

USE OF ENTIRE PLANTS/ROOT SHOOT CUTTINGS FOR WALNUT PLANTING IN MURREE HILLS

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—A note for tree planters

Introduction. Walnut (*Juglans regia*) is an important species of the Himalayan Moist Temperate Forests. Because of its high value for ornamental veneer, attempts are being made to grow it artificially. Usual methods are: planting one year old bare rooted nursery raised stock, and dibbling of seed. In the Murree Hills, dibbling of seed has been the usual method with poor results. This investigation was started to find the best method of growing walnut in that area.

The Site. This area at 2000 m ASL is on gentle to steep slope, with north eastern aspect and loamy soil. The climate is temperate. Temperature varies from below zero to 30°C. Precipitation (a total of more than 1500 mm) is both in the form of rains in monsoon, and snow in winter which stays upto April. The persisting snow for 6 months keeps the site moist which remains so till quite late in summer. The forest type in the area is the moist temperate. Blue pine (*Pinus wallichiana*) is the main species with a few scattered patches of *Cedrus deodara* and *Taxus baccata*. Broad leaved associates are: *Populus ciliata*, *Cornus* spp, *Acer ceasium*, and a few walnut trees (malformed). There is very little under-growth in the forest and wherever it is present, it mainly consists of *Viburnum continifolium*.

Method. The experiment was laid out in May, 1975 in compartment 27 of Patriata Block, Lower Topa Range in a randomised complete block design, using 30 propagules in a plot, planted or sown at a spacing of 1.5 × 1.5 metres. The treatments were as follows:

Entire plants (one year old) transplanted in polythene bags in February 1975.

Root shoot cuttings (from one year old plants) planted in polythene bags in February 1975

Direct dibbling of seed (two in one pit)

Results. Data on survival were collected in July 1975, 1976, 1977 and 1978. Following are the results:

	Percent survival (out of 120 plants)		
	Entire plant	Root shoot cutting	Seed
July 1975	95	96	66
July 1976	80	57	45
July 1977	70	59	33
July 1978	54	52	19

Thus planting of entire plants or root-shoot cuttings proved far superior to dibbling of seed.