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UNITED ARAB EMIRATES

AGRICULTURAL DEVELOPMENT REVIEWED

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[Text] Although the activity of the agricultural and fishing sector in the United Arab Emirates is extremely slight compared to the rest of the economic sectors, since it does not produce more than 0.9 percent of total commercial production, interest in it has outweighed its economic importance, and the thoughts of those concerned have turned to the social and political aspects pertaining to it. Working on the land is a vital part of the concept of establishing a nation, and local food security depends on local agricultural products.

The fact is that the emirates' geographical position and soil and climate conditions limit aspirations, at least for the time being. The area of land originally good for cultivation does not exceed 60,000 hectares; moreover, the entire region lies within the region of the tropical, desert climate of the Arabian peninsula where the average rainfall does not exceed 10 mm per year, and the soils in most areas consist of sand dunes and sandy ground, and in fewer areas of stony ground, sand, and alluvial deposits. Moreover, the temperature varies greatly between summer and winter, and night and day, though on the whole the weather is extremely hot in relation to agriculture, since in the summer the temperature gets up to 46 degrees Centigrade, and in winter it only rarely falls below 10 degrees. Add to that the fact that the meager rainy season is characterized by its short duration, for almost all the rain falls within the period between November and February.

These are tge exemplary problems that beset agricultural in desert countries, and it might be impossible to overcome them, were it not for the availability of cheap solar energy. It can be brought under control for wide-scale use in agriculture, whether for purposes of desalinating water, pumping it, or setting up appropriate air conditioning systems on lands covered with plastic tents. These great hopes are brought on by the fact that using solar energy for agricultural purposes is something that has been frequently done in more than one Asian and African country. Its uses will expand little by little in various fields, and it will become economically cheaper and technologically easier with the passage of time. Solar energy appears to

be highly appropriate for use in agriculture in countries such as the United Arab Emirates that lie within the belt where the sun's rays are strong almost throughout the year. Therefore, equipping and preparing Arab scientific and technical cadres today for a task that is anticipated tomorrow, the establishment of solar energy installations that will have various uses in the countryside, is considered to be a step at the core of agricultural development plans.

Groundwork and Bases for the Future

In any case, it can be said that in previous years, the Emirates have planned broad measures in the area of establishing a good groundwork for agricultural development. The country has been divided into five topographical groups: the desert lands, the al-Batinah coast, the mountain chain, the stoney plains and the oases. It has also been divided into four agricultural geographic regions which are: the eastern region, the southern region, the northern region, and the central region. The largest of these is the northern region with an area of 7,821 hectares, while the total arable area of the four regions is more than 21,554 hectares.

In fact, there has been a constant increase in cultivated areas. Between 1974 and 1978 an increase of 7,000 hectares was recorded, and that is not counting previous increases, the size of which we may be able to get an idea of if we remember that up until 1968, cultivated areas did not exceed 2,500 hectares! The expansion has also included the woodlands sector.

Measures to support and encourage the agricultural sector in the Emirates have diversified and multiplied. They do not stop at offering all sorts of loans and production requirements and digging wells and plowing for free, but they extend to distributing free agricultural land itself, and to giving attention to the marketing of crops and to buying the produce in some regions, as is the case in the al-'Ayn region. The state has also embarked on establishing a number of agricultural extension projects, such as the model farm for citrus, mango, and date production in Daba in the eastern region, project to produce and study cereals and vegetables in al-Haw'ah, and farms for dates, clover, and other things. Perhaps more important than what is in these projects is the fact that they are experimental stations in which studies are carried out, naturally, on which varieties are most suited to the environment, along with using modern machinery and equipment for irrigation, plowing, fertilization, and harvesting.

Defense Against Desertification

Great distances still lie before agricultural development. Doubtless the foremost ambition of those concerned is to cultivate the remaining areas that are in fact good for farming. That area exceeds that total area that has been cultivated so far. Perhaps the existence of the research and development foundation that we have referred to just now will be an effective factor in helping to achieve this foremost ambition.

Upon the shoulders of the concerned parties falls the critical responsibility of combatting desertification. The Arab Emirates are among the Arab states where this phenomenon represents a real danger to agricultural development. Excessive grazing in some regions has caused a complete removal of the plant cover, and the acacia and prosopis woodlands have died out, except for a few remaining in some valleys and at the feet of sand dunes, and the pastures have turned into dry desert. There are other well-known causes of desertification which are present in force in the Emirates. One of the most important is the movement of sand with the prevailing winds and its encroachment upon agricultural regions, as is the case between Abu Dhabi and al-'Ayn, around Dubayy, near al-Shariqah airport, and in the al-Khabb region. Another is the phenomenon of [soil] salinization, which in most cases results from u[illegible] saline water for irrigation. The Emirates share these phenomena with [illegible] Arab regions that are exposed to the same dangers, such as Libya, [illegible], Syria, Iraq, and Jordan. Because of that, the turning of agricultural policies towards reforestation and establishment of woodland trees in selected areas was not just a beautification activity; rather it is a defensive effort in the interest of soil fertility, and to resist the desert's assault on agricultural regions. The area of regions planted to forests must have increased a lot over the 15,000 hectares which was the area recorded up to 1979.

However, treating the problem of desertification requires other diverse measures, including control of grazing and the promotion of crop rotation, which would help to preserve the fertility of the soil, using among other things natural fertilizers that would help to improve soil structure. Perhaps the most important measure, and the most beneficial in the long run, would be to replant the best types of natural vegetation that the environment produced previously "through human effort in the beginning" and to grow it once again in areas close to cultivated areas, and thence to provide suitable conditions overall for it to grow and multiply naturally by itself.

Statistics and Research

So that this agricultural awakening may continue and advance forward, it is necessary that the basic elements of scientific research, which depend first and foremost on adequate statistical reports, be carried out. In the Gulf regions generally, there are statistics that arelacking or incomplete with respect to soils, charts of wild plants, water, and weather. Therefore, one of the most important recommendations of the seventh conference of Arab ministers of agriculture of the Gulf states and the Arabian peninsula hald in Bahrain in 1982 concerned the need to set up a network of water observation stations, and the conference's general secretariat was given the task of collecting reports, studies, and research results relating to agricultural and water projects, and of keeping them at the conference's general secretariat as in information bank. At that time, the general secretariat was also given the task of preparing an integrative study of the plan to produce improved seed of wheat, barley, corn, millet, clover, tomato, and potato crops. A special statement was issued concerning the need to get separate information about experiences, technical experts, research, and training centers and their programs.

All that requires a constant increase in agricultural development budgets, since it is evident in most cases that the amounts earmarked for agriculture does not correspond to what is earmarked for many other items in the area of expenditure and investment, even though the nutritional gap in the Emirates, as in the rest of the Arab countries, widens year after year, and the removal of food facing food-exporting states poses further dangers. While agriculture may not be a profitable investment in the short term, it is indispensible in the long run. The day will come when future generations will priase their fathers for every foot of cultivated land and every green expanse.

Special care must be given to the price policies made with respect to local agricultural production. Competition with imported agricultural produce is of course impossible, and even though the Emirates might produce a surplus of diverse vegetables during the winter, it imports more than 12,000 tons of vegetables a year "including the winter season." This subjects local products to competition that local producers cannot go up against, which frustrates producers, especially the small ones, and forces them to leave for other jobs, and in that lies a great loss to the very foundation of the efforts towards agricultural development.

Agriculture of Ra's al-Khaymah

Since agricultural production concentrates on the production of fruits and vegetables, it is necessary to work towards diversifying it, since cereals hold a pre-eminent position among crops that achieve food security.

Attention to agriculture must be directed in particular to the Emirate of Ra's al-Khaymah, which is practically a miniature bread-basket for the Emirates. It produces more than half the total production of fruits and vegetables in the state. Attention to agriculture in it is required primarily for this reason, not to mention the fact that success of an agricultural plan demands concentrating on an area in which the meaning of a large holding is embodied, including what that means in terms of ease of operation, along with benefitting from the advantages of large production.

As long as the stage is not reached in which water does not constitute an obstacle worth mentioning by means of the economical desalinization of sea water using solar energy "when it becomes cheap," underground water must be conserved and put to the best use possible. It has been seen in the past decade that there has been excessive consumption of water resources in the state, which in some places has led to the exhaustion of underground water, and in others it has caused it to run short and become saline and caused a deterioration in its quality.

Among the foundations that have been established and that still need additional effort are the following: making agricultural services generally available so that they properly reach the various sectors of farmers, the great majority of whom are illiterate and should be addressed in ways that they can understand. Finally, there is attending to the training of national technical

cadres that will see a decisive expansion such as the country has not seen before. It will not be limited just to planting areas suited to cultivation, but it will be extended to reclaiming new lands, where nobody thought a green stem could grow.

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