

PRINCIPLES AND TECHNIQUES OF DRYLAND HORTICULTURE

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**Uncertainties and scarcity conditions prevailing in dryland areas
increase the risks involved in Agriculture**

**Tree –based
cropping systems
make a viable alternative**

**Of the various tree-based cropping systems,
horticulture
offers the most promise towards sustainable livelihoods in drylands**

Characteristics of rainfed horticulture crops

- ❖ Deep rooted**
- ❖ Perennial**
- ❖ Hardy – tolerant to adverse conditions**
- ❖ Maximum biomass production**
- ❖ Thick and shiny leaves**
- ❖ Low water requirements**

Advantages of rainfed horticulture crops

- ❖ Insurance against field crop failure**
- ❖ Supplies nutrition and balanced food**
- ❖ Provides regular / additional income**
- ❖ Supplies raw materials for ancillary industries**
- ❖ Source of timber / fuel / manure**
- ❖ Earns foreign exchange**
- ❖ Improves environment / ecological balance**

Horticulture based cropping systems

❖ Agri-Horti

Mango + Ber/ Custard apple + oilseeds / pulses/cereals

❖ Silvi-Horti

Cashew + casuarina

❖ Horti-pastoral

Mango + Fodder grasses

❖ Agri-Horti-Pastoral

Sapota + Legumes + Grasses

Crops suitable for dryland horticulture

❖ Fruits

Mango, Sapota, Guava, Ber, Tamarind, Custard apple, Wood apple, Jamun, Bael and Jackfruit



Crops suitable for dryland horticulture

❖ Plantation - Cashew



Crops suitable for dryland horticulture

❖ **Vegetables - Drumstik, Curry leaf, Tomato, Chilli and Cluster bean**



Crops suitable for dryland horticulture

Aromatic crops

Lemon grass



Citronella



Khus grass



Crops suitable for dryland horticulture

Medicinal - Periwinkle



Dryland horticulture technologies

- ❖ **Summer ploughing**
- ❖ **Timely planting with clonal material of high yielding varieties**
- ❖ **Planting along the contours**
- ❖ **Raising of root stocks & *in situ* grafting**
- ❖ **Preparation of wider basins around plants**
- ❖ **Providing of mulch & shade**
- ❖ **Formation of bunds / crescent bunds**
- ❖ **Formation of farm ponds and recycling**
- ❖ **Adoption of top working technique to rejuvenate old plantations**
- ❖ **Adopting multi-storeyed /mixed /intercropping systems for fetching additional and sustained returns**

- ❖ **Tremendous scope for commercial cultivation of different horticultural crops in dryland areas**
- ❖ **Risks and uncertainties involved in crop production in dryland areas can be successfully overcome by adopting dryland horticulture**
- ❖ **Because of the inherent plant characteristics best adopted / suited to dryland areas, horticulture crops are most viable alternatives that can be adopted**
- ❖ **Diversity found among horticulture crops with multipurpose uses can best be utilized for effective utilization of drylands**