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THE ALBANIAN AGRO-FOOD SYSTEM IN ECONOMIC TRANSITION

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

Paris 1995

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Foreword

There have been fundamental changes in the organisation and structures prevailing in the Albanian agricultural sector since 1991. The breaking up of the large collectivised farms into micro-farms managed by individual families is the most obvious example of change. While this move to private farming explains the rebound in agricultural production over the last two years, it has highlighted some of the key problems that remain to be solved. Of these, the need for land law reform is paramount. Without the implementation of reforms to establish clear property rights, settle disputes, permit sale of land, land leasing and land mortgaging, farm structures will not evolve in an economically rational way and investment flows into agriculture will be limited.

This report identifies not only legislative reforms but also those actions in a number of other areas, such as agricultural services, education and training, rural development, that it would be appropriate for policy makers to consider. It is organised into three main parts:

- The first part deals with the identification and evaluation of the principal problems posed by the implementation of agrarian reform; particular reference is made to the macro-economic and political framework during the 1991-1992 period;
- The second part is devoted to an analysis of the crop (section A) and livestock (section B) sectors; the principal elements relating to production, processing, distribution, consumption and trade are examined;
- The third part considers the main aspects of agricultural training and technical assistance; the modifications needed to adapt these important areas to a market economy are assessed.

A final chapter contains conclusions and recommendations.

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PART I - THE AGRARIAN REFORM: ISSUES AND CONSTRAINTS

1. THE MACRO-ECONOMIC AND POLITICAL FRAMEWORK OF TRANSITION

The creation of a multi-party system in Albania at the end of 1990, replacing the Communist Party monopoly which had lasted for 45 years¹, ushered in a period of transition from a planned to a market economy. The transition created a series of problems that were unique to Albania although other Eastern European countries faced similar situations. After living through decades of isolation and of political, economic and social deprivation with few equals world-wide, Albania experienced a collapse unprecedented in contemporary Europe. This was brought about by a severe political crisis and by the country's poverty, even though it is rich in rare² and precious sources of energy³.

The present social and economic deterioration has its roots in the 1970s and the beginning of the 1980s, when the break with China and the affirmation of "relying on one's own strength" virtually halted development of the delicate industrial infrastructure. Excessive collectivism and state ownership in the agricultural sector damaged the country's autonomy in food production to such an extent that, for the ten years to 1992, the growth of the Net Material Product (an equivalent of National Income) was only 1.5% - 1.6% per annum, two thirds less than the preceding decade, whereas the growth rate of the labour force increased by 3.5%. Other factors, apart, this led to a slump in productivity by at least 2% per annum⁴. According to World Bank and International Monetary Fund estimates, the per capita National Product fell from US\$670 in 1990 to US\$530 in 1991 and to US\$400 in 1992⁵.

The drought of 1990 and the first partial measures towards liberalisation caused a strong depression in the already weak Albanian economy. Between 1990 and 1992, there was a fall in the production of electrical energy and a sharp rise in imports of energy and petroleum, a restriction on the activity of individual factories and of whole sectors of production, a decrease in exports of industrial products and an attempt to increase exports of agricultural products, so reducing internal supplies of foodstuffs. The loss in production and legalisation of the free market economy resulted in sharply increased prices. The social and economic framework⁶ deteriorated, undermined by disorder in the country areas, strikes and absenteeism were encouraged by an indiscriminate guarantee of 4/5 of salary, and by difficulties experienced abroad as major commercial partners in Eastern Europe restructured their own foreign trade.

1.1 PRODUCTION AND FOREIGN AID

In 1991, when tens of thousands of Albanians fled to Italy⁷ and Greece, Gross National Product (GNP) declined in real terms by 30%. Inflation, at first kept low by a ceiling on price increases, rose very sharply; the balance of payments deficit reached 45% of the GNP⁸, exports were stopped, the foreign debt grew considerably, and the problem of became increasingly serious. In 1992, a further 23% fall in production

was estimated; during the first half year, the balance of payments deficit was greater than 50% of the GNP, imports rose more quickly than exports⁹, inflation calculated on an annual basis reached three figures, and unemployment, despite some growth in the private sector¹⁰, affected 62% of the urban population and 21% of the rural population¹¹.

In 1991, the value of production in the agricultural sector, by far the most important in terms of employment (47.3%)¹² and of contribution to GNP (39.6%)¹³, registered a decline of 24%¹⁴ over 1990 (see Table I.1). In 1992, the value of agricultural production at constant 1991 prices remained well below levels reached in previous years¹⁵ but an increase of 12% was registered, thanks to the commendable results of the livestock sector (see Part IIB). Estimates for 1993 attest to a further recovery in agricultural production of 13%.

The quantitative evolution of crop and animal production between 1990 and 1993 (see Table I.2) provides a measure of the crisis in the agricultural sector. Albanian agriculture during the period between governments from July 1991 to March 1992 and at the setting-up of the new administration¹⁶ was influenced by three factors: the lack of inputs produced at home and the lack of currency to buy these inputs from abroad; the impossibility of introducing alternative mechanisms for the distribution and allocation of resources in place of the collapsed system of centralised planning; the problems arising from the implementation of agricultural reforms, that is to say the dismantling of the co-operatives in favour of almost 380 000 farming families and the privatisation of state companies.

The consequent social and economic confusion led to a dramatic deterioration in the living conditions of the population; at least three factors can be identified:

- the rapid increase in the price of food products for the consumer, liberated as of 1 August 1992; by the end of 1992, prices had increased 3.4 times compared with the end of 1991 and seven fold in comparison with the end of 1990¹⁷;

- the collapse of production in the agro-food industries between 1990 and 1992 which affected all products; for instance, sugar production fell from 15 000 to 1 000 tonnes, canned vegetables from almost 8 000 to less than 900 tonnes, cheese from 10 000 to 1 000 tonnes; developments in other products are shown in Table I.3;

- the 380 000 farming families on the newly-constituted individual farms (representing 46% of total national households and 75% of the rural population)¹⁸ who tended to produce for their own consumption and not for the market; apart from the generalised unavailability of means of transport and infrastructure, this was due to difficulties in setting up agricultural activities.

Only a massive programme of aid in foodstuffs was able, at least partly, to alleviate the gravity of the situation¹⁹. From June 1991 until the beginning of 1993, the total sum of aid given by the international community reached US\$900 000 (ECU 726 000)²⁰. In 1992, the EC provided

Albania with 317 500 tonnes of grain and 49 500 tonnes of flour. The USA sent 12 500 tonnes of vegetable oils, 8 100 tonnes of butter, 2 100 tonnes of powdered milk and 17 200 tonnes of grain. Turkey sent 3 000 tonnes of sugar, 5 000 tonnes of flour, 10 000 tonnes of grain, as well as large quantities of pasta, soap and potatoes²¹.

1.2 GOVERNMENT AND INTERNATIONAL RELATIONS

The Government has to operate within this social and economic framework. Their programme is necessarily linked to policies pursued by former governments, notably by the coalition or "stability" Government and by the "transition" Government. This means completing the privatisation of land and then gradually developing the industrial, mineral, fishing, transport, and commercial sectors. "Small-scale privatisation" of services has already begun by auctioning 25 000 commercial units, giving priority to Albanian buyers. "Large-scale privatisation" of industrial companies is to be implemented by transforming them into joint-stock or limited companies with priority shares given to employees, although this approach will have to take into account the limited savings of the population.

Apart from aid already promised by the EC and by the G-24 countries, essential financial support is guaranteed by admission to the European Bank for Reconstruction and Development (EBRD) which took place in October 1991 and by the more recent admission to the IMF which, together with the World Bank²², is studying the "restructuring" of the Albanian debt and the creation of a stabilisation fund. The commercial agreement for economic co-operation with the EC arranged in May 1992 is giving a boost to economic recovery and is also very important at the political level.

The new Government is having to adopt unpopular measures, such as the abolition of all subsidies on prices of food products²³ and the removal of the benefit of 80% guarantee of full salary for the unemployed. The number of unemployed has increased rapidly and was estimated at the beginning of 1993 at 63.5% of the total work force in urban areas and at 15.7% in rural areas²⁴.

2. THE AGRICULTURAL SECTOR

Despite the limitations due to the inaccuracy of official data²⁵, an attempt is being made in this report to identify the main regulatory, structural and production problems created by the implementation of the reforms in the agricultural sector. These reforms were adopted by the Albanian Parliament in July 1991.

The transition to a market economy, and consequently to the dismantling of the co-operative farms and to the privatisation of the state farms, has required a new regulatory framework. A new Constitution and Legal Code were formulated to meet the particular need for a rapid transformation of the economic system, especially of the agricultural sector which constitutes such an important part²⁶.

In order to understand the process of reform, it is important to review the main stages in the collectivisation of Albanian agriculture and to report on the structure and production capacity. The regulatory framework will be analysed subsequently.

2.1 COLLECTIVISATION AND NATIONALISATION: THE MAIN STAGES

The starting point for this brief review is the land structure at the beginning of the "war of liberation". Before World War II, 3% of landowners owned 27% of the agricultural land in Albania, at that time almost 400 000 ha²⁷. There were over 155 000 Albanian farming families, 13.5% of whom did not own their land; 128 000 families, owned small or medium-sized parcels of land with an average size of 1.8 ha²⁸. This landowning structure did not last long as, between 1945 and 1946, a radical land tenure reform restricted proprietors to five hectares only; this enabled the redistribution of 170 000 ha between the 70 000 small proprietors and families without land. More precisely, with this reform 8 714 proprietors on an area of 54 499 ha were totally deprived of their land, 10 641 were partially displaced losing 64 997 ha, a further 3 163 ha belonging to religious institutions were confiscated, and 50 000 ha were from the State.

The process of collectivisation, which took place over the following 20 years, began voluntarily; the first farming co-operative was started in 1946 at Krutje in the lowlands of Lushnje, to the south of Tirana. Farming families pooled their land, each retaining a quarter of an hectare for their own use. The State encouraged whole villages to form co-operatives by providing incentives, a reduction in taxes and in the quota of product to be obligatorily surrendered to the State²⁹. By the end of 1954, 150 co-operatives had been formed, made up of 8 900 families on an area of 31 500 ha.

Collectivisation of livestock occurred during the same period. In 1948, farming families were permitted to keep a maximum of 50 sheep or goats; the remaining livestock, including the working animals (almost 6 000 in all), were confiscated. Many farmers preferred to slaughter their animals rather than hand them over to the co-operatives, as was the case in the USSR during the 1930s.

A second phase of collectivisation began after the middle 1950s with the extension of co-operative production to the hilly and mountainous areas, both in the traditionally richer southern regions and in the north. In 1959, there were about 1 800 co-operatives, with 114 700 families cultivating 290 000 ha. After 1959, co-operatives were fused into larger units and therefore the number of units diminished considerably, despite the continuous development of cultivated area; the maximum number reached in 1959 was 1 829 co-operatives with an average area of 175 ha but this fell to 421 units with an average of 1 320 ha in 1983.

A third and final phase in the process of collectivisation started in 1965, with as objective completing the elimination of private management. In 1967, individual plots were reduced to 0.11 ha per family unit. During this phase, development of co-operatives in the

mountainous zones was greatly encouraged, by a reduction in taxes, interest-free credit, an increase in the delivery price for the obligatory quota, investment in infrastructure and by the concession of technical inputs and subsidised services, for example through the farm machinery and tractor stations.

Concurrently, the State set up state farms, the first of which were created in 1945-1946 on land belonging to religious institutions, to foreign companies and to large landowners, and later in the 1960s and 1970s on reclaimed land, in all some 200 000 ha. The State favoured the development of these farms for both technical and financial reasons; their number increased from 21 with an average area of 1 000 ha in the mid 1950s to 58 with an average of 3 000-4 000 ha by the end of the 1980s. They differed from the co-operatives in that they had their own farm machinery and equipment, they could obtain state subsidies, and because salaries were fixed and guaranteed.

Collectivisation was completed in the 1970s and the so-called "nationalisation" of the agricultural sector began. In 1970, co-operatives farmed 75.8% of the arable land, state farms owned 20.7% and the remaining 3.5% consisted of individual plots of land farmed by members of the co-operatives. In 1976, under the Albanian Constitution all land was declared to be state property. During the "cultural revolution", individual plots of land were almost totally abolished, livestock were definitively placed under the co-operatives' control, and the "private" markets at which members of the co-operatives could sell their excess produce were closed.

The more viable co-operatives were transformed into "high level agricultural co-operatives (KTL)"³⁰, a large number of which in turn became state farms. However, nationalisation of agriculture was abandoned in 1987, probably because there was little sign of improvement. Nevertheless, in 1989, the KTL continued to occupy 17.7% of Albanian arable land.

2.2 STRUCTURE AND PRODUCTION ON THE EVE OF REFORM

The objective of the Albanian Labour Party (ALP) until the end of the 1980s was to abolish private property, both land and livestock, and to transform the co-operatives, defined under Marxist ideology as collective property, into state farms. In its dogmatic application of this objective, considered to be the best possible expression of the Socialist-Stalinist model, Albania found itself at the forefront of all the other socialist states both in Eastern Europe and in Asia (Mongolia and Vietnam).

However in 1990, the agricultural sector showed clear signs of crisis, with the continuation of a stagnation in production which had begun during the second half of the 1980s. The value of total agricultural production was only slightly higher in 1990 than in 1985³¹, despite the considerable resources invested in the sector, about 30% of total investments.

The crisis in productivity, however, hit the three categories recognised in the national Albanian accounts as agricultural producers in different ways. The contribution of the state farms to total agricultural production remained almost constant, that of the co-operative farms diminished considerably, whereas that of the "private" sector consisting of individual plots of land returned to members of the co-operatives increased proportionally to the decrease in production of the co-operatives.

The structural and production framework of the Albanian agricultural sector in 1990 was as follows³²:

- the 150 state farms which varied in size from 500 ha to 2 000 ha, 1 070 ha on average equivalent to double the average size of the co-operatives; they contributed 29% of the total agricultural production, cultivated 24% (170 000 ha³³) of arable land, employed 21% of the country's working population³³, owned 37% of the tractors and 26% of the combine harvesters³⁴;

- the co-operative farms (492 in 1989) which provided 50% of the total agricultural production, cultivated 70% of arable land and accounted for over three quarters of agricultural activities³⁵;

- the "private" sector (332 000 units in 1989) which consisted of partitioned land and the individual plots produced 21% of the total agricultural production (9% in 1985) and cultivated 4% of the total arable land.

3. THE AGRICULTURAL REFORM

3.1 DECOLLECTIVISATION

The first steps towards agricultural reform were taken in November 1988, at the VI Congress of the farming co-operatives held at Tirana. An attempt was made to obtain greater stability in production planning, commercialisation and the organisation of work by providing incentives for both individuals and those working in a team. In 1989, 34 new co-operative farms were created by dividing up the larger units; this was the first reversal in policy by the ALP.

The first "official" concession relating to the private use of agricultural assets was in July 1990; individual plots had been tolerated up to that time because of their contribution to total agricultural production. On that date, the ALP adopted a procedure which allowed every family whose members belonged to a co-operative to have a few thousand square metres of land, more in the hilly and mountainous areas, and one animal, cattle or sheep, for their own personal use.

Until the elections of 31 March 1991³⁶, the management of the State remained under the control of the old bureaucracy represented in the agricultural sector by farm directors. These directors, according to some Albanian sources and confirmed by certain Western observers within

the country, were largely responsible for the "sabotage and destruction" of the system; having realised that they would soon lose their power and following a policy of "the worse, the better", they tried to shift the blame onto the new democrats in order to demonstrate the latter's inefficiency in managing public affairs.

However, "spontaneous" destruction of the co-operative system began after the elections. By April, members of the farming co-operatives had already started to divide up their land and animals; between June and September, the physical dismantling of stables, greenhouses and other structures took place. With the materials collected, bricks, beams and various other pieces of equipment, farming families constructed houses and cultivated the surrounding land without following any precise plan for land distribution; indeed, in the irrigated zones, they redirected the water supplies to their own advantage, thereby considerably damaging the irrigation system.

Never-the-less between April and September 1991, farming families were the only "enterprises" to continue food production in Albania, even if it was mostly for their own consumption. The state farms and the agro-food industry in particular had almost completely stopped production, creating a crisis in the country's food supplies.

3.2 THE PRESENT REGULATORY FRAMEWORK

From the end of July 1991, Parliament and the Government tried to "regulate" the spontaneous decollectivisation, a process which developed throughout 1992. Privatisation of state farms was decided upon formally in August 1992 and was carried out in two phases, the first in November of the same year, the second in March 1993.

3.2.1 THE LAND LAW

The regulatory framework on which Albanian agricultural reform is founded is the Law "Concerning Land", no. 7501 of 19 July 1991³⁷ and several Council of Ministers' decisions taken in the months immediately following the Law's adoption³⁸. In reality, the adoption of the principal legislative measures in the agricultural sector succeeded events, in that the distribution of land and of major capital assets had started spontaneously.

In accordance with the Law, the State conceded to physical and juridical persons the right to freely possess³⁹ agricultural land, including orchards and vineyards⁴⁰. However, the ancient rights were not taken into consideration during redistribution; the Law makes no reference to property rights preceding 1946. It explicitly forbids the buying and selling of land even though, in order to favour the redistribution of holdings, voluntary exchanges between those assigned plots of land are officially permitted and even tolerated.

The regulatory framework obliges those assigned land to use it exclusively for agricultural purposes, to look after the irrigation and drainage systems already in place and to farm the land within a year of acquisition, on pain of loss of their right. The use of the agricultural land may not be changed.

3.2.2 DECISIONS AND DIRECTIVES

A series of decisions and directives supplement the Land Law. These are treated chronologically as they deal with the various problems that the Government had to face as decollectivisation progressed and as "de facto" legalised situations were already in place.

3.2.2.a THE DISTRIBUTION OF LIVESTOCK

Shortly after the Law was implemented, the Council of Ministers passed a decision to regulate "livestock distribution"⁴¹; the aims of Regulation no. 229 of 23 July 1991 are as follows:

- to assess the collective farms and the State's livestock population;
- to make a veterinary examination of all livestock allocated to farming families;
- to prevent damage to, and distribution of, the livestock which formed part of the genetic patrimony of breeding stock raised in specialised animal husbandry centres;
- to prohibit the exportation of livestock and of animal products, without the required permit⁴².

3.2.2.b THE LAND COMMISSIONS

In order to regulate the assignment of land, the Land Law foresaw the setting-up of Commissions organised on three administrative levels, at national, district and and at village level. A decision providing further instructions, Regulation no. 230 of 23 July 1991 concerning the "Creation of Land Commissions"⁴³, was adopted by the Council of Ministers immediately after the Law was passed.

At national level, the Land Commission consists of 19 members chosen from amongst Ministers, Members of Parliament and experts. It is a corporate body presided over by the Vice-President of the Council of Ministers who acts as Chairman and by the Minister of Agriculture, the vice Chairman; it has the following functions:

- to guide, organise and control the work of the Ministry of Agriculture and Food and of the other centralised institutions relating to the application of the Law, in both the municipalities and the villages;
- to resolve disputes between regions concerning regional boundaries;

- to examine cases of conflict notified by the district Land Commissions.

The district Land Commissions number 36, equal to the number of administrative districts. They are responsible for organising and supervising the assignation of land and, in particular, for setting up groups of specialists to compile the documents necessary for land registry surveys. They are delegated to resolve disputes resulting from land division and between individuals and the village Land Commissions.

There are 2 848 village Land Commissions, one for every Albanian village and they actually implement the legislative measures⁴⁴. The members are freely elected by the residents in the village from among their political and technical representatives⁴⁵. The tasks of the village Land Commissions are to verify the number of family members resident in the village, carry out the division of land without taking into consideration previous boundaries, assign the plots as near as possible to the relevant homes, and to furnish a deed of land to each family indicating the location and the area.

3.2.2.c CRITERIA FOR LAND ASSIGNATION

With another decision, Regulation no. 255 adopted on 2 August 1991, the Council of Ministers established criteria for the distribution of agricultural land⁴⁶. This decision refers to land occupied by co-operative farms. For farms encompassing more than one village, the land is initially sub-divided among the villages according to the size of their population. Next, the land is distributed within the villages to the former members of the co-operatives in accordance with the number in each family unit. All family members count equally, except those with a fixed occupation in either the public or the private sector, who receive half the established share and definitely not over 1 000 square metres.

All residents of the rural areas, even the non-members of co-operative farms, have the right to land, a share equal to half that given to former co-operative members, but not greater than 0.4 ha per family. Agricultural land within residential areas is assigned only for temporary use. Land planted with orchards and vineyards is distributed in the same manner, even to the point of dividing trees or individual vines.

3.2.2.d THE LAND REGISTER

The Law establishes that land, once assigned, be registered. Regulation no. 256 of 2 August 1991 concerns the registration, modifications to, and situation of land and of land registry duties⁴⁷ and specifies the following:

- the land registry is an inventory of the rural heritage in which each village and landowner is listed;

- the basic data for the land register is obtained through topographical operations, triangulation and polygonation, and by simple measurement surveys;

- land is registered in the cadastral inventory under the following headings: agricultural land, orchard, vineyard, olive grove, wood, pasture, meadow, other non-agricultural land;

- conversion from one land use to another, for example from woodlands to arable land, may only be carried out if approved by the Minister of Agriculture;

- the changes made successively to the entries in the land register relating to possession or to plot use are periodically brought up to date.

3.2.2.e THE DIVISION OF OTHER ASSETS BELONGING TO THE CO-OPERATIVES

Once the criteria and the methods for assignment of land and livestock were established, it became necessary to decide upon the division of the other assets⁴⁸ and of any remaining capital belonging to the co-operatives, Regulation no. 266 of 8 August 1991. The following proposals from the Ministries of Agriculture and Food and of Finance were approved by the Council of Ministers:

- before the land is assigned, a general inventory is to be carried out, the financial situation examined and any outstanding debts calculated;

- the division of all the assets may not be made until outstanding debts to the State have been paid;

- if a co-operative farm is unable to pay these debts, they should be paid by the farmers in proportion to the land received.

3.2.2.f THE DISMANTLING OF THE MACHINERY AND TRACTOR STATIONS

As non-state institutions could not own capital, agricultural machinery and equipment were concentrated in a network of Machinery and Tractor Stations (MTS). These provided the co-operatives with a paying machinery service, services were offered at centrally determined prices⁴⁹.

The Council of Ministers' decision, Regulation no. 377 of 11 October 1991 concerns the dismantling of the machinery and tractor stations and the creation of firms for agricultural machinery⁵⁰. The firms for agricultural machinery are designed to carry out work on land belonging to, and under contract with, the private or collective owners and to deal with the maintenance and repair of farm machinery; they depend on the Ministry of Agriculture and Food and inherited the equipment of the MTSs. Agricultural machinery firms may sell tractors

and other farm machinery to their own employees. This sale is carried out through the National Agency for Privatisation.

3.2.2.g THE REORGANISATION OF ANIMAL HUSBANDRY AND VETERINARY SERVICES

Last but not least, the Government took measures to regulate and reorganise the animal husbandry and veterinary services, Regulations nos. 378 and 379 of 11 October 1991⁵¹ ⁵² respectively.

The Council of Ministers decided that the state animal husbandry service be organised at village level, to ensure and check that the laws applying to animal husbandry are correctly implemented. In each district, centres for the genetic improvement of breeding stock are set up; these are responsible for all activity relating to the selection of livestock.

The reorganisation of the veterinary service is based on Law no. 4625 of 24 December 1969; the following are stipulated:

- the veterinary services are to manage and control veterinary problems within and outside the farm system;

- the veterinary service in villages is to be assured by a veterinary officer, also operating as an inspector and as the person responsible for applying measures to prevent infectious diseases;

- all veterinary officers are to possess a licence to exercise their profession;

- permission is to be obtained from the Ministry of Agriculture and Food for the setting-up of firms to make and/or import products to be used in animal husbandry, such as medicines, vitamins and disinfectant;

- prior approval is required from the district veterinary service for the opening of private veterinary clinics and of shops for the commercialisation of animal husbandry products;

- the permission of the veterinary service and the Ministry of Agriculture and Food is needed for the importation, exportation and transport within the Republic of livestock and animal products.

3.2.2.h THE PRIVATISATION OF STATE FARMS

The privatisation of state farms was legislated for one year after the break-up of the co-operative farms. The official reason for this delay is that the Government and Parliament wished to conserve these farms in their integrity for as long as possible in order to guarantee at least a minimum of continuity in agricultural production. It is more probable that the delay was caused by the difficulty in claiming rights over the state farms, as they were set up on land that was mainly reclaimed.

The process was formally implemented on 1 August 1992, when a central Agency for the privatisation of state farms was set up by the Ministry of Agriculture and Food to head 33 district agencies. The Agency

started operations in November 1992. After a gap for a few months in the autumn during the sowing season, the second and final phase was concluded in March 1993.

The criteria adopted for the privatisation of state farms are very similar to those used for the decollectivisation of the co-operative farms; the differences are of form rather than of substance. Land is assigned to residents of the area in which the farm is located, as for the co-operatives. However, the majority of state farms were former KTLs, high-level agricultural co-operatives, and for transformed KTLs the total per capita share of land assigned may not exceed the land previously occupied by the co-operative. Also, land is assigned not for ownership but for use; since land can be inherited, the right of use is perpetual. The difference, therefore, between land ownership, the former co-operatives and land use, the former state farms is in this case one of form. It becomes one of substance when land is successively reclaimed by the State, around 200 000 ha to date; land is assigned for use for a limited time period⁵³, or to be more precise it is a concession over a time period no greater than 15 years⁵⁴.

Other assets, both current and fixed, of the state farms are valued by a special Commission⁵⁵. The valuation is based mainly on one financial criterion: the difference between the initial value, and the value after amortisation of the assets in question is calculated; the result is adjusted in line with the conditions in which the assets are found at the time of valuation. Once a value has been attributed to the assets, the criterion most generally followed for their assignation is the favouring those who effectively used them, for example a lorry to a lorry driver, a tractor to a tractor driver. Assets not claimed by the user may be auctioned.

Livestock are the exception to this rule. They are assigned equally between all the workers on the farm, independently of the work previously undertaken.

4. THE IMPLEMENTATION OF AGRICULTURAL REFORM: RESULTS AND PROBLEMS

Before dealing with the problems encountered in implementing the agricultural reform, two important factors should be considered. The first is that the laws were formulated in haste, in a very changeable political climate; the second is that the Government was fully committed to a legal transition from collective and public to individual and private ownership, which is evident from the regulatory framework.

It is probable that reform was conceived by the Albanian authorities to promote the economic and political stability of the country and to guarantee a return to production. Both objectives have been partially fulfilled as evidenced by the political framework and the progress of agricultural production in 1992 (Tables I.1 and I.2).

The conversion from one agricultural system to another, from a few large farms managed centrally to a myriad of micro-farms managed by farming families was bound to entail a structural and organisational revolution.

For example, consider the management of the supply of water for irrigation purposes after the transformation from 500 large users to a number 100-1000 times greater; the veterinary control of the livestock, concentrated at one time in a few large complexes of thousands of cattle and now divided between a multitude of stockmen each with one or two cattle; or the agricultural mechanisation service, provided by stations in which a large part of the machinery and farm equipment was concentrated and now divided among thousands of individual tractor and lorry drivers.

The problems which the new agricultural Law is intended to address and the probable structural consequences are now treated.

4.1 LAND ASSIGNATION

4.1.1 THE CO-OPERATIVES

The distribution of land belonging to the co-operatives developed very rapidly due to the initial spontaneity of the process and the limited resources to be assigned, 511 000 ha of which 68% are situated in the plains. So rapidly, that by 31 July 1992, approximately one year after the implementation of the land Law, almost 80% of the agricultural land used by the co-operatives had been assigned; this is equivalent to 57% of the total arable land. After this date, distribution continued more slowly, mainly because of the large number of problems arising.

However, according to the official estimates from the Ministry of Agriculture and Food, 430 155 ha or 91.5% of the land belonging to the co-operatives had been assigned by 27 August 1993 (see Table I.4). This is the distributable area; the remaining 8-10% is unproductive land that the national Land Commission estimates will not be exploited by farming families⁵⁶.

The official data reflect very different situations in the various zones of the country. Assignment of land in the plains is almost complete, whereas the process developed much more slowly in the mountainous zones; for example, only 63% of the land is assigned in the district of Diber and 76% in the district of Mat.

One reason for the partial distribution of land in the mountainous areas, found mostly in the north of the country, is that collectivisation was more recent there and usage and traditions remained well rooted in the population. The first **kanum** (codes) regarding the laws of mountain communities have been kept alive and have been passed on from generation to generation⁵⁷. The local population was therefore unwilling to accept the administrative criteria imposed by agricultural reform, whereby land is given to the residents of the rural areas; the issue was solved by substituting the village or district Land Commissions with councils of elders who, as in the district of Diber, were generally more favourable to the restoration of the land structure preceding the war of liberation, in 1946⁵⁸.

This problem also arose in other areas, for example in the Scutari plain, where the slow-down in the land distribution is attributed to arguments between the ex-landowners and the former members of the co-operative farms⁵⁹. Certain ex-landowners even marked out their own boundaries in order to lay claim to their land. It will not be resolved until the Albanian Parliament takes action, either by passing a law on indemnity or compensation or by ignoring the ex-landowners' claims.

The Association of ex-landowners⁶⁰ argues that the real situation of land distribution is very different from the figures provided by the national Land Commission. Only 20%-30% of the distributable land is assigned under the terms of the land Law, another 30%-40% is sub-divided among the families respecting ancient boundaries, while 30% has not as yet been assigned because the potential new owners spontaneously renounced possession of ex-landowners' land⁶¹.

Without commenting on the reliability of this information, the problem engendered confusion in the process of land assignment. Apart from provoking controversies that often resulted in violent and bloody confrontation, in some cases it completely halted land distribution. The confusion, while awaiting clarification, delayed the setting up of productive activity.

Problems also arose over the drawing up of boundaries between the villages. The land Law stipulates that district Land Commissions can re-adjust the boundaries in order that the per capita land to be assigned in each village is the same. This procedure, or rather its omission, caused tension between neighbouring villages.

In the event of controversies over the assignment of land between persons or between neighbouring villages, it could be useful to appoint an arbiter even if only as a temporary substitute for the jurisdictional state bodies dealing with land rights. Any intervention concerning ex-landowners seems to be premature, as long as their claims to land previously owned are neither recognised nor forbidden.

4.1.2 THE STATE FARMS

The initial phase of the privatisation of state farms was carried out on 79% of the available land, 114 560 ha by 27 August 1993 (see Table 1.4). Privatisation also required the clarification of several important issues.

The greatest problems arose in state farms originating from high level co-operatives, the KTL, although other problems did occur on state land in the reclaimed areas⁶². One example is the REMBEC state farm, one of the best in the whole country. Situated at Rembec in the district of Korçë to the south-east of Tirana, it was a high level co-operative until 1983. It was then nationalised and the newly constituted state farm appropriated the Lek 5 000 profits and invested them in increasing the machinery and livestock. On privatisation in November 1992, the farm workers asked the State to return the profits which had been nationalised or give compensation in kind with a share of the livestock. The Agency for privatisation, however, decided not to accept requests

either for reimbursement or for compensation, thereby creating an extremely tense situation between the 400 families working on the farm, the district authorities and the Government. The result was that all farming activity was suspended pending a solution, rendering 2 500 ha unproductive in one of the best areas of the country. Many other state farms were in similar situations.

As in the case of the co-operative farms, the state farms experienced conflicts between farm workers and the ex-landowners. This issue however, is less contentious for the state farms; because of their origins on reclaimed land and former state-owned property, they had less land that could be claimed by the ex-landowners. The preceding example can be used to illustrate the problem. In 1946, when the REMBEC state farm was founded, 1 750 ha of the agricultural land belonged to three large landowners each with 583 ha, the remaining 750 ha (or 30%) belonged to 90 families each with on average 8.3 ha, and 40 families did not own any land at all. Since 1946, the 90 families have increased to 400 families, while the area of land has remained unchanged. Were the large landowners to take back their land and the 90 families their 8.3 ha, the remaining 310 families would have no land whatsoever to farm⁶³. Conversely, if the old ownership rights were not respected, each of the 400 families would receive on average 6.25 ha. This is a clear source of conflict. At Rembec, the families decided to remain united and continued to work as before but on a private basis.

Finally, in certain circumstances problems were caused by the criteria used in the assignment of land share per capita, such as the residence of the assigned owner within the area to be privatised; this is valid for state farms and for co-operatives. In reality, not every family is able to set up its own production unit, however limited; the old, the ill, young couples with small children, old couples with grown-up children and people already employed in other activities cannot physically look after the plot assigned to them which, given the general lack of mechanisation, requires a high intensity of manual labour⁶⁴.

4.2 ASSIGNMENT OF RIGHTS OF OWNERSHIP AND OF USE

The national Land Commission records show that by February 1993, 39% of the families assigned land had received a certificate attesting their ownership of land belonging to former co-operatives. This is a blue certificate, to be distinguished from a green certificate which attests the right to use of state farmland. In conformity with the land Law, the blue certificate is allocated by the Council of Ministers who register the plots assigned to families, showing the position, cadastral use and boundaries. The certificate is signed by the head of the family who retains a copy, by the head of the village Land Commission, and by the district representative; the other copy is deposited at the district land registry office.

The blue certificate, in so far as the land belonging to the former co-operatives is concerned, testifies to land ownership. In reality, no provision is made in the agrarian reform legislation to identify clearly the concept of ownership, nor even to define the rights and limitations

of owners or of those who could obtain other rights to the holdings, such as rent or hire purchase. It would be more correct to speak of right of possession than of ownership.

The possessor of assigned land has the same rights as the owner over the use of the holding. Nevertheless property owned, even though certified as such by the Land Commission, still remains a limited right.

This is also true for the right of use to state farmland certified by the Land Commission, the green certificate. A problem arises if the right to use is limited to a time period, as in the case of reclaimed land; without the right to transfer or to transmit these titles to heirs, the users have little incentive to carry out improvements.

It is necessary to introduce legislation on real estate as well as to insert the right of ownership into the civil code. A specific law would provide the foundation for regulating the real estate market, inheritance, and everything concerned with real estate investment, agricultural credit and the right to water supplies.

Nor is provision made in the legislation to define the exercise of access rights to holdings. One problem which has arisen concerns rights of way, in particular the right of way of necessity. Certain village Land Commissions have not been able to partition the land to allow access to public ways and roads; this has forced neighbours to make their own arrangements creating many public order disturbances.

Similar problems have occurred with the water outlets and aqueducts, the drainage system, and the placing and fixing of sluices. It is necessary to implement legal provisions relating to access rights.

4.3 COMPENSATION OF FORMER LANDOWNERS

As the question of compensation to former landowners is one that has also been posed in other Eastern European countries⁶⁵, it is of interest to examine it in greater depth. In Albania, the former landowners' Association is in direct confrontation with the present Government and Parliament. Former landowners rely on the support of the Democratic Party and on the help given by Albanian emigrants in the USA. As their opponents support the Socialist Party, this issue has strong political connotations.

Three different solutions are proposed. They are as follows:

- a financial indemnity, either direct compensation or shares or a participation in some other form of production;
- compensation in the form of land, either the return of their own or allocation of other land;
- no action to be taken on their claims.

4.3.1 THE POSITION OF THE GOVERNMENT

The Government having discarded the third solution, initially dealt with this question by drafting a bill which fixed as 1 July 1993 the final date for submission of land claims by former landowners and their heirs and set up a State Council for Indemnity and District Offices to deal with the practical side of distributing the compensation. Since the question concerns the definition of beneficiaries and of the historical date after which claims can be accepted, the bill stated that the indemnity for ex-landowners must be carried out on the basis of the land register of 1945; this was also to reduce the number of claimants.

However, the bill specified neither the means nor the total amount of compensation, although it did mention the possibility of substituting monetary compensation with a quota of shares in State companies. A different form of compensation was proposed for those who as former members of co-operatives had already received part of their former property during the distribution process; they received full compensation for the first 10 ha and then a decreasing proportion, 10% for an area of between 11 and 100 ha, 1% between 101 and 1 200 ha, and nothing over 1 200 ha.

4.3.2 THE POSITION OF THE EX-LANDOWNERS

The bill caused considerable dispute. The Association of ex-landowners opposed the Government solution and drafted its own bill⁶⁶. Their proposal was based on opposition to two points: article 8 of the land Law, the old boundaries should not be taken into account in the distribution of land, and the refusal of any monetary compensation. Their alternative bill proposed the following:

- to return land where there have been no new settlements, installations or investments since 1944, up to a maximum of 50% of the land of the villages;

- to compensate those not covered by the preceding point by allocating the 200 000 ha of reclaimed land belonging to the State⁶⁷.

4.3.3 PRACTICAL IMPLICATIONS

Even when or if a fair compensation is accepted and whatever the solution adopted, indemnity, return of lands, compensation in kind, the practical implications should not be underestimated. The value of the assets remain to be defined, as does the period of evaluation; the question of eventual improvements to be carried out between expropriation and restitution are also to be resolved. The form of the indemnity, either in kind with the same or other holdings of equivalent value, or a monetary sum gives rise to both administrative and equity problems, the latter because of the extremely concentrated structure of land ownership at the end of the World War II. Either type of problem can generate great confusion in the carrying out of agricultural reform, as already described.

The search for old cadastral documents, many of which were destroyed or lost during the war, is in itself a very difficult task, without looking into and cancelling possible hire purchase orders on property. In addition, there are the difficulties arising in the event of the death of the landowner; if there is more than one heir to the holding, it could lead to land fragmentation. Finally, the bureaucracy behind each of these administrative acts could be extremely complex and costly. This final consideration is important as the criteria adopted, together with the use of incentives, simplify the choice of solution to the problem.

4.3.4 THE SOLUTION

In April 1993, the Albanian Parliament passed two laws relating to the compensation of former landowners, Law no. 7698 of 1 April 1993 and Law no. 7699 of 21 April 1993. The latter, a Law concerning the compensation in value to the former owners of arable land, illustrates the difficulty in solving the practical implications. For example, article 8 states that former owners of agricultural land are to be given full compensation in value for a land area up to 15 ha and determines the coefficients for the larger areas. However, article 9 states that the monetary amount of compensation per hectare of arable land is to be defined by legislation to be passed within six months after the enforcement of the Law. Moreover, officials of the Ministry of Agriculture and Food in Tirana, interviewed in November 1993, explained the difficulties in determining the value of arable land.

4.4 THE CONSTITUTION OF A NEW CADASTRAL REGISTER

The present regulations do not recognise the old rights of ownership. Article 8 of the land Law is not only very clear on this point but even the decision relating to the duties of the land register stipulates that a new cadastral register be constituted, implying the inadequacy of the old one⁶⁸.

Government officials and Land Commission officers document the assignation of the plots of land which belonged to the former co-operative and state farms on the basis of the blue and green certificates. The procedure adopted is as follows:

- an area is assigned to each family according to the total cultivable land attached to the village, and to the number of family members;

- the village Land Commissions divide up the land in the presence of all interested parties and prepare the document certifying the title of property or use of the assigned plots; this is based on the maps of the former co-operative and state farms⁶⁹ and lists the number of plots assigned to each family, the surface area of each plot, the quality of the land and the cadastral use.

- the certificate is signed by the allottee and by the representatives of the village and district Land Commissions. One copy is kept by the allottee; the other is deposited at the district land

registry office. The maps, prepared by the Military Cartographic Institute and by the Institute of the Science of the Land, are not detailed enough to constitute a register that also includes the very small plots which require a scale of at least 1:100. There is therefore a need for a cadastral law to specify the different functions of the Land Registry Office, such as juridical, topographical and data collection for statistical and fiscal surveys⁷⁰.

4.5 FARM DIMENSIONS, LAND FRAGMENTATION AND CONSOLIDATION

Once the distribution of land is complete, the land structure of Albania will be characterised by a large number of very small farms⁷¹. For example, the almost 380 000 families who claim a right to the former co-operative land should have on average 1.36 ha at their disposal. However, after calculating the number of plots of land already assigned, the average area will be only 0.8 ha per family.

The average size, already low, masks very different situations. In some districts, the area assigned per family is over 2 ha, the 2.15 ha in the district of Permet for example; in other districts, such as that of Puke, the average size is 0.55 ha. Similar data is to be found for individual farms after the privatisation of state farms.

If, as often occurs, the farm is located on land with poor soil conditions or in hilly or mountainous zones, or if there is no supporting infrastructure, it could be too small to sustain even subsistence agriculture⁷². However, there are signs of partial land consolidation, through sub-division of family plots, informal land transactions and forms of co-operation, even though the trading and renting of land is formally forbidden. Without a legal basis, this process will produce considerable difficulties.

An open land market, through trading and renting, would favour land consolidation, and therefore the creation of larger and potentially more efficient farms. It would also allow the land to be used as security for loans to farming families.

4.6 ASSIGNMENT OF OTHER ASSETS

Apart from the land, the assignment of the assets of the former co-operative and state farms is now carried out. Although rather than an assignment, there has been a sharing out of everything that could be divided or dismantled, from livestock to farm buildings, particularly in the co-operative farms where the process started spontaneously.

On each farm, a Council was elected which then formed a Commission to value the assets. The specialists on the Commissions were more often than not those who worked on the privatisation of the real estate. Two main criteria were followed, the first being to attribute at the moment of the valuation a book value to the fixed and liquid assets excluding land, and the second to assign them to those who had used them until that moment⁷³.

This mechanism functioned well for property with a relatively low book value, such as small machines and agricultural equipment, and livestock including cows, sheep and poultry. However, a problem arose with other assets, above all with the physically non-divisible fixed assets. Many of these were physically dismantled, the sheds and pigpens for example, the existence of which were no longer justifiable not only as the animals had been shared out among the farming families but also as the investment would have been too high for a single individual to sustain. The other assets were maintained and bought by individuals or by small groups of former members of the co-operative and state farms⁷⁴.

4.7 REORGANISATION OF AGRICULTURAL SERVICES⁷⁵

The new land structure, put into place with the change of land tenure, brought about problems in the organisation and management of agricultural services; previously, these were either dependent on the State or responsibility was partially or totally delegated to the co-operative and state farms. The services comprise irrigation and the provision of technical inputs, agricultural machinery, agricultural and veterinary assistance, hygiene and sanitary controls, and agricultural credit.

4.7.1 IRRIGATION

In 1991, prior to the modification to the land structure, the total irrigated area amounted to 423 000 ha, covering 60% of the arable land⁷⁶ and contributing 80% to the crop production of the country (see Part IIA). During the period of social disorder in 1991, however, many pumping stations and some of the high tension wires were destroyed and water supplies were redirected onto individual farms. The lack of maintenance and the intentional damage to the irrigation system as a whole led, by 1992, to a total loss of 89 000 ha of irrigated area with 212 000 ha to be recovered⁷⁷.

The break-up of the co-operative system contributed to the difficulties in two ways. It led firstly, to the constitution of a myriad of small producers who have little knowledge of hydraulic schemes, farming on land the irrigated area of which is less than one hectare (0.9 ha) and inadequately served by the distribution network. Secondly, it impeded the setting-up of an alternative structure to regulate the water distribution and to maintain the installations. In 1992, 80% of irrigable land was not being administered⁷⁸; this further reduced the irrigable area, with a negative effect on productive capacity⁷⁹.

On the small-holdings, the right of property over water needs to be transformed into a right to use water for productive purposes but this will be determined by public interest and by the vested interests of other holdings. Also required is the setting-up of some form of water management, both public and private, as well as of organisations to regulate use⁸⁰. Assisted by the Ministry for Agriculture and Food, some

voluntary associations have been formed among individual producers, usually in groups of 30-40 people, to assure the management and maintenance of the secondary and tertiary channels⁸¹.

4.7.2 MECHANISATION

Most agricultural inputs, such as seeds, fertilisers and pesticides continue to be mainly distributed by the state agencies. The restructuring of the agricultural sector is, however, affecting the supply of agricultural machinery, especially as the available machinery is that designed for and used by the large former co-operative and state farms and does not correspond to the needs of the small farms (see Part IIA).

The needs of the newly-constituted individual farms may in future be met by the home production or importation of small agricultural machines. The most immediate problem to be resolved concerns the allocation and management of existing machinery which, although unsuited to the new requirements, is the only available resource.

Agricultural machinery and equipment were traditionally concentrated in the Machinery and Tractor Stations. When these were privatised, the approach adopted was to allocate the machinery and equipment to those who had used them. Until privatisation, the workshops remain state property and the workshop personnel continue as state employees. By March 1993, the 5 350 tractors from the former Machinery and Tractor Stations, over 50% of the tractors in Albania⁸², had already passed into private hands. The recipients immediately began operating as free-lance contractors.

The work of maintenance and repair was separated from farm work and transferred to private firms. The privatisation of the Machinery and Tractor Stations has not resolved the problem of the inadequate territorial distribution of machinery as the Machinery and Tractor Stations were concentrated in a few lowland districts and the privatised machinery and equipment firms have remained in the same areas. However, the free-lance contractors increased the hiring-out charge; in 1992, the charges in Leks per hectare reached 2 000 for ploughing, and 1 000 for sowing grain and for harvesting⁸³, so prompting most of farming families to do these tasks manually or to use animals⁸⁴.

4.7.3 TECHNICAL ASSISTANCE AND VETERINARY CONTROLS

The other agricultural services, including the agricultural extension and veterinary services, now have to be paid for; the new legislation permits the agronomists and veterinary officials who were once employed by the co-operative and state farms to free-lance. The problem here is not only one of finance but also of organisation and is not limited to production. For example, the veterinary services are responsible for the prevention of disease in livestock and for hygiene and sanitary control in the slaughterhouses and meat factories and in the markets.

The dispersion of the livestock among the thousands of small producers created logistic problems for the veterinary officials who have to travel from farm to farm. Their territorial coverage also made it much more difficult for providing information and training; most of the new livestock breeders have received no specific training⁸⁵.

In 1991, the Ministries of Agriculture and Food, Justice, and Foreign Affairs, together with the Order of Veterinary Officials drafted a bill to apply the decision concerning the veterinary services⁸⁶. Concerning animal husbandry, the President of the Republic signed Decree no. 7627 of 21 October 1992 on the organisation, management and duties of the veterinary services.

Hygiene and sanitary control in the animal husbandry and veterinary services are only a small part of the vast problem concerning the repression of fraud in the production and trade of agro-industrial products and in safeguarding the consumer. These issues are normally dealt with by a two-fold strategy, by administrative controls on production and products, and by penalties and regulations to repress fraud in trade. However, there is no specific legislation as yet; the only measure so far approved is Decree no. 7630 of 23 October 1992 on the standardisation of agro-industrial products.

4.7.4 AGRICULTURAL CREDIT

One of the problems in obtaining the inputs necessary for production is funding, the finding of the financial means for the acquisition of goods and services. The setting-up and management of business activities is therefore closely related to the access and availability of credit.

The individual Albanian producers, as well as not being used to organising their own production, have to cope with limited resources. A powerful tool for public intervention would be to create incentives by facilitating access to finance. This is even more important for agriculture, traditionally the weakest sector of the economy, characterised by low rates of productivity and profit.

At present, Albanian farmers are unable either to accumulate savings or to continue production where costs precede revenue by as much as nine months. This situation is aggravated by the lack of a banking structure. The existing bank, the Bank for Agricultural Development or BSA, became operative on 1 November 1991⁸⁷ and provides short-term and medium-term credit at variable rates of interest; for example, in July 1992, the rates of interest, fixed according to the period of the loan, were at 25% for three months, 32% for six months, 39% for nine months, and 42% for one year. The activity of the bank, however, is rendered precarious by the lack of a clear credit policy and by the lack of a legal basis for real estate ownership on which to fix the loan security⁸⁸. In addition, the personnel employed in the 27 regional and 130 rural branches⁸⁹ are inadequately trained in loan evaluation and risk analysis.

The volume of agricultural credit issued is very limited. During 1992, Lek 2.8 billion, US\$28 million, was lent short-term, of which 82% was allocated to the state farms mainly to cover management costs and only 18% to the individual firms⁹⁰. Medium-term loans amounted to only Lek 209 million, US\$2 million, but as much as 98% was given to the individual firms⁹¹. The low level of medium-term credit is best indicated by the amount loaned per family; in 1992, this was Lek 539, about US\$5⁹². Long-term credit is even more restricted.

The limited credit available can be explained not only by low profits in the banking system but also by the low take-up rate, possibly because of a lack of knowledge of credit instruments on the part of the new businessmen⁹³. This is despite an extremely favourable interest rate when compared with the rate of inflation; the interest rate for savings is currently fixed at 39% annually, much lower than inflation, running officially at 6% monthly.

4.8 MIGRATION AND CO-OPERATION

Migration from rural areas and the formation of spontaneous associations are developments with considerable implications for the near future.

4.8.1 MIGRATION FROM MOUNTAIN AREAS

The greater part Albania consists of hilly or mountainous areas⁹⁴ where the per capita assignment of land is very low, only 200-300 m². Under present conditions, this land is capable of supporting a farming family for between one and three months only. Almost one sixth of the population of Albania⁹⁵, some 500 000 inhabitants in 80 settlements find themselves in this situation.

Some areas are in a state of constant emergency where the population survives only with the help provided by CARITAS, by the operation Pellicano, and by the international organisations. A large number of settlements, which seem to have little justification for existing in their present location, were created in the frontier zones under the former regime for the exile of undesirable citizens⁹⁶. Given the precarious nature of the living conditions, it is likely that if the political situation in Albania were to change and aid be withdrawn, these areas would see a major exodus towards the plains and urban areas⁹⁷.

Some of the 3 000 Albanian villages will almost certainly disappear, beginning in the mountainous zones. The exodus has already started; between 30 000 and 40 000 families from the poorest areas of the country have already settled around Tirana, the capital city. They have all illegally occupied land and are constructing their houses with whatever materials they can find.

4.8.2 SPONTANEOUS CO-OPERATION

The grouping of individual farms into associations or co-operatives has now started, based on the individual ownership of a means of production. Apart from the voluntary associations formed for the management and maintenance of irrigation systems, there are examples of co-operation, even though in Albania this term is always carefully avoided.

By 15 March 1993, 37 associations of individual farms consisting mainly of family groups were officially registered by Ministry of Agriculture and Food; they are located mainly in the irrigated zones and in the lowlands. The Ministry, in addition to holding a statute to register and control these associations, also acts as guarantor and arbiter in the case of contestation. Membership is fixed for a certain number of years.

The following example serves to explain how the associations function. The Borizan agricultural co-operative in the Krujë district has 3 000 ha of irrigated land in the plains and is farmed by 600 families. After it was dismantled, 28 families all related to one another and having the same surname, Xhafa, created an association or brotherhood, a "vllazëri" to manage 27 non-adjacent hectares. Each family owns a portion of the land and on average one cow, some sheep, and some hens. The brotherhood have a statute deposited at the Ministry; for the first two years the statute is fixed then, if it is a success, new members are allowed to participate.

The management of the brotherhood is entrusted to the director who deals with outside relationships, in particular with the State and with intermediaries. The decisions, however, are taken by a council of the heads of families who meet every three months. After the first year of operations, the brotherhood bought the co-operative's bakery and a tractor from the former RDT. Profits are distributed on the basis of the land assigned to the families and are calculated on the difference between gross earnings and costs sustained; the costs include a share of the social services and the interest on the loan obtained from the Bank for Agricultural Development.

TABLE I.1

TABLE I.2

TABLE I.3

TABLE I.4

PART IIA - THE CROP SECTOR

I. CROP PRODUCTION

Agricultural production during the last four decades and until very recently has been dominated by plant production. Even until the 1990s, the crop, vegetable, and fruit and vine production represented the major share of total agricultural production, 58% in 1990, whereas animal husbandry contributed only 36% and the forestry and fishing industries the remainder.

Given the very low level of consumption of food of animal origin which accounted for 14 % of the total ration between 1980 and 1990 and the pent-up demand for these products, the food consumption pattern of the future will look very different and the structure of agricultural production will change accordingly. The liberalization of consumer prices in August 1992 is expected to have a major impact on the production of animal products, especially on meat, milk, butter and cheese.

The strengthening of the crop sector at the expense of animal husbandry has to be seen against a policy background which, since the beginning of the 1960s, aimed at a high level of self-sufficiency in foodstuffs and in agricultural raw materials; animal husbandry accounted for 45 % of total agricultural production in the first decade after the war. This policy was due to the then dominant role of the former Soviet Union, which guaranteed the supply of food to Albania only when certain political conditions were met.

The prime objective of the leadership in Tirana was to produce grain, vegetables, fruits and agricultural raw materials in sufficient quantities for the processing industry. This enabled the rapidly growing population to be fed and, by guaranteeing self-sufficiency, Albania was able to withstand political "blackmail" from other Socialist and Capitalist countries. Consequently, the land area devoted to plant production was continuously enlarged and meadows, pastures and forests were converted into arable land, usually regardless of the ecological consequences.

The following Table and Diagram give an overview of land utilization in Albania in 1992.

Table IIA.1 UTILIZATION OF LAND 1992

Item	Hectares	Percentage
Surface Area	2 875 000	100.0
Agricultural area	1 126 914	38.8
of which:		
Arable land	702 482	64.0
Meadows/pastures	424 432	36.0
Forest area	1 051 720	36.4
Other area	696 666	24.7
Arable land	702 482	100.0
of which:		
Field crops	578 277	82.6
Orchards	59 584	8.3
Olive groves	45 084	6.2
Vineyards	19 537	2.9

FIGURE IIA.1 THE UTILISATION OF LAND AND OF ARABLE LAND IN 1992

Total Land Area: 2 874 000 ha

1. GRAIN CROPS⁹⁸

During the years after World War II, the grain crops, which include wheat, maize, barley, rice, and some rye and sorghum, occupied about half the sown area of Albania; in value terms, their share reached 22%, more than one fifth of agricultural production. Wheat and maize, the second most important grain crop in Albania, are now produced in every district, though under rather different natural and technical conditions.

1.1 WINTER WHEAT

Winter wheat is the most important grain crop. It is cultivated on 35% of the arable land and accounts for one third of the total value of crop production and 17 % of total agricultural production.

Wheat is grown up to an altitude of 1 200 m to 1 400 m, which is one of the main reasons for the large difference in yields by region. Between 1985 and 1990, the yields in the main Western producing areas, in the plains around Elbasan and in the South-eastern Korça district, reached up to 40 quintals/ha, whereas in the hilly and the mountainous areas, yields reached only half or even less than the national average of 30 quintals/ha. One factor that contributed to this outcome was that the farms in those regions have always been poorly supplied with inputs.

1.2 MAIZE

The regional differences in yields are even more accentuated in maize production. In areas similar to the Shkodra district, maximum yields reached 50-70 quintals/ha in 1989; in other districts, producers had yields often only slightly more than half the national average of the 38 quintals/ha recorded between 1985 and 1990; in the lowlands, however, the average yield was significantly higher than 50 quintals/ha. Although maize is produced in all districts and up to an altitude of 1 000 m, the areas of greatest concentration are the coastal zone and especially the Western plain where the biggest livestock-raising complexes of Albania are located.

Maize is not only important as animal feed, but also as flour for bread-making in some poorer rural areas of Albania, particularly in the North-eastern mountain districts. Under the Socialist regime, the population in these districts had to eat maize bread for up to four or five months of the year. The average annual maize production between 1985 and 1990 was 284 000 tonnes; of this, about one half was used for food, respectively 30 % as flour bread, 20 % for processing corn starch and a small quantity for the production of edible oils.

The importance of maize has increased with the growth in animal husbandry. Its importance as a raw material for edible oils will depend on the necessary techniques being made more available.

The sown area of maize which decreased between 1980 and 1991 from 104 000 ha to 43 000 ha is increasing again, to 68 000 ha and 78 000 ha in 1992 and 1993 respectively, and is forecast to reach 70 000 ha or

80 000 ha by the mid 1990s (see Table IIA.2). Productivity could be increased by improving yields. In the main producing areas, the districts of Shkodra, Lezha, Kruja, Durres, Kavaja, Elbasan, Fier, Lushnja, Gjirokastra, and Sarandra, yields of between 80 quintals/ha and 100 quintals/ha could be expected under optimal conditions. This would require a sufficiently high level of irrigation which might be very difficult to achieve due to the small size of plots.

Table IIA.2 CROPS: AREA, YIELD AND PRODUCTION (1985 - 1992)⁹⁹

PRODUCT	1985	1986	1987	1988	1989	1990	1991	1992
	i n 1 000 h e c t a r e s							
Total Area	566	568	574	574	574	579	578	578
Bread grains	281	287	283	283	286	277	211	.
-Wheat	192	199	191	199	209	203	160	105
-Rye	10	10	10	12	12	12	.	.
-Maize	78	77	81	72	64	62	43	68
Rice	3	3	3	3	2		1.2	.
Potatoes	15	14	14	12	9	12	11	9
Dried beans	17	18	23	24	24	22	16	20
Vegetables and melons	22	23	23	23	23	27	26	32
Soyabeans	5	6	5	11	14	10	4	1
Sugar beet	8	7	7	7	6	7	4.7	2
Sunflowers	33	28	26	25	21	2	20.3	3
Cotton	15	15	14	15	12	12	6.3	1
Tobacco	23	30	32	31	27	24	17	13
	q u i n t a l s p e r h e c t a r e							
Bread grains	30.9	31.8	31.8	31.0	32.2	29.9	.	.
-Wheat	30.6	28.6	30.8	31.8	29.2	29.9	20.8	
-Maize	34.7	43.2	37.4	32.3	46.7	33.5	28.2	
Rice	33.7	33.5	32.0	27.6	31.3	23.2	12.5	
Potatoes	56.5	77.9	59.1	45.8	97.6	64.3	65.5	
Dried beans	8.4	10	6.6	5.6	8.7	6.1	4.4	
Vegetables and melons	160	161	157	123	154	140	137.2	
Soyabeans	14.0	14	12	10	13.2	6.4	2.5	
Sugarbeet	274.0	246.0	250.0	171.0	397.0	267.0	140	
Sunflowers	10.7	11.6	9.0	6.9	11.1	8	3.5	
Cotton	18.8	16.7	16.1	10.0	14.7	10.2	5	
Tobacco	8.7	7.9	7.8	4.4	7.1	5.8	2.6	
	i n 1 000 t o n n e s							
Bread grains	887	933	908	884	928	841	.	.
-Wheat	603	576	593	637	613	613	297	234
-Maize	274	347	309	237	307	227	129	115
Rice	12	11	11	9	9	7	2.5	.
Potatoes	85	110	89	60	97	80	86	79
Dried beans	16	21	18	18	24	14	13	25
Vegetables and melons	368	388	390	307	392	393	362	565
Soyabeans	8	9	6	11	12	7	3	2
Sugarbeet	228	193	192	12	262	169	58	65
Sunflowers	36	33	24	17	24	17	5	5
Cotton	26	25	23	14	17	12	1	2
Tobacco	20	24	25	14	19	14	7	12

Sources: VSS 1991, pp. 182, 183; WB-Report, 1992, p. 182; 1992: Ministry of Agriculture and Food, Directorate for Statistics.

1.3 RYE, BARLEY, OATS AND SORGHUM

Rye, grown mainly in the mountain districts above 1 200 m, plays only a minor role as a bread grain considering the area sown, 11 000 ha on average between 1985 and 1990. Yields during the same period reached 8.8 quintals/ha and production 11 000 tonnes.

Barley, oats and sorghum have never played an important role in the Albanian grain balance, although demand for barley and oats grew during the second half of the 1980s. Barley and oats could become of greater significance if the animal feed industry were to expand, and for barley alone if the expected reconstruction of the partly-destroyed brewing industry were to occur. Sorghum, a drought-resistant crop, is and could become an ideal plant for Albania's dry agricultural areas.

1.4 RICE

Rice is produced mainly in Lower Albania and is of limited importance in the grain balance. Albanian grain specialists¹⁰⁰ are of the opinion that present day rice production should be kept at least to its former level and that the expected growth in demand should be met mostly within the country (see Chapter III). During the 1980s, the annual per capita consumption of rice was between five and six kilograms; in a recent Albanian-Italian study, it is forecast to increase to 12 kg per capita.

The sown area and yield are forecast to increase under a co-operation project between the Shkodra Institute and the Italian Grain Institute at Vercelle near Turin, that has been accepted in principle and which is to be financed by the EC. The area under production, currently between 2 000 ha and 3 000 ha is to be increased to 7 000 ha by the year 2000. By the same year, the yield of 30 quintals/ha, which is low in comparison with the average yields recorded in Italy and Greece between 1985 and 1990 of 58 quintals/ha and 63 quintals/ha respectively, is to double if the input situation improves.

Albanian annual rice production should reach 45 000 tonnes, given the favourable development of this project. With an estimated 3.5 million consumers by the end of the 1990s, this would result in an annual production of 12.8 kg per capita and would mean that Albania is self-sufficient in rice.

However, the question arises as to the incentives needed to ensure this development. Increasing input costs, for irrigation water for example, will increase the costs of rice production significantly and the profitability in comparison with other grain crops will decrease. It is doubtful whether rice demand actually will double to 12 kg per capita given the free choice of consumers between competing products. The projected data on areas and production of rice are theoretical. In

addition, an objective of self-sufficiency in a given crop does not make economic sense and should not be confused with one of basic food security.

1.5 DRIED BEANS

Dried beans, together with peas and lentils, are the traditional food of Albania. They are generally an important part of the diet of the villagers; they are much cheaper than macaroni and can be stored throughout the year, even longer. Per capita consumption is 2kg - 4kg in towns and is in the range of 5kg - 8kg in the rural areas. Dried beans are only for human consumption in Albania, not for animal feed.

During the last few years, surpluses of dried beans have accrued as farmers had too little market information. According to a Ministry of Agriculture and Food prognosis, production will increase over the next couple of years and is forecast to exceed the level of the 1980s; average production between 1985 and 1990 was 17 166 tonnes. For the Ministry of Agriculture and Food, the economic importance of bean crops remains high.

The following statistics on future crop yields and production (see Tables IIA.3, IIA.4, IIA.6 and IIA.7) are supplied by the Ministry of Agriculture and Food; the assumptions underlying the estimates are unknown. Real market developments are likely to lead to different outcomes.

Table IIA.3 STRUCTURE OF CROP PRODUCTION, 1990-1995¹⁰¹
(.000 ha)

PRODUCT	A C T U A L		E X P E C T E D ^{a)}			
	1990	1991	1992	1993	1994	1995
	i n h e c t a r e s					
Bread grains	276,0	211,0	175,0	180,0	190,0	190,0
Wheat	202,6	143,0	103,0	100,0	110,0	110,0
Maize	61,9	43,0	63,0	80,0	80,0	80,0
Barley	4,1	3,1	2,0	2,0	3,0	5,0
Rice	2,4	1,0	0,2	1,0	1,0	1,0
Potatoes	12,0	11,0	9,0	12,0	12,0	12,0
Dried Beans	21,9	16,0	21,0	25,0	25,0	25,0
Vegetables and						
Watermelons	26,3	26,0	29,0	25,0	27,0	30,0
Cotton	11,6	2,0	1,3	5,0	7,0	10,0
Tobacco	23,7	11,0	13,0	15,0	17,0	20,0
Sunflowers	20,8	9,0	8,5	5,0	5,0	5,0
Sugarbeet	6,3	5,0	3,6	5,0	6,0	8,0
Soyabeans	10,8	4,0	3,2	2,0	2,0	2,0

Source: Ministry of Agriculture and Food, 1992.

a) According to the Directorate for Statistics of the Ministry of Agriculture and Food, from August 1993, the actual area sown to most of the crops were below the figures in the above Table for 1993 (crops such as maize, potatoes, beans, cotton, sunflowers, tobacco and soyabeans). The estimation for the areas of vegetables and melons were significantly higher than in the above Table for 1992. Consequently, the data for the years 1994 and 1995 have only limited validity.

Table IIA.4 CROP PRODUCTION, 1990 - 1995¹⁰²

PRODUCT	ACTUAL		E X P E C T E D ^{a)}			
	1990	1991	1992	1993	1994	1995
i n 1 000 t o n n e s						
Bread grains	841	450	580	620	750	840
Wheat	613	299	252	300	390	440
Maize	227	129	156	320	360	400
Potatoes	80	86	79	150	180	210
Dried Beans	14	13	25	33	38	43
Vegetables and						
Watermelons	393	362	565	630	700	850
Cotton	12	1	0.8	7.5	12	20
Tobacco	14	7	12.5	16.5	20	26
Sunflowers	17	5	3.4	7.5	8.5	10
Barley	.	.	.	5	9	16
Rice	7	2	0.2	4,5	5	5
Sugarbeet	169	70	130	190	240	360
Soyabeans	7	2	11.6	2.8	3	3.4
Fruits	88.3	71	74	100	110	120
Grapes	19.8	91	82	103	110	115
Olives	31.1	10	14	50	40	55
Agrumes	15.1	10	11	16	17	18

Source: Ministry of Agriculture and Food, 1992.

a) See the comment on the validity of the Ministry of Agriculture and Food estimates in footnote to Table .IIA.3.

2. OILSEEDS

Sunflowers and soyabeans in Albania are, like the olive tree, raw materials for the extraction of edible oils. The cultivation of sunflowers did not start until the 1960s and the production of soyabeans started only in the 1970s.

2.1 Sunflowers

In the production strategy of the former political system, growing sunflowers for their seeds was of minor importance in terms of both sown area and inputs; sunflowers do not require a high soil quality. The

sown areas are located, as in Italy, mainly in the hilly regions and are irrigated only very rarely. This explains the low yields (see Tables IIA.2 and IIA.5); they reach, at most, half of the average yields in Italy which between 1988 and 1990 were 22.2 quintals/ha and in 1991 were 26.0 quintals/ha. In some regions, the yields are so low that quite often the harvest does not exceed the quantity of seed sown; under optimal cultivation conditions, yields of 30-40 quintals/ha can be reached in the plains. Seeds come mainly from the Soviet Union and also from Romania; sunflower hybrid breeding started only recently. About 90% of the harvest is produced in the Western plain, the best areas being the districts of Berat and Lushnja.

According to the Ministry of Agriculture and Food, the area sown to sunflowers is low in comparison with the 25 500 ha cultivated in the second half of the 1980s; the area for 1993, 1994 and 1995 is unlikely to exceed 5 000 ha (see Table IIA.3). Harvest estimates for the same years are 7 500-10 000 tonnes (see Table IIA.4).

2.2 Soyabeans

Soyabean production is not expected to exceed 5 000 tonnes per annum before the mid 1990s. However under unfavourable conditions, production could fall to 2 800 tonnes in 1993, and to 3 000-3 400 tonnes thereafter.

Table IIA.5 OILSEEDS: AREA, YIELD AND PRODUCTION
(1980, 1985-1993, average 1985-90)

Year	Area 1 000 ha		Yield quintal/ha		Production 1 000 tonnes	
	Sunflower -seed	Soyabeans	Sunflower -seed	Soyabeans	Sunflower -seed	Soyabeans
1980	26	6	10.9	9.2	29	6
1985	33	5	10.7	14.0	36	8
1986	28	6	11.6	14.1	33	9
1987	26	5	9.0	12.2	24	6
1988	25	11	6.9	10.6	17	11
1989	21	14	11.1	13.2	24	12
1990	21	10	8.0	6.4	17	7
average 1985-90	25.6	8.5	9.55	11.7	25.1	8.8
1991	9	4	5.5	2.5	4.8	3
1992	3	1	.	.	5	2
1993	2	1	.	.	3	2

Sources: VSS 1991, pp. 182, 183. Albanian Agriculture - Facts, Figures, Comments, Tirana 1992, unpublished paper of the Ministry of Agriculture and Food, p. 49. 1992 and 1993: Directorate for Statistics, Ministry of Agriculture and Food.

2.3 OILSEED RAPE

In contrast to Poland, Hungary, Czechoslovakia and to the Scandinavian countries where oilseed rape is an important crop, in Albania this is not the case. The reason is unlikely to be the climate, because oilseed rape is adaptable to different climatic conditions, but rather the seed quality and the Albanian producers' lack of experience with its cultivation. The original home of *Brassica rapa* L, a variety to which oilseed rape is biologically related, is the Mediterranean region. *Brassica rapa*, called *Kolsa* in Albania, is used for fodder in some regions of the country.

Encouraged by the Ministry of Agriculture and Food, in recent years the Lushnja Research Institute together with a French company has started to investigate the conditions under which both winter and summer varieties of oilseed rape could grow. Field experiments have already begun and if it proves adaptable, oilseed rape will partially replace sunflowers in the hilly regions. Nevertheless, sunflowers will remain the main supplier of vegetable oil for the near future.

Further development of sunflowers and oilseed rape will depend to a large extent on the development of prices and production costs and, with the expected growth in livestock production, soyabean production may expand. The extent to which the growth in butter consumption will substitute for the relatively high per capita consumption of edible oils, especially in the cities at 15-17 kg/annum, remains to be seen.

3. POTATOES AND SUGAR BEET

The potato is another traditional crop, cultivated throughout Albania, and is regarded as a vegetable by most consumers. In contrast, the cultivation of sugar beet started only after World War II.

Per-capita consumption of both potatoes and sugar is relatively low, especially among the village people. The average per capita consumption of potatoes ranged from 11 kg to 22 kg during the 1980s and to 24.3 kg in 1991; per capita sugar consumption is between 19 kg and 23 kg.

3.1 Potatoes

During the past 40 years, potatoes were officially classified as a crop of minor importance. For the most part, production was limited to soils of the lowest fertility and during the 1970s meadows were transformed into potato fields. Yields were extremely low, even though half of the fields were irrigated, due to poor location as well as to an undersupply of inputs (see Table IIA.6).

Between 1985 and 1990, the average yield amounted to 67 quintals/ha, not even half the level attained in neighbouring Italy, 196 quintals/ha between 1988 and 1990. Production came mostly from the collective farms in the plains but the districts with the largest production were Korça and Diber where, during the last few years, more than one third of the harvest was produced¹⁰³.

The cultivation of potatoes is very labour intensive and is representative of the low productivity of the crop sector in Albania. Only soil preparation is mechanized; all other operations are done manually and the labour requirement is 200 days/ha, from planting to harvesting¹⁰⁴. The same amount of work, but including sorting and storing, took only 30 to 35 days/ha in France, the Netherlands and Germany during the mid 1980s¹⁰⁵.

Whereas the Korça and the Diber districts are the main producing areas for late potatoes, sown in April and harvested in September, the coastal districts, from Saranda in the South to Vlora, Fier, Lushnja, Durrës, Lesha and Shkodra in the North as well as the region around Tirana, are where the early potatoes are produced, some of which are exported. Albanian specialists believe that the general conditions for the production of early potatoes are at least as good as those in Greece.

In the South-west of Albania, particularly in Saranda, Vlora, and Fier, early potatoes are sown in January/February and are harvested at the earliest at the end of May, but more usually in early June. June,

however, is relatively late to compete successfully with other potato suppliers from Southern Europe on the Central and Western European markets. In the past, Albania sold its early potatoes almost exclusively on the Eastern European market.

Table IIA.6 POTATOES AND SUGAR BEET: AREA, YIELD AND PRODUCTION
(1980, 1985-1995, average 1985-1990)

<u>Year</u>	<u>Area</u> 1 000 ha		<u>Yield</u> quintal/ha		<u>Production</u> 1 000 tonnes	
	Potatoes	Sugar beet	Potatoes	Sugar beet	Potatoes	Sugar beet
1980	16	10	59.6	278.0	98	277
1985	15	8	56.5	274.0	85	228
1986	14	7	77.9	246.0	110	193
1987	14	7	59.1	250.0	89	192
1988	12	7	45.8	171.0	60	125
1989	9	6	97.6	397.0	97	262
1990	12	7	64.3	267.0	80	169
average						
1985-90	12.6	7	66.9	267.5	87	195
1991	11	4.7	77.8	128	72	58
1992	9	2	.	.	79	65
1993	9	2	.	.	102	70
Estimates					Alternative I	
1994	12	6			125	120
1995	12	8			130	140
					Alternative II	
1994					180	240
1995					210	360

Acknowledgements: The production estimates for Alternatives I and II for 1993 - 1995 are given by the Ministry of Agriculture and Food. The basis for these estimates is unknown.

Sources: VSS 1991, pp. 182, 183. - Albanian Agriculture - Facts, Figures, Comments, Tirana 1992, unpublished paper of the Ministry of Agriculture and Food, p. 50, 1992 and 1993: MOAF, Directorate for Statistics.

Apart from suppliers such as countries in North Africa, Egypt and Syria, that can supply their potatoes to the European market in December, early potatoes from the Southern coast of Spain and from Italy, especially

from Sicily and Apulia, are available in February. Early potatoes from Greece, the French Atlantic islands and Brittany are available by late April.

Potatoes in Albania are now considered to be economically very attractive to farmers and are increasingly seen as a cash crop. It is assumed that demand will increase due to the growth in consumption of processed potatoes, such as chips, puree, dried and frozen potatoes, and also of potato-starch for both private and industrial use. This demand could be met by an increase in domestic production, to be achieved through improvements in yields.

Albanian farmers hope to benefit from exporting early potatoes to Central and Northern European markets. However, aside from marketing deficiencies in quality, packaging, transportation and distribution, Albania also has an inconvenient delivery date of May/June. At that time of year, not only does Albania have to compete with suppliers from Southern Europe, Spain, Italy, Portugal and Greece, but also with supplies from other producing countries, such as Germany, France and Belgium.

Early potatoes could be supplied to the Western markets significantly earlier than is possible today, if the production schedule was to be brought forward. This could be achieved by the use of more suitable varieties and of pre-germinated plant material. An efficient marketing capability would be required, however.

In order to satisfy the increasing domestic demand for processed potato products, the processing industry would have to develop and improve. This requires, among other things, production of high quality and standardized potatoes on farms, an objective which is hard to realize at present.

3.2 SUGAR BEET¹⁰⁶

In contrast to potato production, the cultivation of sugar beet is restricted by natural conditions to the district of Korça, where 80-85 per cent of the total harvest is produced; the remaining 15-20 per cent comes from the Elbasan plain in Central Albania. The total area sown is between 6 000 ha and 10 000 ha but this declined during 1991 and 1992 to 2 000-3 500 ha due partly to unfavourable state procurement prices for sugar beets; in November 1992, producers received Lek 1 800/tonne for beets. This compares unfavourably with Lek 14 000/tonne for wheat and Lek 10 000-20 000/tonne for potatoes.

Production is often restricted by rainfall deficits and lengthy drought during the months of June and July. Only ploughing and drilling are mechanized, the drilling being done by old Russian machines which do not control the depth of seed planting. Thinning-out of the seedlings is done completely by hand, as is most of the fertilizer application. Weed control by manual hoeing remains common practice because of the shortage and high price of herbicides; the roots are harvested exclusively by hand.

Yields average 250-280 quintals/ha, about half those recorded in Italy which during 1988-1990 were 501 quintals/ha; however, yields of up to 450-550 quintals/ha and above have been harvested. Sugar production, reached its highest level of 33 000 tonnes in 1980 but then declined to an average production of 18 330 tonnes between 1985 and 1990.

Sugar processing consists of a single small factory in Maliq, close to the city of Korça. The plant, which dates from 1951 is based on Russian technology and has a processing capacity of 2 400 tonnes/day of roots; it is now totally outdated. Another small factory is reported to be still in action; this is the first one to be built in Albania, in 1948 near Korça.

The sugar content of harvested beet is 16-17 per cent as in Germany but, due to bad technical equipment in the processing plants and limited transportation and storage facilities, the extraction rate does not exceed 6-10 per cent. Domestic sugar production accounted for about one half of the total demand in the 1980s when per-capita sugar consumption was only 16-18 kg per annum. Sugar production currently meets only one tenth of Albania's demand; the remainder is imported.

The Ministry of Agriculture and Food does not have a policy for the future of Albania's sugar industry. Some government economic experts believe that domestic sugar production should be reduced in favour of raw sugar imports and, according to the Ministries of Foreign Trade and of Agriculture and Food, it is estimated that Albania needs to import up to 50 000 tonnes per annum for some years to come, one third more than in recent years; imports of sugar averaged 33 400 tonnes between 1985 and 1990, reaching 49 200 tonnes in 1990.

Experts from the Korca district, however, wish to maintain sugar beet production because it is vital to the agriculture of that district. Due to the frequent danger of early frosts, replacement by other crop plants is only partially possible.

The economic efficiency of the sugar sector is very low. Production of beet is characterized by both low productivity, 200 days/ha, and low yields (see Table IIA.6) and although the producer price may increase to Lek 2 700 per tonne, beet production is becoming less and less attractive for the farmers. Privatisation of the outdated sugar plant at Maliq is difficult because of the high investments needed for its modernization. Beet production in the area of Elbasan ceased in the autumn of 1993 due to low profitability and the high transportation costs to the plant at Maliq.

Officials at the Ministry of Agriculture and Food, however, believe that the production of sugar should be continued for social rather than for economic reasons. If the sugar refinery in Maliq is shut down, some 14 000 employees would be made unemployed¹⁰⁷. Alternatively, a similar situation may occur to that in Romania, where the government lost interest in the production and processing of sugar beet and withdrew all financial support, having considered how cheaply sugar can be imported.

For the sugar industry to survive, increases in productivity and

efficiency are necessary in all phases of the production and processing chain, from seeds and the technical and chemical inputs, to harvesting, marketing and refining. State subsidies which allow inefficient operations to continue cannot be afforded and are not a sustainable solution for the long term. Market incentives must be allowed to determine the level of sugar beet production. Steps should be taken to privatise the existing sugar processing plant or to encourage private investment to set up new, modern processing capacity.

4. COTTON

In addition to sunflower production, the cultivation of cotton is an achievement of the Socialist system. The reason for introducing cotton in Albania is thought to be the extreme self-sufficiency policy of the former Communist Party whose objective was to supply the textile industry with domestically-produced raw materials.

4.1 BACKGROUND

As with sugar beet, production of cotton is restricted to a geographical area, the Myzeqe Plain, mostly because of natural and biological conditions. Within this area, production is almost solely concentrated in the districts of Lushnja, Fier and Berat.

Table IIA.7 COTTON: AREA, YIELD AND PRODUCTION
(1980, 1985-1995, average 1985-90)

<u>Year</u>	<u>Area</u> <u>1 000 ha</u>	<u>Yield</u> <u>quintal/ha</u>	<u>Production</u> <u>1 000 tonnes</u>
1980	20	7.7	16
1985	15	18.8	26
1986	15	16.7	25
1987	14	16.1	23
1988	15	10.0	14
1989	12	14.7	17
1990	12	10.2	12
average 1985-90	13.8	14.4	19.5
1991	2	5.0	1
1992	1	.	2
1993	1	.	2
1994	7 ^a		12 ^a
1995	10 ^a		4-20 ^a

a) Ministry of Agriculture and Food estimates from 1992. See the reservations on the value of the estimate given in footnote ^a) of Table IIA.3.

Source: VSS 1991, pp. 182, 183. 1992 and 1993: Ministry of Agriculture and Food, Directorate for Statistics.

After reaching a peak in the 1970s, the area sown for cotton has declined since 1980 and in 1993 it shrunk to 1 000 ha (see Table IIA.7). The contribution of cotton production to total agricultural production was only 0.9 per cent in 1990. The fall in cotton cultivation is due to the low priority given to cotton by the Communist Party, to low producer prices relative to high production costs and to insecure marketing possibilities for cotton because of impaired industrial processing capacity. The pressure on farmers in the last couple of years to produce foodstuffs and cash crops has also been an important factor.

4.2 FUTURE DEVELOPMENT

Very different opinions exist as to the future development of cotton production. According to the Ministry of Agriculture and Food, the sown area of industrial crops should not be extended, tobacco production excepted. The basis for this might be a comparison of the area sown during the past few years, which for cotton was 14 000 ha to give an expected production level for the mid 1990s of about 20 000 tonnes of raw cotton, the average level of 1985-1990 (see Table IIA.7); this weight would relate most probably to fibre and cotton seed together.

Another Ministry of Agriculture and Food estimate predicts a production level of only 4 000 tonnes in 1995; this is assumed to be only the fibre production.

The cotton lobby, consisting of producers in the Fier and Lushnja districts, the processing industry, and cotton researchers in Lushnja, argue that Albania should be to a certain degree self-sufficient in fibre raw materials, given that that the country spends about US\$30-40 million every year on imports of raw threads and synthetic fibres. If there were to be a growth in demand, 15 000 tonnes of fibre would be required annually for the processing industry; it should be met, at least in part, by domestic raw materials.

According to the same interest group, private farmers are skilled in cotton production; once the parcelling of land is completed, a certain specialization and a concentration of the scattered cotton areas can be expected. As a labour intensive crop, cotton production could absorb much surplus labour in the countryside. This is especially true for harvesting which is done exclusively by manual work, starting at the end of August and lasting until the end of October.

Cotton seed, which has an oil content of up to 25 per cent, is processed exclusively for soap because Albanian technology is very underdeveloped. With technical and financial assistance from other countries, the processing industry could be modernized so that the existing plants in Elbasan and Lushnja could produce edible oils from cotton seed.

The Myzeqe Plain is one of the most fertile agricultural areas in Albania, being mainly alluvial soil. An analysis is necessary in order to assess the relative economic benefits from other products, for example such cash crops as early vegetables instead of cotton. Foreign consultancy and support could be useful to help such structural reorganization.

5. VEGETABLES

5.1. BACKGROUND

Vegetable production in Albania has a long tradition and early European and Turkish specialists reported on the well-developed knowledge of Albanians in this field. The best vegetable producers in Turkey are said to be Albanians and Albanian immigrants in Turkey brought back numerous vegetable seeds to Albania; this explains the wide variety of vegetable species in Albania today. Besides tomatoes, cucumbers and onions, there are different kinds of peppers, garlic, spinach, green beans, carrots, eggplants, leeks, melons and watermelons, mushrooms, and spices. There are between 30 and 40 varieties for every vegetable planted.

Albania offers ideal conditions for the intensive cultivation of vegetables. They include a good climate with a high average daily sunshine, good soils especially in the coastal plains, an extensive irrigation network, and a varied topography.

In the coastal plains from Shkodra in the north to Saranda in the south, temperatures seldom fall below zero Celsius even during winter. In the mountains, the vertical temperature differences due to the changes in altitude offer opportunities for a variation in planting; for example, in such districts as Dibra, Gjirokastra and Korca, the cold zone, good conditions exist for the cultivation of middle and late tomatoes and cabbages.

During the main vegetable-growing season, there is also an optimal relationship between the intensity of precipitation and temperature. This occurs during June, July and August when high temperatures are combined with reduced precipitation and controlled irrigation.

Each small region has its specific varieties of vegetables. Typical examples are tomatoes and onions which differ in form, taste and size depending on their origin. This is not only a question of climate but also of different local methods of tillage, sowing, cultivation, harvesting and storage. However, the wide variation has been reduced by standardised mass-production in the years of collectivised agriculture. Fortunately, the varieties in the vegetable gardens of the villagers were least affected.

After World War II, the production of vegetables in Albania became an industry, with the introduction of plastic and glass greenhouses. This base, however, was partly destroyed during 1990 and 1991.

Production, consumption and to a certain extent exports have grown during the last 40 years but vegetable consumption is still low for a country with the eating habits of the Mediterranean area (see Table IIA.8). Compared with Italy which, in 1990, had a per capita consumption of 170 kg of fresh vegetables, in Albania the per capita consumption was 66.4 kg, equivalent to only one third of Italy's per capita consumption.

Until 1990, tomatoes were the most important vegetable crop in terms of sown area, followed by watermelons and onions. The structure of the main vegetables produced was as follows:

	<u>Hectares</u>
Tomatoes	5 000 - 5 500
Watermelons	3 000 - 3 800
Onions, Garlic	2 500
Green Peppers	2 000
Leeks	1 800
White Onions	1 600
Cabbages	1 300
of which: cauliflowers	(200)
<hr/>	
Total	17 200 - 18 500

5.2 LOCATION

Intensive vegetable production is located mainly in the coastal plains. Other locations are the hilly zone, 300-800 m above sea level, and the above-mentioned cold zone, the mountainous area, above 800 m altitude which has a continental climate. Early varieties of vegetables, among them Solanaceae, are produced mainly in the coastal plains and also in the transition zone, the districts of Shkodra, Lezha, Kruja and Elbasan. Both these areas, the coastal plains and the transition zone produce vegetables for export.

Table IIA.8 VEGETABLES AND MELONS: AREA, YIELD, PRODUCTION AND ANNUAL PER CAPITA CONSUMPTION
(1950, 1960, 1970, 1980, 1989-1993)

<u>Year</u>	<u>Area</u> <u>1 000 ha</u>	<u>Yield</u> <u>quintal/ha</u>	<u>Production</u> <u>1 000 tonnes</u>	<u>Consumption</u> <u>kg</u>
1950	5	92.0	53	35.1
1960	7	88.0	71	37.1
1970	20	111.0	230	78.5
1980	24	124.0	332	78.1
1989	23	154.0	392	59.8
1990	27	140.0	393	66.4
1991	26	141.0	362	.
1992	29	.	565	.
1993	30	.	580	.

Source: VSS 1991, pp. 134, 135. 1992 and 1993: Ministry of Agriculture and Food, Directorate for Statistics.

5.3 THE GREENHOUSE INFRASTRUCTURE

A major resource behind Albania's vegetable industry was the plastic sheet and glass equipped greenhouse infrastructure which accounted for about 25 per cent of the total vegetable production. In 1990, plastic and glass greenhouses covered an area of about 1 000 ha, of which 240-250 ha were covered by glass and the remainder by synthetic sheets; approximately 100-110 ha of the glass greenhouses were equipped with heating facilities. The main vegetables planted were tomatoes, cucumbers and spinach; most of the top quality produce was exported. The greenhouses were usually located close to the areas of consumer demand, mainly near the cities.

Most of the greenhouse capacity was destroyed during the political turmoil of 1991 and 1992 and most greenhouses are now in ruins. At the same time, much of the land was being privatized and the infrastructure dismantled by the new owners, due to the lack of energy, spare glass and sheet foils as well as to the shortage of irrigation water which is essential for greenhouse production. Before 1990, almost all the plastic sheets were imported; a small quantity only was produced in Lushnja.

The irrigation network was also mostly destroyed. The effect of this on production can be illustrated by the quantity of cucumbers grown. Previously, 20-30 ha of greenhouse area was devoted to the cultivation of cucumbers, second in importance after tomatoes; in 1993, the area will be at best 3 ha, whereas the projection for tomatoes is 25 ha. Without some reconstruction and modernization of the greenhouse infrastructure, Albania's vegetable production will have a difficult future, especially on the export markets.

5.4 TOURISM AND VEGETABLE CONSUMPTION

In addition to exports, some traders expect better vegetable sales due to a growing tourism sector in Albania. This has led to expectations which can only be realized in the long run, if at all. Some experts expect 3 million foreign tourists a year and, although this number has no basis, they argue about whether a tourist's average daily vegetable consumption will be 0.5 kg or 1 kg. In 1992, only 2 500 tourists visited Albania.

However, it is clear that Albania is making efforts to expand tourism and although the number of foreign tourists will increase, the growth will be limited by Albania's poor tourism infrastructure. Tourist managers underestimate the high standards expected by Western tourists and the size of investments necessary to make the country attractive to foreign visitors. It is also expected that tourism will create additional jobs and income possibilities for farming families.

5.5 FUTURE DEVELOPMENT

The Ministry of Agriculture and Food estimates that the vegetable area cultivated in the medium term future will stabilize at between 24 000 ha and 25 000 ha. Given attractive prices and good sales prospects, specialists in Tirana predicted that the cultivated area would increase to 30 000 ha. In 1992, the area sown reached 32 000 ha.

In the short term, it is likely that trade will be influenced more by internal demand than by export growth. Per capita consumption of vegetables remains relatively low (see Table IIA.8) and so also is

average purchasing power, but it is rising slowly. For average monthly salaries of Lek 1 500-1 600, US\$14-15 at the official rate, vegetable consumer prices at farmers' markets are for many products unaffordable; in March 1993, 1 kg greenhouse cucumber and 1 kg cauliflower were both Lek 200.

With regard to exports, the question which arises for potential traders is where to find the trading opportunities on the already well-supplied markets in neighbouring countries and in the rest of Europe. The traditional Albanian markets of Eastern Europe that in 1989 absorbed 80 per cent of Albanian vegetable exports have ceased to exist, especially the most important markets of Czechoslovakia and the former GDR. On Western European markets, an economically weak Albania has to compete with the biggest vegetable exporter of the European Community, Italy. Italy, a major exporter of fresh and processed tomatoes, has a developed export marketing system and offers a wide variety of high quality vegetables.

Albania will have to diversify its range of vegetables for export. At present, exports consist mainly of tomatoes, melons, cucumbers, peppers, onions and garlic, as well as early potatoes and carrots. Albania does not cultivate asparagus and cauliflower nor does it try to find market niches for such produce in Western Europe, as according to Albanian specialists, vegetable producers in Albania have no tradition of growing these vegetables, no consumer demand exists on the Albanian market, and some difficulties of climate exist, particularly for cauliflowers.

The frost-free Saranda district offers climatic and other conditions for large-scale cauliflower production of about 3 000-4 000 tonnes, which could be exported in the winter and early spring to Germany to supplement German cauliflower imports from France and Italy¹⁰⁸. There are also possibilities for the export of special varieties of pepper to Germany and, during March, April and May, for filling market niches for vegetables such as eggplants, zucchinis and kohlrabi; however, these would have to be grown in greenhouses. It is probable therefore that Albania will have some export options for several vegetables on the German market, given that the share of German vegetable production on the German market amounts to between 36 and 60 per cent depending on the method of calculation.

Albanian experts believe that the country has particular advantages over its competitors in the production of vegetables for several reasons. These are that climatic conditions allow entry to Western markets earlier than competitors, that Albanian prices can be competitive, and that Albania has ecological advantages. If over the next 10 to 15 years the application of fertilizer and pesticides in Albanian agriculture remains rather low because farmers can not afford higher quantities, a quality brand name for vegetables produced under ecologically pure conditions could have market appeal¹⁰⁹.

In addition to this competition aspect and the need to modernize the processing of vegetables, the problems of packaging, labelling and advertising have to be solved in order to improve the competitiveness of Albania on foreign markets. A well functioning sales organization and a

modern storage and transport infrastructure must also be constructed. In all these areas, not only technical and organizational support is required, but also foreign capital investment.

6. HORTICULTURE

Due to climate, soil quality and tradition in Albania, a wide spectrum of horticultural products is farmed, ranging from species that are found in Middle and Western Europe to sub-tropical varieties such as citrus. According to Albanian classifications for horticulture and tree farming, sometimes called arboriculture, the land area cultivated for the four groups at the end of the 1980s was as follows¹¹⁰:

	<u>Hectares</u>	<u>Percentage</u>
Fruit trees	59 584	45.2 (+ 2 490 citrus trees)
Olive trees	45 084	37.3
Vineyards	19 537	15.4
Citrus trees	2 490	1.97

Total	126 271	100.0

Horticulture is the most backward sector of Albania's agriculture despite considerable investment, for example in the establishment of terraced areas in the hilly regions. The share of the land area devoted to horticulture in total arable land grew from 8.8 per cent to 17.8 per cent between 1960 and 1990. In absolute figures, the area covered by all horticulture trees and vineyards between the two decades, 1970 to 1990, increased from 78 000 ha to 125 000 ha.

The economic weakness of tree farming shows in the contribution to total agricultural production, which according to official statistics was between 6.4 per cent and 7.1 per cent during the 1980s. Unofficial estimates put the share as even lower at about 3-4 per cent. The reason for the lack of efficiency in fruit production is the low priority given in Albania's policy to self-sufficiency in food. This led to a poor supply of inputs and the displacement of fruit farming to marginal soils in the hills and mountains. It was even forbidden to locate tree plots in the plains.

As a result of this policy, yields in horticulture were very low, for example less than 10 kg of fruit per root, 8 kg/root of citrus fruits, 8 kg/root of olives and about 20 quintal/ha of grapes. Often the yield of fruits, citrus fruits and olives per root was no more than 2-5 kg¹¹¹. The low production yields are reflected in a low per capita production and consumption. Figures for the 1980s were as follows:

<u>Years</u>	<u>Per capita^a production kg</u>	<u>Per capita consumption</u>	
		<u>kg</u>	
		<u>Urban</u>	<u>Rural</u>
1980	57.2	27.6	19.7
1985	55.3	19.5	15.6
1986	53.1	24.2	16.8
1987	51.7	14.8	16.2
1988	50.2	20.2	13.2
1989	57.2	27.7	15.0
1990	54.2	13.6	11.2

a) Fruits, Citrus and Grapes.

Source: VSS 1991, p. 137, p. 209.

The difference between the production and consumption of fruit is due firstly to trade and secondly to heavy losses of raw materials by the processing industry and distribution system, both of which lacked modern storage and cooling facilities. Per capita consumption is far behind that of other European countries; fruit consumption in Germany in 1992, for example, was 116 kg/head. This implies that Albania's fruit producers can probably count on a rising domestic demand in the future.

6.1 VINEYARDS AND FRUIT TREES

Vines are widely cultivated and the vineyards can be found both in the form of pergola and over large areas such as in the hills surrounding Tirana, where there was a 1 700 ha state farm specialized in grape farming. Grapes are cultivated up to 800 m above sea level. Many regional varieties exist, as with vegetables, and large quantities of grapes are processed by private households into wine and Raki schnapps. There are also different kinds of liqueurs produced as well as brandy. The vineyards are mainly located in the hills in the districts of Shkodra, Pogradec, Lushnja, Durres, Fier, Berat, Elbasan and Korça.

In 1990, fruit trees were cultivated on 47 500 ha of which apples have a share of 23 per cent, followed by plums, peaches and figs. Chestnut trees accounted for a further 10 000 ha.

<u>Fruit Trees</u>	<u>Hectares</u>	<u>Percentage</u>
apples	13 000	23
plums	10 000	17.5
peaches	10 000	17.5
figs	5 300	9.3
cherries, sweet	4 500	7.9
cherries, sour	250	0.4
pears	3 500	6.1
quinces	500	0.9
Total	47 500	100.0

Apple trees grow all over the country but the main locations are the valleys and hills in the South-eastern districts of Korca, Kolonja and Pogradec, and in the North-east of Albania. Plum trees follow a similar pattern but can be found also in the North-eastern districts of Tropoja and Kukes.

Fig trees grow in the districts of Berat, Fier, Durres, Lezha, Shkodra, Tirana, Saranda and Vlora. Peach trees are concentrated in the same areas as fig trees and also in the district of Lushnja, while pear trees are cultivated in the districts of Gjirokastra, Permet, Fier, Lushnja, Tirana, Saranda and Durres. Apricots grow mainly in the districts of Tirana, Durres, Korça and Berat. Cherry trees, 94 per cent sweet and 6 per cent sour cherries, are located in the Mallakaster landscape in the districts of Berat and Diber.

Walnut trees grow in the North-east of the country along the valleys of large rivers such as the Black Drin and the Valbona, and also in the South-eastern plains. Chestnuts are considered to be fruit trees; they are widespread in the North of Albania and in the districts of Korça, Pogradec, Librazh and Tropoja.

There is no tradition of growing soft fruits in Albania partly because of the climate and partly due to economic factors; only in the Korça district can some small plots of strawberries be found. Albanian horticulture experts argue that it would not be difficult to produce strawberries and other soft fruits if domestic demand could be developed and if sales on foreign markets could be realized. The surplus labour force in the countryside could, at least, be employed part-time in such activities. It is hard, however, to judge during which season Albania would be best able to offer strawberries on the German market.

6.2 CITRUS

Albania's capacity for the production and the export of citrus fruits has been overestimated abroad. The country only partially meets the climatic conditions required for citrus cultivation. Only the Southern districts of Saranda, (Borsh, Himara) and Vlora on the Ionian Sea coast offer an appropriate climate for the cultivation of citrus fruits, referred to in Albania as agrumes.

In these districts more than four fifths of the estimated 1.1 million citrus trees are grown. Mandarines, which are less sensitive to cold than oranges, can also be found in the Fier, Lushnja and Elbasan districts; during the period of Socialism, it was forbidden to grow mandarin trees in the lowlands.

In 1990, the total area of citrus plantation in the South of Albania was close to 2 500 ha which was very small in comparison with Italy where 178 000 ha were planted. Between 1986 and 1990, the average production was 12 400 tonnes, only 0.4 per cent of Italy's production, with a yield of 16.2 kg/root.

Citrus production is dominated by oranges with a share of 60 per cent, followed by mandarines with a 28-30 per cent share. The remainder consists of lemons and a very small quantity of grapefruits. There are no data available on the utilisation of citrus fruits, on the quantities consumed fresh, processed, and exported.

At present, neither the planted area nor the number of citrus trees is known. The latest figure provided by the Ministry of Agriculture and Food was for 1991, 1 068 million trees of which 797 000, 75 per cent, were in fruit. During the winters of 1989/1990 and particularly of 1990/1991, many of the trees were chopped down for firewood.

Under these circumstances, it is surprising that the Ministry of Agriculture and Food continues to project a growth in the production of agrumes for the three years, 1993, 1994 and 1995 of 16 000, 17 000 and 18 000 tonnes respectively. The estimates of some citrus specialists are lower, 14 000 tonnes in 1993, 15 000 tonnes in 1994, and 16 000 tonnes in 1995; actual production in 1992 is reported to be 13 000 tonnes. The higher figures are partly based on the assumptions that the trees will be better cared for by private owners and that thefts will drop accordingly.

Albania's citrus specialists and traders are not convinced of export opportunities in the near future. Not only would the quantity of fruits that could be exported be very small in comparison with quantities exported by Italy and Greece but they also could not compete with the high quality of the produce from neighbouring countries; oranges from Albania tend not to be as sweet as those from Italy and Greece. Oranges, mandarins and lemons currently for sale on Albanian markets are mainly imported. This might be due to the present shortage of Albanian citrus production and also to the perception of Albanian consumers that imported produce are better; this occurred in the new Lander of the former GDR after reunification.

If Albania decides to compete in the export market for citrus fruits, it would face tough competition from traditional exporting countries, not only from Southern Europe. It would be progress if Albania could supply greater quantities of a better quality for local markets.

6.3 OLIVE TREES

The olive tree has been known in the country since ancient times. In 1990, the planted area amounted to 45 094 ha, over four times the area before World War II, 10 000 ha in 1938, and equivalent to about 6 per cent of the total area sown to crops. During the previous 30 years, the number of trees grew at an average annual rate of 3.3 per cent and, according to official statistics, reached 5.82 million roots in 1990, although only 58 per cent of these trees were in fruit; this represents 0.72 per cent of the world's olive tree stock of 800 million roots. Slightly different figures are published by the Olive and Citrus Research Institute in Vlora, giving an area of 46 000 ha and 6 million trees; of this area, 16 000 ha, about 35 per cent, were used for

seedlings. It usually takes 10-11 years for seedlings to come to fruition.

Like the fruit tree stock in general, the olive tree stock is old; one quarter, about 1.5 million trees, are older than 100 years. The trees usually reach the greatest yields at an age of 30-40 years. During the period of Socialist agriculture, olive trees were concentrated in huge plantations, such as the former state farm at Lukova on the coast in South-western Albania, and were farmed industrially. About 70 per cent of the total olive tree stock are located in the hilly regions and can even be found in the mountains up to 1 000 m above sea level, usually on poor quality soils. They are often cultivated together with vineyards and citrus trees. Up to 60 per cent of the planted area is concentrated in the four districts of Vlora, Fier, Berat, and Saranda; there are only a few districts in the country where olives are not planted at all.

Olives can be divided according to size. The larger variety, planted mainly in the district of Berat but also in the Lushnja, Vlora, and Fier districts, has a low oil content and serves for the most part for eating purposes mostly in the form of pickled fruit. The smaller variety has a higher oil content and is planted not only in the districts of Vlora, Lushnja and Fier but also in the Saranda, Tirana, Durres, Kruja, Lezha, Shkodra districts.

Between 70 and 80 per cent of the harvest is used for processing. The seed of an olive weighs about 20 per cent of the total fruit; the oil content weight can also be 20 per cent, depending on the variety.

The general situation of the olive sector in Albania is shown below. The data given are the averages for the ten years to 1990.

Area of olive groves ^a	46 000 ha
Number of olive trees ^a	6 150
Olive production	25 800 tonnes
Yield ^b	8.85 kg/root
Olive Oil production ^b	5 300 tonnes
Olive oil per capita production ^a	1.6 kg/head
Olive oil annual export ^a	4 000 tonnes

^a) Data provided by the Olive and Citrus Research Institute in Vlora.

^b) Average data for 1980 and 1985 to 1990 according to official Albanian statistics.

A characteristic feature of olive production is the strong seasonality of yields; in general, the trees give good harvests every third year. Assessments of the quality of Albanian olives and olive oil differ. Although easily damaged by insects, the use of pesticides and insecticides for olive trees is low and will remain so for the foreseeable future. The low levels of chemical residues from pesticides

in Albanian olive oil offer a marketing advantage that could enable it to compete with oils from Italy, Spain and Greece. However, the quality of Albanian olive oil does not always conform to the high standards demanded in Western markets. This is due mainly to the low level of refining technology, usually simple presses not specialized for the processing of olives, and also to poor storage facilities. This is the main reason why in the past most of the Albanian olive oil exports went to Eastern Europe.

6.4 DEVELOPMENT ASPECTS

As to further development, the situation of the horticulture sector is too uncertain to allow projections. This is due to the absence of data on fruit trees and vineyards, the cultivation of which were neglected during the period of transition, and also on the extent of damage to the plantations¹¹².

Of interest is how the privatized small plots of orchards, olive groves and vineyards will be used by the new owners who are often unskilled. As already mentioned, the areas planted to horticulture consist of hundreds or sometimes more than a thousand hectares. If the holdings are individually cultivated, it is hard to believe that the trees can be exploited efficiently. One possibility is for individual producers to participate in a kind of voluntary producer and marketing co-operative in order to manage the production of both fruit trees and vineyards under the new economic conditions. In this way and with the help of specialists, the necessary reconstruction and modernization of tree crops might be achieved.

Measures which can probably be expected in the long term include a reduction in the area planted for fruit trees by eliminating low-yielding orchards, and the introduction of seedlings with higher yields and of varieties better suited to changing consumer tastes. To these can be added, shifting the planted area to locations with higher quality soils, increasing technical and other inputs such as irrigation water, and establishing a more efficient internal and foreign marketing system.

According to the Olive and Citrus Research Institute, between 650 000 and 910 000 trees have to be replaced in the next few years by new, more productive varieties. This will affect about 13 000 ha out of the total area planted of 45 000-46 000 ha.

The Ministry of Agriculture and Food predicts a huge increase in the production of fruit, citrus, grapes and olives during the first half of the 1990s, as follows:

<u>Sector</u>	<u>1991</u>	<u>1992^a</u>	<u>1993^a</u>	<u>1994^a</u>	<u>1995^a</u>
	i n 1 0 0 0 t o n n e s				
Fruit	71	65	90	95	110
Citrus	10	13	13	14	15
Grapes	91	70	80	90	100
Olives	10	20	35	45	53

a) Forecast.

Source: Ministry of Agriculture and Food, 1992.

According to specialists at the Ministry of Agriculture and Food, the main impulse for the expected growth in production will come from the privatisation of the resources. No special programme exists as yet for orchard and vineyard production, in contrast to that for olives.

There is a long-term restructuring and development programme for olive production which extends until the year 2020¹¹³. Its prime target is to increase the supply and consumption of olive oil; exports also will have a role. With state financial support, the area of planted for olive groves is to be enlarged to 60 000 ha, which would be 30 per cent higher than in 1990; yields are to grow to 20 quintals/ha. Production is expected to reach 120 000 tonnes, three or four times more than in the best years.

The programme includes the renewal of varieties, the use of modern technology, an improvement in irrigation methods, and the application of plant protection methods. To complete this programme, the outdated oil-processing industry would also need to be modernised.

7. TOBACCO

7.1 BACKGROUND

Albania has a tradition of growing tobacco and exporting tobacco products. The tobacco industry is one of the oldest processors of agricultural raw materials in the country.

Tobacco is often produced on soils that could not be used for other products, such as soils in hilly areas or those without irrigation. Tobacco is planted nearly everywhere in the country for private use but the best locations, in order of importance, are the districts of Elbasan, Shkodra, Korça and Gjirokastra which account respectively for 27%, 21%, 17% and 5.3% of total production, followed by Berat, Fier, Lushnja, Vlora, Durres, Pogradec, and Saranda in the South. Tobacco is mainly planted manually, partially semi-mechanized, and is harvested only by hand.

Sown area, yields and production varied considerably throughout the 1980s. The area and production have shown an overall decline since the agrarian reforms. The data for the five to six years before the reform, average 1985 to 1990, and for recent developments are as follows:

<u>Year</u>	<u>Area</u> ha	<u>Yield</u> quintal/ha	<u>Production</u> tonnes
average 1985-90	27 800	6.95	19 333
1990	24 000	5.83	14 000
1991	11 000	6.36 ^{a)}	7 000
1992	13 000	9.23 ^{a)}	12 000
1993	13 000	10.76 ^{a)}	14 000

a) Estimated.

Source: For 1985-1990: Official statistics; For 1990 to 1993: Ministry of Agriculture and Food, Directorate for Statistics, August 1993.

The main reasons for the decline in tobacco planting during recent years are most probably the following:

- a decrease in domestic demand for raw tobacco due to the production and sales difficulties of the tobacco industry during the transition process;
- the loss of export markets, including those in Eastern Europe;
- a demand for higher quality products than produced by the domestic industry, leading to a preference for imported cigarettes and tobacco products;
- an increasing preference for Virginia tobacco over Oriental tobacco.

Finally, the smaller sown area might also be due to the continuing problems of land ownership and to a growing interest in the production of more lucrative food and fodder crops¹¹⁴.

Yields are low in comparison with neighbouring countries. To some extent, the higher yields may be an indicator of the level to which Albanian tobacco yields may grow in the longer run under improved production conditions.

<u>Countries</u>	<u>1991 Yield of Tobacco Leaves</u> quintal/ha
Italy	22.8
Greece	21.5
Bulgaria	13.9
Yugoslavia	10.1
Romania	9.7

Source: FAO Quarterly Bulletin of Statistics, Vol. 5, 2/1992, p. 62.

At the end of the 1980s, 80%-85% of the tobacco production was exported and tobacco was ranked third in Albania's export structure behind chrome and mineral oils. During the 1980s, the export of tobacco leaves almost doubled from 10 158 tonnes to 20 089 tonnes/year and that of cigarettes grew by one third, 34% up to 1990.

The main importers of Albanian tobacco were the Eastern European countries, and also Greece, Italy, and Egypt. The percentage of unprocessed material in total tobacco exports has been high and is due to the low technical standard of the processing industry.

EXPORT OF TOBACCO PRODUCTS

<u>Years</u>	<u>Tobacco Leaves</u> 1 000 tonnes	<u>Cigarettes</u> million pieces
1986	11.8	2 957
1987	17.1	2 495
1988	14.1	2 160
1989	20.1	3 389
1990	15.7	2 777
1991	8.1	231

Source: Agolli, Shkelqim, Department of Statistics and Information of the Ministry of Agriculture and Food, Tirana, "Albanian Agriculture - Facts, Figures, Comments" unpublished paper, Tirana 1993, p. 143.

7.2 CURRENT SITUATION

Despite the world-wide campaign against nicotine, Albania's tobacconists are convinced that their products have good prospects on the world market if offered at a better quality and in better packaging.

Much modernization needs to be done both in the field of tobacco production as well as in the processing industry. As in food processing, this can only be done by installing modern technical equipment. The main prerequisite is to find foreign investors to establish joint ventures; two Greek firms are interested in a co-operation agreement with Albania's tobacco industry.

In addition, management and employees have to change their attitude towards quality production, since socialist thinking in quantity terms is still widespread. Finally, it is necessary to adopt a modern marketing approach for tobacco, such as developing brand name products as existed before World War II.

Sales prospects, especially of Oriental tobacco, on foreign markets are believed to be very good. Other varieties cultivated in Albania include Virginia, Burley, Samsun and Basma tobaccos.

Earnings of farmers from tobacco production are attractive compared with other crops. The revenue per hectare may reach Lek 300 000-400 000, US\$3 000-4 000, according to a forecast by a specialist of the Fabrica Duhan Cigare in Shkodra. This is, ignoring the much higher labour requirements per hectare, ten times the revenue of one hectare of wheat. In 1992, foreign buyers were paying up to US\$2/kg of raw tobacco, without taking quality into account; four groups of tobacco quality currently exist.

In typical production areas, such as the districts of Elbasan and Shkodra, tobacco production could become a profitable source of income for farmers if the foreign trade sector can succeed in increasing the export volume of tobacco products.

It can be assumed that the state-owned collecting firms will no longer play a role as purchasers of tobacco. Instead, the basis for tobacco production will be the contract businesses for the farmers. However to date, none of the 12 processing plants comprised of three cigarette companies, three tobacco factories and six tobacco companies has been privatized. According to the Ministry of Agriculture and Food, privatization of six companies is under way as of Autumn 1993. This means that the Government still determines the procurement prices for raw tobacco through purchases by the government-owned companies.

8. MEDICINAL HERBS AND ESSENTIAL OILS

Albania is one of the few countries in the world that has both the natural requirements, varying flora and optimal climate, and the tradition in growing medicinal herbs and ethereal oils¹¹⁵. Medicinal herbs and essential oils are both examples of niche products on which Albania should concentrate its efforts to create a source of earnings of foreign currency.

After World War II, Albania emerged as one of the leading producers and exporters of medicinal herbs. In relation to the quantity of wild plants collected, Albania ranks first in Europe. Of a total of about

500 known different species of medicinal herbs and drugs world-wide, some 300 are collected or cultivated in Albania, and refined and exported as well. Even before the political change, medicinal plants and essential oils, used by the pharmaceutical industry earned Albania between US\$10 million and US\$15 million in exports annually.

According to the Department for Medicinal Herbs and Essential Oils at the Ministry of Agriculture and Food, 2 000-2 100 tonnes of SAGE, *salviae officinalis* L., leaves and volatile oil are traded annually on the world market. Albania contributes between 1 000 tonnes and 1 500 tonnes, about 200 tonnes of which is exported to the European market, and is a price leader. Besides SAGE, the herbs and plants which play an important role in exports are laurel leaves, coriander, thyme and juniper berries. Among the various etheric oils, lavender, *Lavendula officinalis* L., is important in medicinal herbs exports.

EXPORTS OF MEDICINAL HERBS AND ESSENTIAL OILS

<u>Years</u>	<u>Medicinal Herbs</u> tonnes	<u>Essential Oils</u> tonnes
1980	1 288	31
1985	1 562	37
1988	1 104	19
1989	683	33
	Lek million	Lek million
1991	60.8	1.2

Source: Vjetari Statistikor i R.P.S. te Shqiperise/Statistical Year-book of P.S.R. of Albania 1990, Tirana 1990, p. 138.
For 1991: Export-Import Department of the Ministry of Foreign Trade of Albania.

At almost Lek 61 million, equivalent to US\$ 620 000, these exports were responsible for about five per cent of Albania's total foreign currency earnings in 1991.

Statistically recorded exports of medicinal herbs have been falling in recent years because larger quantities are being traded in an uncontrolled manner by the new private export dealers. Since these traders do not observe the state quality standards, Albania's international reputation as a high quality producer and exporter of medicinal herbs is being damaged. In order to reverse this development, the Government is planning to issue export licenses and to put a 40% export tax on all medicinal herbs. This would, however, weaken Albania's world market position in the trade of medicinal herbs.

Another problem is the growing uncontrolled harvesting of herbs by private collectors. This has already damaged the flora badly and has led to the extinction of some species of medicinal herbs. A special law to protect the medicinal herbs flora as well as the creation of a field and forest police are intended to halt this harmful development.

In contrast to exports of vegetables for example, the export of medicinal herbs has remained stable over recent years. This is because herb producers, the administrative authorities, and exporters have co-operated closely with foreign partners who in return have sometimes transferred the processing of the herbs and leaves using modern equipment to Albania, French companies in particular. However, due to the general lack of modern processing techniques, Albania has been and still is forced to export predominantly the unprocessed raw materials of herbs or semi-refined products.

Provided that Albania can regain or even improve its former strong position on the world market for medicinal herbs and etheric oils, the restructuring of processing plants would be a very important measure in development aid. The prospects are good since there is a general tendency in the richer Western societies to use more and more medicines produced biologically. Growth in the production and exports of medicinal herbs will be facilitated by Albania's extensive unexploited forests; 36% of Albania's land area is covered by woodlands. The prospects for such an expansion are helped by the existing close co-operation that has been established with foreign companies, in contrast to other agricultural processing branches.

9. SEED FARMING¹¹⁶

High-grade seed and plant materials are necessary to achieve high, stable, and good quality crop yields. In Albania, at least five research institutes of the Ministry of Agriculture and Food are engaged in plant breeding. They include the Maize and Rice Institute at Shkodra, the Agricultural Research Institute at Lushnja, the Institute of Vegetables and Potatoes at Tirana, and the Sugarbeet Institute at Korça. Also, the Tobacco Institute at Cerrik has in the past bred varieties adapted to Albania's special natural and soil conditions and production needs. It is reported, however, that the quality is low and that variety improvement is overly dependent on crossing local varieties¹¹⁷.

Plant breeding is only one part of seed farming, the other part being to provide agricultural producers with sufficient quantities of appropriate seeds and plant materials. Reproduction of high quality seeds was another task of the research institutes. For this purpose in the past, the large experimental farms were used but these were largely lost in the course of agrarian reform. For instance, the Shkodra Maize Institute had 650 ha and was one the institutes founded in the early 1970s to develop new hybrid maize varieties and to supply farms. Following foreign trade liberalisation, growing quantities of hybrid

maize varieties are being imported uncontrolled into Albania. These are less suitable for cultivation in the country than the local seeds.

Plant breeders obtained good results for grain, vegetables, sunflowers, tobacco and cotton varieties. However, because of sub-optimal plant material and technical inputs on the farms, the genetic productivity potential of the seeds was not realised.

Apart from such criteria as yield and the rather narrow range of varieties, Albania has been self-sufficient in the main seeds. For wheat, sunflowers, rice and beans, 80% of demand has been met by domestic seed producers. In addition to the research institutes, the state and co-operative farms were involved in seed farming.

The seed farming industry needs to be reorganized. It can be expected that (rather than using the seed saved from the previous harvest) the rate of seed renewal in the new, small private farms will be sharply reduced. In the short term, this usually has little negative effect on yields. The rate of seed renewal in the past used to be up to 70 % on two thirds of the wheat area.

Seed breeders and reproducers believe that, in the future, with on-farm breeding there will be opportunities to co-operate with foreign companies in the reproduction of crop varieties. These would include maize, rice, sugarbeet, tobacco, different vegetable varieties and tomatoes especially, forage crops such as lucerne, and eventually sunflowers. They argue that Albania offers good climatic conditions and differentiated climatic zones of lowlands, hills and mountains, a qualified labour force, and low production costs particularly when compared with neighbouring countries.

During the 1980s, Western companies from Belgium, Italy and Germany co-operated on various occasions with Albanian research institutes on seed farming, especially for maize and sugarbeet. Therefore, Albania has some experience in this area. However, since the country is not yet a member of the OECD Seed Certification Schemes, no permanent business contracts have developed out of these contacts for seed production. Albania wishes to join the OECD Schemes as soon as possible.

An FAO project to provide technical assistance for the upgrading of seed control procedures, the certification and testing, began in late 1993. In early 1994, a new Seed Law was passed by Parliament to update Albanian regulations and bring them into line with international standards.

Albanian breeders are convinced that they could take over a large part of the reproduction work previously done in the former Yugoslavia and meet contracts previously filled by other European countries. The weaknesses in the research institutes, for example with regard to machinery and equipment needed for reproduction work, may be solved with the support of foreign partners, and possibly later with self-financed investments.

10. FLOWERS

In the search for market niches for the export of plant products, Albania should focus its efforts on new production possibilities that could be combined with its agriculture. One such possibility is the production of cut flowers and ornamental plants.

Western Europe, and especially Germany, represents a large and growing market for garden plants; these include potted flowers, flowers and non-flowering plants for balconies and gardens, dried flowers and garlands. Together German buyers for private households, hotels and restaurants, offices, the churches and individual purchases, spend more than DM 10 billion annually, according to an estimate by the Central Marketing Company of the German Agriculture/CMA¹¹⁸. The demand from private households alone accounts for about 50% of total demand and in 1992 reached DM 5.1 billion, 44.1% on cut flowers and 22.7% on potted plants. In former West Germany, the annual per capita expenditure on flowers and plants was about DM 150.

German horticultural businesses produce only 20% of German demand for cut flowers; only 60% of potted flowers is supplied by German gardeners. In 1992, Germany imported 240 000 tonnes of cut plants with a wholesale value of DM 2 billion¹¹⁹; this included flowers from non-European countries. However, more than four fifths, 87% of the annual imports of cut flowers into Germany comes from the Netherlands. Japan is also a significant and growing importer of flowers and plants.

Albanian horticultural experts should, with the help of foreign consultants, establish whether the requirements for flower production can be met and in which kind of flowers Albania could specialize in the medium term. The German market, located very conveniently for Tirana, would be a potentially major customer for flowers and ornamental floriculture.

At the start, difficulties of putting such an idea into practice will arise from Albania's lack of experience in commercial flower production. Flowers can now only be bought occasionally from street vendors and no flower markets or flower shops exist in Albanian towns. Agriculture and horticulture can be combined in Albania given the small size and labour structure of farms. The lack of technical, production and marketing skills could be partly compensated for by the foundation of producer associations. Albania could start with open air floriculture, helped by Albania's long periods of sunshine, before open air is combined with glasshouse floriculture.

11. SILKWORM BREEDING

There is a possibility that silk production based on silkworm breeding could become a combined agricultural-industrial niche product in the future. Despite the high market share of synthetic fibres in textiles, there is a growing world-wide demand for natural silk. At present, this demand is met by breeding silkworms on the leaves of the mulberry tree.

By the 1920s, mulberry trees were growing in Albania alongside olive and fig trees in the coastal region; occasionally, they can still be found. Mulberry fruits were used then for alcohol production, mainly schnaps, and even for silkworm breeding. For a long period, Shkodra in the North of Albania was the centre of silk weaving and the silk trade in the Western Balkan Peninsula¹²⁰. Mulberry tree plants and silkworm breeding also existed in the towns of Kruja, Kavaja, Tirana, and Elbasan as well as in their neighbouring villages¹²¹. The Station for Bee and Silkworm Research belonging to the Ministry of Agriculture and Food still exists in Tirana.

Therefore, in the interests of job creation in the countryside and of a diversification of Albania's foreign trade structure, the potential for developing Albanian silkworm breeding should be considered. Moreover, Japan has developed an artificial feed that simplifies silkworm breeding to a large extent and, at least in Japan, makes breeding possible throughout the year¹²². This could help the Albanian industry to develop but may also increase world supplies substantially.

II. UPSTREAM AND DOWNSTREAM SECTORS

1. THE FOOD INDUSTRY

1.1 BACKGROUND

After World War II, the food industry was the most important sector of the Albanian economy, not only within the consumer goods industry but of Albania's industry in general. Its share of the total consumer goods production was about 50% but due to the deficit of raw materials for processing, this share has been declining since 1990. The food industry produced about one quarter of the total value of industrial production and, during the whole of the 1980s, was ranked first amongst the main industrial sectors.

Most processing plants have a small production capacity. The oil and soap industry, which employs 2 000 workers, consists of 49 companies. However, there are some large processing combines, in Tirana, Elbasan, Fier, and Vlora, which produce different kinds of food and beverages.

The food industry is located according to availability of agricultural raw materials, and processing plants are spread all over the countryside. They even exist in some of the larger villages, companies processing vegetables, fruits, oil-seed crops, and grains.

Because of the widespread habit of food self-sufficiency among the rural population and partly among the urban households, raw materials used also to be processed in the co-operative and state farms and in farming households, using low level technology. For example, in addition to the 25 state-owned dairy plants, 450 mechanized dairies existed, one in nearly every co-operative and state farm.

Now, the majority of the processing industry is either destroyed or seriously damaged. Because of this and because agricultural producers are themselves marketing their own products, it can be assumed that the volume of minimally processed raw materials is higher than before. Also, the entire input supply and output distribution system, previously state organized, has almost collapsed and with it the supply of inputs to the processing industry; an example is the collection of raw milk from farms, which now functions only at a low level.

The technical and engineering standard in the food industry was, and still is, extremely low. The processing methods are outdated and the share of manual labour is high. Some of the consequences are a limited variety of food such as the existence of only two or three types of flour allowing three or four types of bread, a low extraction rate from the raw material as for example in the sugar and the oil industries, and also a quality of food that is poor and has a low nutritional value.

The lack of cooling capacity, of special trucks and of modern storage and packaging facilities for food means that losses are generally high and quality is bad and likely to become even worse. Due to the antiquated processing technology of the two sugar refineries in the

Korca district and also to the losses of beets during transportation to the plants and during their storage, the processing yields only 6-7 kg of sugar per quintal of sugar beet, even though the beet has a sugar content of 16%; this can be compared with the 13-16 kg extraction rate in Western countries.

1.2 CURRENT SITUATION¹²³

The food industry remains one of the very few branches of Albanian industry in which production is still continuing, even though at a much reduced capacity (see Table I.2). This is regardless of the technical and organizational shortcomings, of the destroyed or damaged equipment, and of the lack of energy, water and agricultural raw materials.

According to the Ministry of Agriculture and Food, there were various sub-sectors of the food processing industry which were functioning relatively well in the Spring of 1993. These were grain processing and bread making, macaroni and vermicelli production, the refining of oil-seeds, vegetable and fruit processing, the production of beverages such as beer, wine and alcohol, the food conservation industry, and the fish processing factories.

The dairies and milk manufacturing plants and the meat processing factories are either not working at all or only at a very low level of productivity; both lack the raw materials. Meat processing now consists mainly of producing sausages from imported meat (see Table I.2). Sugar refining has never played an important role in the processing industry. Officials at the Ministry of Agriculture and Food point out that, given the current low sugar prices on the world market, it would be cheaper to import sugar than to produce sugar beet in Albania with high financial losses. The oil-seed processing plants are also mainly working with imported raw materials.

The tobacco processing factories are facing similar problems, especially in Durres, Elbasan and Gjirokastra. Since they are experiencing shortages of various supplementary materials such as cigarette and filter papers, they cannot produce continuously. This problem applies also to the brewing sector, where the lack of bottles inhibits a steady production.

In the second half of 1992, led by the National Agency for Privatization, the process of privatization in the food industry was started. However, the degree of transformation to private companies is very small so far (see Table IIA.9). Successful operation and economic and technical restructuring would be greatly facilitated by joint ventures with foreign firms. However, it seems that the political situation, particularly the Balkans' conflict and the problem of Kosova, as well as social and economic obstacles, such as the restitution of property to former owners and the regulations for foreign investment in Albania, make private investors from abroad hesitate to come to Albania¹²⁴.

The following data on the state of the privatization process at the end of 1993 was provided by the Ministry of Agriculture and Food for the use of companies that process plant products.

Table IIA.9 PRIVATIZATION OF THE AGRICULTURAL PROCESSING INDUSTRY

Sub-sector companies ^a	Number of plants	Already privatized	Privatization underway	Not yet privatized
Macaroni	10	-	-	10
Candy	32	3	3	26
Flour	35	1	-	34
Beverages	31	5	3	23
Oil and soap	18	2	3	13
Cigarettes	3	-	1	2
Tobacco factory	3	-	3	-
Tobacco company	6	-	2	4
Total	138	11	15	112

^a) The names of the sub sectors used correspond to the Albanian nomenclature.

In most cases, the regeneration of the food industry will have to begin at grass roots level. The level of economic efficiency of the companies is low and their competitiveness in an open world market economy would be very weak. It was reported that the number of Albanian enterprises that could not face market challenges would be comparatively large¹²⁵.

Due to financial and technical reasons, it seems appropriate to form fewer but larger plants instead of the many small businesses that exist in the different branches of the food industry. Larger units can react better to the changes in the production structure of agriculture. The amount of capital necessary for the technological renovation of one plant in the oil and soap industry is estimated at US\$10 million¹²⁶. The new structure of Albania's food industry has to be more than only a modified reconstruction of the old system. Measures taken need to take into account the developments in a wide range of new foodstuffs as well as modern nutritional demands of consumers.

In the area of quality and variety of foodstuffs, deficiencies exist in the supply of several foodstuffs. These include low-fat and low-calorie foodstuffs, protein and vitamin enriched products, dietary food and special food for children of different ages, such deep-frozen products as vegetables and fruits, and fast food. An improvement of quality and variety of processed foodstuff is also necessary to meet Albania's objective of competing on the world market.

The trading system, underdeveloped and primitive, is another aspect which has to be mentioned in the context of the food industry. Although it is now fully privatized, it has to be totally rebuilt.

2. THE AGRICULTURAL INPUT SECTOR

2.1 BACKGROUND

At present and for the near future, the hoe and spade remain the main implements of production in small-scale subsistence farming. The level of technology is similar to that of 1938 but without draft oxen and with a larger number of farms cultivated than the 170 000 farms then.

Nevertheless, Albanian experts are convinced that it is possible to improve the level of production on the new small private farms if fertilizers, pesticides, tractors and other machinery were available. However, Albania is very short of such inputs. Together, the unsolved agricultural land reform and the lack of inputs are the biggest obstacles to profitable private farming in Albania¹²⁷.

The main reason for these obstacles is that the already poorly developed agricultural input industries, badly damaged during the upheaval, produce only sporadically due to shortages of raw materials, spare parts and energy. The work of the plants is also hindered by legal problems about the ownership of former state property. These and other reasons led to a drop of Albania's industrial production by more than 50% between 1989 and 1992.

2.2 STRUCTURAL ASPECTS

The most important agricultural input industry was, and still is, the Single Superphosphate Factory in Lac, located between Tirana and the town of Lezha. The factory produces phosphate fertilizer and had an average annual output of 162 400 tonnes between 1986 and 1990. The second most important firm is the Fier Nitrogen Fertilizer Factory producing ammonium nitrate and urea, a nitrogen-based fertilizer; the average annual outputs were respectively 102 000 tonnes and 85 000 tonnes between 1986 and 1990. Potash fertilizer was produced only in small quantities and the necessary quantities were imported. However, according to Albanian soil researchers, agricultural soils are relatively rich in potash.

Pesticides, mainly insecticides and fungicides, were produced in a chemical plant in Durres, about 9 400 tonnes/annum on average during 1986-1990. Although the annual import requirement was 3 000-3 500 tonnes, Albania regularly imported only 2 000 tonnes of pesticides a year.

Another important input produced by the chemical industry is plastic foils for vegetable production. Whereas, the scaffolds for the foils last for a couple of years, the foils need to be renewed every year. For the most part they were imported and only a small amount was

produced in a plant at Lushnja. In 1990, the area of plastic sheets was about 800 ha; today, the foil-covered vegetable area appears to be negligible.

The plastic sheeting area is now privatised. Apart from new co-operative activities in the vegetable sector, it seems very unlikely that individual private farmers would have sufficient capital resources or credits to produce vegetables commercially under plastic sheets. Intensive producers located near the cities may be the exception.

The farm machinery producing industries are concentrated mainly in the four larger districts of Durres, Fier, Gjirokastra and Korça but can also be found in the Shkodra and Elbasan districts. In addition, there is a tractor plant in Tirana, which has not produced any tractors since 1985, and the combine harvester project in Durres operating with foreign co-operation.

Albania's agricultural input plants generally produced low technology machinery such as ploughs, disc tools, rotary hoes, fertilizer broadcasters, sowing and irrigation equipment, as well as silage machines, sorting machines, grain cleaning equipment and sprayers for fields, viniculture and fruit growing. Tools for agricultural handicrafts were also made.

2.3 IRRIGATION¹²⁸

To Albanians, water is as important as land and without irrigation Albania would be a desert. The large irrigation system is one of the few achievements of the former Socialist system in the agricultural sector. Most Western reports on Albania's agriculture state that about 60% of the arable area is irrigated. This number, however, is not accurate because the figure relates to the area that could be irrigated and not to actual irrigated land. In some districts, the irrigatable area was between 70% and 80% and sometimes even higher, in districts for example like Saranda, Gjirokastra, Lushnja, Kruja, Lezha, and Shkodra.

Of the total irrigatable area of 410 000 ha, about 350 000 ha or 50% of arable land, were irrigated regularly. Most of the irrigated area was in the lowlands, some 300 000 ha, where open drains were mainly used but no pumps; only 60 000 ha could be irrigated using mechanical equipment like pumps. The remaining 60 000 ha were equipped with sprinkler systems.

2.4 CURRENT SITUATION AND FUTURE DEVELOPMENT

2.4.1 FERTILIZERS

The production of fertilizers decreased sharply during 1991 and 1992. Total production for the two years together amounted to only 150 000 tonnes compared with an annual average of about 350 000 tonnes between 1986 and 1990. Fertilizer use is at best half as much now as it was during 1986-1990, when an average of 140 kg was used per hectare of

arable land. More than half, 50-54 per cent was nitrogen fertilizer, 44-48 per cent was phosphate fertilizer, and only one or two per cent was potash fertilizer.

Assuming an improvement in the effectiveness per fertilizer unit applied in future, a minimum of 160 kg/ha will be necessary. According to Albanian experts, more phosphate and potash fertilizers should be used instead of the high dosage of nitrogen fertilizers that reached and even exceeded 100 kg/ha in some years. However, even though the price of fertilizer has increased tenfold, the Government has not yet offered farmers cheap credits for fertilizers and pesticides, as is the case for the purchase of tractors. The need for higher dosages of potash is based on new soil analyses at the Tirana Soil Research Institute which show that the level of potash in the soil in Albania is falling, as it is in the Southern Balkan region and also in Greece.

In future, a larger variety of mineral fertilizers, including a higher share of complex and granulated ones, can be expected. Nevertheless, problems of packaging, transport and storage of fertilizers persist. If both the Albanian fertilizer plants can be reconstructed as joint ventures with foreign partners and resume normal production, they could meet the future fertilizer demand of Albania to a large extent.

2.4.2 PESTICIDES

The pesticide industry has almost collapsed; only negligible quantities of pesticides based on sulphuric acid are produced. During 1991 and 1992, no commercial imports were registered and the price for pesticides increased dramatically. In addition, sprayer equipment for smallholdings was not available.

Albania plans to import more chemical raw materials and to produce modern pesticides in the country. The industry will reduce its output of pulverised pesticides that have been dominant in Albania until now. Biological control of pests and diseases is to be strengthened since both the scientific and institutional requirements are in place. The mechanical control of weeds will continue to be very common in Albanian agriculture, given the high labour availability. An advance warning and forecasting service for plant protection still needs to be developed but the technical basis for this is missing.

2.4.3 MACHINERY

Since 1990, the agricultural mechanical engineering industry has used only a very low level of its capacity. Some raw materials are not available and energy is restricted. The development and production of new models has ceased. No tractors or combines will be produced in the near future. Imported agricultural machinery is too expensive for farmers.

Therefore, Albanian technicians advocate the production of most machinery and technical equipment in the country. In the long term, they believe that the reconstruction and modernisation of existing

machinery plants would be more efficient than importing agricultural technology. This, however, would require intensive and lasting co-operation with foreign firms.

2.4.4 MECHANIZATION

Mechanization of production is seen by Albanian experts as the first and necessary step to achieving an increase in food production. A proposal by the Ministry of Agriculture and Food to begin a strategy of minimum mechanization of agriculture appears rational, given present conditions. These are farming structures of mainly smallholdings, a high labour availability, low purchasing power, a rather low level of professional qualifications of the majority of farmers, and poor financial conditions; interest rates are fixed at between 30% and 42%¹²⁹.

It is believed that a policy of maximum mechanization would cause great social problems, not only in the rural areas but also in the society as a whole; this is without even considering how such a strategy could be realized. At the same time, the dilemma for agricultural policy is that if labour is not reduced through technical progress, both the productivity of labour and the living standards of the remaining farmers cannot be increased.

In order to meet the requirements of a minimum mechanization, various pieces of machinery are necessary. These include tractors with some attached equipment as for example a plough, pre-sowing and pre-planting machinery, drilling machinery, sprayers, and a means of transportation such as tractor trailers.

For cost reasons, this machinery combination could not realistically be the standard equipment base of an average individual farm. However, for some of this machinery, private machinery contracting firms or user co-operatives could be established. In general, less is known about the level of farm mechanization in the livestock sector.

2.4.5 THE TRACTOR PARK

A total of 490 000 ha of arable land and 32 000 ha of orchards, olive groves, and vineyards have been cultivated in the past nominally using 10 600 tractors of different types and horse power, including 6 500 wheeled, not crawler, tractors powered from 25 to 110 horse power. In 1989, the average ratio of tractors to agricultural land was 1:68 ha.

The majority of the tractors are more than 20 years old; many are more than 35 years old and worn out. Of the 10 600 tractors, about 5 000 are recorded in the official statistics as still being used in agriculture, some of them as a source of spare parts. That is about one tractor for every 80 farms.

The plan is to renew the tractor park by 1995. There are different estimates for the total number of tractors likely to be needed by then. According to forecasts by the Agricultural University of Tirana, 7 000 tractors with 60-65 horsepower will be required for the lowland farms and about 900 tractors with 45-50 horse power for the hilly and terraced

areas. Whereas the Ministry of Agriculture and Food estimates purchases of between 5 000 and 6 000 new tractors with 40-60 horse power in the next few years, the Station of Agricultural Mechanisation in Tirana estimates that 11 800 tractors will be needed of which 8 300 will be purchased.

Albania imported 2 285 tractors between 1988 and 1991 and 4 168 tractors between 1992 and 1993, according to the Ministry of Agriculture and Food. Among them were 2 000 of the 2 300 contracted mini-tractors or garden-tractors from China, each with 15 horse power.

Tractors from Eastern Europe are also being imported, for example the Belarus tractors which are substantially cheaper than Western ones. The Belarus tractor with 50-60 horse power, assembled in Greece, costs between US\$6 000 and US\$9 500 compared with US\$20 000 for recently imported John Deere tractors. Western brands, though, are preferred to Eastern European ones because of their better quality and technical features.

As with the other agricultural input commodities, the establishment of private sales organizations for tractors and farm machinery needs to be promoted. Furthermore, private repair shops and service stations are needed throughout the country, now that the former state-owned Machine Tractor Stations (MTS) have been closed down.

2.4.6 ASSISTANCE PROGRAMMES

The deficit of agricultural inputs is only one reason for the critical production and food supply situation. In addition, farmers lack capital or credits to buy fertilizers, pesticides and machinery. According to the Ministry of Agriculture and Food, neither the Government nor the Bank for Agricultural Development can offer farmers public credits for the purchase of inputs.

Assistance projects and development programmes of the international organizations, foreign governments, and aid organizations are intended to cover the most urgent technical needs to increase Albanian agricultural production in the near future. Donors to date are the European Community/EC¹³⁰, the World Bank, the Economic Commission for Europe/EEC, the International Bank of Reconstruction and Development/IBRD, and Governmental Development Agencies of different countries such as Italy, Greece, Netherlands and Austria, as well as the USAID and the German Corporation of Technical Co-operation/GTZ.

Past, current and planned agricultural assistance for Albania by donor institutions and countries is heavily oriented towards supplying critical agricultural inputs such as machinery, spare parts, pesticides, fertilizer, animal feed, seeds, and processing equipment. Some Western agricultural assistance is devoted to institutional development, agricultural policy advice, land reform issues, and the improvement of the financial services¹³¹.

Examples of international support activities are the PHARE Programme Development of Albania's Agriculture of 1991-1993 and the World Bank's Agricultural Sector Aid Programme of 1993-1994. National programmes include the USAID Fertilizer Supply Programme to supply 20 000 tonnes of urea during 1993 and the 1992-1994 Dairy Sector Programme, and the 1992-1993 German Agricultural Mechanization Programme. With the help of a German credit, farmers were able to purchase about 170 tractors. The purchase price, determined by the Ministries of Agriculture and Food and of Trade, was US\$20 000 for a tractor with 60-65 horse power. The buyers got long-term, 20-year bank credits guaranteed by the Government at subsidized rates, 6-7% compared with 30-40% market interest rates.

2.5 WHOLESALE AND RETAIL TRADE

The establishment and improvement of private or co-operatively organized wholesalers and local market-dealers is important for the better functioning of the agricultural input sector and the supply of inputs to farmers. Both domestically-produced and imported input commodities could be traded on such markets.

The International Fertilizer Development Center, the IFDC, supplies farmers with fertilizers through a network of some 200 private dealers throughout the country¹³². In co-operation with the EC, the IFDC organises country-wide seminars for the traders to introduce them to modern selling methods.

2.6 IRRIGATION

During the period of political unrest, large parts of the irrigation network were damaged or destroyed. The destruction had not stopped by 1993. Irrigation dams and pumping stations have been damaged, concrete parts from water drains were stolen and farmers illegally diverted irrigation ditches and drains to their private plots. As a result of this and because of a four-month drought in the summer of 1992, large losses arose.

No accurate estimate exists as to the extent of the destruction of the irrigation network. According to rough estimates by Albanian experts, approximately 40% of the system is not operating¹³³. According to the Ministry of Agriculture and Food, 80 000 ha of the irrigation area are in some way destroyed, damaged, or out of service. However, this figure gives no estimate of the significance of the destruction. In 1992, World Bank experts estimated that of a total of 420 000 irrigatable hectares, 50.4% needed rehabilitation and that only 21%, 89 000 ha were irretrievably damaged. The situation was similar for the drainage system; about 48% of the total of 276 000 ha of artificially drained land needed rehabilitation¹³⁴.

In the Aide Memoire of the World-Bank Mission, it is stated that, after completing the irrigation rehabilitation project in 1993/94, the performance of the infrastructure would be expected to be at least as efficient as before 1990¹³⁵. Albanian experts, however, doubt that the extensive damage can be repaired in such a short time. There is some justification for this pessimism as a number of technical and

organizational obstacles remain to be solved. The Government, the owner of the water and of the irrigation infrastructure, still has to make some necessary political decisions.

Agricultural irrigation in Albania gives rise to important social questions because of the high proportion of families living from agriculture. Irrigation water has up to now been subsidised, especially in the hilly and mountain regions where agriculture usually is less profitable. Whereas under the Socialist system one cubic meter of irrigation water cost Lek 0.07, in the Spring of 1993 it cost Lek 0.7 in the mountains and Lek 2.5 in the lowlands. Future price increases are expected.

Equally important as the restructuring of the irrigation network is the privatization or the communalisation at the village level of water supply and distribution. The main supply network will retain its basic structure. However, the existing distribution system does not meet the new requirements of the private smallholder as to timing and quantity. The new system must allow for individual usage and has to be based on full cost-benefit criteria after government subsidies on the water price have been phased out over a transitional period. One possibility for the management of water use is the introduction of Water User Associations.

III. AGRICULTURAL FOREIGN TRADE

1. BACKGROUND

The Communist party's main objective for foreign trade policy was to support Albania's economic self-sufficiency. Imports, as a rule, played only a contingency role for goods required but not available domestically; exports were needed to finance such imports. The Communist element in this approach was that the structure and the quantities of imports were determined by the central planning committee according to their ideology rather than by the market.

The legal and organizational base for foreign trade policy was the state trading monopoly which no longer exists. A government decree of August 1991 frees all foreign trade activities. Even the state-owned foreign trade companies that still exist in the agricultural trade sector, for example EKSIMAGRA, AGROEXPORT and ALIMPEKS, have to follow private business principles and be self-financing and operate on their own behalf and carry their own risk.

Foreign trade is regulated by custom tariffs, the rate varying between 5% and 30% of value, and by an export-import regime. The latter lists commodities, valid for a period of six months, for which the export and import is prohibited or for which a licence is necessary. Of the 63 export items prohibited in the second half of 1992, about two thirds were farm products. On the list for the first six months of 1993, prohibited exports include mainly agricultural commodities, timber and firewood¹³⁶.

Besides the official regulated trade, there is an active illegal trade by private dealers, one example being the trade in cattle across the border to the former Yugoslav Republic of Macedonia. About half of Albania's foreign trade is still handled by state-run agencies and, for such commodities as medicinal herbs and essential oils, partially also by the Ministry of Agriculture and Food.

In 1992, the State's share in the total value of foreign trade was two thirds. In the first months of 1993, 70% to 80 % of Albania's exports consisted of minerals, mainly chrome ore and copper, and electrical power, all of which are state-owned commodities. The trade balance is negative; in 1992, imports amounted to Lek 13 135 million and exports were Lek 5 706 million.

2. AGRICULTURAL PRODUCTS

Agricultural goods always played an important role in Albania's export structure, both during the monarchy before World War II and during the Socialist period until 1989. In spite of forced industrialisation, agricultural goods still had a 30% to 38% share of the total export trade in the late 1980s (see Table IIA.10). These figures are high compared with the other former Socialist countries. During 1985-1990, the proportion of agricultural exports in total exports in Bulgaria was

10% to 15%, in Hungary 20% to 27%, and in Poland 9% to 15%. In 1992, Albania's share of agricultural exports was as high as in earlier years amounting to 38.4%, due partly to large sales of medicinal herbs and ether-oil essences and partly to reduced exports from other sectors, industrial goods especially.

Table IIA.10 AGRICULTURAL FOREIGN TRADE
(1985-1990 and 1992)

<u>Years</u>	<u>Value</u> Lek million ^a	<u>Percentages</u>	
		Agricultural trade as % of total trade	Foodstuffs as % of agricultural trade

E X P O R T S			
1985	703	33.5	56.3
1986	719	28.8	55.4
1987	848	34.1	50.6
1988	841	32.9	51.3
1989	1 026	33.9	50.8
1990	861	37.9	52.9
1992	2 192	38.4
I M P O R T S			
1985	531	21.1	39.4
1986	561	21.0	36.9
1987	479	18.1	29.8
1988	696	21.7	37.7
1989	952	25.0	28.8
1990	975	25.8	39.2
1992	893.2	6.8

a) Rounded.

Source: VSS 1991, pp. 296-299; figures for 1992: Export-Import
Department of Ministry of Foreign Trade, Tirana.

2.1 EXPORTS

2.1.1 COMMODITIES AND STRUCTURE

Before World War II, Albania exported mainly animal products such as cattle, hides, skins, cheese and eggs, fish products, and plant products such as tobacco leaves, tobacco goods, olives and citrus fruits. These exports made up, on average four fifths, 81%, of total exports between 1928 and 1932¹³⁷. Following the War and until 1990, exports again consisted largely of tobacco and cigarettes, fresh and processed fruits,

and olives but also of vegetables, potatoes, fruit juices, alcoholic drinks and wine as well as medicinal herbs and spices.

The range of agricultural export goods was and continues to be rather limited. Tobacco and tobacco products occasionally accounted for up to 60% of agricultural exports; unprocessed goods generally made up 45%-50%. By comparison, in the EC, about 70% of agricultural exports are processed foodstuffs and 30 % are raw materials.

As regards destination, the Socialist countries of Eastern Europe dominated as buyers of agricultural products after World War II. However, for medicinal herbs and essential oils, Western countries were also important buyers.

2.1.2 CURRENT SITUATION

Since January 1990 to date, foreign aid operations and credit-financed purchases of food, mainly from EC countries, accounted for between 80% and 90 % of the daily food consumption of Albania. The G-24 Member countries and the International Organizations, including the World Bank, the International Monetary Fund and the European Bank for Reconstruction and Development, the EBRD, gave total aid of ECU 721.3 million from the beginning of 1990 to July 1992; more than one third, 37.2%, of this aid was supplied by Italy¹³⁸.

It is therefore Albania's principal objective to secure the country's food supply to a large extent from domestic production. The exports of all basic agricultural raw materials and foodstuffs are forbidden and others may only be exported with special licenses. Just how fast and to what extent the dependence on food imports can be reduced, it is difficult to determine. It is clear though that after achieving greater stability of the reform process, Albania will make strong efforts to earn foreign currency by expanding its exports of agricultural products. Trade specialists at the Ministry of Agriculture and Food assume that the agriculture and food industries have good export possibilities. The prospects are especially favourable for fresh fruits and vegetables, canned fruits and vegetables, early potatoes, beverages such as fruit juices, mineral water, beer and some special alcoholic drinks, tobacco products, and medicinal herbs and essential oils.

Apart from these traditional Albanian agricultural export commodities, there should be an intensification of efforts to find additional export niches. Possibilities include seed breeding and seed production, as well as seed reproduction for foreign seed-growing companies. Furthermore, opportunities to develop the export potential for cut flowers and other commercially produced garden plants should be pursued (see Part IIA).

2.1.3 OPTIONS

The markets in Western Europe are well supplied and very competitive for fruits such as apples, cherries, plums and grapes, for canned fruits and vegetables, for potatoes, beverages and cigarettes, and also for processed animal products. This is not the case for herbs and oils.

The argument that Albanian agricultural goods can compete on international markets because of low production costs loses some of its effect when factors such as high processing and marketing costs as well as the need to improve quality standards are taken into consideration. Both low costs and high quality are essential for success on export markets.

Albania should consider the opportunities of earning a higher share of value added on agricultural exports by further competitively priced processing of raw materials, for example ready to serve food, and by establishing its own efficient sales channels. This, however, requires the setting up and improvement of an effective processing and packaging industry, as well as a modern storage and cooling system, and the training of personnel.

At present, Albania is not able to achieve these aims out of its own resources. If it is to be achieved relatively soon, joint-venture projects with foreign firms in these product sectors are essential. The development of exports to meet early markets in Europe for some fruit and vegetables also needs a similar approach.

2.2 IMPORTS

It is unlikely that the structure of Albania's agricultural imports will change fundamentally in the near future. Products such as the grain crops of wheat, maize, rice and barley, as well as sugar and cotton will continue to account for most agricultural imports. The Ministries of Agriculture and Food and of Foreign Trade estimate that Albania will be importing between 300 000 tonnes and 350 000 tonnes of wheat per year for the next few years. Albania also imported a number of other foodstuffs (see: Table IIA:11).

TABLE IIA:11

AGRICULTURAL IMPORTS
(Average 1985-1990)

<u>Plant Products</u>	<u>Tonnes</u>	<u>Animal Products</u>	<u>Tonnes</u>
Wheat ^a	72 666	Butter	613
Rice ^a	10 166	Soft Cheese	586
Barley	4 150	Homogenized Milk	420
Sugar	33 416	Meat	2 616
Cotton	5 558		
Maize	19 166		
Edible Oils	21 500		
Coffee	1 191		

a) 1988-1990

Source: VSS 1991, pp. 317-321.

Due to the restructuring of agriculture, the sown area of cotton and sugar beet is expected to decrease. The extent to which this reduction will be compensated for by higher yields per hectare is unclear. Their future development will also depend on the producer prices for these products in Albania as well as on the world market. Imports of sugar and cotton are expected to rise with the increase in per capita consumption of these products.

A change in the structure of grain imports can be expected, with a growing share and an improved quality of durum wheat and probably also of barley for the brewing industry. Imports of edible oils are expected to drop over the next few years due to increasing domestic production of olives and sunflowers because of higher yields, to a better processing quality, and to the projected expansion in the sown area of rapeseed. With a growing purchasing power of consumers, the imports of semi-luxury foodstuffs will increase. The Ministry of Agriculture and Food estimate future Albanian imports of foodstuffs to be about US\$150 million per annum.

Albania's foreign trade will benefit from better transport links, especially with other European countries, if the suggestion of the European Parliament to the EC Commission for an integrated sea trade and harbour system in the Adriatic and Ionic seas is accepted. This plan involves the modernization of Greek and Italian sea harbours and their connections to Europe's main trading routes. The plan also embraces harbours in Albania, most probably at Durres and Vlora, and in Slovenia and Croatia¹³⁹.

PART IIB - THE LIVESTOCK SECTOR

1. GENERAL FRAMEWORK

The production of livestock and the associated processing industries in Albania have seen little development and specialisation. Evolution in this sector was contained by the economic policies of the previous regime and has undergone a profound regression since the breakdown of that economic system.

This sector still, however, has great potential to satisfy the growing requirements of the population for food. It also appears to be one of the few manageable activities for small farmers who can sell their excess production at market; examples include milk sold from farms in the lowlands to nearby market centres, and meat sold from inland farms and from those in the mountainous regions where the widespread breeding of half-wild small ruminants is the only alternative to abandonment of those areas.

The development of livestock production in Albania was largely determined by the economic policy and the priorities adopted by the former regime, which eventually led to the prohibition of any form of private ownership for farmers. The effects of this policy, which determined the evolution of the country's livestock population, was first evident in the lowlands and was later most influential in the mountain regions during the 1980s when the process of collectivisation was completed.

The resources set aside for agriculture by the Albanian government led to a constant increase in livestock production, which nevertheless remains unable to meet satisfactorily the level of consumption. This outcome is due partly to resistance by farmers to the process of collectivisation and partly to a general inefficiency which does not allow high levels of production and performance to be attained.

Between 1990 and 1993, animal production increased its share in total agricultural production (Table I.1). The reconstruction of both the food processing industry and the veterinary services, needed for disease control and prevention and for guaranteeing hygiene standards for food products of animal origin, still constitutes a high-priority area for intervention.

2. THE LIVESTOCK POPULATION

2.1 CATTLE

Between 1950 and 1970, the cattle population decreased in absolute terms (Table IIB.1); this progressive reduction in the number of cattle can be attributed to the substitution of animal for mechanised labour. The cattle population increased in absolute terms from 1970 to 1980 but declined during the period 1980 to 1985. In 1986, numbers increased to

the 1980 level and have continued to rise, despite the dismantling of the co-operative system and state farms and the demolition of the animal husbandry centres.

The changes occurring around Tirana can be illustrated by the example of the model livestock farm KAMZA, located a short distance away from the University; this complex, consisting of several sheds surrounding the milking shed and with a capacity of over 1 000 cattle, has been completely destroyed. The livestock centre of the Myslym Peza co-operative suffered a similar fate; those assigned to the land have even broken up the road and used that land for production.

The increase in livestock population can be explained by the fact that, during the initial phases of privatisation, livestock constituted real capital, in contrast to land for which there is as yet no true right of ownership. In March 1993, a Friesian dairy cow had a market value of US\$300-500 and had generally been obtained from a co-operative or state farm at a much lower price, usually without any effective monetary expenditure. The breeding of dairy cows for the sale of milk is one of the few possible options for agriculture to be self-financing.

2.2 SHEEP AND GOATS

The trends in the sheep and goat population are the same as those for cattle, though with different developments. The population grew until 1960, then declined between 1960 and 1970 with the setting-up of collectivisation, which spread to mountainous areas in 1966. The number of sheep and goats only reached the 1960 level in 1989 (Table IIB.1).

This population represents by far the most important livestock resource in Albania. In the case of the hilly areas of the Mediterranean **machis** in which goats are frequently found, excessive numbers per hectare are often recorded.

2.3 POULTRY

The number of chickens and pigs grew continually until 1990, reflecting the progress of state investment. The poultry population reached over five million in 1990, bred in 12 very large and specialised state farms able to produce 12 000 tonnes of meat and 220-240 million eggs per year.

The uncertain nature of statistical data is particularly evident in the case of poultry breeding and production. The closure or reduced activity of these farms led to a population decrease in 1991 and in 1992 to a number put by the official data at almost half the 1990 population (Table IIB.1).

The broiler farm at VAOAR near Tirana is a good example of the use of old technology and of the ways of using old equipment on the privatisation of the state farms. The installations comprise 11 buildings on two levels, where poultry was bred for meat on a closed cycle. The material used for their construction and the insufficient space allowed between the different parts of the factory indicate the low level of technology. The production performance recorded gave a

conversion index of between 1.8 and 2.0 for a 1.3 kg chicken at 54 days and a production of 350-400 tonnes per annum; a total of 150 full-time workers were employed. The farm is now privatised after constituting a joint-stock company with an Italian business. Production resumed in September 1992 with the importation of 16 000 chicks; the ground floor of a single building is used and there are 13 employees. The farm buys animal foodstuffs from the market at 25 Lek/kg and sells 21-day-old chickens to farmers at Lek 60-61 each and 44-day-old chickens at Lek 125 per chicken.

The market for chicken is very attractive due to an almost non-existent domestic supply resulting from disease problems and to a constant demand. In December 1992, chicken on the Tirana market was valued at the same price as veal because of difficulties in obtaining alternative meat products such as beef and sheepmeat, since almost all the slaughterhouses in the country had closed down.

Difficulties of supply were confirmed by the massive delivery to the Tirana market in March 1993 of frozen chicken legs from Greece; these were displayed at the roadsides under totally inadequate hygiene and health conditions.

2.4 PIGS

The pig population in Albania reached its maximum size in 1990 with 220 000 animals, followed by a sharp fall in 1991. The situation was attenuated by a slight rise in 1992 after the closure of the state farms, as in the case of poultry.

Specialised pig breeding does not have the same importance as that of other species. However, pigs represent an major source of protein and lipids in rural areas, and particularly in mountain areas where pigs range freely among village houses.

2.5 TERRITORIAL DISTRIBUTION

Cattle breeding shows the highest concentration of livestock. There are over 50 000 head in each of the districts of Shkoder, Lushnye, Elbassan, Fier, and Korce, where forage is produced in large quantities and is most readily available (Table IIB.3).

Sheep and goat farming is concentrated in the same districts but they are also found in large numbers in the mountainous areas of the north and south-west of the country, in the districts of Berat, Vlore, Tepelene, Gjirokaster, and Sarande. In these areas, the mountainous conditions and productivity of the terrain do not allow for any alternative way of exploiting the scarce resources of fodder.

Pig farming produces over 15 000 animals but only within the districts of Korce, Shkoder and Lushnye.

3. MEAT PRODUCTION

Total production of meat grew constantly until 1990 but underwent a slight fall in 1991 (Table IIB.4). Until 1980, the reduction in sheep and goat meat production was offset by the steady increase in beef and poultry production. Since 1990, the poor results can be attributed mainly to a fall in the production of pig and poultry meat.

3.1 BREEDS

The production and yield obtained reflect not only the choice of breed and the criteria for genetic improvement adopted in the country but also the type of animal feed and the state of health of the animals (Table IIB.4). According to those responsible for selection and artificial insemination in the animal husbandry institutes, the different breeds at present are the following:

- cattle: 50% black Friesians, 35% Jersey, and the remainder either Oberintal or Simmental;

- sheep: local breeds, with the presence of cross-breeding between Merinos and Tzigara with the very long-haired native breeds and also between Ile de France with the Hungarian breed, Avasi for milk production;

- goats: native breeds, mainly found in hilly areas and in the Mediterranean **machis**.

3.2 GENETIC IMPROVEMENT

Genetic improvement was concentrated on cattle farming. A programme of artificial insemination was followed, using the network of the co-operative and state farms.

Animal husbandry practices, including the widespread use of artificial insemination, evolved to suit the large-scale structure. The dismantling of the specialised animal husbandry centres compromised the supply of services provided for the co-operative farms and prevented the use of production techniques linked to the pre-existing structure.

The policies adopted, however, seemed to take into consideration the environment and farm specialisations. Great importance was attached to Friesians for milk production, and the Oberintal, an animal with three main characteristics, being small, tough and particularly adapted to harsh food supplies, was chosen in preference to the Brown Swiss.

Now, the difficulties in production techniques relate to other factors, such as the lack of buildings, the sheds, barns and warehouses appropriate to the new smaller size farms, and the very limited funding opportunities open to farmers who either can not afford or see no obvious need to use artificial insemination. The breeding of cattle and the growing of crops for fodder conflict with other land use requirements; imbalances in the livestock diet are created by fodder shortages and by

the lack of readily available concentrated feed. The structure for dealing with health control, prevention and cure is in a state of near paralysis.

As far as sheep production is concerned, it is important to stress the inadequacy of research and of improvements made to the local breeding stock. Instead, preference was given to the importation of foreign breeds, which are very specialised but incapable of adapting to the very poor quality of the fodder available in Albania.

Sheep and goat farming is one of the most attractive prospects for the country. The distribution of sheep makes their production complementary to that of crops and their use of agricultural by-products efficient. There is no competition for the use of land and the marketing potential, even internationally, is favourable. However, a thorough and intense selection and improvement of the local breeds is indispensable.

3.3 FEED SUPPLIES

The scarcity of fodder and the imbalance in the animal diet has a very negative influence on livestock production. The dismantling of a centralised system of production made up of large units has required adaptation of production techniques to the new conditions; for example, the transformation of the centralised production and fodder supply into a system more appropriate to very small farms is characterised by strong pressure on the use of land. The cattle population per farm is rarely more than two adult animals.

Cattle breeding in co-operative and state farms made use of green forage, of alfalfa and of maize silage during the winter months. The present diet is based on pasturing and the use of hay forage and of grain and maize by-products usually stocked in heaps near the farm buildings. The small size of farms prevents the practice of maize silage, a technique which permits the production of a greater quantity of forage per hectare.

The state of the nutritional imbalance, aggravated by the lack of available concentrated feed, manifests itself in low yields and by the small size of the animals. Milk production is at best two tonnes per annum.

Useful experience was gained at a livestock farm specialised in milk production, with the gift of 600 pregnant Friesian cows from the German government in 1989. Half of the cows were sent to the experimental animal husbandry centre at Durres, the Stacioni i Zooteknise Xhafzotaj, and the other 300 cows to a second experimental station near Tirana. The project also sent specialists, new breeding technologies and frozen sperm to Albania. During the first milking period, the cows produced 4.8 tonnes of milk with on average a 3.9%-4.0% fat content per animal. Production was reduced to 3.3 tonnes and 2.7 tonnes per animal respectively during the second and third milking periods, mainly due to an insufficient and unbalanced diet. By December 1992, the lack of forage had reduced the number to 180 cows. Forage was bought in from

private sources at very high prices (given the competition with alternative crops); maize silage was bought at a base price of 6 Leks/kg.

Food supplies for sheep are almost exclusively pasture, while the winter diet is integrated with small quantities of hay and maize.

4. SLAUGHTERHOUSES AND MEAT PROCESSING PLANTS

The meat industry is structured into slaughterhouses and processing plants for meat and by-products. There are 28 slaughterhouses, 14 meat processing plants and five tanneries, distributed uniformly throughout the country.

4.1 SLAUGHTERHOUSES

The slaughterhouses can be divided into three types, according to capacity, the date of construction and the technology employed.

The five slaughterhouses at Berat, Durres, Fier, Korce and Vlore were constructed between 1980 and 1985. They are built on two floors and are equipped with iron-made machinery, are partially mechanised and have some refrigerating capacity. At each one, the slaughtering capacity is 15 cattle, 40 pigs and 60 sheep per day on the one production line. The slaughtering line is on the first floor and the by-product processing plant is on the ground floor. These slaughterhouses have no equipment for blood dehydration, nor do the refrigeration facilities work. The Korce slaughterhouse is now closed.

A further eight slaughterhouses, located at Gjirokaster, Dibre, Mat, Librazhd, Pushkruia, Delvine, Pojradetz and Permet, were built between 1980 and 1985. Their construction and design is similar to the first group but their capacity is much smaller, only 5 cattle, 10 pigs and 30 sheep per day.

There are another 14 slaughterhouses in other smaller cities. They were constructed 30 years ago.

The slaughterhouse at Tirana, now closed, differed from the others in both its production and storage capacity. The slaughtering lines were separate for each of the species; the production capacity was 20 cattle, 200 pigs and 200 sheep slaughtered per eight-hour work-shift, and 30 tonnes of meat processed in every 24 hours. Constructed in 1963 using Hungarian design and technology and put into operation in 1966, the building is on three floors; the slaughtering lines were on the top floor, storage for half carcasses and by-products was on the first floor and the ground floor was used for meat processing and for the storage of meat products.

At full capacity, the slaughterhouse employed 350 specialists and 800 workers. It was completely mechanised and had the capacity to preserve and transform all by-products, apart from the hides which were

only salted at the plant. Although the slaughterhouse is closed, part of the meat processing plant is kept in working order to allow a small number of employees to work on the 100-200 kg of frozen beef which is imported from abroad.

The building, machinery and equipment are obsolete and inadequate even to satisfy the minimum standards of health and hygiene. The whole plant appears beyond recovery, both due to its general obsolescence and its proximity to residential areas; it was built in the suburbs. In 1989, a slaughterhouse for chickens, the only one in Albania, was built in Tirana; it was equipped with Slovakian machinery but it also is now closed.

Privatisation of the slaughterhouses is progressing slowly. However, not one plant was privatised by November 1993 (see Table IIB.6).

4.2 MEAT PROCESSING PLANTS

There are 14 meat processing plants in Albania. Generally small in size, they are not being used to full capacity while awaiting privatisation. During the first phase of privatisation, the plants at Berat, Durres, Fier, Korce and Vlore should be improved using equipment and capital from Greece.

Demand for pork is strong at the present time but the processing of pigmeat is little more than primitive, using ancient and established methods. The pigmeat plant at Tirana, attached to the slaughterhouse, was built to process 5-6 tonnes per day and was capable of supplying 40 different products. In February 1993, the plant produced only one product, a mixed pork and beef sausage, at a limited capacity of 100-200 kg/day. This product was sold directly from the plant at Lek 270 per kg.

4.3 TANNERIES

Tanning is carried out at five tanneries, located at Tirana, Shkoder, Vlore, Gjirokaster and Korce, where the level of production specialisation is high. The Tirana tannery produced only sheepskin coats and (fox) furs, the Vlore tannery only treated cattle hides, while the remaining tanneries were able to work with any product. These plants are now inactive and are awaiting privatisation.

Until 1990, tanning provided a good export trade which has now been interrupted. The closure of the tanneries allows for the exportation of fresh hides to the Turkish, Macedonian, Greek and Italian markets only.

In March 1993, the prices for hides and skins were as follows: fresh cattle hides were sold at US\$1.1 per kg, kid hides at US\$1.3 per hide, and the skins of adult sheep at US\$1.5-US\$2 per skin. Insufficient distinction was therefore made between the quality of the products and their value, particularly for the high quality hides such as kid.

The spread of various skin parasites in sheep in certain areas of the south-east of the country had repercussions on the commercialisation of the skins. This underlines the importance of preventive action and veterinary care.

Pigskin is not tanned for traditional reasons. These include the scarcity of the raw material and the habits of eating and smoke-curing, practised by the population of catholic origin in the north of Albania.

5. MILK PRODUCTION

Milk is of significance in Albania because of the constant growth in production. A growth due in fact to the increase in the production of cow's milk up until 1980, which compensated for the decline in that of sheep and goat's milk which has shown an increase only since 1985. This trend is linked to the increase in livestock numbers and, to a modest extent, to the improvement in breeding techniques (see Table IIB.5).

The production and sale of milk and dairy products are very important activities in Albanian agriculture. When available, fresh cow's milk can sell for Lek 25 per litre on the Tirana market; this would be the farmers' price as the farmers themselves bring the milk into the city. In most cases, the milk is treated with preservatives, is almost always diluted with water, and has not undergone any sanitary or hygiene control.

The dismantling of the co-operative and state farms affected not only the technological aspects of the production and sale of milk but also the dairy producers themselves. They were given no preparation and generally lost their patrimony of traditions and training.

6. THE MILK INDUSTRY

The milk industry is made up of both large and small factories. The 18 large factories were constructed between 1970 and 1975, with a maximum manufacturing capacity of between 10 and 50 tonnes of milk per day. Provided with equipment from other Eastern European countries, these factories were able to produce fresh milk, butter and various processed and semi-processed cheeses, and in one factory only, powdered and condensed milk.

The smaller units numbered 500, some of which were seasonal. They were distributed around the country in order to satisfy demand in the mountain areas and to facilitate the collection of milk from the co-operative and state farms; 200 were privatised in November 1993 (see Table IIB.6).

The destruction of the milking parlours and the privatisation of cattle led to a complete breakdown in the collection, processing and transport of milk and dairy products. The small quantities offered for sale by each producer and the lack of any organisation capable of co-ordinating the collection, refrigeration and transportation of milk to the

factories, make attention to this sector a priority. In addition, the inability of supply to meet demand, particularly in the large, residential areas, together with the extremely high prices of milk products in these areas and the lack of respect for and control of any form of hygiene or sanitary control need to be resolved.

The factory at Tirana is currently out of operation; its privatisation is being studied. Among the small factories, the situation at Buddel, a few kilometres north of Tirana, is worth examining. This factory, in normal working order from 1970 to 1980, processed a maximum of 20 tonnes of milk per day, collected from the neighbouring co-operative and state farms. During that period, 40 people were employed for the production of three types of lightly matured cheese, semi-processed and processed pasta, ricotta, butter and milk. This factory now only employs four people and processes 100 kg of milk per day which is collected from 30 private producers located within a radius of six kilometres. The producers provide their own transport and are paid Lek 20 per litre, every other week. The factory makes one type of cheese which is sold on the Kruje market at Lek 200 per kg and ricotta, sold at Lek 40 per kg.

A return to production in the small factories would be useful and inexpensive since no particular technology would have to be employed. The reopening of the larger factories would be possible after some modest help to provide restructured and improved sanitary conditions.

7. ANIMAL HEALTH ASPECTS

With reference to the classification approved by the World Health Organisation (WHO), only one of the 16 pathologies classified in group A is found in Albania, the pseudo fowl pest or Plague. The situation of this pathology appears to be particularly difficult given the virulence of its origins, the lack of a vaccination against it and the importance of poultry production for farming families, both in the production of food for home consumption and for sale on the market.

The group B pathologies found in Albania are as follows:

Anthrax or charbon, splenic fever: - Between 100 and 150 cases of this pathology are registered each year; vaccination could be effective. The distribution of livestock among farmers is one reason for the spread of infection and of human health problems as a consequence of the absence of any checks on the meat. The most frequent cases are to be found in the lowlands of the centre and south of the country.

Bovine brucellosis: - According to the director of veterinary services in Albania, there have been no cases for three years. Prevention includes two check-ups per year which are at present very difficult to carry out, due to the inability of the veterinary services to provide controls throughout the territory.

Brucella melitensis: - This pathology is common in pastures in the mountain areas in the south of the country, in the districts of Sarande, Gjrokaster, Tepelene and Vlore. Each year, 1 000-1 200 animals are affected and subsequently destroyed.

Tuberculosis: - Sporadic cases of not more than 300 animals per year are reported, mainly in the north-east of the country, in the districts of Dibre and Mat; the human population can also be affected.

Leucosis: - Over 25% of the cattle population is infected. The Veterinary Institute for Preventive Medicine uses a German method to produce vaccines using antigens made in Albania, which are very expensive to produce.

Salmonella ovis: - This could be controlled by adequate preventive measures.

The typical parasite pathologies are widespread, favoured by a climate which facilitates their biological cycle. Treatment with albendazolo, twice a year, is effective but very expensive.

Among ectoparasites, sheep scabies is a very serious pathology which has become common and difficult to control over the last two years with the spread of flocks. The necessary therapy is expensive and the Albanian veterinary services are unable to carry out preventive treatment because of the lack of resources and necessary raw materials.

There has been a strong growth in pathologies due to the breeding techniques practised prior to privatisation, in stabilising diseases and in providing an unbalanced diet. The present situation is marked by a decrease in respiratory diseases and enteropathologies, offset by an increase in parasitic diseases.

The current situation in the country areas does not allow for animal health intervention in as equally an efficient way as in the co-operative and state farms. Farmers have lost almost all knowledge of traditional animal husbandry. For this reason it is essential to provide information about the most frequent and damaging pathologies, activate a general programme for prevention and cure, and extend controls on animal products for human consumption.

The low level of consumption and the prospect of an increase in demand for animal products renders some kind of veterinary control of these animals essential. This justifies the priority given to the reorganisation of the slaughterhouses and to the prevention and cure of animal pathologies.

The Albanian veterinary services possess the necessary professionalism to carry out these tasks, but not the financial means required.

8. VETERINARY SERVICES

In 1991, the Ministries of Agriculture and Food, Justice, and Foreign Affairs, together with the Order of Veterinary Surgeons, drafted new legislation based on the Italian and French services, which was presented to the Parliament in 1993. State-employed veterinary surgeons were granted the right to work freelance in 1991.

The veterinary services are supported by a large number of research centres. One of these, the Institute of Livestock Research known as the IKV, is specialised in the prevention of diseases and in the production of vaccines. When it was set up in 1960, it employed as many as 200 people; now, only 24 veterinary surgeons, 56 technicians and 20 administrative staff are employed, and the equipment is inadequate and often obsolete. The Institute no longer receives a state subsidy and is run as a private pharmaceutical industry. However, it is capable not only of producing all the vaccines necessary for the pathological problems present in Albania but is also able to produce vaccines for other countries. It lacks raw materials, glass containers and equipment, which has resulted in the under-use of its potential.

The veterinary service is also supported by a network of 26 local veterinary laboratories equipped with services for disease prevention and therapy, but which have at present very little capacity to do this work.

The veterinary service has personnel with a good level of professional training, structures which could be recuperated, and equipment and the basic material, medicines and financial resources.

LOTUS TABLE IIB.1

LOTUS TABLE IIB.2

LOTUS TABLE IIB.3

LOTUS TABLE IIB.4

LOTUS TABLE IIB.5

LOTUS TABLE IIB.6

PART III - AGRICULTURAL EDUCATION, RESEARCH, AND EXTENSION SERVICES

A good level of education and widespread professional knowledge are essential for a small country with a small population such as Albania. With limited raw materials and scarce resources of agricultural land, it is necessary to increase labour productivity in order to further economic growth. These educational aims especially apply to Albanian agriculture.

Since the collapse of the Socialist state, the education system in Albania, and in particular the agricultural education structure, is undergoing fundamental reform¹⁴⁰. The objective of this reform process is to adapt the elementary, vocational and high school/university education system to the new political and economic requirements of a democratic society and a market-oriented economy.

1. AGRICULTURAL SECONDARY SCHOOLS

At present in Albania, compulsory education lasts eight years, divided between four years of elementary school and four years of upper school. If academic training is to follow, it is possible to attend four more years at either a middle school, also termed a Gymnasium, or a vocational middle school.

Such middle schools in Albania cater for the main professions. For agriculture, the vocational middle school is called a secondary agricultural school¹⁴¹. These schools offer, in addition to the more general basic subjects, practical technically-oriented training in plant production and animal husbandry. A diploma from such a school entitles the student to admittance to an agricultural university.

Until recently, there were about 350 agricultural secondary schools, some in very small villages. Just less than half of all middle school pupils were taught at agricultural secondary schools. The strong regional distribution of this type of school and the high attendance rate was in part due to the large proportion of people living in rural areas, some 65%-70% of the population, but also to political ideology.

The quality of the teaching at such schools was, and probably still is, relatively low and the level of knowledge amongst the pupils similarly weak. In their admittance examination to the Agricultural University in Tirana, the AUT, the students' knowledge of basic subjects and foreign languages was poor. Teachers in rural areas were usually university graduates without any teacher training. To compensate for this disadvantage, applicants from the rural areas received credits at the admittance test as well as in the first semesters if studying subjects such as chemistry, physics and mathematics.

In addition to the agricultural secondary schools, there are two vocational middle schools in the town of Shkodra that offer four-year diplomas for the veterinary and forestry professions.

1.1 REFORM MEASURES

With the development of a private farming sector, the professional requirements of students of vocational schools, as well as the contents of the curricula, have changed fundamentally. Whereas in earlier times agronomists were expected to possess highly specialized knowledge in one or two particular fields, they are now expected to have a wider knowledge; in addition to production techniques, agronomists are now required to learn business administration.

The plan is to replace the four-year system of agricultural secondary schools by a two-year course from 1993/94 onwards. In future, 60%-70% of all lectures will consist of practical subjects, whereas in the past the course was divided equally between theory and practical work. The main subjects will be agronomy and animal husbandry but there will also be lectures and practicals in engineering, farm building techniques, farm management and book-keeping in order to induct the skills that a modern private farmer needs. An argument in favour of a reduction in course length is to cut the time that farming families are deprived of student labour. The majority of pupils in agricultural secondary schools have a rural background to which they return after graduation. During their education, the majority stay at boarding schools.

In 1992/93, about 7 000 pupils attended agricultural secondary schools, 70% of the scholars were male. The Ministry of Education expects these numbers to drop substantially and estimates the number of students in 1993/94 to be 5 200 and only 2 000-2 200 in the years thereafter. This implies, as regards professional skills, that only very few of the now 400 000 farms will be able to take advantage of someone with a higher and specialized technical diploma in agriculture. At the same time, the number of agricultural secondary schools will be reduced to about 30, one in each of most of the country's 36 districts.

It is planned to retain the middle schools in Shkodra for veterinary and forestry sciences. The programme is to be reduced to three years, most probably to enable those young farmers to return to the family plots as soon as possible.

1.2 TRAINING FOR AGRICULTURAL TEACHERS

The level of education at these schools will almost certainly be improved by the Educational Center for agricultural secondary school teachers, which will probably be established at the Albanian University of Tirana, the AUT. According to the Ministry of Education, classes are due to commence in 1993/94 for six-month periods and with an intake of 15-20 AUT graduates at a time.

About 230 teachers will be needed for the 30 agricultural secondary schools. With two classes each year at the Educational Center, it would be possible to give all of these teachers the necessary pedagogical skills within six to seven years. Teachers for the Center will be trained at the American Farm School in Thessaloniki in Greece. This

school, financed by an American sponsoring group, provides Albania with advice and staff for the reform of the middle-school system.

Also, despite the efforts being made, it will probably take longer than expected to supply the badly-equipped agricultural middle schools with adequate teaching materials as well as with the technical equipment for the laboratories and experimental farms. This will hinder a rapid improvement in the level of education.

1.3 PRIORITIES

The agricultural education system, vocational as well as university education, is undergoing a fundamental reform process. The aim is to create a system that meets the new requirements of a democratic society and a market-oriented economy.

Private farming requires new professional capabilities. A farmer is expected to be an entrepreneur with a wide knowledge. It is essential to raise the standards of lectures and examinations at the agricultural vocational schools so that students who plan to attend the universities can fulfil the entry requirements. Those students would then be exempt from the initial semester, devised mainly to make up the deficits of knowledge at the agricultural vocational schools, particularly in natural sciences. It is intended to replace the former four-year system of agricultural vocational education by two-year courses characterised by stronger practically oriented teaching.

Quantity and especially the quality of human capital will also be crucial for the future development of Albania's agro-food sector. However, a high level of professional skill requires a sophisticated education system that in turn can not be created without high investments. Public financial resources for such purposes will not be available in Albania for some time, except in only very limited amounts.

Therefore, foreign technical and financial support in agricultural education would be an important contribution to the development of agriculture. The multiplier effect that education in vocational schools (and in the Agricultural University) will have on new production and processing methods as well as on economic skills, should not be underestimated.

It would be helpful for the development of vocational education to establish demonstration projects in one or two model schools¹⁴². Foreign advice to political authorities and to the school administrations and teaching staff to help create new programmes and educational targets is necessary. Financial and technical aid for the reconstruction of the school infrastructure would speed up this process, for example with teaching materials and technical equipment for laboratories and workshops. Financial support for these projects could be raised from the European Community's PHARE programme or from the World Bank, both of which offer technical assistance for reforms in Albania's education system. The career opportunities for women in agricultural professions also needs to be enlarged.

Young Albanian farmers need to be motivated for education and further vocational training. The dual education system of theoretical education in school and practical skills learnt on the job, as successfully practised in Germany, would suit the interests of the farming families. They do not favour a situation where their children have to stay away from the farm for too long and deprive the farm of labour as is the case with the present vocational boarding-school system.

This modernization of agricultural vocational schools requires teachers who are better qualified to meet the new demands in professional and in pedagogical teaching. Therefore, further training, consultation, and technical support should also be given to the teaching staff.

2. HIGHER INSTITUTES FOR AGRICULTURE

Until the Autumn of 1992, Albania had two Higher Institutes for Agriculture, the Higher Institute for Agriculture in Tirana and the Higher Institute for Agriculture in Korça. The former Institute is now a university, the Albanian University of Tirana, the AUT, and the latter was integrated into the Polytechnical University of Korça in September 1992 and is now one of the three faculties of that University.

There is no clear division of tasks between the AUT and the Faculty of Agriculture of Korca. The Ministry of Education, however, forecasts that a healthy competition could develop between the two institutions, particularly for general agronomy courses.

2.1 THE AGRICULTURAL FACULTY AT THE KORÇA UNIVERSITY¹⁴³

The curriculum for the 350 full-time and 35 part-time students being taught by an academic staff of 24 professors and 9 assistants focuses exclusively on plant production agronomy. Lectures on animal production are supplementary only.

The Faculty consists of three departments, Propadeutics for botany, chemistry, physics and mathematics, Plant Production for genetics, plant breeding, plant protection and plant cultivation, and Soil Sciences which includes agrochemicals and irrigation. In order to study economics, the students have to attend classes at the Economics Faculty of the University.

It is intended to introduce and develop the subjects of Environmental Protection and Agriculture, and Plant Protection for which foreign aid and assistance is sought. Students also have to learn one foreign language. Languages offered are, in order of importance, English, French and Russian; German may also be offered. Students usually choose the one they began at primary school.

The Faculty has an experimental farm of about 50 ha, which is used mostly for training students. Since the former Socialist enterprises were liquidated, it is difficult to find places for practical courses for students. The Faculty also has a library but the range of books is

extremely limited. It consists of some 20 000 titles, mostly Marxist and old Russian texts, that are not at all relevant to university education.

In principal before entering the Faculty, students have to pass a test in chemistry and biology. However, since the number of applicants for the 1992/93 study year, October to July, was lower than the numbers recommended by the Ministry of Education, all 75 applicants entered the Faculty without undergoing a test. Beginning with the 1992/93 academic year, the curriculum has been modernized to conform to the standards of Western agricultural faculties.

The course lasts four and a half years and ends with an examination for a degree in General Agronomy; it is not possible to specialize. In future, the degree will be entitled Graduate Engineer of Agriculture.

The socio-demographic background of the agricultural students in Korca has changed significantly. In the past at least 80% to 90% of the students came from rural areas or had an agricultural background; now the majority of freshmen come almost exclusively from the city. Current job opportunities for graduates are poor. It is unlikely that any of the 70 students that graduate in 1993 will find a job. There are already hundreds of unemployed agronomists in the South of Albania.

The future of the Agricultural Faculty in Korca is insecure. Under the present difficult economic circumstances, it is virtually impossible to improve the situation with the limited resources available in the short term. A stagnating budget can not meet the expenses urgently needed for restructuring, and will not while the outlook for graduate employment is poor. In addition, it is expected that the number of students will shrink, especially if the Military Service Act is changed to remove the exemptions of the male students from military service if pursuing an academic education.

It can be assumed that as soon as the private economy starts to prosper, teachers will look for better paid jobs elsewhere. The average monthly income of a university teacher in the Spring of 1993 was Lek 3 000, about US\$28. Expressed in terms of purchasing power, this is equivalent to less than 20 kg of meat. The monthly salary of a worker in a private firm was between Lek 6 000 and Lek 10 000.

Given the new demands of private agriculture, the Faculty's limitation to agronomy alone will prove to be too restrictive. Even though there are now lectures in economics, marketing and farm management, there is a lack of academic staff familiar with Western economic theories and the practical aspects of a market economy.

The Agricultural Faculty in Korça has to compete with the Agricultural University of Tirana, the AUT. To survive, the Faculty will have to specialize, for example in Agriculture and Environmental Protection or in Nutritional Science or even in Flower Growing. In pursuing such specializations, contacts with foreign institutions should be developed

and strengthened. Until now, these have consisted only of loose relationships with the universities of Greece, Italy, the former Yugoslav Republic of Macedonia, Germany and France.

The outlook of the Korça University, and therefore also of the Faculty of Agriculture may have been improved at least for the foreseeable future by developments in late 1993. According to university sources, the University is to become an American University after 1994/95 under the responsibility of the San Diego State University.

2.2 THE AGRICULTURAL UNIVERSITY OF TIRANA, THE AUT

Founded in 1951 near Tirana, the Higher Institute for Agriculture¹⁴⁴ has now changed its name to the Agricultural University of Tirana, the AUT. It is the main Albanian institution for the academic education of agricultural and forestry professionals and consists of four faculties, Agronomy, Agricultural Economics, Veterinary Medicine, and Forestry. The AUT possesses a scientific library, an experimental farm of 120 ha and a number of smaller experimental plots for the Faculty of Forestry.

A department for natural sciences with classes in chemistry, physics, mathematics, statistics and computer science is being planned with the aim of becoming a separate faculty. It is intended that other subjects such as botany and biology will be incorporated into it.

2.2.1 ORGANIZATION AND STRUCTURE OF THE AUT

The AUT is one of Albania's seven universities and two colleges that are subordinate to the Ministry of Education, in particular to the Department of Higher Education. The Ministry appoints the rectors of the universities and, on their proposals, the deans of the faculties. The heads of the chairs are elected by the scientific staff of the departments concerned. The Ministry also approves the curricula and the budget. A new University draft law is expected to give more autonomy to the universities and colleges.

(The structure of the AUT is shown in the following organigram:)

FIGURE III.1 STRUCTURE OF THE AGRICULTURAL UNIVERSITY OF TIRANA

2.2.2 TEACHING STAFF

At the end of 1992, the teaching staff of AUT consisted of 314 teachers, including the professors, assistant professors, and lecturers. About two thirds of the teaching staff are male.

The senior management staff of the University was replaced in the Spring of 1992 and, at the same time, new deans of the faculties were appointed. The process of renewal of the staff has been rather radical, with some teachers dismissed either because they owed their positions to the Communist Party or because their qualifications no longer met the AUT's new professional requirements¹⁴⁵.

The staff can be divided into three categories. The first consists of older teachers who have been mostly placed there under the old political system. The second group, aged between 30 and 45 years old, makes up 25%-30% of the staff and represents the driving force behind the present university reform process. They have good scientific knowledge and experience, speak foreign languages and are able to work with the new communication technologies. They could, with foreign help, accomplish the reforms in teaching and science within the new political and economic framework. The third group are young academics, aged 25-30 years old, who will be the bearers of post-reform development, educating the new agricultural student generation to European standards.

2.2.3 QUALIFICATION OF THE STAFF

To assess the scientific level of the AUT is primarily a question of the qualifications of the staff in teaching and research. Important criteria include the quality of publications and the standard of research results, as well as the level of teaching. Until 1990, publications in foreign journals were rare.

Teachers if allowed to study abroad did so exclusively in the former Soviet Union, other Eastern European countries or sometimes even in China. Very few, privileged teachers could spend time for research, conferences or scientific exchanges in Western countries, such as Italy, Greece and Turkey. Four decades of isolation from contacts with scientists in Western countries, as well as the shortage of Western scientific literature, has had a negative influence on the professional level of the teaching staff.

It is difficult to compare Albanian academic titles such as lecturer, candidate of science, docent, doctor of science, and professor, borrowed from the Russian scientific nomenclatura, with the Western ones. However, Albanians believe that a degree in General Agronomy from the AUT is equivalent to the German "Agrar-Diplom", Agricultural Diploma, that the Albanian "candidate of sciences" is equivalent to the holder of a German doctorate and that the Albanian "Doctor of sciences" is equivalent to the German university lecturing qualification, the "Habilitation". It is doubtful, however, that the comparison would bear scrutiny.

The AUT is substantially backward in almost every scientific area when compared with Western Agricultural Universities or Faculties of Agriculture. The technical equipment of laboratories and experimental stations is out-dated, lagging ten to twenty years and more behind comparable equipment in Western Europe, with a consequent impact on the quality of practical lessons and the research work performed there. Because of these poor conditions, one of the main aims of the AUT is to upgrade teaching and research to the level of education of Western European academic institutions.

2.3 THE AUT FACULTIES

2.3.1 FACULTY OF AGRONOMY

In the 1992/93 academic year, the Faculty of Agronomy consisted of eight chairs. They were the Chairs of Botany, Soil Sciences, Horticulture including vegetable production, Plant Genetics, Plant Protection, Crop Science, Biophysio-ecology and Agricultural Mechanization. The Chair of Biophysio-ecology was founded in 1990.

The Faculty offered four degree courses, in General Agronomy, in Plant Protection Agronomy, in Vegetable Production Agronomy, and in Fruit-growing Agronomy. As of the 1992/93 academic year, only one degree is offered, in General Agronomy. The length of the degree course remains four and a half years.

The daily university routine was rigidly structured until recently but has now been revised. The students have to attend lectures in 39 subjects, including the basic agricultural subjects such as botany and chemistry and the obligatory foreign language; each one is followed by a written or oral examination

The ratio of lecturers to students, as in the other AUT faculties, compares favourably with equivalent corresponding data in Germany. In 1991/92, there were 70 faculty teachers and 763 full-time students, a teacher/student ratio of 1:11. The teachers are also responsible for the correspondence students of whom there were 193 in 1991/92.

The number of agronomy students is falling and will continue to do so because of the unfavourable outlook. In future, it will be necessary for agronomy students to stress their economic subjects to match better the job requirements of privatised agriculture. The technical and personal basis for such a reorientation is still lacking.

Preparations are under way to put more emphasis on the subject of processing of agricultural raw materials. There are plans to create a section on agricultural industries within the department of Biophysio-ecology but the laboratory would have to be modernized and equipped. It would then be one of the tasks of this laboratory to introduce and adopt international quality standards for food products in Albania as part of Albania's effort to become competitive on the European markets.

2.3.2 FACULTY OF AGRICULTURAL ECONOMICS

The Faculty of Agricultural Economics is the second largest at the AUT in terms of student numbers, 1 301 students in 1992/93, and employs the largest number of teachers. This size is partly due to the additional services provided for other faculties, such as lectures in foreign languages and basic courses in economics and statistics. In addition, the Faculty counsels just over half of all of AUT's correspondence students, 426 of the 821 students in 1992/93.

As in other faculties, the number of registered students is dropping compared with earlier years. Nevertheless, students' expectations of job prospects with an economics degree remain high, especially regarding possible employment in the private agricultural and food sector. Students can choose between business administration and general economics. There is a higher proportion of female students in this Faculty perhaps because of the job prospects for administrative work.

In the 1992/93 academic year, the Faculty consisted of seven chairs. These were the Chairs of Micro and Macro Economy, Business Management, Marketing, Financial Policy, Statistics, Sociology and Law, and also of Foreign Languages which served all four faculties.

Due to its earlier Marxist-Leninist ideological orientation, the Faculty now faces some difficulties adapting staff and course content to new curricula and research projects. From the 1992/93 academic year, the new curriculum of 30 different subjects was supposed to meet the basic standards of a Western Faculty of agrarian economy.

The further development of the Faculty could be helped by setting up a new chair for extension services and either a chair or a department for the study of new forms of agricultural co-operatives. Post-graduate studies could also be developed. In order to be able to put the new market-oriented approach into practice in the teaching and research programme, the Faculty hopes to receive personnel and financial aid from the European/Albanian programme sponsored by the American agencies, USAID and VOCA. (The US Agency for International Development and Volunteers in Overseas Co-operative Assistance.)

The previous system of correspondence study does not have good prospects, given the new political conditions. In the past, it was easy to avoid enrolment tests by starting a correspondence course. It was through this form of university study that the Communist Party enforced mass education in Socialist Albania.

2.3.3 FACULTY OF VETERINARY MEDICINE

In 1992/93, 1 321 AUT students were registered at the Faculty of Veterinary Medicine, making it the University's largest faculty in terms of student numbers¹⁴⁶. This appears surprising given the more than 2 000 unemployed veterinarians in Albania, and the poor study and research conditions at the Faculty¹⁴⁷.

There is no rational explanation for the large number of students and little hope that the job situation will improve in the short term. By the end of 1992, not one private veterinary surgeon's office was established in the whole of Albania. The reasons are that prospective veterinarians have no money to open a private practice, and that no modern medical equipment or veterinary medicines are available in Albania. Besides, the former Socialist legislation which make it illegal to open a private office is still applicable.

The Faculty also covers the teaching and research into animal husbandry. In the past, veterinary medicine and animal husbandry were dealt with separately within the Faculty but the two areas were combined in 1991. However, due to the large number of unemployed animal husbandry technicians and the lack of demand for graduates in this area, lectures and practicals in this discipline were cancelled in 1992. It appears that no training possibility for animal husbandry exists in Albania as there is no Chair of Animal Husbandry at the Agricultural Faculty in Korca either.

The length of the course is four and a half years and consists of lectures in 35 different subjects. Written and oral examinations have to be passed in most subjects.

Since the Socialist farms were liquidated, it is difficult for the students to obtain training posts. Only one small barn on the experimental farm remains, housing a small number of cows, sheep and pigs, suitable only for simple tests or training. Anatomy and autopsy rooms as well as the out-patients' clinic are either out of order or barely working.

Due to the poor study conditions, but also due to the declining demand for graduate veterinarians in the public and agricultural sectors, the number of enrolments will fall to between 35 and 40 in each academic year, compared with about 300 in past years. The Faculty staff estimate that the total number of veterinary students in the future will not exceed 400, at best.

The Faculty has eleven chairs. The Chair of Biology was founded in 1989 and includes fish cultivation and fishery technologies. The Chair of Microbiology was founded in 1990 as was the Chair of Zoo-culture. The remaining eight Chairs are those of Physiology and Biochemistry, Genetic Improvement of Animals, Animal Anatomy, Animal Pathology and Reproduction, Infectious and Parasitic Diseases, Non-Infectious Diseases, Ruminant Breeding, and Animal Nutrition. The present teaching staff consists of 64 people.

2.3.4 FACULTY OF FORESTRY

For a complete profile of the AUT, some information on the Faculty of Forestry should be provided¹⁴⁸.

The Faculty is the smallest of the four. It had a total of 355 students registered in 1992/93 and 56 teaching staff. The Faculty's future is not in question, given that Albania has 1 million hectares of forests covering 36% of the total land area.

There are five chairs covering Sylviculture, Afforestation and Erosion, Forest Exploitation, Forest Management, and Wood-processing. In addition, there are the Chairs for the Natural Sciences and Sports, which also offer services to the other three faculties.

2.4 SCIENTIFIC RESEARCH AT THE AUT

The policy of the former Communist party with regard to education and science was to separate research and teaching. This objective, however, could not always be realized in practice.

The education of students has always been and continues to be the main task of the AUT but research has also been a part of the work of the university staff. Depending on the department, about 60% to 75% of the working time is devoted to teaching; the rest is spent on research work. For the last two years, there has been no organized research in most of the departments at the AUT due to the lack or inadequacy of laboratory facilities. This is largely due to funding problems; available funds only cover salaries.

The old laboratories and technical equipment, some of which are more than 30 years old, cannot therefore be renewed, nor is there enough money to buy chemicals for the laboratories. In addition, research and studies are hindered by the general energy supply situation; breakdowns in electricity and water supply are frequent.

According to German experts and the AUT itself, the level of research at the University is far behind Western European standards and it will probably take years to catch up. Most of the research work carried out was applied, focusing for example on such subjects as plant breeding, soil science and plant protection.

Research work will continue but it is not clear to what extent. The intentions of the AUT are to enlarge and deepen the scope of research. Without research, at least supporting student education, the quality of the lectures and the educational level of the graduates will drop and the University would not be able to reach the standards set by the new agricultural conditions. To avoid this, the staff of the University must further develop their own professional level to international standards.

It seems very unlikely that research at the AUT can survive without foreign aid. The co-operation programme with the AUT planned by the German government assigns a substantial amount of money to help develop the research capacity of the University and also includes advisory help.

However, this aid is limited to the Faculties of Agronomy, Medicine and Forestry and to the university library.

2.5 AGRICULTURAL STUDENTS

The reports on Albanian agriculture by the World Bank and the FAO/UNDP do not provide any information on the students of the AUT and the Agricultural Faculty at Korca. They are important because, with their knowledge and skill, they will shape the future of Albanian agriculture. Some basic information about the students (of the AUT) is therefore worth mentioning.

In 1992/93, 3 814 agricultural students were registered at the AUT and the Agricultural Faculty in Korca. That is about 17% of all students in Albania, a little less than half of whom are women. Previously, about 75% of agricultural students came from the rural areas. This share is falling rapidly as the statistics for the 1992/93 academic year show that, for the AUT and the Agricultural Faculty in Korça, only 43 % of the freshmen came from the countryside (see: Figure III.2).

Numbers of agricultural students are falling and expected to drop further, even if new areas of job opportunities for graduates emerge. Possible new areas are the agricultural co-operative system, extension service, agricultural administration, marketing, vocational schools, and food processing industries. About 800 students at the AUT and the Korca Agricultural Faculty could be expected to graduate each year¹⁴⁹.

To encourage students to study agriculture and as a reaction to the falling number of applicants, most of the courses at AUT do not require an entrance examination, a requirement for other subjects such as medicine, law, and economy. However, given the high unemployment rate in Albania, studying gives at least some kind of social security and men can avoid military service.

Students generally receive a monthly bursary, either of Lek 1 427 for a full grant or of Lek 737 for a half grant. The full monthly grant is equivalent to about US\$14, equal to an average monthly salary. However, students from Tirana and Korca are excluded from this bursary scheme.

The standard of living and working at the AUT is poor and the conditions in the dormitories are particularly bad¹⁵⁰. Foreign support and assistance would be very helpful for AUT students; their interest in doing internships abroad is high but such offers are rare.

The students are well aware of their poor job prospects. Questioned about their plans after graduation, quite a number of them replied that they would either look for a job or emigrate.

FIGURE III.2 SOCIO-DEMOGRAPHIC STRUCTURE OF AGRICULTURAL STUDENTS IN ALBANIA

2.6 PRIORITIES

The AUT is struggling to survive due to the inefficiency of the former Socialist education system, the almost total isolation of Albanian science from international academic exchange, and the economic and financial difficulties of the transition. Teaching and scientific research are stagnating or declining. Technical equipment, personnel and knowledge are being lost throughout the University.

However, because of the importance of the agricultural and food processing sector for the Albanian economy, the AUT as the leading agricultural educational institution will probably survive. Albania alone is not in a position to guarantee the survival of the AUT nor to stimulate development there.

Technical, financial and organisational aid as well as advice are in prospect. This includes an extensive German development programme for three faculties using millions of deutsche marks and executed by the German Agency for Technical Cooperation, the GTZ, as well as American aid projects for the Faculty of Economy to be implemented by the USAID and VOCA. In addition, co-operation projects between the AUT and foreign universities, such as the Italian, Greek, and Turkish universities, exist or are being developed.

In trying to raise the level of academic education to European standards, the University must, through its own efforts, improve the technical capacity as well as the quality of teaching and scientific research. The main priorities are as follows:

- the development of a new educational concept that aims for a stronger integration between the Faculties of Agronomy and Economy;
- the preparation of new teaching programmes;
- the introduction of new study courses, including internships;
- a better qualified staff, through intensive co-operation with universities and research institutes abroad;
- an intensification of exchanges with foreign countries;
- the publication of agricultural magazines and the foundation and reactivation of scientific professional associations;
- the preparation of a catalogue of professional requirements for teaching and research staff;
- a programme of organisational reforms, to include the build-up of a qualified university management structure and the introduction of performance-based salaries for teachers;
- the use of international university partnerships to give the AUT students the possibility of acquiring international experience and of improving their foreign language skills;

- an improvement in the poor living and working conditions of the students.

Albania's very limited research resources, due to financial restrictions and to the small number of qualified agricultural researchers, requires a division of labour between the University and the scientific research institutes that are part of the Ministry of Agriculture and Food. Pending financial and personnel consolidation, the AUT should concentrate on applied research related to its teaching subjects whereas the research institutes should concentrate mainly on basic research. With close co-operation between the University and the Ministry, the scientists of the AUT, for example, could evaluate and utilise in the Ministry's experimental farms the basic research results found by the Ministry's institutes. Research work at the AUT is being hindered by a shortage of technical engineers and laboratory assistants and of younger scientists.

3. THE AGRICULTURAL RESEARCH INSTITUTES

The foundation of agricultural research institutes outside of universities was, in the case of Albania, the practical consequence of the Marxist principle that research and teaching should be institutionally separated. This resulted in an indirect limitation of research activities at the former Higher Institutes for Agriculture in Tirana and Korca.

For a small country, Albania has a surprisingly large number of agricultural research institutes. The 14 to 15 institutes are located throughout Albania but the majority is to be found in and around Tirana. They are directed and controlled by the research department of the Ministry of Agriculture and Food. Their area of research covers the theoretical and practical aspects of production.

However, there is no institute focusing on economic and agro-sociology research. As part of the fundamental restructuring and development of agricultural research, the foundation of such an institute should be considered. It would be useful to do this in collaboration with the Faculty of Agricultural Economics at the AUT, because of the growing importance of these subjects for the new curricula and because of the limited number of competent Albanian specialists in these areas.

The structure of the agricultural research institutes in general is comprised of two to four research departments, a technical department, laboratories usually for chemistry and physics, and an experimental farm sometimes covering hundreds of hectares. In addition, the institutes sometimes have offices elsewhere in the country.

Independent research scarcely existed in the past when the Communist Party dictated objectives. Scientists had to work 100 days a year "in production" and, in the institutes, they were frequently assigned work

other than research that would have been better carried out by technical assistants.

Research was more quantity than quality oriented¹⁵¹. Overseas scientific contacts were strictly limited and controlled. Scientific literature from the West was available only on a small scale. Exchange of academic staff took place almost exclusively with institutions from Eastern Europe and sometimes from China. Russian was the most commonly spoken language among scientists.

In the institutes, research into plant production, for example, was largely focused on the implementation of field experiments and tests. The breeding of new seed varieties and their reproduction for farms was a subject of particular interest.

In addition to research, the institutes had to provide scientific advice to the analytical laboratories of the Directorates for Agriculture in the districts. For example, the soil laboratories obtained information from the Soil Research Institute in Tirana and the plant protection laboratories from the corresponding institute in Durrës. In other instances, the institutes provided genetic material.

3.1 RESTRUCTURING

Since 1991/92, the institutes have been developing new structures and working methods and looking for research objectives. However, research work has stagnated and in some institutes no research has been done in the last two years. There is an absence of current objectives for research projects and a lack of financial and technical resources to continue the work on the projects.

The budgets of the institutes are restricted and adjustments for inflation are generally not made. At best, they cover personnel costs; purchases of new equipment which is not available on the Albanian market and of literature have virtually stopped. Existing instruments, mostly of Eastern European origin, are outdated or defective and there are hardly any laboratory chemicals. Research is often hindered by the failures in electricity and water supplies and other technical services.

A majority of the experimental farms belonging to the institutes have been wilfully destroyed, including green houses, fruit plantations and vineyards. In some cases, former property owners just repossessed their farm land without going through formal procedures. People also reclaimed land to which they had no legal rights. A good example is the experimental area of the Maize and Rice Research Institute in Shkodra which before the political change amounted to 650 ha and is now reduced to a mere 30 ha.

Tight budgets and restructuring has entailed a reduction in staff numbers. This has resulted in the dismissal of personnel who got their positions for political reasons and not because of their qualifications. The positions of the directors and vice-directors have been newly filled.

The number of the scientific staff in the institutes which formerly averaged between 20 and 30 has been reduced to 10 to 12 researchers. The 595 specialists and technicians mentioned in the FAO/UNDP Study are now reduced by half¹⁵².

The following requirements are thought to be necessary for the future development of the research institutes:

- objective scientific research will become more important;
- the spheres of research which until recently were hardly covered will be intensified;
- employment will take place based only on qualification and merit;
- practical research will be oriented by the new demands of private agriculture;
- public relations are upgraded;
- the research will become, to some extent, commercialised allowing the institutes to sell some of their scientific results;
- new opportunities to create international contacts and scientific co-operation with foreign institutes will be utilized and expanded.

A precondition for the realization of these aims is greater autonomy for the institutes. However, the number of institutes is probably too large. A reduction and concentration on 6 or 7 larger institutes is seen by Albanian research managers as financially necessary and technically reasonable.

A further necessity is more scientific competition between institutes. Also, to ensure a better co-ordination and closer co-operation between the institutes, it is planned to set up a National Center for Agricultural Research.

The financial restrictions as well as uncertain prospects leads to concern that scientific staff could leave the institutes, resulting in a loss of expertise. Their desire to co-operate with foreign research institutes and companies is great and is believed to be the only solution to raising research standards to the European level.

For the institutes specialising in plant production, there is some hope for co-operation with foreign firms in seed breeding and seed reproduction. The institutes believe that the professional qualifications of the personnel are sufficient for such co-operation. The technical equipment of the laboratories, however, is obsolete and needs modernization with foreign help if possible. Recent collaboration with French, Italian, Belgium and German companies failed because Albania is yet not a member of the OECD Seed Certification Schemes.

3.2 PRIORITIES

In the past, agricultural research was concentrated in about 15 research institutes and stations and administered by the Ministry of Agriculture and Food. Research was mainly determined by Albania's policy of food self-sufficiency in grain crops. Research emphasis was on applied science, such as the breeding and reproduction of seeds and plant materials (see Part IIA. Seed Farming). For these purposes, the institutes had large areas of land.

Technical equipment and foreign literature were scarce. Communication with Western research institutes was rare. These restrictions led to backwardness in most fields of Albanian agricultural science.

The situation now is characterized by very restricted research work in most of the institutes. For political and financial reasons, the small number of researchers in the institutes has been further reduced. Even though the continuation of all 14 or 15 institutes is uncertain, the staff are developing new organisational structures. They are also developing new research objectives and methods.

The future research agenda of the Ministry of Agriculture and Food has not yet been made public. The division of labour between the research institutes of the Ministry of Agriculture and Food and the AUT for the future is therefore still unclear. An institute focusing its work on agricultural economics, sociology, and agrarian law should be considered.

To increase the efficiency of research, the number of institutes needs to be reduced to allow greater concentration on research topics and the number of researchers per institute to be enlarged. At the same time, the qualifications of the researchers and the technical equipment of the reconstructed institutes need to be improved.

The new educational policy allows the institutes more autonomy. This could increase competition within the research sector. As public finances for research and development are and will continue to be very limited for some time, the institutes could use their increased autonomy to raise the money to modernize their equipment base. For this purpose, the institutes are looking for the co-operation of foreign partners.

4. THE EXTENSION SERVICES

Before the liquidation of the co-operatives and the state farms, the 550 agricultural enterprises were, to a large extent, self-sufficient in extension services. For the main products, they had their own specialists, the majority of whom had an academic qualification. In addition to the agronomists, veterinarians and agrarian economists, there were specialists in the production of fruit, vegetables, wine and livestock and in agro-chemicals. The state farms also had agricultural engineers.

Extension service activities were also provided by some departments of the former Higher Institutes for Agriculture and by the research institutes of the Ministry of Agriculture and Food. These services concentrated on providing advance warning of plant diseases, information on animal diseases, recommendations with regard to plant protection measures, and calculations for the use of fertilizers.

With the transfer of agriculture to the private sector, the extension service is having to be newly designed and rebuilt. Most of the former specialists are now unemployed. Moreover, the AUT and the research institutes are in the process of being restructured themselves and therefore are unable to focus on the provision of extension services.

4.1 A NEW SERVICE ORGANISATION

For farmers, the transformation is causing great uncertainty about the future, especially with regard to property rights and ownership of farmland. Therefore, the environment for developing an extension service is not favourable. In addition, a framework for agricultural policy has not yet been formulated by the Government. To date, privatisation policy is concerned only with land questions. The full economic and social content of a rural development policy has still to be elaborated. As long as the aims are not set out, it is difficult to give precise guidelines on the objectives and organisation of a new extension service.

Some advisory services, mainly in the area of crop production are provided by the Directorates for Agriculture in the districts but their main task is still the administration and management of agriculture. The advisory work at the farm level is mostly supplied by professional staff of the Directorates employed in the rural sub-offices. They are located in the 539 central villages, also called united villages which cover four or more villages, in which the administrative offices of the former Socialist co-operatives were housed. Due to the limited number of official cars and the lack of gasoline, the work of these professionals is greatly hindered.

The agricultural press is also assisting farmers by publishing reports about the cultivation of agricultural products or informing them on how production problems are solved abroad. Two publications subsidised by the Ministry of Agriculture and Food are available, "Panorama Agroushqimore" and "Agrovizion" but their circulation is limited. Since the Autumn of 1993, Albanian television broadcasts a weekly thirty minute programme about farming problems and the American association, VOCA, has started a television information series about the market economy.

Given the low income of most of the farmers, a private advisory service or a co-operative based service charging the users does not appear to be a realistic solution during the transition period. Institutions such as the Chambers of Agriculture found in Western European countries, which could either alone or with the help of an extension service give advice and assistance, do not exist.

Private rural wholesalers and dealers who could provide some form of advisory service related to the farmers' input and selling activities are just beginning to do so. The food processing industry is not in a financial or technical condition to offer such a service.

The Ministry of Agriculture and Food believe there is an urgent need to set up a government-run agricultural extension service. Although the Ministry is short of management expertise in this area, enough qualified personnel are available in the villages. These probably include most of the unemployed graduates but they lack many of the new skills needed.

In the Autumn of 1992, the Ministry of Agriculture and Food introduced measures to set up an extension service, including advisory services for crop and animal production and a service to provide business advice, using the Directorates for Agriculture in the districts. The plan is to establish teams, to include one agronomist, two specialists in animal husbandry one of whom would be a veterinarian, and one or two agricultural economists for questions on farm management and statistics. As a pilot project, teams would be installed in the central villages in five or six administrative districts on the coastal plains (see: Figure III.3).

FIGURE III.3 STRUCTURE OF THE DIRECTORATES FOR AGRICULTURE AT THE DISTRICT EXECUTIVE COMMITTEES

4.2 TERMS OF REFERENCE

In setting up and in operating an extension service, some specific problems have to be taken into account. There are considerable regional variations in agricultural production, often very local, between the coastal, hilly and mountainous areas. In addition, there is a large number of small farms, more than 400 000 in the 2 848 villages, using predominantly primitive working methods for cultivation and harvesting. The efficient operation of an extension service would also be hindered by the underdeveloped communications infrastructure.

The most suitable target for extension service activities are the nearly one hundred Private Farmers Associations, the PFA. They are more open to progressive production technologies and marketing methods than are the small individual farmers who are normally aiming at self-sufficiency and who are financially much weaker. Farms in which family members have had a university education or finished an agricultural vocational school would also be receptive.

The objectives of the new extension service would be to transmit business and production knowledge and to give assistance in the decision-making process on the basis of market economy criteria, with the aim of improving the working and living conditions of farmers. Environmental and social aspects of rural life have also to be part of the extension service. Important elements of advice would include the following:

- information about the basic principles of a market economy;
- development of new forms of agricultural co-operatives for the purchase of production inputs as well as for marketing, primary processing, usage of irrigation water and the administration of irrigation plants, common usage of grassland and machinery usage;
- consolidation of farmland to eliminate the fragmented structure of farms;
- mechanization and other technologies, tillage, sowing and application of fertilizers.

It is difficult to estimate how the need for an extension service will develop in the future. It can be assumed that, through the restructuring and consolidation process in agriculture as a whole and on farms, the need for advice will grow. Therefore besides an efficient organization, qualified advisers will also be necessary. A Chair or an Institute for Agricultural Extension Services at the Faculty of Agricultural Economics at the AUT might help here.

During a transition period, a special retraining programme could be set up for unemployed agricultural specialists to train them as advisers for the extension service. At the same time, the subject of Extension Services would have to be added to the curriculum of the Faculty of Agricultural Economics and become an examination subject for graduates

who want to work in this area. In addition, practical field studies researching the methodological and educational aspects of an extension service could be carried out.

The research institutes could also provide extension service activities again, such as advisory and training lessons for farmers planning to buy agricultural machinery and tractors from abroad. This could be possible as long as a corresponding rural dealer system was not in existence.

4.3 PRIORITIES

When the process of privatization of the state farms is completed, there will be more than 400 000 farms ranging in size from 0.8 ha to 2.0 ha, the average size being 1.4 ha.

Only a few of the new farmers are sufficiently educated in general farming work; most of them are skilled in one area only, such as mechanisators, zootechnicians or agronomists. In response to a questionnaire, more than 85% of farmers responded that they had no knowledge of the market economy, the determination of prices, agrarian markets, supply and demand or the management of credit¹⁵³.

This means that the farmers are working in considerable ignorance about inputs and the marketing of their products. Therefore, farmers need access to information on questions such as how best to combine production inputs.

Consequently, an adapted and diversified extension service is needed to meet a changing agriculture. Farmers are cautious about an institution run by government because of the negative experiences of the past. Overcoming these prejudices will take time and a careful approach. At least initially, the service should be either free of charge or at low cost.

Legislation concerning an extension service in Albania did not exist until very recently. A decree governing the reorganisation of the services in agriculture was passed in 1992. In it was recommended the employment of the 2 280 agricultural high school specialists from the former co-operative farms in the planned extension service.

The present state-organized service consists of separate advisory departments attached to the Directorates for Agriculture in the districts and also, in some instances, at the level of communes or central villages.

Most of the employees of these extension service departments are narrowly specialised. They would need to attend retraining courses, oriented towards the new economic environment. These extended vocational training courses would benefit greatly from the support of foreign extension service specialists at either the AUT or the Agronomy Faculty of Korca University.

GENERAL CONCLUSIONS AND RECOMMENDATIONS

The spontaneous nature of early phase of the de-collectivisation of agriculture in Albania not only accelerated the process of agrarian restructuring but created a number of problems, quite different from those found in other former Socialist countries. The rapid transformation of a small number of large collectivised farms, centrally managed, into many micro-farms, managed by individual families, brought about a structural and organisational "revolution". The situation was exacerbated by the lack of an adequate regulatory framework. The ensuing social and economic confusion led to a dramatic deterioration in already low living standards that were only partially relieved by a large-scale food-aid programme. In the more recent period (not covered by this report), conditions have improved significantly. A remarkable degree of macroeconomic stabilisation was achieved, and in agriculture, production rebounded in 1993 and 1994.

The analyses carried out earlier in this report point to a number of areas where specific policy actions are required in order to revitalise the agro-food sector in Albania. A number of measures are outlined below which Albanian policy makers may wish to consider as part of the reform process towards a more market-oriented agro-food sector.

1. Legislative reform

Establishing a legal framework in which private enterprise can develop is central to the reform process in agriculture, as it is for all sectors.

1.1 Land law -- There is a need to create a real land market in order to facilitate land consolidation and to allow the individual farmer better prospects of fully achieving the fruits of his investment and labour. Existing land law should be revised to give individuals full rights to own land. The right to sell land to other individuals should be affirmed together with the right to mortgage land.

1.2 Related laws -- The insertion of the right of ownership into the civil code, and the passing of a specific law concerning real estate, is necessary in order to provide a foundation for the regulation of the real estate market and thus for all related issue of investment in real estate. For example, there is no specific regulation which defines the exercise of access rights to holdings. It is therefore necessary to establish a whole series of regulations relating to access rights.

1.3 Land leasing Law - An open land market, through trading and renting, would favour land consolidation and thus the constitution of larger and potentially more efficient farms. As is the case with the entitlement to buy and sell land, land leasing acts as a mechanism to put land into the hands of those who will make more efficient use of it.

Similarly, land leasing encourages landowners to invest in land improvement. In this respect a law on leasing should also define the statutory relationship between land owners and farm tenants, and deal with such issues as dispute settlement and rental negotiations. However, it needs to be kept in mind that the co-existence of full land ownership and other forms of land tenure requires some restrictions on private property rights in order to protect the interests of tenant farmers.

1.4 Land mortgaging -- Collateral to secure borrowed capital is a fundamental requirement for obtaining such capital for investment. Land is usually a farmer's most valuable asset. The right to mortgage land can have significant productivity enhancing effects. Farmers mortgage their land in order to receive credits for inputs and machinery. They can also purchase additional land, using the land being bought as collateral for the loan. This practice is extremely important because it allows the purchase of land by competent farmers who may have limited savings available. Banks also favour the right to mortgage land. By using land as collateral for loans, banks can be confident of recovering their investment if loan repayment ceases. There is thus a direct corollary between the right to buy and sell land and the right to mortgage: only through a reliable property valuation determined by a functioning land market can banks assess risks and take financially sound lending decisions.

1.5 Land registration law - A land register is needed in order to specify the nature of entitlements to land and to develop a legal framework for land transactions. Titles to land should also be recognised by law and recorded. A corresponding **cadastral law** is also necessary, specifying the functions of the land registry office, including its legal role, topographical issues, and responsibility for data collection for economic and fiscal surveys.

1.6 Compensation for former land owners - The question of indemnity for former landowners could be resolved though adopting a simple compensation scheme which clearly defines eligible recipients. The compensation plan for former land owners (or their heirs) should be limited to the entitlement to monetary compensation for the forced take-over of land, or the entitlement to land that is not used for agricultural purposes. In the case of monetary compensation, bonds could be issued which would gradually be paid off, partly with the proceeds of a moderate land tax. Claims for the restitution of land in agricultural use should be limited to those who are actually farming the land.

2. Agricultural services

The new farm structure that has been created with the change in land management has, in its turn, brought a series of problems in the organisation and management of some important agricultural services, that were in the past directly dependent on central government or partially or totally delegated to the co-operative farms and state farms.

2.1 Irrigation and drainage -- The distribution of land has led to the destruction of a large part of the irrigation and drainage system and to a lack of maintenance of the distribution and drainage channels leading to a reduction in available water supplies. The main priority for intervention should be the repair of the water draining and distribution system, followed by the improvement in the management of irrigation water distribution by ensuring the sustainability and effectiveness of Water User Association on one hand, and by developing District Water Divisions that provide technical support to local Water User Association on the other.

2.2 Farm mechanisation -- The present small farm sizes do not permit an efficient usage of existing machinery and equipment, which was designed for use on large areas of land and on specialised crops. However, some of the existing farm machinery, although old, could be kept operative. Associations of private farmers provide a potentially efficient means of sharing this equipment and keeping it operative. There may be scope for the local development and manufacture of machinery adapted to the new small-scale farming conditions.

2.3 Agricultural marketing -- The changes in the production system require a corresponding reorganisation of the agricultural marketing system. There is now no real network of retail distribution in the country, and no wholesale market structure. The former is carried out spontaneously by individual farmers or by individual street traders. The second is dominated by importers and transporters who supply the main markets with no continuity assured or minimum standards enforced. The main infrastructural, institutional and legal requirements for the development of agricultural markets need to be identified. Local communities should be assisted in the development of retail and wholesale market infrastructure and a market information system.

2.4 Hygiene and sanitary controls -- Food hygiene and sanitary controls need to be specified and implemented so as to protect the consumer. Albania needs to define penalties in cases where standards are not respected (see 6.3 below).

2.5 Agricultural credit -- Although the generally low technological level employed by small-scale crop and livestock producers does not require high capital investment per farm, access to short-term credits is needed for the purchase of inputs such as seeds and fertilisers. Longer-term credits are needed for the modernisation, improvement and consolidation of farms. the development of an efficient rural credit system is therefore of special importance.

3. Education and Training

The development of human capital is perhaps the single most important requirement for a successful transition in the medium to long term and should be given a very high priority by policy makers.

3.1 Agricultural training -- There is a great need for farmers to undergo training because of the loss of farming culture and experience,

due to collectivisation. Little attention has been given to the special training needs for the large number of private small-scale farmers. Priority should be given to providing them with basic knowledge needed to operate and manage a farm. International co-operation with Albania in setting up a training programme for farmers covering domestic economy, farm economics and production technology particularly for livestock would bring substantial returns.

3.2 Agricultural Education -- Vocational education needs to be reformed including the upgrading of the teaching staff and the restructuring of teaching programmes. Financial and technical aid for the rebuilding of the outdated school infrastructure would speed up this whole process. Key needs include teaching materials and technical equipment in laboratories and workshops. The dual education system (a combination of theoretical education in school and practical skills on the job), would best suit farming families. Young people provide much of the labour on farms and families do not like their children to stay away from the farm for long periods as is presently the case with the vocational boarding-school system.

3.3 Academic education -- The level of academic education at the Agricultural University of Tirana will need to be raised to European standards through improved quality of teaching and scientific research, in particular in economics and ecology. In pursuing these objectives high priority should be given to developing new and better adapted curricula to provide graduates with the knowledge required under the new conditions. Teaching qualifications will need to be improved through intensive co-operation and exchange programmes with universities and research institutes abroad, providing teaching staff and students with the opportunity to acquire international experience and improve foreign languages skills. Employees of public and private institutions serving agriculture also need to be retrained.

4. Rural development

High levels of migration from the more disadvantaged rural areas has been occurring in response to the lack of job opportunities and other means of income generation. A comprehensive rural development policy needs to be developed to mitigate the more severe social and economic consequences of large scale migration by facilitating the emergence of viable economic activities in rural areas. Such a policy needs to facilitate the use, in a wide range of activities, of the whole range of human and other resources available in these regions, in order to improve conditions in these areas. However, it will take some time to develop and introduce such an integrated policy. For the shorter term, an improvement in agricultural structures and market conditions, however modest, may be the best means of influencing migratory behaviour and modifying its negative consequences.

The most promising activities are those which make the best use of resources in the most disadvantaged areas of Albania. This would encompass not only livestock breeding and the production and processing

of animal products but also the cultivation of aromatic and medicinal herbs, the development of freshwater fishing and the promotion of tourism.

4.1 Agro-tourism

Tourism has been almost non-existent even though Albania's landscapes are of great historical interest and natural beauty. Private tourist facilities for foreign visitors are slowly developing but they are very Spartan and the new organisational structures are often unreliable. Agro-tourism together with the exploitation of agricultural and other resources could help development of the inland regions.

4.2 Rural infrastructure

If the full development potential of the rural areas is to be realised, the inadequacies in accommodation, the transport and communications system, and in the public services such as electricity, water, and sewage, need to be addressed. International aid could be usefully targeted to this type of infrastructural improvement.

5. The crop sector

The changes in ownership and farm size have changed cropping patterns and led to an increase in vegetable crops at the expense of industrial cultivation. The ability of farmers to sell their production to local markets has privileged the cultivation of products destined for direct consumption such as vegetables.

5.1 Grains and fodder

The previous high share of bread-making grain, especially of wheat, in arable land use decreased sharply in 1991 and 1992. However, because of higher yields, total grain production is forecast by the Ministry of Agriculture and Food to return to the production levels of the 1980s by the mid 1990s. Albania's annual wheat consumption is between 600 000 and 650 000 tonnes. Production in 1992 met less than half of this demand and the deficit was covered by foreign food aid. Of the other grain crops, durum wheat production is also projected to increase. Maize is expected to increase its share within the structure of grain production. Animal feed production is expected to increase due to the growing animal population and production.

5.2 Industrial crops

With the exception of tobacco, the acreage under industrial crops such as sunflowers, sugarbeet and cotton will shrink but production could reach, and even exceed, former production levels through higher yields. Production of sugar and edible oils is likely to remain below domestic demand and Albania will most probably import these products.

Albania seems to have a comparative advantage in tobacco production which will therefore remain important in the long term as an export commodity.

5.3 Vegetables

Vegetable production is being transformed into a type of industrial gardening with the building of plastic, synthetic sheet and glass greenhouses. Between 1991 and 1992, a large proportion of the greenhouse capacity was destroyed. The rather narrow variety of vegetables now produced needs to be enlarged, especially to enable the export of fine quality vegetables such as asparagus, cauliflowers, lettuces, and early carrots. Red radishes could also be a successful export vegetable, to France and Germany for example, if it could be supplied throughout the year. In the past Albania exported potatoes to Eastern Europe. Albania could now use its climatic advantages to develop the production and export of early potatoes. However, it will have to compete successfully with other Mediterranean exporters of early potatoes.

5.4 Tree crops

Albania produces a large variety of tree crops, such as fruit, olives, citrus, and grapes. Even though the climatic conditions are favourable, this sector of agriculture remains backward. The main reasons for the low efficiency of production and low yields are inadequate supplies of inputs, especially of irrigation water and pesticides. Furthermore, the plantations are ageing and in a bad condition and, between 1989 and 1991, a large number of trees and vines were cut down for firewood in private households. Most of the remaining root stock needs to be renewed or moved to more favourable locations. Unless Albania modernises its fruit and vine growing and improves product quality, packaging and transportation, it will not be able to compete with neighbouring suppliers in the Central and Western European countries.

5.5 Medicinal and aromatic plants

During the last four decades, Albania developed into a leading producer and exporter of medicinal and aromatic plants in Europe and even world-wide. These commodities are an example of niche market products, for which Albania could strengthen its export position in the future, due to its tradition, its climate and ecological conditions. The export of medicinal and aromatic plants has remained stable over the past few critical years. Due to the lack of modern processing techniques, Albania has to export mainly raw materials and semi-refined products. Therefore, the build up of a modern processing sector, possibly in co-operation with foreign companies, would add value to these products and improve export opportunities.

5.6 Seeds

Albania should take advantage of opportunities, perhaps in co-operation with foreign companies, to produce and export seed varieties such as maize, sugarbeet, various vegetables, and forage crops. During

the 1980s, some Western countries co-operated with Albanian research institutes on seed production, especially for maize and sugarbeet. However, since Albania was not a member of the OECD Seed Certification Schemes, no permanent business contracts have developed out of these contacts for seed production. Albania has now applied for membership of the OECD Seed Schemes with FAO providing technical assistance for the upgrading of seed control procedures, certification and testing. In early 1994, a new Seed Law was passed by Parliament to update Albanian regulations and bring them into line with international standards. The enactment of the provisions of this Law regarding certification is a prerequisite for granting Albania admission to the OECD Schemes. Production, export and imports of quality seed whenever necessary would be facilitated.

5.7 Flowers

Given Albania's climate, possibilities for the production of cut and potted flowers and decorative garden plants for export should be explored. Western Europe is a large market for such products. In Germany, 80% of the flowers sold are imported (more than four-fifths of these imports of cut flowers come from the Netherlands). In the medium term, Albania should be able to acquire a share of the European market, particularly the German market.

5.8 Silkworms

It is possible, that on the basis of silkworm breeding, silk production could become another niche product. Mulberry trees, silkworm breeding, and silk production have a long tradition in Albania. The feasibility of rebuilding Albania's silkworm breeding and silk production should be explored in particular in view of a new silkworm feeding technology that simplifies breeding and enables production throughout the year.

6. The Livestock Sector

The analysis of livestock production and the processing of animal products points to some opportunities for the development of this sub-sector. A major requirement is the restructuring and privatisation of processing plants and the reorganisation of the veterinary services.

6.1 Livestock production -- Labour intensive livestock production is one of the most suitable activities for small farmers. This is the case of milk from farms in the lowlands near market centres and of meat from farms in the interior and in mountainous areas. The potential for small-scale livestock production needs to be further explored beginning with an analysis of the present resource base and market opportunities.

6.2 Privatising slaughterhouses -- Another priority is the privatisation of the slaughterhouses, in particular that of Tirana. Apart from the issue of privatisation, the construction of a new slaughterhouse at Tirana is a question to be addressed as soon as possible to resolve serious hygiene problems. Partial restoration of

existing structures and equipment does not seem feasible. A new slaughterhouse at Tirana would also facilitate the opening of better sales opportunities for Albanian meat on international and, particularly, on European markets.

6.3 Veterinary service -- Urgent attention must be paid to all aspects of disease prevention and sanitary control of the production, processing and sale of meat, milk and other products. The spread of some diseases to the human population coupled with a general lack of control reinforces the urgency for action. The inadequacy of financial resources and technical support available to the Albanian veterinary services must be addressed.

6.4 Privatising small cheese factories -- Modernising and privatising the small cheese factories scattered throughout Albania, in particular in the mountainous areas, does not require a large financial investment. Such a development could also represent a useful alternative source of income for small milk producers and be a way of satisfying domestic demand. The reopening and restructuring of the cheese factory at Tirana needs to be considered.

7. Input industries

Agricultural input industries are not only underdeveloped, operating with outdated equipment, but are also partly destroyed or not operational due to shortages of energy and spare parts. Because of the large deficit in farm machinery adapted to small-scale agriculture, the hoe and spade are still the most widely used implements in Albanian agriculture.

Fertiliser production has fallen significantly and its use is at most half of previous levels; foreign supplies are sustaining Albania's fertiliser market. More recently, private activity among fertiliser suppliers has been increasing in response to price liberalisation. For a number of years, fertiliser and pesticide consumption in agriculture will remain rather low.

8. Trade

Albania has become a market for agricultural products from neighbouring countries imported mainly by private firms and dealers, some illegally or semi-legally as cross-border trade not registered in the official foreign trade statistics. Fruit and eggs are imported from the former Yugoslav Republic of Macedonia and various Eastern European countries such as Bulgaria and Romania are targeting the Albanian market. Commercial imports include products which Albania is capable of producing efficiently itself, such as beer, alcoholic and soft drinks, wine, cigarettes, jam, spices, cheese and butter. These imports may decline as agriculture and agro-food in Albania recovers and becomes more competitive. It is important for Albania to resist pressures for increased protection of the Albanian market against imports. Such protection hurts consumers and would damage the prospects for Albanian exports through higher raw-material costs or higher wage costs.

In future, agricultural products could earn substantial amounts of the foreign currency needed to finance the modernisation of Albania's economy. However, with the exception of a few speciality products, Albania's traditional agricultural export commodities face well supplied and competitive food markets. During the last few years, Albania has lost most of its former agricultural export markets in Eastern Europe. To be successful on the food markets of Central and Western Europe Albania needs to make use of its climate and cost advantages against its competitors. This would also be achieved if Albania were to extend the competitive position of traditional export products, such as medicinal and aromatic plants, tobacco products and some very early vegetables, and to develop new speciality products.

Albania's foreign trade performance also suffers from a lack of experience in building and operating an efficient marketing system for its agricultural products. Assistance in the form of advice is therefore a necessary condition for the development of Albania's foreign trade. There is also a need to develop the necessary financial, storage and transport infrastructure to support export growth. Albania's foreign traders need better market and price information for both the domestic and the foreign market than exists today. Albanian products must be brought up to the minimum health and quality standards required by importers. For this, government regulation and certification of standards are needed. Finally, Albania also needs better access to the food markets of the OECD Member countries. To this end there is a need to reinforce efforts to negotiate trade agreements for food and agricultural products especially with European neighbours.

General

Since this report was drafted the situation in Albania has changed generally for the better. Macroeconomic conditions have improved to a degree not widely expected. Albania has been the fastest growing European country in 1993 and 1994. Inflation has also been brought down sharply. However, unemployment, including under-employment, is probably very high. Much of the economic recovery can be attributed to the turn around in agriculture after two years of severe decline. This recovery, in turn, has been due to the incentives created by farm privatisation and price reform. State-farm privatisation and decollectivisation were effectively complete by the end of 1994. However, progress has been achieved at the expense of farm fragmentation, serious contention over boundaries, access rights and ancient property rights. Land law reform that will establish clear property rights, settle disputes including those about access rights, permit sale of land, land leasing and land mortgaging is still awaited. Without these steps, farm structure cannot evolve in an economically rational way and the necessary investment in farming will not take place.

Serious problems persist in the infrastructural area where decades of extreme Marxism led to a stagnation of development. The banking system serving the agriculture and food industries is very underdeveloped. Farm infrastructure and supplies are seriously deficient (farm-machinery in particular). The badly damaged irrigation system is now receiving some priority attention. Investment funds should be concentrated on the repair and rebuilding of those parts of the system capable of yielding a high return on the investment needed. Food industry privatisation is proving very difficult. This is largely because of the seriously deficient nature of the old structures. However, there are signs that the new District Privatisation Boards are close to achieving a successful privatisation of many small and medium sized agro-food enterprises.

Agricultural and trade policies have taken a basic market oriented approach but there is the danger of pressure for more support due to the difficult market conditions. The liberalisation of Albanian foreign trade implies the integration of Albanian agriculture into the world economy and world trade and this, of course, will have further consequences for Albanian agriculture. The adjustment of the structure of agriculture and food industries in response to the new open trading environment is an ongoing dynamic process that requires a continuous process of policy evaluation and policy adjustment.

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CURRENCY EQUIVALENTS

Currency Unit = Albanian Lek
Lek = US\$ 0.01
US\$ 1 = 100 Lek (December 1992/November 1993)

ABBREVIATIONS

ha hectare
l litre
quintal 100 kg
t tonne
m² square metre
m³ cubic metre
% percentage

ACRONYMS

AB Agricultural Bank
AL Arable Land
ALP Albanian Labor Party
AUT Agricultural University of Tirana
CF Cooperative Farm
FAO Food and Agricultural Organization of the United Nations,
Rome
LC Land Commission
MOAF Ministry of Agriculture and Food, Tirana
MOFI Ministry of Food Industry, Tirana
PD Planning Direction of the MOFI
PFA Private Farmer's Association (Albania)
SD Statistics Department of the MOAF
SF State Farm
MTS Machinery and Tractor Station
UT University of Tirana
VS Veterinary Service
VSS Vjetari Statistikor i Shqiperise (Statistical Yearbook of
Albania
TAP Total Agricultural Production
USAID US-Agency for International Development
VOCA Volunteers in Overseas Cooperative Assistance (USA)
WB World Bank
ZS Zootechny Service

ORGANISATIONS

AUT Agricultural University of Tirana, Tirana
ECU European Currency Unit
EBRD European Bank for Reconstruction and Development
FAO Food and Agricultural Organisation of the United Nations
IFDC International Fertilizer Development Centre
IMF International Monetary Fund
MOAF Ministry of Agriculture and Food, Tirana
PFA Private Farmers' Association (Albania)
U.S.A.I.D. US Agency for International Development
VOCA Volunteers in Overseas Co-operative Assistance (USA)

Annex Table 1: **Research Institute and Stations**

Institutions	Main Area	Location
Zootech Reseach Institute	Animal Breeding	Tirana
Veterinary Research Institute	Veterinary	Tirana
Forage Research Institute	Fodder Production	Fush-Kruje
Agriculture Research Institute	Wheat, Cotton	Lushnje
Orchards and Vineyards Research Institute	Fruits	Tirana
Tobacco Research Institute	Tobacco	Cerrik
Soil Research Institute	Soil	Tirana
Institute of Vegetables and Potatoes	Vegetables, Potatoes	Tirana
Maize and Rice Institute	Maize, Rice	Shkoder
Olive and Citrus Institute	Olive, Citrus Fruits	Vlore
Sugarbeet Institute	Sugarbeet	Korce
Pasture Station	Pastures	Fush-Kruje
Station of Forests and of Ether-oil plants	Forestry, Medical Plants	Tirana
Mechanical Service Station	Mechanical Services	Tirana
Biomass Station	Biomass	Tirana
Plant Protection Station	Plant Protection	Durres
Station for Bee and Silkworm Research	Bees, Silkworms	Tirana

Source: Ministry of Agriculture and Food, ~~An Agricultural Strategy for Albania~~,
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NOTES

1. The Albanian Workers Party (ALP) changed its name to the Socialist Party in June 1991, at the X Congress. It was dominated almost uninterruptedly by the figure of its first leader, Enver Hoxha. The party grew from the moment it took power, from 2 800 members in 1944 (principally poor farmers) to 29 000 members at the I Congress in 1948, to 66 000 in 1968 and to 122 000 at the time of the VIII Congress (mainly manual workers, co-operative farmers, office workers, the military and the ~~intelligeneia~~).
2. According to current Western estimates, the mineral chrome reserve consists of approximately 20 million tonnes, equivalent to 15 years production. (A. MASOTTI Cristofoli, Albania, ~~Est-Quest~~, No. 2, 1992, p. 85).
3. The offshore petroleum reserve alone contains about 550 million tonnes, although extraction (inshore) is currently less than 1 million tonnes. The hydro-electric potential is an even more precious resource; in the early 1980s, this was estimated at 15 billion kWh/year, probably the highest in Europe after Norway. Annual production is 3-3.5 billion kWh, 90-95% of the total electricity production; the power installed is relatively high at 0.45 kW per capita (in Italy it is 1.05 kW); any eventual increase would have to be set against the widespread hydro-geological deterioration. In 1992, Albania exported 509.6 million kWh for a total value of over Lek 1 billion (US\$10 million), by far the most important export item.
4. A. MASOTTI Cristofoli, op.cit., p. 79.
5. Albanian Economic Tribune, No. 1, 1993, p. 5.
6. A. MASOTTI Cristofoli, op.cit., pp. 85-92.
7. In response to the two main waves of immigration in February and August 1991, as well as to requests by the Albanian government, Italy intervened with special measures, such as the paramilitary operation "Pellicano".
8. According to an Albanian source, the state reserves reached US\$900 000 in June 1991.
9. According to the Albanian Ministry for Foreign Trade, in 1992 goods worth Lek 5,7 billion were exported (66,6% from the state, 33,4% from the private sector), compared with imports worth Lek 13,1 billion (50,2% from the State, 49,8% from the private sector). The most significant export item was electrical energy (over Lek 1 billion), followed at a much lower level by medicinal herbs (Lek 102,4 million). The main import items were the acquisition of 6 200 tonnes of cereals (Lek 443,2 million), 205 tractors (Lek 283,9 million), 2 543 tonnes of meat (Lek 172,2 million), and 2 099 tonnes of cheese (Lek 160,9 million).
10. In the course of the first semester of 1992, the private

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sector employed 28 000 workers; at the end of the year, the number had risen to 45 000. Albanian Economic Tribune, No. 1, 1993, pp. 5 and 14).

11. Unemployment of the urban and rural populations reached respectively 141 000 and 47 000 on 1 September 1992 (Albanian Economic Tribune, No. 1, 1993, p. 14). It is important to note that the guaranteed salary of 80% for all workers whose firms had been forced to close or were not working contributed further to the collapse of public finance and to greater absenteeism.

The territory of Albania extends over 2.8 million ha. Farmland only covers 702 000 ha (25% of the total area), 60% of which is irrigated. Some 44% of agricultural land is flat, 37,5% hilly (with a slope of between 5 and 25%), and 18,5% is mountainous.

12. Percentage referring to 1990. Between 1975 and 1989, the agricultural working population remained at about 50% of the total working population.
13. During the 1980s, the agricultural sector contributed about 35% of the internal gross production of the country.
14. For 1992, one can assume an average exchange rate of about US\$1 per 100 lek.
15. In 1989, the value of the total Albanian agricultural production was Lek 73.9 billion, a value at constant prices of 1986 provided by the Ministry of Agriculture and Food's Statistics Department, on 12 March 1993).
16. The political elections of March 1992, overthrowing the results of the previous year, seem to have made a decisive contribution in consolidating the basis for democracy in an embryonic state. The three parties of the ex-opposition (The Democratic, Social Democratic and Republican Parties) obtained 69.9% of the vote and the first missed a majority of two thirds by only one seat.
17. In 1991, the average monthly increase in prices was 8.7%, whereas in 1992, it was 11.1%. Taking the main commodity groups for 1992, the average monthly growth was 12% for "foodstuffs, drinks and tobacco", 8.7% for "clothing and footwear", 13.7% for "rent, water, heating and electrical energy", 12.3% for "household goods", 12.2% for "transport and communication", and 8.3% for "education and culture". The products which increased the most in relation to December 1991 prices were food products, an increase of 256%. In particular the price of meat, salami and fish increased by 350%, milk-cheese products and eggs by 335%, fruit and vegetables by 319%, vegetable fats by 226%. Price increases were less marked during the third trimester of 1992, and the volume and structure of goods on the market widened (Ministry of

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Agriculture and Food, Statistics Department, 6 February 1993).

18. According to the Ministry of Agriculture and Food, the average family farm numbers four members. Total and rural population refer to 1990 (VSS, 1991, p. 35).
19. An important source of income for Albanian families is constituted by money sent back home by emigrants, one person in every three or four within the age-range 18 to 35. This is estimated at US\$2 000 per emigrant, giving a total of between US\$600 000 and US\$700 000 each year (Albanian Economic Tribune, No. 1, 1993, p. 5).
20. Albanian Economic Tribune, No. 1, 1993, p. 5.
21. Data provided by the Ministry of Agriculture and Food, Statistics Department on 5 November 1993).
22. The Albanian Government signed two Development Credit Agreements in Washington DC with the World Bank on 7 July 1993. The credits, amounting to about US\$35 million, will be used to finance projects for the improvement of transport and for technical assistance, qualification and supply of equipment for agriculture (Albanian Economic Tribune, No. 5, 1993, p. 7).
23. All Albanian citizens receive a monthly subsidy of Lek 280 to compensate for the increase in food prices, which have been totally free of control since 1 August 1992.
24. Albanian Economic Tribune, No. 1, 1993, p. 14.
25. In an attempt to reform the system of statistical data collection in the agricultural sector, Albania has, since 1 January 1993, taken as a model the (simplified) ISTAT (Italian Central Institute of Statistics) censuses. Compared with past years, when the agricultural structure consisted of little more than a few hundred co-operative and state farms and the gathering of data was centralised, the actual "destructuring" of agriculture into hundreds of thousands of individual farms has considerably complicated the gathering of data.
26. Abandoning the Constitution in 1976 which had decreed total nationalisation, the Government preceding the present one passed "constitutional laws". A "new" Constitution is being elaborated and was to be ready in 1993.
27. Generally, the large landowners lived in the city and farmed out their land on contract: the farmers took 90% of their production of foodstuffs and the landowners the remaining 10% plus all the animal products (meat, milk, eggs and wool) which they then sold in the city markets.
28. Many large landowners started to sell their properties in 1944, when they had probably already understood that the

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Communists would change the regime of land ownership. These lands were bought, and paid for in gold, by small and medium-sized proprietors, interested in increasing their own farming network.

29. This was a similar system to the one adopted in the USSR. After the break with Yugoslavia in 1948, Albania started to follow the Soviet model and, in the field of the division of work within COMECON, specialised in the production of raw materials and foodstuffs to become, according to the words of Krusciov, "a garden in bloom" (Albania joined the Warsaw pact in 1955 and left it in 1968). The break with the USSR came in the early 1960s on their alignment with China, which gradually substituted for the Soviets with technical assistance and credit concessions. However, the strong isolationist tendencies of the Albanian leadership led to a crisis in the relationship with China which, in 1978, interrupted its economic aid and repatriated its technicians.
30. Approximately 50 farms of this type, mainly located on the more fertile plains, were differentiated from the "lower level co-operatives" by better productivity, due to greater investment by the State.
31. At constant 1986 prices, the value of total agricultural production was about Lek 8,08 billion in 1985, Lek 8.17 billion in 1990 (VSS, 1991, p. 175).
32. The data which follows was taken from VSS, 1991 and from information gathered by Ministry of Agriculture and Food, Statistics Department. The data referring to employment was taken from the first volume of the UNDP/FAO report, 1991.
33. The total number employed was 304 990, of which 6 240 were specialists such as managers, agronomists, and accountants, 146 250 were salaried farmers, 152 500 were salaried workers in other jobs. There were 1.9 workers to each hectare and one specialist for every 26 hectares.
34. The higher output of the state farms in comparison with the co-operative farms, of 30-40% extra in crop production and 100-300% in livestock production was determined by the improved pedagogical and technological conditions as well as by the higher level of input provision. The reasons for this were, respectively, as the state farms were founded in the best areas of the country and contained 60% of well-irrigated land, because they had their own farm machinery and equipment whereas the co-operatives did not, and because they were given special financial concessions.
35. There were 550 833 salaried workers and 15 978 specialists, equivalent to 1.1 ha per worker, and one specialist for every 33 hectares.
36. The election of 31 March 1991 brought the democrats into

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Parliament for the first time with a third of the seats, due principally to the votes of the urban population.

37. The law was formulated on the basis of the Law of Fundamental Provisions of the Constitution, No. 7491 of 29 April 1991.
38. Law no. 7501 is a collection of decisions and directives on the subject of agriculture, reported in ~~Disa akte për reformën ekonomike ne bujqësi~~, Tirana 1991, 94 pp.
39. To foreign physical and juridical subjects, land is conceded for rent over a certain time period.
40. Land is sub-divided into three main categories: agricultural land (including orchards and vineyards); forests and pastoral land; non-agricultural land (urban areas, parks, roads, beaches).
41. ~~Disa akte për reformën ekonomike ne bujqësi~~, op.cit., pp. 62-64.
42. Given the potentially high profit from the sale of cattle outside the state boundaries, many attempts to export cattle have been recorded, in particular to the former Yugoslav Republic of Macedonia.
43. ~~Disa akte për reformën ekonomike ne bujqësi~~, op.cit., pp. 17-21.
44. The area administered by the co-operatives is thought to be in 2 570 of the 2 848 Albanian villages.
45. The members of the national and district Commission are appointed directly by the Government which chooses among administrators and specialists in the sector of agriculture.
46. ~~Disa akte për reformën ekonomike ne bujqësi~~, op.cit., pp. 31-34.
47. ~~Disa akte për reformën ekonomike ne bujqësi~~, op.cit., pp. 35-46.
48. ~~Disa akte për reformën ekonomike ne bujqësi~~, op.cit., pp. 51-57.
49. Part of the machinery and equipment was kept by the state farms, co-operatives were allowed only a minimum of mechanised equipment.
50. ~~Disa akte për reformën ekonomike ne bujqësi~~, op.cit., pp. 75-78.
51. ~~Disa akte për reformën ekonomike ne bujqësi~~, op.cit., pp. 87-90.

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52. ~~Disa akte~~ per reformen ekonomike ne bujqesi, op.cit., pp. 83-86.
53. These land quotas for temporary use are assigned with priority to specialists of state farms who are non-resident in the area to be privatised. The objective is clear: to favour professionals such as a director general, production director, or administrative personnel categories, who have a considerable knowledge of agriculture but because of their specific functions do not necessarily reside in the agricultural area of the village and would therefore be deprived of the right to be assigned land.
54. Land assigned to joint-ventures paying a fixed rent.
55. To guarantee "transparency" this should be the district Agency of privatisation.
56. These are the unproductive marshy and unreclaimed areas, or excessively saline land.
57. This refers in particular to the **kanum** of Lek Dukagjin going back to the era of Skanderbeg (XV Century)
58. According to the canons established by Lek Dukagjin, a daughter had no right to inherit land. Despite the fact that Albania has recognised equal rights for men and women, in some areas of the country, particularly in the north where the patriarchal society was very strong, the "moral" law prevailed. In these cases, the heirs of women former owners are not even taken into consideration by the village councils of elders.
59. This problem arises only in those areas, which nevertheless make up the largest part of Albanian arable land, in which private real estate previously existed. This consists of all the land of the co-operatives and part of that of the state farms: it excludes reclaimed land, around 200 000 hectares, as being all under the responsibility of the state farms.
60. This is the national Association of ex-landowners "property with justice" (~~Shoqata kombetare e te shpronësuarve "pronësi me drejtesi"~~) which brings together all the deprived landowners from 1944 onwards.
61. According to the Association, there have even been cases, at Scutari for example, in which the "farmers" went to the "landlords" in the city to sign agreements for land cultivation which, among other things, included payment of rent.
62. It is expected that only one part, about half, of the reclaimed areas of state farms will be given for usage; the remaining area will make up a special reserve for eventual joint ventures (in the meantime however, even that area is to be assigned with a contract for use of 5-10 years). On 15

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March 1993, there were 14 joint ventures in agriculture over an area of 16 000 ha, while in an initial phase mixed administrations occupied another 3 000 ha of state farms. This difference is explained by considering that some contracts were cancelled because the conditions imposed were not fulfilled by the foreign companies, especially the clause concerning the total re-employment of the company's labour force. This trend is confirmed by the reduction of the area occupied by joint ventures, 13 994 ha by 27 August 1993.

63. Naturally the possible inheritances which could have occurred between 1946 and 1992 should be subtracted from this number. The number of families without land would be smaller, as would be the average area inherited.
64. In theory, the Law concerning land provides for the confiscation of land in these cases and its redistribution.
65. On the case of the Baltic area see A. Segrè, "Some aspects of the agrarian reform during the transition period from plan to market. The case of Latvia" (~~Est-Ouest~~, No. 5, 1991, pp. 93-127); and ~~Possible Forms of Privatization in the Agriculture of the Baltic States~~, Workshop on "Agricultural Policies in the Baltic States" (OECD-CCEET, Visby, 13-15 October 1992, 16 pp.).
66. On 11 March 1993, the ex-landowners launched a demonstration in front of Parliament to protest against the indemnity Bill and to present 25 000 signatures gathered to abolish, in accordance with the Albanian Constitution, the Law concerning land.
67. According to estimates made by the Association, around 80 000 ha would be sufficient to compensate the ex-landowners "transferred" to urban areas.
68. In Albania, registration of real estate exists since the time of the Turks. The "old" register, now "inaccessible", is of a geometrical partitioning.
69. The Tirana Institute of Land Research and the Land Commission have at their disposal the land register of the co-operatives and of the state farms which consists of maps on a 1:5 000 scale, indicating the dimensions and the main destination of each cadastral plot.
70. Both for those assigned a plot of the state farm in ownership, and for those who received in "use" land belonging to state agencies for the first 2-3 years of activity, no land tax is imposed nor is any rent payable to the State.
71. The land structure of 1944 consisted of a high number of small farms which, without emigration, would have been divided up into smaller units.

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72. The Government has allocated support for disadvantaged farms in hilly or mountainous locations, including in the land Law a chapter relating to a subsidy to top up the earnings of farming families.
73. The lorries of the "Krutje" co-operative farm in the district of Lushnjë were assigned to the lorry drivers who had used them for the farm, for a value of US\$66; the cows and sheep were valued at Lek 14.4 per kg in August 1991.
74. On the "Krutje" co-operative, the six hectares of greenhouses were bought for US\$66 000, using a credit reimbursable over five years at an interest rate of 39%, by two specialists in agronomy from the farm. The two new owners employ seasonal labourers salaried at Lek 50 lek per day (US\$0.5), mainly though not exclusively recruited from the former members of the co-operative, usually the same workers who previously worked in the greenhouses.
75. See also Parts IIA, IIB and III.
76. Albania has a long tradition in irrigation systems given that less than 20% of the rain falls in the six months between April and September, while it is most unusual for it to rain during the three summer months. In 1938, the irrigated area was equal to 10% of the utilised agricultural land (29 000 ha). Since then, the irrigated area has grown considerably: 135 000 ha in 1960 (29% of arable land), 283 000 ha in 1970 (47% of arable land), 364 000 ha in 1980 (51.9% of arable land), and over 400 000 in 1990 (60% of arable land).
77. Out of the 276 000 ha drained, 133 000 ha will have to be reactivated. In order to put the irrigation system back into operation, a study by the FAO/WB-CP in December 1992 estimated that an investment of US\$40 million would be needed.
78. The other administrative structures regulating the distribution of irrigable water and the maintenance of installations were the state farms (over 111 000 ha) and the Department of land and water within the Ministry of agriculture.
79. The impact of the widespread hydro-geological imbalance caused by considerable deforestation and by a lack of control over water courses cannot be ignored; there are many lakes and rivers in Albania. In addition, the irregular distribution of rainfall is at the basis of frequent water and energy shortages (80% of energy comes from hydroelectric sources).
80. The creation of an organisational structure would be important in determining the "price of water", that is, payment on the part of the user of the costs of the irrigation service. In the past, water was paid at Lek 0.7 per m³; the Ministry of Agriculture and Food fixed the price for 1993 at Lek 7 per m³.
81. In March 1993, there was no law regulating the management of

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water supplies. However, the land and water department of the Ministry of Agriculture and Food is at present preparing a bill concerning water in collaboration with FAO.

82. In 1989, Albania was given 10 565 tractors, or 1 tractor every 68 hectares of arable land (World Bank - European Community, An Agricultural Strategy for Albania, World Bank, Washington DC, October 1992, p. 250).
83. This data refers to the district of Krujë in December 1992. In March 1993, the cost ploughing 1 000 m² was Lek 1 000 in the Mali district in the north-east.
84. It is not unusual to see men, women and even children in the Albanian countryside carrying out the main agricultural work manually or with the help of animals: oxen, horses and even mules, for those who own them.
85. For a complete treatment of the problem of veterinary control see the part dedicated to the livestock sector.
86. The Albanian veterinary service was set up in 1928 based on a set of regulations numbering more than 60 articles, very similar to those of other European countries. After 1944, the law concerning the veterinary service was reduced to 29 articles, and further reduced to 24 in the norms of 1990.
87. The law instituting the BSA (No. 7520 of 16 October 1991) and the means of credit concession are reported in ~~Informatori Bujqësor~~, No. 3, 1991 pp. 3-23.
88. In general, the guarantees required by the Bank are buildings, livestock population and products.
89. In the districts and communes, the Bank operates through branches which each have their own lending limit: 1st office 3 000 lek, 2nd office 5 000 lek, 3rd office 7 500 - 10,000 lek, the maximum is 700 000 lek for a medium-term and 2 000 000 lek for a short-term loan.
90. This is divided as follows: 61.6% for commercial activity; 23.1% for agricultural activity; 5.6% for industrial activity; 9.7% for other uses.
91. This is divided as follows: 54.9% for agricultural mechanisation; 29.8% for breeding; 13.7% for rural construction; 0.1% for fruit farming; 1.5% for other uses.
92. This value is the result of the relationship between the number of Albanian farming families (380 000) and the total volume of credit lent to individuals (Lek 204 million).
93. The experiment conducted by CARITAS is interesting in this context. In order to provide an incentive for production, delivered seed directly to farming families with the

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obligation of returning the same amount after harvesting. The experiment was made with potatoes by distributing 300 000 kg of seed. It is hoped to extend this test later to the production of cereals (2 000 families for wheat and 4 000-6 000 for maize).

94. In Albania, 70.1% of the 28 000 km² is over 300 meters above sea level.
95. Data reported by P.P. Ambrosi, director of CARITAS in Albania, in an interview with the mission in Tirana.
96. In the past it was common practice, in fact, to exile certain social categories considered to be dangerous in marginal areas. This had essentially two aims: to permit the regime to free itself from undesirable characters, and to allow for the settlement or rather the defence of otherwise uninhabited areas, and possible outposts in the case of enemy attack.
97. For example, a mission of the "Operazione Pellicano" transported by helicopter 2 000 kg of flour to the village of Brisa (district of Tropoje, in the north-east of the country). The village consists of a group of houses perched on a gorge in the Albanian Alps, six hours walk away from the nearest small town; 75 families and around 300 people live there. Food production is concentrated on small terraces of 50-80 m² where maize is cultivated and around the house there are vegetable plots (beans) of a few square metres; animal production is provided by cows, goats and pigs. The farming families in the village produce exclusively, even though this is not sufficient, for their own consumption.
98. Relevant agronomical and agro-technical information about food and agro-industrial crops are presented in detail in the FAO/UNDP and World Bank/EC reports on agriculture in Albania.
99. For more information see ~~Agriculture and Food Statistics of Albania 1993~~
100. The Shkodra Maize and Rice Research Institute.
101. For more information see ~~Agriculture and Food Statistics of Albania 1993~~
102. For more information see ~~Agriculture and Food Statistics of Albania 1993~~
103. Data on regional production can be obtained from VSS 1991, p. 196 and for 1992, World Bank/EC Report on Albania, pp. 192, 194.
104. World Bank/EC Report on Albania, p. 55.

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105. International Agricultural Journal, Moscow, No. 4, 1992, p. 7.
106. Most of the data were provided by the Sugar Beet Station in Korca, in February 1993.
107. Ministry of Agriculture and Food data, October 1993.
108. See: Marwegen, H. "Möglichkeiten der Intensivierung des Agrar-exports der SVR Albanien in die Bundesrepublik Deutschland" in Ed. W. Althammer, Agrarwirtschaftliche Zusammenarbeit mit Albanien, München 1989, pp. 107-111.
109. For further information on Ecology and Agriculture in Albania, see: Moser, Friedrich/Mayerhofer, Rainer "Raumplanung und Umweltschutz" (Area planning and environmental care), pp. 452-463, in Grothusen, Klaus-Detlev, Südosteuropa-Handbuch/Handbook on South Eastern Europe, Vol. VII Albanien/Albania, Göttingen 1993, and: Alla, Ilir/Rrakacolli, Z. "Landwirtschaft und Umweltproblematik in Albanien" (Agriculture and the Problems of the Environment in Albania), in Südosteuropa Mitteilungen/South Eastern European Report, München 2/1991, pp. 115-121.
110. Data concerning Albania's problems in horticulture have been supplied by Petrit Rama, Chair of Fruit and Vegetables at the Agricultural University of Tirana.
111. Source: "Albanian Agriculture - Facts, Figures, Comments", Directorate for Statistics and Information, Ministry of Agriculture and Food, unpublished, Tirana 1992.
112. The Ministry of Agriculture and Food indicates that it is planned to carry out a new census of fruit trees, vineyards and olive trees at the end of 1993.
113. See: Ismaili H. "L'oleiculture en Albanie" Institute de Recherche des Olives et Agrumes, Vlora.
114. See: World Bank/EC Report on Albania, p. 56.
115. "In spite of the relatively small territory, Albania has a natural flora of about 3 200 species, of which more than 500 are medicinal herbs." Some 176 plants, nearly 300 medicinal drugs, are sought by buyers. Source: Skenderi, Gazmend "Medicinal Plants from Albania" ALIMPEKS, Tirana, year unknown.
116. Although seeds and plant materials are production inputs, they will be dealt with here and not as part of the upstream branch.
117. See: World Bank/EC Report on Albania, p. 104.
118. CMA MAFO-Briefe: 1992 - Das Milliarden-geschäft bei Blumen und Zierpflanzen, Bonn 1993, p. 1.

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119. Frankfurter Allgemeine Zeitung, No. 230 of 4th October 1993.
120. See: Louis, Herbert, Albanien. Eine Landeskunde vornehmlich auf Grund eigener Reisen, Stuttgart 1927, p. 51.
121. See: Zavalani, Dalib. Die landwirtschaftlichen Verhältnisse Albaniens, Berlin 1938, p. 118.
122. See the newspaper article "Artificial feed mixture for silkworms" in Blick durch die Wirtschaft, Frankfurt/Main, No. 85 of 4th May 1993.
123. See: World Bank/EC Report on Albania "Food Processing Industry" Annex 4, pp. 81-87 and "Processing and Marketing of Basic Foods" Annex 5, pp. 90-97.
124. One of the main obstacles seems to be the lack of clear investment legislation and the cumbersome investment procedures operated by the state administration. By Spring 1993, the draft law on foreign investment had not been passed by the Parliament. One controversial point seems to be whether foreign investments should be controlled or even guaranteed by the State. Most of the 115 foreign joint-venture companies invest in less dangerous areas with high profit rates; in areas that secure a quick return on capital, as well as in trade and services. See: Selim Belortaja, Chairman of the Albanian Agency for Encouraging Foreign Investments, in Flash-Albania, Tirana, No. 9, April 1993.
125. Tribuna Ekonomike Shqiptare, Tirana, 5/1992, p. 13.
126. See: N. Ndrean, A. Robo "Joint Ventures of the Food Industry" in Panorama Agroushqimore, Tirana, 9/1992, pp. 10-11.
127. See: "Private farming in need of land reform and input industries" in Weekly economic report, Albanian Telegraphic Agency, ATA, Tirana, No. 11 of 11th March 1993, p. 2.
128. See also paragraph "2.6 Irrigation."
129. See: Begeja, Maksim "Mechanisation and the privatised Agriculture" in Panorama, Tirana, No. 11/1991, pp.15, 17. Information of the Stacioni e Mekanizimit te Bujqesise, Tirana.
130. See: "European Community's Aid to Albania" Commission of the European Communities, Tirana, 8 December 1992.
131. See: Gebauer, R.H., Transmission note/Memo Paper to the Participants of G-24 Agricultural Working Group concerning Agricultural Assistance to Albania, 9 November 1992, EC.
132. See: "IFDC in Albania" in Panorama Agroushqimore, Tirana, 12/1992, pp. 15-16.

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133. See: Mari, Aleksander "Zhvillimet aktuale dhe perspektivat" Actual development and the perspectives in Panorama Ahroushqimore, Tirana, No. 1/1993, pp. 3-5.
134. See: Albania - Irrigation and Drainage Rehabilitation Project. Aide Memoire of the Preparation Mission, Tirana, December 1992; Text annex; The World Bank/EC Report annex 9, irrigation, pp. 126-141.
135. Aide Memoire of the World Bank Mission, 1992; see annex A4.
136. See: Albanian Economic Tribune, Tirana, 6/1992, p. 7, and Business News, Tirana 2/1993, p. 5.
137. See: Zavalani, Dalib. "Die landwirtschaftlichen Verhältnisse Albaniens", Berlin 1938, p. 50.
138. See: Kalo, Ylli. "Who is actually feeding Albania?", in Albanian Economic Tribune, 2/1993, p. 2.
139. See: Woche im Bundestag, Bonn, No. 9 of 5 May 1993, p. 42.
140. See: "Mid-Term Plan for the Education Sector, 1993-1995", Ministry of Education, Tirana 1993. This gives a comprehensive overview of the current situation of the Albanian education system and of its intended future development. This publication, however, was not available in time for this study.
141. See: "Mid-Term Plan for the Education Sector, 1993-1995", Tirana 1993, pp. 26-89, National Project on Secondary School Education", and especially pp. 62-72, Secondary Agricultural School Education.
142. Two pilot projects have been implemented at Berat and Korça with the support of the American Farm School in Thessaloniki.
143. See: "Mid-Term Plan for the Education Sector, 1993-1995", Ministry of Education, Tirana 1993, pp. 254, 255.
144. See: Instituti i Larte Bujqesor i Tiranes/The Higher Institute for Agriculture of Tirana, Tirana 1986, 62 pp.
145. See : Flash Albania, 5/1993, Tirana 1993, p. 2.
146. See : Hörchner, F., "Leistungsbeschreibung der Veterinärmedizinischen Fakultät der AUT." An evaluation of the Faculty of Veterinary Medicine in 1992 by the German Agency for Technical Cooperation/GTZ. Unpublished paper, pp.10, 1993, GTZ, Eschborn/Germany.
147. According to Faculty sources, the technical level of the laboratories and other equipment at the AUT Faculty of Veterinary Medicine is about 40-50 years behind Germany.
148. See: Becker, G., "Leistungsbeschreibung der

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Forstwirtschaftlichen Fakultät der AUT." An evaluation of the Faculty of Forestry in 1992 by the German Agency for Technical Cooperation/GTZ. Unpublished paper, 62 pp., 1993, GTZ, Eschborn/Germany.

149. See: Steffens, D., "Landwirtschaftliche Ausbildung an der AUT", unpublished paper, Eschborn 1993.

150. See: Jaehne, G., "Studieren in Albanien - Eindrücke von einem Besuch der AUT in Tirana", UNI Forum, Giessen, 1/1993.

151. According to the Agricultural Research Institute in Lushnja, February 1993.

152. See : FAO/UNDP Study, "Albania - An Overview of the Agricultural Sector", October 1991, Vol. 1, pp. 119-123.

153. See : Albanian Economic Tribune, Tirana, 1/1993, p.31.