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Republic of Lebanon
Office of the Director General of Administrative Reform
Council for Public Sector Projects and Studies
(CPSPS)

PROJECT FOR ERADICATION OF HASHISH IN LEBANON

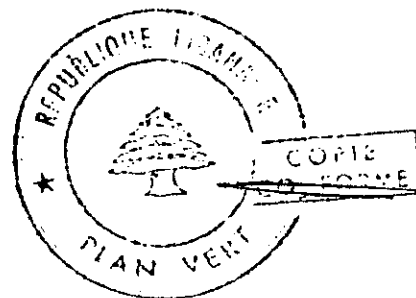
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TERMINAL REPORT BY THE PROJECT MANAGER

December 1976

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TERMINAL REPORT ON THE PROJECT FOR ERADICATION OF HASHISH IN LEBANON

FOREWORD

1. This report on the Project for Eradication of Hashish Production in Lebanon covers the period from March, 1974 till December, 1976.
2. The activities of the project were seriously interrupted in the latter part of 1975 because of the local strife in Lebanon. As the situation worsened, it became necessary to evacuate the international staff and to curtail many of the planned activities of the programme.
3. The project, however, was not terminated at any time during this period. The administration office of the project was maintained in Damascus, Syria and the Lebanese Project Manager, Mr. Abdullah Yazbeck, assisted by two Lebanese agriculturists and project technicians, was able to carry out limited project activities. This project perhaps was the only United Nations Development Programme in Lebanon which was not completely terminated during the conflict.
4. It is of particular significance that the Lebanese staff of the project continued some field activities during the conflict period and that the Government of Lebanon made provisions for salary payment of the staff. At this date, December 15, 1976, most of the project staff are on duty and are conducting work activities for replacement of hashish in the area.
5. During the conflict, a large number of people from the urban areas of Lebanon returned to their lands of the Bekaa and there is great interest in food crop production. The communities are in great need of technical assistance and guidance in improvement of production techniques.
6. It is rather important that this courageous group of project personnel be given increased administrative and financial support to facilitate the conduct of their valuable activities.
7. Although the cultivation of hashish continues in the area, the formation of a new disciplined government could quickly eliminate the cultivation of this crop. It becomes increasingly important to further develop a crop production education programme.
8. The project was able to demonstrate that there are many agricultural enterprises, properly managed, which can economically replace hashish at the farm level.

BACKGROUND

General

9. The Government of Lebanon initiated a programme in 1966 aimed at the eradication of Indian Hemp plantations. This project was formulated to provide for the replacement of hashish with other economical agricultural enterprises. Prior to the UNFEDAC/FAO project for eradication of hashish, the primary emphasis had been on replacing hashish with sunflower oil crop.
10. This project was to be executed by the Green Plan Organization of the Ministry of Agriculture in Lebanon and the Food and Agriculture Organization of the United Nations.

11. The project document provided for a well designed flexible work plan as well as a work schedule for the project. It provided for critical items necessary to form an execution team at the field level. It excluded the expensive and often over-staffing of foreign experts. Essentially, it provided for a flexible programme whereby local trained people could help develop their own community and people. Hopefully, this project pattern can be adopted and used as a guide in other agricultural development programmes. The plan of operation of this project was signed on June 12, 1973.

Hashish Production and Trade

12. Hashish, the arabic name for the Indian Hemp plant (*Cannabis Sativa*) was originally believed to be grown rather widespread in the North Bekaa and Hermel districts of Lebanon. An intensive, on-the-ground survey showed that hashish production was restricted to an area in close proximity to the city of Baalbeck. The cultivation was carried out on relative good soils with some irrigation possibilities. The main areas are the Yammounic irrigation project, the irrigated lands of laboue and the irrigated lands in the mountain area of Marjhine. During the three years of the project, the 1974, 1975 and 1976 growing seasons, the land relegated to the cultivation of hashish ranged from 2,000 to 3,000 hectares. Surveys were performed annually by project staff. Approximately 40 villages were involved in hashish production.
13. The average production of green hashish was generally 200 kg per dunum on irrigated land and 80 kg per dunum on non-irrigated land. Most farmers sold their hashish green and recovered 100 LL per kantar (250kg). During the past season, due to the demand for hashish, a price of 250LL per kantar (250 kg) was paid.
14. In the normal processing of hashish, 250 kg of green hashish produces the following:
- | | |
|------|------------------------|
| 1100 | grammes of topflower |
| 1100 | grammes of second rank |
| 1100 | grammes of third rank |
15. The processed top flower is used to produce oil of hashish. It requires 5 kg of processed flower to produce 1 kg of hashish oil.
16. In the Balbeck area, the dealers of hashish in small quantities are numerous. The larger quantities of processed hashish (1 ton or more) which may have a value up to 1 million dollars per ton in Lebanon or 3 million dollars per ton in the Western Countries, are traded by only a few merchants who are well known in Lebanon.

OBJECTIVES OF THE PROJECT

17. The project was developed as a first stage of a long range programme of definite agricultural activities for the development of the region. The programme involved was to combine a rural development investment with the judicious use of police enforcement measures against both hashish production and trafficking. The portion of the total programme for which United Nations financial and technical assistance will be provided included the improvement of farm practices and on-farm development. The project was essentially oriented as an action programme to develop agriculture production so that agriculturists would not be dependent upon hashish production.

18. Immediate Objectives of the Project

- (1) Undertake detailed on-the-ground level planning.
- (2) The development of the potentially usable water resources.
- (3) Reforestation and watershed protection on steep lands.
- (4) Restoration and establishment of range land.
- (5) Reclamation of potential arable land for crops
- (6) Infrastructures services, including roads, domestic water supplies and rural electrification.
- (7) Improve rural housing and construction of barns
- (8) The establishment of cooperatives.
- (9) The provision of needed seasonal production credit.
- (10) Development of cooperative arrangements for marketing farm produce.
- (11) Develop small agro-industries.
- (12) Provide a field level execution team for an farm development works and establishment of substitute crops.

IMPLEMENTATION OF PROGRAMME

Staff

19. In August, 1973, Dr. Charles Simkins, of the University of Minnesota was accepted by the Green Plan of Lebanon and F.A.O as the project manager for the programme. Dr. Simkins subsequently was made available to the project on March 15, 1974. The Green Plan Organization of Lebanon immediately named a temporary project manager, Mr. Nizar Husseni, who, after a few months, was replaced by Mr. Abdullah Yazbeck, to serve as permanent project manager for the agricultural development section of the project. Mr. Jahid Matar was designated project manager for the land reclamation and soil conservation division which was to support the project.

20. In cooperation with the Green Plan, the programme for sunflowers as a crop replacement for hashish was reorganized. A staff of seven professional and 14 administrative and technical assistants was developed by January, 1975. Three United Nations volunteers joined the staff soon afterwards.

21. In the reclamation group, four professionals and more than 22 technicians and administrative staff were organized for work activities.

X } 22. The Green Plan Organization of Lebanon should be complimented on its delegation and commitment of staff. Truly, it is rather remarkable that this staff was recruited and in operation in such a short time.

Headquarters Facilities

23. Shortly after the initiation of the project, the Green Plan Organization relocated their headquarters in Baalbeck to a rather desirable location with respect to office facilities. This building provided ample space for both the agricultural development and land reclamation groups. It did not, however, have sufficient space for storage and parking of project equipment plans were made to construct and develop a site for a permanent headquarters. Green Plan obtained a governmental site suitable for building and parking space. Architectural plans and specifications were drawn up, but the construction of the building was not undertaken due to the outbreak of civil war. The United Nations was to contribute the sum of US \$ 50,200 towards the development of this permanent headquarters. The leased building in Baalbeck still serves as the headquarters for operations. The building was occupied by certain military elements during the civil war, but has now been returned to Green Plan.

Aerial Photography

24. Aerial photography of the region was accomplished in September, 1973. The National Defense staff undertook the work and furnished the project with two copies of the prints (scale 1:10,000).

25. These aerial photos were used mainly in connexion with field studies for water resources. These were taken too late in the year to be used to provide information on hashish production.

26. The photos did provide ground control for preparation of plans for soil conservation work and mapping of soils.

27. Approximately 800 km² were photographed in black and white. A portion of the area was photographed in infra-red.

28. The cost of the aerial photography and production of prints was shared by the UNFPA/FAO project and Green Plan Organization.

Contracting Services

29. The project entered into a contract with the American University of Beirut for research activities which were aimed at providing answers in regard to substitute crops for the area.

30. This contract provided for four projects as follows:

- (1) Production experiments on sunflowers.
 - a. Performance of varieties.
 - b. Date of seeding.
 - c. Rainfed vs irrigation.

- (2) Double cropping, including cereal and legume crops in combination with sunflowers.
- (3) Comparison of different cereal crops and annual legumes as forage crops.
- (4) Feeding trials of barley-vetch-and urea on sheep and cattle.

31. These projects were to have a duration of three years and were budgeted at a cost of 187,680 Lebanese pounds.

32. Trials were conducted and completed in the 1974-1975 crop season. Trials were established again in the fall of 1975, but were not harvested due to local strife.

33. A preliminary report of the first year's trials indicated encouraging results in respect to a) early planting of sunflowers, b) use of barley and vetch as a fodder crop and, c) on irrigated land, many economical possibilities were demonstrated in respect to double cropping. Economically, sunflowers, well-managed, resulted in potential net income equal or better than hashish on rainfed lands. The Production of potatoes followed by wheat or barley produced yields which would result in net incomes of greater magnitude than that obtained from hashish on irrigated land.

Water Development for Irrigation

34. As part of the project for development of water resources for the Central Bekaa, a programme was initiated by F.A.O under the leadership of Mr. Chapond, F.A.O expert.

35. This project consisted of a complete inventory of all wells and pumps in the Bekaa. A geophysical survey was also made with electrical soundings. Additionally, a reconnaissance programme of drilling test wells was accomplished.

36. The hashish project cooperated in this survey by paying a portion of the salary of Mr. Floegel, a hydro geologist assigned to the project. Mr. Floegel and his team made a rather complete inventory of the existing water resources of the Bekaa. Frequently, Mr. Floegel was called upon to give recommendations in respect to well drilling in the project area.

37. This close cooperation resulted in a report to be published by F.A.O which:

- (1) Defines the ground and surface waters of the Bekaa.
- (2) Identifies potential areas for irrigation.
- (3) Makes recommendations for water management in the Bekaa.

38. Financed in part by labor and equipment from the World Food Programme the land reclamation project was involved in the building of small dams and reservoirs for irrigation purposes.

39. The critical item in agricultural development of the Bekaa lies in the development and regulation of the water resources. More than 80 percent of the hashish grown is on lands that have a good irrigation potential. There is sufficient water to allow for regulated flow on this land if it were developed and managed.

40. Those involved in hashish production and trafficking now control the major water resources of the area.

Development of a Crop Substitution Programme

41. Considerable effort was expended to recruit, train and organize a field execution team for on-site assistance in crop production. The main hashish growing area of 40 villages was divided into 5 areas. A professional agronomist was assigned to each area and a programme of crop production demonstrations were initiated.

42. These demonstrations involved whole package programmes for the production of wheat, barley, vetch, potatoes, sunflowers and grain crops. In most villages, tractors were available for power to prepare seedbeds. Little or no planting equipment was available. Planters previously used in the sunflower programmes were brought into use to improve seeding procedures. Fertilizer was applied according to research results obtained from scientists from the American University of Beirut. Weed control by chemical methods was introduced and farmers were advised on better harvesting methods.

43. Results of these demonstrations, even in the first year, were very gratifying. Farmers in the area realized for the first time that yields of wheat, barley, sunflowers and potatoes would be materially increased by proper production practices.

44. During the second cropping season (1975), farmers in the area began to have confidence in the programme and asked for assistance from the group. Educational meetings were held in certain villages and the promotion of a village plan for agricultural development was made. Assistance was given after the villagers agreed to discontinue production of hashish.

45. The villages of Haouch Barada, Chlifa and Chaato were chosen as pilot villages for a more complete programme for crop substitution. Surveys of the villages were accomplished by project staff and a simple plan for development was agreed upon. The major items in development included:

- (1) Land leveling for irrigation.
- (2) Water conveyance
- (3) Village roads.
- (4) Farm machinery
- (5) Credit for supplies.

46. Green Plan agreed through the World Food Programme to build the village roads and provide for the land leveling and water conveyance. The farm machinery was to be purchased by the farmers on a cooperative basis.

47. The credit for annual farm supplies was to be secured from local lending agencies.

48. The F.A.O. water resources group were to drill an exploratory irrigation well in each of the three villages. Should there be adequate water for irrigation, Green Plan would obtain the right to develop and distribute the water.

49. The plan of development got underway in the fall of 1975. seedings of wheat and barley were made. Construction of village roads were commenced and the exploratory wells were drilled. Unfortunately plans were not completed due to the civil war.

Programme for Farm Mechanization

50. Although the size of the farms in the Bekaa are relatively small there is a definite need for introduction of small farm machinery to economize production and secure higher yields.

51. At present, wheat and barley are seeded by hand broadcasting. In order to obtain good plant populations of new semi-dwarf wheat varieties the amount of seed used is more than two times the normal quantity recommended. The introduction of planting equipment, particularly small grain drill, is sorely needed. Similarly, planters to seed sunflowers, onions and other vegetable crops are also needed. The project staff was able to borrow some equipment for the A.U.B farm, the Ford Foundation, and the Ministry of Agriculture, to demonstrate the use of precision planting equipment. Grain drills and row crop planters were ordered for purchase from project funds. This equipment was never delivered due to the local situation.

52. At present, December 1976, the staff now working in the Bekaa could benefit greatly from the use of small grain planting equipment.

Establishment of Farm Cooperatives and the Provision of Market Services

53. During the sojourn of the project, no farm cooperatives were formed. Discussions were held with the Lebanese Directorate of Cooperatives and cooperative lines of work were established. Several village representatives expressed a desire to form a legal cooperative. Discussions were held with them explaining the requirements for forming a cooperative. The professional staff attended a week of seminars given by staff of the Lebanese Cooperative Organization. Unfortunately, as in other programme activities, the strife in Lebanon prevented the further development of this activity.

54. The project, however, was instrumental in assisting farmers market their sunflowers. At harvest time, the threshed sunflowers were delivered to central location, weighed, sacked and delivered by the project staff to the Ministry of Agriculture.

55. In general, during the period of the project, there were good markets for most agriculture products. The neighboring countries of Jordan, Saudi Arabia and Kuwait provided ample markets for most farm commodities.

Development of Agricultural Processing and Associated Small Industries

56. Although the project was provided with funds to establish a, a) milk processing plant, b) fruit drying plant and, c) greenhouse crop production, these activities were not undertaken.

57. A survey of the Bekaa indicated that there was insufficient milk production in the Bekaa to warrant the construction of a milk processing plant. The importation of dried milk into Lebanon resulted in a lack of incentive for the development of a dairy industry.

58. The market for fresh fruit in neighboring countries during the period of the project made the construction of a fruit drying plant a low priority item.

59. Although the construction and use of greenhouses for crop production had proved successful in South Lebanon, the results of trials at the A.U.B farm and Ministry of Agriculture indicated that with present fuel costs it was rather uneconomical at this time to consider vegetable production through greenhouses.

Revolving Fund

60. The project contained provision for the use of a revolving fund to purchase agricultural inputs which otherwise might be unavailable to farmers and additionally to purchase substitute crops which the farmers found difficult to market.

61. It was not necessary to make use of this fund to purchase crop substitutes for hashish during the period of the programme. Markets were found for wheat, barley, potatoes and other crops which farmers grew as replacement crops. The sunflower crop was purchased by the Lebanese Government until local strife made it impossible to deliver the harvested sunflower crop.

62. The revolving fund during the 1976 crop season was used as a means of obtaining needed fertilizer and seed supplies for farmers of the area.

63. The project purchased fertilizer and seeds in cooperation with the Syrian Government and sold these supplies to farmers in the Bekaa at cost price. This allowed the project staff to assist farmers in developing a programme of production and to continue with the crop replacement programme.

RESULTS

64. During the first two years of the project, the prospects for the successful completion of scheduled three year project appeared to be promising.

- (1) Project staff were recruited, organized and training and work activities were well underway.
- (2) Crop replacements for hashish were proving to be economically feasible and the field execution staff was gradually becoming accepted by the farmers.
- (3) A headquarters building for the staff has been leased and furnished. Land had been secured for the construction of a new building and construction plans had been drawn up.
- (4) During the 1975 crop season, project staff had the opportunity to plow up growing hashish and replace it with potatoes and sunflower crops.
- (5) Basic investigations in regard to future cropping patterns had been undertaken by researchers of the American University of Beirut.
- (6) Aerial photography of the area had been completed and put to use in planning and water surveys of the area.

- (7) An intensive village survey of hashish cultivation had been completed and the work programme was focused on these areas of production.
- (8) In cooperation with other F.A.O projects, a survey of the water resources of the area had been initiated and exploratory wells had been drilled.
- (9) Project staff had introduced small farm machinery for better planting and seeding and project equipment had been ordered.
- (10) Three United Nations volunteers were assisting staff in preparation of package programmes for crop production and village development plans.
- (11) Farmer educational meetings were scheduled and held. The objectives of the programme were discussed and technical information on crop production was extended.
- (12) Weekly staff and training sessions were held by project staff and a weekly reporting system of work activities had been instituted.
- (13) Monthly meetings were conducted with the Green Plan Committee in alternate meetings in Beirut and Baalbeck. Steps were being taken to draft an amendment to the government of Lebanon to take the responsibility to enforce the law in regard to hashish cultivation and trafficking.
- (14) Green Plan land reclamation and soil conservation activities were coordinated with project village development plans. Road building, land leveling and improvement of water conveyance systems was carried out by project staff.
- (15) A viable self-sustaining corps of dedicated agricultural workers were establishing themselves with the farmers of the area.
- (16) The Green Plan and UNFDAC/FAO administrations had a clear picture of the specific needs for the future of the project and were in agreement on the village to village approach in agricultural development for hashish eradication.
- (17) A consultant on regional planning was secured. Mr. Eugene Babb, consultant, made suggestions and outlined the future needs for agricultural planning and development of the area.
- (18) Projects for development of the area were outlined and suggested by project staff.
- (19) The Government of Lebanon was unable during the period of the programme to enforce measures against drug trafficking. It was also unable to take positive action in the enforcement of the law against cultivation of hemp. This lack of law enforcement weakened the effectiveness of the project and made the work of the staff more difficult in a replacement of the hashish crop. This inability to enforce the law, however, is understandable when one considers the ultimate great disaster which befell the Lebanese country and people.

- (20) The project staff were able to show that on rainfed lands the production of sunflowers could produce returns which competed very favorably with hashish production. On irrigated lands, the production of potatoes, as well as double cropping with small grains, provided net incomes which were greater than that obtained normally from hashish production.

RECOMMENDATIONS

For Lebanese Government

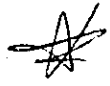

- (1) With the return of more stable conditions, the Lebanese Government should take steps to organize a special programme for the development of the Bekaa.
- (2) This programme, with special delegate authority, should be linked with the present work of the Green Plan of Lebanon.
- (3) As a first and vital step in the eradication of hashish, the Yamounie Irrigation Project should be completed. (This area cultivates 80 percent of the hashish in Lebanon).
- (4) There should be a complete re-organization and staffing of the water authority of the Bekaa. This is essential since the present local authority enhances and promotes the cultivation of hashish.
- * (5) A village to village approach to development should be made. This approach should include the formation of cooperatives, development of farm and village roads, credit for agriculture inputs and industries, and development of water resources. It should also provide for the consolidation and development of a first class school system and medical service.
- * (6) The authority should provide for the development of an agricultural production education service. This could be accomplished by strengthening the agricultural development group of Green Plan which was formed by this project.
- (7) The Lebanese Government should vigorously pursue enforcement measures against drug trafficking. A special corps of well trained and well paid police force should be organized.
- (8) Complete banning of hashish production should be undertaken as village development plans are implemented.
- * (9) Steps should be taken immediately to stamp out the new emerging industry of poppy production and opium trafficking in the Bekaa.
- (10) Special use in planning should be made of the F.A.O report on the water resources of the Bekaa.

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For the United Nations

-  (1) Strong consideration should be given to an interim programme to assist the Lebanese Government in the continuation and strengthening of the present agriculture development group now conducting activities in the Bekaa.
-  (2) Give financial and consultative support in the planning development and implementation of projects.

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Office of the Minister of State for Administrative Reform
Center for Public Sector Projects and Studies
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