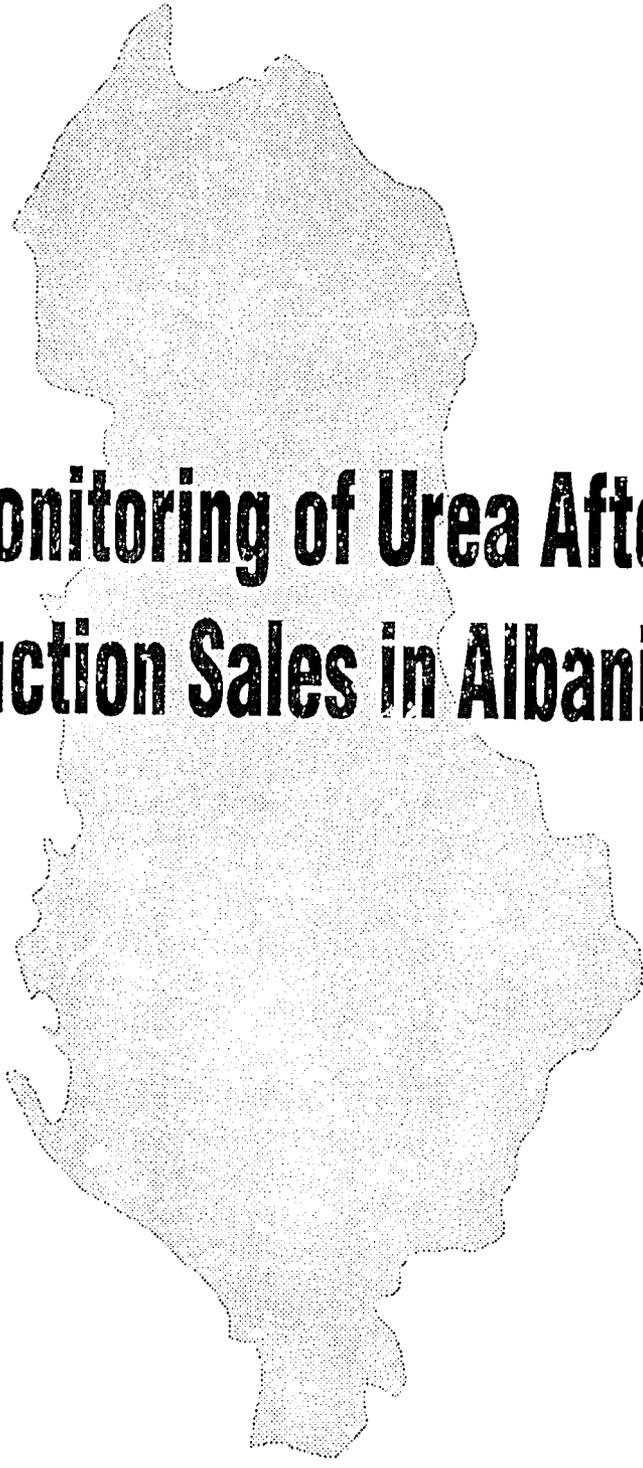


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Monitoring of Urea After Auction Sales in Albania

International Fertilizer Development Center

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Monitoring of Urea After Auction Sales in Albania

Salient Findings of the Fertilizer Monitoring

1. The survey monitored 103 private dealers who purchased urea at the auctions.
2. Of the private dealership, 77 (75%) are proprietorships and 26 (25%) are partnerships.
3. The survey monitored 10 purchases of fertilizer by state farms and 29 purchases of fertilizer by state enterprises.
4. The survey monitored 505 deliveries of a total of 8,345 mt of urea among private dealers, 46 deliveries of a total of 756 mt among state farms, and 137 deliveries of a total of 4,091 mt among state enterprises.
5. 19,200 mt of urea was sold at auction, and the monitoring survey accounted for 13,192 mt or about 70% of the total amount sold.
6. On an average private dealers paid 2,468 lek (US \$49)/mt of urea, state farms 2,341 lek (US \$47), and state enterprises 2,633 lek/mt (US \$53).
7. Private dealers sold about 1,240 mt of urea to subdealers at an average price of 4,070 lek/mt.
8. State enterprises sold about 192 mt of urea to subdealers at an average price of 5,140 lek/mt.
9. Private dealers sold about 3,086 mt of urea to farmers at an average price of 4,500 lek/mt.
10. On an average all types of dealers paid about 6.1 lek/mt/km for transportation.
11. The mean time between purchase and delivery of urea was 8 days among private dealers, 7 days among state farms, and 12 days among state enterprises.
12. In the survey 87% of private dealers, 100% of state farms, and 93% of state enterprises reported using warehouses of concrete, brick, or stone construction.
13. The estimated mean warehouse storage capacity is 256 mt among private dealers, 117 among state farms, and 703 among state enterprises.

14. The mean estimated value of warehouses among private dealers is 57,000 lek (US \$1,140), 112,000 lek (US \$2,240) among state farms, and 141,000 lek (US \$2,800) among state enterprises.
15. Among private dealers who rented warehouses, the mean capacity was 256 mt, the mean size was 242 m², and the mean rent was 43 lek (US \$0.86) per square meter per month.
16. Television and "word of mouth" are the primary means by which dealers learned about the availability and auction of urea.
17. Animals (57%), animal carts (25%), and human shoulders (6%) are the main means used by farmers to transport urea. State enterprises (89%) and state farms (100%) were most likely to use trucks.
18. The mean distance from fertilizer dealers to the farm gate is 4.2 km, and on an average farmers paid 0.109 lek (US \$0.002)/kg for transportation.
19. Among farmers monitored in the survey, on a total of 463 ha, the favored crops are maize (206 ha), wheat (76 ha), alfalfa (44 ha), watermelon (42 ha), and potato (34 ha).
20. Most farmers sell production directly at rural markets (76%), rather than to government sources (10%), private middlemen (9%), or best price source (3%).

Introduction

As part of the Albania Agricultural Adjustment Project, 20,000 tons of imported urea was transported to Albania. Following the terms of reference, that urea was made available for purchase through two auctions that were held in April and May of 1992. The urea was offered in lots of 50 tons and sold to the highest bidders. Also in accordance with the terms of reference, numerous announcements on radio, television, and in newspapers were used to inform the general public and potential dealers about the auctions.

Although other detailed reports on the auctions, credit use, and marketing of the imported urea will be written, some basic background is offered here. The media announcements requested that persons interested in purchasing urea through auction procedure should visit the IFDC offices located at the "Instituti Studimit Takova" (Soil Science Institute) in Tirana, Albania, on specified dates and at specified times. Each of the two meetings were attended by over 100 interested persons. There were, of course, some mere curious persons and some who thought the fertilizer would be gratis, but more importantly the meetings were attended by persons who were genuinely interested in becoming entrepreneurs in agricultural inputs.

During these meetings the nature, terms, and conditions of the auctions were explained as were procedures for obtaining credit from banks. Also, the broad nature and intent of the project were explained in detail and included ship arrival, unloading, bagging, transportation, and storage. Bid procedures, methods, and conditions were given special emphasis.

Procedure for Monitoring Fertilizer

Two questionnaires were developed for monitoring the urea after the product left the port. One questionnaire was used for dealers and sought information on the following points: name, village of residence, port of purchase, occupation, district, and date of interview. Information was also obtained about shop locations, type of dealership (proprietorship, partnership, state farm, or state enterprise), and number of employees per shop.

Concerning the fertilizer purchases by dealers, information was sought on the quantity purchased, date of purchase, date of arrival at dealer locations, place of purchase, and price. Additional information was sought on sales to subdealers and farmers, transportation with related information on quantity price, distance, off-loading costs, and warehousing capacity, type, and costs. The dealer questionnaire also included a question about how dealers learned about the auctions and the availability of the imported urea. Finally, a question was asked about sources of credit used by the dealers.

The questionnaire for farmers (customers) also sought information on names, village, district of residence, and date of interview. Concerning purchases, information was obtained about quantities purchased, date of purchase, prices, and type and cost of transportation. For intended use of fertilizer, information was obtained on crops, area of each crop, application dates, and expected yields. Finally, farmers were asked about sales of production, source of knowledge about the availability of urea, use of credit, and the condition of the urea upon receipt.

Both questionnaires were drafted at IFDC Headquarters and reviewed by the IFDC staff in Albania and the Asia Division of IFDC. The questionnaire was tested in the field in Albania, which improved the quality and clarity of both instruments.

A total of 25 enumerators were hired to travel throughout Albania to interview dealers and customers. Seven persons were hired to code the data and otherwise prepare the data for computer entry. Once fertilizer deliveries began, the port of Durres was visited almost daily to obtain the delivery authorizations from the previous day. The authorizations showed the name and village of the dealer, and this information was used to make assignments for interviewing. This is how the process of monitoring the urea in the field was conducted.

Types of Fertilizer Dealers That Purchased Urea

Private Dealers

Among private dealers who participated in the auctions of urea, two types of business arrangements are observed – proprietorship and partnership. Of the 103 monitored private dealers 77 (75%) reported being sole proprietors of their businesses, and 26 (25%) reported having established partnerships with one or more persons. The data in Table 1 show further that private dealers were established in 14 (52%) of the 27 districts of Albania. Private dealers in the districts of Durres (12), Elbasan (16), Kavaja (20), Korca (7), Kruja (9), Shkodra (8), and Tirana (9) collectively represent 81 dealers or 65% of all private dealers who participated in the auctions of urea.

The terms and conditions of the auctions did not and could not decide *a priori* what districts would be represented at the auctions. Thus, following various media announcements, the private dealers and thus district representation resulted from self selection. When one considers that there was no private business in Albania for two generations, the formation of 125 private fertilizer dealerships by the Albania agricultural adjustment project is remarkable.

Table 1. Number and Types of Monitored Private Dealerships That Purchased Urea by District

District	Types of Private Dealerships		Total
	Proprietorships	Partnerships	
Berat	3	1	4
Durres	8	4	12
Elbasan	10	6	16
Fier	4	-	4
Kavaja	17	3	20
Korca	4	3	7
Kruja	6	3	9
Librazhd	2	1	3
Lushnja	3	-	3
Pogradec	2	-	2
Puka	-	1	1
Shkodra	6	2	8
Tirana	9	-	9
Vlora	3	2	5
Total	77	26	103
Percent	75	25	100

State Farms

As shown in Table 2, a total of 10 state farms in Albania purchased urea during the auctions. This represents 6% of the 164 state farms. The district representation of state farms in the auctions shows that of the seven districts, Durres, Kavaja, Lushnja, Tirana, and Vlora are in the western lowlands where about 60% of the cultivated area of Albania is located; and Elbasan and Skrapar are more eastern districts, partially mountainous, but among the more agriculturally productive districts.

State Enterprises

Table 3 shows the number of state enterprises that purchased urea by district during each auction. Compared with the first auction, the participation of state enterprises virtually doubled in the second. The geographical distribution of the state enterprises shows that 70% of the districts were represented in the auctions.

Table 2. Number of Monitored State Farms That Purchased Urea by District and by Auction

District	Auction 1	Auction 2	Total
Durres	2	-	2
Elbasan	1	1	2
Kavaja	1	-	1
Lushnja	1	-	1
Saranda	1	-	1
Skrapar	1	-	1
Tirana	1	-	1
Vlora	-	1	1
Total	8	2	10

Table 3. Number of Times Monitored State Enterprises Purchased Urea by District and by Auction

District	Auction 1	Auction 2
Berat	-	1
Dibra	-	1
Durres	1	1
Elbasan	2	4
Fier	-	1
Gjirokastra	-	1
Gramsh	1	-
Kavaja	1	1
Kruja	-	1
Lezha	1	-
Librazhd	1	1
Lushnja	-	1
Mat	-	1
Mirdita	1	1
Permet	-	1
Shkodra	1	-
Skrapar	-	1
Tepelena	-	1
Vlora	1	1
Total	10	19

Monitored Deliveries

Private Dealers

Table 4 shows the number of monitored deliveries and amount of urea monitored among private dealers by district and by auction. These data show that 505 deliveries were monitored among private dealers in 15 districts.

Table 4. Number of Monitored Deliveries and Amounts of Urea Monitored Among Private Dealers by District and by Auction

District	Number of Monitored Deliveries		Total Monitored Deliveries	Amount of Urea Monitored		Total Amount Monitored (mt)	Total Monitored (%)
	Auction 1	Auction 2		Auction 1	Auction 2		
Berat	5	22	27	50	250	300	4
Durres	33	8	41	603	266	869	10
Elbasan	30	50	80	464	707	1,171	14
Fier	8	22	30	100	557	657	8
Kavaja	55	52	107	573	582	1,155	14
Korca	5	18	23	92	340	432	5
Kruja	21	18	39	300	460	760	9
Librazhd	19	3	22	200	100	300	4
Lushnja	-	21	21	-	225	225	2
Pogradec	7	7	14	100	100	200	2
Puka	-	6	6	-	68	68	1
Saranda	2	-	2	300	-	300	4
Shkodra	10	20	30	550	500	1,050	13
Tirana	16	31	47	165	405	570	7
Vlora	12	4	16	225	64	289	3
Total	223	282	505	3,721	4,624	8,345	-
Percent	44.0	56	100	45	55	100	100

Note: Figures are rounded for amounts and percentages.

State Farms

Table 5 shows the number of monitored deliveries and amounts of urea monitored among state farms by district and by auction. These data show that 46 deliveries were monitored among state farms in 7 districts.

State Enterprises

Table 6 shows the number of monitored deliveries and amounts of urea monitored among state enterprises by district and by auction. These data show that 137 deliveries were monitored among state enterprises in 18 districts.

Table 5. Number of Monitored Deliveries and Amounts of Urea Monitored Among State Farms by District and by Auction

District	Number of Monitored Deliveries		Total Monitored Deliveries	Amount of Urea Monitored		Total Amount Monitored (mt)	Total Monitored (%)
	Auction 1	Auction 2		Auction 1	Auction 2		
	------(mt)-----						
Durres	4	-	4	121	-	121	16
Elbasan	7	-	7	50	-	50	7
Kavaja	8	-	8	50	-	50	7
Lushnja	5	-	5	28	-	28	4
Skrapar	11	-	11	107	-	107	14
Tirana	6	-	6	300	-	300	39
Vlora	-	5	5	-	100	100	13
Total	41	5	46	656	100	756	-
Percent	89	11	100	87	13	100	100

Note: Figures are rounded for amounts and percentages.

Table 6. Number of Monitored Deliveries and Amounts of Urea Monitored Among State Enterprises by District and by Auction

District	Number of Monitored Deliveries		Total Monitored Deliveries	Amount of Urea Monitored		Total Amount Monitored (mt)	Total Monitored (%)
	Auction 1	Auction 2		Auction 1	Auction 2		
	------(mt)-----						
Berat	-	4	4	-	30	30	0.7
Dibra	-	4	4	-	100	100	2.0
Durres	11	-	11	199	-	199	5.0
Elbasan	8	28	36	550	747	1,297	32.0
Gjirokastra	-	6	6	-	100	100	3.0
Gramsh	1	-	1	15	-	15	0.2
Kavaja	5	1	6	82	250	332	8.0
Kruja	-	5	5	-	88	88	2.0
Lezha	4	-	4	250	-	250	6.0
Librazhd	3	3	6	100	100	200	5.0
Lushnja	-	5	5	-	383	383	9.0
Mat	-	5	5	-	150	150	4.0
Mirdita	5	4	9	50	10	60	2.0
Permet	-	3	3	-	12	12	0.1
Shkodra	18	-	18	530	-	530	13.0
Skrapar	-	6	6	-	145	145	4.0
Tepelena	-	7	7	-	100	100	2.0
Vlora	1	-	1	100	-	100	2.0
Total	56	81	137	1,876	2,215	4,091	-
Percent	41	59	100	46	54	100	100

Note: Figures are rounded for amounts and percentages.

Prices Paid at Auction

As shown in Table 7, a total of 384 lots of 50 mt each or 19,200 mt was sold at auction. Of that amount, 13,192 or 69% of the total amount sold was delivered at the time the dealers were contacted and interviewed.

Table 7. Summary of Amounts of Urea Sold and Amounts and Percentage Monitored by Auction

	Number of Lots Sold	Amount Sold (mt)	Amount Monitored	
			in Survey (mt)	Monitored in Survey (%)
Auction 1	193	9,650	6,253	65
Auction 2	191	9,550	6,939	73
Total	384	19,200	13,192	69

The price data in Table 8 show that on an average dealers paid 2,480 lek or US \$50/mt of urea. This average price is about 25% of the world market price. The highest average prices per metric ton were paid by state enterprises (US \$53) followed by private dealers (US \$49) and state farms (US \$47). The highest price paid per metric ton of urea was by a state enterprise (US \$110) and the lowest by a private dealer (US \$20) or about 55% and 10% of the world market price of urea, respectively.

Table 8. Mean, High, and Low Purchase Prices Per Metric Ton of Monitored Urea by Type of Dealer^a

Type of Dealership	Mean Purchase Price		High Price		Low Price	
	lek	US \$	lek	US \$	lek	US \$
Private dealers	2,468	49	5,000	100	1,000	20
State farms	2,341	47	2,800	56	1,500	30
State enterprises	2,633	53	5,500	110	2,000	40
All dealers	2,480	50	-	-	-	-

a. 50 lek = US \$1.00.

Prices Paid by Customers

The mean purchase price paid by farmers for urea was about 4.5 lek/kg or US \$0.09/kg. This is also the average price paid by the few state farms and state enterprises that made purchases from other state farms or enterprises.

The notable exception in Table 9 is in the district of Elbasan where sellers, usually other farms or enterprises, evidently sold the urea at or below their purchase price of about 2.5 lek/kg. Evidently, these state organizations generated cash quickly through such sales. Of course, this was to the dismay of private dealers, who noted this "unfair competition." This activity was, however, limited and isolated.

Table 9. Mean Quantity and Price of Monitored Urea Purchased by Customers by District

District	Private Farmers		State Farms		State Enterprises	
	Quantity (kg)	Price (lek/kg)	Quantity (kg)	Price (lek/kg)	Quantity (kg)	Price (lek/kg)
Berat	2,950	4.3	-	-	-	-
Dibra	300	5.0	-	-	-	-
Durres	59,550	4.3	123,000	4.5	150,000	4.5
Elbasan	20,000	4.8	50,000	2.5	21,500	2.5
Fier	4,800	4.0	-	-	39,000	4.3
Gramsh	250	5.4	-	-	-	-
Kavaja	26,700	4.2	-	-	-	-
Korca	4,610	5.0	-	-	-	-
Kruja	21,400	4.2	-	-	-	-
Librazhd	700	5.3	-	-	-	-
Lushnja	6,900	4.7	-	-	-	-
Mirdita	300	4.5	-	-	-	-
Pogradec	1,370	4.6	-	-	-	-
Puka	900	4.2	-	-	-	-
Shkodra	5,450	4.5	-	-	-	-
Skrapar	4,700	4.5	-	-	-	-
Tepelena	550	4.0	-	-	-	-
Tirana	12,360	4.2	89,000	4.5	-	-
Vlora	3,300	3.2	9,500	4.5	24,000	4.5
Total	177,090	-	271,500	-	234,500	-

Sales to Subdealers

Private dealers and state enterprises reported sales to subdealers. Data on these sales are shown in Table 10. Private dealers reported about 1,240 mt of urea was sold to subdealers and about 192 mt to state enterprises. The mean price paid by subdealers to private dealers was 4,070 lek/mt. This is somewhat less than that charged to private farmers (4,500 lek/mt, see Table 11), which reflects the relative ease of sales to subdealers and lower handling costs.

Table 10. Urea Sales to Subdealers by Private Dealers and State Enterprises

District	Sales by	Price		Sales by	Price	
	Private Dealers (mt)	(lek/mt)	(US \$/mt)	State Enterprises (mt)	(lek/mt)	(US \$/mt)
Berat	55.0	4,680	93.60	-	-	-
Durres	248.0	4,140	82.80	43.3	7,700	154.00
Elbasan	-	-	-	3.0	5,000	100.00
Fier	185.0	3,920	78.40	-	-	-
Kavaja	210.0	4,300	86.00	-	-	-
Korca	9.0	4,700	94.00	-	-	-
Kruja	25.0	3,400	68.00	20.0	4,000	80.00
Librazhd	40.0	4,500	90.00	-	-	-
Lushnja	104.5	4,440	88.80	-	-	-
Saranda	176.5	3,200	64.00	-	-	-
Shkodra	110.0	3,280	65.60	55.0	4,500	90.00
Tirana	76.5	4,160	83.20	-	-	-
Vlora	-	-	-	70.5	4,500	90.00
Total	1,239.5	-	-	191.8	-	-
Mean	112.7	4,070	81.40	38.4	5,140	102.80

Table 11. Monitored Urea Sales to Farmers by Private Dealers

District	Quantity (mt)	Price	
		(lek/mt)	(US \$/mt)
Berat	186.2	4,530	90
Durres	232.5	3,770	75
Elbasan	528.5	4,770	95
Fier	179.4	4,180	83
Kavaja	603.0	3,810	76
Korca	108.5	4,960	99
Kruja	119.0	3,980	79
Librazhd	180.0	4,630	92
Lushnja	23.0	4,400	88
Pogradec	135.0	5,690	113
Shkodra	286.3	4,030	80
Tirana	293.5	4,400	88
Vlora	211.0	4,640	92
Total	3,085.8	-	-
Mean	237.4	4,500	88

The average prices charged to subdealers by state enterprises (5,140 lek/mt) show sales to parties who anticipated higher future prices or those having identified a profitable geographical area for subsequent sales. In any case the willingness of subdealers to pay about 25% more to state enterprises than to private dealers also suggests the possibility that state enterprises sold the urea in more remote areas or areas where no private dealerships were established. There is also anecdotal evidence that some state enterprises are being operated as "private businesses."

Sales to Farmers

Data on urea sales to farmers by private dealers were collected in 13 districts. These data as shown in Table 11 were reported by dealers. It should be noted that these sales data refer only to those quantities sold as of the date of the interview and that sales continued after interviewing was completed.

As one may expect the greatest quantities of urea were sold to farmers in the western lowland region and the agriculturally productive area in the eastern region of Albania as shown in Figure 1. On an average the selling price of the urea to farmers was 4,500 lek/mt or about US \$89.

Transportation Costs

Transportation costs may be understood through a variety of measures. The concept of cost per ton per kilometer is often used but may be confusing. State farms and enterprises in Albania reported frequently that there was "no cost" for fertilizer transportation. Of course trucks, gasoline, and labor had to be used, but the "state" paid rather than a particular state farm or enterprise. Thus, although transportation costs were incurred, such costs were not directly borne by the purchaser.

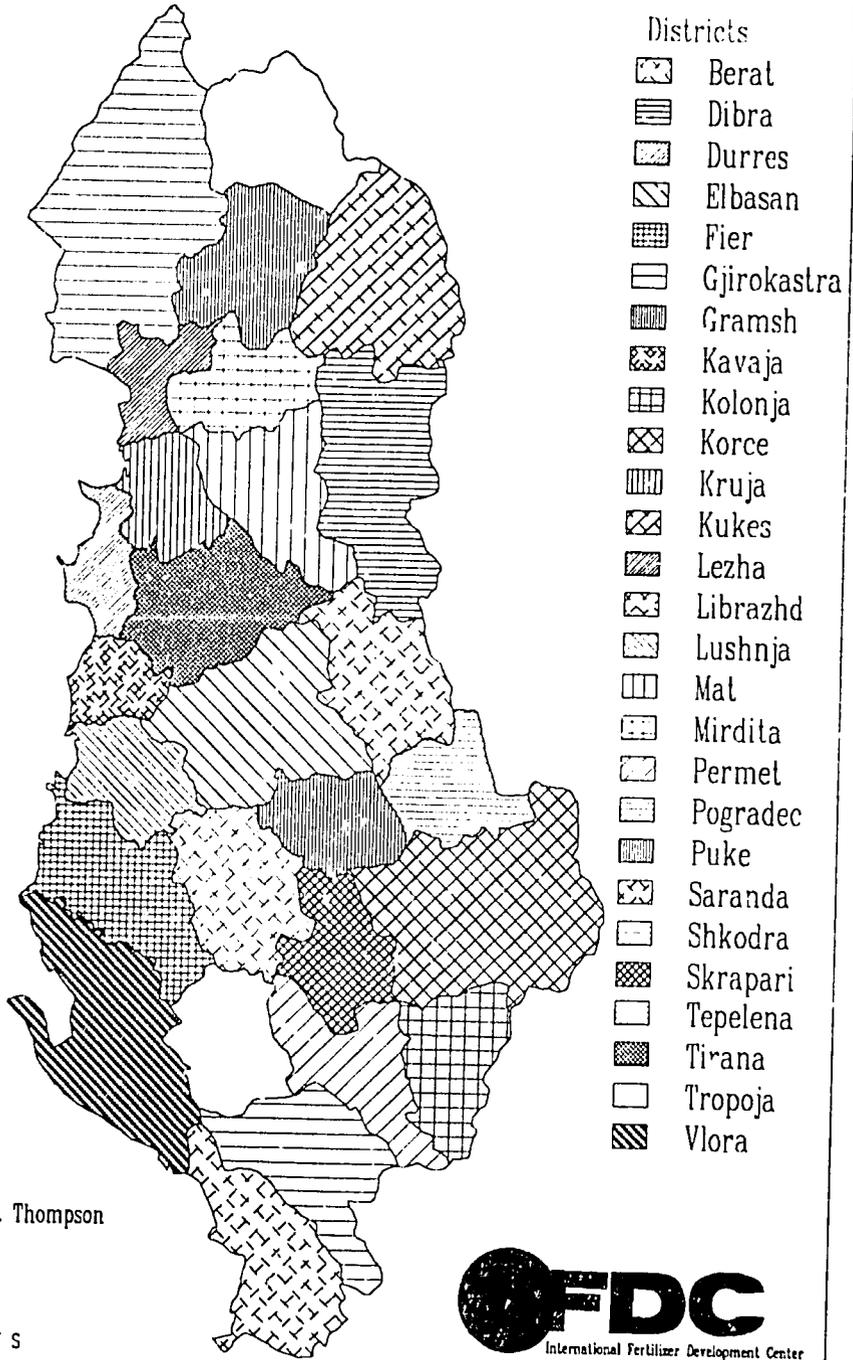
Numerous terms and conditions for the use of transportation were negotiated by private dealers. In some cases private dealers hired trucks at a set price, others negotiated to pay only for gasoline, others paid a price by distance, and yet others paid by weight. Thus, the concept of cost/ton/kilometer is confusing for it yields mean costs that are confusing and show great standard deviations such that interpretation is void of meaning.

Given these observations, the data in Table 12 show the quantity of urea monitored, estimated mean distances from port to dealer location, and estimated transportation costs in lek/ton/km.

Not unexpected, some of the most expensive transportation costs per metric ton were observed in the mountainous districts. Finally in relation to transportation, Table 13 shows the mean time in days between the date of purchase and the date of arrival of urea at the purchaser's warehouse. On an average at least partial delivery was completed for private dealers and state farms in about one week. Deliveries to state enterprises was somewhat longer, with an average of about 12 days.

FIGURE 1. ADMINISTRATIVE DISTRICTS OF ALBANIA

ALBANIA



Conceptualization: Thomas P. Thompson



International Fertilizer Development Center
 Produced by: James Brink
 RVRD Division, IFDC, 1992

Table 12. Estimated Mean Cost of Fertilizer Transportation Among Private Dealers, State Farms, and State Enterprises by District

District	Mean Quantity Monitored (mt)	Estimated Mean Distance Port/Dealers (km)	Estimated Cost (lek/mt/km)
Berat	305.0	104	6.2
Durres	358.0	18	8.8
Elbasan	1,159.0	86	4.2
Fier	407.9	75	6.3
Kavaja	564.6	29	7.8
Kruja	592.0	61	4.6
Librazhd	148.0	94	5.3
Lushnja	212.0	77	4.8
Shkodra	357.0	136	8.5
Total	5,424.0	-	-
Mean	-	-	6.1

Table 13. Mean Time in Days Between Date of Purchase and Date of Arrival of Urea at Purchaser's Warehouse

Type of Dealerships	Mean Days Between Purchase and Arrival	Standard Deviation
Private dealers	8	5
State farms	7	7
State enterprises	12	9

Note: Figures are rounded.

Characteristics of Warehouse Facilities

Types of Warehouses

Table 14 shows the types of warehouse facilities that are used by private dealers, state farms, and state enterprises in Albania. Concrete, brick, and stone warehouse facilities are very common and rather well constructed. Private dealers (10%) had open storage or plastic covering for fertilizer and 3% had some sort of wooden shelter. These data show clearly that storage facilities for fertilizer in Albania are quite adequate, and field observations confirm this point.

Table 14. Types of Warehouses Used by Private Dealers, State Farms, and State Enterprises

Type of Dealerships	Type of Warehouse				Total
	Concrete/ Stone/Brick	Open Shed/ Open Air	Wood	Plastic Cover	
	----- (%) -----				
Private dealers	87	8	3	2	100
State farms	100	-	-	-	100
State enterprises	93	-	7	-	100

Note: Figures are rounded.

Estimated Storage Capacities of Warehouses

One peculiar characteristic of Albanian fertilizer storage practices is a preference to stack products about 8-10 bags high. The data shown in Table 15 suggest that on an average 1 mt of fertilizer occupies 1 m². Thus, one may observe that fertilizer warehouse facilities in Albania are not used efficiently and that this is a consequence of a preference for low stacks of bagged fertilizer.

Table 15. Estimated Mean Fertilizer Storage Capacities of Warehouses Owned by Private Dealers, State Farms, and State Enterprises

Type of Dealership	Estimated Mean, Fertilizer Storage Capacity		
	(mt)	(m ²)	(mt/m ²)
Private dealers	256	242	1.10
State farms	117	121	0.97
State enterprises	703	453	1.60

Note: Figures are rounded.

Estimated Market Value of Warehouses

Of course, the sale of real estate was not characteristic of the Albanian economy under the Communist regime. Thus, to ask dealers about the "market value" of warehouse facilities was considered often as an unusual question. However, the question is an important one to determine the assets of fertilizer dealers, especially private dealers.

The data in Table 16 show the estimated "market values" of warehouses owned by private dealers, state farms, and state enterprises. These figures show these values to be the greatest among state enterprises, intermediate among state farms, and lowest among

private dealers. On an average warehouse facilities were valued at about 100,000 lek or US \$2,000 as expected.

Table 16. Estimated Mean Value of Warehouses Owned by Private Dealers, State Farms, and State Enterprises

Type of Dealership	Estimated Mean Value	
	(lek)	(US \$)
Private dealers	57,000	1,140
State farms	112,000	2,240
State enterprises	141,000	2,800

Note: 50 lek = US \$1. Figures are rounded.

Rented Warehouses

Only private dealers reported renting warehouses, and as shown in Table 17 the mean rental cost per square meter is 43 lek or about US \$.90 per month.

Table 17. Estimated Mean Fertilizer Storage Capacity and Cost of Warehouses Rented by Private Dealers

Type of Dealership	Fertilizer Storage Capacity		Mean Rental Cost (lek/m ² /month)
	(mt)	(m ²)	
Private dealers	256	242	43

Note: No storage facilities are rented by state farms and enterprises.

Public Information About the Urea Auction

The terms of reference required that various media be used to publicize the urea auction and thus attract aspirant dealers to the orientation meetings. Therefore data were collected to determine how dealers learned of the urea auctions. These data are shown in Table 18.

Informal Sources

As one may expect, "word of mouth" or the proverbial "grapevine" was reported as the most common source of information about the auctions. The data in Table 18 show that 64% of the private dealers, 63% of the state farms, and 52% of the state enterprises learned about the auction by "word of mouth."

Table 18. Means by Which Dealers Learned of the Urea Auction

Information Means	Private Dealers	State Farms	State Enterprises
	------(%)-----		
Television	26	12	28
Newspaper	8	25	20
Visits to farmers	2	-	-
Word of mouth	64	63	52
Total	100	100	100

Note: Percentages are rounded.

Television

Advertisements on television was also a source of information about the urea auctions and 26% of the private dealers, 12% of state farms, and 28% of the state enterprises reported learning about the auctions from this medium.

Newspapers

Advertisements about the urea auction were also placed in newspapers in Albania. Private dealers (8%) were least likely to learn about the auctions from this source. State farms (25%) and state enterprises were about equally as likely to have learned of the auction through newspaper advertisements.

These data show that the media in Albania can be used effectively to disseminate information about fertilizer availability and use. One may reason that "word of mouth" news about the auctions originated from television and newspapers. What is not clear from these data is why radio was not reported as an information source.

Characteristics of Customers of Fertilizer Dealers

The fertilizer dealers were asked to maintain a list of customers to whom urea was sold. These customers could be state farms, state enterprises, or private farmers. The resale of urea by state farms and state enterprises was very limited. Thus, the emphasis in this section is on private farmers who purchased urea from private dealers. Verbal and written requests for such information were made during the orientation sessions, and reminders were offered during interviewing. However, the dealers were not as compliant as intended. The interviewers were able to obtain names and addresses of some customers from dealers, farmers, and village residents. Through this procedure 735 customers were interviewed in 404 villages, but the total number of customers is unknown. This sample is certainly sufficient to establish initially some characteristics of the first purchases of fertilizer in Albania under the conditions of private enterprise. These data are shown in Tables 19-23.

Types of Transportation

Until mid-1991 all vehicles in Albania were owned by the state. As shown in Table 19, state farms (100%) and state enterprises (89%) were most likely to use trucks for transporting fertilizer from dealer locations to warehouses. Only 10% of farmers reported using trucks. As one may expect farmers relied on animals (57%), animal carts (25%), human shoulders (6%), and animal wagons (1%) for transporting urea from dealers to farms. These means account for about (90%) of all transportation used by farmers.

Table 19. Types of Transportation Used by Farmers, State Farms, and State Enterprises That Purchased Urea From Dealers

Type of Transportation	Farmers	State Farms	State Enterprises
	------(%)-----		
Truck	10	100	89
Car	1	-	-
Animal cart	25	-	-
Animal	57	-	-
Human shoulder	6	-	-
Animal wagon	1	-	11
Total	100	100	100

Note: Percentages are rounded.

Transportation Costs

The fertilizer transportation cost data reported by farmers are shown in Table 20 for the 41,360 kg of urea that was monitored. These data show that for the 10 districts where data on farmers' transportation was obtained the mean transportation cost was 0.109 lek or \$0.002/kg. These data are based on 202 farmers or 28% of the sample; as noted, 529 farmers reported no transportation costs. This is not to suggest that animals, carts, and human shoulders have no cost when used for fertilizer transportation, but farmers do not calculate or consider these forms of transportation as having a cost. However, these data show that transportation costs for fertilizer in Albania are not an economic burden or problem for farmers.

Table 20. Mean Cost of Transportation Among Farmers Per Kilogram of Urea by District

District	Total Quantity Monitored (kg)	Mean Distance From Dealer to Farm (km)	Mean Estimated Transportation Cost (lek/kg)
Berat	1,650	6.0	0.60
Durres	3,150	2.8	0.28
Elbasan	5,650	3.0	0.90
Kavaja	7,100	2.2	0.22
Korca	1,910	0.8	0.08
Kruja	6,650	1.7	0.17
Lushnja	3,800	2.8	0.56
Shkodra	2,050	2.0	0.20
Skrapar	3,700	18.6	1.86
Tirana	5,700	1.7	0.51
Total	41,360	-	-
Mean	-	-	0.109

Note: Based on 202 farmers' transportation cost; 529 farmers reported no transportation costs.

Farmers' Expectations About Crop Production and Yields

The data on crop production and yields (Table 21) were collected during the period of April and May, which coincided with land preparation and planting and 2-3 months before wheat harvest. Thus, no data could be collected on harvested yields. However, farmers were asked about crops, cropped areas, and expected production. From these data expected yields per hectare were calculated.

These data on crops show the interests of farming as indicated by total area planted by crop. The area in food crops – maize, wheat, potato, beans, tomato, onion, pepper, and sunflower for seed and oil – account for about 80% of the total area surveyed. Some proportion of these crops will almost certainly be sold. Alfalfa, an important animal feed, and watermelon, an important cash crop, each occupy about 10% of the planted area.

Official figures on crop production and yields in Albania are subjects of humor and amusement. Albanians suspect that such figures were always inflated to meet established goals that were unrealistic. One may reason confidently that the distinction between "real" and "imagined" production was blurred for two generations in Albania. But expectations are based on past experience and knowledge about yields that were "imagined" and "inflated" for political reasons.

Table 21. Mean Area Cultivated by Farmers and Expected Production and Yields of Major Crops

Crop	Total Area (ha)	Mean Area (ha)	Mean Expected Production (kg)	Mean Expected Yield (kg/ha)
Maize	206	0.40	2,600	6,500
Wheat	76	0.46	1,800	3,900
Alfalfa	44	0.25	6,900	28,000
Watermelon	42	0.25	10,200	40,800
Potato	34	0.20	2,300	11,500
Beans	21	0.12	350	2,900
Tomato	17	0.05	660	13,200
Sunflower	11	0.52	660	1,270
Onion	7	0.06	1,460	24,300
Pepper	5	0.04	293	7,300
Total	463	-	-	-

So the "new" private farmers of Albania expect yields that are probably unrealistic. Many farmers bluntly stated that they had no idea of what to expect in terms of yields. Because of the expectations shown in Table 21, one may reason confidently that Albanian farmers will be disappointed with "real" yields. Time will certainly bring expectations in line with reality. Of course, it would be interesting to watch expectations change in the data from longitudinal surveys.

Outlets For Crop Sales

The data in Table 22 show that 76% of the farmers selling crops expect to make sales directly at rural markets. Only 10% of the farmers expect to sell crops through government procurement. These crops are virtually always wheat, maize, and sunflower. The role of private middlemen in purchasing production is not well developed in Albania because only 10% of the sample reported sales to such outlets. A few farmers (3%) stated bluntly that production would be sold to the source offering the best price, which makes infinite sense. Again, it will be interesting to watch how sales behavior changes among farmers over time.

Table 22. Percentage of Farmers Selling Agricultural Production Through Various Outlets

Outlet	Farmers (%)
Directly at rural markets	76
Through government procurement	10
Through private middleman	9
To source offering best price	3
Other	3
Total	100

Note: Percentages are rounded.

Information Sources About the Availability of Urea

As one may expect, the data in Table 23 show that farmers generally learned about the availability of urea by word of mouth (71%) and television (25%). Newspapers (2%) and visits by private dealers (2%) were not significant sources of information about the availability of urea.

Table 23. Means by Which Farmers Learned That Urea Was Available for Purchase

Means	Farmers (%)
Television	25
Newspaper	2
Visits by private dealers	2
Word of mouth	71

Note: Percentages are rounded.

Evidently, private dealers did not take much initiative in directly informing farmers about the availability of urea. One may conclude then that dealers did little to promote and stimulate sales but, perhaps because news spread quickly by word of mouth, such promotion was not necessary.

Use of Credit by Farmers

As shown in Table 24, of the 735 farmers interviewed only 37 used credit to purchase urea from private dealers. The use of agricultural credit is at an early stage of development in Albania, but it is encouraging to note that 26 farmers were able to obtain fertilizer credit from a bank. Dealers were evidently reluctant to grant credit to fertilizer customers. This is almost certainly a result of very prudent business practices in a time of economic uncertainty and change; again, longitudinal data will show how credit use by farmers may change.

Table 24. Percentage of Farmers Using Credit to Purchase Urea by Source

Source of Credit	Number of Farmers (%)	Farmers
Dealer	2	5
Bank	26	7
Friend	9	25
Total	37	100

Note: Percentages are rounded.

Monitoring the Greek and Yugoslavian Borders: A Postscript

Fertilizer monitoring at major roads into Greece and Yugoslavia began on May 4, 1992, and stopped on May 18, 1992. During this period seven border monitors were placed as follows at four roads into Yugoslavia – Hani-Hotit (1) Morin-Kukes (2), Bllate-Peshkopi (1), and Qafe-Thane-Pogradec (1). At points into Greece, monitors were placed at Kapshtice-Korca (1) and Kakavije-Gjirokaster (1). During this period no project urea was observed going into Yugoslavia or Greece. During this period the license plate numbers of virtually all trucks passing out of Albania and into Greece and Yugoslavia at the monitoring points were recorded. The numbers were matched with those of trucks leaving ports in Albania, principally Durres. A match would not indicate the movement of fertilizer out of Albania but would be peculiar; no matches were found. Without authority to inspect truck loads, such monitoring was constrained. This type of monitoring was discontinued on May 18, 1992.

Further steps were taken to monitor project urea that may move into Greece. In late May, two IFDC staff members traveled into northern Greece and with sample fertilizer bags asked farmers and others if such fertilizer was available or had been seen in the area. The staff members arrived in Janina, Greece, on May 24.

The team spent May 24 traveling in a southwest direction. During that drive they talked with farmers, truck drivers, gas station attendants, and others about the availability of project urea in Greece. This was done by showing an empty project urea bag to those interviewed. Such talks continued for about 200 km to the town of Igumenitsa. The team left Igumenitsa on May 24 and traveled northwest about 40 km south of the Albanian border and inside Greece. That trip along the border extended for about 1,200 km.

In the town of Neraida, a gas station attendant and a farmer stated that they had seen project fertilizer bags in Kastoria and Folorina. Additionally, a woman shopkeeper in Eleousa stated that her brother works in Janina and had seen such fertilizer being sold there.

From Janina the team continued in a northwest direction and continued to ask questions in about 10 villages. On May 25 they arrived in Folorina and began to ask questions about project fertilizer while showing the bags to farmers and others. The owner of a firm called Atlas was consistently and frequently mentioned as selling "our bags" of fertilizer. He is evidently a supplier of fertilizer to several dealers in northwest Greece. When interviewed by the team, a resident of Folorina who lives next door to the Atlas warehouse stated that he had also seen "our bags" coming in and going out of the Atlas facility.

We cannot with total certainty say that project fertilizer moved to Greece, but all evidence suggests so. This is not surprising because a 50-kg bag which was sold at auction for about 125 lek may sell in Greece for US \$16.00 or more (3,000-4,000 Dhracmas) – an undeniable incentive for fertilizer to be taken to Greece on a well-known and well-traveled "back road." However, we do not expect that the amount of fertilizer leaving Albania exceeded 1%-2% of the 20,000 tons because the logistics are daunting.