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REPORT ON
CREDIT FOR IRRIGATION EQUIPMENT
IN THE JORDAN VALLEY

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PREPARED FOR THE AGENCY FOR
INTERNATIONAL DEVELOPMENT UNDER CONTRACT
No. AID/NE - C - 1343
JORDAN

MAY 1977

ACKNOWLEDGEMENTS

This report has been prepared within the constraints of a very limited time frame and with the very high degree of cooperation from Dr. Sami Sunna' and the Agricultural Credit Corporation Staff and the involved USAID officials of Agriculture, Capital Development, and Program offices. Information and advisory assistance was also courteously provided by many other staff members of Jordan Valley Commission, Jordan Co-operative Organization, and USAID.

The urgency for completion of the loan requirements and implementation of sprinkler equipment acquisition program stems from the importance of having the equipment in operation during the last months of this Cy and first months of Cy 1978 if it is to contribute to the production of the 1978 vegetable crop in the Valley.

Material in the report is primarily based upon discussions in country and documents listed in the bibliography.

The writer is grateful to the many cooperating individuals and particularly those who reviewed draft material and made suggestions and corrections.

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I. PROJECT ASSIGNMENT

The purpose of the assignment was to assist the Jordan Valley Commission (JVC) and the Agricultural Credit Corporation (ACC) in the development of arrangements for the provision of credit to farmers, particularly small farmers, in the Jordan Valley for the purchase of irrigation equipment to increase production and income. The loan capital is to be generated through an AID loan of Eight Million Dollars to be used initially for the purchase of Sprinkler Irrigation Equipment. The scope of the assignment includes:

- Preparing an agreement for execution by JVC, the borrowing agency, and ACC, specifying the respective responsibilities and the procedures for implementing and managing purchases, receipt, allocation, and credit arrangements for farmers to acquire and install sprinkler irrigation equipment on their farms and the use of funds collected as repayments on sprinkler loans.
- Reviewing policies and procedures on agricultural credit in the Jordan Valley and the role to be played by the Jordan Valley Farmers Association (JVFA) with special emphasis on services to tenants and small farmers, and an assessment of Valley Farmers' perception of credit availability, cost, terms, sources and reliability.
- Discussing policies and procedures, and possible improvements for getting irrigation equipment into hands of users.
- Preparing terms of reference for 18 man-months of technical assistance in implementing the project.

II. PROJECT DESCRIPTION

"The project consists of the procurement and on-farm installation of portable on-farm sprinkler equipment for use in four irrigation areas covering 93.100 dunums (9310 Hectares) in the Jordan Valley. East Ghor Canal Extension, (AID Loan 278-H-009), Zarga Triangle (AID Loan 278-T-011), the North East Ghor, a project assisted by the International Development Association (IDA); and Hisban-Kafrein project assisted by the Kreditanstalt für Wiederaufbau (KfW).

"In all four areas, construction is underway on fixed water delivery systems which will provide water to individual farms. The materials to be procured include portable pipes, filters, gauges, couplers, valves, fittings and sprinkler heads to be distributed to farmers in the areas described above. The JVC will receive, store, manage and distribute the equipment to farm owners or tenants approved by the Jordan Valley Commission as eligible recipients following the execution of credit or cash sale agreements between the Agriculture Credit Corporation and eligible recipients." (1)

(1) Source - Annex 1 of Loan Agreement dated September 30, 1976.

III. SUMMARY OF FINDINGS

- A. Sprinkler irrigation is relatively new. The few such systems in the East Bank area have been operating for a limited period. Approximately 3000 farm units are expected to be provided with sprinkler irrigation equipment under this project. The introduction of the system is to be supported by an intensive technician and farmer training program and followed up with on-the-farm supervision.
- B. A land redistribution plan authorized by Law No. 12, 1968, designed to provide minimum and maximum size of "Holdings"⁽¹⁾ in the irrigated area is underway. It provides for a minimum of three hectare holdings and a maximum holding at twenty hectares. The law prohibits the sale of land without prior Government approval and authorizes the Government to acquire the land and redistribute it to beneficiaries who qualify on a priority basis; the first priority includes holders who are operators, the second priority refers to "Professional farmers residing in the area"; third and fourth priority goes to farmers outside the project area, and the fifth priority includes "Holders who utilize their land by lease or share-cropping within the project area."⁽²⁾
- C. The organizational structures for implementing the essential acquisition, distribution, training and financing of the sprinkler equipment program seem to be in place.
- D. The Jordan Valley Authority (JVA) (Successor to JVC April 1977) has primary responsibility for planning, execution, and financing matters relating to Jordan Valley development and coordinating the services of several co-operating organizations such as ACC, in provision of agricultural credit, Ministry of Agriculture (MOA) in the provision of agricultural extension services and certain custom services such as plowing and spraying; Agricultural Marketing Organization in the provision of marketing information and services; Jordan Valley Farmers Association (JVFA) in the provision of many services planned for its members.

(1) A "Holding" is generally defined as the land that is farmed by an operator as a farm unit. (Changes have been made in the provisions of the Land Reform legislation by recent adoption of an act establishing the Jordan Valley Authority. Copies of these changes are not yet available. - May 1977.)

(2) Source: AID project paper - 1976.

- E. An Act authorizing the organization of a Jordan Valley Farmers Association with local units numbering 33 area development councils became law in 1974. The Jordan Valley Farmers Association (JVFA) responsibilities include provision of agricultural credit, production inputs, including tools and machinery, and agricultural marketing services. It also is to provide a channel through which farmers participate in formulating and implementing government policy and agricultural programs in the valley. (1)
- F. ACC-supervised Loan System seems to be strongly oriented toward security inspections rather than technical assistance to borrowers for improvement of production and increasing income. Information reported was that medium term loan borrowers may receive 4 to 6 visits as compared to seasonal loan borrowers receiving 2 visits per year by the Branch Office Supervisor. ACC officials advise that the major role and responsibility for advice and guidance in farm management and production practices of the farm rests with the Ministry of Agriculture Extension workers. ACC's field supervisors' role is in the area of advice and guidance on financial matters.
- G. The recent report on vegetable diseases in the Valley and the influence of sprinkler irrigation on the treatment and control procedures and methods indicates a likelihood of increased costs of production due to the cost of improved materials and methods for more effective control. (2) Action to develop a package of practices to meet such contingencies is under way.
- H. Other donors are involved in projects of support for development programs in the valley. Representatives of KFW (West Germany) and the Ministry of Overseas Development (U.K.) were discussing plans for assistance projects with JVA, ACC, and JCO during the period of this assignment.
- I. Construction of the pressure system for connecting sprinkler equipment is proceeding on a schedule that is expected to provide completed sections for use by the fourth quarter of Cy 77.

(1) Abstracted from the Temporary Law No. 19-1974.

(2) Source: Report of Mr. Allen Stevens, Department of Vegetables, U. of Cal., Davis, Cal., 1977.

- J. JVA advises they are prepared to begin construction of warehouses and facilities to receive the sprinkler equipment upon arrival.
- K. It is reported that 60% of the land in the Valley is operated by tenants or share-croppers. Odvar Aresvik⁽¹⁾ reports that non-owner-operated land percentage is higher in 1973 than in 1961. Tenant operation must, therefore, be recognized as a significant segment of the agricultural situation in the valley and seasonal and medium term credit procedures adapted for this class of producers.

(1) Author of "The Agricultural Development of Jordan" 1976.

IV. ADMINISTRATION AGREEMENT (1)

The Agreement, required under the conditions precedent to disbursement, by the "Loan Agreement Between the United States of America and The Hashemite Kingdom of Jordan," dated September 31, 1976, provides the guidelines and describes the arrangements between JVA and ACC for the management and control of credit to farmers for purchase of sprinkler irrigation equipment acquired with the proceeds of the AID loan and for the use of the repayment of credits extended under the agreement. Section 3.03 of the loan agreement provides that "A.I.D. shall notify the Borrower upon determination by A.I.D. that the conditions precedent to disbursement have been met."

The format of this Agreement parallels that of a similar agreement existing between JVA and the Jordan Housing Bank in connection with an AID loan.

- A. The agreement contains a provision by which JVA plans to provide funds for payment of the semi-annual instalments on the AID loan from repayments from the farmer beneficiaries.
- B. The agreement does not include plans for the use of the repayment funds accumulated in the special account for the reason that JVA and A.I.D. Mission Staff members agreed that these plans, including lending policies, rules and regulations should parallel those being negotiated in connection with the AID 1978 \$3,000,000 support project. It is expected that it will be two or three years before repayment amounts would be of significance for re-lending.
- C. The requirement of a ten-year lease does not seem realistic. Actual experience gained in the application of this provision may result in its modification to better serve the needs of tenant operators. JVA points out that under the law tenants are required to have a lease for a minimum of three years. All leases must have the approval of JVA. Consideration is also being given to adjusting loans to tenants to mature at the time of expiration of the lease (when the lease period is less than ten years) with loan rescheduling or extension taking place if and when the lease is renewed or extended.

(1) Annex I.

- D. Deferment of principal repayments until production income is available is an established practice and will be applied to sprinkler loans. The option of one of four repayment plans allows flexibility in the repayment schedule within the ten-year maximum period.
- E. Mandatory attendance at the training schools for farmer borrowers was ruled out as being impossible to police and more effective if conducted under voluntary conditions with an effective promotion program.

The value and effectiveness of the provision of mandatory membership in the JVFA is, in the opinion of the writer, very questionable and could become counterproductive in developing a workable unified organization of farmers.

- F. The proposal to eliminate the requirement of a written farm plan of operation in connection with loans to sprinkler loan borrowers is likely to have an adverse effect on the quality of performance of these borrowers with respect to their agricultural production and loan repayment. Farm production planning and budgeting with low income farm families has been found to be a most effective mechanism for raising incomes and improving repayment capability.

V. NATIONAL AND AGENCY POLICIES ON AGRICULTURAL CREDIT.

Institutional sources of agricultural credit consist primarily of two semi-autonomous organizations: The Agricultural Credit Corporation and the Jordan Cooperative Organization (JCO). Commercial Banks are providing some credit to the agricultural sector, both directly and indirectly, through the financing of merchants and commission agents who, in turn, extend some credit to farmers.

Both agricultural lending agencies charge substantially the same rate of interest to farmer borrowers on seasonal loans, i.e., 8% discount (interest for one year is deducted from the amount of the loan at the time of advance). ACC's rate of interest on medium term loans is 6% per annum and JCO's rate to borrowers of medium term loans is 7.5% per annum. Both require written farm plans. The volume, terms and conditions of commercial banks and non-institutional sources of agricultural credit are not available.

National policy supports a low interest rate on loans to farmers to raise farm incomes and increase agricultural production. Interest rate ceilings are determined by the Central Bank which, at present, has set the ceiling at 9% per annum.

A. ACC's Role

ACC's Headquarters are in Amman and its organizational structure embraces 12 branch offices, one of which is located at Wadi Yabis, in the Valley. ACC has been engaged primarily in medium term lending until about five years ago when it began making seasonal term loans. Its use of its long-term lending authority has been very limited.

According to a paper on Agricultural Credit in Jordan prepared by ACC in 1974, "ACC's loans represent the largest share of the aggregate official agricultural loan portfolio". The Corporation has approximately 17,000 active loan accounts at this time. The following table reflects the number of loans, seasonal and medium term and the total amount loaned in the Valley for the last three years. The table also shows the total number and amount of seasonal loans in the country and the percentage relationship to ACC's total loans for the same years. It may be noted that over 50% of the total number of seasonal loans granted in 1976 were in the Valley.

TABLE 1 (1)

Year	Jordan Valley Loans Number			Total Country Seasonal Loans Only		
	Seasonal	Medium	Amount	No.	Amount	% of Total Loans
1974	141	87	316,536	332	219,286	10.3
1975	187	92	307,967	404	287,620	9.0
1976	149	106	334,991	286	353,447	12.6

Seasonal loans for crop production purposes are for a period not exceeding one year. Cash advances are made as needed and usually the amounts for purchase of supplies are paid direct to a supplier on behalf of the borrower. ACC reports that working arrangements with the suppliers supplement their supervision as the supplier instructs the farmer on the proper use of the fertilizer, fungicide or other materials when the farmer receives them.

Medium term loans for such purposes as purchase of equipment, land development and orchard establishment are usually for periods not exceeding ten years, with repayments scheduled annually at marketing time. In case of orchard establishment, principal repayments are deferred for up to 5 years.

ACC requires first real estate mortgage for the amount loaned which may not exceed 75% of the value of the collateral. Its rules do permit loans to be secured by acceptable guarantors in cases of loans to tenants or share croppers.

B. Role of J.C.O.

The JCO is a national cooperative organization with 349 affiliated local societies with individual members totaling 30,000. One hundred and two (102) of these affiliates are agricultural multi-purpose societies with 12,000 farmer members. Seasonal credit is extended,

(1) Source ACC. Credit Section

based upon farm plans of operation agreed upon between the borrower and local manager and the JCO district and headquarters staff. Loans are for a period not exceeding one year and advances are made in cash and in kind from supplies of fertilizers and other chemicals and production supplies that the society provides. No interest is charged on the value of the "advance in kind". This portion of the credit is handled as "Credit Sale". The local societies have a cash and a credit sale price system. The value of "advance in kind" supplies to borrowers is included in the amount of the loan.

Medium term loans are made for usual purposes and the period may not exceed six years.

Long term loans are made only to local societies by the central organization. Seasonal loans by local societies to members, up to JD.500 may be secured by an acceptable guarantor.

Medium term loans are secured by land mortgage and the loan may not exceed 75% of the value of the collateral. Second and third mortgages may be acceptable provided the 75% of value rule is observed.

The following table reflects JCO's seasonal and medium term loaning activity in the Valley.

TABLE 2
JCO issued Loans to Cooperatives
in East Jordan Valley (1974-1976) (1)

Year	TYPE OF LOANS		
	Seasonal (Cash) (JD)	Seasonal (In kind) (JD)	Medium (JD)
1974	62,000	110,000	2,000
1975	155,000	250,000	21,000
1976	214,346	350,000	287,145

(1) Source: Jordan Cooperative Organization - May 1977.

VI. ROLE OF J.V.F.A.

The Jordan Valley Farmers Association Law, No. 19, for the year 1974, states that "Membership shall be automatic to any farmer who exploits an agricultural unit or more in the East Ghor Canal area...or who exploits directly one or more plots of irrigated land in the Jordan Valley.."

In other words, membership in the association is not voluntary. Each member will pay a two JD. membership fee initially and three JD. annual subscription. The association has 33 local Development Area units. Members in each Development Area will elect an Area Development Council consisting of one council member for each 50 Association members.

Under the Law, the JVFA has responsibility to provide loans and agricultural inputs, agricultural equipment, and marketing services for its members. The Area Development Council will review and make recommendations on applications for credit to ACC through its Branch Office.

The Area Development Councils are organized and prepared to function with the local Agriculture Extension Field Agent acting as Secretary. The management structure of the JVFA is not a functioning unit and it is likely to be many months before it is prepared to start taking over the first of many responsibilities envisioned for it in the overall development program. In the meantime, it is planned that JVC and ACC will furnish the guidance and some of the services proposed for JVFA until the latter's capability is developed. It is presently proposed that JVFA will first engage in provision of seasonal credit to its members through provision of funds and supplies, with the guidance, training and supervision of ACC. The organization and development of service capability by the JVFA is detailed in a recent consultant⁽¹⁾ report, "The Functions and Organizational Aspects of the Jordan Valley Farmers Association," December 1976. Chart 4 of this report reflects the flow of seasonal credit applications through the P.A. structure when JVFA becomes operational. Table A.1 of the report records data compiled from a survey of farmers in the Valley.

(1) Job Savage, Agricultural Cooperative Development International.

VII. PROCEDURE FOR DISTRIBUTION OF SPRINKLER EQUIPMENT.

A detailed plan⁽¹⁾ has been prepared by JVA for the handling, warehousing, and distribution of the sprinkler equipment. The plan outline includes designs for construction of three warehouses, a time phase schedule and sample forms for inventory control and purchasers' orders.

The amount of credit provided the purchaser may include the cost of delivery from the JVA warehouse to his farm. The delivery service will most likely be provided by a contract arrangement through JVA at a reasonable fee. This phase of the activity has not been explored, but satisfactory arrangements are expected to be completed without difficulty.

The farmer sprinkler operation and maintenance training program outline is being developed by a Committee including members of the Faculty of Agriculture of the University of Jordan, MOA and JVA.

In reference to Paragraph (9) Warehouse-Retailing of the plan, it is recommended that in the case of a credit sale the appropriate ACC official will finalize the order form for the purchaser when the loan documents have been executed. The order form when finalized for the purchaser may be presented to the warehouse authority for delivery of the equipment specified.

(1) Special Report No. 4 to the Jordan Valley Commission
by William Gillen - March 1977.

VIII. TECHNICAL ASSISTANCE

Terms of reference for eighteen months of resident technical assistance to:

- A. Assist in estimating the aggregate credit needs in the Jordan Valley and,
- B. Assist the JVFA in implementing its role for seasonal credit to reach farmers, particularly tenants and small owner-operators, are incorporated in Annex 2 & 3.

These draft outlines include a description of the assignment, scope of work, and suggested qualifications of the proposed advisors.

According to recent advice, only one advisor for the 18-month period is expected to be recruited under this proposal. In that event, the position of Credit Advisor to the JVFA will likely be elected and it appears that the material in the outline for that position will be adaptable for the longer tour period.

IX. RECOMMENDATIONS

- A. ACC has gradually increased the rate of interest charged its borrowers. However, the interest rate presently charged borrowers is insufficient to enable ACC to pay the cost of capital borrowed in the money market, plus its operating costs. Thus ACC is dependent upon subsidized loans, and its net earnings for loan capital increases. The interest rate charged its borrowers has been a subject of discussion and recommendations by advisors as far back as 1961. Many developing countries have found that adjusting agricultural interests rates upward attracts investment in agriculture and results in accelerating agriculture development.
- B. To accelerate agricultural productivity and production, consideration should be given to such matters as:
1. Most suitable type and amount of subsidies.
For those whom National policy dictates should receive special consideration and treatment to help improve their capability to produce for their own benefit and the benefit of the economy, assistance may be provided through agricultural price supports, improved marketing services, subsidized fertilizer supplies or some other methods. The value of fertilizer for increasing productivity is apparently not fully appreciated by the farmers. While world use of fertilizer is expanding, the volume of fertilizer used in Jordan has remained quite stable, as reflected by the imports shown in the following table.

TABLE 3(1)

Imports of Nitrogenous, Phosphate,
and Potassic Fertilizers
(in tons)

Year	Nitrogenous	Phosphate	Potassic	Total
1967	1,109	4,259	1,843	15,211
1968	4,229	6,132	876	11,237
1969	3,874	7,461	853	12,193
1970	1,888	6,454	4,357	12,699
1971	3,409	3,920	5,011	12,340
1972	3,000	504	448	3,952
1973	6,125	3,504	742	10,371
From January to September 1974	7,835	2,713	310	10,858

2. Relaxation of security requirements providing for a first real estate lien as collateral for seasonal loans. In discussing the land mortgage requirement, the authors of "Small Farmer Credit in Jordan," 1972, comment. "This has been a major limitation to the accessibility of lower income farmers, the value of whose land would not be enough to cover the security needed for the loan, and thus this is a major limitation to the progress of ACC towards one of its ultimate objectives which is to finance small farmers and provide them with credit to keep them in business." In discussions on this subject, ACC officials have pointed out that currently seasonal loans are available to tenants who can provide two guarantors.
3. Rely primarily upon effective farm production planning and follow-up supervision and the income resulting from diligent farming to provide income to repay loans on schedule. An orientation toward supervisory farm visits to provide advice and technical assistance to the farm operator in contrast to visits to check upon security is needed. Discussions with field

(1) Source: Kingdom of Jordan, Department of Statistics, External Trade Statistics.

workers indicate that the supervisor visits medium term borrowers 4 to 6 times a year, whereas seasonal loan borrowers visited 2 times a year based upon the timing of the loan advances and for the purpose of determining the proper use of loan funds.

The manager of the East Ghor Canal reported that his canal supervisors visit farms receiving water from the canal frequently, 3 to 10 times a year, usually to advise on irrigation practices and water management and control. The Agriculture Extension Supervisor reported that his local extension agent with approximately 200 farms in his area would visit each farm on an average of once each month. Each technician has special information and advice for the farmer and each has a contribution to make to the success of the production program. On the farm is the critical point of implementation of the proper practice at the proper time for successful farm operation. Continual effort would seem necessary to assure coordination of the technical assistance provided on the farm so that the inter-relationship of the practices are clearly understood by the farm operator. Occasional joint visits by the three field workers to the farm where they are jointly involved might be most fruitful. A re-alignment of duties and responsibilities of the ACC supervisor to give him broader responsibility to advise and instruct borrowers on matters of production practices should be considered.

4. Re-scheduling repayment of a loan previously made should take place only in the case of medium or long-term loans and only
 - a. When an error has occurred in the initial planning and repayment scheduling such as not allowing sufficient time for the crop, such as citrus or olives, to mature for market to provide income for repayment, and
 - b. When the borrowers cropping program has been modified, with the assistance and approval of ACC, and the crop income will then be received at a different period in the year than the former crop plan.

Re-scheduling in cases other than situations described above serve the principal purpose of removing a delinquency from the records of the lenders and actually distorts the loan and program's condition. The

re-scheduling process requires time of the record keeping and supervisory staff that may otherwise be devoted to strengthening planning and supervision of the lending program. Re-scheduling in itself contributes nothing to the capability of the borrower to overcome the causes of the delinquency. ACC's seasonal loans are not re-scheduled, under present policies. Seasonal loans not repaid due to crop failure may be "postponed" by a settlement agreement worked out with the borrower.

5. Establish and promote farmer savings and investment program. Encourage or require regular savings from income, i.e.:
 - a. Layer enterprise - monthly.
 - b. Broiler enterprise - quarterly.
 - c. Vegetables - at harvest time.
 - d. Citrus - annually at harvest.

At this stage of development of JVFA, ACC could initiate a capital accumulation program among borrowers who are members of JVFA. The funds could be deposited to a savings account of the borrower with an understanding that the savings could be converted into share investments in JVFA when the latter organization has progressed to the appropriate stage of development. Investments of this nature can become significant collateral for loans to the members and may relieve the compulsion for first mortgage real estate security in all cases.

6. Farm planning may be more meaningful if more emphasis is placed upon the production practices that must be followed to attain the production projected.

Some manner of evaluation of the production operation at the close of the season to compare planned and actual result and determine reason for failure, if any, as a basis for improving performance the following season. Also, a budget of use of income and savings with a seasonal review should be most helpful in assisting farm families to improve their progress and income.

7. A much broader and higher degree of coordination between ACC and JCO should improve substantially the amount and quality of service and assistance that farmers receive. Uniform farm plans and application forms, as well as more uniformity in the rules and

18.

procedures for lending to farmers should be encouraged. Could not JCO be the main source of agricultural supplies for ACC borrowers who are located in the JCO supply area? Would not the member's equity, through share purchase experience of JCO, be of value in designing and implementing a savings/capital mobilization program through ACC/JVFA channels in the Valley?

BIBLIOGRAPHY

1. Small Farmer Credit in Jordan - Thomas Stickley & Marwan Hayek - American U., Beirut.
2. The Jordan Valley Farmers Association, Jan. 1974.
3. Report on Jordan Valley Farmers Association by Job Savage, 1977.
4. Social and Economic Survey of the East Jordan Valley, 1973.
5. Project Paper - Jordan Sprinkler Irrigation, A.I.D.
6. Jordan Five Year Plan, 1976-1980, National Planning Council.
7. The Agricultural Development of Jordan - Oddvar Aresvik, 1976.
8. Water Management Technology, Sprinkler Irrigation (Jordan). Training Program - Jack Keller, 1977.
9. Jordan Cooperative Development Survey - 1975 Cooperative Resource Committee, Washington, D.C.
10. Agricultural Credit Corporation - Act No. 12, 1963.
11. USAID Advisor End-of-Tour Reports.
 - a. Floyd P. Higbee 1961
 - b. Wilson Rice 1966
 - c. Rueben Hall 1967
 - d. Albert H. Mason 1967
12. Paper - Jordan Cooperative Organization, 1977.
13. Jordan Cooperative Organization - Lending Policies and Procedures.
14. Jordan Cooperative Organization: Investment in Small and Medium Scale Farm Development.
15. Vegetable Diseases in the Valley, by M. Allen Stevens, Department of Vegetable Crops, U. of Cal., Davis.
16. Special Report No. 4 to the Jordan Valley Commission Farms Irrigation Project - William Gillen - March 1977.

PARTIAL LIST OF OFFICIALS CONTACTED

1.	Dr. Sami Sunna'	Deputy Director-General	ACC
2.	Dr. Nur El-Din Taquieddin	& Asst. Deputy Director-General Asst. Deputy Director-General/ Finance	JVA ACC
3.	Burhan Sharabi	Chief of Credit	ACC
4.	Abdul Razzak Khayyat	Inspector	ACC
5.	Samir Omari	Wadi Yabis, Branch Manager	ACC
6.	Husam Haddadin	Wadi Yabis, Field Supervisor	ACC
7.	Omar A. Dahghan	President	JVA
8.	Dr. Fahd El-Nattur	Head, Irrigation Dept.	JVA
9.	Munther Haddadin	Deputy Director-General	JVA
10.	Khalil Khayyat	Wadi Yabid, Director, Irrig.	JVA
11.	Zara Sa'di	Wadi Yabis, Agr. Extension	MOA
12.	Mousa Arafah	Assistant General Director	JCO
13.	Fred Howarth	U.K. Cooperative Advisor	JCO
14.	Raddi Haddad	Wadi Yabis, Branch Manager	JCO
15.	John Hyslop	Agriculture Economist	USAID/J
16.	Thomas Pearson	Capital Development	USAID/J
17.	Gordon Pierson	Program Officer	USAID/J
18.	Christopher Russell	Mission Director	USAID/J
19.	Fuad Qushair	Program Advisor	USAID/J
20.	Allen Stevens	Horticulturist	U. of Cal.
21.	Juliette Batshon	Secretary	ACC
22.	Lewis Edwin Clark	Credit Advisor/Finance	AID/W
23.	Fred R. Marti	Agricultural Economist	
24.	Carol Steel	Assistant Program Officer	USAID/J

ANNEX 1

ADMINISTRATION AGREEMENT

This Administration Agreement executed this _____ day of _____ 1977 by and between the Jordan Valley Authority (JVA) and the Agricultural Credit Corporation (ACC) which are established by and function under the laws of the Hashemite Kingdom of Jordan, witnesseth that

Whereas the Hashemite Kingdom of Jordan, acting through the JVA, has entered into a Loan Agreement with the United States of America, acting through the Agency for International Development (AID), pursuant to which the JVA will borrow up to US. \$8,000,000 to be used to finance the foreign exchange costs of goods and services required for the sprinkler irrigation project and for credit for farmers in the Jordan Valley to purchase such sprinkler irrigation equipment, and, whereas the ACC will perform administrative services for the JVA under this Administration Agreement.

Now, therefore, the JVA and the ACC (hereinafter the Administrator) hereby agree as follows.

ARTICLE I

Description of Project

SECTION 1.01. The Project.

The Project consists of the procurement and on-farm installation of portable on-farm sprinkler equipment for use in four irrigation areas covering 93,100 dunums (9,310 Hectares) in the Jordan Valley: East Ghor Canal Extension, (AID Loan 278-H-009); Zarqa Triangle, (AID Loan 278-T-011); the North East Ghor, a project

assisted by the International Development Association (IDA); and Hisban-Kafrein project assisted by the Kreditanstalt fur Wiederaufbau (KFW).

In all four areas, construction is underway on fixed water delivery systems which will provide water to individual farms. The materials to be procured include portable pipes, filters, gauges, couplers, valves, fittings and sprinkler heads to be distributed to farmers in the areas described above. The JVA will receive, store, manage and distribute the equipment to farm owners or tenants approved by the Jordan Valley Authority as eligible recipients following the execution of credit or cash sale agreements between the Agriculture Credit Corporation and eligible recipients.

ARTICLE II

Duties of the Administrator

SECTION 2.01. Establishment of Accounts

The Administrator will cause to be established the following account.

A non-interest-bearing special account on behalf of the JVA, into which the Administrator will cause to be deposited:

- A. The proceeds of that portion of the loan funds, disbursed to JVA pursuant to Section 7.02 of the Loan Agreement between JVA and AID, and
- B. Sprinkler loan repayments received by the Administrator.
- C. Cash payments received from farmers as partial or full purchase price of sprinkler equipment.

SECTION 2.02. Books and Records

The Administrator will keep books and records relating to his obligations under this Agreement in such form and manner as will disclose at all times:

- (i) The amount of payments due and made on the sprinkler loans;
- (ii) The application of payments pursuant to Section 2.06;
- (iii) The amount of Administrator's compensation pursuant to Section 3.01; and
- (iv) The discharge by the Administrator of its other obligations under this Agreement, including records for identification of loan recipients tenure status, i.e., landowner, tenant or share cropper.

At such times as the JVA or AID may reasonably request, the Administrator will grant the requesting party access to the books and records specified in the preceding sentence.

SECTION 2.03. Loan Application and Approved Process

- A. JVA will determine the eligibility of applicants for assistance under this program.

An eligible applicant may pay the full purchase price of the sprinkler equipment from his own resources to ACC at the time of delivery of the equipment. JVA will provide the Administrator with the names of farmers who are eligible for assistance under this project, and who desire credit.

- B. In the process of determining an individual's eligibility,

JVA will develop the following information:

- (i) Evidence of farm ownership by the recipient in the Jordan Valley, such as a title deed, or a certification by JVA of its intent to allocate or sell or to permit the sale of, a specific farm unit to the recipient and a statement of its value.
- (ii) Evidence of tenure arrangements, in the case of non-land owners, of not less than 10 years duration approved by JVA.
- (iii) Detailed specifications of the equipment prescribed for the individual farm unit and a statement of value.

C. Upon receipt of the documentation and certification of eligibility for credit, the Administrator will prepare loan documents for the obligation to JVA, establish a loan account for the borrower, and perform the following actions:

- (i) Have the credit documents executed by the borrower; (1)
- (ii) Explain to the borrower the terms and conditions, and his right and obligations under the loan contract, including:
 - a) The term of the loan and the repayment schedule of annual instalments,
 - b) The application of repayments first to accrued interest and then to principal,
 - c) After payment of interest then due, the borrower may repay, without penalty, all or any part of the

(1) "Borrower" as used herein shall mean the recipient of sprinkler equipment under a credit arrangement with ACC.

outstanding principal.

- (iii) Issue to the borrower an appropriate Order Form for presentation at the JVA warehouse for delivery of the sprinkler equipment.

SECTION 2.04. Making and Servicing Sprinkler Loans

- A. Interest on sprinkler loans will be six percent (6%) per annum.
- B. The borrower may choose one of four repayment schedules.
 - 1. Escalating payment
 - 2. Level payment
 - 3. Simple interest calculation payment
 - 4. Decreasing payment

A detailed table of the repayment plan selected will be provided each borrower.

- C. Sprinkler loans may not exceed 100% of the cost to the borrower of the prescribed sprinkler equipment.
- D. The Administrator may require additional security in special cases, but in no case may additional security be required that may prevent a farmer from receiving sprinkler equipment under the credit arrangements outlined herein.
- E. The Administrator will provide to the JVA a Certificate testifying to the closing of the loan within five (5) days of such closing. This certificate will indicate the name of the borrower, the amount of the borrower's

loan, the terms and conditions of the loan, and such other pertinent information as may be required under the Loan Agreement between the JVA and AID.

- F. Repayments will be collected by ACC and deposited to the Special Account for the benefit of JVA.
- G. ACC will notify JVA of any accounts that become delinquent for more than sixty (60) days.
- H. Servicing actions on delinquent and defaulted loans will be prescribed by JVA.

SECTION 2.05. Sprinkler Loan Documents

The Administrator will hold all sprinkler loan documents in trust for JVA.

SECTION 2.06. Collection and Application of Payments

The Administrator shall collect, receive, hold and deposit all principal payments, principal prepayments (made in accordance with the terms of the loans), interest payments and all other amounts paid from time to time under all loans held by the Administrator under this agreement to the special account established pursuant to Section 2.01. The Administrator, in so doing, shall act for the benefit of the JVA. On the last business day of the twelfth calendar month, following the date of the first loan under this agreement and semi-annually thereafter, the Administrator shall apply the amount received in the following order of priority:

- (i) Withdraw for the account of the Administrator an amount equal to the fee prescribed in Chapter III, Section 3.01.
- (ii) Pay to or on behalf of JVA the remaining amount, but not to exceed the amount of the semi-annual instalment due AID except that during the early years of the loan any amounts that JVA may have advanced for AID instalment payments should be re-imbursed from funds available in the special account.

The use of the funds remaining in the special account will be prescribed by an agreement between JVA and AID reflecting conditions and needs at the time repayment amounts have been accumulated in the account.

SECTION 2.07. Reports by Administrator

The Administrator shall submit reports to the JVA concerning the finances of the Project and the account established under Section 2.01, no less frequently than once each year and more frequently than once each month as the JVA shall deem necessary.

SECTION 2.08. Branch Facilities

The Administrator will maintain suitable branch facilities in the Jordan Valley to ensure that the borrowers are adequately served. In this context, the term "Suitable Facilities" is defined at the minimum as a fully staffed mobile branch.

ARTICLE III

SECTION 3.01. Compensation

The Administrator shall be entitled to compensation to be paid from the account of the JVA established pursuant to Section 2.01.

The compensation shall not exceed an amount equal to _____ of the total collections of interest payments from borrowers, deposited to the JVA account during each semi-annual period as defined in Section 2.06.

ARTICLE IV

SECTION 4.01. Amendments

This agreement may be amended at any time by mutual agreement of the parties thereto.

SECTION 4.02. Termination

This agreement may be terminated by either party by giving written notice to the other party 60 days before such termination date.

SECTION 4.03. Automatic Termination

This agreement shall remain in force and effect for a period of ten years from date of execution, unless terminated pursuant to Section 4.02 above.

AGRICULTURAL CREDIT CORPORATION

JORDAN VALLEY AUTHORITY

By _____

By _____

Title _____

Title _____

ANNEX 2

- I. Title - Agriculture Credit Advisor
- II. Assignment - Assist the Jordan Valley Farmers Association (JVFA) in initiating a farmer seasonal credit service through its Area Development units, organizational structure to its members.
- III. Tour - Beginning 4th quarter Cy 77.
- IV. Background - The JVFA Law - 1974, authorizes the organization of farmers in the Valley to engage in various services including the extension of credit to its members for their benefit.

The Association plans to initiate its activities and service programs with the implementation of a seasonal loan and agricultural supply (advance in kind) service. Loan capital will be provided by and through ACC, which will administer the lending program.

The Jordan Valley Authority (JVA) has major responsibility for planning, execution and financing of matters relating to the development of agriculture in the Jordan Valley. Its plan provides for the development of an autonomous organization of farmers for their active participation in implementing government policy and in the provision of production and marketing service to its member.

ACC is a semi-autonomous institution of the Government that is the principal source of institutional credit -- seasonal, medium and long-term -- to Jordanian farmers. ACC manages special credit programs for the benefit of farmers in the Valley, which is rapidly developing irrigation farming.

The Advisor would work with JVFA staff in initiating and developing its capability in servicing the needs of the Association member and training JVFA staff in sound seasonal loan-making, supervising and servicing procedures and practices. ACC will be the agency through which loan capital will be supplied.

In developing lending practices and procedures, the Advisor will relate to JVA and its staff in coordinating JVFA operation within the policy framework of the authority. The Advisor will

also utilize the experience and observe the guidelines of ACC as the Central Agriculture Lending Agency. Coordinating the contribution of the various resource agencies that have a role in the Valley development will be an important aspect of this assignment.

V. Qualifications

- This technician should have substantial background of experience in supervised credit programs at the farm level. Experience in an irrigated vegetable and fruit producing area would be desirable. Some experience in agricultural credit in developing countries would be helpful.

He should be capable of communicating effectively with farmers, association members, agricultural credit workers and officials of credit and development institutions. An understanding of cooperative business is important. He should be adaptable to working in a warm climate.

ANNEX 3

- I. Title - Agriculturist - Development finance planning.
- II. Tour - Six months: A.S.A.P.
- III. Background - Improved irrigation facilities are being developed and a moderate land reform program is in operation. The Jordan Valley accounts for about 85% of the country's irrigated land. "It is the focal point of *far* large public investment in agriculture."⁽¹⁾ Other international donor organizations are providing assistance to various aspects of overall development in the Valley. "There are 42,000 Ha of land capable of supporting a program of sustained irrigated agriculture."⁽²⁾
- IV. Assignment - A. Assist in assessing and estimating aggregate agricultural credit needs in the Valley.
1. Seasonal - crop production.
 2. Medium term, i.e. land development, equipment.
 3. Long-term, i.e. major land development, buildings, purchase of land.
 4. Loans to local farmer societies, i.e. warehouses, agricultural supply inventory, agricultural produce marketing capital, tools and equipment inventory.
- B. Assist in establishing, revising, adapting policies and procedures for extending credit for the different purposes and terms.
- C. Assist in design of a report format for use by international lending agencies in assessing capital requirements and considering loan commitments for Jordan Valley agricultural development.
- V. Qualification - This technician will assist and advise JVC in design of the scope, procedure and conduct of a study to estimate total credit needs by categories for the development of Jordan Valley

(1) Agro-Economic Aspects of Tenancy in the East Jordan Valley Royal Scientific Society - 1975.

(2) AID Project Paper - Jordan Sprinkler Irrigation - 1976.

agricultural resources for optimum production. This includes capital for the development of effective agricultural supply and marketing services.

He should be experienced in agricultural program planning, management of agriculture credit and design of agricultural supply and products marketing structures. Experience in developing countries would be highly desirable. An individual with substantial experience as chief of a department of program planning of a successful regional agricultural cooperative or with experience as a high ranking officer in a Regional F.C.A. institution, which area includes irrigation farming, should embrace the experience well-suited for this assignment.