

Advisory for Hudhud and Nilofer cyclone to farmers on Horticulture

The severe cyclonic storm “Hudhud” made a land fall on 12th October, 2014 at Visakhapatnama caused damage to horticulture crops in 4 districts each in Andhra Pradesh and Odisha and now Nilofer in Gujarat. In order to sustain the cyclonic impact, State wise crop advisory for fruits / vegetables is given under neath for adoption of contingency measure to minimize and prevent further damage in standing fruits and vegetables crops.

Andhra Pradesh

North Coastal districts of AP (Visakhapatnam, Srikakulam, Vizianagaram and East Godavari) suffered damage due to gale accompanied by downpour.

Vegetable crops

Damage :

Water logging and lodging of Brinjal, Tomato, radish, chilli, and cucurbits and stress due to excess soil moisture.

Advisory

- Provide quick drainage by opening furrows
- Harvest the left over produce at physiological maturity.
- In mild to moderate affected field due to lodging / uprooting, take up prophylactic need based spray to prevent fungal/ bacterial diseases (leaf spot, rots, wilt, blight etc.), apply foliar spray of fungicide / bactericides (Mancozeb 2 gm/litre, carbendazim 1 gm/litre, copper oxychloride 3 gm / litre, plantamycin 0.69/litre spreptocycline 6 gm / 100 litre or soil drenching with copper oxychloride (30 gm/10 litre).
- Nipping of apical buds to induce sympodial branching to compensate the production loss.
- Apply light booster doze of fertilizer, if soil application is not possible, foliar spray of 2% urea / DAP, 1% MOP.
- Apply NAA hormone (40 ppm) to prevent premature drop of flowers / fruits.
- In severely affected villages, take up community nursery to supply seedlings for cultivation of vegetables in post flood situation.

Banana

Lodging, tearing off of leaves, complete uprooting, Breaking of Pseudostem (stem)

Advisory

- Provide quick drainage in plantation.
- Propping / staking of partially lodge, uprooted, trees.
- Removal of lodged banana plant to allow single good sucker to replace the lost plant.
- Removal of old and dead leaves.
- Need based Application of plant protection measure as there is likelihood of disease occurrence in the stressed plant. Spray propiconazole 0.5 ml /litre + Banole oil 1% litre of water to control sigatoka & leaf spot diseases.
- Care during cultivation to avoid root injury and control of nematodes in (Rugby 10 G @ 10g/plant) or Caldan 4 G @ 10 g / plant) infested regions.

Cashew / Mango

Lodging, partial or complete uprooting of trees, breaking of branches, lifting of plants to erect in pit.

Advisory

- Provide quick drainage from the orchard.
- Propping / staking of partially lodged uprooted trees.
- Broken twigs / branches of trees to be pruned (flat cut at breakage site) and apply copper oxychloride or Bordeaux paste at cut ends and apply need based plant protection measure to control pests. Spray copper oxychloride (0.3%) to control anthracnose and other spots.
- To undertake gap filling in the orchard in case of complete loss due to uprooting of plants.
- Apply booster dose of fertilizer after attaining optimum moisture level.
- During November & December, rejuvenation of old / unproductive orchard may be taken up if plants are severely damaged.

ODISHA STATE

North Coastal district of Odisha (Gajapati, Koraput, Malkangiri and Rayagada) were the worst affected districts. The details of crop damage and contingency measures are given below:

Mango

Breaking of branch, uprooting of plants and lodging, lifting of plant to erect in pits.

Advisory

- Provide early drainage of excess water for our orchards.
- Propping / staking of partially lodged / uprooted trees.
- Prune broken branches of trees (flat cut of breakage point) and apply Bordeaux paste or copper oxychloride paste at cut ends.
- Apply need based plant protection measure as there is likelihood of occurrence of disease in stress plants.
- Apply booster dose of fertilizer as and when optimum moisture conditions return in the orchard.
- Fresh planting may be done in place of the lodged uprooted older tree.
- Rejuvenation in old / unproductive saline orchard may be taken up during November- December if plants are badly damaged.

Papaya

Lodging, breaking, uprooting of plants, partial submergence.

Advisory

- Provide quick drainage in orchard.
- Fallen fruits may be collected and used for making Fruit-fruity.
- Harvest at physiological maturity marketable fruits.
- Practice earthing up of plants
- Propping of papaya plants.
- Earthing and staking of lodge plants.
- Application of the booster dose of fertilizer.
- Protection of stem to sun burn can be given by making a mixture of hydrated (Slaked) lime, zinc oxide and water (22kg lime, 4.5 kg zinc oxide and 400 L water)
- Drenching of copper oxychloride (3 gm/litre) near stem may be given to avoid stem rot.

Cashew

Breaking of branches, lodging, partial or complete uprooting of trees.

Advisory

- Provide quick drainage in orchards / plantation
- Propping / staking of partially lodge / uprooted trees.
- Prune broken branches and apply Bordeaux , paste to cut ends.
- Apply COC 3 g/litre of water in canopy after clearing the broken dropped leaves in young trees.
- Undertaken gap filling in the orchards in case of complete loss of plant due to uprooting.

Vegetables crops

Tomato, Brinjal, Chillies, cucurbits, cabbage, cauliflower

Advisory

- Provide quick drainage
- Staking of lodge plants
- Harvest produce at physiological maturity
- Follow earthing up around plants.
- Apply foliar spray of fungicide (Copper oxychloride 3 gm/litre or drench soil at the base of plants to prevent rot / wilt / leaf / spot / blight.
- Apply light buster dose of fertilizer under optimum soil moisture.
- Practice nipping of optical buds to promote sympodial branching.

General Recommendation for all states including for Nilofar in Gujarat :

Specific recommendations for each crop for Andhra Pradesh and Odisha shall also be applicable to Gujarat State.

Vegetables crops:

- Efforts needs to be made to drain out the existing water from the field
- Earthing up for solanaceous, cucurbitaceous and cole crops may be done to avoid exposure of their root system.
- There is need to apply fertilizer replacement to recover after floods have receded.

- Foliar spray of 2% DAP + 1% KCL (MOP), 40 ppm NAA for controlling excessive premature fall of flowering / buds / young fruits and pods and 100 ppm salicylic acid for increasing stem reserve utilization under high moisture stress.
- Spray growth retardants (500 ppm cycocel) or Nipping of the terminal buds for promoting growth of sympodial branch.
- Store leafy vegetables in light plastic pack for use after cyclone.
- Creation of seed bank may be taken up in cyclone prone areas.
- Seeds need to be sown in pot trays on stall beds to avoid the seed loss during heavy rains.

Fruit crops:

- To drain out excess water from the orchard by making channels after flooding or high rain fall to reduce the ill effect on the standing trees.
- Pruning of tall tree from top and cut branches near house and cattle sheds.
- Partially uprooted trees should be pulled back in the same direction of their fall to reduce root damage. But in big trees, branch may be pruned.
- Tree having breakage of main, primary branches need to be given a flat cut at brakeage points and apply Bordeaux paste. Main trunk and branch should be painted with lime to prevent sun burn. (Hydrated (Slaked) lime, zinc oxide and water 22 kg lime, 4.5 kg zinc oxide and 400 L water).
- High rainfall and flood can leach essential nutrients from the soil, which can make the plant sick. Iron & Nitrogen can be replaced through the fertilize use.
- During cyclone, root damage and tree stress are very common and prone to root invading pathogen, which can be controlled by application of copper fungicide around root zone at monthly interval after a cyclone.
- Staking of the main trunks should be done in the opposite director of the pull back to prevent further movement.

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