

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 (30/11/2017) - Thursday (07/12/2017)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr)	R H%	
	Min	Max				Min	Max
Nasik	16-18	28-29	Nashik, Ojhar, Palkhed, Dindori Niphad, Vani, Pimpalgaon Kalwan, Devla, Baswant, Satana, Shiridi, Loni - No Rain	Partly Cloudy	01-19	25-51	52-94
Pune	17-20	30-31	Pune, Phursungi Loni Kalbhor Uruli Kanchan, Yavat, Patas, Supa, Baramati, Narayangaon, Junnar - No Rain	Partly Cloudy	01-19	25-52	51-90
Solapur	18-20	29-31	Vairag, Solapur, Nanaj, Kati, Latur, AUSA, Kasegaon, Pandharpur, Atpadi - No Rain Osmanabad, Tuljapur, Pangri, Barshi Drizzling - Tue & Wed	Partly Cloudy	08-20	27-46	49-80
Sangli	18-21	31-32	Sangli, Miraj, Shirguppi, Kagvad, Arag Shetfal Palsi, Vite, Kavatha Mahankal, Palus, Valva, Tasgaon - No Rain Khanapur- Drizzling - Tue & Wed	Partly Cloudy	04-24	28-35	53-75
Bijapur	18-20	29-31	Bijapur Tikota, Telsang Chadchan - No Rain	Partly Cloudy	08-24	30-49	57-81
Hyderabad	15-18	26-27	Hyderabad Medchal, Zahirabad Drizzling - Tue to Thu	Partly Cloudy to Cloudy	04-14	36-69	70-100

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: 46 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.

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 @ 5 kg in two splits this week till 8 mm berry size.
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 weather being cloudy, and as GA3 and CPPU applications are due, apply fungicides for powdery mildew to avoid disease infection in the bunches
2. Thinning of rachis followed by berries should be carried out
3. Whenever GA3 and CPPU has to be applied, use phosphoric acid to maintain pH of the solution
4. Don't flood the vineyards as the weather being cloudy, may lead to disease development.
5. Keep the leaves healthy so as to have more photosynthesis rate during this period
6. Apply micro nutrients or sea weed extracts (known) for the same

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

1. Old vineyard:

In the coming week, there will be no rainfall in majority of the grape growing regions. However, the cloudy weather in some parts may create the problem of powdery mildew incidence. Open canopy in the vineyard will help to reduce the incidence. In the vineyards at 10-12mm berry stage, the incidence of powdery mildew will be more as the canopy is dense. Under such condition, arrangement of shoots on the wire will support for penetration of sunlight thereby reducing the multiplication of spores of this disease. This will also help for effective spray coverage.

The minimum temperature is falling below 10°C. The decrease in temperature will create the problem of pink pigmentation in berries of white seedless grapes. Covering bunches with paper will help to reduce the disorder. However, during this stage disease incidence threat will also be more. Considering these, spray of effective fungicides before paper cover should be considered as an important activity.

The decrease in minimum temperature will slow down the physiological processes thereby hampering the berry growth. During this period, the growers generally spray GA3 and CPPU. This results into skin thickening thereby spoiling the eating quality and also the residue issues while export. Hence, instead of PGR sprays, root development can be given due importance. Loosening of soil on the bund will help for activating the roots. Mulching on the bunds will also help to increase the temperature in the root zone.

2. Grafted vines:

Due to reduction in minimum temperature the vegetative growth of grafted shoots will be slow. The re-cut of the grafted vines will be initiated during January (Sangli and Solapur) while in February in Nashik and Pune region. At the time of re-cut, 5-6 buds above the graft joint should be matured. Hence, application of potassic fertilizers (0:0:50 @ 3 to 4g/litre water depending on the shoot growth) through 2-3 spray on the grafted plants during this time will help to advance the cane maturity.

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

Days after pruning	Risk of diseases			
	Downy mildew	Powdery mildew	Anthracnose	Others (specify)
46	Low	Medium	Nil	Nil

From Friday onwards the weather will be cloudy in most grape growing areas. 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. 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 continued. 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. In most of the vineyards, the canopy is dense and hence the spray coverage might be poor. So, it is advised to remove the late shoots for a better coverage. Application of potash/mono-potassium phosphate/ calcium chloride or sulphate also indirectly controls the disease.

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)

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.