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FOREST DEPARTMENT

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Office of the Chief Conservator of  
Forests, A.P. Hyderabad.

Sri A. Ramakrishna, I.F.S.,  
Chief Conservator of Forests.

CIRCULAR NO. 6 /81.

Sub:- Forest Department- Improvement method of raising  
polythene bag seedlings of Eucalyptus-Circular  
Instructions-Issued.

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At present seedlings of Eucalyptus are being raised as bag plants using varying sizes of tabular polythene bags closed at one end, and of 150-200 gauge. The polythene bag is cut open and discarded at the time of planting the seedlings in the fields.

An improved method where a polythene sheet is used for raising Eucalyptus seedlings, appears to have been developed in Malasia in recent years. (Oral communication by Dr. Y. S. Rao, Regional Economic F.A.C. Bangkok) This method has several advantages over the conventional method. The procedure for raising seedlings under the new method is described below.

A 1000 gauge polythene strip of about 20 cms. width and of a convenient length (2-3 Meters) is laid flat on the under shade in the nursery. On this strip of polythene sheet, soil normally used for fillings the bags but with a slightly higher clay contents and adequately moistened, is spread uniformly to a thickness of about 3 cms. Seedlings of Eucalyptus raised in primary beds and ready for pricking out into bags are laid at intervals of 6-8 cms. at right angles to the length of strip with the collar of the seedling about 1 cm. inside the edge of the strip, and the entire root laid straight on the strip. The first seedling may be laid about 4-5 cms. from one end of the strip. About 2 cms. thick layer of same soil mixture then spread uniformly on the entire width of the polythene strip to cover the root of the seedling. Thereafter the strip of polythene with the soil and the seedlings laid on it, is carefully rolled like a mat from one end to another end and then tied with a string in the middle to prevent its unrolling. Thus each roll of polythene strip will contain between 25-30 seedlings in a concentric spiral. Such a rolled strip containing 25-30 seedlings (kept erect like a bag plant) could be conveniently watered as a whole, and also shifted as a whole from time to time without undue disturbance to the root system of the individual seedlings. In order that the roots of the seedlings do not strike ground, these multi-plant rolls could be shifted from place to place every 15 days as the roots start emerging from the open bottom end, which is in contact with the ground. Because the bottom end is open there is free drainage of water, thus preventing damping off and other fungal diseases of the seedlings.

After a few days under shade till the seedlings are fully established, the multi-plant bag rolls could be kept in the open and are watered and maintained like individual polythene seedlings, as per the current technique. When the seedlings are ready for planting out with the commencement of rains, (seedlings about 45 cms. tall on an average), the multi-plant bag rolls are taken to the field intact and at the planting site the rolled strip is gradually opened (unrolled) with each seedling taken out carefully with a ball of earth surrounding the root system and planted out in the



already dug pits. Thus transport of the bag culture also becomes easy with a number of seedlings taken together with least disturbance to the seedling root systems and thus minimising cost on transport also.

After all the seedlings in the multi-plant roll are planted out, the polythene strip is cleaned of all left over soil, rolled up, and taken back to the nursery and kept in store for use in the following year.

This method stated to have been evolved in Malaysia a few years ago has thus a number of advantages and could be followed by the DFOs with advantage wherever Eucalyptus polybag seedlings are being raised. It is therefore ordered that during 1980-81 in every division where Eucalyptus bag culture is being raised for planting in 1981 rains, atleast 3000 or 5% whichever is lower of Eucalyptus seedlings should be raised following the method described above in order to know the problems if any in adopting this method on a large scale from 1981-1982, nursery season and to develop proper consistency of soil mixtures to be used in this new method. The ideal size of the multiplant roll containing a concentric spiral of seedlings would have between 20-30 seedlings each for ease of shifting and carrying in field. The actual spacing between the seedlings, the thickness of the soil layers above and below the seedlings, the composition of the soil, are all to be worked out to suit local conditions to obtain the best results. All Divl. Forest Officers raising Eucalyptus are therefore requested to take personal interest in implementing the above method through issue of suitable instructions to their Range Officers concerned and personally supervising atleast the stage pricking out of the seedlings into the multi-plant polythene rolls and their subsequent maintenance. This method could also be adopted for raising seedlings of other species which do not produce branches while in the nursery. If it is proposed to use this technique in raising seedlings of other species also experimentally the DFOs are most welcome to do so, raising about 1000 seedlings of each species following the above method. If the seedlings are for free distribution for public under Make India Green Scheme, one rolled strip has to be allotted in full to an individual. If necessary rolled strips containing only 10-20 seedlings each could be raised, for allotment to individual farmers requiring only small numbers of seedlings.

All the Divl. Forest Officers are requested to acknowledge the receipt of this letter at once and submit an interim report atleast by end of March 1981 indicating the number of seedlings of ~~xxxxxxnursaryxxxxxxx~~ different species raised by the above method, the location of such nursery and range where these seedlings are raised to facilitate inspections by their Conservators of Forests and Addl. Chief Conservators of Forests during their tours. A final report may be submitted before end of September, 1981 after the seedlings are planted out in the field, indicating the overall advantages and dis-advantages and relative economics of this new method, and improvements if any suggested to make this method workable under our conditions.

The receipt of letter may please be acknowledged.

Sd/- A.L. Rao,  
Addl. Chief Conservator of Forests  
(DPAP).

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