

CRIDA : HYDERABAD

Hail storms in Maharashtra during 1st fortnight of December 2014: Impacts and contingency measures advocated

Hail storm struck several villages of Niphad, Sinnar, Malegaon, Chandwad, Baglan, Deola and Yeolatalukas in Nasik districts on 11th December. This storm was associated with high winds and un-seasonal rain. Deola received a rainfall of 16.3 mm and Yeola received 10.4 mm on 11th December. Subsequently a rainfall of 18.5 mm was received in Dindoritaluka and 17.5mm in Sinnartaluka on 12th December. Rainfall in Malegaon taluka was 15 mm and in Deola 13 mm on 12th December. The damage to agricultural and horticultural crops due to hail storms was stated to be severe in some villages like Ruee, Satana, Chandwad and Wadner Bhairav. Crops like grapes, pomegranate, onion, maize, vegetables and wheat in the hail storm struck areas were damaged and the extent of damage is being assessed. Apart from Nasik district, some areas in Dhule and Jalgaon districts were also affected due to hail storms. Leaf shedding, damages to fruits/branches, flower/fruit drop were the type of damages occurred due to this hail episode. The extent of area affected due to hailstorms was initially put at about 38,000 ha. Further, it is learnt that majority of the horticultural gardens were covered by crop insurance. Stray incidents of cattle loss were also reported. Sri Devendra Fadnavis, Chief Minister of Maharashtra on his visit to the hail hit areas observed the utility of imported hail nets in protecting the grape orchards. He promised to make arrangements for the indigenous production of hail nets.

Contingency measures recommended in hail hit horticultural crops:

Grapes

- Remove berries affected by hailstorm and high intensity rainfall and apply *Trichoderma* to such orchard to control fungus attack.
- If damage occurred to the stem and other branches of already harvested orchards, spray copper fungicides.
- Due to hot and humid climate there is possibility of increasing incidence of downy mildew and fruit flies. It is advocated to spray Metalaxyl 0.05%, Mancozeb 0.2% or Cymoxanil 0.05%, Dimethomorph 0.1% or phosphoric acid 0.2% for management of downy mildew. Any systemic insecticides such as prophenophos may be sprayed to control fruit flies.

Pomegranate

- Under cloudy and humid conditions, the intensity of oily spot may increase. Suitable measures like removal and burning of affected leaves, branches and fruits and then application of 1% Bordeaux mixture or 25 g COC + 10 lit water may be done. If humid climate lasts for long time then after one week, spray 2.5 g Bromopol dissolved in 10 lit of water.
- Remove hailstorm affected fruits. As per tree age and damage caused by hailstorm maintain proper number of fruits by thinning. If *Mrigbahar* fruits are ready, then quickly harvest.
- If damage is 100% in *AmbeBahar* orchard then it is suggested to manage *MrugBahar* effectively for those half damaged branches by cutting and providing proper shape. If the orchards are more than 5 years old, apply a booster dose of 19:19:19 fertilizer @300 g per tree and give light irrigations at fortnight intervals.
- If damage is 50% in *AmbeBahar* orchard then following contingent measures may be followed:
 - Bring back the trees to the upright position and provide support with *bamboo*.
 - As a long term strategy, establish wind breaks made of *shevari* and maize straw.
 - Apply recommend dose of nutrients and apply nitrogen fertilizers dose in 3-4 splits.
 - Apply 1% Bordeaux mixture or COC to affected stems.
 - Spray orchard with 1% Bordeaux mixture (1 kg CuSO₄ +1 kg CaSO₄ +100 lit water) or 25 g COC fungicides in 10 lit of water.

In field crops such as onion, wheat and vegetables, drain out excess water. In onion, purple blotch and alternaria leafspot may develop and hence take up spray of mancozeb or chlorothalonil @0.2%.

