PRINCIPLES AND CONCEPTS OF CROPPING SYSTEMS

(Part- 2)

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Types of Multiple cropping

a) **Inter cropping** – Two or more crops are grown at a given time in spatial arrangement

b) **Mixed cropping** – Two or more crops are randomly grown at a given time without any distinct arrangement

c) **Sequential cropping** – Two or more crops are grown in succession one after another

Examples of predominant multiple cropping systems

Intercropping: Sorghum/pigeonpea in red soils

Mixed cropping: Sorghum, pigeonpea & sesame

Sequential cropping : Sorghum – Safflower & Maize –Chickpea

Finger millet + Pigeon pea (8:2)

Traditional practices

Intercropping and mixed cropping are the most common cropping systems

Farmer's practice (Mixed cropping)

Advantages of multiple cropping

- Avoid risk of total crop failure due to erratic rainfall and ensures food security
- Optimum utilization of natural resources – land, water, sunlight
- Increases the annual net yield per unit area

Potential cropping systems in relation to rainfall and soil type

Rainfall (in mm)	Soil type	Water availability period (weeks)	Potential cropping systems
350-600	Red soils & shallow black soils	20	Single *kharif* crop
350-600	Sandy soils	20	Single *kharif* or *rabi* crop
350-600	Deep black soils	20	Single *rabi* crop
600-750	Red/Black/sandy	20-30	Intercropping
750-900	Sandy / deep black/ red soils	More than 30	Sequential and double cropping

Factors influencing choice of cropping system

1) Farm resources

Choice of the cropping system depends on land,labour and water. Amount of rainfall as well as soil type and water holding capacity influence the type of cropping system based on the length of crop growing season

Factors influencing choice of cropping system

2) Farm enterprises

Enterprise at the farm level leads to a cropping system having specific crops eg.. Fodder crops in dairy and grain crops in poultry

Factors influencing choice of cropping system

3) Farm technology

Improved technologies alter the cropping systems

In deep black soils with annual rainfall more than 750mm, dry seeding yields both *kharif* and *rabi* crops instead of only one *rabi* crop in the post rainy season

- **Besides putting various measures to increase the productivity of dryland crops, efforts would also be needed to increase the cropping intensity which was generally 100% implying that a single crop was taken during the year.**

- **Cropping intensities of these areas could be increased by practice of intercropping and multiple cropping by way of more efficient utilization of the resources**