

Curriculum Vitae

Personal Data

Name : Eng. Tawfig Z. N. Al Ja'afreh

Data of birth : 15/8/1953

Nationality : Jordanian

Status : Married

Qualification

- 1- Agricultural Diploma in Forest Instate/ Leticia – Syria/1976
- 2- B.A in Civil Engineering/ Lamar University/1983
- 3- Master of Science in Water Resources Technology/ Birmingham University /U.K/1990

Experience

- 1- work as a director General of Agricultural Credit corporation (ACC) since 2004 -till now-
- 2- Worked in defferent position at the (MWI) Ministry of Water & Irrigation) from 1983-2004. the last position was Secretary General Asst. for finance & Contracting.
- 3- Chairman of Finanal Accounting System (FAS) at (MWI)

Membership

- 1- Member of Jordan Engineering Assioation
- 2- Associated member of American Engineer association
- 3- Member of International Arbitration committee
- 4- Debuty chair board of Agricultural Credit Corporation (ACC)
- 5- Head of the board for Jordan fertilizer company
- 6- Member of excutive committee of NENARACA
- 7- Member of the high committee of Jordan Alliance to end hunger



Near East North Africa Regional Agricultural Credit
Association (NENARACA) ✓

**A working paper on
The Agricultural Credit Corporation's role in tackling the
environmental problems in Jordan**

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Abstract

Jordan has an area of about 89,000 sq. kilo meters, and a population of million 5.6. The 2006 per capita income of the GDP, at market price, comes to JD 1805 (US\$ 2545). The Government attached special importance of making finance available to the agricultural sector. Therefore, it established, in 1959, the Agricultural Credit Corporation (ACC) with the goal of strengthening and developing agriculture through giving loans of different kinds for various agricultural purposes.

Jordan faces general environmental problems, especially in agriculture, such as drought, because: 91% of its area is dry desert; its cultivable area is small, making only 3% of its overall area; exhaustion of natural pastures; misuse of land; low productivity of land; diminishment of forests area; fragmentation of ownership of agricultural land; excessive drawing of underground water; decrease of wells productivity; improper use of inputs; and scarcity of water resources.

The Corporation, in collaboration with the concerned Ministries, participated in alleviating, as much as possible, the environmental problems in Jordan through encouraging farmers to drill artesian (tube) water wells at the marginal areas, plant fruit trees and vegetables in large areas of land, build support walls and terraces. Additionally, it has a policy of consolidating land ownership, protecting pastures, and building animal pens outside the municipal limits.

The Corporation, in collaboration with the concerned Ministries, encourages farmers to drill cisterns for collecting rain water to use for supplementary irrigation and for watering animals. It also finances modern technologies for rationalizing water use for irrigation. Moreover, the Corporation gives operational loans to cattle raisers during drought years to enable them to manage aridity risks, reduce losses, and protect pastures.

The Corporation took part in financing most of the poultry projects established in accordance with approved technical specifications, encouraging farmers to substitute chemical fertilizer with organic manure, and financing modern environment-friendly olive oil presses.

The Corporation advises the farmers on the optimum capital use and use of the proper varieties of crops to enhance farmer access to its credit. It provides the farmers with educational publications, accepts substitutes for collaterals, and applies differential rates of interest. The Corporation's geographical spread-out, along with these other factors, contributed in remedying part of the environmental problems in Jordan.

Executive Summary

Jordan has an area of about 89,000 sq. kilo meters, and a population of million 5.6. The 2006 per capita income of the GDP, at market price, comes to JD 1805 (US\$ 2545). Based on its economic, social, and environmental dimensions, the agricultural sector in Jordan is considered one of the basic production sectors in the national economy. It is further seen as a generator of activities in other economic sectors, and as the capital that serves as the prime promoter of development. Agricultural credit plays a distinct role in agricultural development. Hence, making the necessary finance available for the agricultural sector was given special attention. So, the Agricultural Credit Corporation (ACC) was founded in 1959 with the goal of participating in the support and development of agriculture, raising the farmers' standards of living through granting various kinds of loans with different terms and for different agricultural purposes. During the period from 1960 to 2006 the Corporation issued loans totaling of JD million 374 to 189,000 farmer borrowers. These loans were granted for use for the reclamation of irrigated and un-irrigated land, development and promotion of animal and poultry resources, financing the mechanization of agriculture and food processing, and financing the purchase of plant and animal production inputs.

The environment in Jordan is attended by challenges and general problems that perhaps are not generally different from those in adjacent countries, especially in reference to the agricultural field. Those can be highlighted as follows:

- 1) Drought, which is related to land resources. Statistics show that the rainfall level is low, and that years of drought are very common. 91% of Jordan's area is dry desert that has a yearly rain fall rate of less than 200 mm. Dry weather is predominant, and it impedes horizontal expansion of agricultural production, exposing land resources to detrimental elements, especially drought.
- 2) Limited agricultural land. The area of cultivated land in Jordan is 2.5 million donum, which constitutes 29% of the cultivable land, 3% of Jordan's overall area.
- 3) Soil erosion: erosion, which results from high-velocity winds and rain, land sloping, land bareness, and improper agricultural methods, deprives coming generations of one of important resources.
- 4) Exhaustion of natural pastures: This is a predominant phenomenon in Jordan, which consists of excessive and premature grazing, frequent plowing, and cutting shrubs for use for firewood.
- 5) Low productivity of most pasture areas in Jordan: The area of the desert pastures, where the yearly rainfall rate is no more than 100 mm, is 60 million donum, which constitutes 67% of Jordan's total area. The productivity of these pastures is very low, due to low rate of rainfall.
- 6) The dwindling of the forest areas: The total area of forests in Jordan has shrunk to no more than 1% of Jordan's total area, which is attributed to many factors, such as forest fires, excessive exploitation, conversion of forests to residential and public facilities areas, and contamination caused by dust, factories and vehicles.

- 7) Fragmentation of agricultural land ownership, which renders the land economically unviable. The number of ownerships increased from 51,000 in 1975 to 93,000 in 1997, thereby negatively affecting the environment in Jordan.
- 8) Excessive drawing of underground water increased from 79 million cubic meter in 1995 to 200 million cubic meters in 2004, thereby lowering the underground water level, lowering water wells productivity and worsening the quality of water.
- 9) Misuse of agricultural inputs. Use of fertilizer, insecticide, plastic debris, and agricultural detritus all contaminate the environment and are detrimental to the animal resources and to human health.
- 10) Weather conditions, such as the fluctuations of rainfall, winds, frost, and other uncontrollable elements generate problems that extensively affect the agricultural sector, intensify the problem of exhaustion of plant covering and increase drought impact that result from disorganization of grazing, an increase in soil erosion, failure to use the kinds of plants suitable for land that endure aridity, as well as failure to use proper harvesting methods and means of stabilizing the soil in sloping areas.
- 11) Scarcity of water resources. Dependence for water is mainly on rainfall which is low and fluctuating with 85% of it exposed to evaporation. Rates of population growth and the rise in demand for water, whose quantity is limited to start with, complicated the situation and generated a continuous drain on the water sources so much that the yearly per capita share of water in Jordan is 170 cubic meters compared to the water-requirement line of 500 cubic meters per year.

Measures used by the ACC for tackling the environmental problems

1) Combating drought:

- The Corporation financed the drilling and agricultural exploitation of tube wells at the marginal areas. A total of 700 artesian tube wells have been drilled; upward of 200,000 donums of land have been cultivated with fruit trees and vegetables; high areas of land have been graded, and provided with support walls. This enhanced the surrounding environment, protected agricultural production by preventing soil erosion and maintained the topography.
- The Corporation participated in tackling the problem of fragmentation of agricultural land ownership, correcting the defects in the structure of land ownership in order to optimize productivity, exploit fallow land and make it productive, and organize ownership based on economical size of land possessions. In 2007, the Corporation increased the loan size for land consolidation from JD 5,000 up to JD 10,000 for un-irrigated land and up to JD 30,000 for irrigated land.
- The Corporation encourages financing projects that, using minimum amounts of water required by the land in question, produce products that are in demand at the market. It also provides finance to artesian wells owners for putting in drip irrigation networks, instead of surface irrigation, in order to preserve water and to raise the efficiency of using it, reduce evaporation, and retain soil characteristics. The Corporation further finances the use of sprinkler and central irrigation systems for grain-growing projects.
- The Corporation encourages the financing of animal-raising projects, including

and the Ministry of Environment. It encouraged farmers to substitute chemicals that pose public health and environmental risks with manure and organic fertilizers to provide biological diversity through wholesome organism and plant covering. The Corporation, in collaboration with the Ministry of Agriculture, advises the farmers in the Jordan Valley, the majority of whom is borrowers, on combating flies. . The Corporation contributed to the construction of more than 50% of Jordan's 110 olive presses. It also participated in increasing the number of production lines in the old presses, as well as replacing modern presses for old low productivity ones that do not meet safety and health and environmental standards. The modern presses operate as part of a proper system that collect remnants of pressed olive for sale to industries to process and use for making soap and organic fertilizer.

7) The Corporation does not only assess loan amount needed to implement agricultural projects, but also advises the farmers in optimum use of the available capital which is one of the limited resources in Jordan. The Corporation employs agriculturists specialized in plant and animal production, soil, water resources, environment, nutrition, and plant protection. These specialists play an effective role in advising the farmers concerning selecting the varieties suitable for each area of land, agricultural methods, problem solving, as well as providing the farmers with information, including educational publications put out by the Corporation.

The Corporation signed a contract with the Agricultural Syndicate for training agricultural graduates, who seek jobs, for a fixed period. More than 100 agriculturists in various disciplines enrolled and are receiving on-the-job training. Evaluation results indicate that these trainees, along with their Corporation's employee colleagues provided the farmers with advice on all technical and environmental aspects.

8) Other actions.

The Corporation encourages farmers to have easy access to its credit. To this end, it resorted to simplifying the collaterals requirements, accepting personal guarantees in lieu of land mortgage, disparate rates of interest, computation of interest rates based on the simple interest rule, and the geographical spread of the Corporation. This brought about an increase in the number of customers, whose yearly rate exceeds 65%, and encouraged the establishment of agricultural projects that contributed, in one way or the other, to solving some of the environmental problems in Jordan .

building the necessary pens (enclosures and semi-enclosures) outside the municipal limits, keeping in mind that there is apprehension about animal-raising in open areas on natural pastures during drought periods and knowing the excessive and premature grazing done by most animal raisers in Jordan.

- The Corporation granted accumulative loans totaling JD 55 millions to 11,000 borrowers. It also supervises and monitors the building of animal pens financed by the Corporation, in order to ensure compliance with technical specifications of the Ministry of Environment.

2) Water storage.

The Corporation provided farmers in the rural and desert areas with loans to build 55-cubic-meter storage tanks and rain water storage wells to use for supplemental irrigation, for watering cattle, for the protection and preservation of soil, and for increasing agricultural production. This is done in line with Jordan's water strategy. 10,000 borrowers received loans totaling JD 15 million to finance the building of water storages with an estimated total capacity of about one million cubic meters per year.

3) Financing the installation of greenhouses (glass and plastic houses).

The Corporation played an evident role in financing these projects which were started in the Jordan Valley area and have spread throughout the entire Jordan. There are about 35,000 plastic greenhouses in Jordan, 70% of them located in the Jordan valley area which has comparative advantage worldwide for the production of vegetables and fruits. The Corporation financed more than 60% of these projects. Their products are of good quality with minimum contamination; withstand weather changes; have high return per cubic meter of water compared to exposed (non-greenhouse) agriculture; allow for full disease combating and 200% increase in production, thereby meeting the vegetable needs of local market with exporting the excess production to external markets.

4) Encouraging farmers to use modern irrigation technology.

Traditional irrigation systems for 80% of the cultivated land in the Jordan Valley have been replaced by modern systems, particularly drip systems, thereby improving water use efficiency, reducing water squandering and losses, and reflecting positively on the limited water resources in Jordan.

5) Remedy of drought.

The Corporation plays a prominent role in giving operational loans to cattle raisers to enable them to buy the necessary fodder for their cattle during years of drought. At the onset of drought period, the Corporation rations out (issues sparingly) loans for sheep-raising, because under such harsh conditions, the number of sheep must be reduced, or stabilized, rather than increased.

During 1999 and 2000, the Corporation gave loans totaling JD million 20 to more than 8,800 ranchers to enable them to manage drought risks, minimize losses, protect and manage pastures, hold down demand on pastures, and hold steady the number and productivity of sheep. Also, the Corporation reschedules loans due from cattle-raisers during drought years.

6) Cleanliness of the environment.

The Corporation participated in financing more than 90% of Jordan's poultry projects in accordance with technical specifications determined by the Ministry of Municipal Affairs