

Dos and Don'ts for Cyclone in Agriculture

Agricultural Implications of cyclone and associated heavy rainfall and high winds

Impact of heavy rainfall and floods

- Very intense rainfall and floods can damage the different crops in the fields.
- Flooding can create anaerobic soil conditions that can have significant impact on vegetation.
- Chemical reactions in anaerobic soils also lead to a reduction in nitrate and the formation of nitrogen gas. This de-nitrification can be a significant cause of loss of plant vigour and growth following flooding.
- Heavy rainfall causes soil erosion, disruption to critical agricultural activities, water logging, increased moisture stress and attack of pests and diseases on the crops.

Impact of high winds

- High winds cause deformation / lodging / uprooting of crops.
- High winds also cause shattering of grains from matured plants.
- Tall crops like sugarcane, banana etc are susceptible to strong winds.
- Hinder agricultural operations like spraying and application of fertilizers.
- Lead to moisture loss from the crop fields thereby increasing water needs of crops.

Dos and Don'ts:

Do's before Cyclone:

- Early harvesting of crops, if 80% matured.
- Storing of harvested produce in safer place.
- Repairing of irrigation canals and embankments of rivers in the risk zone to avoid breaching.
- Arrangement of extensive drainage facilities in the fall out areas.
- In case of horticulture crops provide mechanical support to plants to avoid lodging and being uprooted.
- Adoption of crops like rice that can function effectively in saturated and even submerged conditions for locations that are flooded regularly.
- Effective Water storage systems (rivers, lakes, reservoirs etc.) in reducing flood damage.
- Planting of vegetation that uses more water and that can act as a barrier to moving water (horizontally and vertically) can reduce flood severity and impacts.
- Propping of sugarcane.
- Keeping the animals in proper sheds.

Do's - Post cyclone:

- After the event is over, drain out excess water from the standing crop fields and carry out propping of sugarcane, banana plants (to keep them erect), mechanical support to vegetables and fruit plants and thus, to minimize the damage.

Don'ts:

- Don't undertake harvesting of the crops which are at vegetative / grain formation stage.
- Don't go for spraying of pesticides and fertilizers.
- Don't leave the harvested produce in open field.
- Don't venture in the sea because of cyclonic storm and tidal waves (for fishermen).
- Don't allow the animals grazing outside.