

The role of the Fier Agricultural Programme in the development of an Albanian AKIS

**Continuity and change in the Albanian Agricultural Knowledge and
Information System during the transition in the 1990's**

Gerrit Holtland
Teamleader FAP

Table of Contents

1. Introduction.....	3
2. Agricultural Development in Albania	4
2.1 Pre-communist Albania.....	4
2.2 Communism.....	4
2.3 The transition period.....	7
2.4 Conclusions	11
3. The AKIS in transition.....	12
3.1 Before 1992: the legacy of the communistic period	12
3.2 Agricultural Education.....	14
3.3 Agricultural Extension.....	15
3.3.1 The National Extension Service.....	15
3.3.2 The most used extension methodology: field-demonstrations	18
3.3.3 Elements of privatisation in Fier and at national level	21
3.4 Agricultural Research: On Farm Trials as a new concept	24
4. Conclusions.....	27
References	29

The role of the Fier Agricultural Programme in the development of an Albanian AKIS

Continuity and change in the Agricultural Knowledge and Information System during the transition in Albania

1. Introduction

The 1990s are an era of dramatic change for Albania. The beginning of the decade saw the end of one of the most repressive and centralised regimes ever. Since the second world war the communistic regime (lead by Enver Hoxha) killed thousands of people while hundred thousands were kept in camps and prisons. The country was nearly completely isolated from the rest of the world.

After the collapse of the regime, Albanians need to reorganise their society. This is not easy; new democratic rules and institutions and a new approach to the economy have to be developed which leads to much uncertainty. Many left the country in a bet to gain a better future for themselves and their children. When things seemed to improve little by little, the fraud and stress of the elections in 1996 and the collapse of the pyramid schemes in early 1997, threw the country back into a complete anarchy.

Although the economic backlash of the pyramid crisis ultimately seem to be have been overcome, its psychological effect is still tremendous. People's trust in their leaders and in their own ability to create new forms of interaction between the state and its citizens is severely shocked. The lack of law and order caused by the widespread possession (and use) of arms, further depresses the atmosphere.

In the midst of this, Albanian farmers try to make the best of it. They have done fairly well. The Ministry of Agriculture and Food (MAF) from its side tries to assist farmers in increasing their production and their productivity. The main instruments for this have been a price policy which protect agricultural producers via import duties on agricultural products during the peak production season and via investments in the rural infrastructure. The latter is done in cooperation with foreign donors.

A special part of the support of the government to farmers has been the setting up of an Agricultural Knowledge and Information System (AKIS) in cooperation with donors. Extension is an important element of any AKIS and a completely new concept in the Albanian context.

This papers sets out to review the development of this concept in the last 7 years: 1992-1999. After a general overview of the changes at national level, the role of the Fier Agricultural Programme in this process is highlighted. In the analysis the historical context is important. The central questions are. What has changed and what remained the same? What has been the role of the extension service during these changes? And which lessons can be learned for the future?

2. Agricultural Development in Albania

2.1 Pre-communist Albania

Before the second world war Albania was a backward country; only about 10% of the poor population was literate. Living conditions were very poor, both in isolated mountainous areas as well as in marshy coastal areas where diseases like malaria still prevailed. The Albanian economy was based on agriculture, with less than 5% of the GNP coming from industries before the communist took over in 1944 (Hall, 1994).

The Albanian society was a feudal society. In 1944, three percent of the farmers owned 27% of the land (mostly in the coastal plains). Eighty three percent owned on average 1.8 ha and 14% of the families had no land and lived as tenants (World Bank, 1992). Yield were very low, e.g. in 1950 the national average of maize, the main crop, was 0.9 ton/ha (Zdruli, 1997). The average milk production was 600 l/lactation.

In the feudal system in the coastal areas, share cropping arrangements were common: the landlord took 30% of the harvest, the state received 10% as tax and the farmer the remaining 60%. Tenants were not allowed to built a stone house nor to have a chimney in order to prevent to develop claims on the land (Qazim Sulaj, pers.comm.). It is not difficult to imagine that communistic ideas (specially on land reforms) were well received here after the second world war.

Farming in mountainous areas was based on extensive livestock keeping (small ruminants; local breeds of cows) and intensive gardening in the valleys. Although strong local leaders did emerge, farmers (or better their clans) remained independent and had a long tradition of effectively avoiding (Ottoman) state interference in their lives. Communism was an alien idea to this society.

2.2 Communism

Before entering into detail, one must remark the statistics collected and published by the old regime are not always reliable and conversion of units like Gross Material Product to western units like Gross National Produce is not a straightforward exercise. As a result one finds that different authors come with different data on this period. Hall (1994) shows that for one year, one author estimates the growth of agricultural production to be 4.2%, while another comes to a decline of 0.6%. Surprisingly for the next year the first mentions a decline of 0.4% and the second a growth of 2%! In general the data used here come from the World Bank report of 1992. Hall (1994) is also a very comprehensive and reliable source of data on this period.

Landownership

The first major act of the communists under the leadership of Enver Hoxha in 1945-46 was a radical land reform in which owners could at the maximum retain 5 ha of arable land; the rest was redistributed among the 45% of the poorest families. In 1948, herds of more than 50 heads of small ruminants were nationalised (that is the 80% which was not slaughtered). In 1949 the people were asked to form co-operatives; pooling land and other resources would allow for a quick modernisation of agriculture. Mechanisation with the help of Russian machines would relieve people from the arduous work.

Due to resistance from feudal lords, rural businessmen and big farmers, progress was slow. A problematic aspect for common people was that the social unit of organising the work would no longer be the traditional clan (a group of families related through a common male ancestor, in Albanian called 'fis'), but a 'brigade' lead by a specialist. By the end of 1954 only 150 small cooperatives were created voluntarily under soft pressure from the government. About 6% of the families joined, mainly in the coastal area. Per family 0.25 ha remained private.

In 1954-1959 cooperatives were set up in a more forceful way, also in the hill- and mountainous regions. In the end, about 70% of the families and of the land were part of a cooperative. Still about half of the total agricultural production was private. Each family was allowed to keep 0.25 ha private land, but this was gradually reduced to only 300 m² for a garden.

In 1965 the last stage of collectivisation of the land started and in a few years nearly all private farming was eradicated; only in mountainous areas people still owned 0.1 ha. With the new constitution of 1976 all land officially fell to the state, but in practice some smaller areas (gardens/fruittrees) remained private. In 1981 the last blow was the collectivisation of all cows (like in 1948 many were slaughtered). While in the first half of the 1980's private agricultural production accounted for 20% of the total value (on 3% of the arable area), in the second half of this decade this dropped to less than 10%.

Investments

In the 1950's investments rose very quickly due to assistance from abroad (Russia) and to forced labour contributions to large scale investments like roads, railways, drainage and irrigation systems etc.. In the period 1965-1978, large scale investments by the Chinese (e.g. in fertiliser factories and irrigation) kept the yields increasing. When the Chinese left, in a few years the economic situation took a turn for the worse.

Over the total period of 1945 till 1990, the area used for agriculture increased from about 400.000 ha to about 700.000 ha. The largest part of the increase came from draining marshes, clearing forest, and terracing slopes (mostly with 'voluntary labour'). The irrigable area increased even more: from 30.000 to over 420.000 ha; 75% of this increase was realised before 1975.

The number of cattle increased simultaneously from about 420.000 to 700.000 with the mentioned dip in the beginning of the 1980s; the number of small ruminants did not change (despite a drop of 20% in the 1960s when they were collectivised).

Productivity

The rigid centralised planning and the total absence of any incentive for people to work had disastrous effects. At the end of the 1980s, the yield of most crops was 20-50% lower than in Bulgaria, the next poorest country in Europe. Cows produced 1,275 litres/-year, 60% of the next poorest performing European country, Romania.

Since the human population increased from 1.2 million in 1950 to 3.3 million in 1990, the area of land per capita was reduced. With half of the people working in agriculture, the area per worker was only 1.5 ha; one third of the next poorest performing country in Europe: Poland. Since more people per unit of land can be fed with crop production than with animal products, the share of livestock production in the GDP of agriculture dropped from 45% in 1950 to 32% in 1988.

Due to the use of more inputs and the availability of irrigation, yields per ha had increased; e.g. maize yields were about four to five times higher than in 1950. In general yields on state farms were 1.5 - 3 times higher than on co-operatives.

The total balance in terms of income and food available for the growing population has been by and large positive until 1975, in the next decade the situation was more or less stagnant and in the last years of the communist regime it was negative, with a negative economic growth in 1984, 1987, 1988, and 1990 (World Bank, 1992) and with a negative food production growth *per capita* throughout the 1980's except 1982 and 1983 (Hall, 1994).

As important as the production was the distribution of the produce. Co-operatives and state farms were forced to sell (or exchange) their total production which was then distributed to shops in towns where only registered clients (read: town dwellers) could buy them. In practice this meant that many villagers had to produce the luxury goods of milk, meat and wheat-bread while they had to eat the hated maize bread and beans.

Salaries

The salary of a university trained agricultural expert was about 90 USD irrespective of where he was working (state-farm or co-operative). Nearly all lived in towns and came by car or busses (and sometimes by foot) to the rural areas to work. A worker on a state-farm earned about 50 USD, while the salary of a member of a co-operative depended on the performance of the co-operative. Workers were paid according to the work done. For a normal day of work (which was clearly defined) a fixed amount of money was paid, but part of this (10-30% according to different sources) was retained by the co-operative and only paid at the end of the year in case profit was made. Often this was not the case. The financial balance of the cooperative in one year was translated in a new standard of payment for a standard day of work in the next year. In an average co-operative in the coastal areas the standard pay was 13 lek/day. With 30% retained this led to a monthly income of 35 USD. In well performing co-operatives this could be 50% higher, in others it was less than half of this. In some mountainous areas salaries were so low that the state had to find other mechanisms (subsidies) to keep people alive.

2.3 The transition period

The whole decade of the 1990's is considered here as a period of transition. During the first half of the decade the privatisation of the collectivised production factors (in agriculture: land, labour and animals) was the most urgent issue, in the second half the creation of a well functioning civil society (in agriculture the creation of an AKIS is an important part of this).

In the initial phase of the transition period the support structures for agriculture disintegrated. The already poorly functioning irrigation system was made completely ineffective in the early 1990s. The state enterprises for agro-inputs and agro-markets, irrigation etc. performed very poorly and by and large remained ineffective until today. Roads, drinking water and electricity became more and more problematic, etc. All this made life difficult for farmers, yet they struggled on and slowly some improvements are to be seen, as will be shown in the next paragraphs.

Landownership

In 1989 about half of the cows were given back to the people (mainly in mountainous areas) and in 1991 farmers took the other half by force from the stables. Later this was coined as 'privatisation'. In 1991 also the law on privatisation of land was approved and village committees set up to divide the land. In mountainous areas, the land was usually given back to the former owners, in the coastal plains the land was equally divided by all members of the co-operatives. In 1992, 78% of the arable land was privatised, mostly the land of the co-operatives. At the end of 1993, 93% was privatised, including land of the state farms. Quite some land is refused (because it is too salty, too wet, too steep etc.). Most of this was land developed by 'voluntary labour' during the communist era.

All over the country the number of conflicts on landownership is enormous. Many killings have occurred over land and water, not only in mountainous areas but also for example in Fier. Main problems are encountered with 'right of way', with incorrect seize (i.e. the actual area is less than the title deeds says), with conflicts between villages about to which village the land belongs etc. Despite the rhetoric of consecutive governments on the progress made, the pace of solving these conflicts is very slow and problems will prevail for many years to come.

The 'quick and dirty' privatisation of the land lead to over 400.000 farming families each having between 0.5 (mountainous areas) to 1.5 ha (coastal plains). Since this is often scattered over 3-4 plots, fragmentation is a major problem.

Productivity and income

In the 1990's the productivity in the agricultural sector gradually recovered as the next table shows.

Annual growth of GDP per sector

	1990	1991	1992	1993	1994	1995	1996	1997	1998
Total	- 10	- 28	- 7	10	8	13	9	- 7	8
Agriculture	- 5	- 24	18	10	8	13	3	1	
Industry	- 14	- 38	- 51	- 10	- 2	6	13	-6	
Agric. as % of GDP	40	42	54	55	55	55	53	56	54
Annual Growth Consumer									
Price Index (%)	3	104	237	31	16	6	17	42	9
Ex. Rate Lek/USD	9	24	75	102	95	93	104	149	
GDP/cap. (in 1,000 Lek; '90 prices)	5.1	3.7	3.5	3.9	4.2	4.6	5.0	4.6	4.9
GDP/cap. (USD)	573	211	212	388	608	762	819	686	891

Source: 1990-1997: Tables in the Albanian Human Development Report 1998. For 1998: FAO, 1999.

Note: other sources give sometimes other data.

The first four lines in the table show that agriculture recovered much quicker than industries and services. The last lines of the table show that in 1991/92 the crisis was deepest and indeed massive foreign support was needed to feed the population. The crisis with the pyramid schemes in 1997 lead to a reduction of the real income of about 10%.

The development of the Consumer Price Index and the exchange rate are interesting. Initially the devaluation of the Lek (the Albanian currency) was much higher than the inflation. This was caused by the liberalisation of the exchange rates while the prices of some key-products (like bread and kerosene) were still fixed. The effect was that the income per capita measured in USD dropped dramatically. Starting from 1993 inflation is higher than devaluation. The steady inflow of foreign currency sent by the many emigrants and the limited need of businessmen to import foreign products (since there are no customers for these), keep the exchange rate of the Lek fairly low. With a high inflation this results in a quickly rising income in terms of US dollars. This does not mean that the real income increased dramatically: it seems people have more USD to buy foreign (luxury) products, but in practice this is not the case since they need to pay much more for local products.

In practise the income per capita in constant '90 prices, as presented in the one but last row of the table, reflects most accurately how the majority of the people experienced the transition. It reveals that by and large only from 1995 onwards the standard of living has been comparable with the communistic era. This does not mean that everything remained as it was.

At this stage it is useful to compare the present situation of an extension worker and a farmer with their situation under the communistic regime. In the old system an agricultural expert would earn about 90 USD. Of this 3-7% was for the rent of his house and some small amounts for electricity and water. Health services, education etc., were free of charge. A loaf of bread was 0.5 USD and a kg of meat 2 USD. When the same person is at present employed by the government he might earn about 90 USD again. Normally he owns his house; he pays about 10 USD for electricity and water. Bread is still 0.5 USD, but meat is 4 USD per kg. Proper health services and education are expensive. So, in terms of purchasing power this group has gained little in the last decade.

Farmers have a different perspective. First of all in the old system it was very difficult for them to obtain any luxury product (like milk or meat) as these were distributed via shops in town where only town dwellers were registered as clients. The income of ordinary co-operative members was in the range of 25-50 USD (see above). Kunkel and Skreli (1998) measured in 1995 an average income of Albanian farming families of 2,150 USD/year (excluding the rental value of the house). Since an average family consist of 5.2 people, half of whom are economically active, the labour income is 69 USD/-month per person. About two third of the income derives from agricultural production; one third from off farm income. The latter provided 70% of the *cash* income.

This general picture needs to be further elaborated. First of all the *cash* income from agricultural production remains very low as can be seen in the next table.

Gross Average Income from sales of crops and livestock, 1994-1998

	1994	1995	1996	1998
Gross cash income in Lek/family	12,700	23,400	38,900	57,800
Gross cash income in USD/fam.	134	252	374	401*
Cash income from livestock (%)	73	85	79	73
Area under crops (1,000 ha)	394	390	353	353

* for 1998 an exchange rate of 144 Lek/USD is used

Sources: Annual reports MAF-Statistical department; based on data of the SARA project

With an average family seize of 5.2 people, the annual cash income from sales of crops and livestock grew from less than 20 USD/cap./year in 1994 to nearly 80 USD in 1998! Livestock is a much more important source of cash income than crop production.

Litschauer (1997) shows that the cash income distribution in 1996 was very skewed: 42% of the farmers had a negative cash income from farming activities (so they were purely subsistent oriented), while on the other hand 23% of the farmers earned 87% of the total cash income in agriculture. This latter group had an average gross cash income from the farm of nearly 1.200 USD/year. So specialisation has taken place: one part of the farmers is able and willing to invest in agriculture and they make a reasonable profit; most however are not able and/or willing to invets and remain subsistence oriented.

Indeed, many families have opted for non-farming strategies to survive. The area under crops is only 78% of the 450.000 ha of arable land controlled by active farmers and only 61% of area officially classified as arable land (Jaehne and Schinke, 1995). So a considerable area (over 100.000 ha) of land classified as arable is refused by farmers and at the same time over 20% of the area considered to be arable is actually not used. In Gjiro-kaster prefecture in 1998 only about 11,000 ha out of the 38,000 ha registered as arable, were planted with field crops! Of the 24.123 farmers counted in 1994, in the survey of MAF in 1998 only 15,600 (65%) remained. The national average fort his is 92%.

Regional differences are huge. Most income is generated in the coastal plains; e.g. while in 1998 the average gross income from agricultural production was 57.800 Lek, the income in the prefecture of Fier was four times higher than in the prefecture of Diber (82,900 Lek, versus 20,800 Lek). On top of this, farmers in Tirana had an income of 116,600 Lek/year.

Sub-sectors of agriculture

Table 3 shows that not all sub-sectors in the agricultural sectors grew at the same rate.

Trends in agricultural sub-sectors, 1990-1998

	1985-90	1994	1995	1996	1998
Area wheat (1,000 ha)	203	166	114	107	120
Area alfalfa (1,000 ha)	51	68	78	89	94
Area maize (1,000 ha)	62	89	100	72	60
No. of cattle (1,000 head)	633	797	863	761	720
No. of sheep (1,000 head)	1,646	1,706	2,209	1,720	1,643
No of goats (1,000 head)	1,145	1,259	1,441	1,145	718
Yield of wheat (ton/ha)	2.9	2.3	2.6	2.4	3.0
Yield of alfalfa (ton/ha)	30	18	24	30	31
Yield of maize (ton grain/ha)	3.9	1.8	1.7	2.9	3.4
Yield of potatoes (ton/ha)	6.4	11.1	10.6	11.0	12.7
Yield of beans (ton/ha)	0.9	0.8	1.0	1.1	1.1
Yield of vegetables (ton/ha)	16.2	18.2	18.4	19.8	19.7
Milk production (litre/cow)	1350	1600	1720	1870	1710

Sources: World Bank, 1992, MAF statistical yearbooks, Jaehne and Schinke (1994), Civici and Lerin (1997). Other sources give (sometimes considerably) different data

Initially livestock took the lead. In 1996 many animals were sold in order to put money in the pyramid schemes (Litschauer, 1997). However in 1998 the trend of reducing the number of animals continued and the number of cattle was only 14% above the 1990 figures. Also the production per cows dropped. The number of sheep was the same as in 1990, while the number of goats fell even far below the 1990 stock.

In 1992 the share of livestock in agricultural GDP increased to 42% and in 1997 it was 47%, bypassing its pre-communist level (Bottema and Wentholt, 1998). Data differ much however and according to Jaehne and Schinke (1994) the contribution of livestock is more than 50% of the agricultural production since 1992.

Related to the increase in numbers of livestock, the area under fodder crops grew until 1995, after which the area planted declined while the yields continued to rise. The latter can be explained by the rehabilitation of the irrigation system by the Irrigation Rehabilitation Project of the Worldbank. Over time the relative importance of alfalfa increases at the expense of maize. The reason could be that the annual expenses for the seeds of maize are too high, especially as time and again farmers were disappointed by the quality of the seeds.

In total until present about 100.000 ha has been rehabilitated by the Worldbank Irrigation Rehabilitation Project and some other projects (including FAP). Although the institutional and financial sustainability of the Water Use Associations who have to take care of the irrigation system is still doubtful (Holtland et al. 1998), and although in some district considerable parts of the rehabilitated irrigation system are destroyed again (notably in Durres and Tirana, but also in Lushna and Fier), at least a larger part of the system somehow functions now.

At national level the number of (small) milk processors has grown in the 1990's (Bottema and Wentholt, 1998). Within the livestock sub-sector changes have taken place as the price ratio between milk and meat changed over time. In the period 1994-1998 in Fier town meat prices increased with 130%, while milk prices increased with only 65% (Puka, 1999, Tosun, pers. comm.). At national level this was even more pronounced with an increase of respectively 160% and 255% for milk and meat (FAO, 1999).

The increase in the area under fodder went at the expense of industrial crops and wheat. Crops like cotton and rice virtually disappeared, while the area under tobacco, sunflower and sugarbeet was severely reduced. The area of wheat was reduced considerably during the 1990s and is expected to stabilise around the figure for 1998: 120.000 ha.

Unfortunately at national level no statistics are kept for the greenhouse sector, but evident from the field suggests that since 1995 most investments are attracted by the greenhouse sector. For example in Fier district the area of plastic greenhouse increased from 0.15 ha in 1994 to 3 ha in 1996 and 9.3 ha in 1997 (Puka, 1999). In Lushna-district the increase has been even bigger. The crucial issue is that early vegetables get a good price. The total area under open field vegetables is fairly constant during the 1990's as is the average yield per ha. Potato production has changed considerably over the last few years. New varieties and high quality Dutch seeds are used and the yields have increased from a mere 8 ton/ha in the communistic period to about 12 ton/ha at present. Innovative farmers get up to 25-30 ton/ha of early varieties and up to 35-40 ton/ha for medium term varieties.

Fertilisers are an important source of yield increases. From 1994 to 1998 the use of fertiliser has increased with about 36%. The total amount of fertiliser used increased from 91 to 124 thousand tons. This is yet only about one third of the amount of fertilisers used in 1990 (Civici and Lerin, 1997). Per ha of tilled land only 76 kg of active ingredient is applied, about the same level as in 1970 and about half the amount applied in 1990 (Hall, 1994). In the past the major part of the fertiliser was produced in Albania (N-fertiliser in Fier and P-fertiliser in Lac). In 1998, out of the 124 thousand tons, 87 thousand tons were imported (by AFADA dealers).

2.4 Conclusions

The overall conclusion is that in the 1990's agriculture production has grown considerably, but that the productivity for the main crops (wheat, alfalfa and maize) did not yet reach its pre-1990 level. The minor crops did better: yields of beans and vegetables grew with about 20%, similar to the growth of the dairy production. Potato yields increased most of all, with about 100%.

Despite the fact that crop-yields have not reached pre-1990 levels, total factor productivity of agriculture increased by 35% in the period 1989 -1995 (Kodderitzsch, 1999). Of this 20% was caused by using less inputs and 15% by a higher value of the output. The first confirms that less fertilisers are used and more work is done by hand (in stead of by machines). The second confirms that livestock production (with a higher added value for

the farmer) has increased that in the process of price liberalisation agricultural products have become more expensive.

Past trends can not be easily extrapolated into the future. When e.g. one compares the increase in prices of agricultural products in Fier district with the inflation over the period 1994 -1998, most products have become relatively cheaper. This reflects the growth of agriculture production and the increased competition between farmers. Only the most efficient farmers will survive this competition. Indeed in the last few years specialisation is taking place. One finds more and more farmers with 50 or more small ruminants, with 4-5 cows, with a small plastic greenhouse etc. Access to high quality inputs and to markets will be the major elements in the competition.

In the future, further specialisation is needed in order to develop a competitive Albanian agriculture. In order to avoid that a further increase in production would only lead to a lower price and hence a stagnant income for the farmers, the possibilities for export have to be explored seriously. Comparative studies have to be done to identify the comparative of Albanian farming over neighbouring countries. A first approximation might be that dairy products, vegetables and potatoes offer the best prospects. All attention should be focused on these. It is in the vegetable sector that agricultural research and extension can have their biggest impact, since still much can be gained by improving the level and the quality of the production of potatoes, tomatoes, cucumbers and the like.

3. The AKIS in transition

The changes in the roles in the Agricultural Knowledge and Information System are part and parcel of the transition process. This paper aims to give an outline of these changes. It starts with a short description of the AKIS during the communistic era, without which one can hardly understand the depth of the changes which have taken place. Next the period 1992-1999 is described during which the Fier Agricultural Programme (FAP) has been shaped and implemented. Lastly an attempt is made to give a picture of how things could develop further in the next few years.

3.1 Before 1992: the legacy of the communistic period

Education was one of the focuses of the communist regime. The number of agricultural middle school increased from 5 in 1960 to 343 in 1990 (Spasse and Veshi, 1998). In the villages 'professional middle schools' were created where general secondary education was given together with some form of professional/practical education. In 1993 153.500 people had finished a 4 years course on an agricultural middle school: 22.600 agronomists; 10.600 economists/accountants and 16.900 Veterinary assistants (MAF, 1994). About 6% of them continued to an Agricultural University. A similar percentage became 'brigadier' in a co-operative or state farm, the rest became farm workers (Veizi, 1997).

In 1951 the Agricultural University of Tirana was established; later another was created in Korça. Until the transition, 18.330 people graduated from these (7.872 agronomists; 6.098 economists/accountants and 4.360 veterinarians/zootechnicians; MAF 1994).

Most of them graduated in the later years: e.g. in 1990 there were 4,231 students at the Agricultural University in Tirana (Spasse and Veshi, 1998).

Before 1975, most students of the AU came from agricultural middle schools; after that, admission depended on the average marks students had scored in secondary school. As a result most students came from the better equipped urban schools which had better teachers. On top of that, access to middle and higher education was generally heavily biased to urban people as they had much better connections with party members who had the final say on the admission of children in schools.

In general agricultural professions had a low social status and very few pupils would opt themselves to study agriculture, even at university level. In practise only those who did not have enough connections with party officials to enter preferred studies like medicine or engineering, but who had high marks in secondary school went to the Agricultural University. The teaching was very much theoretically oriented. A special attribute of the system was that people could also study 'with correspondence'. This means people rarely came to the school (e.g. only twice per year for some practical lessons) and did exams. Many people who had gained office via political connections were in this way supplied with the necessary diploma's. A practice which in all kind of shapes continues until today.

Agricultural research has been initiated very late in Albania. Many research institutes were only established in the 1970s. For example the Plant Protection Institute was established in 1971, the Institute for Vegetables and Potatoes in 1974 and the Soil Institute even later. Like in the University the emphasis was on theoretical aspects. Field research was difficult and poorly organised. The researchers usually made a protocol for a trial and sent it to some state farms where field technicians implemented the trial, collected the data and sent them back. Also agricultural middle schools were involved in this: in 1988-89 eleven research institutes did 1280 experiments on different schools; some institutes had experiments at more than 50 schools, even the institute for livestock research (Spasse and Veshi, 1998) for which research is notoriously more difficult than for crops. It is hard to believe that these have been serious trials. When the data came back to the institutes they were analysed by the mathematician of the institute before the researcher would draw some conclusions and write an article. In this system the exposure of researchers to the situation in the field was minimal. Combined with the fact that most graduates from Agricultural Universities came from towns, makes it understandable that the core of the AKIS was theory rather than practise. Practical skills like diagnosis of crop disorders in an early stage were not developed.

Another major problem was that research was more or less synonymous with breeding, both for livestock as for crops. New breeds and varieties were seen as the key to any improvement of production. A second point of attention was pests and diseases. Yet there was no interaction between these ideas: so no breeding of disease resistant varieties took place (and still does not take place). There was also little attention for good husbandry and new technologies. Until the 1990s pesticides are used which have been long prohibited in Western Europe.

Researchers had very few contacts abroad and in case they had, it was mostly with other communistic countries. Only after 1978 more contacts with western countries were

allowed and some people got the opportunity to study abroad. A typical result of the isolation is the Albanian soil classification system which was made with little assistance from outside (Zdruli, 1997). The classification system hardly uses any measurable criteria while those which are used are not always in line with international standards. As a result the old soil classification into modern systems like FAO-UNESCO or the Soil Taxonomy is cumbersome (v. Kekem, 1998; Zdruli, 1997). Next to this the only complete soil map from Albania is from 1958.

A last problem was that the appointment of staff in institutes was often not based on technical merit but on connections with the members of the Central Committee, the organ of the communist party which had to approve all appointments. In their judgement the 'biography' of a person was crucial. This biography concerned the (political) behaviour of your family over the last decades. Having a father or a mother from a family with active members of the Balli Kombetar (nationalists who fought against the fascists occupiers in World War II and against the communists afterwards), almost automatically meant that one could not pursue a scientific carrier.

In the remaining of this chapter, the evolution of the Albanian AKIS in the 1990's is analysed. The key-elements are Agricultural Education, Agricultural Extension and Agricultural Research.

3.2 Agricultural Education

After the transition of 1991 the middle school collapsed and in 1993 there were no new graduates of professional agricultural middle schools. At present only about 12 schools do officially exist of which about half are active (Korca, Berati, Fier, Golem, Shkodra). These have survived because foreign donors took an interest in them. Now they each have some 60-120 pupils of which annually about 15-30 graduate.

In 1993 there were only 491 graduates of the agricultural universities, a drop of nearly 90% compared to 1990. Specially the interest for the vets/zoot. was very low: 24 only (Jeanhke and Schinke, 1994). In 1996, 284 students were registered at the Agricultural University of Tirana (AUT; GTZ-leaflet). In the 1997 crisis the AUT was severely looted and damaged; a.o. the library was burnt down. In 1998 about 100 students followed courses on technical subjects (among them 30 for veterinary). About half of them are from Kosovo, Macedonia and NE-Albania. The interest from the more potential coastal plains is very low. In 1999 most of the agricultural departments had about 20 new students per year. Only economics is generally more attractive. For veterinary sciences and forestry also some 20 students are enrolled per year. Few students see a possibility for an active career in science; most hope to migrate after their graduation.

In 1993 the AUT created the Department of Extension Education in Agriculture which (with TEMPUS funds) trained 91 people (52 extension workers, 39 teachers) in 5 courses of 5-10 weeks in the period 1994-1997 (Veizi, 1997). In cooperation with ANEP some more courses were given in 1998/1999. Unfortunately this initiative was not given a follow up and in 1999 its staff was moved to other departments.

3.3 Agricultural Extension

3.3.1 The National Extension Service

The first step in setting up a national extension service was the Law on Extension, enacted in January 1992, which allows for setting up an extension agency under MoAF responsible for providing technical, marketing and business advisory services (Kodderitzsch, 1999). In mid 1993 an Extension Unit was created in MoAF supported by the PICU project of EU-Phare (Sena, 1999). In 1994 this project continued as the Albanian National Extension Project (ANEP), which was sponsored until 1997 by EU-Phare and ever since by the Dutch government. The unit initially (1993) worked with 6 districts, which was gradually expanded to all (36) districts (1999). Here an overview of the national extension service is given, using the key-elements of any organisation.

Mission

As can be seen from the next sub-paragraph on demonstrations, the actual extension activities preceded the development of an extension service and therefore of the process of developing a mission or a vision for such a service. Considering the history of the AKIS one can imagine that developing a clear vision on extension was very difficult. Yet in 1995 a clear medium term policy document was produced, endorsed by the ministry and discussed and explained to the district extension services. It opts for a public extension service offering services free of charge to all farmers. It distinguishes very clearly the tasks of an extension worker and an inspector. Since most Albanian staff considers the main tasks of any government service to be the enforcement of laws and regulations, this was a difficult issue.

Unfortunately after the elections of 1996, under a new minister of agriculture the vision on extension became blurred again. Key-staff was changed and the distinction between extension, inspection and even statistics was no longer clear. In fact, the extension workers did not report to the extension unit in the ministry but to the directorate on crop production. In their reporting they focused on what is called 'evidence' a remnant of the old practice to inform the ministry every two weeks on how far one has managed to implement the "production plan". Only in 1999, this situation was rectified and again a vision on extension was developed. Again the distinction with other tasks was crucial. This time the free of charge services were to be complemented with semi-commercial (aiming at cost recovery in the long run) services for commercial farmers (see later).

Structure

The Extension Unit has a decentralised structure with a small staff of one coordinator, a monitoring- and gender officer and 7 regional managers, each covering about 4- 8 districts. In each district a chief of extension is responsible for extension. Since in the old system agronomists were taught some management techniques (and zootechnicians not), they normally occupy this post. They have one or more subject matter specialists (on livestock, on extension methodology, on plant protection or soil issues). At commune level he has up to 30 extension workers. Until 1999 at commune level it was often not clear whether someone was an extension worker or a plant protection inspector.

In 1999 the department of agriculture in Fier developed, in cooperation with FAP, an alternative structure for Fier district. The main reason was that the spreading of the staff over all communes with the same, vague task description made it not possible to adjust the staff to the specific needs of the specific agro-ecological zones. Therefore the total field staff of 40 people (extension workers, plant protection inspectors, veterinary inspectors) working in 14 communes and 3 towns was regrouped in 7 agro-ecological zones, each with a small staff of 3-7 people (mostly 6). Since this team is responsible for the total zone, it allows for a certain degree of specialisation of the teammembers: one concentrates on on-farm-research, another on statistics etc. One is responsible for the co-ordination. Several other district have copied the model from Fier. In the future the model offer the opportunity to include the smaller districts into more viable larger ones, f.e. in Kuçovo district at present 27 people are serving only 2 communes. This could be reduced to less than half without affecting the services to farmers.

General Approach

Each district makes its own extension plans in a participatory way. Rapid appraisals are done during which priorities for extension are established in open dialogues with farmers. The plans are presented in a kind of logical framework. They have to be approved at national level (where at the same time checks are made for overlaps and possibilities for cooperation between districts).

Staffing / Human resources development

At national level the extension unit in MAF is severely understaffed. Only 2 professional staff members are available for the planning and monitor of activities, to guide and assist the 7 regional managers, to organise meetings and seminars etc..

At commune level, reports in the first years mention about 600-740 extension workers. Next to these there were 400 commune plant protection advisors and 400 commune animal health advisors, who mostly functioned as inspectors. After a reduction of staff in 1998 and 1999, and after a better division of tasks in 1999, at present there are 380 extension workers, who are supposed not to perform any other task. In the first half of 2000 a further reduction of MAF staff with 30% is foreseen

Changes in staff occur frequently, mostly based on political affiliation. Of the group of people involved in the initial PICU extension efforts in '93/'94 only two are still active in the national extension service. Until now 3 people have been in charge of the Extension Unit of MAF. In most districts the chief of extension have been changed once or more.

From the very beginning training was an important aspect of the support. Initially the emphasis was on the basics of participatory extension planning, on extension methods and on extension management. Also some technical issues were trained, specially farm economics and marketing. Since all extension workers were supposed to be generalist but were trained in either crop production or livestock production, some additional training on these issues was given to cover the gaps. Since 1998 gender issues receive due attention. Most training was done via the principles of Training of Trainers, whereby the regional co-ordinators played a key-role. At present they are well trained and are able to provide training themselves. Unfortunately due to many changes in staff the training has to be repeated again and again.

Over the years several study tours were organised, via ANEP, FAP, AFADA etc.. These proved to be very useful in giving the Albanian participants an idea of how complex and well organised the AKIS-es in other countries were. Two issues often stood out: the (high level) of subsidies provided to farmers in EU countries and the high degree of farmers organisations and the resulting influences on policies and activities undertaken (e.g. research and extension).

Activities

The first activities were field-demonstration with fielddays. Since these have been very important in the development of the extension systems, they are separately analysed in the next sub-paragraph. Next came distributing leaflets, local fairs, individual advice to farmers, group meetings and seed multiplication activities (mostly in the mountainous areas). Since 1995 on farm trials are included in some districts (they are analysed in the next paragraph on research).

Finance

The budgets are fixed at national level: per district between 500-1000 USD/year is available for extension activities (excluding salaries and the normal costs for the car of the extension service). Until 1999 this was paid by the donors, from 2000 onwards MAF will pay 50%.

Inputs

In 1999 the Worldbank estimated that the GoA paid about 0.5 million dollar as salaries of the MAF extension workers and a group of over hundred extension workers paid by the local governments (mostly communes). Each of the 36 district received a car from ANEP and a set of equipment (computer, printer, copier etc.).

The different ANEP projects paid the actual extension activities. Until 1997 1.500 USD per year was made available per district. Since 1998 a differentiation was made between the districts; big ones received 1,500 USD (??), small ones 1,000 USD (??). Considering that the annual budget available for running a district department of the large district of Fier is about 1.000 USD per year, this is a fairly generous budget.

In 1997 a monitoring system was installed for the extension activities. According to Sena (1999), until spring 1999 about 3000 farmers have been involved in demonstrations on wheat, 1500 on maize, 500 on field-vegetables, 114 on watermelon, 80 on potatoes, 40 on olives and 20 on the use of Festuca grass against erosion. For livestock 270 farmers took part in demonstrations on the use of concentrate. According to extension unit the monitoring system gives even higher numbers. This might give a reasonable idea of the planned activities for 1997-1999; yet little is known on the impact in the field, on which we turn now.

Outputs

The data of the monitoring system on the number of farmers reached are highly over-estimated. For example the claim in the evaluation report of the EU-Phare project that before 1998 200.000 farmers had been contacted by the extension service and of these 90.000 had even regular contacts, can not be taken seriously. As long as claims of indi-

vidual extension worker to have given individual advice to 350 farmers in one single month are just copied and used, the system will not yield relevant data.

A next step would be to monitor the impact of the activities. The impact study done by FAP (see next par.) is the most well elaborated field study into the impact. This is not enough; indeed there is still much room to improve on the learning cycle in the extension service: an improved monitoring system, and a system of impact studies are needed. A sampling system of statistics (as initiated by the SARA project) could contribute as well, since it generates more reliable data than the present system of supposedly 100% coverage of all farmers.

3.3.2 The most used extension methodology: field-demonstrations

After the formal transition to a market economy, the agricultural specialist no longer could order the workers (farmers) what to do. Many of them were dismissed and only a few continued to work in the Ministry of Agriculture and Food. Nobody had an idea of what these people could do until from 1992 onwards a series of project started to organise field demonstrations for Albanian farmers. The Albanian Fertiliser and Agro-input Dealers Association (AFADA), established in 1992 by the IFDC in an USAID financed project, started this first in 1992 with demonstrations on the use of DAP in wheat. In 1993 the so-called PICU project of the EU-Phare followed with demonstrations in 6 of the most potential districts; at the same time FAP started in Fier. In the next years IFAD I, IFAD II and Agrinas followed in resp. NE-Albania and Pogradec district.

The aim was to show Albanian farmers that with modern inputs high yields could be obtained. Favourite issues for demonstrations were the use of concentrate for livestock, the use of herbicides in wheat, new varieties of potatoes, beans, wheat etc. and the use of fertilisers in wheat and maize. Since the input supply was difficult at that time and farmers very poor, most inputs were given free of charge. This fitted well in the stream of import support projects which had been going on for some years since 1991.

To give an idea of the constraints met with demonstrations the experience of FAP is explained here in detail. The following table gives an overview of the demonstrations done in two thirds of the villages of Fier district by FAP in 1993/94 and 1994/95.

Number of demonstrations plots organised by FAP in 1993-1995

	1993/94	1994/95
Wheat	70	65
Potatoes	24	30
Paprika	23	-
Watermelon	-	5
Beans	-	10
Fodder (alfalfa)	26	35
Total	143	145

Source: Selaci (1994) and Bakker et al. (1995)

The issues demonstrated with the crops were seed quality, choice of variety, fertilisations and weed control. The demonstrations had a 'mixed character': next to being

results demonstrations, they also function as trials (new varieties), method demonstration (e.g. application of fertiliser) and in some cases as seed multiplication plots.

In 1994 the inputs were given free of charge, on average 133 USD was spent per farmer, with nearly 250 USD per livestock demonstration. In 1995 the farmers who joined a demonstration for the second time had to pay 50% themselves. The selection of the farmers was a problem. Extension workers wanted to select farmers based on technical merits but commune officials pushed for poor farmers. In 1994 they seemed to have managed, as about 20% of the demonstration farmers left their farm to work abroad (Westenbrink and Vogelzang, 1994).

In 1996 an impact survey was done to measure in how far farmers know the technologies demonstrated and in how far they apply these. Three groups were distinguished: demonstration farmers (demo-farmers); farmers who visited the demonstrations (visitors) and farmers who did not visit the demonstrations (control group). In total 97 farmers were interviewed in 11 villages. Twenty were demonstration farmers; 25 were visitors of the demonstrations and 52 formed the randomly selected control group. Questionnaires were made for wheat, white beans and fodder crops (maize and alfalfa). For wheat 53 farmers took part, for fodder crops 30 and for white beans 14.

Before the results can be discussed some weak points have to be mentioned. First of all the level of knowledge and application of the technologies was not measured before the demonstrations. Secondly in some cases the extension messages were not clearly formulated and therefore hard to evaluate. If the objective is to 'give knowledge about the importance of feed balances for cows, calves, sheep and horses' it is very difficult to measure later in how far this objective has been reached. This has been a problem for the demonstrations on livestock and white beans. Here most attention is paid to the results on wheat. Despite the constraints some interesting conclusions can be drawn from the data in the next table.

Impact of wheat demonstrations on the knowledge and practices of farmers in Fier

Technology	Demo-farmers		Visitors		Control group	
	<i>know</i>	<i>adopt</i>	<i>know</i>	<i>adopt</i>	<i>know</i>	<i>adopt</i>
new wheat variety	100	0	100	0	60	0
crop rotation	97	65	80	48	50	42
wheat-seed treatment	90	40	70	36	30	20
use of DAP in wheat	100	60	80	50	20	15
herbicides in wheat	65	47	50	37	22	13

The new wheat variety had a zero adoption rate as no seeds are available. On the other messages the table shows a clear correlation between knowledge of a technology and adoption rate. Obviously demo-farmers are aware of the technology which was shown on their farm. The notable exception is for the herbicides. The majority of the visitors also know the technologies. For the control group, there is a marked difference between the technologies: in some case they have a good knowledge, in other cases only 20%

knows the advocated technology. The explanation could be that farmers of the control group were aware of the new variety and crop rotation principles before the demonstrations started, while none of them knew anything on seed treatment, DAP and herbicides.

Leaving the data for what they are, several very useful observations were made by the farmers, and the interviewers took very well notice of this (Selaci and Thanasi, 1996):

- a. lack of cash often prevents farmer to apply their knowledge;
- b. 12% of the demo-farmers stopped farming; most migrated.
- c. some fertilisers were not in the market at the right time;
- d. expired and ineffective pesticides are sold on the market;
- e. farmers know seeds have to be disinfected, but they do not know the pesticide;
- f. there is a general lack of knowledge on plant protection issues:
 - * farmers do not know how to diagnose pests and diseases;
 - * farmers lack the knowledge on how to control pests and diseases;
 - * knowledge available on pesticides, concerns only old ones;
 - * people using pesticides do not always know the right application methods;
 - * farmers want the extension workers to visit their field and advise them on how to control pests/diseases; but most extension workers do not have the required skills;

For all demonstrations a leaflet was made. The survey found that 40% of all farmers are satisfied with the leaflets; 60% found the leaflets difficult and asks for direct contact with extension workers. The data on the control group show that demonstrations and leaflets were not able to convince them to purchase new and unknown agro-chemicals.

The experience with livestock demonstrations in Fier is different. In 1993-94, PICU gave 10 farmers 5.5 kg concentrate per day for 5 months (half Dec. - half May). The data collected show an increase in production of 4-8 litres of milk per day. One of the conclusions of the final report was that farmers are convinced that they should give supplementary feeding in winter. In 1995-96 ANEP organised a similar demonstration. Two of the previous 10 farmers took again part: this time 10 farmers got 3 kg per day for 90 days (April-June) and they are supposed to contribute another 3 themselves. The reported result is a 4 - 10 litres extra milk per day.

Next to the fact that in both cases the reports do not give the impression that the data mentioned are actually measured, two issues stand out. In 1996 the conclusion of 1994 that concentrate has to be given in winter is not applied by the extension service itself. Secondly one kg of concentrate costs 25 Lek; milk was sold for 17-23 Lek/l. So on average 150 Lek was invested and 80-200 was gained. With all troubles it is not worth the effort; especially as the report on the demonstration complained on how difficult it was to find the concentrate. Still in the 1996 report some improvements in the analysis of the extension service can be found: an economic evaluation is included in which even a differentiation is made between cows and farmers. The conclusion is more specific: concentrate should only be advised for good cows which are near to markets.

There is no reason to assume that these experiences would not be representative for most demonstration done in Albania in the last six years. The general conclusion is that they played a useful role in the establishment of the extension service and in the establishment of the relations between the extension service and the farmers. Their impact on the actual behaviour of farmers has however been limited. Farmers from their side asked for more individual advice on plant protection issue and on the use of unknown agro-chemicals.

After 1995 FAP stopped to pay all the inputs needed, and started with on farm trials (see next paragraph). In the following years, ANEP did the same. IFAD I, IFAD II and IFDC/AFADA continue to subsidise demonstrations (see next par.).

3.3.3 Elements of privatisation in Fier and at national level

In the last few years more attention is paid to private extension. One can distinguish three forms of private extension: extension via private firms promoting their products; privately operating individual extension workers who advise farmers against payment and independent private organisations employing extension workers. Each of these forms is discussed here.

Extension by private firms

Extension by private firms is promoted by AFADA. It started already in 1992 with demonstrations on inputs via the extension service (see above). Since 1998 it works only via so called Technology Transfer Centres (TTCs). Traders are supposed to supply all inputs and cover all other costs for a farmers-demonstration field of 0.3 ha. Several varieties of the main crops are shown as well as the effect of some inputs (e.g. Potassium fertiliser). In the first year the costs are covered completely by AFADA (via the USAID sponsored project implemented by IFDC), in the second year the trader has to pay 50% and in the third year he has to cover all expenditures. In 1998 the first TTC was established in Fush Kruja, in 1999 eight TTCs were established, among others one in Fier. In Fier there was a close cooperation with the department of MAF which selected the farmer and appointed a specialist to take care of the technical aspects of the field. It is no coincidence that in the past this specialist set out most scientific trials done in Fier.

Unfortunately the set-up of the TTC (with very few, if any, responsibilities for the farmer and with only a few TTCs in the whole country) makes it fairly expensive. Since the technologies demonstrated are by and large still the same as those of the demonstrations described in the previous paragraph, their impact on farmer's behaviour will be limited as well. Ironically in this private extension system subsidies are given for demonstration activities which the public extension no longer subsidises (see above).

Traders however do have other forms of extension. Several traders in Fier employ agricultural specialists for one or more of the following jobs:

1. to work in their magazine/shop and to advise farmers who come to buy inputs on how to use them;
2. to visit their clients; e.g. a researcher comes to Fier every weekend (in the growing season) to identify pests and diseases in greenhouses and to advise farmers on how to control these. He advises the trader which pesticides to import;

3. to manage a farm to produce seed (e.g. tomatoes; potatoes);
4. one trader employs an agronomist to do some on farm trials, to organise a farmers group using inputs from the trader and to write leaflets on how to make optimal use of these.

In most cases these trained specialists are paid a salary which is about 2-3 times higher than a government salary. In Fier district up to 10 trained agricultural specialists might be employed in this way, mostly crop protection specialists.

Individual extension workers, paid by farmers for advise and management duties

In Fier several agricultural specialists are hired by farmers for all kind of services:

1. as a manager of a greenhouse, or a dairy farm. They can be paid either a monthly salary (15.000 - 30.000 Lek/month, depending on the seize) or part of the income (e.g. 10%) or part of the profit or a combination of the two; some of them act as guard at the same time;
2. to take care for certain aspects of the production; e.g, health or feeding aspects of a poultry unit or plant protection for (plastic) greenhouses. He visits the place (nearly) every day. He identifies pests and diseases and takes the necessary measures. The treatment or spraying he does himself. He takes about 5.000 to 10.000 Lek/month. Some of them are also employed as extension workers by MAF.
3. veterinarians and plant protection specialists offer their services when things go wrong with animals or in a greenhouse or field. Payments depend very much on the seize of the field, the urgency of the problem, the relation between the farmer and the specialist etc. Some specialists have a government job at the same time.

The number of people involved in this is unknown, but with about 800 of trained agricultural specialists living in Fier it is clear that tens of them are involved. At national level in 1992 about 12.000 specialist were employed by MAF; at present this will be about 2000. Even considering the fact that many will have migrated or found a job outside MAF or even outside the agricultural sector, many are still available as advisors or managers for innovative farmers.

Independent private organisation offering knowledge and information

The Centre for Agro-Business and Information, established by FAP in 1996 is the first *organisation* in Albania asking money for advise and information. Since the end of 1998 it is a registered Association of farmers and agro-businesses. The members (40) elect a board of 6 which takes all policy decisions and which has to approve all expenditures of the QABI-office. Contracts are signed by the board (see below) and the staff is responsible to the board. In practise this means that the board members are close to the staff and that the expenses for the office are kept to a minimum.

The main activities of its four staff members are:

- a. publish a monthly bulletin with prices of inputs, technical information and advertisements of traders; in 1998 over 5.500 copies were sold;
- b. an Information Center where traders display their products; QABI has regular contacts with 15 traders, most in Fier but also from Tirana and Lushna
- c. individual advise of farmers on investment opportunities. Example are investment in (plastic) greenhouses, dairy cows, grape seedlings, seed potatoes etc.

One farmer invested about 50.000 USD based on the advice, several others invested some thousands of USD.

- d. soil sampling and fertiliser recommendations;
- e. support to producer groups. Examples are milk marketing or the common procurement of inputs (plastic for greenhouses, seeds, seedlings, pesticides etc.). QABI supplies the necessary information for this as well as support on how to organise the groups. In general the groups remain ad-hoc groups.
- f. At national level QABI contributed much to the establishment of the Albanian National Seed Potato Association (see elsewhere).
- g. seminars to link actors. At district level QABI held seminars with farmers, researchers, input suppliers and processors; e.g. on tomato production or grape production. Participants have to pay to take part in these seminars.
- h. on request QABI does marketing studies. The latest example is one on olive oil, but also studies on tomatoes and potatoes have been done.
- i. studytours and exchange visits for which the participants pay;
- j. training: a group of farmers in Lushna district is trained in bi-weekly sessions of one day, during a period of few months; a NGO-pays the fees;
- k. mediate on inputs and markets. QABI links farmers and agro-businesses by informing both parties on the demands of the other.

Since the beginning of 1999, clients have to pay 150% of the costs of direct services like sending a fax, phoning or making a copy. For transport they pay 20% inside-, and 50% outside the district. When clients indeed decide to invest as the result of the information given by QABI or through the mediation by QABI, it gets 2% of the value as a commission. The fee for advisory services of QABI staff is 500 Lek per working day or 10% of the actual costs (incl. overhead costs).

Organisations like QABI can play a role in establishing at least a private mechanism to deliver information, knowledge and skills to farmers. They can however not be fully private in the sense that the Albanian farmers and agro-businesses at present are not bale or willing to pay the full price for the services. Support of donors (including the MAF) is needed.

FAP supported QABI by paying the costs of the basic salaries (136 USD/month netto, or 200 USD gross) and the transport. The contribution of FAP towards the other running costs (rent of the office, office materials, telephone, printing the bulletins) is related to the income generated. A contract is signed stating that for every Lek of income generated by QABI, FAP contributes 2 more. In this way the staff is forced to generate income, since without it, it would soon go bankrupt. Every year this arrangement is reviewed, so that the amount given is balanced. In order to stimulate the individuals to generate income, 50% of money collected is for the staff. Half of this (25% of the total) is for the individual concerned and the other half (25% of the total) is shared between the other staff members (including the manager who does not deliver services directly to clients).

The three basic elements of these contractual arrangements are that:

- it means a subsidy to a private extension organisation while keeping all relations in the system based on private mechanisms;
- it stimulates the staff to work hard on income generation (so on good work)

- through the mathematical set-up it does not allow for any type of fraud.

In 1999, QABI recovered about 15% of its costs. Most income is generated by the bulletin, membership fees, the 2% commission, seminars and services (tel./fax/ transport etc.). The income from fees for advice was limited which can be explained by the competition QABI faces from the free of charge specialists employed by traders and the extension workers of MAF as well as by the competition of officially unemployed trained agricultural specialist employed by farmers as advisors/managers.

An important repercussion of privatisation is that it reduces the possibilities to use the organisation for the realisation of policies of outsiders (being it the government or of donors). In the case of QABI this meant that it reduced its role in the stimulation of group formation and diversification of the agricultural systems, since farmers were not willing to pay for this. The only way for outsiders to have the private organisation working on these issues is by hiring them to do so.

Conclusions

The first conclusion of this is that, although both researchers and extension workers earn extra money, no *organisation* is receiving any sizeable amount of money for advisory service. Next to the above mentioned factors, the psychology of farmers is another. When they know that their payments will go to an organisation, they are reluctant to pay. Organisations should provide services for free, otherwise they prefer to take an (un-) employed specialists whom they can control, who also takes care of (part of) the implementation of the advice and who will 'guarantee' a good yield.

So, although many unemployed, trained agricultural specialists sell their skills and knowledge, one can not speak of any kind of *privatisation of parts of the AKIS*. No new public knowledge is generated and spread; many people keenly keep their knowledge and skills for themselves. The main problem for many small, starting farmers is not solved since they can not hire a specialist. They do not know where to get the right inputs, how to produce and where to market their produce. Organisations like QABI can solve their problems.

3.4 Agricultural Research: On Farm Trials as a new concept

From a fairly early stage the importance of a good link between agricultural research and extension was recognised. Since there was limited experience with agricultural research in Albania (see above) and since only very few means were available, it is logical to focus on applied research via on farm research. For this in 1995 the National Research Council (RNC) was established. Its primary aim was to stimulate the use of on farm research, to set priorities for applied research and to co-ordinate the different trials. All agricultural research institutes appointed a research-extension linkage officer, who was responsible for the link between research and extension; questions from the field were forwarded to him or her (of commune extension workers, via chief of extension at district level, the regional manager and the extension unit) and (s)he would find the answer from a colleague and communicate it back through this chain.

Research-extension-linkages officers were trained in participatory planning of on farm research. Problem identification is done by farmers, extension workers and researchers together. Research proposals were elaborated by the research institutes to be submitted to the RNC for approval, after which they would be funded by the ANEP. The implementation of trials is a responsibility of the research institutes. In practice few proposals for on farm research programmes were submitted, and the NRC only met twice in 1995 and once in 1998. In 1999 it was reformed into the National Research Advisory Committee. According to Sena (1999) in 1999, 65 farmers were involved, mostly in variety tests (of maize, wheat, potatoes, beans) and breed comparison (sheep and cows). In how far these trials are successful is unknown to the author.

In 1995/96 FAP initiated in Fier a programme of on-farm-trials for which annual contracts with research institutes were signed. According to this, researchers of the Institutes:

- a. compiled research methodologies,
- b. compiled detailed budgets for the trial,
- c. monitored the implementation of the trial;
- d. processed the data;
- e. draw the conclusions (in cooperation with extension workers, farmers etc. ; special attention is paid to the economic aspects of the trials and to a systematic collection of the opinions of the farmers).

FAP, in cooperation with DAF, did

- a. select the farmers for the trials,
- b. provide and distributes the necessary inputs,
- c. ensure the involvement of an experienced extension worker in the supervision and implementation of the trials,
- d. take part in the discussions on the final data;
- e. cover the cost of transport and DSA for the researchers (MAF rates).;
- f. pay a small incentives of 100 USD per trial to the institute, for the methodology and the final report. In 1999 this incentive was given to the researcher involved.

In 1998 an internal evaluation showed some weaknesses in the model and in the way it was implemented:

1. the commune extension workers do not consider OFR as their task; so they are not motivated to monitor the farmers and measure the yields;
2. the selection of farmers was not always based on objective criteria; less motivated farmers were included for reasons of friendship etc. This gives poor results.
3. sometimes farmers differ too much, giving a too high variability in the results;
4. as a result of the above, data from some farmers are not used for analysis;
5. the results of OFT are not yet systematically translated in extension plans and they are not yet spread to other districts;
6. the selection of subjects for OFT is still done by researchers and extension workers, after consulting the farmers.

In reaction to these results district committees were created to select the subjects for on farm research and to come to concrete agreements on how to implement the trials, how to spread the results etc. Members are the chief of extension (chairman), the Regional Extension Co-ordinator, relevant researcher, some farmers, some traders and 1-2 pro-

cessors (when relevant). In the case of Fier the extension co-ordinator of FAP acted as secretary of the committees and also QABI was represented. Committees on potatoes and greenhouse vegetables were created. In general traders availed the inputs for the on farm trials, farmers implemented the trials, the researchers wrote the reports and the different representatives of the extension organisations committed themselves to spread the possible messages resulting from the trials.

Secondly the farmers taking part in one particular trial will be more concentrated. This indeed increased the participation of the extension workers and reduced the logistic problems of the OFR-coordinators (and so a closer follow up is possible). Thirdly DAF was requested to assign some extension workers with the special task of on-farm-research. They agreed on this, since it fitted well in the new organisational set-up which DAF-Fier was implementing (see above).

In an effort to institutionalise the participatory approach to on-farm research, in 1998, FAP assisted the Institute for Vegetables and Potatoes (IVP) to identify its priorities for research on greenhouse production in a workshop of one week with researchers, farmers, traders, extension workers and traders. Next to the traditional variety screening, plant protection, technological and economic issues were seen by all as a high priority. The director presented this during the seminar for the 25th anniversary of the institute and all agreed (including the minister and vice-minister). However all his staff members were specialised in breeding (of one or more crops) and since the institute did not receive the promised two extra staff members to work on technological or economic issues, not much has changed. Only when there is a clear request from outsiders (like FAP) for applied research on technological issues, this is done.

Over the period 1995/96 - 1998/99, in total 28 trials have been done by FAP in cooperation with the Institute for Vegetables and Potatoes; 6 with the Wheat Institute in Lushna, 2 with the Livestock Research Institute and 2 with the Forage Institute. The last four are still continuing.

In case of the trials with potatoes and vegetables, the contribution of two Dutch experts on these subjects has been indispensable. In total they came about 10 times between 1995/96 and 1998/99. They shared their experience with Dutch farmers on similar issues and came with valuable suggestions for new trials.

The final results have been satisfactory: clear conclusions could be drawn on:

1. the best varieties of wheat, potatoes, tomatoes, cucumber and (water-)melons;
2. the husbandry of potatoes improved considerably: N, P and K-fertilisation- and the use of ridges of potatoes proved viable new technologies. The control of Phytophthora and Rhizoctonia was improved. Seeds from several districts in Albania were tested and a market for high quality Albanian seeds was created;
3. greenhouse technology was improved via better measures to combat frost in early spring (micro-tunnels/wetting) and via the introduction on seedling production in modules (which is now commercially done);
4. for some vegetables grafting proved to be successful (not for all); the pruning of melons was improved considerably;
5. P-fertilisation of white beans is economically attractive; inter-cropping of maize and beans not due to high labour requirements.

As important as these concrete results is the creation of an extensive network for innovation consisting of researchers, farmers, traders, extension workers and QABI staff. For the potatoes the creation of the Albanian National Seed Potato Association in March 1999 was a logical conclusion of the work done by FAP, both on on-farm-trials as well as on support to Producer Organisations (via QABI). ANSPA aims at supplying Albanian farmers with high quality seed potatoes; either from imports or via well supervised multiplication plots of (Dutch) elite seeds in Albania. Its activities include inspection and certification of locally produced seeds, training of farmers and seed inspectors and on farm trials.

For tomatoes a kind of informal network developed as well. For wheat an informal group of FAP-staff, extension workers and farmers was established who grow over ten ha of high quality seeds (often using seeds first used in on-farm-trials).

It is in these networks that the researchers get an incentive to observe trials well and to come to clear and reliable conclusions. This is new in Albania. In a seminar on the result of on-farm-trials, one researcher stood up and only said "we do trials in order to learn things which we do not yet know". This was obviously the most important lesson for him during the two years he worked on the trials.

4. Conclusions

Immediately after the transition people started to keep much more livestock; as a result the area under fodder crops increased. Recently however the number of animals dropped considerably, as did (to a lesser extent) the milk production per cow.

In crop production, much has remained the same in Albania agriculture: the yields of most crops have not yet reached their pre-1990 level. The technology applied in most cases is still the same.

The reason for the above are the small and fragmented holdings, poor input supply, lack of marketing opportunities (lack of processing capacity), the lack of information on inputs and markets and the lack of information, knowledge and skills of more modern production technologies.

The functioning of the AKIS still bears similarities to the situation before transition. Staff appointments and scientific promotions are as much based on political affiliation as on technical merit. Many people still study by "correspondence", also at the university. The severely under-funded research institutes find it hard to re-direct their research to the practical problems of the farmers.

The extension service has not been able to change much in these basic facts. It would also be unrealistic to expect it to do so. Despite this, much has been reached at national level. The isolation of the Albanian AKIS has been broken. A well structured extension service is set up. Many people have been trained in a wide range of relevant topics. A

range of extension activities has been carried out and people gained considerably experience in doing so.

Area for improvements are still many:

- improve the technical competence of the extension workers and researchers;
- improve the functioning of the staff by clear tasks descriptions and staff appointments based on merits;
- better coordination with third parties (AFADA, projects);
- focus the attention on some key-issues via on farm trials and linked extension activities (coordinated from the national level);
- improve the ability of the organisation to learn in a systematic way from its own experience via a more appropriate monitoring system and via specific impact studies.

Based on the experience of FAP in the last 6 years, the main lessons for the Albanian AKIS would be:

1. *create networks for innovations* (via on farm trials; via links with agro-businesses and via producer organisations like ANSPA) were all interested parties work together on a well defined, common goal;
2. *stimulate private mechanisms*; although it will be very difficult to have fully private extension organisations, semi-private regional extension organisations like QABI, using private mechanisms will be much more efficient in supporting farmers to become competitive at the national and international level.

In both cases an innovative approach is needed, whereby a few promising sectors are selected and supported via a range of activities. Potato production and early vegetables from plastic greenhouses (tomato, cucumber, watermelon) are good candidates. Opportunities for export should be identified.

For both the networks and the regional semi-private extension organisation a close co-operation with others is needed, especially with research institutes, producer organisations, traders associations, donors and credit institutions. For quick progress in the field of productivity assistance of foreign experts with much experience in applied research is indispensable.

References

- Bakker, S., H. Demiri, J. Hoekstra and V. Manushi.* (1995). Zero-mission. FAP report.
- Bottema and Wentholt* (1998). The dairy market and stakeholders in Albania: linking markets with extension. Report of a mission; 26 Oct. - 7 Nov. 1998. Amsterdam. KIT.
- Civici, A. and F. Lerin* (1997). Albanie, une agriculture en transition. Option Méditerranéennes. Montpellier, Bari. CIHEAM.
- EU_phare* (1998). Evaluation second phase technical assistance. Tirana, EU-report.
- FAO* (1999). The republic of Albanian. Impact of the kosovo crisis on Albanian agriculture and the environment. Tirana, FAO.
- Hall, D.* (1994). Albania and the Albanians. Pinter reference. London.
- Holtland, G., S. Ferko, R. Kuiper, J. Smit and M. Wind.* (1998). A bottom up approach to the rehabilitation of (parts of) the large scale irrigation system and the handing over to Water Use Associations in Fier district, Albania. Paper presented at the International Seminar on Participatory Irrigation Management in Tirana, April 1998.
- Holtland, G.* (1999). Constraints and opportunities for Producer Organisations in Albania. Case studies from village, district and national level. WB-Website on PO.
- Jaehnke and Schinke* (1994). Agriculture and Food Statistics of Albania. Berlin, Duncker & Humblot.
- Kekem, v. A.J.* (1998). Availability and quality of soil information. FAP-report.
- Kodderitzsch, S.* (1999). Reforms in Albanian Agriculture. Assessing a sector in transition. Worldbank Technical Paper 431. Washington, Worldbank.
- Kunkel, D. and E. Skreli.* (1998). Rural household income: sources and distribution. Implications for agricultural polices. Per presented at the symposium: "The role of research in restructuring of Albanian agriculture". Tirana, February 12th 1998.
- Litschauer, J.G.* (1997). An evaluation of the transition in Albania's agricultural sector. Unpublished paper.
- MAF (1999). Statistical yearbook. Tirana, MAF.
- Puka, A.* (1999). Agricultural Strategy Paper for Fier district (Albanian). Fier.DAF
- Selaci, F.* (1994). The ongoing of the extension project for the period January-September 1994 and proposals for the organisation of the work in the future. FAP-report.
- Sena, S.* (1999). Këshillimi Bujqësor. (Agricultural Extension). Tirana, AFADA.

Spasse, I, and H. Veshi (1998). Pre-University Agricultural Education. Institute for Pedagogic Studies, Tirana.

UNDP (1998). Albanian Human Development report.

Veizi, P. (1997) Re-qualification of teachers and extension workers as a crucial element in the restructuring of agricultural education. In: Agricultural school in agricultural development. I. Halla (Ed.), Golem.

Westenbrink, G. and L. Vogelzang. (1994). Monitoring mission agricultural extension project. FAP-report.

World Bank (1992). An Agricultural Strategy for Albania. Washington. Worldbank/EU.

Zdruli, P. (1997). Benchmark Soils of Albania. Vol. I. Washington, USAID, International Conservation Division.