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EXPERIMENTAL STATION FOR FRUIT JUICE AND WINE PRODUCTION

DP/ALB/86/004

ALBANIA

Technical report: Assessment of the wine-making industry
and technical support institutions in Albania*

Prepared for the Government of Albania
by the United Nations Industrial Development Organization,
acting as executing agency for the United Nations Development Programme

Based on the work of M.I. Mijares and L. Hidalgo Fernandes C.,
respectively experts in oenology and viticulture

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* This document has not been edited.

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1. INTRODUCTION AND WORKPLAN

1. TIME FRAME

This report covers the joint mission carried out between 23 May and 1 June 1988 under project DP/ALB/86/004: "Experimental Station for Wine Production". Thus, the duration of the mission was 10 days, exactly as envisaged in the project terms of reference (annex IV) and the employment conditions (Special Service Agreement).

2. TERMS OF REFERENCE

The terms of reference of the two consultants are given in annex I, to permit comparison with the work actually done.

3. CHRONOLOGICAL ACCOUNT OF THE EXPERTS' ACTIVITIES

The experts jointly carried out the programme of visits and activities described in chronological order below.

23 May 1988: Travel Madrid-Geneva-Zürich-Tirana. The mission arrived at Tirana at 5 p.m., although departure from Madrid took place at 6.15 p.m.; the reason was a three-hour delay in Zürich. The mission was met by the national counterparts of the experts, Mr. Vangjel Zigori (Head of the Food Technology Department) and Mr. Zamir Myftiu (Head of the Department of Technological Design). Dinner with the counterparts and a representative of the Ministry of Foreign Affairs, who began to describe the characteristics of the Albanian viticultural and wine sector in general and gave some general structural information on Albania.

At the dinner, a private study was made of the characteristics of the wines served (Albavin de Riesling and Albavin de Merlot 1988).

24 May 1988: At 9 a.m., visit to the Institute for Light and Food Industry Studies and Projects. Analysis of the technical and design characteristics of the new centre, jointly with the two counterparts and an architect of the Institute. Visit to the site.

The project document was collected and studied in private.

25 May 1988: Travel to Lushnja to visit two Ministry of Agriculture experimental viticultural centres intended for the testing of experimental hybrids: one free-standing and the other with grafting. Visit to the Dushk nursery of the Ministry of Agriculture where there are 1,200,000 plants grafted by the English system, with which 40 per cent rooting is achieved. Interview with Mr. Petraq Sotiri.

Visit to Tepleme by the River Vjose. Private study of the wines tasted (red Kallmet + Saperavi, two-year-old Albavin de Merlot, 1987 Tokay Vere and Bardhe, Shehibardhe, Sheshizy).

Visit to Girokastra.

The entire visit took place in the company of the counterparts, who provided ample information on the structural systems for grape and wine production and marketing.

26 May 1988: Travel to Saranda in Delvina district, where the Delvina cellars were visited: the oenologists Marika Zhonga and Kristofor Buzi showed us round the cellars. The cellar has a distillery for wines.

The following wines were tasted and studied: Delvina Riesling, Delvina Delvina Seco, Delvina Merlot 1987, Delvina Merlot 1986.

Visit to Butrint and its production zone.

27 May 1988: Visit to various production zones of Saranda, Vlore, Fier and Tirana.

28 May 1988: Visit to the Viticultural Institute. Analysis of the centre and description of Albanian viticulture and wine-making.

Tasting and study of three-year-old Merlot and two-year-old Cabernet wines. Visit to the Gj Dimitrov N.B. Ndërmarrja Bugesöre Agricultural Enterprise and to the 17 Nëntori N.B. Agricultural Enterprises.

Lecture by the viticultural expert to:

Stefan Gjoka (Director)

Petrak Sotiri (Head, Viticultural Sector)

Abedin Çiçi (Former scientific staff-member for viticulture and fruit-growing)

Ali Merja (Director of the Viticulture and Fruit-growing Winter Station)

Tosso Nini (Viticultural expert in the Institute)

Edmond Serbo (Viticultural expert of the Ministry of Agriculture)

Sheme Krasnipi (Director of the Lushuje viticulture agricultural enterprise)

Margarit Qirjoigi (Agronomy Chief of that enterprise)

Vaugjel Boshor (Head of the Viticultural Service of Lushuje region).

29 May 1988: Visit to Berali, its production zone and its large food-production enterprise. Meeting with all of the directors, with an account of the production methods and the products obtained. The following wines were sampled and studied: Shesh i Bardhe 1986, Shesh i Zy 1987, Merlot 1986, Shesh i Zi 1986, and Kallmet 1985.

The principal senior officers who accompanied us and explained the processes were the Director of the Stathi Karaja Enterprise, the chief engineer of the Mikel Bozaxhin Enterprise and the graduate oenologist, Luan Lico.

30 May 1988: Data were obtained regarding the tenders submitted for the installation of the wine-cellar (Magga, Meat, Padovan) and appropriate changes were made.

Visit to the Kantina veres Durres, accompanied by the directress, Klara Minga, the chief engineer, Bashkim Laknore, the former chief engineer, Bardhyl Velca, and the head of the wine-cellar, Prokop Kushi.

The following wines were tasted and studied: Shesh i Bardhe Durres 1987, Shesh i Bardhe Durres 1987, Shesh i Bardhe Sködi 1984, Dimiat Shködem 1987, Shesh i Bardhe Albavin Tirana 86, Shesh i Bardhe Lushnja 1987, Tokai Lushnja 1987, Aligotere Durres 1987, Kallmet Durres 1987, Duoma Kallmet Durres 1985, Shesh i Zy Durres 1986, Merlot Durres 1973, Merlot Tirana 1985, Shesh i Zy Tirana 1986, Merlot Lushnja 1987, Shesh i Zy Shköden 1987, Merlot Shköden 1987, Kallmet Shköden 1987, Kallmet Shköden 1985, Kallmet Shköden 1983, Kallmet Shköden 1981, as well as various blends: cabernet x shesh i zy, shes i zy x kallmet, kallmet x saperavi, cabernet sauvignon x vlosh, kallmet x alicante bouche, kallmet x cabernet, kallmet x saperave and two other kallmet x alicante bouche. A Grenahze (garnacha) was also tasted. Lecture on the theory of tasting.

31 May 1988: Visit to the Food Technology Institute accompanied by the Director-General, Kujtim Bicaku. The project for the centre was analysed and the necessary alterations were made

Lecture given to the senior staff of the Institute by the oenology expert on the making, treatment and aging of wines.

Interview with the Head of Oenology Department of the Ministry for the Food Industry, Jani Demo, and with the oenologist of the Durres experimental wine-cellar, Myslim Ysufi.

Interview with the Vice-Ministers of Industry and External Affairs at which their specific views were obtained.

1 June 1988: Final interview with the counterparts.

Return to Madrid via Rome. Arrival at 7 p.m.

This account shows that the experts scrupulously and carefully carried out the following activities specified in the terms of reference:

- Visits to the most important wine-making plants in the country;
- Visit to the installations of the Food Industry Institute;
- Survey of the Institute's oenology equipment;
- Analysis of the future project and its location, with the engineers;
- Visits to the most important vineyards of the country and analysis of their shortcomings;
- Survey of the equipment at the disposal of the Institute and of other laboratory equipment.

4. REPORTS

The attached analytical and detailed reports were prepared jointly by the two experts and contain:

- A detailed list of the equipment;
- The training programme;
- Diagnosis of the situation regarding wine-production in Albania;
- Conclusions;
- Recommendations.

Thus the terms of reference set for the experts have been fully complied with.

We express our thanks to all of the persons mentioned in this report, without whose assistance this mission could not have been carried out or would not have been so productive.

We very particularly wish to express our thanks to Mr. Vanjel Zigori and Mr. Zamir Myftu for their help and the constant dedication and efficiency they displayed in their work. They are the genuine driving force behind the project.

II. ASPECTS OF THE PRODUCTION OF WINE-MAKING GRAPES IN ALBANIA

1. ALBANIA

The total area of vineyards in Albania is approximately 20,000 ha, of which 14,000 ha are in production and 6,000 ha are young vineyards.

The average yield is some 60 metric quintals^(a)/ha, with actual production of 840,000 quintals and potential of 1,200,000 quintals for the whole of the country (Petraq Sotiri).

According to estimates made in Tirana, grape production amounts to 560,000 quintals (Vangjel Zigori), 32 per cent being used for the production of wine, 2 per cent for grape juice and 60 per cent for spirits (Raki). I consider that table grapes have been included, possibly making up the rest.

(b)
OIV mentions an area of 12,000 ha, with production of 440,000 quintals of grapes (37 quintals/ha), of which 390,000 quintals are table grapes (68 per cent), the rest (32 per cent) being intended for wine-making and distilling, with a production of 220,000 hl of wine for consumption and distilling.

2. GENERAL DISTRIBUTION OF VINEYARDS

Albania is divided into four horticultural zones, from the coast to the interior:

A. Coastal zone

This occupies the low-lying part of the country, along the coastal strip, with altitudes ranging from sea-level to 300 m, with flat land and small hills. The largest area of vineyards, approximately 100,000 ha, corresponding to 50 per cent of total vineyards, is located in this area.

The most important districts are:

Tirana, Durres, Skodra, Lezha, Vlora, Lushnja, Piere ... etc.

All of the vineyards visited were irrigated, though occasionally some are not irrigated, engaging in the production of table grapes, wine and spirits for domestic consumption.

(a) One metric quintal = 100 kg

(b) Organisation International du Vin

B. Hilly zone

This is a medium-altitude zone, lying at altitudes between 300 and 600 m. with approximately 6,000 ha of vineyards.

The most important districts are:

Elbasan, Kruja, Gramsh, Berat, Librazhd, Mirdete, ...etc.

C. Submontane zone

This is the intermediate altitude zone of the country, at 600-800 m above sea-level. The area devoted to vineyards is 3,000-3,500 ha.

The most important districts are:

Korça, Pogradec, Kolonja, Dibra, etc.

D. Mountain zone

This contains the highest vineyards in the country, which lie at approximately 800-1,000 m above sea-level, with an area of about 1,000 ha.

The vineyards produce basically for local consumption and production also includes early table grapes.

3. SOIL AND CLIMATE

Although the soil in the vineyards is highly varied in character depending on its situation, area, depth and richness, it is generally clayey-sandy of medium composition, with pH between 5.5 and 6.8 and rarely between 6.5 and 7.2.

The climate is of the mediterranean type in the coastal and intermediate zone, with continental influence in the interior, which is at a much higher altitude. The winters are severe in the mountains, while the summers are hot in the plains, with very great annual variations in temperature.

The maritime influence is felt only in the narrow coastal strip, the mountain chains soon neutralizing its effect.

The active period of vegetation for vines varies from 192 days in Korçë to 322 days in Sarandë.

Heat summation ranges from 3,109° C in Korçë to 5,338° C in Sarandë, actual temperatures being 1,307° C and 2,383° C at those locations.

The hours of daylight in the active vegetation period also vary greatly from 1,634 in Peshkopi to 2,460 in Vlorë.

The heliothermic integrals are therefore highly variable, from 2.39 in Korçë to 6.24 in Vlorë.

Conditions are perfect for vine vegetation, permitting a wide range of varieties and production of both table and wine-making grapes as well as grapes for air-drying.

Zone	Days of vegetation	Hours of daylight	Total active temp.	Total actual temp.	XH.10
Durrës	287	2,292	4,581	2,130.5	4.88
Vlorë	307	2,460	5,269	2,538.0	6.24
Korçë	192	1,832	3,109	1,307	2.39
Shkodër	248	2,077	4,712	2,267.8	4.71
Tiranë	264	2,157	4,128	2,230.6	4.81
Peshkopi	199	1,634	3,383	1,511.9	2.47
Sarandë	322	2,400	5,338	2,383.6	5.72

4. VINE TRAINING

In the coastal zone, vines are generally trained using the espalier method with three wires, the first at a height of 1-1.20 m above ground level and the third at approximately 2 m.

Table grapes are usually trained in arbours with an average height of 2 m.

The mother vines for grafting are also trained in espaliers with three wires.

In all cases, the uprights are of reinforced concrete and the wire is galvanized.

The commonest form of pruning is the double-spur method (Guyot), with a double cordon in some situations and varieties. The load per plant is of about 14-18 buds per stock.

The planting layout varies, there being vineyards with layouts of 2 x 1.2 m, 2 x 1.50 m and up to 3 x 1.5 m, corresponding to 4,160, 3,300, and 2,220 stocks per hectare, respectively, according to location and development.

In the mountainous zone, the general form of training is low and free, on the "Gobelet" system with arms that support short shoots.

The transitional zones - hills and submontane - have intermediate and mixed forms according to situation and location.

5. TILLING OF THE VINEYARDS

Soil-tilling operations are mechanized when possible, using tractors and implements between the lines. Vineyards planted on terraces, frequently narrow, approximately following contour lines, are worked by hand or with small motor cultivators.

Tractors are not used between the stocks and there is practically no use of herbicides at the foot of the vinestocks, because the corresponding work is done with the abundant manpower available in the country.

There is no mechanization in summer pruning, the tying down of tendrils, harvesting nor in winter pruning, all of this work being carried out by hand owing to the abundant manpower available.

Harvesting is carried out carefully, using wooden boxes and intermediate separator strips, which are piled one above the other without compressing the fruit. In all the wine-cellars visited, there were no grape acceptance hoppers, but instead there were conveyor belts for emptying the harvesting boxes.

Phytosanitary treatment is carried out with mechanical equipment but the use of backpacks is also frequently encountered.

6. VINEYARDS VISITED

The experimental base of the city of Dushku. Viticulture Department of the Tirana Viticulture Institute.

Experimental area in Tirana. Viticulture Department of the Tirana Viticulture Institute.

Shamer vineyard in the Saranda region, Delvina district. Operated directly by the Ministry of Agriculture.

7. RECOMMENDATIONS

1. It is desirable to maintain and preserve the considerable indigenous germinal plasma existing in Albania, establishing a good "germinal plasma bank" as a basis for future variety improvement.

2. It is desirable to make a clonal and sanitary selection of the indigenous material, with diversified aims for the purposes of producing table grapes, air-drying grapes, wines and distilled products.

3. The work at present in hand for variety improvement should be continued, fundamentally based on selected indigenous and foreign varieties of interest for purposes of improvement.

4. The health of the vegetable material imported should be investigated (fundamentally, from the point of view of virosis), studying its adaptation to ecological condition in the country before distribution.

5. The stocks used should be diversified, making studies on the affinity of the scions and the stocks on which they are grafted in various adaptation situations.

6. It is desirable to spread the use of herbicides in vineyards, since cultivation may come to a halt under certain conditions.

7. Programmes for the fertilization and irrigation of the vineyard that would maintain or increase production should be established, always without a loss of quality, and even with an improvement in quality.

8. A gradual programme for the increase of vineyard mechanization should be developed, since mechanization is at the moment at a low level, being used only in tilling the soil.

9. The application of systemic cryptogamicides for vineyards should be studied and disseminated.

III. ASPECTS OF WINE-GRAPES PROCESSING IN ALBANIA

1. BACKGROUND

Wine and vineyards had existed in Albania since the pre-Roman period but suffered a major reverse in the 500 years in which the country was under Ottoman domination, when wine-making for direct consumption practically disappeared, all that was left being processing for later distillation to obtain the spirit known under the name of "Raki".

Albanian wine-making has been re-established for only 30 years and at the moment wine-making is an important factor in the country's food industry, which incidentally represents 48 per cent of the country's economy.

2. PROCESSING

To make a critical and balanced judgment of the present state of this sector in Albania, we shall divide it into the following chapters.

- A) Raw materials;
- B) Processing cellars;
- C) Control of the finished product;
- D) Bottling and packaging;
- E) Wine-making techniques;
- F) Sensorial analysis,

A) RAW MATERIALS

This aspect was fully commented on and studied by the viticulture expert. Please, see Part II, above

B) PROCESSING CELLARS

There are some twenty wine-cellars in the country, most of which were visited.

The installations are of medium quality and rather run down, especially as regards the store-houses.

Most of them do not have any refrigeration installation nor any installation for the treatment of musts or wines.

The store-houses do not guarantee perfect conservation of the wine, and in most cases symptoms of oxidation and storage problems were observed in the wines (excessive development of aroma, colour, etc.).

The machinery for processing grapes into wine is rudimentary but is not unsuitable. Similarly, in most cases there are filtration and pumping systems, etc.

C) CONTROL OF THE FINISHED PRODUCT

The Tirana Food Technology Institute has some suitably equipped laboratory installations for carrying out analysis using physical, chemical and microbiological methods under the management and control of Mr. Vangel Zigori, who is perfectly familiar with all the existing methodologies available at present.

The Institute's equipment needs to be supplemented by a few small apparatuses as recommended in the appropriate annex.

The analyses that can be carried out at the centre at the moment are sufficient to guarantee the necessary control of wines and derivatives (Brandy, Eau de Vie, etc.)

It would be desirable for the technicians to receive specific training on the analytical control of wines and diagnosis.

D) BOTTLING AND PACKING OF PRODUCTS

At the moment, bottling does not protect against leakage or penetration of air and thus does not totally protect the wine.

The bottles are irregular in shape and of defective quality; above all, the corks are of very low quality, by no means protecting the wine nor guaranteeing its keeping qualities.

The quality of the cork used is possibly the greatest present problem for the stability and domestic marketing of the product and would really be a great problem for export.

E) WINE-MAKING TECHNIQUES

Greater training of technicians in wine-making is necessary. It would be very useful to carry out a wine-making course in the framework of this project that would make it possible to raise the level of existing technicians, giving them greater specific training regarding wine-making, preservation, stabilization and aging of Wines and derivatives.

F) SENSORIAL ANALYSIS

Analysis using physical, chemical and microbiological methods makes it possible to establish an "X-ray" of the wine and to ascertain its analytical composition and possibilities regarding stability, preservation and aging.

However, only sensorial analysis provides thorough knowledge of the product and thus the possibility of ascertaining its commercial value and acceptance by the end consumer.

It is therefore necessary to train technicians in this methodology (sensorial analysis, tasting).

In addition, this type of analysis is an excellent supplement to the physical, chemical and microbiological analyses for detecting accidents, defects, diseases, possibilities and suitability for aging in the wine.

3. TRAINING OF LOCAL TECHNICIANS ABROAD

According to the guidelines received, a programme was prepared for six Albanian technicians, to be trained in pairs, according to the following tentative programme:

Two technicians/experts should receive training in viticulture and wine-making and industrial training to perfect their knowledge of installations (wine-cellars and laboratories) and related modern operating techniques.

It would be desirable to carry out such training in Albania and Italy during the months of September-October 1988.

Two technicians in chemical, physical and microbiological analysis, who would specialize in these techniques, but specifically applied to wines; this could be carried out in April-May 1989 in France and Spain.

Two wine-making technicians specializing in cellar operations (wine-making and wine technology) in September-October 1989 in Spain.

For all these programmes, we have initiated contacts in each of the countries and will submit them shortly to UNIDO for decision.

Technically, everything has been programmed so that the project can follow the development envisaged.

We emphasize the suitability of Mr. Vanjel Zigori and Mr. Zamir Myftiu to head the project.

4. PRODUCTION OF GRAPES AND VINE

Total grapes 93,000,000 kg:

Table grapes. 16 per cent 15,000,000 kg.

The remaining 78,000,000 kg of grapes are intended for making industrial products: wines, Raki, Brandies etc.

The distribution of grapes is as follows:

Production from wine-making grapes:

150,000 hl of wine;

37,000 hl of spirits;

50,000 hl of Brandy

The rest is intended for making grape juice, vinegar and concentrated must.

Of the 150,000 hl of wine, 25-30 per cent is exported.

Of the 50,000 hl of Brandy 90 per cent is exported.

The spirits are practically all consumed domestically.

Of the 15,000,000 kgs of table grapes, 50 per cent are intended for export.

VI RECOMMENDED LIST OF EQUIPMENT FOR THE EXPERIMENTAL WINE CELLAR

Capacity of the cellar: 30,000 litres

Two refrigeration units, one for the treatment of musts being processed and the other for the stabilization treatment of wines;

The first should be able to cool the must from ambient temperature to 6° C (approximately 1,000 litres/hour);

Two air conditioners, 7,000 W;

One earth filter (kieselguhr) with incorporated pump (1,000 litres/hour);

One plate filter with 20 x 20 stainless steel plates. Frame also of stainless material;

One Millipore or Sartorius membrane or cartridge filter. Capacity 1,500 litres/hour;

One horizontal press, model VASLIN 1,000-1,500 kg.:

One cylinder crusher with cylinders protected by cartridges or similar method, 1,000-1,500 kgs/hour.:

One continuous press, 1,000 kg/hour;

One piston pump for pastes, 1,000-1,500 kg/hour;

Two stainless steel centrifugal pumps, 1,500-2,000 kg/hour for decanting wines;

One wine-bottling machine, 800 bottles/hour, with bottle filler, corking and labelling devices, equipped for still wines and sparkling wines;

NOTE: That would be the indispensable material.

The Italian tender which has been selected by the Albanians is very appropriate and covers all the needs and, with the discount allowed, would permit import within the project budget.

V. RECOMMENDED LABORATORY EQUIPMENT

At the moment, the Tirana Food Industry Institute possesses practically all of the equipment necessary to carry out all the analyses required for wines and their derivatives by using physical, chemical and microbiological methods.

Nevertheless, it would be desirable to purchase the following to supplement the existing equipment;

- 1 nephelometer;
- 1 video cassette with colour monitor for use in training in viticulture, wine-making and tasting;
- 1 filter and equipment for the counting of yeasts (Millipore and Sartorius);
- Flame photometer for the determination of sodium and potassium;
- 1 French OMEGA pedal-operated grafting machine.

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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
ORGANISATION DES NATIONS UNIES POUR LE DEVELOPPEMENT INDUSTRIEL

PROJECT IN THE PEOPLE'S SOCIALIST REPUBLIC OF ALBANIA

JOB DESCRIPTION

DP/ALB/86/004/11-51/J.13103

POST TITLE International Consultant in Enology

DURATION 10 days

DATE REQUIRED January 1987

DUTY STATION Tirana with travel within the country

PURPOSE OF PROJECT Provide support to the Government for the development and expansion of the food industrial sector through reinforcement of the existing institutional infrastructure (Institute of the Food Industry) and direct contribution to the local industrial plants.

DUTIES In co-ordination with an expert in viticulture, the consultant will provide support to the Institute of the Food Industry -IFI- in Albania for the identification of the technical constraints of the national wine production sector, and for the definition of the appropriate technical contribution that IFI could provide to the industrial plants. The consultant will be expected to carry out the following duties:

- Visit the most important wine production plants in the country (previously defined by ...), identify their technical problems and the necessary action the Institute/Government shall take to technically upgrade the sector;

- Assess the IFI facilities and its equipment resources, the project for the establishment of the new experimental station and define the appropriate technical contribution that IFI shall provide to the industrial plants for continued development of the sector. The consultant will also support IFI, specifically:
 - . In the preparation of the detailed equipment specifications for the experimental station and laboratory, including the technical literature to be acquired;
 - . Support the IFI/Government in the preparation of a detailed three month training programme in an European technical centre for wine-making, for four national experts.

The consultant will also be expected to prepare a joint technical report with the expert in viticulture, setting out all the findings of his/her mission and recommendations to the Government on the follow-up action which might be taken.

QUALIFICATIONS

Professional with background in Food or Chemical Engineering or Food Technology with a wide experience in the wine industry in Western Europe and with a substantial knowledge of the wine production.

LANGUAGE

English or French. Knowledge of Italian is desirable.

BACKGROUND
INFORMATION

Agro-industry as a sector in Albania has in recent years played an important role in the country's economic and social development.

Besides the tobacco industry, which is responsible for the second largest source of foreign exchange in the country, the food industry is particularly important for being, in fact, the third largest source of export revenue and for its social impact on the domestic market.

Within the food industry, processing of fruits and vegetables, including the production of wine is the most important activity, specially in terms of external revenue.

There are presently in Albania, four industrial plants processing fruits to produce juice: one in Tirana producing orange and apple juice, one in southern Albania producing orange juice, and two plants in the north producing basically apple juice. It is estimated that more than 200,000 tones of fruits and processed annually to produce juices.

The local wine industry is, however, more relevant in terms of processing plant numbers. There are about 20 plants with capacities varying from 25-200 tones of grapes per day (8 hour shifts) and also some small producers, processing, all together, around 50,000 tones of grapes per season.

The Institute of the Food Industry -IFI- in Albania is the organization technically responsible for the development of the food industry in the country.

The Institute, in co-ordination with other national technical and scientific organizations, is responsible for providing technical assistance to the production plants, through engineering studies for plant construction and equipment installation, laboratory tests (chemical, physical and microbiological), research and development of new products and processes, and upgrading the technical level of the existing plants.

The Institute is also responsible for the Quality Control of the exported food products, particularly the microbiological and chemical controls.

The experimental station to be built by the Institute is part of its development plans to continue to assist the production plants in the country, specially to assure quality, increase plant productivity and their competitiveness in the international market.

The Institute will be responsible for the construction of all the necessary buildings for the experimental station. The Government is requesting complementary technical support from the United Nations through equipment acquisition and training of some of the Institute's representatives.

**UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
ORGANISATION DES NATIONS UNIES POUR LE DEVELOPPEMENT INDUSTRIEL**

PROJECT IN THE PEOPLE'S SOCIALIST REPUBLIC OF ALBANIA

JOB DESCRIPTION

DP/ALB/86/004/11-52/J.13103

POST TITLE International Consultant in Viticulture

DURATION 10 days

DATE REQUIRED January 1987

DUTY STATION Tirana with travel within the country

PURPOSE OF PROJECT Provide support to the Government for the development and expansion of the food industrial sector through reinforcement of the existing institutional infrastructure (Institute of the Food Industry) and direct contribution to the local industrial plants.

DUTIES In co-ordination with an expert in enology, the consultant will provide support to the Institute of the Food Industry -IFI- in Albania for the identification of the technical constraints of the national wine production sector, and for the definition of the appropriate technical contribution that IFI could provide to the industrial plants. The consultant will be expected to carry out the following duties:

- Visit the most important vineyards in the country (previously defined by IFI), identifying possible constraints and pointing out the necessary action for the development and expansion of the wine production sector in Albania;

- Assess the laboratory facilities of IFI and other associated national technical and scientific organizations, the project for the establishment of the new experimental station and, collaborate in the definition of the appropriate technical contribution that IFI shall provide to the industrial plants for continued development of the sector. The consultant will also support IFI, specifically:

- . In the preparation of the detailed equipment specifications for the laboratory, including the technical literature to be acquired;
- . Support the IFI/Government in the preparation of a detailed three month training programme in an European technical centre for wine-making, for four national experts.

The consultant will also be expected to prepare a joint technical report with the expert in Enology, setting out all the findings of his/her mission and recommendations to the Government on the follow-up action which might be taken.

QUALIFICATIONS

Professional with background in Agronomy or Biology with a wide experience in the wine industry in Western Europe and with a substantial knowledge of the wine-grape growing component of the industry.

LANGUAGE

English or French. Knowledge of Italian is desirable.

BACKGROUND
INFORMATION

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