

## Plants in Arid Lands and Their Utilization (3)

### PART 3 : Alluvial Fan

An alluvial fan can be classified into three parts, the top, the center, and the end. Most area of the top and the center parts of the alluvial fan around Al Ain is located in Oman territory and the end part spreads into UAE. The surface layer of the alluvial fan is composed of gravel and its size becomes larger at mountain side. The depth of gravel layer of the center part is several meters and the quality of ground water in this area is good. All the water sources for Faraj (Qanat) around Al Ain are distributed in this central part. The size of soil particles at the end of the alluvial fan is relatively fine and the area is often covered with sand dunes. Vegetation at the top is similar to that of mountain area. *Rhazya stricta*, and *Acacia tortilis* grow at the center. *Hammada elegans* and *Prosopis cineraria* predominate over the end.

#### 1) *Rhazya stricta*



##### Characteristics:

Distributed over north-west India, Iran, and Arabian peninsula. The size of a leaf is 2-3 cm wide, 5-10 cm long. The flowers bloom from February through June.

##### Conditions of growth:

Highly drought tolerant. Growing in gravel plain. Weak against salinity and germination rate declines when soil salinity exceeds 2,500 ppm.

Use: Traditional medicine for indigestion, stomach ache, etc.



#### 2) *Prosopis cineraria*



##### Characteristics:

Distributed over arid lands in India, Pakistan and Arabian peninsula.

Compound leaf. Thorny. The root goes straight and deep into the ground.

##### Conditions of growth:

Highly drought tolerant. Growing with less than 100 mm/year of rainfall. It endures wide range of temperature, from -6 to 50 and prefers alluvial soil or sandy soil. It can grow with alkaline

soil as well.

Use: Used as firewood because it generates high calorie heat (5,000kcal/kg). Young shoots are good feed. Also used for furnitures, timbers and frames of boats.

Others: Adopted for afforestation for fixing soil.

