

GOVERNMENT OF ANDHRA PRADESH
(FOREST DEPARTMENT)

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

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Prl. Chief Conservator of Forests.

CIRCULAR NO. 22/85-U.1.

Subject:- Social Forestry - Raising of Avenue Plantations -
Instructions - Issued.

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It is felt that sufficient time has elapsed to draw upon various experiments done and experience gathered on raising avenue nurseries and avenue plantations and streamlining the procedure for future course of action.

2. 186 cm. tall plants should be used in planting the shade line. In the case of slow growing species, the plants should be raised quite in advance to attain the height by the planting time.

3. The techniques in raising tall plants shall be as follows:-

Initially, pedigree seed should be sown in raised or sunken beds in lines to avoid crowding. Bare root seedlings of good size from the beds should be transplanted at 60 cm. spacing in single file in trenches 60 cm. deep and 60 cm. wide. The dug out earth should be discarded and the trench should be filled with tank bed soil mixed with organic manure. When available polypot seedlings can be transplanted in trenches instead of seedlings from beds. The plants in the trenches should be flood irrigated frequently to encourage growth. The top soil in the trench should be enriched with organic manure occasionally. It is hoped that, by following this technique, the plants would reach 160 cm. height by March-end of the following year. They should be dug out with ball of soil intact round the roots and placed in polypots of size 30 x 45 cm. and filled with best natural soil mixed with organic manure. For some days, the container plants should be kept in shade and watered regularly to provide for recovery from shock. After, these plants should be shifted into open and watering should be reduced gradually to harden and make them fit for strip planting. The tall plants in the containers require support and should be kept under shade or in open, otherwise they would fall ground and be damaged. For this purpose they should be arranged in improvised scatter made from stricks of wood of miscellaneous species.

4. In the case of slow growing species (viz. Tamarind, Pongamia etc.) the transplants could be put in earthen pots of size 30 x 20 cm. top and bottom diameter and 45 cm. deep or 30 x 45 cm. and 400 gauge polypots filled with best natural soil mixed with organic manure. The containers should be placed in trenches of suitable size and buried with earth upto the neck of the containers. The plants in the trenches should be flood irrigated frequently. The top soil in the container should be enriched by organic manure occasionally to maintain the level of nutrients of the soil. At the end of the summer of the following year, the container

5. In the case of Neem opinion is expressed in some quarters that earthen pots should be used for obtaining tall plants as in the case of tamarind pongamia etc., instead of transplanting of bare root seedlings first and then transferred them into pots of big size. The Conservators of Forests should exercise their discretion in this regard and try both techniques so as to arrive at the right technique by the end of this year.

6. There is no purpose served in aligning shade line under or over the existing avenue trees. The planting points should be 10 m. away from the existing trees in all directions.

7. Normally, cattle proof trench-cum-pot method is followed in raising avenues. In view of the great variability in the technique in different circles, it is found necessary to standardize it. It is suggested that the cattle proof trench should be 10 m. wide and 50 cm. deep. The dug out earth should be heaped up along the external rim of the trench to form a well raised mound. The mound and the trench should afford an effective barrier to cattle. The central pit should be 50 cm. cube with a rim of equal width allround the pit. The pit should be filled with fortified soil before planting. Thorn fence should be put up along the inside of the trench to protect the plant from cattle pushing their snout across the trench. The thorn fence could be replaced as and when necessary. Prosopis could be sown on the mound formed on the outer periphery of the trench. The trench method could be modified to ridge planting in water logged areas and any other approved method under variable conditions of soil, climate and situation.

8. It is necessary to prune the lower branches of the plant and leave the crown of leaves at the top to avoid temptation of browsing by cattle. A palm leaf can be wound round the plant so that the sharp needles of the top of the fronds would prick animals especially goats pushing their neck to catch the leaves in the crown. Once the plants are established, there is no need for this sort of protection to be continued.

9. The plant should be tied to a stake until it is established in the pit. Otherwise there is a possibility of root shock due to upwaving of the plants in winds resulting in large percentage of mortality. Later on, the stake should be removed to allow the plant to put on sturdy growth.

10. It is an accepted technique that a single species should be planted in the shade line at 10 m. spacing in each km. instead of planting a number of species. The following procedure should be adopted in planting avenues.

a) A treatment map should be prepared for every km. and every planting point and the species to be planted should be identified at least two years in advance.

b) The species to be raised in the shade line are normally Neem, Pongamia, Raintree, Peltophorum, Ficus species. Diorenan, Eppa, Tamarind etc., where there are overhead telephone lines of power lines the position of the planting points should be shifted away from the overhead lines. Delomix and other flowering trees should be introduced near habitations.

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c) Minimum of 20 % of the plants in the avenue coal fruit trees. This percentage could be increased to 100% near habitations.

The fruit trees could be Tamarind, Neredu, Mango.

d) Except for the fruit trees, only single species should be introduced each km. However local soil should be taken note of in selecting the species eg., Babul on clayey soil and it should be ensured that stray trees on the roadside merge into the avenue and form part of the avenue plantation.

e) Water sources along the avenue should be selected and marked in the treatment map so that a regular water regime could be prescribed depending upon the proximity or distance of the water source from the avenue concerned and the number of plants that can be watered from the different water sources.

f) Beneficiaries could be inducted in raising shade line and the help of DRDAS could be enlisted in providing watering equipment (like Cart and bullocks or tricycle fitted with water drums etc) to the beneficiaries.

g) Multi rows should be raised wherever enough land is available on roadsides but only through the agency of beneficiaries. Fencing and uprootal and ploughing should not be done departmentally in the area intended for multirows because of their high costs.

h) It is good to plant avenues in advance of the monsoon and provide for watering in the beginning so that the plants are established by the time monsoon sets in. Thereafter, the plants will have congenial conditions for growth. If planting is done with the onset on monsoon, the rains help only in the establishment of the plants and one growing season is thus more or less lost for growth. By following this method in regions where monsoons are certain, we can save on watering in the long run. However, in the critical regions, planting with the onset of monsoon shall continue to be followed.

i) Watch and ward and watering should be as per F.S.R.,

j) The Watchmen should be provided a badge to identify them while on duty.

k) Required number of Range Officers and Section Officers shall be allotted exclusively for avenue work.

11). The Forest Department is in public gaze in accepting the challenge of raising avenue plantations. Any failure in this regard will be adversely commented and will erode departmental credibility and professional competence of officers. Therefore, I urge upon all the officers to make avenue planting a tremendous success.

The receipt of this circular should be acknowledged in the form enclosed.

Sd/- V. S. Sastry,
Prl. Chief Conservator of Forests.