAUK II), implemented by NR International/ ADAS.
This Publication was prepared by the Department of Agriculture and Environment Statistics in SOK comprising the following persons: Bajrush Qevani, Haki Kurti, Rexhep Fejzullahu, Habib Strana, Güven Güneren (UNMIK) in cooperation with consultants from ASPUK II Project: Avni Ramadani, Lulzim Shala, Muhedin Nushi, Valerie Evans, Emma Chapman and Dr. Sophia Davidova.
SOK would also like to thank all regional office employees of SOK, field enumerators and respondents for their cooperation and contributions.
We would welcome any comments and suggestions you may have regarding this publication in order to meet better the needs of users in future publications.

Chief Executive in SOK
Hysni Thaçi

Pristine, November 2005

Abbreviations and Acronyms

AHS	Agriculture Household Survey
ASPAUK	Complementary Services to the Agricultural Statistics and Policy Advisory Unit Kosovo
AWU	Annual Work Unit
EAR	European Agency for Reconstruction
EU	European Union
FADN	Farm Accountancy Data Network
HH	Household
LFS	Labour Force Survey
LSMS	Living Standard Measurement Survey
MAFRD	Ministry of Agriculture, Forestry and Rural Development
MPS	Ministry of Public Services
PPS	Probability Proportional to Size
PSU	Primary Sample Unit
SOE	Socially Owned Enterprises
SOK	Statistical Office of Kosovo
UNMIK	United Nations Interim Administration Mission in Kosovo

Key to symbols

-	Zero
:	Data not available
.	Not applicable
0	Magnitude less than half of unit employed
0, 0	Magnitude less than half of unit employed
ha	Hectares
kg	Kilogram
t	Tonne
hp	Horse power
%	Per cent

In tables where figures have been rounded to the nearest final digit, there might be a slight discrepancy in the sum of the constituent items as shown.

Contents

1 Objectives, methodology and scope of the survey

1.1. Survey objectives and scope

The objective of the Agricultural Household Survey 2004 is to provide data on the agricultural situation in Kosovo with respect to the demography of agricultural households; land use and farm structure; livestock; crops; forestry; agricultural inputs; machinery and labour force. The survey aims to help assess the agricultural situation in Kosovo and provide the basis for future monitoring of trends in the sector.

The survey covers land farmed by agricultural households, living and farming in rural areas[1]. It does not include land belonging to agricultural households in rural areas that are not farming or land belonging to agricultural households living in urban areas in Kosovo or abroad; unless rented by agricultural households from the rural areas. This is in contrast to previous years where land belonging to all agricultural households, whether living in Kosovo or abroad, was included.

Additionally, land belonging to state owned enterprises - not farmed by agricultural households - is not included in the Survey. Data is presented at national level and municipality level in some cases.

The Survey was conducted in the autumn of 2004 and in January 2005. The survey has been conducted annually since 2001. Important features of the Survey compared with previous years are: a larger sample of interviewed households; large farms have been fully enumerated and the frame from which the sample is chosen has been completely updated[2].

1.2. Survey frame

In late August and September 2004 all rural villages in Kosovo were visited. Based on a face-to-face questionnaire with the village heads, estimates were obtained for purposes of updating the sample frame. For each village, estimates were obtained for:

- the number of households in the village
- the number of agricultural households in the village;
- the number of inhabitants of the village;
- the number of families from the village who are living outside the village;
- the number of families living in the village at present;
- the number of inhabitants of the village who are living outside the village;
- the number of inhabitants currently living in the village.

In 468 randomly selected villages, estimates were cross-checked through a full listing of all households and agricultural households in the village.

In most cases the number of agricultural households was less than had been estimated by the village head. Adjustments to the frame were made accordingly.

While the frame may not be as reliable as a census would be, as it is based on estimates on the part of the head person in the village, it represents an update on data used previously, which was based on 1981 data.

The updated frame includes 117.967 agricultural households in rural areas in Kosovo. The number of agricultural households assumed in previous years was higher.[3] This should be

[1] At least one member of the agricultural household should be farming.

[2] Sample size in 2001 was 1,440 agricultural households; in 2002 was 3,200 agricultural households; in 2003 was 1,264 agricultural households, and; in 2004 was 4.646 agricultural households.

[3] The total agricultural household frame used in previous years (based on 1981 data) was: 2001: 154,752; 2002: 157,600; 2003: 169.473.

taken into account when comparing the results of the Agricultural Household Survey 2004 with previous years.

1.3. Sample Design

The survey was based on a two-level stratified sample. The sample size was 4,646 agricultural households. The first level of stratification was by municipality in order to obtain municipality estimates and to ensure full geographical coverage. The second level of stratification was by village size to ensure representation of agricultural households located in a range of village sizes. In the absence of a Farm Register of Agricultural Census it was not possible to stratify the sample according to type of agricultural holding or size.

The villages in the frame were used to form Primary Sampling Units (PSUs), from which the random selection of households to interview was made. The method used to form the PSUs was:

- for small villages, less than 50 agricultural households, several small villages were grouped together (according to their geographical proximity) to form one PSU;
- for medium sized villages, the whole village comprises one PSU;
- for large villages, the village was divided into parts, comprising 75 to 200 agricultural households. Each part formed one PSU.

The size of the municipality, in terms of total number of agricultural households, determined the number of Primary Sampling Units (PSU), selected in each municipality.

- For municipalities with more than 7,000 agriculture households, 25 PSUs were randomly selected;
- For municipalities from 4.000 – 7.000 agriculture households, 20 PSUs were randomly selected;
- For municipalities with less than 4.000 agricultural households, half of the PSUs were selected.

Within each selected PSU, 8 agricultural households were randomly selected for interview. This was based on a list of all agricultural households in the selected PSU (See Section 1.6). For larger villages more than one PSU of the same village were selected, all the PSUs of the village were included.

A total of 535 PSUs were included in the sample. In some municipalities with a relatively low number of agricultural households, less than 20 PSUs were included[4]. For these municipalities, estimates may not be reliable at municipality level but will contribute to reliable estimates at Kosovo level.

The second level of stratification was, within each municipality, to stratify the PSUs according to the size of the village: small (less than 75 agricultural households); medium (75-150 agricultural households); and large (greater than 150 agricultural households). The number of PSUs selected from each category of village reflected the total number of agricultural households in each municipality living in small, medium and large villages. The PSUs in each village strata were selected probability proportional to size (PPS) based on the number of agricultural households in each PSU.

To reduce the heterogeneity of the sample frame, and thus improve the estimates, all units that were beyond the normal distribution, in terms of farm size, were identified and enumerated fully. These are referred to as large and specialized farms.

Thresholds by farm type were established in consultation with MAFRD experts, municipality agronomists, local and international experts and agro-processors as well as analysis of existing data sets. The thresholds established also took into account the resources available for full enumeration of the selected farms. Table 1.1 presents the thresholds used for selection of large and specialized farms.

[4] Novoberda; Zvecan; Zubin Potok; Shterpce; Obiliq; Fushe Kosovo; Shtime; Mitrovica; Leposavic; Kline; Dragash.

Table 1: Thresholds for large and specialized farms by farm type

Production	Selected Threshold
Potatoes	10 ha
Cereals	50 ha
Industrial crops	All farms
Orchards	1,5 ha
Vineyards	4 ha
Horticulture open	3 ha
Horticulture covered	0,30 ha
Cattle	35
Sheep	200
Goat	40
Pigs	35
Poultry	4.000

In the absence of a complete farm register, a list of all farms in Kosovo above the threshold size was compiled. This was accomplished through visits to each municipality to consult with municipality officials and with reference to existing data sets.
376 large and specialized farms were identified and fully enumerated. These are referred to in this publication as “large farms”. They are not necessarily commercial farms. All other agricultural households are referred to in subsequent chapters as “small agricultural households or farms”.

1.4. Estimation Procedure

Weights were applied at municipality level.

1.5. Definitions

The survey was carried out using the following important definitions:
The definition of a household is a union of persons that live together, and pool their income.
The definition of an agricultural household is one that possesses and cultivates more than 0.10 ha of arable land[5], or less than 0.10 ha of arable land but has at least:

- 1 cattle and a calf, or 1 cattle and 1 heifer
- 1 cattle and 2 sheep’s or 2 grown goats
- 3 grown up pigs
- 4 grown sheep’s and pigs
- 50 grown poultries
- 20 beehives or
- more than 20 m^2 of fish pond.

The total land area of the household includes all land belonging to the household both used and not used and rented land, less land that is given out to rent.

[5] Field, garden, plastic tunnel, orchard, vineyard, meadow

1.6. Field Procedure

Fieldwork was conducted in two stages. The first stage was the listing of all households and agricultural households in the selected villages. Field staff, in some instances using maps of the villages, went door-to-door gathering data using a questionnaire. The results of this fieldwork were used to select agricultural households to be surveyed.
The second stage of field work was to collect data from selected agricultural households. The method of data collection was face-to-face interviews based on a questionnaire (Annex).
A data checking procedure was carried out. It comprised three levels: (i) checking completed questionnaires in the field by field supervisors; (ii) checking completed questionnaires in SOK central offices by permanent staff of the Agricultural Department, and (iii) logical checks during data entry. Following completion of the fieldwork a further quality control was carried out. A total of 100 agricultural households were selected (selected randomly by PSU and agricultural household). These agricultural households were re-interviewed to verify the validity of the data initially provided. No major discrepancies were found.[6]

2 Agricultural households

The Agricultural Household Survey 2004 collected information about agricultural household members. Considering the many changes that occurred in Kosovo in the past 15 years, the insufficiency of actual population data[7] creates problems in interpreting statistics. This chapter provides data on agricultural households in 2004 concerning age, gender and education of household members, and information about the household members who lived out of the household in past 12 months.
It should be noted that only households living and farming in the villages have been counted. Under these circumstances the figures for agricultural population are expected to differ from 2001 agricultural household survey when households living in other places – also abroad – were also included. Table 2. presents agricultural household members in Kosovo by age group.

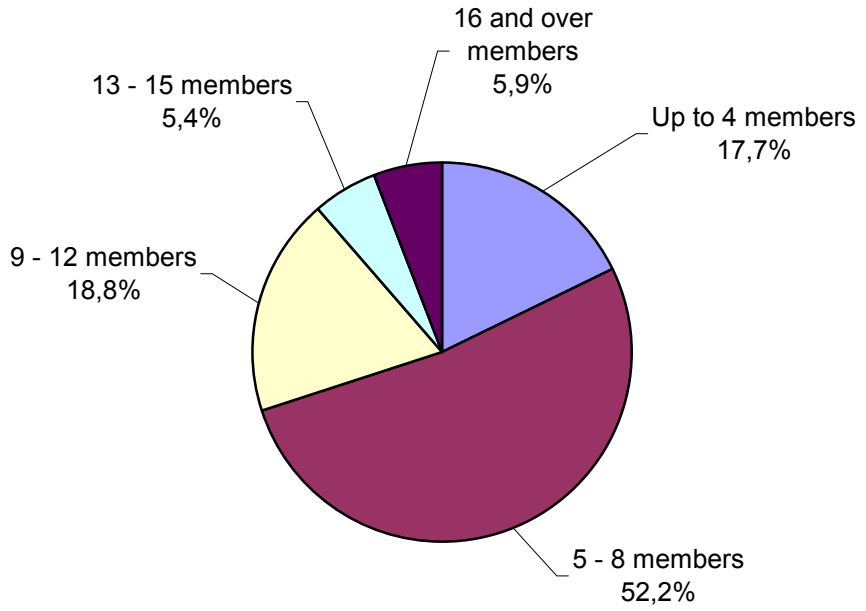
Table 2 Agriculture population by age group

Age group	Number	%	Comulative %
Up to 14	278.405	30,7	30,7
15-29	267.467	29,5	60,1
30-49	218.856	24,1	84,2
50-64	89.391	9,8	94,1
65 and over	53804	5,9	*100,0*
Total	907.925	*100,0*	

The table shows a total agricultural population of around 908.000([8]). Over 60 % of the agricultural population is under 30 years of age. Agricultural households in Kosovo are large. Figure 1. presents the distribution of households according to size.

[6] Some small variations were observed in the responses provided by agricultural households. This is thought to be due to the lack of record keeping and the estimates provided by the agricultural household at the time of interview.
[7] Due to the lack of general population census
[8] Agricultural population is defined as all members of agricultural households as defined in Chapter 1.

Figure 1: Agriculture household size



The most households are with 5–8 household members; 52,2 % of all agricultural households fall in this group. Very large households with 13-15 members account for 5,9 %. The average number of household members is 7,7. Out of the total agricultural population, around 10 % lives outside the household for more than six months. The largest number is male within the age group 15-59, who in 2004 spent 10-12 months outside household.
Table 2. presents agricultural population by municipality and age group. Most municipalities have a high number of people dependent on agriculture. Podujevo, Ferizaj, Prizren and Lipjan have the largest agricultural populations, above 50.000 each.
Table 2.2 shows the differences in age structure between municipalities. Malisheva has the highest percentage of young persons up to 14 years of age, 36,4 %, compared to an average of 30,7 % for Kosovo. Novo Bërda, a small municipality with an agricultural population of only around 3.000, has the highest share, 40,3 %, of young active working population between 15-29 years old, compared with an average for Kosovo of 29,5%. The share of the core group of the working population, between 30-49 years old, is similar amongst municipalities, between one fifth and one fourth of the agricultural population. The fraction of 50-64 years old people in Kosovo is nearly 10 % and of elderly people (aged 65 or more) around 6 %. In some municipalities, Leposavic, Zubin Potok, Zvecan, and Shterpce, the share of the agricultural population over 50 years old is much higher, 40,2 %, 30,7 %, 29,2 % and 25,9 % respectively. One of the reasons is the migration of young people due to the lack of jobs and career prospects in the villages.

Table 3: Agricultural population by age group in municipalities

Munisipality	Age group										Total	
	Up to 14		15 - 29		30 - 49		50 - 64		65 and over			
	Number	%	Number	%	Number	%	Number	%	Number	%	Numri	%
Kosovo	**278.405**	***30,7***	**267.467**	***29,5***	**218.856**	***24,1***	**89.391**	***9,8***	**53.804**	***5,9***	**907.925**	***100,0***
Deçani	8.356	*28,5*	8.949	*30,5*	6.735	*23,0*	3.163	*10,8*	2.094	*7,1*	29.298	*100,0*
Gjakova	12.380	*29,9*	13.005	*31,5*	9.286	*22,5*	3.913	*9,5*	2.754	*6,7*	41.339	*100,0*
Gllogoci	11.127	*28,5*	13.616	*34,8*	8.975	*23,0*	3.760	*9,6*	1.594	*4,1*	39.072	*100,0*
Gjilani	11.700	*29,3*	10.192	*25,5*	10.258	*25,7*	5.115	*12,8*	2.710	*6,8*	39.975	*100,0*
Dragashi	5.647	*28,6*	5.189	*26,3*	5.224	*26,5*	2.217	*11,2*	1.462	*7,4*	19.739	*100,0*
Istogu	10.209	*31,1*	9.051	*27,5*	8.330	*25,3*	3.500	*10,7*	1.772	*5,4*	32.862	*100,0*
Kaçaniku	7.497	*30,7*	7.506	*30,8*	6.038	*24,7*	2.177	*8,9*	1.188	*4,9*	24.405	*100,0*
Klina	9.576	*32,0*	9.775	*32,7*	6.427	*21,5*	2.365	*7,9*	1.773	*5,9*	29.917	*100,0*
Fushë Kosova	4.233	*27,3*	4.933	*31,8*	3.676	*23,7*	1.837	*11,9*	822	*5,3*	15.501	*100,0*
Kamenica	6.286	*26,3*	6.476	*27,1*	6.367	*26,6*	2.635	*11,0*	2.155	*9,0*	23.919	*100,0*
Mitrovica	5.535	*32,7*	5.021	*29,7*	3.936	*23,3*	1.515	*9,0*	910	*5,4*	16.917	*100,0*
Leposaviqi	1.102	*11,6*	1.856	*19,5*	2.725	*28,7*	2.240	*23,6*	1.580	*16,6*	9.503	*100,0*
Lipjani	14.401	*28,5*	15.625	*30,9*	12.248	*24,2*	5.634	*11,2*	2.604	*5,2*	50.512	*100,0*
Novo Brda	509	*17,2*	1.195	*40,3*	620	*20,9*	310	*10,4*	332	*11,2*	2.965	*100,0*
Obiliqi	3.944	*31,1*	3.560	*28,1*	3.274	*25,8*	1.341	*10,6*	573	*4,5*	12.691	*100,0*
Rahoveci	11.061	*29,8*	11.090	*29,8*	9.613	*25,9*	3.446	*9,3*	1.947	*5,2*	37.157	*100,0*
Peja	11.071	*30,2*	10.652	*29,0*	8.747	*23,8*	3.852	*10,5*	2.356	*6,4*	36.678	*100,0*
Podujeva	17.263	*31,8*	16.003	*29,5*	13.005	*24,0*	5.359	*9,9*	2.628	*4,8*	54.258	*100,0*
Prishtina	7.167	*27,1*	7.448	*28,1*	6.763	*25,6*	2.848	*10,8*	2.241	*8,5*	26.467	*100,0*
Prizreni	17.728	*33,7*	14.804	*28,2*	13.023	*24,8*	4.005	*7,6*	2.978	*5,7*	52.538	*100,0*
Skenderaj	15.152	*31,6*	14.144	*29,5*	11.599	*24,2*	4.203	*8,8*	2.780	*5,8*	47.878	*100,0*
Shtimja	7.435	*35,8*	5.929	*28,6*	4.978	*24,0*	1.513	*7,3*	907	*4,4*	20.763	*100,0*
Shterpca	2.553	*24,7*	2.280	*22,1*	2.827	*27,4*	1.246	*12,1*	1.429	*13,8*	10.335	*100,0*
Suha Reka	16.911	*34,2*	14.772	*29,9*	11.400	*23,1*	3.824	*7,7*	2.525	*5,1*	49.433	*100,0*
Ferizaji	18.324	*34,8*	14.468	*27,5*	12.735	*24,2*	4.515	*8,6*	2.586	*4,9*	52.628	*100,0*
Vitia	13.748	*33,6*	10.453	*25,5*	10.272	*25,1*	3.730	*9,1*	2.725	*6,7*	40.927	*100,0*
Vushtrria	10.384	*26,8*	13.843	*35,7*	8.680	*22,4*	4.411	*11,4*	1.454	*3,7*	38.771	*100,0*
Zubin Potoku	1.007	*20,3*	1.225	*24,7*	1.211	*24,4*	974	*19,6*	550	*11,1*	4.967	*100,0*
Zveçani	841	*18,2*	1.117	*24,2*	1.303	*28,3*	738	*16,0*	610	*13,2*	4.609	*100,0*
Malisheva	15.258	*36,4*	13.289	*31,7*	8.583	*20,5*	3.005	*7,2*	1.765	*4,2*	41.900	*100,0*

Table 4. shows agricultural population by gender and by municipality.

Table 4: Agricultural population by gender in municipalities

Municipality	Male		Female		Total	
	Number	%	Number	%	Number	%
Kosova	**477.899**	***52,6***	**430.026**	***47,4***	**907.925**	***100,0***
Deçani	15.581	*53,2*	13.716	*46,8*	29.298	*100,0*
Gjakova	22.055	*53,4*	19.283	*46,6*	41.339	*100,0*
Gllogoci	19.806	*50,7*	19.266	*49,3*	39.072	*100,0*
Gjilani	21.457	*53,7*	18.518	*46,3*	39.975	*100,0*
Dragashi	9.983	*50,6*	9.756	*49,4*	19.739	*100,0*
Istogu	16.796	*51,1*	16.066	*48,9*	32.862	*100,0*
Kaçaniku	13.310	*54,5*	11.096	*45,5*	24.405	*100,0*
Klina	15.563	*52,0*	14.353	*48,0*	29.917	*100,0*
Fushë Kosova	7.955	*51,3*	7.546	*48,7*	15.501	*100,0*
Kamenica	12.415	*51,9*	11.504	*48,1*	23.919	*100,0*
Mitrovica	9.163	*54,2*	7.754	*45,8*	16.917	*100,0*
Leposaviqi	5.288	*55,6*	4.215	*44,4*	9.503	*100,0*
Lipjani	27.238	*53,9*	23.274	*46,1*	50.512	*100,0*
Novo Brda	1.571	*53,0*	1.394	*47,0*	2965	*100,0*
Obiliqi	6.932	*54,6*	5.759	*45,4*	12.691	*100,0*
Rahoveci	19.602	*52,8*	17.555	*47,2*	37.157	*100,0*
Peja	18.770	*51,2*	17.908	*48,8*	36.678	*100,0*
Podujeva	28.836	*53,1*	25.422	*46,9*	54.258	*100,0*
Prishtina	13.896	*52,5*	12.571	*47,5*	26.467	*100,0*
Prizreni	27.586	*52,5*	24.952	*47,5*	52.538	*100,0*
Skenderaj	25.083	*52,4*	22.795	*47,6*	47.878	*100,0*
Shtimja	11.033	*53,1*	9.729	*46,9*	20.763	*100,0*
Shterpca	5.502	*53,2*	4.833	*46,8*	10.335	*100,0*
Suha Reka	26.340	*53,3*	23.093	*46,7*	49.433	*100,0*
Ferizaji	27.545	*52,3*	25.083	*47,7*	52.628	*100,0*
Vitia	20.692	*50,6*	20.235	*49,4*	40.927	*100,0*
Vushtrria	20.903	*53,9*	17.869	*46,1*	38.771	*100,0*
Zubin Potoku	2.781	*56,0*	2.187	*44,0*	4.967	*100,0*
Zveçani	2315	*50,2*	2.293	*49,8*	4.609	*100,0*
Malisheva	21.900	*52,3*	19.999	*47,7*	41.900	*100,0*

All municipalities have more males than females. The results for 2004 were not substantially different from those from the Agricultural Household Survey 2001. The latter indicated that with the exception of elderly people there was substantial dominance of males in the agricultural population. The dominance of males in agricultural population appears to persist despite the pre-and post-war emigration which involved more males than females.
In the survey, data were gathered on education level. Table 4. presents the level of education attained by the agricultural population by age group.

Table 5: Education attainment of agricultural population by age (from 15-64 years of age)

Education Level	Age Group						Total	
	15-29		30-49		50-64			
	Number	%	Number	%	Number	%	Number	%
None	2,595	*1.0*	6,850	*3.1*	13,156	*14.7*	22,601	*3.9*
Some Primary	17,908	*6.7*	11,110	*5.1*	21,475	*24.0*	50,493	*8.8*
Primary Completed	95,111	*35.6*	88,858	*40.6*	33,458	*37.4*	217,427	*37.8*
Some Secondary	40,668	*15.2*	4,393	*2.0*	821	*0.9*	45,882	*8.0*
Secondary Completed	93,950	*35.1*	89,527	*40.9*	14,770	*16.5*	198,247	*34.4*
Some High School	2,229	*0.8*	1,104	*0.5*	342	*0.4*	3,676	*0.6*
High School Completed	2,285	*0.9*	6,259	*2.9*	3,323	*3.7*	11,867	*2.1*
Some Tertiary	10,589	*4.0*	3,240	*1.5*	323	*0.4*	14,152	*2.5*
Tertiary Completed	2,131	*0.8*	7,515	*3.4*	1,724	*1.9*	11,371	*2.0*
Total	267,467	*100.0*	218,856	*100.0*	89,391	*100.0*	575,715	*100.0*

The largest share of population has primary or secondary education. The share of these two groups taken together is nearly three quarters of the adult agricultural population in active working age. At the two extremes, no education and some or fully completed tertiary education, are small shares of the population, around 4 % in each group.
There are large differences in educational attainment among Kosovo male and female agricultural population aged 15-64 (Table 6.).

Table 6: Education attainment of agricultural by gender (from 15-64 years of age)

Education Level	Male		Female		Total	
	Number	%	Number	%	Number	%
None	4.882	*1,6*	17.719	*6,5*	22.601	*3,9*
Some Primary	17.899	*5,9*	32.594	*11,9*	50.493	*8,8*
Primary Completed	78.242	*25,9*	139.185	*50,9*	217.427	*37,8*
Some Secondary	27.687	*9,2*	18.195	*6,7*	45.882	*8,0*
Secondary Completed	142.766	*47,2*	55.481	*20,3*	198.247	*34,4*
Some High School	2.695	*0,9*	982	*0,4*	3.676	*0,6*
High School Completed	8.986	*3,0*	2.881	*1,1*	11.867	*2,1*
Some Tertiary	10.313	*3,4*	3.838	*1,4*	14.152	*2,5*
Tertiary Completed	9.010	*3,0*	2.361	*0,9*	11.371	*2,0*
Total	302.479	*100,0*	273.236	*100,0*	575.715	*100,0*

The number of females without education is over three times higher than males. In general, Kosovo agriculture families educate their daughters up to the end of the primary school. For this reason the adult females with completed primary education amount to about 51 %, while 47 % of males have completed secondary school.
This gender difference is due not only to the priority given by families in rural areas to educate sons, but also depends on the distance from the place of residence to school, traffic conditions and on the existing physical infrastructure. In villages with primary schools both genders are usually sent to school. Other surveys (LSMS 2000, LFS 2001 and 2002) found large differences in education between the rural and urban population.

Data gaps

The planned population census will provide better information on the size of the agricultural population and the gender structure in rural areas.

3 Land use and farm structure

The total land area in Kosovo accounts for 1,1 million hectares. The most quoted structure of land use applies to the late 1980s and it is based on the cadastre register. The Agricultural Household Survey 2004 collected data from households about the use of each plot of land, owned or operated, including land left fallow. It should be noted that the data presented below show smaller land area by categories in comparison to reported previously. Several factors could be responsible for this discrepancy. First, SOE[9] land is not included and this report does not refer to this land. Second, the definition of agricultural household has implications for the data on land use.

The household had to be in Kosovo and actually living in the village in order to be counted. Fallow land has been counted only when it was reported as such by agricultural households. Land area abandoned by households living abroad or by displaced persons has not been counted. Another possible reason could be some under reporting of land plots by farmers due to expectations of future taxation.

Furthermore it is known that a large quantity of agricultural land, in recent years, has been lost to construction. Finally, the small sample size could also be a factor. However, it should be noted that the experience of other countries in transition to a market economy indicate that old records from the centrally planned system have often overestimated the availability of farm land as they had not been adjusted for the substantial losses of land areas to non-agricultural uses. Table 7. presents land use as reported by farmers.

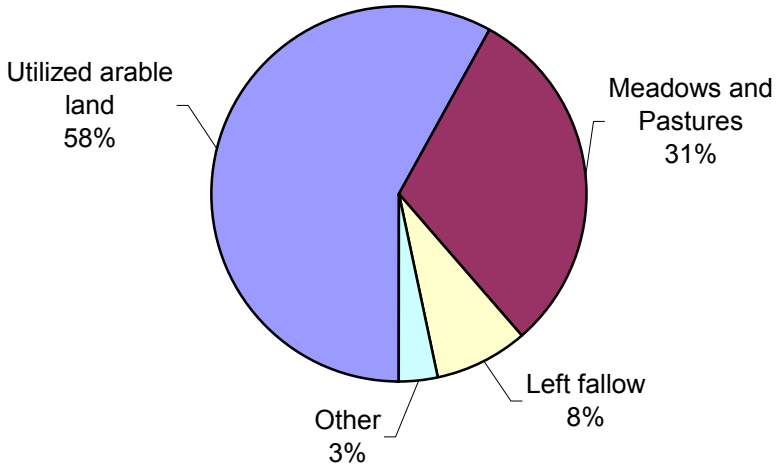
Table 7: Land use

Land Type	Area (ha)	%
Utilized arable land	114.162	*43,19*
Kitchen gardens	2.253	*0,85*
Orchards	3.088	*1,17*
Vineyards	980	*0,37*
Green house	189	*0,07*
Meadows	55.601	*21,03*
Subtotal Cultivated Land	176.273	*66,68*
Pastures	4.975	*1,88*
Left fallow	15.750	*5,96*
Subtotal Agriculture Land	196.997	*74,52*
Forestry	9.136	*3,46*
House yard	58.097	*21,98*
Other	109	*0,04*
Total Land area	264.340	*100,00*

Agricultural land owned or operated by households accounts for 75 % of the total land area. The remaining is land under forests and house yards. Agricultural land includes utilized arable land, kitchen gardens, orchards, vineyards, green house, meadows, pastures, and land left fallow. The use of agricultural land by main categories is presented in Figure 2.

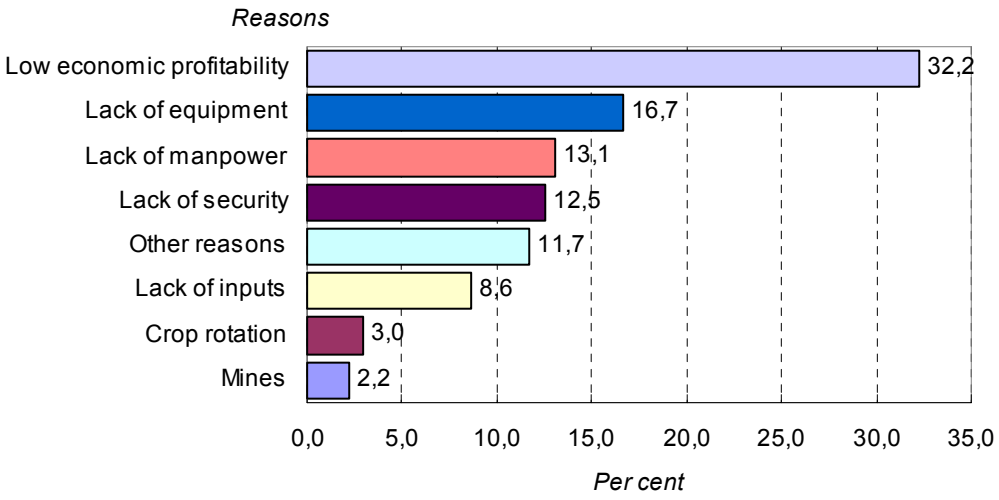
[9] Agrocombinats, Agriculture Enterprises and Cooperatives

Figure 2: Use the agricultural land



The largest part, 58 %, is the utilized arable area; the second largest category comprises meadows and pastures. According to the Agricultural Household Survey 2004, 8 % of agricultural land is left fallow. In 2004, a quarter of all agricultural households had some land left fallow. Around one third of the farmers who left land fallow indicate, that this was due to low economic profitability, Figure 3.

Figure 3: Reasons stated by farmers for Land left fallow[10]



The other important reasons indicated by farmers are the lack of inputs, equipment or labour. Although on average agricultural households have enough equipment for the cultivated area and excess labour, for some households these appear to be a constraint.

[10] One of the reasons is also lack of security, that refers to the farmers that are concerned for their own safety

Table 8: Irrigation of cultivated land by municipality

Municipality	Irrigated	Not Irrigated	Total	Share of irrigated land
	%	%	%	%
Kosovo	***31,5***	***68,5***	***100,0***	***100,0***
Decan	*67,5*	*32,5*	*100,0*	*7,2*
Gjakova	*34,6*	*65,4*	*100,0*	*4,3*
Gllogoc	*33,3*	*66,7*	*100,0*	*4,9*
Gjilan	*30,4*	*69,6*	*100,0*	*4,8*
Dragash	*5,4*	*94,6*	*100,0*	*0,3*
Istog	*54,4*	*45,6*	*100,0*	*5,9*
Kachanik	*32,1*	*67,9*	*100,0*	*2,3*
Kline	*25,3*	*74,7*	*100,0*	*2,1*
Fushë Kosovo	*33,6*	*66,4*	*100,0*	*2,6*
Kamenica	*26,5*	*73,5*	*100,0*	*3,7*
Mitrovica	*27,3*	*72,7*	*100,0*	*1,3*
Leposavic	*37,8*	*62,2*	*100,0*	*3,6*
Lipjan	*21,0*	*79,0*	*100,0*	*3,8*
Novo Brde	*21,2*	*78,8*	*100,0*	*0,4*
Obiliq	*27,2*	*72,8*	*100,0*	*1,3*
Rahovec	*43,3*	*56,7*	*100,0*	*5,8*
Peje	*69,5*	*30,5*	*100,0*	*8,9*
Podujevo	*25,2*	*74,8*	*100,0*	*5,6*
Prishtina	*30,3*	*69,7*	*100,0*	*4,2*
Prizren	*30,8*	*69,2*	*100,0*	*3,6*
Skenderaj	*15,1*	*84,9*	*100,0*	*1,9*
Shtime	*23,2*	*76,8*	*100,0*	*1,4*
Shterpce	*38,1*	*61,9*	*100,0*	*3,0*
Suha Reka	*25,8*	*74,2*	*100,0*	*3,9*
Ferizai	*19,4*	*80,6*	*100,0*	*2,8*
Viti	*23,6*	*76,4*	*100,0*	*2,8*
Vushtrii	*31,1*	*68,9*	*100,0*	*3,7*
Zubin Potok	*40,7*	*59,3*	*100,0*	*1,1*
Zvecan	*53,2*	*46,8*	*100,0*	*1,7*
Malisheva	*9,7*	*90,3*	*100,0*	*1,1*

Irrigation is used on around 33.000 ha i.e. around 32 % of cultivated land is irrigated. Table 8 presents the share of irrigated land by municipality as reported by farmers.

Farm structure is dominated by small family farms, typically under two hectares, which produce for household needs. There were 369 private household large farms identified in 2004, including specialist units. These had about 9.400 ha of land, or 3,6 % of the total private land reported by farmers.

Table 9: Agricultural land by farm size and farm structure

Farm Size	Small Farms			Large Farms			Total			
	Number of farms	Area (ha)	% of farms	Number of farms	Area (ha)	% of farms	Number of farms	Area (ha)	% of farms	Cumulative %
0 - 0.5 ha	27.503	8.305	*23,5*	9	3	*2,4*	27.512	8.308	*23,4*	*23,4*
0.51 - 1 ha	27.379	20.808	*23,4*	10	7	*2,7*	27.389	20.815	*23,3*	*46,8*
1.01 - 2 ha	32.646	47.813	*27,9*	20	33	*5,4*	32.666	47.846	*27,8*	*74,6*
2.01 - 3 ha	14.907	36.311	*12,7*	30	73	*8,1*	14.937	36.384	*12,7*	*87,3*
3.01 - 4 ha	6.678	22.986	*5,7*	42	148	*11,4*	6.720	23.134	*5,7*	*93,1*
4.01 - 5 ha	3.294	14.769	*2,8*	31	139	*8,4*	3.325	14.908	*2,8*	*95,9*
5.01 - 6 ha	1.898	10.346	*1,6*	29	161	*7,9*	1.927	10.507	*1,6*	*97,5*
6.01 - 8 ha	1.389	9.783	*1,2*	42	294	*11,4*	1.431	10.077	*1,2*	*98,8*
8.01 - 10 ha	477	4.193	*0,4*	29	257	*7,9*	506	4.451	*0,4*	*99,2*
Over 10 ha	826	12.715	*0,7*	127	7.851	*34,4*	953	20.567	*0,8*	*100,0*
Total	116.998	188.031	*100,0*	369	8.966	*100,0*	117.367	196.997	*100,0*	

Table 9. shows the distribution of farm size for both small and large farms. Farms are classified in 10 size groups. 96 % of small household farms are under 5 ha, and these account for 80 % of the agricultural land in small farms, whilst 4 % of farms over five hectares account for 20 % of the land. In 2004, the mean farm size of the small household farms, counting agricultural land only, was 1.6 ha. The standard deviation was much smaller than for large farms, (2.1). This very fragmented farm structure impedes the development of commercial agriculture and perpetuates subsistence farming.

The distribution of large and specialised farms is completely different. The mean farm area was 24,3 ha with a standard deviation of 76,6. 38 % of farms are below 5 ha but the agricultural land area of these farms accounts for only 4 % of the agricultural land in large farms. Whereas 62 % of farms are over 5 ha. This group accounts for 96 % of the land. Within this group, there are a few very large farms, with extensive pasture. Bearing in mind the number and land area under small farms, the overall size distribution of agricultural land in Kosovo is almost identical to the distribution of small household farms.

Table 10 presents the land use by categories in small and large farms. The differences between these two farm groups are substantial. For the small farms, the arable land is slightly beyond one third of the total land area, whilst in the large farms it is nearly a half. In small household farms, kitchen gardens and house yards account for 4,5 % of the total area. This is another indication of their subsistence and non-commercial character.

Table 10: Total area by land use and farm structure

Land type	Small Farms		Large Farms	
	Area (ha)	%	Area (ha)	%
Utilized arable land	109.028	*42,77*	5.134	*54,6*
Kitchen gardens	2.248	*0,88*	5	*0,05*
Orchards	2.966	*1,16*	122	*1,29*
Vineyard	731	*0,29*	248	*2,64*
Green house	173	*0,07*	16	*0,17*
Meadows	54.088	*21,22*	1.514	*16,1*
Subtotal Cultivated Land	169.234	66,38	7.038	74,85
Pastures	3.092	*1,21*	1.883	*20,02*
Left fallow	15.705	*6,16*	44	*0,47*
Subtotal Agric Land	188.031	*73,76*	8.966	*95,34*
House yard	9.092	*3,57*	44	*0,47*
Forestry	57.720	*22,64*	377	*4,01*
Other	92	*0,04*	17	*0,18*
Total Land Area	254.937	*100,0*	9.403	*100,0*

More than a quarter of the land in both farm structures is under meadows, pastures and forest. Land left fallow is a larger percentage of the area in small farms. Often, these farms have other sources of income and they devote less time to agricultural activity. The situation in the large farms is different as these farmers rely on farm income to maintain their households.

Table 11: Agricultural land area by ownership and farm structure

Ownership	Small Farms		Large Farms		Total	
	Area (ha)	%	Area (ha)	%	Area (ha)	%
Owned	175.096	*97,3*	2.016	*79,5*	177.112	*97,2*
Rented	8.238	*1,7*	4.445	*18,9*	12.682	1,8
Used for free form private individual	3.939	*0,8*	1.274	*0,8*	5.214	0,8
State land	652	*0,1*	674	*0,6*	1.326	0,1
Other	106	*0,1*	556	*0,2*	662	0,1
Total	188.031	*100,0*	8.966	*100,0*	196.997	*100,0*

During the Agricultural Household Survey 2004 information was collected about the ownership status of the plots. Table 3.5 indicates that in small farms nearly all land is owned. Large farms use more rented land.

Data gaps

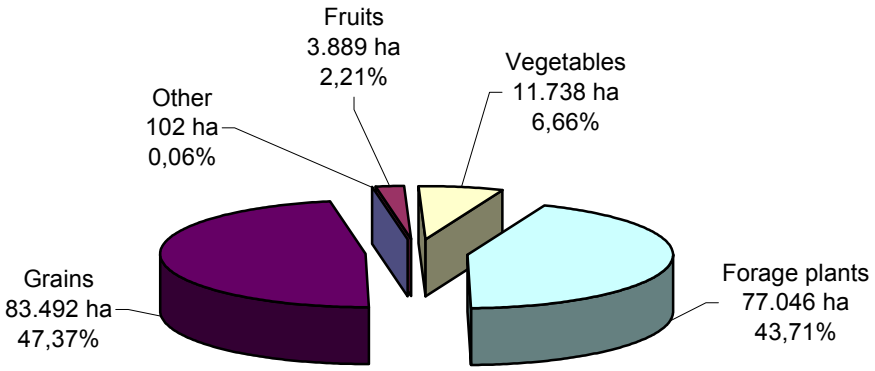
The limitations of accuracy of a small sample should be kept on mind when using the data. For this reason, data at municipality level have not been shown.

4 Crops

Kosovo is a country almost completely surrounded by mountains. The main areas of arable land are concentrated in valleys and flat areas in the north and east. Vegetable and fruit production is concentrated mainly in the west. There is extensive grazing, pasture and forestry in the mountains.

This chapter presents data on areas under cultivation by crop (in hectares); production levels and yields in tonnes. Figure 4.1 presents the main agriculture crops cultivated in 2004, grouped in five categories: grains; forage plants; vegetables; fruits; and, others[11].

Figure 4: Area under crops by categories



The Survey results show that cereals and fodder crops account for the largest area of cultivated land in Kosovo; around 90 %. While fruit and vegetables account for the remaining 10 %, approximately, of cultivated land.

Favorable agronomic conditions prevailed in 2004. This is reflected in overall production levels and yields. Table 12. shows the planted area, production and yield by crop.

[11] Industrial crops, Seedlings

Table 12: Crop area, production and yield

Crops	Area (ha)	Production (t)	Yield (t/ha)
Grains	83.492		
Wheat	52.156	196.693	3,7
Rye	337	980	2,9
Barley	2.221	6.297	2,8
Barley for beer	846	2.731	3,2
Oats	2.336	4.963	2,1
Maize	25.596	91.671	3,5
Vegetables	11.738		
Potatoes	2.526	55.881	22,1
Tomatoes	606	11.261	18,5
Aubergine	10	256	25,1
Peppers	2.040	39.883	19,5
Pumpkin	849	6.115	7,2
Courgette	60	868	14,3
Cucumbers	202	5.889	29,2
Water melon	527	9.963	18,8
Melon	103	1.463	14,2
Cabbage	570	15.419	27
Cauliflower	7	124	18,8
Spinach	42	343	8,1
Lettuce	27	262	9,6
Red beet	12	301	24,2
Parsley	5	28	6
Leek	51	870	17,1
Onion	661	9.920	15
Radish	0	5	10,9
Garlic	87	500	5,7
Beans	3.275	5.253	1,6
Peas	16	36	2,3
Leguminous plan	27	63	2,3
Carrots	35	427	12

Crops	Area (ha)	Production (t)	Yield (t/ha)
Forage plants	77.046		
Wheat (green)	103	401	3,8
Rye (green)	778	1.999	2,5
Barley (green)	61	184	3
Oats (green)	3.409	8.675	2,5
Maize (green)	1.195	21.407	17,9
Hay (meadow)	51.676	132.330	2,5
Mixed grass	2.959	9.485	3,2
Lucerne	14.049	45.328	3,2
Trefoil	2.607	8.738	3,3
Vetch	209	768	3,6
Fruits	3.889		
Apple	674	9.141	13,5
Pear	227	2.781	12,2
Quince	34	580	17,2
Medlar	10	171	16,2
Plum	1.691	16.136	9,5
Apricot	26	352	13,2
Peach	17	209	12,1
Cherry	41	415	10,1
Sour Cherry	38	356	9,4
Walnut	54	1.019	18,8
Hazelnut	7	21	3
Chestnut	162	750	4,6
Strawberry	14	58	4,1
Raspberry	2	4	1,5
Vine grape	301	1.422	3,7
Grape	591	2.658	4,5
Other	102		

The table shows that wheat and maize are the most important crops in Kosovo in terms of planted area and amounts harvested. The most dominant vegetables were beans, potato and pepper, and for forage crops, hay (meadow) and alfa-alfa. The most dominant fruits are plums, apples and grapes. The table also shows good yields in 2004 for crops such as wheat, maize, potato, beans, and pepper.

Some municipalities are well known for certain types of cultivation. This is reflected in the survey results. The municipalities of Lipjan, Klina and Ferizaj have the highest wheat and maize production. The municipalities of Vushtrri, Peja and Istog are the main potato and tomato producing areas. Rahovec municipality, well known for its vineyards, has the highest grape production. The municipalities of Rahovec, Peja and Prizren are the most important for pepper production, Istog, Peja and Suhareka municipalities for apple, and Leposaviq, Zveçan and Zubin Potok for plum.

5 Forestry

Forestry is an important sector in Kosovo for economic, environmental and social reasons. New legislation for forestry management has recently been introduced based on international conventions[12]. In the Agricultural Survey 2004 information was gathered from households on the prevalence of forests in the private sector, wood usage by municipalities, and types of wood used[13].

Table 5.1 presents the number of agricultural households that possess forests by municipality, expressed as a percentage of the total number of agricultural households in each municipality.

Table 13: Number of agricultural households that possess forests by municipality

Municipality	Total HH	HH with forest	%
Kosovo	**117,967**	**56,198**	***48***
Deçani	3,987	1,146	*29*
Gjakova	5,307	3,644	*69*
Gllogoci	5,191	3,863	*74*
Gjilani	6,256	2,905	*46*
Dragashi	2,739	720	*26*
Istogu	4,211	1,608	*38*
Kaçaniku	2,923	2,011	*69*
Klina	3,323	2,253	*68*
Fushë Kosova	2,322	338	*15*
Kamenica	4,258	2,502	*59*
Mitrovica	2,319	1,096	*47*
Leposaviqi	2,675	2,263	*85*
Lipjani	6,667	1,768	*27*
Novo Brda	531	465	*88*
Obiliqi	1,697	406	*24*
Rahoveci	3,714	1,691	*46*
Peja	5,299	1,545	*29*
Podujeva	6,736	3,134	*47*
Prishtina	4,597	1,840	*40*
Prizreni	5,953	2,720	*46*
Skenderaj	5,297	4,106	*78*
Shtimja	2,185	1,094	*50*
Shterpca	1,763	395	*22*
Suha Reka	5,181	2,721	*53*
Ferizaji	6,314	3,126	*50*
Vitia	5,190	1,105	*21*
Vushtrria	4,939	1,352	*27*
Zubin Potoku	1,132	1,005	*89*
Zveçani	1,010	926	*92*
Malisheva	4,251	2,450	*58*

Table 13. shows that the municipalities of Zvecan, Zubin Potok and Kamenica have the highest % of agricultural households with forests (92%, 89% and 88% respectively). The territory of these municipalities is known to be mountainous. Thus the importance of forests in these areas is very high and in many cases is the main source of income for agricultural

[12] The forestry law of Kosovo has been approved in 2003, on the bases of which Kosovo is going to manage its forests based on the annex III of United Nations Session Report, on Environment and Development (Rio De Janeiro from 3-14 June, 1992)

[13] Additional information regarding Kosovo forestry can be obtained from MAFRD, Forestry Department, respectively from the data collected regarding "Forestry Inventory"

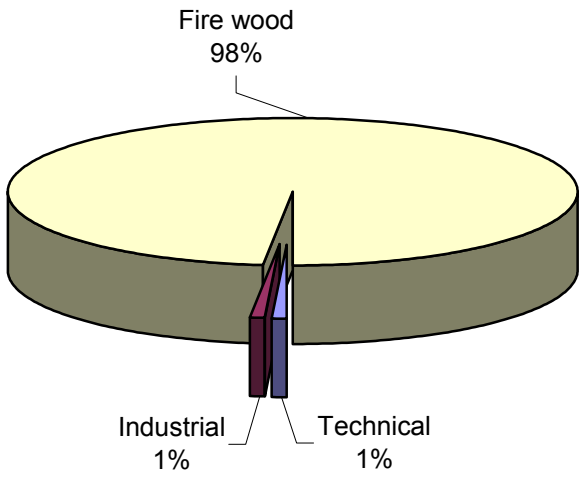
households. The lowest percentage of agricultural households with forests is in Fushë Kosovë (15 %) and Viti (21 %). In Viti municipality, most of the forests are state property rather than in private ownership. Table 5.2 shows utilization of wood by municipality.

Table 14: Amount and purpose of wood utilization by municipality

Municipality	Total utilization	Purpose of utilization, %		
	m3	Technical	Industrisl	Fire wood
Kosovo	434,336	*0.9*	*0.7*	*98.4*
Deçani	5,030	*4.5*	*:*	*95.5*
Gjakova	27,561	*:*	*0.5*	*99.5*
Gllogoci	12,803	*:*	*:*	*100.0*
Gjilani	19,167	*:*	*:*	*100.0*
Dragashi	2,276	*:*	*:*	*100.0*
Istogu	7,092	*2.2*	*:*	*97.8*
Kaçaniku	15,093	*:*	*:*	*100.0*
Klina	24,042	*:*	*:*	*100.0*
Fushë Kosova	2,224	*:*	*:*	*100.0*
Kamenica	17,708	*7.5*	*:*	*92.5*
Mitrovica	12,665	*0.5*	*:*	*99.5*
Leposaviqi	28,387	*:*	*:*	*100.0*
Lipjani	25,316	*:*	*1.1*	*98.9*
Novo Brda	8,562	*:*	*:*	*100.0*
Obiliqi	2,935	*:*	*:*	*100.0*
Rahoveci	10,851	*:*	*:*	*100.0*
Peja	12,755	*14.7*	*6.4*	*78.9*
Podujeva	29,583	*0.5*	*:*	*99.5*
Prishtina	16,604	*0.2*	*:*	*99.8*
Prizreni	7,186	*:*	*:*	*100.0*
Skenderaj	32,580	*0.2*	*1.0*	*98.8*
Shtimja	10,731	*:*	*:*	*100.0*
Shterpca	2,645	*:*	*:*	*100.0*
Suha Reka	15,057	*:*	*5.4*	*94.6*
Ferizaji	31,525	*:*	*:*	*100.0*
Vitia	7,170	*:*	*:*	*100.0*
Vushtrria	10,021	*:*	*:*	*100.0*
Zubin Potoku	14,223	*:*	*:*	*100.0*
Zveçani	9,322	*:*	*2.3*	*97.7*
Malisheva	13,222	*:*	*:*	*100.0*

The highest utilization of wood belonging to agricultural households is in Skenderaj municipality and Ferizaj municipality. In these municipalities sale of firewood provides an important source of income for agricultural households.
Figure 5. shows the utilization of forests owned by the private sector.

Figure 5: Utilization of forests



Most wood is used as firewood, 98 %, while only 2 % is used for technical and industrial[14] purposes. This is expected, given that most of the woods in Kosovo are low forest, not suitable for production or technical-industrial usage. The same data regarding utilization of forests by municipality is presented in Table 14. Table 15. presents the types of woods in Kosovo.

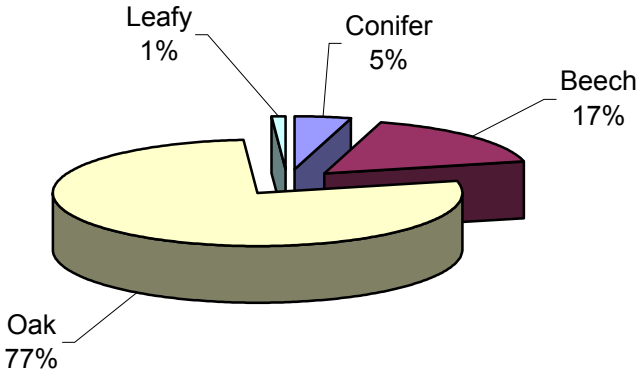
Table 15: Types of woods

Wood type	Përqindja (%)
Spruce	3,18
Fir	1,01
White pine	0,18
Black pine	0,03
Other conifers	0,17
Beech	16,75
Oak	77,53
Other hardwood	0,74
Soft caduceus	0,41
Total	100,0

It is clear from the table and figure 6. below that the most important woods are oak (Quercus) 77 %; beech (Fagus) 17 % and conifer (Pinus, Abies, Picea, etc) 5 %.

[14] Electrical poles, railway pontoon/connectors, furniture, flooring and tannin and cork from wood bark.

Figure 6: Wood types



6 Livestock

Statistics on the number of animals according to the size of household farm, small or large, were gathered in Agricultural Household Survey 2004. No production data were collected for livestock. In Kosovo there are a number of relatively large household farms specialized in livestock. They are included in the figures under the title large farms. The data for 2003 comes from the Agricultural Household Survey, 2004. It represents the perceptions or memories of farmers about the number of livestock they had a year ago as very few keep records. For this reason, information may differ from data for 2003 provided by other sources15.

Table 16. shows the number of livestock in 2004, 2003 and the percentage change between 2003 and 2004.

Table 16: Livestok numbers as of Nov- Dec 2004

Livestock type	2003		2004		Index	
	Small Farms	Large Farms	Small Farms	Large Farms	Small Farms	Large Farms
Cattle	233.892	5.120	236.076	4.671	101	91
Dairy cows	139.680	2.656	126.691	2.616	91	98
Other cattle	94.212	2.464	109.385	2.055	116	83
Pigs	39.320	1.889	33.836	1.396	86	74
Sows	16.699	905	10.546	983	63	109
Sheep	55.407	26.487	53.359	18.580	96	70
Ewes	43.117	15.393	39.117	13.336	91	87
Goats	13.247	1.878	9.386	1.429	71	76
Equine	6.300	111	6.534	116	104	105
Poultry	1.721.755	393.749	1.281.151	379.286	74	96
Chicken	1.668.594	391.451	1.238.214	378.475	74	97
Other poultry	53.161	2.298	42.937	811	81	35
Beehives	39.698	718	40.918	505	103	70

[15] Livestock Census of 2003 and Biannual Administrative Survey conducted by the Livestock Department.

Cattle are the major livestock, of which 54 % are dairy cows. Households had a small number of buffalo, around 500 in 2004, which are included in total cattle. In 2004, only 2 % of the cattle were in large specialized household farms. The cattle are very dispersed among households. The average number of cattle per household is 1.12 in small farms and 15 in large farms. The average number of dairy cows per household possessing dairy cows is 1.57 in small farms and 8.5 in large farms. Dispersion is typical for other type of livestock as well. The small farms have on average 14 sheep and 17 poultry, whilst the large farms have 224 and 1,686 respectively.[16].These statistics underline the subsistence character of livestock sector in the small household farms.

Almost all classes of livestock showed a decline by the end of 2004 in comparison to the same period in 2003. Notable exceptions from this tendency are total cattle, equine, and beehives in the small farms, and equine and sows in the large farms.

There are several factors that contributed to the decrease in livestock numbers in 2004. 2003 was a dry year in Kosovo and throughout the Balkans in general. This decreased the supply and increased the prices of animal feed and grains.

One of the sectors that was strongly hit by the increased costs was poultry. The major drop in the numbers was in the small farms. Despite this decrease in numbers, the sector was still larger compared to data for 2000 supplied by the LSMS agricultural module. The sheep sector has also contracted substantially, particularly on the large farms which attempt to market their products. There have been difficulties to find markets, particularly for export, and many farmers were forced to decrease their flock or to give up completely. The livestock sector in Kosovo has also been facing strong competition from imports.

At municipality level, Gjakova, Peja, Suhareka, Prizren, Istog, Gllogoc, Decan, Malishevo, Podujevo, Ferizaj, Skenderaj, Vushtri have the largest number of cattle. The highest concentration of poultry is in Lipjan and Gjakova

Data gaps

A larger sample is required for proper estimation. Small numbers of livestock at municipality level cannot be captured with the present sample size.

[16] These averages for large farms represent averages for all large farms and are not limited to specialized dairy farms or chicken poultry farms.

7 Agricultural inputs

In the Agricultural household survey 2004, data were collected about agricultural inputs, namely agricultural machinery and equipment, fertilizers and manure. Data were not collected on the use of equipment, operating costs or equipment hire. Data were not collected on fertilizer prices or on the use of other inputs either. Labour input is discussed separately in chapter 8.

Agricultural machinery and equipment

Information was gathered regarding the number of machinery and equipment, and the number of households who own different machinery. The value figures, indicated as unit values, refer to the owner's judgment on how much they could get for the machine if they sold it. As in the previous Agricultural Household Surveys, it is supposed that for various reasons the owner's judgment tends to underestimate the value.

Table 17: Machinery and equipment in agricultural households[17]

Machinery type	Small Farms			Large Farms		
	Number owned	% of farms owning machinery	Unit value	Number owned	% of farms owning machinery	Unit value
Large Tractor (over 40 HP)	16.441	*13,6*	3.515	277	*49,7*	4.121
Small Tractor (under 40 HP)	30.952	*26,1*	3.056	199	*47,3*	3.446
Motor-cultivator	8.965	*7,4*	1.252	143	*32,4*	1.253
Plough	39.637	*32,5*	245	416	*74,7*	315
Disc harrow	10.011	*8,5*	306	125	*30,3*	470
Tooth harrow	17.324	*14,7*	233	213	*49,7*	300
Trailer	32.271	*27,1*	751	330	*69,7*	989
Sowing machine	4.431	*3,4*	681	146	*28,5*	932
Milling machine	4.106	*3,4*	510	157	*37,2*	736
Fertilizer drill	2.065	*1,7*	330	123	*28,5*	435
Sprayer	1.605	*1,4*	490	115	*27,7*	594
Mower	7.497	*6,2*	504	137	*31,6*	745
Hayraker	2.896	*2,3*	442	96	*22,1*	515
Combine harvester	877	*0,6*	5.482	56	*10,1*	5.739
Animal feed binder	868	*0,7*	3.297	62	*15,7*	3.682
Thresher	184	*0,2*	183	2	*0,5*	225
Mill[17]	4.478	*3,7*	544	107	*25,8*	3.308
Water pump	4.001	*3,3*	324	160	*31,4*	633
Milking machine	731	*0,6*	387	92	*15,4*	787
Other	2.324	*2,0*	658	78	*15,2*	3.606

Farmers own quite a large number of tractors. The comparison between small and large farms, shown in Table 17, indicates that around 40 % of small farms own a tractor, whilst this percentage is 97 for the large farms.

Having in mind the tiny plots of arable area on the small farms, the difference in comparison to the large farms is not surprising, as small farmers may use contracted machinery services or hire machinery instead of purchasing their own. They are also financially constrained. Most of the tractors owned by small farms are below 40 horse power. The majority of equipment owners also own a plough, harrow and trailer. Other types of equipment are fairly uncommon. Although combine harvesters are not commonly owned, the survey indicates

[17] In here are included all kind of mills with no distinction

there are about 930 in Kosovo. 10 % of large and specialized farms own a combine harvester.
The equipment available, in terms of quantity, as data about the age of machinery were not collected, appears to be enough for the cultivated area. Although much better mechanized, the large farms make little difference to the number of machines owned at national level.
For the same type of machinery and equipment, the unit values are often higher on the large farms than in the small farms. Large farmers own more powerful, more expensive and better maintained equipment.

Use of fertilizers and manure

Table 18. presents the percentage of households who use different types of fertilizers. Fertilizer is used by most farmers. NPK, often used as a base dressing at planting, is the most frequently used of all inorganic fertilizers, and most of the rest are NAG and Urea, which are mainly used as top dressing applications after crop germination. NPK is used by three quarters of small farms and 85 % of large farms. It should be noted that one household could use fertilizers of different types.

Table 18: Use of fertilizers and manure by household[18]

Type	Small Farms	Large Farms
	%	%
NPK	*75,8*	*85,1*
NAG	*34,9*	*48,4*
Urea	*31,3*	*36,7*
Other[18]	*1,8*	*1,6*
Manure	*54,3*	*68,8*

Altogether 20 % of small farms and 13 % of large farms do not use any fertilizer. Around half of the small farms and one third of the large farms do not use manure. Only around 10 % of household farms use neither fertilizers nor manure. A larger proportion of large farms use fertilizers and/or manure than small farms. The main reasons are the financial capacity of large farms to purchase inputs and the stricter application of farm technologies by larger farmers. Some of the small farmers also lack proper technological knowledge.

Table 19: Use of fertilizers and manure by crops

Crops	Area (ha)	Fertilizer		Manure	
		Used (t)	kg/ha	Used (t)	t/ha
Grains	83.492	34.767	416,4	120.572	1,4
Vegetables	11.738	7.458	635,3	59.816	5,1
Forage plants	77.046	9.887	128,3	63.860	0,8
Fruits	3.889	544	140	11.632	3,0
Other	102	12	117,6	195	1,9
Total	176.267	52.666		256.065	

Table 19. shows the use of fertilizers and manure by crop; crops are presented in groups and the average use of fertilizers and manure per hectare is indicated. It is important to point out that the quantities are in gross terms. This means that there is not direct information about the net use of active substances in different fertilizers. Vegetables have the highest application rate per hectare, with 635 kg/ha of inorganic fertilizers and 5.1 t/ha of manure. Grains have 416 kg/ha of inorganic fertilizer and 1.4 t/ha of manure. Most of the fertilizer was used for these crops, 47 % of both inorganic fertilizers and manure.

[18] All other kind of fertilizers

After some calculations were made, it appeared that the amount of 416 kg of fertilizers per hectare of cereals is within the normal range. Technical recommendations used in Kosovo are that cereals require 50 to 150 kg of Nitrogen; 50-120 kg P_2O_5 and 50-100 kg K_2O as an active substance. The use of manure is relatively low, but the decline in livestock numbers after the war has had a negative impact on the production of manure.

Data gaps

As for agricultural inputs, a larger sample is needed.

8 Agricultural labour

Data about agricultural labour are important in order to assess to what extent agriculture can absorb rural labour and the degree to which non-farm jobs are required. The latter can indicate that policies beyond agriculture, targeting rural development are necessary. For this reason, the Agricultural Household Survey 2004 collected information about the employment on-farm of household members depending on their commitment to farming, full-time, part-time or occasional. Persons who worked at least 20 hours per week in agriculture were classified as part-time employed. Persons who worked less than 20 hours were defined as occasional labour. Information has also been collected about the number of working days of hired farm labour.

Working days were subsequently converted into Annual Work Units (AWU) using standards from EU member countries. One AWU was estimated to be equal to 1,800 working hours. The length of the working day was defined at 8 hours resulting in 225 working days per year per one full-time employed. In the interpretation of 2001 Agricultural Household Survey, the working days per year and person were estimated to 250 without a reference to working hours and AWU.

Table 8.1 presents the number of household members engaged on-farm by gender and degree of commitment to the household farm (full-time, part-time or supply of occasional labour).

Table 20: Household members engaged on farm

Full time						
Age	Male		Female		Total	
	Number	%	Number	%	Number	%
<16	1.096	*76*	350	*24*	1.446	*100*
16-65	53.184	*76*	16.653	*24*	69.837	*100*
>65	1.044	*74*	363	*26*	1.407	*100*
Total	55.324	*76*	17.366	*24*	72.690	*100*
Part time						
Age	Male		Female		Total	
	Number	%	Number	%	Number	%
<16	2.351	*57*	1.751	*43*	4.102	*100*
16-65	65.292	*62*	39.476	*38*	104.769	*100*
>65	998	*56*	794	*44*	1.791	*100*
Total	68.641	*62*	42.021	*38*	110.662	*100*
Occasional						
Age	Male		Female		Total	
	Number	%	Number	%	Number	%
<16	5.526	*53*	4.880	*47*	10.406	*100*
16-65	63.950	*53*	57.606	*47*	121.556	*100*
>65	988	*44*	1.271	*56*	2.259	*100*
Total	70.464	*52*	63.757	*48*	134.221	*100*

Altogether, 318.000 members of working age have some degree of engagement in on-farm work. This represents around 50 % of all members of agricultural households above 14 years of age. It is obvious that agriculture alone cannot provide employment for the agricultural population and other sectors of the economy should be at least as important an employer in rural areas as farming.

The table shows that for all age groups the participation of male members of households in full-time on-farm work is much larger than the female one (about three quarters of all full-time engaged household members are male). In comparison with 2001 Agricultural Household Survey the ratio male-female full-time engaged in farming has changed towards a higher relative participation of male household members. There are also gender differences among

people who work part-time, but they decline in the group engaged occasionally in farming, e.g. 53 % male and 47 % female.
Most of the household members engaged in agriculture, 93 %, are of active working age, between 16 and 65 years old. The remainder are either young people below 16 years of age, 5 %, or people at retirement age above 65. Young people are mainly engaged occasionally in farming as they are at the age when most of them are in full-time education.
Table 8.2 presents the number of days worked on household farms by hired waged workers. Gender and age data are also given.

Table 21: Hired agricultural labour, working days

Age	Male		Female		Total	
	Number	%	Number	%	Number	%
<16	494	91	48	9	542	100
16-65	236.341	94	16.276	6	252.616	100
>65	365	100	0	0	365	100
Total	237.199	94	16.324	6	253.523	100

Applying the conversion procedure explained above, the working days in the table represent 1.127 full-time employed hired waged persons. This small number of hired agricultural workers is related to the small size of household farms which cannot absorb labour in addition to the household members. Moreover, the average number of members per household in Kosovo is high, providing abundant household labour. The predominant proportion of hired labour is male in active working age. Most frequently, the wage per day falls within the range of 10-15 Euro. Gender differences in the pay of persons in active working age have not been observed, but in the group of young people, under 16, male, earn more, 13 Euro per day, while females are only paid 10 Euro.

Data Gaps

In general, employment in agriculture is difficult to measure correctly. Underestimation is common. Often farmers do not count household members as farm labour input.

9 Farm expenditure

Data about farm expenditure and revenue were collected during the Agricultural Household Survey 2004 in an attempt to fill the existing gap in respect of economic statistics at farm and household level. Gradually, this information will be expanded with data collected according to the Farm Accountancy Data Network (FADN), consistent with the EU definitions. Data on farm expenditure by major items on small and large household farms, and farm revenue, are sensitive to the way farmers value their own labour and household members labour input on-farms. Commonly, this value is under reported, resulting in underestimation of expenditure on wages and salaries.

The mean expenditure per farm is 658 Euro, which is more than the reported cash revenue of 507 Euro. Small farms report expenditure of 578 Euro and cash revenue of 408 Euro. One of the reasons for expenditure being higher than the cash revenue is that most small farms produce output for the household, which is not sold. However, many households have alternative sources of income to pay for farming costs. Large and specialized farms have much larger cash revenues, the mean is 31,522 Euro and expenditures, 25,813 Euro, therefore this group can cover farm expenditure by cash revenues.

Table 22. shows expenditure on farm production by major items for small, large and total farms in Kosovo.

Table 22: Structure of farm expenditure

Expenditure type	Small farms		Large farms		Total	
	Total expenditure		Total expenditure		Total expenditure	
	Euro	%	Euro	%	Euro	%
Fertilizers	12.079.815	*17,8*	662.466	*6,8*	12.742.281	*16,4*
Manure	1.219.748	*1,8*	25.134	*0,3*	1.244.882	*1,6*
Chemicals	1.626.513	*2,4*	244.179	*2,5*	1.870.692	*2,4*
Seed	7.231.392	*10,6*	683.159	*7,0*	7.914.551	*10,2*
Animal feed	6.116.400	*9,0*	2.437.205	*25,1*	8.553.605	*11,0*
Livestock purchase	6.586.719	*9,7*	1.669.084	*17,2*	8.255.803	*10,6*
Veterinary services	1.838.410	*2,7*	157.726	*1,6*	1.996.136	*2,6*
Wages and salaries	2.545.088	*3,7*	1.151.212	*11,9*	3.696.300	*4,8*
Fuel	8.735.505	*12,9*	732.310	*7,5*	9.467.815	*12,2*
Machineri repairs and maintenance	3.959.697	*5,8*	259.791	*2,7*	4.219.488	*5,4*
Contracted services and rent for machineriy hire	9.365.077	*13,8*	212.911	*2,2*	9.577.988	*12,3*
Maintenance and repair of farm buildings	1.075.763	*1,6*	281.581	*2,9*	1.357.344	*1,7*
Rental of farm land and buildings	693.512	*1,0*	482.085	*5,0*	1.175.597	*1,5*
Electricity, telephone etc.	3.135.563	*4,6*	136.750	*1,4*	3.272.313	*4,2*
Interest on loans	265.729	*0,4*	283.512	*2,9*	549.241	*0,7*
Other operative expenditure	1.466.970	*2,2*	286.453	*3,0*	1.753.423	*2,3*
Total	67.941.900	*100,0*	9.705.558	*100,0*	77.647.458	*100,0*

The main categories of expenditure are fertilizers, contracted services and rent paid for hired machinery, fuel, seeds, animal feed and purchase of livestock. These items account for nearly three quarters of farm expenditure of all farms. The small share of expenditure on maintenance of farm buildings is due to the fact that often the only thing small household farms possess is a plot of land. The other cost item with a very small share in total farm expenditure is interest paid on loans.

In Kosovo bank loans are not widely used in farming. Farmers borrow informally from friends and family without any formalized arrangements for payment of interest. Some farmers tend not to count these as loans.

There are large differences in the structure of expenditure between small and large farms. Small farms spend around 55 % of their total expenditure on crop cultivation, namely seeds, fertilizers, fuel, and contracted services and machinery hire. Nearly 70 % of large farms specialize in livestock. This has influenced their costs. 42 % are for animal feed and livestock purchase. Large farms have hired labour and pay 12 % of total expenditure as wages and salaries. They also pay more for rentals of land and buildings, and interest on loans.
Table 23. shows the estimated total expenditure on farm production by Municipality

Table 23: Type of farm expenditure by municipality (Euro)

Municipality	Fertilizers and chemicals	Seeds	Livestock	Machinery	Wages and salaries	Other expenditures	Total
Kosova	15.857.854	7.914.551	18.805.544	23.265.291	3.696.300	6.354.494	77.647.458
Deçani	236.323	142.673	585.086	467.187	147.983	31.610	1.579.251
Gjakova	710.487	281.061	2.156.544	1.231.645	232.664	390.221	4.612.401
Gllogoci	785.206	545.292	112.591	866.563	104.953	63.422	2.414.605
Gjilani	541.337	185.811	995.456	675.253	306.184	81.715	2.704.041
Dragashi	89.956	9.228	408.845	157.029	11.772	40.609	676.830
Istogu	621.609	320.698	695.655	915.739	268.802	438.916	2.822.503
Kaçaniku	128.215	77.973	461.084	296.125	36.956	36.273	1.000.354
Klina	830.412	845.302	480.462	1.009.037	311.603	209.984	3.476.816
Fushë Kosova	353.324	137.889	330.088	677.171	36.061	80.802	1.534.533
Kamenica	463.036	105.722	273.990	516.899	59.766	65.601	1.419.413
Mitrovica	61.457	58.886	320.603	302.381	63.287	26.139	806.613
Leposaviqi	395.210	175.694	476.443	599.886	23.014	348.532	1.670.247
Lipjani	1.219.107	508.726	1.733.146	2.315.854	332.736	1.628.809	6.109.568
Novo Brda	67.481	23.453	42.259	84.739	0	19.028	217.931
Obiliqi	261.408	88.435	241.817	417.407	31.364	63.284	1.040.431
Rahoveci	1.921.764	756.717	793.055	2.194.049	281.237	1.510.749	5.946.822
Peja	574.439	389.379	747.389	932.503	273.906	185.462	2.917.617
Podujeva	660.315	364.463	800.013	1.114.624	133.840	161.187	3.073.255
Prishtina	530.733	219.999	251.994	1.046.021	97.514	145.920	2.146.262
Prizreni	366.327	152.576	1.048.235	687.499	100.491	45.374	2.355.128
Skenderaj	634.632	347.802	544.416	656.416	27.364	201.800	2.210.629
Shtimja	244.881	132.223	242.805	338.791	15.535	11.710	974.235
Shterpca	508.359	58.332	167.731	293.027	5.715	25.625	1.033.164
Suha Reka	532.395	310.710	929.562	1.105.137	115.531	36.780	2.993.336
Ferizaji	605.325	294.062	374.701	684.516	183.673	89.903	2.142.277
Vitia	844.723	348.599	473.805	860.610	77.346	24.729	2.605.083
Vushtrria	840.313	619.105	576.285	1.281.446	217.823	237.192	3.534.972
Zubin Potoku	60.349	19.857	244.853	79.084	109.459	18.336	513.602
Zveçani	188.874	55.075	1.589.524	306.725	13.970	121.358	2.154.168
Malisheva	579.857	338.810	707.108	1.151.928	75.753	13.428	2.853.455
Per cent (%)	*20*	*10*	*24*	*30*	*5*	*8*	*100*

In order to facilitate the use of the table, cost categories have been aggregated, comparable with Table 22. Fertilizers, manure and chemicals have been put together in the group “fertilizers and crop chemicals”; animal feed, purchase of livestock and veterinary services are under the general title “livestock”; machinery repairs and maintenance, contracted services and rent for machinery hire, and fuel are under “machinery”. All smaller items have been aggregated into other expenses.

Statistical Office of Kosovo (SOK) - a brief description

The Statistical Office as a professional office has been in operation since 1948, and has passed through all the historic phases of Kosovo. On August 2nd 1999 the Office restarted its work as an independent and professional institution of public administration of Kosovo. Kosovo Consolidated Budget and various donors for particular projects finance the Office.

A Statistical Regulation (Regulation 2001/14) came into force 2 July 2001. SOK is an executive agency attached to the Ministry of Public Services (MPS). A Master Plan (medium term development plan) for the statistical system in Kosovo has been produced.

Organization structure: Seven Regional Offices (Pristine, Peja, Gjakova, Prizren, Ferizaj, Gjilan and Mitrovica) and Head Quarters in Prishtina have at present a total of 137 employees, 90 at HQ and 47 at the Regional Offices. There is 1 international expert to support the Office and 1 language assistant. The Office has a fully-fledged field organization for surveys with experienced enumerators and sufficient transport. A new organization of the Office has recently been implemented. A working group on statistics, involving most of the Ministries, is under creation.

The Office Mission is to fulfill the needs of users for objective statistical data and analyses in order to support government departments and provide proper information for decision-makers and other users in Kosovo.

- **Address: Statistical Office of Kosovo, Zenel Salihu Str. No: 4, Pristine**
- **Telephones:**
  Head-quarters: +381 (0) 38 235 111
  Director: +381 (0) 38 235 545 or +381 (0) 38 504 604 ext. 6572
- **Fax: +381 (0) 38 235 033**
- **E-mail: agriculture@ks-gov.net**
- **Web-site: www.ks-gov.net/esk**