

Methods to be adopted to Maximise Production and Development of Improved Strains and Plant Materials *

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Soil Conservation for maximising production: It need be hardly stressed that soil conservation has direct bearing on maximising production. Generally soil conservation is understood as prevention of soil erosion. But in fact soil conservation is itself defined as maximising production without depleting soil fertility. Soil conservation is good land husbandry-use of land according to its potentiality, prevention of soil erosion, manuring to maintain soil fertility and adoption of all improved agricultural practices. This soil conservation is the ideal means to maximise production and it is particularly important for dry lands. As major portion of our cultivable lands do not have adequate irrigation facilities, soil conservation is the only means to maximise production.

Work done in the field of soil conservation in this State: With a view to evolve suitable dry farming practices to assure crop production in the semi arid and famine affected zones of this State, a Dry Farming Scheme and Dry Farming Developmental Scheme were in operation during the years 1939-'48 at the Agricultural Research Station, Hagari and it was partly financed by the Indian Council of Agricultural Research. Among the recommendations adopted (as a result of these schemes) for dry farming, such as wider spacing, inter cultivation, manuring, fallowing etc., contour bunding was included for prevention of soil erosion and conservation of moisture to improve the dry lands permanently. The recommendations were identical to the similar conclusions arrived at other dry farming stations like Sholapur and Bijapur in Bombay, Rohtak in the Punjab and Raichur in Hyderabad. The State Government, therefore, desired to take up large scale contour bunding works, even as early as 1946. But the State had not got the necessary legislation empowering the Executive departments to take up contour bunding or any other land improvement measures in private holdings. The Madras Land Improvement Schemes Act, was enacted only in 1949. In the meantime, the Bombay Government had taken up large scale contour bunding and had covered over 6,00,000 acres as a famine relief measure. Later the Bombay Agricultural Department took up the schemes as a regular part of their departmental activities. During the initial stages, there were certain drawbacks and defects in the work and later after modifications the work is being pushed through. A few Officers of this department were deputed for training in soil conservation in Bombay in 1948-'49 and since then batches of two or three men are being deputed periodically.

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State Soil Conservation Board: The Soil Conservation Experts to the Government of India who visited this state during 1948 had INTER ALIA suggested the creation of a High Level State Soil Conservation Board to initiate and co-ordinate soil conservation, land utilisation and ground water investigation schemes in this State. The State Government had accordingly constituted a thirteen member State Soil Conservation Board with the Director of Agriculture, Joint Director of Agriculture and other heads of departments as members with the Honourable Minister for Agriculture as Chairman. The Board has met thrice after its constitution and all the soil conservation schemes were discussed, at the said Board meetings and were duly recommended.

Tree Planting — Selection of Plants to Aid Beekeeping

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The importance of plants for bird, beast and man is sufficiently realised even from time immemorial and did not fail to get sufficient attention in any good administration of a country or management of villages. Tree planting, probably obtained the maximum effort during King Asoka's reign and to this day is talked of as having secured the maximum benefit to India. It should be the common experience of everybody to find a stately avenue tree giving shelter to men and beasts that seek protection under it in the burning sun. In this appreciation of service we are getting out of a humble plant life we may miss the several birds and animals that get an equal amount of protection on the tree itself from the rigours of the weather.

With the dawn of independence in India the subject of tree planting has rightly come to prominence again and the Government of India has inaugurated a tree planting week, "Vanamahotsavam" to be observed in the first week of July every year, when all the Government Departments, public institutions and workers contribute their mite for tree planting for the year. This tree planting securing the effort of many can be put on a rational basis especially in areas where beekeeping proves promising and deserves to be encouraged. Instead of selecting any tree for planting taking into consideration its economic importance only, we

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have now enough information with us about bee-pasturages, as to enable us to have a wide selection of plants that can, in addition to serving some economic gain, can also help the beekeeping industry. With this in view a list is furnished below of different plants that can be used for tree planting and still prove useful for apiculture. It is fortunate that the list includes most of the trees that are now being used for tree planting and the exclusion may only be confined to a few. The planting of the trees should, however, be so adjusted as to benefit the beekeeping industry. It is the intention of the authors that the tree planting should be so adjusted in the selection of plants as not only to benefit birds, beasts and men but also the bees. In this connection, it may be interesting to know that recently two trees growing near one another in Chinnathadagam village in Coimbatore Taluk showed as many as 105 *Apis dorsa* colonies. What all is required is some attention for proper selection of trees and to give a wide scope for it. A fairly exhaustive list has been got up with details to help the readers in the selection of plants as avenues, hedges, etc. It is the earnest wish of the authors that the subject may get due attention at the hands of everybody taking part in tree planting weeks especially the Highways Department that is to plant many an avenue tree.

LIST OF TREES RECOMMENDED FOR TREE PLANTING

I. (Nectar yielders)

Serial No.	Botanical name	Period of flowering	Remarks
<i>Avenues :</i>			
1.	<i>Albizzia lebbek</i>	March	Suited to the plains
2.	<i>Creteva religiosa</i>	do.	Thrives along river banks.
3.	<i>Pungamia glabra</i>	do.	..
4.	<i>Dalbergia paniculata</i>	April	Suited to dry districts.
5.	<i>Entolobium saman</i>	March	..
6.	<i>Sapindus emarginatus</i>	October	Suited to low hilly tracts of dry evergreen forests.
<i>Hedges :</i>			
1.	<i>Dombeya</i> sp.	November	..
2.	<i>Eriodendron anfractuosum</i>	March	Suited to West Coast.
3.	<i>Prosopis juliflora</i>	March	..
4.	<i>Prosopis glandulosa</i>	March	..
5.	<i>Acacia alba</i>	September	..
<i>Ornamental :</i>			
1.	<i>Cithroxylum subserratum</i>	November	Propagated by cuttings.
2.	<i>Mimusops elangi</i>	May	Suitable for dry and hilly tracts upto 4000 ft.
<i>Timber :</i>			
1.	<i>Gliricidia maculata</i>	March	Good source of green manure. Establishes quickly.
2.	<i>Azadirachta indica</i>	March	Suitable for black soils,
3.	<i>Santalum album</i>	December	..

Serial No.	Botanical name	Period of Flowering	Remarks
<i>Vegetables and Fruits:</i>			
1.	<i>Sesbania grandiflora</i>	January	Suited for plains.
2.	<i>Moringa pterygosperma</i>	February	Suited to dry sandy soils.
3.	<i>Tamarindus indica</i>	May - June	Evergreen avenue tree of much economic use.

II. (Pollen yielders)

Avenues:

1.	<i>Castanospermum australe</i>	March	Exotic plant.
2.	<i>Delonix regia</i>	May - June	Garden, ornamental and shade plants.
3.	<i>Delonix elata</i>	December — January	Green manure.
4.	<i>Holoptelea integrifolia</i>	February	Fuel tree.
5.	<i>Peltophorum ferrugineum</i>	do.	Exotic, flowers twice a year suited to dry as well as moist areas.

Hedges:

1.	<i>Pethecolobium dulce</i>	January	..
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Ornamental:

1.	<i>Parkia biglandulosa</i>	November — January	..
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Timber:

1.	<i>Acacia arabica</i>	July	Suited to dry localities especially in black cotton soils.
2.	<i>Morinda tinctoria</i>	March	Suited to dry regions especially in black cotton soils.
3.	<i>Ailanthus excelsa</i>	January	Wood very light.
4.	<i>Borassus flabellifer</i>	March	Tree of very economic importance.
5.	<i>Thespesia populnea</i>	January	Evergreen avenue.

III. Pollen and Nectar yielders

Avenues:

1.	<i>Alangium salvifolium</i>	March	Suited to dry regions — a good timber.
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Hedges:

1.	<i>Agave americana</i>	January	Fibre and ornamental suited to dry, gravel and sandy soils.
2.	<i>Aegle marmelos</i>	March to May	Suited to plains — medicinal

Vegetable and Fruits:

1.	<i>Cocos nucifera</i>	Throughout the year	Highly economical, valued for timber.
2.	<i>Feronia elephantum</i>	March	Fruit and medicinal.