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FROM - ANTIAN

SUBJECT - Agricultural Economics and Planning (PROP)
278-11-140-134.

REFERENCE - AIDTO A-317

NON-CAPITAL PROJECT PAPER (PROP)

Country : Jordan Project No. 278-11-140-134

Submission date: 11.28.1968 Original: x Revision No.

Project Title: Agricultural Economics and Planning

U.S. Obligation Span: FY 1970 through FY 1975

Physical Implementation Span: FY 1970 through FY 1975

Gross life-of-project financial requirements:

U.S. Dollars	449,000
U.S.-owned local currency	-
Cooperating Country cash contribution (in $ equivalents)	- 780,000
Other donor	-
Total:	1,229,000

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I. SUMMARY DESCRIPTION

The GOJ has requested U.S. technical assistance for a new project designed to increase the competency of its personnel in the Directorate of Agriculture Economics in the Ministry of Agriculture. The GOJ has expressed its concern over the lack of personnel trained in the development and conduct of analyses for the following types of problems:

A. Studies basic to agricultural planning, resource development and agricultural policy formation.

B. Optimum economic use of production inputs and practices.

C. Most profitable farm organization, including livestock enterprises.

D. Economic adjustments of the smaller farmers.

E. Optimum farm adjustments of the larger farmers, to price, policy and institutional changes.

F. Development of efficient marketing system.

G. Collection, interpretation and use of special agricultural statistics.

The implementation of this project will develop trained personnel in all aspects of agricultural economics which are essential to adequate planning for agricultural development, the setting of priorities for the allocation of relatively scarce national resources and manpower, and in making profitable farm management and marketing decisions. Information will also be gathered and developed which will allow the private sector to plan and develop supporting agro-business. Successful achievement of the targets of this project will greatly strengthen other GOJ agencies such as the Agricultural Extension Directorate, the Agricultural Credit Corporation, the Jordan Development Board, and other USAID/J assisted projects such as for Wheat Research and Production, Vegetable Research and Production, East Ghor Rural Development and various on-farm irrigation projects.

With a changing agriculture developing to meet new markets, a strong competent agricultural economics and planning institution is essential in plotting the course to be followed.

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TABLE I

NON-CAPITAL PROJECT FUNDING (OBLIGATIONS IN $000)

PROP Date: Nov. 23, 1968
Original : x
Project No.: 278-11-140-134
Project Title: Agricultural Economics & Statistics

Fiscal Years		L/G Ap	L/G Tot.	Personnel Services AID	Personnel Services PASA	Personnel Services CONT	Participants U.S. AGENCIES	Participants CONT.	Commodities DIR	Commodities U.S.	Other Costs
Prior thru Act. FY											
Oper. FY 1970			76	10*		52		14			
Budget FY 71			114	10*		78		21		5***	
B+1	FY 72		116	10*		78		28			
B+2	FY 73		91	10*		52		14		15***	
B+3	FY 74		26			26**					
B+4	FY 75		26			26**					
	Total life		449	40		312		77		20	

* For specialized short-term consultants, 4 months each.
** Short-term consultants to be determine, costs equal to 1 man-year per year.
*** For books, periodicals, and office machines.

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TABLE 2

NON-CAPITAL PROJECT FUNDING, LOCAL CURRENCY COSTS

	AID-Contributed Local Currency		Other Cash Contributions Cooperating Country
	U.S.-Owned	Country-Owned	(000 of $ equiv.)*
Prior through Actual FY			
Oper. FY 1970	Probably none during the life of the project.		105
Budget FY 71			115
B+1 FY 72			125
B+2 FY 73			135
B+3 FY 74			145
B+4 FY 75			155
Total life			780

* Estimated at $70,000 per year for salaries and $35,000 for other costs, with a $10,000 increase per year for expanded staff, field work, etc.

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AMMA

II. SETTING

A. Present Agricultural Picture

Jordan has about 1,200,000 hectares of arable land which is about 12% of the total land area. About 600,000hectares receive an average annual rainfall of more than 300 mm (about 12 inches) which is considered to be about the minimum required for permanent and reliable dry farming.1/ During years of greater-than-average rainfall, the cultivated area may be extended to the 300-200 mm area. Irrigated land amounts to about 40,000 hectares and this area is being expanded as additional land is developed using water from deep wells in the desert area.

Crop production is directly related to rainfall, expecially the cefeals. Other crops are more indirectly related to precipitation as is shown in Table 3.

TABLE 3. - Indices of Rainfall and Production of Important Dry-land Crops

Year ending	1954	1963	1964	1966
Rainfall (index)	100 a)	60	128	81
(precipitation, mm)	380 a)	213	462	293
Grains	138	51	153	[illegible]
Tomatoes	103	201	183	1[illegible]
Watermelons & cucumbers	127	133	135	94
Olives	132	53	128	40
Grapes	130	119	155	121

a) Established for rainfall only, average of 1963-4 - 1965-6. Base year for crops was not indicated. No close relation between the two tables referred to in source.

Source: FAO Report, p.44, Table 27; and p.52 Table 33.

The place of agriculture in Jordan's economy is indicated in Table 4. Agriculture utilized 35.3% of the total labor force in 1961, with a total of 137,757 persons working on farms out of a national labor force (including military) of 389,978. 2/

1/ FAO, FAO Mediterranean Development Project, Jordan Country Report, Rome 1967. p.44. To be referred to as FAO Report.
2/ FAO Report, p.5, Table 2.

TABLE 4 - RELATION OF VALUE OF AGRICULTURE TO THE GNP AT CURRENT PRICES
(JD millions)

	1954		1963/4		1966	
	Amount	% GNP	Amount	% GNP	Amount	% GNP
Agriculture	14.2	27	28.1	19	27.7	15
Total GNP @ market prices	52.4		149.2		185.8	

Sources: FAO Report, p.14, Table 8 and The National Account, 1959-1966, Department of Statistics, Amman, p.12, Table 2.

The relative importance and value of the various crop categories of agriculture is shown in Table 5. This table also shows the relative change of the crops with time and the relative value of the crops in relation to each other.

TABLE 5 - VALUE OF AGRICULTURAL PRODUCTION AT FARM PRICES
(JD millions)

	1954		1963/4		1966	
	Amount	%	Amount	%	Amount	%
Grain, legumes, sesame	7.0	48.0	6.5	22.2	4.2	13.8
Vegetables, melons	3.2	22.0	8.0	27.4	5.7	18.7
Fruits, grapes, olives	2.3	15.8	6.6	22.5	7.5	24.6
Livestock, poultry	1.8	12.2	8.1	27.6	13.0	42.6
Forestry	0.3	2.0	0.1	0.3	0.1	0.3
Total:	14.6	100.0	29.3	100.0	30.5	100.0

Sources: FAO Report, p.47, Table 29, and The National Accounts, p.27, Table 6.

The changes in the cropping pattern are shown in a different way in Table 6.

TABLE 6 - CHANGES IN CROP PATTERN (PERCENT OF TOTAL AREA)

	1956	1961	1964	1965
Field crops	84.7	74.9	74.0	72.9
Vegetables, melons	5.1	10.1	11.0	11.3
Olive trees	5.8	8.6	9.0	9.4
Fruit trees, vines	4.4	6.4	6.0	6.4
Total:	100.0	100.0	100.0	100.0

Source: FAO Report, p.50, Table 32.

The changing crop patterns have been accompanied by a corresponding increase in the use of fertilizers and in mechanization. This is indicated in Table 7, for certain years for which there is data, but the quantities being used are still rising as of the date of writing.

TABLE 7 - SALES OF FERTILIZER AND TRACTORS

	1958	1963	1966
Fertilizers in MT			
Nitrogenous	1,675	5,519	6,517
Phosphate	339	694	1,255
Other	693	1,070	2,460
Total:	2,707	7,283	10,232
Tractors in single units	664 1/	1,169	2,068

Source: FAO Report, p.53 Table 34

The above tables indicate the growing importance of non-cereal crops and orchards and vineyards and the development of a very thriving broiler industry. To date these changes in agriculture have taken place with inadequate policy or planning guidance or knowledge of benefits.

1/ Includes unserviceable units.

B. Progress in the Development of distribution for Agricultural Development

The Agricultural Research Directorate in the Ministry of Agriculture has done much in the development and testing of improved varieties in all of the fields of agriculture, e.g., wheat breeding, vegetable variety testing, sheep breeding and selection. USAID was associated with the Research Directorate from the late 1950's through the mid 1960's when it supplied a Vegetable Research Advisor, Plant Pathology Advisor, Agricultural Research Advisor, and a Livestock Advisor.

The Agricultural Extension Directorate in the Ministry of Agriculture has been in existence for about 10 years, and there are many devoted personnel who are doing a good job of contacting the farmers on agricultural matters. USAID has supplied Extension Advisors to this Directorate in the past.

The work of Cooperatives among farmers in Jordan has been rather disappointing to date. Although advisors to the GOJ have worked in Jordan, the basic idea of using cooperatives as production tools apparently has not been fully understood by either the officials or the farmers themselves. Loans to farmers through the cooperatives have had a very poor record of repayment. Some of the cooperatives, however, have done good work. (The North Shounah Citrus Cooperatives and the Wadi Yabes Packing Plant) and efforts are being continued to improve the usefulness of cooperatives.

The Agricultural Credit Corporation was established in the early 1960's with the assistance of USAID Advisors to meet the special needs of the farmers. It has received two substantial loans from IDA which it re-lends to farmers for specified items, as well as through the cooperatives. It has met a real need in the development of agriculture in Jordan, but unfortunately, probably as a result of the June 1967 conflict, repayment of loans has fallen off. Their entire policy is being reviewed and it is anticipated that the ACC will be taking steps to modify its loan policies and to increase its loan collections.

Marketing of agricultural products and produce has received much attention since the mid-1960s and a UNDP Marketing Team has worked with the Marketing Center of the GOJ. Many studies of marketing fresh produce to neighboring Arab countries have been made, as well as studies concerned with expanding the processing of fresh vegetables and fruits and the use of cold storage. A Marketing Corporation has been set up.

A separate Department of Statistics was formed in the Ministry of National Economy. With USAID assistance, as well as that of other aid donors, this department has gradually expanded its activities and improved its services. It now provides a host of data in the field of agriculture.

as well as other fields, on a regular basis. In addition, it will get specific, special information for agencies of government when requested to do so. Although in the process of development, it is anticipated that the Department of Statistics will provide a centralized data gathering function serving all other agencies of government.

In the field of Agricultural Planning and Policy making, there appears to have been no formal institution in the GOJ which made this their prime concern. Some agricultural economists have been trained abroad for this work but they are generally engaged in tasks of a more limited nature working with the ACC, the Department of Statistics, and other government agencies. There are trained economists working with the Research Department of the Ministry of Agriculture, and the newly formed Directorate of Agricultural Economics and Statistics has economists and statisticians already on the staff. The FAO had a project to improve the techniques of agricultural sampling which left some trained Jordanians who are now working in the Directorate of Agricultural Economics.

Over the past few months there have been numerous discussions with the Minister of Agriculture, the people in the Ministry concerned with this project, the head of the Department of Statistics, the head of the Marketing Department of the Ministry of National Economy, representatives of the ACC, and other GOJ officials. The project has been fully discussed with the Ford Foundation's agricultural economist (Dr. Brough) who is advising the Minister of Agriculture. These discussions have clarified the understandings regarding organizational responsibilities and have resulted in the enthusiastic support of all concerned for this project.

C. Problem Situation

Problems in agriculture in Jordan might be described in three broad categories:

1. Those problems related to production, such as increased availability of water for irrigation; increased use of fertilizers, insecticides and herbicides; introduction and increased use of appropriate agricultural machinery; increased availability of other inputs such as credit, cooperatives, etc.

2. Those economic problems of agriculture which include the following:

a. The lack of sufficient economic data and analyses for public decision making for development programs.

b. Lack of information as a basis for sound policy decision making by government officials.

c. Lack of economic information about farm organization and management for profitable decision making at the farm level, and

d. Lack of economic information for effective decision making by the private sector that serves agriculture.

3. Those problems associated with the lack of coordination of limited agricultural economic data collection among several agencies within the GOJ. Statistical data has been collected by the Ministry of National Economy, and limited economic data has been developed by the Ministry of Agriculture, the Agricultural Credit Corporation and the Jordan Development Board, to name a few. However, meaning and useful economic analyses of these data have not been made nor has there been a sustained effort to bring about an awareness of the limited statistical and economic data that is available.

There now exists an urgent need to: (1) increase the quantity and quality of economic information and (2) centralize all economic research pertaining to the agriculture sector in one Ministry (The Ministry of Agriculture) and to coordinate statistical data collection with the Department of Statistics in the Ministry of National Economy.

III. Strategy

In order to solve the problems listed in II. above, the Jordan Government has established the Directorate of Agricultural Economics ~~and Statistics~~ within the Ministry of Agriculture. The Directorate was established with four divisions i.e., the Agricultural Economics Division; the Foreign Relations and International Division; the Studies, Follow-up and Evaluation Division; and the Agricultural Statistics Division. A general Director and Assistant Director have been named, as well as a Chief of the Foreign Relations and International Division; a Chief and Assistant Chief of the Statistics Division; two other Division Chiefs. Most of the above positions are now filled and the incumbents would be available to work with any foreign advisors who might be obtained.

Action is currently underway to transfer certain trained agricultural economists from other GOJ agencies to this Directorate. There is some difficulty being encountered where the personnel are currently receiving greater salaries than would be allowed with the new Directorate.

The present organization of the Directorate is under study by an Expert of the Ford Foundation with headquarters in Beirut. He has made recommendations for modification of the present organizational structure to

more efficiently and advantageously work on the problems listed in II above and others which will arise in the course of time. This plan shows the most advantageous relationships between this Directorate and the other GOJ agencies now working in these same or related fields.

The new Directorate is designed to use the basic data provided by the Department of Statistics and the Marketing Department in the Ministry of National Economy and to analyze and use this data in performing its function of economic research and planning for the agricultural sector. Certain limited types of data gathering for special studies in agriculture will be collected by the new Directorate, with the approval and under the general guidance of the Department of Statistics. The Marketing Department of the Ministry of National Economy will furnish information and analysis to be used by the new Directorate in agricultural applications. The precise relationship will be ma worked out over time as this project takes shape and as the capabilities of the various agencies evolve.

The Ministry of Agriculture recognizes its relatively limited resources for agricultural economics work and their limited adequately trained manpower to focus on these problems. The Ministry also recognizes the lack of leadership in these fields within itself. It is with these points in mind that it has requested assistance fro the US.

In order to assist the GOJ and specifically, the Directorate of Agricultural Economics of the Ministry of Agriculture, the USG will make available the services of a short-term consultant prior to the starting of the project in USFY 1970 whose primary task will be to assist the GOJ personnel to further recognize the Directorate of Agricultural Economics and to help identify the major economics problems which they can begin work on immediately. He will also review the documents of this project and make suggestions for their revision. It is anticipated that he will be helpful in identifying participants who might be sent abroad for training and the specific fields of study appropriate for each.

At the beginning of the project in USFY 1970, the USG will make available the services of two Advisors one each in the fields of Farm Management and in the field of Agricultural Planning and Development. The first will work for three years and the second for two. Beginning in USFY 1971, the USG will make available the services of an Advisor in Statistics who will work for three years. Beginning in USFY 1972, an Advisor in Agricultural Production Economics will be made available. He will work for two years. The US will provide the services of short-term consultants up to about 4 months per year to assist the long-term advisors in specialized fields of activity determined

by the advisor and GOJ officials. During the last two years of the project, i.e., USFY 1974 and 1975, the services of several short-term consultants will be made available dependent upon the specific needs of the project at that time. Their combined services will equal two man years.

In addition to the Advisors who will serve on the project, the USG will provide funds for GOJ personnel to be sent abroad as participants to study the more relevant aspects of agricultural economics and statistics as follows:

No.	Field	Degree	Location	Years of the Project
1	Statistics (methods & sampling)	M.S.	AUB	1, 2
1	Farm Management	M.S.	AUB	1, 2
1	Ag. Econ. Planning & Dev.	Ph.D.	USA	1, 2, 3
1	Ag. Econ. (Ag. Dev. in Developing countries)	Ph.D.	USA	1, 2, 3
1	Agricultural Statistics	Ph.D.	USA	2, 3, 4
1	Ag. Price & Income Policy	M.S.	AUB	2, 3
1	Land Economics	M.S.	USA	3, 4

In addition to this graduate training, the U.S. Advisors will give on-the-job training at the secondary level or equivalent to not less than four men in Farm Management and four men in Statistics.

The USG will also supply limited funds to provide for the purchase of key demonstrational equipment needed for the project and not available in Jordan.

All of this assistance will be directed at improving the GOJ institutions concerned with the gathering and analysis of economic data related to all fields of agriculture and with the use of these data for planning various kinds of agricultural and economic programs.

The GOJ will make available sufficient personnel to fill all of the posts in the Directorate of Agricultural Economics, as well as make provision in its annual budget to take care of all salaries, office, maintenance and other costs.

As an important part of this project, the GOJ will determine, with the assistance of the Advisors enumerated above as necessary, the more specific relationships of the Directorate in the Ministry of Agriculture and the other GOJ agencies now gathering agricultural economics data and statistics. The duties and role of each agency shall be carefully enumerated so that duplication of effort will be minimized or eliminated altogether.

This project will have extensive close relationships to other USAID/J projects. The Wheat Research and Production Project is in need of persons who can make economic studies of the entire summer-fallow technology, as well as numerous other studies relating to wheat production and marketing. The Vegetable Research and Production Project will need similar exports to make in-depth studies on the economies of production, handling and marketing of the major vegetables selected for intensive study, as well as additional studies on processing, storage and export. Additional studies in depth are needed for all agriculture carried on in the Jordan Valley especially in the East Ghor Development project area. With increased emphasis being given by USAID/J to the exploration for and development of ground water in the Eastern desert region, economic studies are needed taking into consideration the cost of water development, land shaping for irrigation, initial cost of the land and the need for a crop rotation system so designed to give the maximum income per unit area to the farmer with a maximum amount of produce being grown for a select export market, or for local consumption if export is not feasible. The Agricultural Extension Directorate requires sound economic data to include with its recommendations on crop production for the farmers. The farm credit institutions also require sound economic data for its lending programs.

All of these studies can be made by personnel of the Directorate of Agricultural Economics when they have reached sufficient competence. Many of these studies can be started almost immediately with current personnel upon the arrival of the short-term consultant in mid-USFY 1969.

IV. Planned Targets, Results and Outputs

The most important target of this project is to develop within the GOJ a sound institution or institutions with competent well-trained personnel capable of making the kinds and quality of studies needed by the GOJ and the private sector to make economically meaningful agricultural policy and set and implement logical agricultural developmental priorities. This project will also identify and enumerate the relationships between the various GOJ agencies currently doing agricultural economic and statistical studies.

A. Basic Statistical Activities.

Annual land-use, production, yield and utilization data (and similar livestock and poultry data) and consus data will be collected by the Department of Statistics of the Ministry of National Economy.

During the course of this project and in the process of developing the capabilities needed above, the following types of additional

agricultural statistics will be needed and personnel trained to gather them to the extent they are not gathered by the Department of Statistics of the Ministry of Agriculture

1. Historical trends of input, output and land use parameters by district.

2. Annual aggregate uses of agricultural input data such as fertilizers, chemicals, machinery, labor and water by districts.

3. Annual farm income data by size of farm and districts.

4. Annual and seasonable farm, wholesale and retail price data by commodity.

5. Annual food and fiber consumption data by family income and other population characteristics.

6. Annual import and export data by commodities and country of origin or destination.

7. Periodic projections of production, consumption, imports and exports by commodities and countries of origin or destination.

8. Changes in farm size and land tenure arrangements by districts.

9. Annual estimates of yield and production, prior to harvest, for important commodities by districts.

10. Statistics for special uses as needed.

B. Studies Basic to Agricultural Planning, Resource Development and Agricultural Policy Formation.

For the development of the agriculture sector of Jordan, much knowledge is needed to guide the investment and use of public resources. Many useful studies have been conducted but continued effort is needed as a basis for public decision making in several important areas. Examples of several types of research are:

1. Cost-benefit analyses of proposed irrigation, drainage, reforestation, soil conservation, and other development projects.

2. Studies to evaluate the effectiveness of alternative action programs that affect agriculture, such as for credit, agricultural extension, increased production or market development.

3. Evaluations of the effect of alternative agricultural policies on land use, production, farm income, and community development. Policies concerning farm credit, price support, import taxes, import restrictions and support of farm inputs.

4. Predictive analyses of the aggregate impact of adopting new technology for certain enterprises such as wheat, vegetables or poultry.

5. Projections of aggregate national input requirements as new technology is adopted. Production inputs such as seeds, fertilizers, chemicals improved machinery and production credit should be considered.

6. Predictive analyses of the future production-consumption balance and the trends in consumption and production, especially for the agricultural enterprises that require large initial investments, such as fruits, nuts, dairy, poultry and beef.

C. Farm Management and Production Economics Research

Production economics is concerned with the economic evaluation of all aspects of agricultural production, both on individual farms and for aggregates of farms. Farm management research is more specific and is aimed at solving the on-farm economic problems of production. The latter involves the use of economic principles, accounting and budgeting techniques to make sound economic decisions about the organization and operation of the farm business. The following kinds of studies will be made under this project.

1. Input and cost of production studies.

2. Economics of farm practices including:

a. Fertilizer use.

b. Spraying practices, both insecticides and herbicides.

c. Water application and use.

d. Product varieties.

e. Machinery use.

f. Livestock and poultry feeding.

3. Economic Problems of Farm Organization Studies in this field will be concerned with:

a. Long-term investment problems.

b. Year to year adjustment problems. Questions that need answering are:

i. What types of vegetable production is most economically feasible in the Jordan Valley?

ii. What new seed or vegetable crop would be economically feasible in the Valley?

iii. In which up-land areas would it be profitable to substitute new and improved barley varieties for wheat?

iv. Under what conditions and in what areas is it economically feasible to replace wheat or fallow with certain grass or forage crops?

v. Can improved corn or sorghum varieties, or wheat, be profitably and competitively produced on irrigated land in the Jordan Valley?

vi. Can forage crops be produced profitably in rotation with vegetables in the Jordan Valley?

vii. Is it economically feasible to develop beef or lamb feeding operations in irrigated areas?

D. Economic Problems of the Smaller Farmers

The problems of the small, subsistence and/or part-time farmer are quite different from those of the larger farmers. These problems will be explored with the objective in mind to either assist him to intensify his operations and possibly become more solvent or to recommend that he leave farming or that he consolidate his holdings with his neighbors, or other pertinent solution.

E. Marketing Problems and Research Needs.

Development of the marketing phases of the agricultural industry is a key to the successful expansion of this sector. Appropriate research will be instituted, which will include:

1. Pricing Efficiency Studies with appropriate recommendations.

2. Operational Efficiency Studies to include a more economic arrangement and combination of resources used in packing, storing,

transportation and processing of agricultural products.

3. Market development studies.

In all of the above studies, progress in agricultural development will be measured by continuing the work based on the findings on previous studies. It will be stressed that economic studies are not a one-shot deal that gives answers for over current, but rather a continuing process designed to recommend changes in agficultural production to meet the changing times and conditions.

V. Course of Action.

Ongoing US assistance is planned to start in U.S. Fiscal Year (USFY) 1970 and continue through USFY 1975. Prior to USFY 1970 there are certain activities which should be undertaken and if possible completed during the remainder of USFY 1969.

A. USFY 1969

1. U.S.A.

a. With financing under the East Ghor Rural Development project, a short-term consultant will be recruited to arrive in Jordan about January 1, 1969, and will work with GOJ officials for a period of about 4 months. He will review the documents pertaining to this project, discuss the organization of the Directorate of Agricultural Economics with officials concerned and make suggestions for changes or implementation, and with GOJ personnel identify certain economic problems on which work can begin immediately. Cost: $7,500.

2. GOJ

a. The GOJ should establish a coordinating committee composed of high officials of the Ministry of Agriculture, Ministry of National Economy, the Agricultural Credit Corporation, the Jordan Development Board and any other agencies currently dealing in agricultural economics or statistical matters for the purpose of further identifying the functions of each agency and refining the roles of each.

b. GOJ should transfer available qualified personnel from other agencies to fill the slots in the staffing pattern which might be vacant in the Directorate. It is hoped that special consideration will be given to the problem of transferring people from an agency now paying a higher salary than that which might be possible in the new Directorate. A loss or reduction in salary will have an adverse effect on transferring personnel from one agency to another.

c. If at all possible, personnel should be identified for graduate training at the M.S. and Ph.D. levels at both the AUB and in the USA.

d. Provisions should be made in the JFY 1969 budget to take care of the new or expanded organization.

B. USFY 1970

1. U.S.A.

a. One Advisor in the field of Farm Management to serve for a three year tour of duty, one Advisor in the field of Agricultural Planning and Development to serve for a two year tour of duty and one specialized short-term consultant for 4 months will be recruited. They will work with the corresponding GOJ personnel in the agency. They will assist in the selection of participants.

Consultants: $62,000 Participants: $14,000

2. GOJ

a. With the assistance of the Advisors, project personnel will set immediate research priorities from among the targets enumerated in Section IV above and others which may be determined to be pertinent to agricultural development in Jordan and in-service training sessions will be set up to train the staff in the duties required. These training sessions will be conducted by qualified GOJ staff or by the Advisors.

b. Job descriptions will be written where they do not exist, and personnel will be selected for training abroad as participants.

C. USFY 1971

1. U.S.A.

a. The services of the first two Advisors will continue and a third Advisor in the field of agricultural statistics who will serve a term of three years and another specialized short-term consultant for 4 months will be recruited. They will work with their counterparts in the GOJ and will assist in the selection of additional participants.

Consultants: $88,000 Participants: $21,000

2. GOJ

a. Continue filling positions and continue work on priorities established, revising them as needed. Select participants as

scheduled.

D. USFY 1972

1. USA

a. Continue the work of two Advisors and recruit another specialized short-term consultant for 4 months and an Advisor for a two year tour of duty in the field of Agricultural Production Economics.
Consultants: $88,000 Participants: $28,000

2. GOJ

a. Continue work and select participants as scheduled.

E. USFY 1973

1. USA

a. Continue the work of two Advisors and recruit a specialized short-term consultant for 4 months.

Consultants: $62,000 Participants: $14,000

2. GOJ

a. Continue work as scheduled.

F. USFY 1974

1. USA

a. Recruit short-term consultants to advise the GOJ on specific items identified by the previous Advisors and project personnel.
Consultants: $26,000 Participants: None

2. GOJ

a. Continue work on main priorities as scheduled and work with the short term consultants in their specific fields of competence.

G. USFY 1975

1. USA

a. Recruit additional or similar short-term consultants to work with project personnel on specific items.
Consultants: $26,000 Participants: None

2. GOJ

a. Continue scheduled work and work with short-term consultants.

SYMMES