

मौसम पूर्वानुमान आधारित साप्ताहिक सलाह

Weather Forecast Based Weekly Advisory

(Assumption: Fruit Pruning date - 15/10/2017)

I. Weather Data for the Prevailing Week

Thursday (23/11/2017) - Thursday (30/11/2017)

| Location | Temperature (°C) | | Possibility of Rain | Cloud Cover | Wind Speed (Km/hr) | R H% | |
|------------------|------------------|-------|---|---------------|--------------------|-------|-------|
| | Min | Max | | | | Min | Max |
| Nasik | 18-20 | 29-31 | Nashik, Ojhar, Palkhed, Dindori Niphad, Vani, Pimpalgaon Kalwan, Devla, Baswant, Satana, Shiridi, Loni - No Rain | Partly Cloudy | 00-11 | 26-35 | 59-75 |
| Pune | 18-21 | 30-32 | Pune, Phursungi Loni Kalbhor Uruli Kanchan, Yavat, Patas, Supa, Baramati, Narayangaon, Junnar - No Rain | Partly Cloudy | 00-16 | 22-56 | 59-82 |
| Solapur | 19-23 | 31-33 | Vairag Barshi, Pangri, Solapur, Nanaj, Kati, Osmanabad, Latur, Ausa, Tuljapur Kasegaon, Pandharpur, Atpadi - No Rain | Partly Cloudy | 04-17 | 21-41 | 58-83 |
| Sangli | 18-22 | 32-33 | Sangli, Miraj, Shirguppi, Kagvad, Arag Drizzling - Thu & Sat Shetfal Palsi, Khanapur, Vite, Kavatha Mahankal, Palus, Valva, Tasgaon - No Rain | Partly Cloudy | 06-16 | 22-41 | 59-85 |
| Bijapur | 19-23 | 31-32 | Bijapur Tikota, Telsang Chadchan - No Rain | Partly Cloudy | 08-19 | 22-39 | 55-89 |
| Hyderabad | 16-20 | 28-30 | Hyderabad - No Rain Medchal, Zahirabad Drizzling - Fri | Partly Cloudy | 01-14 | 38-54 | 71-99 |

Note: Above weather information is summary of weather forecasting given in following websites
<http://www.imd.gov.in/>, <http://wxmaps.org/pix/prec6.html>, <http://www.fallingrain.com/world/IN/>,
<http://www.wunderground.com/>, <http://www.bbcweather.com-weather/1269750, etc..>

II. a) Days after pruning: 39 days

b) Expected growth stage of the crop: - Flowering to berry setting stage

III. Nutrition and irrigation management (Dr. A.K. Upadhyay)

Expected pan evaporation: 3 to 5 mm

Amount of irrigation advised (Dr. A.K. Upadhyay):

1. During shoot growth stage, apply irrigation through drip @ 5,100- 8,500 L/ acre/ day. Further, in case vigour is more than desired, then reduce irrigation water application by half to 2,500 – 4,200 L/ acre. Still if you are not able to control the vigour, stop irrigation till such time growth is controlled.
2. During Flowering to setting stage, apply irrigation through drip @ 2000 to 3500L/ acre/ day.

3. During Berry development stage, apply irrigation through drip @ 5,100- 8,500 L/ acre/ day. Further, in case vigour is more than desired, then reduce irrigation water application by half to 2,500 – 4,200 L/ acre. Still if you are not able to control the vigour, stop irrigation till such time growth is controlled.
4. Due to rains soil may be saturated with water, donot apply fertilizers till the soil comes back to field capacity (wapsa).

Soil and Nutrient management (Dr. A.K. Upadhyay)

Nov. pruned vineyards

Shoot growth stage:

1. If the crop is between 5 leaf to prebloom stage, apply Zinc sulphate and Ferrous sulphate @ 15 kg/ acre based upon soil test value.
2. Boron application should be carried out only if soil test value indicates low levels and the irrigation water does not contain boron. If during foundation punning, the petiole test stated that boron was deficient then apply boron @ 1.5 kg to 5 kg depending upon the soil test value. Apply one kg boron at a time.
3. Apply 10 kg Magnesium sulphate per acre if the crop is between 5 leaf to prebloom stage.
4. If sodicity problem is there, apply 10 kg Sulphate of potash per acre in 2 splits this week.
5. If soils are calcareous, spray Sulphate of potash and Magnesium sulphate @ 2-3g/L depending upon leaf age during prebloom stage.

Oct. pruned vineyards

Flowering to setting stage:

1. Donot apply any nitrogen based fertilizer just before Flowering to Setting stage to avoid problems of kooj (inflorescence necrosis). Manage canopy for adequate sunlight and air movement within the canopy for avoiding/ minimizing problems of kooj (inflorescence necrosis).
2. If SOP not applied, then apply 15 kg SOP in case low temperature and cloudy conditions forecasted during flowering stage.
3. Apply 4-5 kg Phosphoric acid in two to three splits this week.
4. Go for Petiole sampling at Full bloom stage

Berry Development stage:

1. After Berry setting, continue initially with Phosphoric acid application @ 7.5 kg in two splits this week.
2. If the berry size is from 2-4mm, spray calcium & 2g Calcium Chloride or 0.5 g Ca chelate per litre. Target sprays immediately after GA application (preferably next day) for better absorption.
3. If the berry size is from 5-8mm, spray calcium & 2g Calcium Chloride or 0.5 g Ca chelate per litre. Target sprays immediately after GA application (preferably next day) for better absorption.
4. In the calcareous soil, spray magnesium sulphate @ 3g/L on the vines followed by fertigation of magnesium sulphate @ 10kg/acre from setting till 6-8 mm berry stage.
5. After 8-10 mm berry size, start application of nitrogen in the form of ammonium sulphate @ 25kg /acre in 4 splits in calcareous soil and as urea @ 15 kg/acre in

other soils in 3 splits. Follow this up with Sulphate of potash or 0-0-50 @ 25 kg/acre in 3-4 splits for next two weeks.

IV. Requirement of growth regulators (Dr. S.D. Ramteke)

1. The most of the vineyards are in 6-8 mm berry size stage hence the application of GA₃ @ 40 ppm and CPPU @ 1 or 2 ppm with pH 5.0-6.0 must be done.
2. Don't mix GA₃ with more chemicals
3. Do not give excess or flood water in the vineyard and proper aeration has to be maintained in the vineyard.
4. Remove the yellow leaves, if any.
5. Weedicide should not be used in the vineyard.
6. Tied all the shoots to the supporting wire

V. Canopy management (Dr. R.G. Somkuwar)

1. Old vineyard:

The rainfall was experienced in majority of the grape growing areas. This will create the problem of high vigour. The humidity build up will help to multiply downy mildew spores. Hence, in the condition of dense canopy, the shoot arrangement on wire should be done in such a way that the vineyard will have open canopy. This will reduce the incidence of disease and also help for effective spray coverage.

In berry setting stage of vineyard, spray or dip of PGR should be avoided during the period of high vigour. This may lead to excess vigor again. Hence, application of PGR by delaying for one or two days during the condition of rains may help in absorption.

2. Grafted vines:

The vegetative growth of grafted shoots will be at faster rate since the temperature and relative humidity is appropriate. Due to high rainfall in some of the grape growing region, the vegetative growth will be more. This will delay the cane maturity. Hence, shoot pinching to stop further growth and application of potash for advancing the shoot maturity will help in the vineyard.

VI. Disease management (Dr. S.D. Sawant and Dr. Sujoy Saha)

| Days after pruning | Risk of diseases | | | |
|--------------------|------------------|----------------|-------------|------------------|
| | Downy mildew | Powdery mildew | Anthracnose | Others (specify) |
| 39 | Low to medium | Medium | Nil | Nil |

There is a possibility of rain after about 14-15 days. In vines where there is no history of downy mildew this year, application of mancozeb [75WP@2-2.5g/L](#) may be done. If there is a history of downy mildew in the vines, then application of systemic fungicides needs to be done. If it is in the flowering/fruitset stage application of Dimethomorph 50WP@1g/L+mancozeb 75WP@2g/L or Iprovalicarb+propineb @ 2.25g/L or Mandipropamid@ 0.8g/L or Dimethomorph [+ametoctradin@0.8g/L](#) and Cymoxanil +Mancozeb WP@2g/L may be done for controlling downy mildew. If the vines are above 55-60 days, application of Fosetyl-Al 80WP @ 2.5-3g/L may be done to control the remnant infection of downy mildew. **For growers who want to export to China, application of Fosetyl Al should not be done.** For powdery mildew management, in order to remove initial inoculum, in vines less than 50 days after fruit pruning, application of chemicals in annexure 5 may be done keeping in mind that the

PHI should be 50-60 days. Application of triazoles viz. Tetraconazole @ 0.75 ml /L or Fluopyram 200+Tebuconazole 200SC @0.5ml/L or Hexaconazole @1ml/L or Metrafenone 50% SC @0.25ml/L should be preferred. In vines, more than 50 days application of sulphur@ 2-3g/L should be done for powdery mildew control. Keeping in view of the recent rains application of BCA i.e. soil drench and foliar spray of *Trichoderma* sp and/or *Bacillus* sp and foliar spray of *Ampelomyces quisqualis* may be given. The existing humidity will allow the BCA to proliferate and control the disease. However, they will work better if applied along with sulphur rather than triazoles and SDHI fungicides.

Exporters are requested to adhere to the chemicals as given in Annexure 5 of NRL, ICAR-NRCG

VII. Insect and Mite management. (Dr. D.S. Yadav)

Growth stage active shoot growth/pre bloom stage



- Vineyards may have higher thrips and jassid infestation.
- Monitoring for thrips should be done by tapping the shoots on white paper and counting number.
- The monitoring of thrips should be done during afternoon hours and the monitoring for jassids should be done during 6-7 pm in the evening.
- Fipronil 80 WG @ 0.05-0.06 g/L water or lambda cyhalothrin 5 CS @ 0.5 ml/L water are effective to manage thrips, jassid and caterpillars. However, fipronil should be used only once and before flowering stage.
- To manage thrips and caterpillars during flowering and berry setting stage, application of emamectin benzoate 5 SG @ 0.22 g/L water is effective.
- Fipronil 80 WG @ 0.05-0.06 g/L water or lambda cyhalothrin 5 CS @ 0.5 ml/L water are also effective against flea beetle.

Crop advisory relevant to different places is prepared by experts, considering forecasted weather, crop growth stages in majority of vineyards and ground information on incidence of different conditions in different grape growing areas received from regular interaction with progressive grape growers. No claims are made on its correctness.

Usefulness of this information may be communicated to us at director.nrcg@icar.gov.in.