

TREE PLANTERS NOTE

PERFORMANCE OF SOME EXOTIC ACACIAS IN PAKISTAN

Mahmood Iqbal Sheikh*

A few years back seed of some exotic Acacias was imported for comparative trials in arid areas of Pakistan. One of the studies was laid out near Jamrud, Peshawar (av. ann. rainfall 350 mm). The soil is sandy loam, with scattered pebbles in the soil horizon as the areas has been an old bed.

One year old plants of 3 species viz. *Acacia victoriae*, *Acacia aneura* (Australia) and *A. tortilis* (Sudan) were planted in August 1979. One hand watering was given at the time of planting. 16 plants of each species were planted in one plot at 2 x 2 m, in 5 replications; 80 plants each of the three species, 240 plants in all. The study was assessed in October, 1982 with the following results:

	<i>Acacia victoriae</i>		<i>A. aneura</i>		<i>A. tortilis</i>	
	Surviving	Av. ht(m)	Surviving	Av. ht(m)	Surviving	Av. ht(m)
R ₁	3	1.90	4	1.30	8	4.00
R ₂	9	1.60	6	1.00	12	1.60
R ₃	8	2.60	10	1.00	10	2.06
R ₄	6	2.40	4	1.45	9	3.00
R ₅	9	2.00	11	1.40	10	4.80
Total	35	10.50	35	6.15	49	15.45
Average		2.10		1.23		3.09

Average survival is 44, 44 and 60% and average height is 2.10, 1.23 and 3.09 for *Acacia victoriae*, *A. aneura* and *A. tortilis* respectively. Given the edaphic and biotic factors where it is growing, the performance is quite satisfactory. *A. victoriae* has even started producing seed which was collected this year for further propagation of the species.

All the species have done quite well in Rakh Dagar Kotli (Av. ann. rainfall 250 mm). Some important characters of the species are given below:

*The author is Director General, Pakistan Forest Institute, Peshawar.

Acacia victoriae (Elegant Wattle). A dense or struggling thorny multi-stemmed glabrous shrub or tree, 1-8 m high with fairly rapid early growth. Regenerates readily from suckers and has a large root system. Flowers in September-October and mature legume can be harvested in December. Can be easily raised from seed.

The species is eaten by stock during drought and is considered a useful feed supplement. It can be used for low wind breaks and for soil protection. In Australia, it has been recorded in the driest localities with 50 mm rainfall.

Acacia aneura (Mulga). Small to large shrubs/trees upto 9 m, main stem often dominant. Major importance of the species is as a fodder plant. Grows in arid zone with 200-250 mm av. ann. rainfall and lowest on record is 60 mm.

Flowering depends on favourable climatic conditions and flowers may appear any time during the year. Can be easily raised from seed.

Acacia tortilis (a. raddiana = *A. spiracarpa*). A gregarious tree, 10-12 m high wide spreading flat topped or umbrella shaped. The species grows wild in Tunisia and Sudan and is known for drought resistance. It does however need watering for its establishment in the first year. Starts flowering and seeding in the third year.

It is a good fodder. Its gum is used in pharmaceuticals.

These are three useful introductions in the country for afforestation in low rainfall zones and may be tried by the field foresters.