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STUDY OF VAQARR COMUNA

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INTRODUCTION

This report on the situation in Vaqarr comuna is meant to identify key elements of the land situation in a specific comuna (a comuna is a grouping of villages). This description will help to interpret data generated by the larger IPRS Impact Assessment questionnaire survey. This study will also serve in directing survey data analysis to specific questions arising from current realities.

Focus in this report is on three areas: 1) the overall agricultural situation in the comuna -- how it appears to have been evolving in recent years and factors associated with differences among the various villages, particularly the three sampled in the IPRS baseline survey, 2) investment on land held by people in the area and what role tenure security appears to play in such investments, 3) land market and transfer activity --- how common is it, what motivates it and what are its major forms?

Sources of data include interviews with comuna-level officials and residents in the three Vaqarr villages --- Vishaj, Lalmi and Gropje --- which were sampled in the IPRS baseline survey. Officials contacted included the comuna secretary, the comuna mapping specialist and agronomist and the comuna crop agriculture and livestock officers. Recent (1995) statistics on current land use patterns and livestock were also obtained. Farmer interviews targeted those either known from survey questionnaires or discovered in the course of field visits to be involved in investment or land transfer-related activities.

Vaqarr in comparative perspective

Vaqarr comuna is located just west of Tirane. It is predominantly Muslim. Unlike some of the other sampled comunas, international migration does not appear to be a

¹The author was greatly assisted by Prof. Llukan Puka, who acted as translator and provided valuable insights reflected in this report.

major factor in shaping Vagarr's socio-economic life. At least in the three villages visited, and purportedly in others as well, international migrants are few --- 4-5 per village appears typical. Other factors that appear much more relevant to villagers' economic well-being include how the distribution of land occurred (both in terms of allotment size per capita and whether old boundaries figured into the distribution), the number of old-time residents versus newcomers, distance/ease of road access to Tirane, extent of irrigation and topography.

GENERAL PATTERNS AND TRENDS IN OF AGRICULTURE

The main change over the last 5 years has been a sharp decline in the area planted in grains, in favor of alfalfa (jonxhe) and dairy production. Declining grain yields in the post-cooperative years, was one reason cited for this shift. Declines are blamed on seed supply problems², the failure to practice crop rotations and low chemical fertilizer use rates due to high prices. Escalating production costs combined with low yields and prices to reduce interest in grains as a crop.

Table 1
Price Trends for Grain Crops and Fertilizer

Grain prices - (Lekes per kg.)	1993	1994	1995
Wheat			
Maximum	19.7	17.7	15.1
Minimum	11.3	15.8	12.7
Average	17.3	16.4	14.3
Corn			
Maximum	19.0	21.2	20.1
Minimum	13.9	17.9	17.0
Average	17.5	19.8	17.8
FERTILIZER/kg Average			250 ³

² Their unavailability, high price and low quality.

³ If use 50 kilos per dynam cost is 50 kg x 10 leke/kg = 500 Leke per dynam.

LAND USE

LALMI Village

According to a woman interviewed in Lalmi: "There is no water to grow vegetables in the summer. Production costs are too high and a very high percentage of land (she said 75%) remains unutilized. Most of the land used is planted in alfalfa (jonxhe). She has one cow and sells milk daily in Tirane. Vegetables and vines are grown around the house for the family's own use. She noted that there was virtually no wheat production in the village because production costs were so high and product prices low.

Gropje village, example of crop rotation

Someone interviewed in Gropje with access to supplemental well irrigation said that the rotation he followed was:

1. Wheat --> 2. Corn --> 3. Beans --> Vegetables. Because land was distributed by fis, his parcel was bounded by parcels of his two other brothers. They all followed the same rotation so that they could coordinate land preparation, planting and harvest operations.

By 1994 most people in the area were said to be buying wheat flour because this was cheaper than planting and milling grains oneself. Still, some continue cultivating wheat to secure their own supply. This year it was said to be hard to obtain wheat flour in the market and flour prices were relatively high.

As noted, livestock was the main agricultural branch to expand in place of cereal cultivation. About 90% of village families now have cows and about 10%, sheep. Typical herd sizes per family are 1-3 cows and 10-20 sheep. Growth in cow numbers between 1992 and 1995 is shown in Table 2.

Table 2
 Directorate of Agriculture and
 Food/ Vaqarr Comuna Sample Survey Estimates of Cows
 Populations: 1992-1995

YEAR	Number of Cows
1992	806
1993	917
1994	1100
1995	1224

Sheep and goats are largely restricted to villages with some pastures (eg., Allgjate, Damjan and Vishaj). Looking at Table 5, villages in which the ratio of sheep and goats to cattle exceeds 2 tend to be those marked by more hilly terrain.

SIGNIFICANCE OF DAIRY

a. Two brothers take the train from their village near Durres every day and sell milk in Tirane. Transport costs them 15 Leke each way. They do not process the milk; it is sold in 1.5 liter Coca Cola bottles. When the price is high, as it is in the winter, they sell the milk themselves. When the price falls in summer, they sell to a company in Tirane. They estimated that about 4-5 dn were needed to support one cow with alfalfa (joxhe). They have 4 cows.

b. Woman in Lalmi: She sells milk from her 1 cow in 1.5 liter Coca Cola bottles. She said that she made 250 Lekes/day -(50 Lekes per bottle x 5 bottles). It costs her 15 Leke to go to Tirane and 30 Leke to come back.

c. Vishaj: About 10% of families were said to be selling milk and gjiz (curd) in Tirane. According to a person interviewed there, involvement in the sale of dairy products frequently depended on the breed of cow people owned. Improved breeds costing 50-80,000 Leke (about \$5-800) were able to produce triple the milk local breeds could produce -- about 25 liters/day versus 8 liters/day, respectively. He estimated family consumption needs at about 1.5 liters per person. Thus, for those approximating the average family size of 5, more than one cow would have to be owned for any

selling to be possible with local breed cows.

Increased emphasis on dairying is reflected in the expansion of alfalfa (jonxhe) acreage. However, while most villagers and even comuna officials indicated that alfalfa had now become the most widespread crop⁴, sample survey statistics from the Directorate of Agriculture and Food suggest a much less dramatic change (See Table 3 and Table 4).⁵

Alfalfa (jonxhe)

Alfalfa (jonxhe) is cut 6 times per year if there is enough water; this yield drops to half if water is insufficient. About 4-5 dynam of alfalfa (jonxhe) are needed for 1 cow. About 80% is dried as straw (kashte) for winter feeding. This is left in the field, not stored in enclosures. The alfalfa (jonxhe) cycle lasts 4-6 years. People wishing to use someone else's alfalfa can do so for about 1,000 new Leke/dynam.

Table 3
Vaqarr Comuna: Field Crops
(March 1996)

CROP	AREA IN HECTARES	% OF TOTAL
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⁴One comuna agronomist well-acquainted with the situation put the change in the following quantitative terms: In 1992 about 50% of the area was planted in corn and wheat; the rest was planted in jonxhe and vegetables. By 1995 the proportions had changed to only 10-15% in cereals, about 50% in jonxhe and 35% in vegetables.

⁵These data are based on a 10% family sample per village with average areas per crop utilized to reach the aggregate figures. Results are adjusted to reflect what experts in the area know about the situation. This methodology is questionable and so, therefore, are the resulting estimates.

In terms of alfalfa area, the 22% official estimate of cultivated area devoted to alfalfa would entail a presumption of approximately 2 dynam of alfalfa per cow. This is a low ratio. Most interviewed suggested minima of between 3-5 dynam of alfalfa per cow. This would raise the percent area devoted to alfalfa to 30% - 40%, which seems closer to reality.

		CULTIVATED AREA
Cereals	614	53
-Wheat	314	
-Maize	300	
Vegetables	217	19
Forage crops		
-Alfalfa	257	22
-Other		
Other	66	6
Total cultivated area	1154	100

SOURCE: Directorate of Agriculture and Food, Tirane ---
 Vaqarr branch, March 1, 1996

Table 4
 Vaqarr Comuna: Field Crops by Village for
 IPRS Baseline Study Sample Villages
 (March 1996)

VILLAGE	GRAINS	VEGETABLES ⁶	FODDER CROPS	OTHER	TOTAL
Lalmi Area % (ha)	54 (68)	22 (28)	23 (29)	---	100 (125)
Vishaj Area % (ha)	51 (85)	8 (14)	40 (67)	1 (1)	100 (167)
Gropje Area % (ha)	46 (43)	40 (38)	13 (12)	1 (1)	100 (94)
TOTAL for sample villages Area % (ha)	51 (196)	21 (80)	28 (108)	1 (2)	100 (385)

MAJOR RELATIONSHIPS UNCOVERED

1. Land per capita and land use patterns

Comparing villages in the comuna, relative emphases in land use appear to shift as the size of per capita land allotments distributed in 1991 moves up from 1 dn. to over 2 dn. In villages where families received 1 - 1.5 dn. per capita, alfalfa (jonxhe) and dairy are the mainstays. Vegetables are primarily raised to meet household consumption needs; only minimal areas, if any, are devoted to grains. In villages where more than 2 dn per capita had been distributed, the scale of vegetable growing increases to a level where surpluses meant for sale in Tirane, are likely to be produced. Two factors limiting this tendency are water availability and distance to Tirane.

⁶Includes vegetables, watermelon, potatoes and beans.

2. Distance to Tirane and sources of income

a. Agriculture versus non-agricultural work in Tirane: Villages off the main road and relatively distant from Tirane (eg., Bultice) have few income earners working daily in Tirane. Instead, emphasis tends to be on agriculture and/or livestock. In contrast, in Lalmi which is on the main road, relative family wealth was said primarily to be based on the number of those earning incomes in Tirane. Other factors restricting the potential importance of agriculture in Lalmi include the lack of irrigation water (only 20% or so of the land is irrigated) plus the small per capita allotments in that village (1.3 dn for most, 2 dn for the minority of oldtimers).

b. Sale of vegetables. The extent of vegetable production tends to lessen in villages out of easy or inexpensive daily commuting range from Tirane. This is true of Bultice village. Although most of the land there is irrigated, (about 70% of the area) and per capita allotments exceeded 2 dn, distance from Tirane restricts vegetable (and milk) sales. Instead, the balance shifts to grains and animal husbandry. In contrast, people in Vishaj which is also relatively distant and almost adjacent to Bultice are able to sell vegetables because they happen to be on a main road leading to Tirane. Many were said to be doing so on a daily basis, selling leeks, onion, corn, cabbage and spinach. Sale of spinach, lettuce, leeks, onions and cabbage provide a source of income throughout the winter months; between April and June, tomatoes and watermelon assume prominence.

3. Numbers of Sheep and availability of natural pasture (kullota)

While virtually all households have 1-2 cows, only a small minority of families own sheep and goats. Sheep numbers tend to correlate with the availability of pasture and hilliness of the terrain. Three villages were reported to have areas of pasture of 15 - 30 ha each.⁷ It is unclear if other villagers have access to such pasture. In other villages -- Bultice, Damjan, Arbenne and to a more

⁷Algjate has the biggest one of 30 ha which is purportedly used exclusively by ex-owners and members of their clan (fis). Since Algjate was not visited, this could not be directly or definitively confirmed.

limited extent, Vishaj -- it is mainly State land (mostly forested) that is available as pasture. The overall situation in the comuna as it relates to livestock types and numbers is indicated in Table 5 below.

Table 5
Livestock - Vaqarr Comuna (end of 1993)

VILLAGE	COWS/Cattle	Sheep	Goats
Allgjate	110	288	31
Gropje	83	37	45
Prush	184	120	12
Lalmi	187	110	78
Vaqarr	281	542	45
Damjan	213	235	81
Bultice	131	246	128
Vishaj	183	215	90
Arbenne	116	131	103
TOTAL	1488	1924	613

EX-OWNERS, TENURE INSECURITY AND INVESTMENT

People appear to be waiting to see what the next election will bring. Unrealistic as it may seem, many either hope or fear that the land distribution of 1991 will be reversed or amended and that ex-owners will get their land back. Such uncertainty and the virtual absence of governmental enforcement authority has fostered an atmosphere in which people generally come to their own arrangements, whether in accord with or in contravention to current statutes.

The idea that claims may be settled through compensation is being promoted through a government information campaign. Compensation procedures have been spelled out and are scheduled to take effect beginning March 1996. In the meantime, people are being encouraged to submit their claims to comuna offices or to the national compensation commission office in Tirane. While some

interest has been expressed, no-one had yet⁸ approached Vaqarr's compensation commission with formal claims.

Only the passage of time, stronger public authority or the satisfying of ex-owner claims is likely to stabilize people's expectations about rights to land. In the interim, some persist in going to great lengths to preserve ancestral claims. This occasionally takes the form of parcel exchanges (See Box below), sales or intimidation. The deep-seated legitimacy of ex-owner rights among the general populace inevitably affects how people use or dispose of their land.

Gropje - EXAMPLE OF PARCEL EXCHANGE

In Gropje, land had been distributed per capita and roughly in accordance with 'old boundaries'. However, while people in the same fis generally obtained land contiguous to others of the same fis, about half of the families in the village ended up with one or two parcels claimed by others.

This happened to one of the people interviewed in Gropje. He has four parcels. During the 1991 distribution, three came out of ancestral lands. The one that was not was located in a nearby state farm and was received in-use. An ex-owner subsequently arrived on the scene and forced him to vacate the parcel. The two ultimately came to an amicable agreement: The Gropje villager gave the ex-owner the piece he was claiming in return for a piece from the ex-owner which happened to be land formerly owned by ancestors of the Gropje villager. This agreement was certified to by a document issued by the state farm land commission.

Non-use of land

Up to 30-40% of land in villages of Vaqarr was said either not to be used or used by people other than those assigned rights recorded in tapis. This was due to intimidation by ex-owners against those assigned land through the 1991 distribution.

Unused/uncultivated land is encountered in villages

⁸As of the first part of January, 1996.

where ex-owners are in no position to use the land themselves. This is the case in Gropje where most ex-owners will not even rent out land; they prefer to leave it vacant. Cases of ex-owners renting out land tend to be restricted to villages where ex-owners live in Tirane (eg. Vishaj).

In Gropje about 25% (25 ha) is left vacant because the ex-owners live elsewhere; tapi holders cannot use the land because of threats, intimidation and reluctance to precipitate conflicts with people with whom relations continue to be otherwise good. In Lalmi about 30-40% of land is occupied, but farmed by ex-owners. This is possible because most of the ex-owners live in the village or in an adjacent village, Prush.

Investments

Overview

Until now, most investment has been in the form of houses or house plots (truall) inside the yellow line. On cultivable land, virtually all investment is said to be on 'father's land'. This is certainly true of houses built outside the yellow line, and generally true of other investments as well.

HOUSE BUILDING INSIDE AND OUTSIDE THE YELLOW LINE

Case of woman in Lalmi who said : "There is no Yellow Line'. That was a Communist thing. Now we can do what we want with our land.' In her case she is building on her arable parcel (which happened by chance to be part of husband's father's land) because of a conflict with someone else claiming her land concerning the house she is now living in with her husband and three sons. The ex-owner had wanted 300,000 Leke for the land the house was on.

The way land was distributed and the balance between oldtimer and newcomer families has much to do with observed investment patterns. In Vishaj, land was distributed according to old boundaries. While most land people received was father's land, most people in the village also

received a few pieces that formerly belonged to other fis (clans). This is also what happened in Gropje.⁹ In Lalmi, the vast majority of families are newcomers. Consequently, a larger proportion of families there received land through the 1991 distribution that was not what they would consider to be 'their' land; land held by newcomers tended to be regarded by them as held 'in-use' not in-ownership as tapis they held would indicate.

While investments outside the yellow-line have up to now been tentative and limited in scope, the pace of investment appears to be picking up. However, as already indicated, virtually all investment is restricted to parcels carved out of ancestral lands. People interviewed with land they considered their family's being used by others, generally said that they would object most to construction, but would also oppose any tree planting by tapi holders to what they still viewed as 'their' land. Another who was a newcomer in Lalmi, but had ancestral land in Allgjate said that he act to prevent any building on 'his' land; the current occupant, he said, also would not sell without informing him. He knows the people using the land and his relatives still in Allgjate would inform him of any objectionable actions on the part of the current occupant. One person in Gropje complained that the village road ran through his land. He wanted it back and said that neither government privatization bonds, money or other land would satisfy him --- only the return of his father's land. This was not an entirely representative view; several interviewed indicated that money¹⁰ or alternate land would be satisfactory.

Types of investment

Among recent types of investments emerging in Vaqarr, were:

- a. Greenhouses covered with plastic¹¹

⁹Other villages in which the old boundaries/per capita formula was applied were Prush and Algjat.

¹⁰His exact words were: 'Money can solve all the world's problems'.

¹¹Prices of greenhouses were said to vary widely depending on the materials used. Costs ranged from 6-700,000 Old Leke per dynam to up to 3 million Old Leke for the most expensive ones. The least expensive greenhouses were made of light plastic and wood cost; the most expensive ones were made with concrete supports and plexi-glass.

There are 5-6 in the entire comuna. All were reported to have been constructed on ancestral land. In Gropje, which was said to have a tradition of specializing in vegetable growing, there are now two such greenhouses. A third is being built there now.

b. Wells (especially in Gropje), were discovered to be particularly common in Gropje, where most of the fields along the main road into the village have them. All were sunk on father's land and were meant to permit the continued cultivation of vegetables after the collapse of the former irrigation system. The wells also appear to be used for supplemental summer irrigation for other crops as well. One person interviewed, estimated that it took about 3 days labor to dig a 3 meter-deep well.

Interest in tube wells, Gropje

In Gropje, some were said to be thinking of sinking a tube well capped by a pump. The cost of such an investment was put at about 10,000 Leke. Those cited as interested in making such an investment were thinking of doing so jointly with 4-5 members of the same fis. Channels would then dug to distribute the water among the partners. Such investments are facilitated in Gropje because the land was distributed by fis, an close relatives tend to have parcels bounding one another. Availability of credit might stimulate such investment.

c. Trees, mostly vineyards, fig and plum; in the three villages visited, these were said almost invariably to be on ancestral land or around the house (See Vishaj case below).

Vishaj: Investment on 'father's land' versus other land

Ahmet, with a family of 9 people, has 9 parcels totalling 23 dynam. Four of the parcels were from his father's old land (the father had 2 ha. before collectivization). He invests only in these four: all the fertilizer he buys is

devoted to these parcels, also all tree crops (20 fig trees and 20 apple trees) and 60 vines are all planted on 'fathers' land'. Except for one very distant parcel (800-1,000 m) which is used exclusively for wheat, all the rest are relatively close to the house --- between 300 - 500 meters. Distance cannot, therefore be said to provide an explanation for this pattern.

Restriction of investments to family land appears to be partly due to risk aversion but mostly because it is likely to raise the ire of ex-owners.

COSTS OF VARIOUS INVESTMENTS CITED BY INTERVIEWEES

Vines: One person who planted 60 vines said that the job took him, working by himself, 3 days for digging the holes. The vines themselves cost nothing, since branches are freely available. At 4-500 Lekes per day, the cost comes to at least 1,200 Leke + whatever cost and labor went into constructing the vine supports.

Fig trees: 2 days for 20 trees, mostly to dig holes. This comes to about an hour per tree (assuming an 8 hour workday) or about 50 leke per tree.

Wells: Those sunk in Gropje, which are about 3 meters deep, take about 2-3 days to construct. Because no stones are used for reinforcement, repairs are necessary every 2-3 years.

LAND MARKET ACTIVITY

Most land market activity is concentrated inside the yellow line and related to construction. Those involved are people claiming to be ex-owners of land and occupants of houses built during the co-op period or those wishing to build for themselves or their children on land claimed by others. Village construction site land is selling for as much as 1,300 Leke (about \$13) per square meter.

Intra-family property rights concerning land sales

Example -1

A woman in Lalmi's family has 8 dn. divided into 2 parcels -- a .5 dn. house parcel (truall) and a 7.5 dn. field abutting the road. Many had approached her husband with interest in buying the land. She says that since her husband's name is on the tapi that she considers it the husband's land. Despite this , she would not let him sell. When offers came in it was discussed by the whole family. Sons were very opposed to selling. When she joke around with her husband about who has which rights to which land, he sometimes says to her that she should seek her own land from her own father in Peze village.

Example -2

Illustrating the precedence of male over female rights to land is the case of woman with no brothers who agreed that her male cousins (her father's brothers sons) received the share that was formally hers through inheritance. However, she regarded this as a grant of use rights and demanded that she get money from the cousin when he sold the land.

Lalmi -- Land sale for housing:

The discussion was with one of 5 original ex-owner fis members and a newcomer. They seemed to be good friends and were working together building the newcomer's house. The newcomer was originally from Allgjate but had been living in Lalmi for many years. He had just bought the land for the house from another ex-owner who claimed the land, a one dynam piece that had been allotted to the newcomer during the 1991 distribution. The house was intended for one of his sons and was to be located adjacent to his own house.

His old house had been purchased from the ex-owner when he went to Tirane in the '80's. After 1991 the ex-owner, renewed his claim on the land saying that the house had nothing to do with the land. Also after the original transfer of the truall by the Village Land Commission which gave all land around the house as truall the law was changed to permit only 350 m2 to go along with the house. The rest of the piece, which had been used before as a garden was the area that the newcomer wanted to build on. The ex-owner kept appearing everyday to harass him. The newcomer finally decided to pay the ex-owner to get him off his back.

Mysterious palate on the main Tirane-Kavaje road:

The parcel originally part of a cemetery, having the status of waquf or religious endowment land. The parcel was sold about 2 years ago (1993) by the state to someone who built a shop on it. It was then purchased by someone else for \$6000 and sold recently for about \$15,000 to a person, reportedly from Turkey, who is building a multi-story apartment building (palate) on it.

Outside the yellow line, renting and sharecropping appear to be relatively common. Per dynam annual rental rates quoted in Vishaj ranged from 300 Leke for non-irrigated land to 600 Leke for irrigated land. One person from Bultice said that the rent he was paying was excessively high because he had reached a bad agreement with the ex-owner claiming the land: He was paying 3,500 Leke per dynam for land that he had received 'according to the law'. In Gropje, rental agreements typically were between resident farmers and ex-owners living in town. The land involved was generally land for which the renters held tapis, but for which these ex-owners maintained their claims. In other words, even people with tapis for their land sometimes feel constrained to pay ex-owners some rent. Where ex-owners live in the same village or nearby village ex-owners will sometimes not agree to rent the land out and either use it themselves (eg., Lalmi), or if they cannot do so, prefer to leave it uncultivated (eg., Gropje).

LALMI land rental: Liquor warehouse at the entrance of the village. The 1.5 dn. parcel is rented to a company by the ex-owner based on old tapi rights for \$300 per month. This includes the land and warehouse which had been built during the co-operative period.

Sharecropping This was said to be common in Lalmi. Sharecropper usually pays about 1/3 of product. In a case involving 2 dn. in which landowners live in Tirane:

The sharecropper, who plants wheat ends up paying between \$30-\$50/dn. depending on production. Expenses are entirely covered by the sharecropper.

Renting agricultural land: about \$10/dn which are approximately the costs of producing wheat on 1 dynam

People are paying for land they have tapis for simply to avoid conflicts and out of the belief that the State would not or could not protect rights it allocated through the 1991 distribution.

OUTLOOK

Uncertainty overshadowing the matter of land claims appears to be having a dampening affect on investment on land for which people have tapis, but for which others have long-standing claims. In some case, people are reaching agreements on their own --- in essence engaging in a compensation of ex-owners. Some land is even left without annual crops because of conflicting claims. The authorities have been unsuccessful in making the law stick and people have been coming to their own arrangements. In the meantime, the overwhelming tendency has been to focus any available investment resources --- even fertilizer --- on land considered to be family land. Prospects for investment on non-father's land is unlikely to improve until the law is applied or enforced, until people lose hope that the law will be overturned and/or until ex-owner's accept compensation.

ANNEX-1
Estimates of Costs and Income from Milk Production

<<Assuming 3 dynam for 1 cow>>

I. COSTS

Alfalfa costs¹² per dynam

Leke	Seed	4 kg/dn * 400 L/kg	====> 1,600
	Fertilizer:	100 kg/dn * 10 L/Kg ¹³	====> 1,000
	Land preparation:		====> 1,100
Leke	Total per dynam		3,100
Leke	Total per cow		9,300

Alfalfa yields for about 4 years

|
v

Annual alfalfa costs per cow ==> $9,300/4 = 2325$
Lekes/year

II. ANNUAL MILK PRODUCTION:

About 3,000 liters per cow per year

Potential gross income from 1 cow:

3,000 liters * 30 Leke per liter====> 90,000 Leke
/year

III. ROUGH PROFIT: About 87,000 Leke per year if all milk sold minus transport costs of perhaps 10,000 per year

¹²Only first year with production for 4-6 years.

¹³This fertilizer price appears to be very low --- although it was given by a comuna agricultural officer. Other prices quoted were 24 and 60 new Leke/kg.

Appendix -II
Estimates of Wheat Costs of Production

Below are estimates of costs and product income for wheat. The numbers are no more than indicative, as they are based on only 2-3 cases.

I. COSTS:

- a. Land Preparation: 1,200-1,500 Leke per dynam
- b. Fertilizer: 50 kg/dynam x 40¹⁴ leke per kg = 2000

Leke

- c. Harvest (mechanical): 500 Old leke per dynam by combine
- d. Milling: 150 Old Leke per 100 kg

Approx. total: **3,000 Leke /dn**

II. YIELD and Income

Non-irrigated wheat:

160kg/dn. x 14 Leke/kg =

2,240 Leke

III. Net

-760 Leke

¹⁴This figure is an approximate figure, between the extremes of 10 L and 25 L/kg provided by different interviewees.

Crop	Area in hectares	% of Total Cultivated Area
Cereals	614	53
-Wheat	314	
-Maize	300	
Vegetables	217	19
Forage crops		
-Alfalfa	257	22
-Other		
Other	66	6
Total cultivated area	1154	100

SOURCE: Directorate of Agriculture and Food, Tirane ---
 Vaqarr branch
 March 1, 1996

Village	Grains	Vegetables ¹⁵	Fodder crops	Other	Total
Lalmi					
Area	68	28	29	---	125
%	54	22	23		100
Vishaj					
Area	85	14	67	1	167
%	51	8	40	1	100
Gropje					
Area	43	38	12	1	94
%	46	40	13	1	100
TOTAL for sample villages					
Area	196	80	108	2	385
%	51	21	28	1	100

¹⁵Includes vegetables, watermelon, potatoes and beans.

Tree crops - Vaqarr Comuna March 1995

VILLAGE	Fruit	Olives	Vine s
Allgjate	233	1540	477
Gropje	470	218	1175
Prush	770	1206	1501
Lalmi	610	80	1684
Vaqarr	610	128	2642
Damjan	345	282	1549
Bultice	290	0	688
Vishaj	310	379	1115
Arbenne	352	1167	1311

Agricultural Calendar