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*Shaping Lives...
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Center for Smart Agriculture

Organic Farming



Module 5: Organic management of field

Session 3: Water and Nutrient management



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Water management is the activity of planning, developing, distributing and managing the optimum use of water resources. It is a subset of water cycle management.

Pre-planting steps that help with water management include:

- Proper creation and maintenance of field channels for water delivery
- Land levelling that allows water to be evenly distributed and retained
- Tilling operations that include field bund preparation, water puddling and maintenance
- Bucket drip irrigation
- Treadle pumps²



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Prepare and level field



Use good clean seed



Plowed fallow field



Maintain plant population



Keeps canals and bunds clean and use water to control weeds



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There are two major components of Water

Management :

Irrigation: It is the artificial application of water to the soil essential for plants growth.

Drainage: It is the removal of excess water from the field.

Water Management Practices

- 1) On Farm Water Management
- 2) 2) Soil Management
- 3)) Crop Management



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1) On Farm Water Management

- Watercourse Improvement
- High Efficiency Irrigation System





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2) Soil Management

- Laser Land Leveling
- Mulching
- Use of Organic Matter





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3) Crop Management

- Sowing Method
- Weed Control
- Suitable plant Species

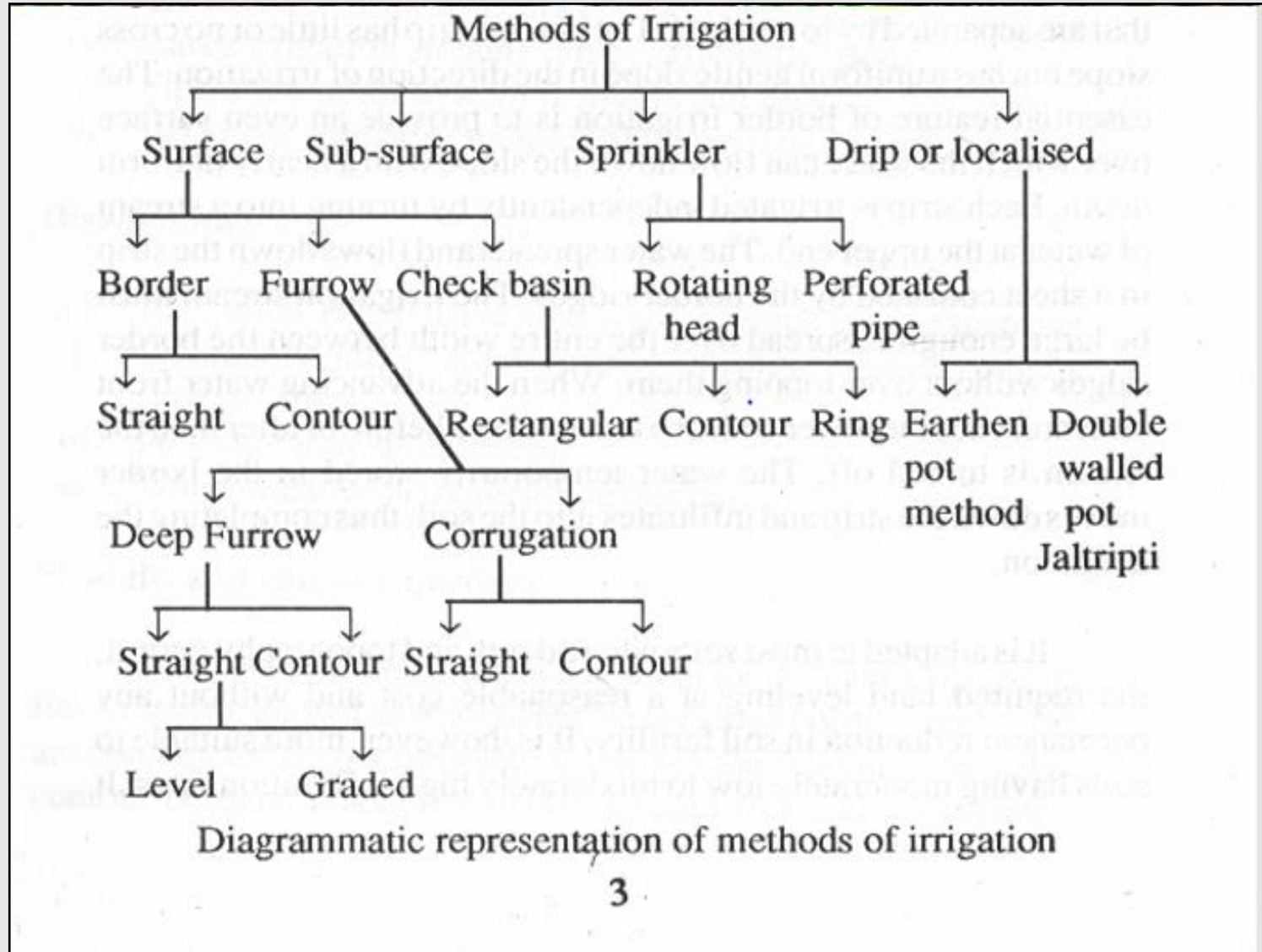




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Methods of irrigation





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Nutrient Management in Organic Farming

The management of nutrients in organic farming systems presents a formidable challenge, as the use of inorganic fertilisers is not permitted.

Use of organics must optimise a range of soil, crop rotation and manure managements to ensure a nutrient supply which will guarantee optimum crop yields and minimize losses to the environment.



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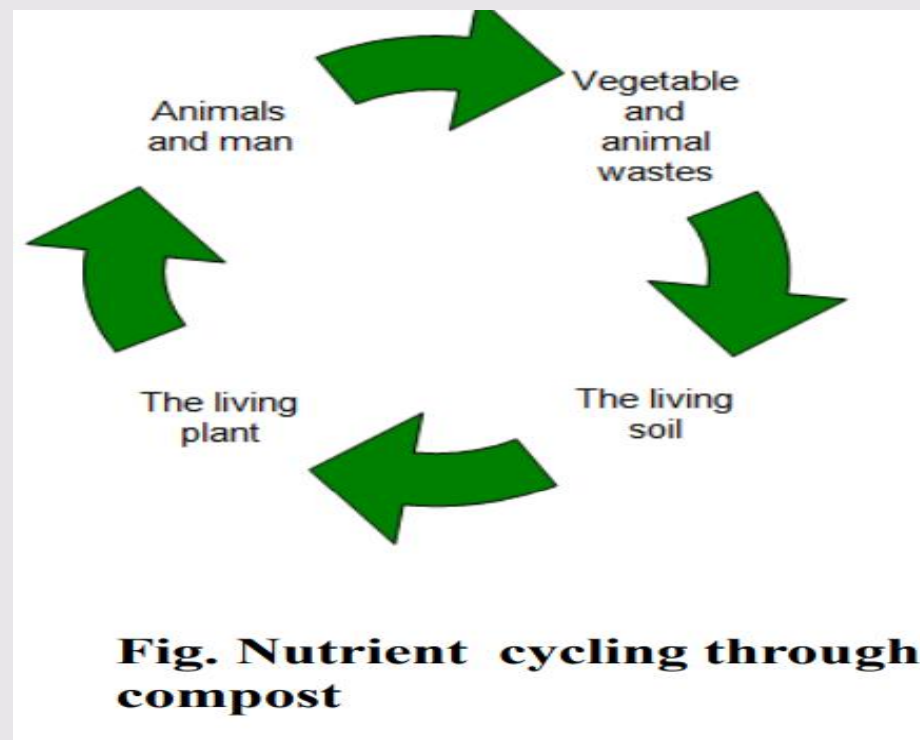
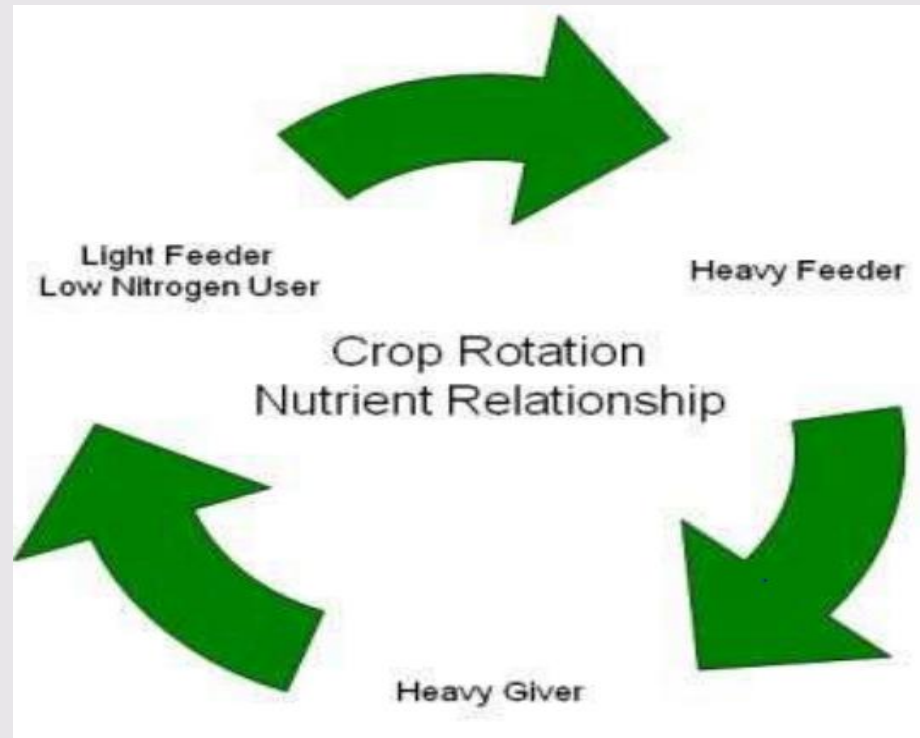
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Nutrient Management practices

- Crop rotation.
- Cover cropping.
- Addition of compost/FYM.
- Application of green manures.
- Application of crop residues.
- Supplemental application of organically approved amendments.
- Animal manures.
- Use of biofertilizers.



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Organic soil amendments



Compost



Shredded tree bark



Sphagnum peat moss



Manure (cow/sheep/horse/rabbit)



Leaf mold



Wood ash



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Fig: Crop residue cover



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THANK YOU