

Government of Andhra Pradesh
Forest Department

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Office of the Chief Conservator of
Forests, Andhra Pradesh, Hyderabad.

Sri Munawar Hussain, I.F.S.,
Chief Conservator of Forests.,

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CIRCULAR NO. 3/32-E2.

Sub:- Eucalyptus Nursery & Plantation raising-
Hardening of Seedlings etc., Instructions-Issued.

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Instructions were issued earlier in this office Circular No. 34 and 34-A/81-E.2, to improve on the existing nursery practices followed in different parts of the State, to facilitate production of qualitatively better seedlings, while reducing substantially the cost of raising such seedlings.

An important aspect of Eucalyptus seedling raising as polythene bag culture of even as naked root plants is hardening the seedlings in the nursery, to enable such hardened seedlings to better withstand the shock of planting out in the field that too after transport over considerable distances, and also in tiding over short dry spells after planting in the field. Hardening of the Eucalyptus seedlings essentially consists of two separate treatments given to the seedlings, and they are (1) Dropping the seedlings by cutting off the terminal portion of the seedlings to a length of about 8-10 cms. (top two pairs of leaves with the terminal bud) after the seedlings have attained a height of about 30 cms. begin with. The first topping like this could be performed by mid April, if the nursery raising schedule is strictly followed with primary seedlings pricked out into the bags latest by mid February, as such seedlings would have attained a height of about 30 cms; on average by middle of April, and such topping operation could be performed a second time also during mid May after the topped seedlings have again developed a vigorously growing terminal shoot and attained a height of about 40-45 cms. The advantage of such toppings (clipping of terminal shoot) is that the stem of the topped seedlings becomes hard and woody and also yellowish, unlike the Eucalyptus seedlings normally grown in the nursery without topping, which have a greenish, soft and delicate stem. The leaves on the hardened stem also become somewhat leathery, compared to the delicate green leaves normally found on un-treated seedlings.

The second part of the hardening of the seedlings consists in gradually reducing watering of the seedling over a period of about 2-3 weeks during the second fortnight of June and continued into the first week of July also, if necessary, still 2-3 days before the seedlings are taken out for planting in the field (for South West monsoon planting) The object of such gradual reduction of watering to the seedlings down to about 1/4 th the normal level is to make them drought resist and thus be able to withstand shock and the dry conditions prevailing in field when the seedlings are planted out, particularly

when there is an unexpected short dry spell after these seedlings are planted out. In order however that the soil the root system of each of these polythen bag seedlings is fully saturated with water before the seedlings are taken out of the nursery for planting which is a must, these hardened seedlings should be profusely watered twice daily before they are taken out from the Nursery. The reason for this is that the fully saturated soil around these seedlings in the bags, can sustain such seedlings for number of days after planting out, even if there is a dry spell.

It is expected that mortality in Eucalyptus plantations will very considerable be reduced, particularly of mortality observed immediately after planting out in the field, if Eucalyptus seedlings are hardened properly as indicated above.

All the Conservators of Forests and Divisional Forest Officers are requested to see that these operations for hardening of the Eucalyptus seedlings in the Nursery are carried out without fail in all their nurseries this year, through issue of suitable detailed instructions to their staff, and also by personally explaining the same in the field during their frequent inspections of nurseries.

Another elementary pre-caution that should be taken while planting seedlings in field, which however is not followed in most cases, is to see that while planting the seedlings after cutting the polythene bag, the ball of earth which covers the root system of the seedlings is disturbed and the seedling carefully lowered into the pit with ball of earth intact, and the top root kept straight in the pit and then only the pit is refilled with the dug up soil, and the soil around the seedlings well compacted. This point is specifically being mentioned, as in all large number of cases, while cutting the polythene bag in the field before planting the seedlings, the mud-doors carelessly hold the ball of earth around the root system of seedlings, resulting in most soil around the root system dropping off and thereafter virtually planting naked seedlings. Naturally in all such cases, the root system having undergone shock due to exposure to light and dry wind (even if for a few seconds), the seedlings after planting out fail to establish quickly, which may finally result in death of such seedlings particularly when the climatic conditions are even somewhat unfavourable after planting.

Another useful point to be remembered while planting out seedlings in the pits, is to plant them deep i.e., about 3-4 Cms. of the basal part of stem above the collar region, is to be placed below the general ground level and covered fully by soil. This operation while prevention exposure of the collar region and the tap root just below due to soil erosion around base of stem due to heavy monsoon rains, will also help the root system of the seedlings to reach quickly the deeper more moist layers of the soil by the end of the monsoon season.

The need for carrying out adequate moisture conservation measures around the planted seedlings in all the dry and semi-arid zones wherever fuelwood and other plantations are being raised (except in Babul plantations being raised in the submergible prt of tank foreshores), and its importance in ensuring rapid establishment of the planted seedlings their continued growth during and after the rainy season and the very survival of the planted seedlings during the prolonged hot dry summer, has already been stressed in this office circular No. 37 (SF)/81. dated. 5.1.1982. It is pointed out again, even at the cost of repetition that this aspect of plantation management needs urgent attention of all officers, and steps taken ensure adequate water (Run) and moisture conservation in between planting rows through contour trenching and around each planted seedlings through soil working coupled with formation of a saucer, not only in the year of raising but even in the 1st year of maintenance and thereafter also if considered necessary.

The receipt of this Circular letter may be acknowledged
at once and necessary action taken to implement these instruc-
tions scrupulously in all Eucalyptus nurseries and plantations
to be raised from now on.

SA - A.L. Rao,
Asst. Chief Conservator of Forests
(Civil Forestry)

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DEPARTMENTAL TEST- OFFICE PROCEDURE & ACCOUNTS
DEFINITIONS

CADRE:- means the strength of a service or a part of service sanctioned as separate unit.
(Vide definitions under F.R. 9)

COMPENSATORY ALLOWANCE:- means an allowance granted to meet personal expenditure necessitated by the special circumstances in which duty is performed. It included a travelling allowance but does not include a sumptuary allowance nor the grant of a free passage by sea to or from any place outside India.

vide definitions under 3.3.9)

FEE:- means a recurring or non-recurring payment to a Government servant from a source other than the Consolidated Fund of India or the Consolidated Fund of the State, whether made directly to the Government servant or indirectly through the intermediary of Government.

(Vide definitions under S.R. 9)