

Crop Rotation



What Is It

- This is the practice of growing a series of dissimilar types of crops in the same space in sequential seasons
- Rotation is done between –
 - Deep rooted/Shallow rooted
 - Leguminous/non leguminous
 - Root/Leaf/Flower/Fruit Crops
 - Family e.g.
 - Brassica Family - Radishes, Broccoli, Cauliflower
 - Grass Family - Wheat, Paddy

Benefits

- Allows soil to replenish whatever it has lost esp. when rotation is with a leguminous crop
- Takes advantage of the different nutritive needs of different plants
 - e.g. mustard depletes sulphur while the water logging of rice builds up sulphur hence follow rice with mustard
- Improves soil structure because of deep and shallow rooting.
- The deep rooted plants leave a lot of organic matter and also leave tunnels for the roots of the succeeding crop to follow.
- Fields need not be let to lie in fallow
 - which is economically good

Benefits (Contd.)

- Weeds are specific to a crop and hence weeds automatically are controlled
 - e.g. the striga weed that grows with Sorghum (jola) can be controlled by following with a coriander crop.
- Pests and Disease controlled because it avoids build up of pathogens and pests
 - Pest build up happens when the same species is continuously cropped.
 - Crop rotation effectively breaks the pest cycles.
 - Hence important to rotate between families
 - e.g. root plants (radish) -> fruit crops (tomato) -> grain vegetables (beans).
 - Do not plant radish after cauliflower (because they belong to same family)

How To Do It

- To help with the proper management divide the land into $\frac{1}{2}$ acre plots
- For each plot make a 6-7 year plan
- Typical plan at Dr. Sarvadhman Patel's farm is shown in next slide

A Typical Plan At Dr. Patel's Farm

Kharif Crops (June-Sept)	Rabi Crops (Oct-Mar)	Summer(Mar-June)
Bhendi or CowPeas - Jul 2009	Potatoes - Nov 2009	Bajra- Mar 2009
Cauliflower or Methi - Jul 2010	Bottle Gourd - Oct 2010	Sunhemp - Feb 2010
Maize - Jul 2011	Tomato/Chili/Brinjal - Nov 2011	Bhendi - Apr 2011
Cluster(Guar)Bean - Aug 2012	Garlic or Onion - Nov 2012	CowPeas - Apr 2012
Sesbania - Jul 2013	Cauliflower- Nov 2013	Bajra - March 2013
Palak, Methi or Coriander - Jul 2014	Potato - Nov 2014	Water Melon – Feb 2014
Turmeric - Jul 2015	Sunflower - Nov 2015	Cluster Bean - March 2015