

AAINews

APPROPRIATE AGRICULTURE INTERNATIONAL
CO., LTD

1-2-3-403 Haramachida, Machida, Tokyo, 194-0013 JAPAN.

TEL/FAX:+81-42-725-6250 Email: aai@koushu.co.jp

Tales of Dates

When I ask people in UAE and Oman, what makes a good desert crop, the most common response is "the date". As you know, dates have long been the staple food for desert dwellers. Where there is an oasis, there are dates. I heard that there has been much fighting for the rights over oases in the past. Indeed, dates are highly adapted to arid conditions. Dates hate moisture during the pollination period, and can be grown with highly saline water. In some places the irrigation water for dates contains over 7,000 ppm of salt. In addition, date palm leaves grow side ways, creating shade that makes it possible to grow grass, fruits and vegetables beneath the palms. Date fruits are very high in calories and easy to preserve. They can be carried around as they are for over a year.

Although it might seem that date palms grow naturally in oases and that it is easy to cultivate the fruits, in reality rather a lot of work is involved. The most important thing in date palm cultivation is pollination. Around April, at souks in cities like Muscat, one can find something that looks rather like a rice scoop or ladle. On closer examination, one can see a split at the tip from which many small fruit-like substance protrude. Each is actually a stamen. In order to produce good quality dates, it is necessary to have good pollen and a good female plant. If pollination is unsuccessful, trees do not bear large fruits (as shown in the left hand photograph down) and therefore have no commercial value. Even after pollination, there is no rest for the date farmer. From May to June, fruits grow at great speed. Sometimes, as much as 40kg of fruits are produced on one branch and it is necessary to give support to the branch so that it won't break. Harvest time is from July to October, although the precise months differ from variety to variety. The busiest time is towards the end of July. After harvesting, people are still busy, cutting off old branches and attending to the stems.

All these things have to be done to produce high-quality dates. But at the same time, date varieties (of which there are some hundreds) are important. To grow saplings, lateral buds are cut and planted individually, and those which thrive, are sold in the markets. Prices vary substantially from sapling to sapling. Here in Oman, one sapling can cost anything from 1,500 yen to 12,000 yen. So, why don't people grow saplings from seeds? When we eat dates sold in markets and spit out their seeds, they easily germinate. However, as stated above, there are male and female dates and it is difficult to ascertain the sex of saplings until they have grown to a reasonably large size. In date palm farms, the ratio of male to female palms is one to ten. Three to four years after saplings are planted they start to bear fruits, and it takes a total of five years before fruits can be good enough to go on the market.

Dates are usually sold at special shops in souks. There are domestic varieties, although domestic varieties in Oman are said to not be of particularly high quality. There are also imported varieties from Saudi (these are of the highest quality), Iran, Iraq and Tunisia. Dates are not consumed solely by humans. Racing camels are also fed with dates to supplement their nutrition. I have also read that some dates are exported to Japan and used as an ingredient for the sauce that accompanies tonkatsu dishes.

(Zaitu in Salalah)



**Date fruits after pollination
(the dates on the right have not been pollinated)**



Date stamens used for pollination

New series: Past Technical Assistance for the Gulf States and Future Challenges

Part 1: Technical assistance to the Gulf States in the fields of greening and agriculture

Since 1976, AAI has been both directly and indirectly involved in technical cooperation projects related to arid zone agriculture and in the greening of deserts in Gulf States such as UAE and Oman. AAI staff participated directly as JICA experts in experimental farm projects using asphalt moisture barrier, and in the joint research project conducted by Shizuoka University and UAE University. We have also had chances to conduct fact finding visits to projects such as JICA's aquaculture project, the sandponics model farm project set up by Kashima Oil Company Ltd. and the afforestation site run by Taiki Corporation. In 1985, we took part in the landscaping and greening project in the suburbs of Dubai. In this project, AAI planned, designed and established tree nurseries and worked on seedling production. In addition, AAI managed the project itself, being in charge of logistical and personnel administration. Starting 1996, a long-term JICA expert seconded by AAI has been working in Salalah, Oman, offering technical cooperation such as guidance to local technicians on crop production. These activities are summarised in the table below.

Project Name	A i m s	Execution period	Executing bodies	Local Counterpart
Experimental Station Desert Development Institute, Japan	Application test of desert greening devices, in particular, crop field experiments on effects of asphalt moisture barrier	1976-1980	DDIJ	Department of Agriculture, Abu Dhabi
Aquaculture Project	Technical cooperation regarding development and dissemination of aquaculture technologies at the Marine Resources Development Center	1980-1999	JICA	Ministry of Agriculture, UAE
Kashima-Abu Dhabi Farm	Establishment, operation and management of a commercial model farm using sandponics	1980-1990	Kashima Oil Company Ltd.	Department of Agriculture, Abu Dhabi
Afforestation Project	Afforestation project within the framework of the government's desert greening program	1980-1990	Taiki Corporation	Department of Forestry, Abu Dhabi
Landscaping and Desert Greening Project	Afforestation project within the framework of the government's desert greening program	1985-	AAI Company Ltd.	Water Department, Dubai
Joint Study Project on Improvement of Arid Land Agriculture	Basic research into sand dune fixation, water saving, and increasing crop production with saline water irrigation	1985-1998	JICA / Faculty of Agriculture, Shizuoka University	UAE University
Nejd Agricultural Research Station	Guidance and advice on crop production in arid regions at the Nejd Agricultural Research Station	1996-	JICA	Ministry of Agriculture and Fisheries, Oman

In Japan, AAI participated as a member of the advisory board at the Symposium on the Greening of the G.C.C. Countries that was held in autumn 1992. We were able to hear reports on greening efforts conducted in the Gulf nations, and also the Symposium offered a precious opportunity to examine, with the participants from the gulf states, the future prospects of an extremely wide range of fields including greening technologies and water supply technologies

In this new series, we would like to discuss the ideal technical cooperation in the Gulf States based on our long experience. For this, we will focus on some projects conducted in UAE. We will analyze and evaluate how the projects started, how they were executed, and how they have fared after being transferred to the local authorities concerned. Moreover, we would like to examine ideal methods of technical cooperation in this area, making comparisons with assistance programs implemented by western and international organisations. Given the fact that the Gulf states are increasingly being removed from the list of nations targeted for assistance, this may be the time to consider how future activities in the region should be conducted

New series: Agriculture in the Dhofar region, Oman

Part 1: Dhofar region

We have printed several reports on Dhofar in AAI News before. Starting this issue, we are going to present five reports on agriculture in the Dhofar area. The planned contents are as follows: 1. The characteristics of topography, climate and regional agriculture and livestock farming. 2. Agriculture around Salalah. 3. Livestock farming in the Jabal region. 4. Nomadism in Nejd and modern agriculture introduced recently. 5. Problems and challenges facing agriculture in Dhofar in the future and my personal view of the future.

1) Regional characteristics of Dhofar

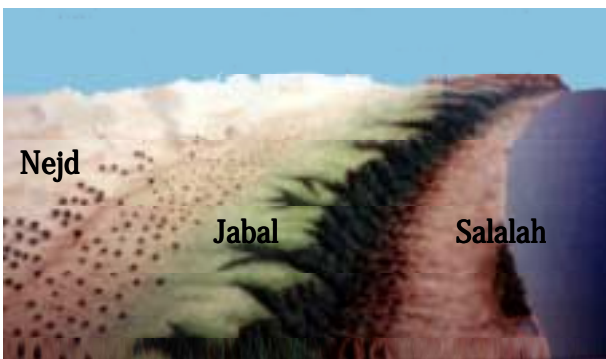
Along with the Batinah coastal region, the Dhofar region, located in the south of Oman, has long been rated as one of the best agricultural areas in the country. This is because Dhofar region, due to the influence of the July to September monsoon, has a climate unique among the surrounding areas on the tip of the Arabian Peninsula.

As indicated in the chart below, in Salalah and Jabal, temperatures decrease in summer months due to the monsoon. In Jabal, as temperatures decrease, there is a tremendous increase in rainfall. This is caused when moist winds from the Indian Ocean in the south hit Jabal and become rain. However, the monsoon effects differ radically over the mountain ranges. In the "Nejd" area behind Jabal, dried air comes over Jabal in the form of a hot wind, creating a climate with strong winds and dry, hot weather. Nejd is only about 30km away from the coast, however the climatic changes that occur from the coastal areas to Nejd vary phenomenally. As a result, different types of agriculture and livestock farming occur. These make the most of each region's natural environment.

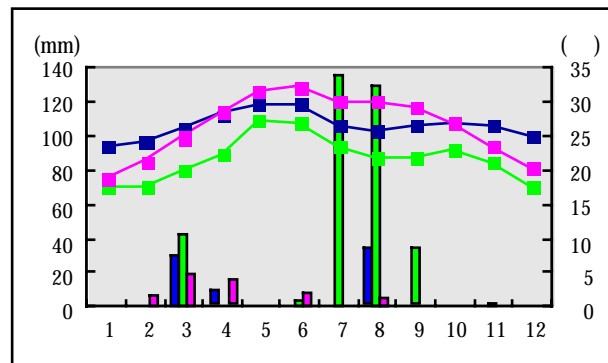
2) Regional characteristics of agriculture

- 1. Salalah coastal plain In the monsoon period, fruits such as coconuts and bananas, vegetables and grass for fodder are grown in a traditional manner, using infiltration water near the ground surface. Large-scale grass cultivation has been popular in recent years.
- 2. Mountain ranges Traditional livestock farming, mainly cows and goats, utilising wild vegetation as fodder.
- 3. Nejd area Traditional camel rearing. Large-scale grass cultivation irrigated by deep underground water has been seen in recent years.

Traditional agriculture and livestock farming have long been conducted in Salalah, Jabal and Nejd, and they have been recognized as Oman's main farming areas. However, at the same time, farming using modern methods has been promoted and has cut into the traditional farming areas. We would like to report on current conditions and various challenges for the future in the following issues.



Topography of Dhofar region



Climates of Dhofar

Rainfall (mm)

Temperature (°C)



A Sketch of Pakistan (2): Friday Market in Islamabad

In issue 6, I introduced the Souk Juma in Damascus, Syria. In this issue, let me talk about Juma Bazaar in Pakistan. "Juma" means Friday and "bazaar" means market. So, the Juma bazaar is a market held on Friday, the local holiday. (In Damascus, the permanent-looking Souk Juma seems to open on days other than Friday as well). These photographs show different views of the market in Islamabad, Pakistan. They were taken only a few minutes walk from the Holiday Inn Hotel (which used to be called the Islamabad Hotel).

Usually, this area is very quiet, but every Friday, many tented shops are erected. It is very similar to the free markets often seen on Sundays in Japan. Shops mainly sell vegetables and fruits, however, there are shops selling spices, clothes, toys and groceries. Clothes and grocery shops are set up in booths divided by concrete walls, and vegetable and fruit shops open in an adjacent empty space.

Products vary depending on the seasons. The main vegetables in the market are onions, potatoes, radishes, carrots, eggplants, cucumbers, water melons, cabbages, cauliflowers, spinach, tomatoes, okra, and chilli. Common fruits are mango, papaya, orange, lime, banana, apple, apricot and pomegranate. Occasionally, strawberries are seen, too. As for the spices which are indispensable for cooking in Pakistan, these are sold in powdered form often arranged in cone-shaped heaps as in the photographs.

Souk Juma and Juma bazaars are seen in many different areas in Islamic societies, and they function as a network of people, commodities and information, linking cities, rural areas and desert regions. Visiting such souks can yield useful information for our field surveys, since they often provide us with an insight into local culture and tradition.



Shops selling women's shawls



A cauliflower vendor



Fruits such as apples, papayas and melons are for sale



Many types of spices