

GOVERNMENT OF ANDHRA PRADESH
FOREST DEPARTMENT

Rc.No.3424/2018/NC-2,
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O/o the Prl Chief Conservator of Forests(HoFF)
Aranya Bhavan, Andhra Pradesh, Guntur.

Sri P.Mallikharjuna Rao, I.F.S.,
Prl Chief Conservator of Forests
(Head of Forest Force)(FAC)

CIRCULAR NO.1/2018/NC-2

Sub:- A.P. Forest Department – Neeru-Chettu – Technique for Raising
Tall Seedlings – Regarding.

Find the enclosed technique for raising tall seedlings. It is instructed to
take immediate action and to raise tall plants (more than 2 Mt. Height) for all
types of plantations.

Sd/-P.Mallikharjuna Rao
Prl.Chief Conservator of Forests
(Head of Forest Force)(FAC).

To
Distribution list "A".

Copy to Stock File / spare-2.

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S. Shamam
Superintendent 4.4.18
18/4/18

TECHNIQUE OF RAISING TALL SEEDLINGS IN 12"X 18" BAGS

Production of tall seedlings has been an area which has received considerable attention during recent years. At present it has been thought mainly for aesthetic forestry. Particularly Avenue Plantations, Greening of Urban areas, creation of parks. Planting in religious places and such other aspects.

In order to produce such tall seedlings of height, more than 2 to 2.50 Mt., special care has to be taken with regard to container, soil mixture, nursery stock etc.,. the technique for raising tall seedlings for the species *Azadirachta indica*, *Ficus religiosa*, *Ficus lacot* (Juvvi) *Ficus bengalensis*, *Ficus mysorensis*, *Neredu*, in the bags 12"x18" (H.D.P.E. Woven sacks) is as follows.

Production small bag plants for transplanting

Normally the best time for transplanting into 12"x18" bags in the month of October, for this purpose, good, healthy seedlings in poly bags of size 4"x7" are to be produced.

1. *Ficus* Species:

The seed of these species is normally available in the month of February. Fresh seed to be collected, dried and sown in primary beds or poly pot. The soil mixture for primary beds should contain 3 parts of Farm Yard manure, 2 parts of red earth and soil mixture with the same proportion should be used. The seed is to be mixed with sand (twice the quantity of seed) and spread evenly on the bed. The germination starts from 10th day and continues upto 30 to 40 days. The seedlings should be maintained for 4 to 6 weeks and when they have reached a height of 6 to 8 cm, they taken out and planted in bags of size 4"x7" care should be taken while transplanting. Bags should be profusely watered and it must be ensured that water percolates upto the bottom of the bag. Apart from using 4"x7" bags, root trainers (165 CC) are also used for transplanting. The root trainer mix used is 4:1:1 compost, vermiculite and burnt rice husk). Profuse rooting is noticed in case of root trainer.



Neem:

Fresh seed available during June are to be sown in primary beds and planted into 4"x7" bags once they attain a height of 6 to 8 Cm. Seed is also sown in root trainers of 165 CC.

Neeredu:

Same as for Neem as described.

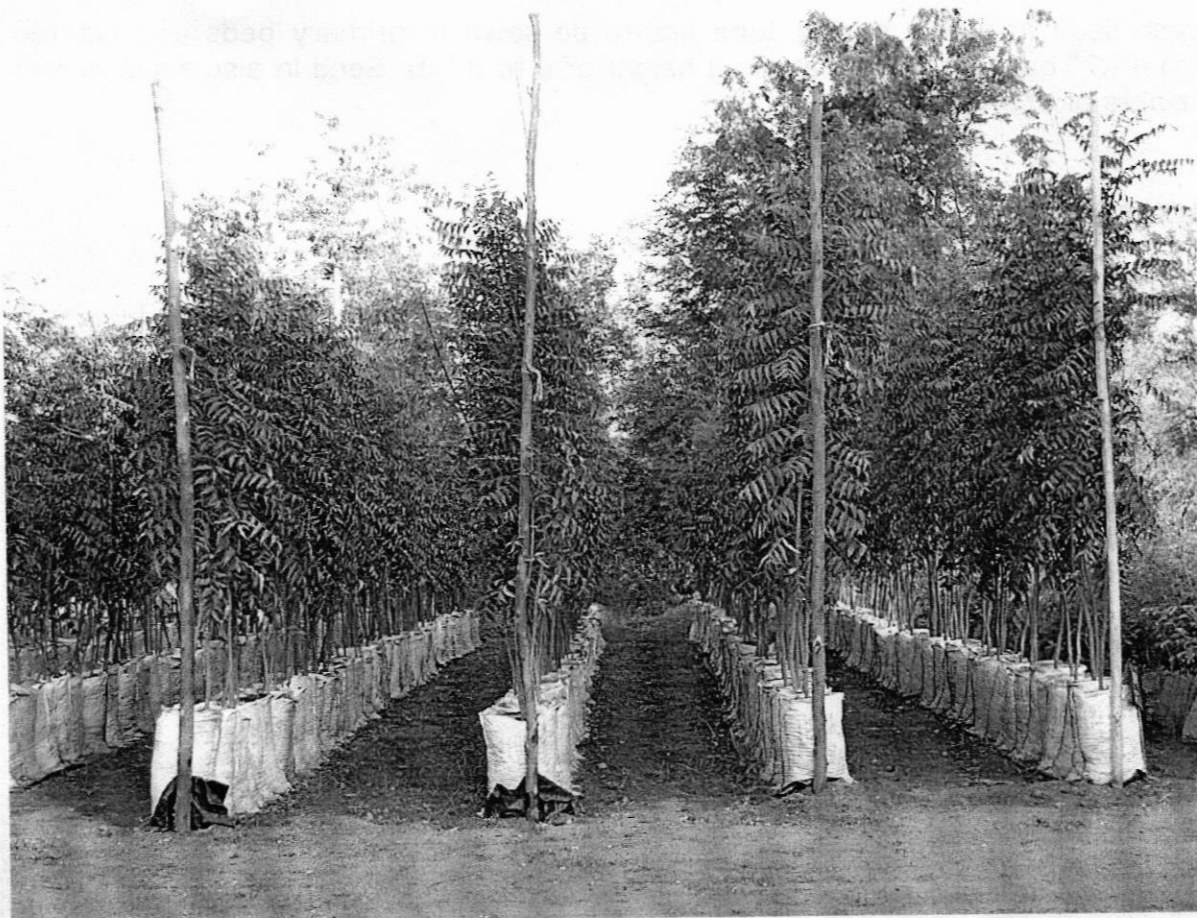


Preparation of 12"x18" bags and transplanting

Seedlings of size 5cm. to 6cm to be pricked out from primary beds into 4"x7" bags allow the seedling to attain a height of 9" in the bags (say two months).

These bag plants (4"x7") or root trainers plants are transplanted into H.D.P.E. bags of size 12" x18" filled with soil mixture of 1:1:1:1 (Red earth, tank silt, farm yard manure and sand) in the month of October. While transplanting straight healthy and good bag plants are to be selected. Leftover seedlings should not be used.

After transplanting the 4"x7" bag plants or root trainer plants into 12"x18" to H.D.P.E. bags, the bags should be arranged in single bag rows of 100 nos., or 50 nos. The spacing between the rows should be about 0.75 Mts. This will ensure good aeration.



The Process of debudding.

After the plants attain a height of 60 cm to 1 Mt., auxiliary buds start emerging. These auxiliary buds are to be removed, once they emerge and grow about 1 cm. Care is to be taken not to remove the leaf adjoining the bud. The leaves are to be kept intact.

The process of debudding (removal of auxiliary buds) should be carried out periodically at least once in 3 to 5 days. Debudding allows the auxins to flow up to terminal bud and hastens the vertical height of the plant and stem becomes stout and thick.

Stakes are to be provided to each individual plant with bamboo stakes of height 6 to 8 feet. However, horizontal bamboo splits with vertical support can be provided for each row of plants at 1 Mt., 2 Mt., heights as shown below:



Neem bag plants provided with vertical Casuarina supports and horizontal bamboo splits. Polythene sheet is spread to avoid striking of roots into the ground. Neem bag plants 3 months after transplanting.

Debudding is to be stopped once the plants reach a height of 2 to 2.5 Mt., and this allows the formation of crown. If roots are noticed striking the ground, polythene sheet may be spread below the bag plants. At this stage grading is to be done, so that good stock of plants can easily be transported to the site for planting. It takes 9 months to 1 year to grow tall bag plants in this method.

Advantages of 12" x 18" bag plants:

1. Since 12"x18" bag plants are produced by using special techniques, the seedlings are more healthy, tall and escape damage by animals.
2. In village wood lots, Avenue planting and urban forestry, if these seedlings are used, the success rate is very high.
3. Since the height of the plants is more than 2.50 Mts., they establish early and withstand long duration of drought spells and suitable for arid and semi arid areas.
4. Since the bag contains lot of fertile soil mixture, the same will help the plants to establish, even in marginal soils.
5. Number of watering can is reduced.

6. Since more inputs are given at nursery stage itself, further maintenance cost and time can be reduced, so that, more areas can be planted, in stead of spending more time in maintenance of old plantations.
7. The plants can be protected by using a vertical stake (8 feet length, 15 Cm circumference) and thorn fence (Prosopis) tied to the stake.
8. Overall, tall plants will be available in 9 months period (October-June).
9. Similar strategy can be adopted for other species.

Sd/-P.Mallikharjuna Rao
Prl.Chief Conservator of Forests
(Head of Forest Force)(FAC).

// t.c.b.o//

S. Sharani
Superintendent 9.4.18.

MP
4/4/2018