

## **THE IMPROVEMENT OF AGRICULTURAL SYSTEMS – THE IMPORTANT FACTOR FOR INCREASING RURAL INCOME IN ALBANIA**

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### **ABSTRACT**

The economic improvement of Albania, as expected, will result mainly from the agricultural sector. Albania has the necessary potentials to use agriculture as a base for pushing further the development and the economic growth based on: the agricultural resources, the potentially competitive agro-industry and the relatively well-trained human resources.

Disproportion regarding levels of farm production capacities, large number of farms, prevalence of minimal-size farms and labor intensive methods, presence of production limiting and non-limiting resources, lack of land market, etc., are some of basic factors that associate progress of agriculture in Albania during the transition.

There are two main problems Albanian agriculture is facing nowadays:

**Firstly**, the existence of agricultural holdings with a minimal size, fragmented, closed in itself and oriented towards the fulfillment of the family needs.

**Secondly**, the existence of a considerable large family which needs to operate in this micro-farm.

Under these conditions, the Albanian farmers have found the **adaptation of a very complex production system rational**.

The agricultural production during the years to come in Albania must be guided by constructive policies that favor farm **efficient systems**; that promote the right processes of land distribution (the optimal planting structures) and that support the adequate schemes of input use and marketing systems.

Based on the situations mentioned above, we think that our presentation will be focused the good management of the factors that will improve the agricultural systems and their effects on rural income in Albania.

### **INTRODUCTION**

The growth of the Albanian economy and the economic stability are conditioned from the growth and the development of the agricultural sector. This is also conditioned by the natural, climatic, geographical and demographic conditions which enable a sustainable and effective agricultural production.

Agriculture has historically had a considerable weight in the countries GDP structure. In 1995 it reached 25%. It is important to remember that the calculations of the macroeconomic indicators before 1990 were based on Albanian calculation methods according to the “System of Material Production”

The political & the economic changes that took place at the beginning of 1990 and the transformation of the centralized economy in a free market economic system dictated the need of changing the method of GDP calculation.

After the year 1990 till 1996, the GDP was calculated from the relevant macro-economic structures of the Ministry of Finance using the method of production calculation. In order to render comparative data and based on the existing macro-economic indicators, and also in collaboration with the IMF, the data of 1980-1990 were converted from the “System of the Material Production” to the “System of National Accounts”, according to which the National Revenue was converted to the GDP.

After 1990, the big changes of the economy affected also the change of the GDP structure in favour of agriculture. Because of the massive damages and the drastic reduction of the production levels in general and especially in other branches of the economy like industry, transport, services etc it results; that starting from the year 1992 to 1996 agriculture stands for about 54% of the GDP (calculated according to the method of production calculation – see Table 1)

Supported by the technical assistance of the IMF, the Institute of Statistics has calculated for the first time the annual GDP for the period 1996-2000 based on the methods of production and expenditures, using variable and constant prices based on the “System of National Accounts” of the United Nations, that differs totally from the previous calculations.

**Table 1. The structure of GDP 1992 – 2001**

No	Description	Years									
		1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
1	Industry	32.1	16.9	13.9	12.5	11.7	15.5	13.8	11.4	11.4	11.7
2	Agriculture	42.5	54.2	54.6	54.6	54.6	30.8	31.2	30.7	28.5	28.1
3	Construction	6.6	7.6	9.1	9.6	11.4	4.6	4.3	4.1	4.9	6.1
4	Transport	3.3	3.0	3.1	3.4	3.5	6.5	7.6	10.3	11.0	9.9
5	Commerce, hotels & rest						24.3	20.8	21.2	23.2	21.3
6	Services	15.6	18.3	19.4	19.8	19.9	21.1	25.9	27.9	25.9	26.7
	<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

**Source: INSTAT – the statistics of 1999-2001**

Because of changes in the methodology of calculation, the economic restructuring and the better assessment of the economic indicators in the other branches of the national economy, a remarkable decline of the agriculture’s specific weight in the GDP is noticed, starting from 54.6% in 1995, down to 30.8% in 1996 and yet 28.1% in the year 2000, which is the last year calculated with the new methodology.

The changes in the structure of the Added Value according to the main sectors of the economy result in a smaller ratio of the primary sector (Agriculture, Hunting and

Forestry) with the secondary one (industry and construction) compared to the ratio of the year 1996 and in an increase of the third sector, the services in general. So, the specific weight of the primary activity (Agriculture, Hunting and Forestry) in the added value goes down from 30.8% 1996 to 28.1% 2000 and for the secondary sector from 20.1% to 17.8%, while for the commerce, the transport-communication activities and the services, the weight goes up from 49.1% 1996 to 54.1% in 2000.

The decline in the specific weight of agriculture in the GDP structure does not mean that agricultural production has also declined. On the contrary, even in the period 1996-2002 it increased by 3% to 4% each year, except for the year 1997 when the collapse of the pyramid schemes resulted in a total collapse of all branches of the economy.

All the branches of the economy represent a GDP increase during the years 1998-2000 as opposed to the previous years. The recent changes of the GDP calculated with constant prices show that 1998 can be considered as the year of change after the big decrease of the year 1997. The percentage of the production decrease in 1997, which was more than 10%, was followed by an average increase of about 4% in the years 1998-2000.

There are different, internal and external, objective and subjective factors that affect the development of agriculture and its level of contribution to the GDP. The most important among these factors are:

- Uncertainties regarding the land ownership
- The existence of very small farms with very fragmented and small pieces of land
- The low level of crediting the activities in the agriculture sector
- Small producers, not supported and not able to compete in local and regional markets as well
- Transport infrastructure
- Shortages in farm machinery and its high cost
- Uncertain sources of energy (electricity, fuel etc.)
- Underdeveloped market structures and market information systems.
- An underdeveloped Food Processing Industry

## 1. ALBANIAN AGRICULTURE AND ITS ROLE ON RURAL DEVELOPMENT

### 1.1. Farm units and agrarian structures

After land privatization in 1991, the organizational form of agricultural production in Albania is the family farm. Apart from them, there exists even a small number of peasants joint ventures and some other state entities.

**Table 2. Farm Structure**

No	Farm types	Number	Total area	Worked area
1	Family farms	466659	451917.1	397900.1
2	Peasants joint-ventures	57	66.4	55.9
3	Other state entities	93	1437514.1	412036.0
	<b>TOTAL</b>	<b>466809</b>	<b>1889497.6</b>	<b>809992.0</b>

Source: INSTAT Statistics of 1993-2002

The minimal size and the high fragmentation of family farms, which are the main form of agricultural production, are hindering factors for the agricultural development in Albania. Although at very slow steps, there do exist some trends towards the increase of the farm size. This statement is also supported by the following table.

**Table 3. Grouping of farms according to their size**

No	Farm size groups	Year 1995		Year 2000	
		Number of farms	%	Number of farms	%
1	0.1-0.5 ha	152 600	36.3	92924	24.0
2	0.5-1 ha	121 600	28.9	104585	27.0
3	1-2 ha	126 200	30.1	145857	37.5
4	Over 2 ha	19 600	4.7	44564	11.5
	<b>Total</b>	<b>420 000</b>	<b>100</b>	<b>387930</b>	

Source: MoAF. The special agricultural survey (1995, 2002)

From the analysis of the above data it can be concluded:

**First**, the total number of the farms is decreasing. So, in the year 2002 as compared with the year 1995 the number of farms has decreased by about 8%. This results from the migration of the rural population towards the urban zones.

**Secondly**, there exists a trend towards the decrease in the number of the minimal size farms. During the last 7 yrs the number of the farms of 0.1- 0.5 ha and 0.6- 1ha is decreased with about 13%.

Thirdly, it results that the farms groups of 1-2 ha and 0.6-1 are increasing which also suggests a trend towards the increase of the farms size which would be a very essential factor for the future agricultural development. The land transactions have given positive effects on this trend (land market and land leasing).

The main characteristic of the agricultural farms in Albania is the domination of the family labor. About 90% of the farms satisfy their job needs from their family.

**Table 4. Farm types according to the labour source available**

No	Farm types	Number	%
1	Family labour only	422719	90.5
2	Mainly with family labour	38934	8.3
3	Mainly with labour provided from outside the family	5006	1.2
	Total	466659	100.0

Source: INSTAT, Statistics 1993-2002

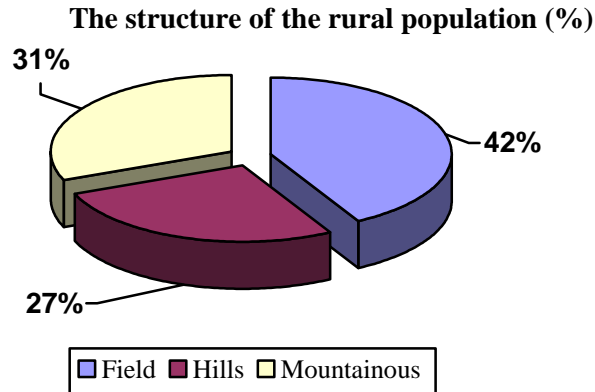
There are two main problems Albanian agriculture is facing nowadays:

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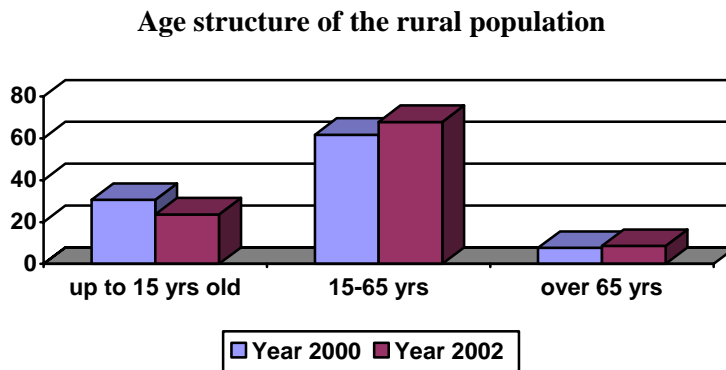
**Secondly**, the existence of a considerable large family which needs to operate in this micro-farm.**on the rural development**

## 1.2. Employment Structure

The rural household in Albania is composed of about 4.8 persons, but recent statistics show a declining trend. During the years 1997-2002 the average number of family members has decreased as the rural population in general. The same phenomena is valid for all the prefectures. The rural zone is dominated by families with 3-5 members, which represent 56% of the total number of the families or 47.5% of the rural population.



About one third of the rural population lives in mountainous areas (31%). The rural population is still dominated by young people. About 26% are up to 15 years old, 67.8% are 15-65 years old and only the remaining 8.6% is over 65 years old.

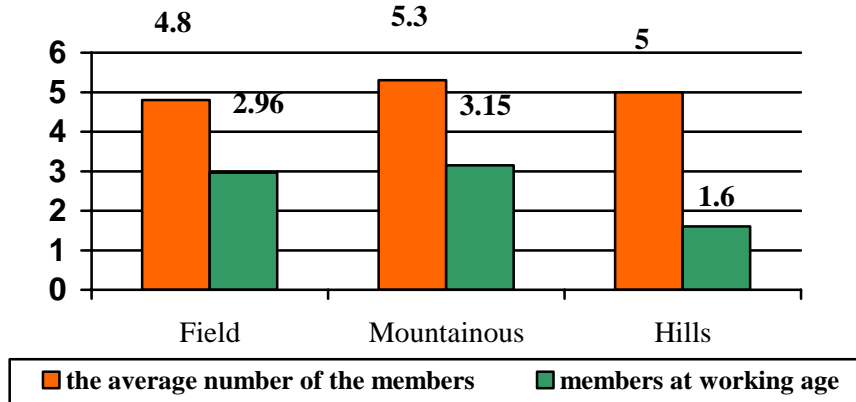


**Source: Agricultural survey, 20002, MoAF**

Based on this composition, it can be stated that the country has a young generation, capable of working but with very little employment opportunities in agriculture. The farm is the main source of employment. So, 73% of the working force is employed in agriculture, 6% is employed in non-agricultural businesses, 6% in agro-industrial activities and 3% in other jobs. Especially, the ages of 16-30 years old have very limited connections with the farm. Only 50% of the young people work in a farm, this mainly because of the low income level offered by farms. An in-depth analysis of the possibilities to work on a farm, shows that there are few possibilities for a full-time employment, because the farm owns a limited area and a limited number of animals. Not

mentioning the age over 65 years old that work intensively on farms. There are 6.1 persons of the age 15-65 for each hectare of land in the mountainous areas, 3.6 persons per hectare in the hills and 2.8 persons per hectares in plain areas.

**The number of the family members and the working force (no)**



**Source: Micro-Economic Analysis of farm Restructuring in Central And Eastern Europe (ALBANIA) EU PHARE Program. July 2001**

The data of Figure 3 show that the farms in the mountainous areas are still overloaded with working force although the sizes of the farms are minimal. Under these conditions you cannot talk about working force efficiency. It will necessary to promote new programs in these zones in order to promote employment in other sectors, other than agriculture .

### 1.3. The estimated production and the agricultural revenue

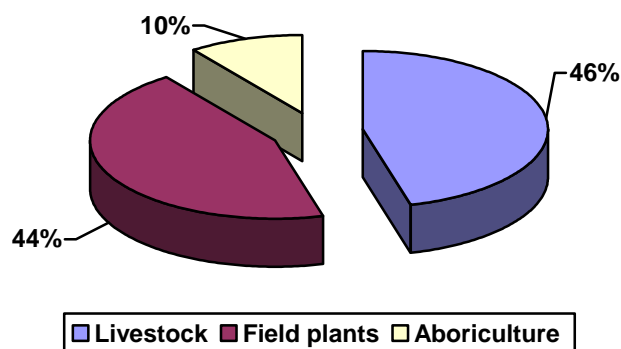
The estimated agricultural production has been increased 1.1% during the last year. It must be stressed out that the annual rates of the estimated production increase continues to be lower than the annual GDP increase (5% for 2003) It can be said that the low level of the economical increase in agricultural has affected negatively the GDP. This situation results also from the low yields of the field plants and the livestock that not yet have reached the level of before 90s.

**Table 5. The estimated production in agriculture (with the prices of 2000) in milion leks**

No	Description	1992	1994	1996	1998	2000	2001	2002	2003
1	Livestock	54784	69205	77482	70791	77426	80164	82854	86867
2	Field plants	71284	77401	91098	81463	84371	83409	84873	83392
3	Arboriculture	8747	10899	12727	14447	15916	16662	16627	19205
	<b>TOTAL</b>	134814	157504	181307	166701	177713	180235	184354	189464

**Source: Agriculture and Food Statistics of Albania, 2003**

**The structure of the estimated production in 2003 (%)**



The destination of the estimated production shows that the cash incomes in farm are still low in comparison with the interior consumption, although the average incomes during 1997-2003 are increased about 2.3 times.

**Table 6. The destination of the estimated production (%)**

No.	Description	1997	2002
1	Sold production	13	30.2
2	Interior consumption <sup>1</sup>	87	69.8
	<b>Total</b>	<b>100</b>	<b>100</b>

**Source: Agricultural survey, 20002, MoAF**

The sold production composes about 30% of the estimated production in 2002 compared with 13% in 1997.

We can draw some conclusions from the following data:

- The family farms in Albania continues to be considered as subsistence, although during the last years is noticed an increas of the revenues realized from sales.
- The majority of the agricultural and livestock production is used for family consumption.
- The above situation has caused a very low-level of money circulation (in and out) within the farm, although it changes a lot according to the zones. About 54% of the farmers realize up to 100 000 leks incomes (with an average of 45 000 leks per farm). About one third of hte farms have big incomes varying from 100 000 to 400 000 leks (with an average of 193 000 leks). Only 3% of the farms are well-managed and make big profits over 400 000 leks per farm. The poorest farms (8%), which possess less than 5 ha, are located in the mountainous areas and make limited incomes with an average of 1000 leks.

<sup>1</sup> In **interior consumption** are included: the family consumption, the production consumption, the processing and the remaining stock

**Table 7. The number and the distribution of the farms according the gross revenues' distribution**

No	The revenues (leks)	Total number of Farms	Selling Farms	The ratio of the selling farms	Average income per farm
1	0 – 10.000	69291	16365	23.6	1157
2	10.001-100.000	145763	145777	100.0	53277
3	100.001-400.000	144795	144793	100.0	203062
4	> 400.000	35001	34998	100.0	653645
<b>5</b>	<b>Albania</b>	<b>394849</b>	<b>341918</b>	<b>86.8</b>	<b>152277</b>

Source: Agriculture and food statistics of Albania, 2003

**Table 8. The ranking of the farms according to their revenues**

No	Gross revenues in leks	Zones			
		East-North (mountainous)	Central (hilly-field)	South western (field and hilly)	Western (field)
1	0 – 10.000	16.1	10.2	5.0	1.7
2	10.001-100.000	60.8	61.1	44.7	46.6
3	100.001-400.000	21.6	25.9	46.0	47.1
4	> 400.000	1.5	2.8	4.3	4.6

Source: Agricultural survey, 20002, MoAF

In the field and hilly zones of the country, almost half of the farms make annual revenues more than 100 000 leks per farm. In the hilly and mountainous zones, the number of farms with the same profits, is one third of the total. This low capacity of the revenues is caused by the limited natural resources, the difficult agro-ecological conditions (that make difficult the development of the most profitable planting systems) and the limited market access.

Certainly, the level of incomes varies according to the geographical zones and within each region itself. So, the number of families that don't satisfy even their own needs is bigger in the hilly and mountainous part. The economical situation of the families that live in the south-western zone is judged to be better. Regarding the farms size, the economical situation seems to be bad for the families that don't have arable land in the farms of 0.1- 0.5 ha. The farms bigger than 1 ha of arable land live in better economical conditions. ‘

The data shows that there's a considerable variation in the average annual incomes of the farms in different regions of the country. The net incomes from 22 000 leks to 110 000 leks (the average is 62 300 leks) per farm (see the tables in annex). The farmers' attempt to minimize the risks are based on the continuous insecurity concerning the land rights, the lack of support for the agricultural services, the irrigation, the input/output markets and the lack of investments in the agricultural production. Because the technology and



the farms’ machinery are old, the marketing is not adequate, there’s little knowledge on the farms’ management, and there’s a low level of the extension services, the farms production still remains low.

Because of the small farms’ size, the production of a small surplus, and the lack of the crediting possibilities, the farmers cannot buy all the required inputs for the production improvement. As a matter of fact, the farmers tend to use those production structures that improve the production of the products needed for subsistence. Because the production is made with low-level seeds, fertilizers and other inputs, the de facto production is only half of the potential one. The poor irrigation infrastructure is even more limited because of the poor financial capacity of the farmers to increase production by using other inputs.

## 2. FARMING SYSTEMS IN ALBANIA

### 2.1. Types of farms

Family farms in Albania are characterized by characteristics such as: limited access to production capacities, considerable land fragmentation, overcrowded rural families, financial constraints regarding input provision, lack of public institutional framework, insufficient credits for agriculture, high interest rates for agricultural credits, inadequate collateral, lack of information and infrastructure, etc.

**Table 9. Data on the number of the farmers that cultivate field plants**

No	No. of the farmers (in %)	Zones			Country
		Field	Hills	Mountainous	
1	Wheat	83	84	52	68
2	Corn	64	71	83	74
3	Beans	44	32	41	40
4	Potato	8	13	19	14
5	Alfa-alfa	83	41	29	49
6	Foder crops	20	23	14	18
7	Vegetables	62	32	45	48
8	Other field plants	11	10	9	10

Source: MoAF- The special agricultural survey,2002

Based on these data it results that the number of plants cultivated by a farm is really big. Livestock is certainly a very important activity of the family farms that is also assessed as their most profitable activity.

**Table 10. Data on the number of farmers that breed livestock ( % ) .**

No	Number of farms	Zones			Country
		Field	Hills	Mountainous	
1	Farms with livestock	90	70	58	85
2	Farms with goats	3	37	45	20
3	Farms with sheep	8	38	59	32

4	Farms with poultry	94	80	69	90
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**Source: MoAF. The special agricultural survey, 2002**

Farm production patterns include almost all crops and animals, and to a large extent this is due to the fact that farms are not market oriented, but produce mostly for family farms self consumption. Albanian farmers' rationale behind conceptualization of production structures is based on two principal objectives: **food security for the household and minimization of economic risk.**

## 2.2. Analyzing of agricultural systems

Based on the limited production potential (land, livestock, etc), the Albanian farm system has developed as a rational solution the use of complex productions structures, which include a large number of crops and animals.

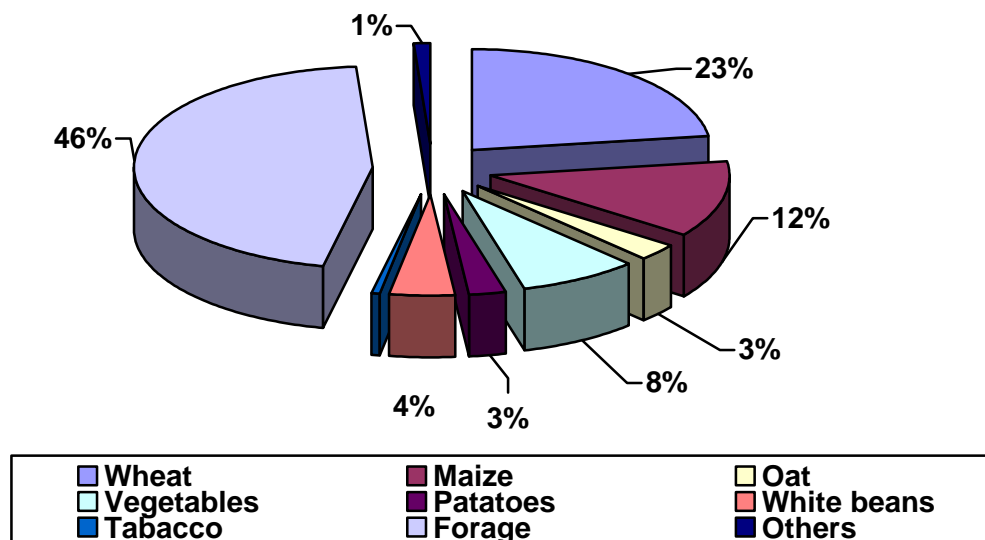
**Table 11. The Structure of Arable Land Use (000 ha)**

No.	Crops	1992	1994	1999	2000	2003
1.	Cereals	176	263	178	178	153.4
	<i>Wheat</i>	103	170	109	112	90.8
	<i>Maize</i>	63	75	55	53	48.3
	<i>Rye</i>	1.0	2.0	2.0	1.3	1.6
	<i>Barley</i>	4.0	4.0	2.0	1.2	1.6
	<i>Oat</i>	5.0	12.0	10.0	10.7	11.1
2.	Vegetables and Melon	29	30.0	31.2	32.8	32.4
3.	Potatoes	9.0	11.0	11.4	11.4	10.5
4.	White Beans	21.0	20.0	22.8	22.5	17.4
5.	Tobacco	13.0	6.0	6.7	5.7	1.6
6.	Sunflower	9.0	1.0	1.6	1.9	0.4
7.	Sugar - Beet	4.0	2.0	1.3	1.4	0.3
8.	Soya	3.0	0.2	0.7	0.4	0.4
9.	Forage	160	186	158	165	182
	TOTAL	424.0	519.2	411.7	419.3	398.6

**Source: Agriculture and food statistics of Albania, 2003**

The data in Table 11 show that the highest level of arable land use has been achieved in 1994 (90%). The production structures have changed significantly, compared to the data of the period 1989-1990, even though during this decade they have had natural oscillations, while forage crops and vegetables were very important.

### The crops structure, 2003



Source: Agriculture and food statistics of Albania, 2003

Different production structures can be found according to the farm's location, destination of production, (for marketing or not), family needs fulfillment, etc. Nevertheless, the dominant farm production systems are:

1. Cereals – Vegetables – Forages – Livestock – Other.
2. Cereals – Forages – Livestock – Vegetables.
3. Vegetables – Forages – Livestock.
4. Vegetables – Fruit Trees – Vineyard.
5. Cereals – Livestock.
6. Vegetables (greenhouse).
7. Vegetables – Potatoes.
8. Forages – Livestock.
9. Fruit Trees/Olives.
10. Vegetables – Vineyard.

Analyzing farm production structures in different areas, the following can be concluded:

- Farm production systems are characterized by crop systems composed of annual and perennial crops, and by the livestock's systems, which include all types of livestock, and poultry. The main agricultural crops include: wheat, maize, alfalfa, vegetables, white bean, and fruit trees. The main products from annual and perennial crops include: cereals, seeds, straw and forages for livestock, fruits, grape, and olives. Livestock systems are dominated by cattle and poultry in the plain areas; and cattle, sheep, and goats in the hilly and mountain area. The main products from livestock include: meat, milk, and organic manure. Other products and by-products from livestock are: eggs, wool, honey, cheese, and butter.

- Based on a general assessment, in different zones, farmers have divided the land into the following approximate proportions in terms of production systems:
  - ⇒ *In the plain area*: cereals 40%, forages 38%, vegetable 9%, and others 13 %.
  - ⇒ *In the hilly area*: cereals 28%, forages 47%, vegetables 15%, and the others 10%
  - ⇒ *In the mountain area*: cereals 11%, forages 64%, vegetables 4%, and the others 21%

Wheat in general is not produced for marketing, but to fulfill family needs for bread; forage crops are produced to provide fodder for livestock in particular for cattle; while other crops are produced to fulfill family need for food. As noticed the logic of production structure for Albanian farmers is based on two fundamental objectives: *to fulfill family needs for food, and to minimize the economic risk.*

The conceptualization of such production structures has transformed the Albanian agriculture into a self-sustained part of economy. Production for marketing has not become yet a particular objective. It represents a surplus after the completion of the two main objectives mentioned already.

1. The number of crops cultivated in a farm varies from 4 to 7. Farms deal with several types of livestock, and several fruit trees (generally distributed within farms). Such a “mosaic” of production aims not only to fulfill family needs for food, but also to diminish the economical risk.
2. The production systems developed in farms are conditioned by the following factors:
  - ⇒ Tradition: Farmers were forced to work in state farms or agricultural cooperatives, gaining experience in the cultivation of many agricultural crops.
  - ⇒ Demand: Farmers are owners at the same time. They create their incomes from the farm, concentrating in the cultivation of such crops that are used to fulfill their family needs, and have a demand in the local markets.
  - ⇒ Income: Mostly farmers cultivate such crops that guarantee incomes from the farm.
  - ⇒ Resources: Farmers cultivate such crops that can involve family members to carry operations, are easy to transport and market, as well as easily stored and processed in the farm.

The above data indicate that the Albanian farms are oriented toward subsistence, and production for marketing does not represent any major objective for them. Under such conditions, the organization and improvement of the marketing system, as well as the conceptualization and implementation of intensification policy (especially in the plain areas) will induce important changes in the farm production structure and the quantity of productions destined for the market.

At present farmers’ relations to the market are weak, due to:

- Practical difficulties for a normal marketing of the production surpluses after the fulfillment of family needs. Farmers and their families in the rural areas face limitations of bargaining markets. Input purchases and by-products sales can be realized in the local markets to traders that live in the rural areas, and in some

cases in the city markets or state sectors. Market limitations have in fact decreased the real quantity of production for sale.

- Designation of a considerable amount of land for cereal production (40 % in the plain area), which generate little incomes and are produced to fulfill family needs for bread. Cereals in general are not produced for marketing (sales vary from 4-10% of the production).
- In the case of farm specialization, there exists uncertainty to sell produced commodities and to buy inputs and other alimentary agricultural products.

The establishment of a marketing system for agricultural products will:

- Provide to farmers the opportunity to trade their products normally. This means that farmers will have the practical opportunity to rationally administrate the marketed part of their products, in terms of quantity and prices, as well as the way to be exposed in the market. This way, the marketable part of the production will find their outlets.
- In the case of specialized farms, it will increase the certainty for marketing the offered commodities, and purchasing the required inputs and alimentary products.

The conceptualization and implementation of a production intensification policy will be followed by two important impacts:

- *Firstly*, the decrease of the area devoted to self-consumption of cereals and other crops in general, and the use of formally occupied areas for marketable crops.

Albanian farm families have designated the arable area for a long time to wheat and maize production. This safeguarded the issue of needs fulfillment for bread by farm families, due to the limited land resources available. The answer to this issue was found by the implementation of a policy for an intensive land use. The intensification of the land use aims to increase the productivity of wheat and maize, decrease the cultivated area devoted to such crops, and increase the use of the freed area for intensive crops such as vegetables, forages, etc.

- *Secondly*, the general increase of productivity will have direct effects in the increase of production for the market.

As has been outlined already, Albania's economic improvement will be based in particular on the agricultural sector. Albania has the potential to use the agriculture sector as a key for economic development, due to: the existence of agricultural resources; potentially competitive agro-industries, and relatively well-developed human resources.

The future agricultural production should be guided by constructive policies, which could support effective farm systems; encourage the necessary processes of land allocation (optimal structure); and support adequate schemes for use of inputs, and marketing of the agriculture and livestock production.

In this context, the transformation of agriculture from subsistence agriculture to market orientation will be a decisive move. This is the path to promote the development of agricultural raw material production industries, agricultural product's processing industries, and other activities associated with them as well.

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