

Kind of Tree-planting Activities in United Arab Emirates

Part 4: Various Trials by Forestry Department

1) Afforestation without irrigation

An experiment to quit irrigation has been carried out since 1977 at Al Khazna area located between Abu Dhabi and Al Ain where *Prosopis juliflora* were planted in 1970. Most of the trees are still alive till now, which indicates the possibility of afforestation without irrigation. Forestry Department also tested various trees in other areas and confirmed that *Prosopis cineraria*, *Acacia tortilis*, *Zizyphus spina-christi* can live without irrigation if they are more than 7 years old. They are also conducting a comparison test on frequency of irrigation.

2) Afforestation using drainage water for irrigation

Afforestation trial using drainage water for irrigation has been carried out since 1987 for a forest (200ha) next to Al Ain Sewerage Treatment Plant. Main varieties for afforestation are *P. cineraria*, *A. tortilis* and *Z. spina-christi* and the result is generally favorable. The test area is planned to be expanded in future. The drainage water is used for irrigation and quantity of water is 90 litter per tree in 4 days. The test is carried out in the area where shifting dunes are observed. The planted trees are growing better than other large scale afforestation area and function well as sand and/or wind protection forest.

3) Planting test of Jojoba (*Simmondsia chinensis*)

Planting test of Jojoba is operated in Sulaimat nursery station. Planting density is 4.0m x 1.5m with male/female tree ratio of 1:9. Drip irrigation of 20 litter/tree in 2 days is adopted. Usually Jojoba blooms in April and bears fruits in June or July. They can grow with saline water (11,000-13,000ppm), but the harvesting will be delayed for 2 to 3 years. High quality oil like cachalot oil can be obtained from Jojoba seed, and is used as a raw material for shampoo, wax, etc. Jojoba oil has a great potentiality as a material for various products.

4) Test of sand dune fixation

A test of fixing sand dune is carried out at a shifting dune area near the Al Ain airport. The drip irrigation facility is installed on the slope of the dunes and various kinds of trees are planted. Varieties used for afforestation are *Prosopis cineraria*, *Pithecellobium dulce*, *Acacia seyal*, *Tamarix* spp., *Calligonum comosum* and *Leptadenia pyrotechnica*.



Sand dune fixation trial near Al Ain airport



Planting test of Jojoba in Sulaimat