AGRONOMIC MEASURES IN DRYLANDS

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AGRONOMIC MEASURES IN DRYLANDS

Soil & Water conservation – agronomical + mechanical measures

Agronomical methods are supported with mechanical measures where land slope exceeds permissible limits and run - off gains erosive velocities

Agronomic methods are used in inter – bunded areas and mechanical practices complement to help boost crop yields in rainfed drylands

SEED RATES

Normal season

Sowing is done with normal seed rate

> Selective thinning is recommended if occurrence of drought is expected to reduce the plant population – use of scarce soil moisture among fewer plants

Late season

Where the monsoon is moderately delayed, normal cropping with reduced seed rate is advised

Line sowing

Line sowing on contours is essential. It arrests run-off and conserves soil being eroded. It helps in the use of labor – efficient implements in weeding

Wider spacing

Wider spacing between rows and between plants within the row. This reduces plant population and competition between plants for scarce soil moisture. Fewer plants have greater access to limited available soil moisture

WEEDING

Frequent weeding is an important part of dryland agriculture. Line sowing and mechanical weeding, with appropriate size of blade harrows / cycle weeders remove unwanted vegetation which competes with the main crop

Removal of weeds helps the main crop obtain greater accessibility to soil moisture &plant nutrients for its own growth

STRIP CROPPING

Raising Erosion Permitting Crops (EPC) with Erosion Resistant Crops (ERC) having abundant adventitious root system and providing high percentage of canopy in strips

The close-growing ERC strips are generally legumes which fix nitrogen in the soil and enrich it.

The increased resistance to run off in ERC results in higher volume of water percolating through soil profile due to increased time of concentration and the canopy also protects the soil from the beating action of the soil

STRIP CROPPING

MIXED / INTER CROPPING

Mixed cropping of different crops along with the main crops, such as millets and different legumes is an insurance against the vagaries of monsoon

Different root systems of mixed crop feed at different depths of the soil

Mixed cropping provides small quantities of grain of different kinds for home consumption at different times

MIXED / INTER CROPPING

Groundnut + Pigeon pea (8:2)

Finger millet + Pigeon pea (8:2)

AGRI - HORTICULTURE

Marginal lands do not produce good annual crop returns even in normal seasons. These kinds of soils are best used for raising trees of economic value and creating permanent assets

These lands are also very good for raising dryland horticultural crops such as mango, cashew, tamarind etc

A part of the land could be earmarked specially for planting mixed tree species known in the area for providing fuel, fodder and timber for house hold needs and agricultural implements

Crops suitable for dryland horticulture

❖ **Fruits**

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










Agronomic measures contribute a lot for enhancing production in drylands. However, timeliness and preciseness in performing operations in the field should be taken care of