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 (07/12/2017) - Thursday (14/12/2017)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr)	R H%	
	Min	Max				Min	Max
Nasik	13-19	23- 29	Nashik, Ojhar, Palkhed, Dindori, Vani , Pimpalgaon Kalwan, Devla, Baswant, Satana, **Drizzling - Thu & Tue** Shirdi, Loni **Drizzling - Thu & Fri** Niphad **Drizzling - Thu , Fri & Tue**	Partly Cloudy	00-20	39-45	74-100
Pune	15-21	26-31	Pune, Phursungi Narayangaon, Junnar **Drizzling - Thu & Tue** Loni Kalbhor, Patas, Supa, Baramati **Drizzling - Thu & Fri** Uruli Kanchan, Yavat **Drizzling - Fri**	Partly Cloudy	00-19	38-57	66-98
Solapur	18-22	29-32	Solapur, Nanaj, Kati **Drizzling - Thu Light Rain - Fri** Vairag, Osmanabad, Tuljapur **Drizzling - Thu** Latur, Ausa, Kasegaon, Pandharpur, Atpadi Pangri, Barshi **Drizzling - Thu & Fri**	Partly Cloudy	00-19	31-47	60-86
Sangli	16-20	28-31	Sangli, Miraj, Shirguppi, Kagvad, Palsi, , Vite **Drizzling - Thu & Sat Light Rain - Fri** Arag **Drizzling - Thu, Fri & Sat** Shetfal Kavatha Mahankal, Palus, Valva, Tasgaon **Drizzling - Thu & Fri** Khanapur- **Drizzling - Tue**	Partly Cloudy	00-22	29-47	64-97
Bijapur	18-22	29-31	Bijapur Tikota, Telsang **Drizzling - Thu , Light Rain - Fri** Chadchan **Drizzling - Thu & Sat**	Partly Cloudy	01-19	33-54	51-90
Hyderabad	18-19	28-30	Hyderabad Medchal, Zahirabad **Drizzling – Tue to Thu**	Partly Cloudy	01-16	38-67	69- 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: 53 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: 2.5 to 4 mm

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

Amount of irrigation advised

In many areas drizzling/ light rains are predicted. Regulate canopy size so that humidity does not build up in the canopy/around bunch/ inflorescence that could lead to inflorescence necrosis/ berry cracking. If soil is at field capacity (wapsa) then do not apply irrigation to the vines.

1. During shoot growth stage, apply irrigation through drip @ 4,250- 6,800 L/ acre/ day. Further, in case vigour is more than desired, then reduce irrigation water application by half to 2,100 – 3,400 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 @ 1,500 to 2,500L/ acre/ day.
3. During Berry development stage, apply irrigation through drip @ @ 4,250- 6,800L/ acre/ day. Further, in case vigour is more than desired, then reduce irrigation water application by half to 2,100 – 3,400 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.
6. 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).
7. If SOP not applied, then apply 15 kg SOP in case low temperature and cloudy conditions forecasted during flowering stage.

Oct. pruned vineyards

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. Apply the GA@40 ppm and CPPU@ 1 or 2 ppm at the stage 6-8 mm size for growth and development of berry.
2. Keep the leaves healthy so as to have more photosynthesis rate during this period. 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 drop in the minimum temperature. This will hamper the physiological development of grape berries. Increase in vineyard temperature through mulching and irrigation will help to maintain the physiological processes active. The decrease in temperature will also create the problem of pink pigmentation in berries of white seedless grapes. Covering bunches with paper will help to reduce the disorder. Powdery mildew incidence in the vineyard under dense canopy is also seen in majority of the vineyards. Hence, priority of maintaining open canopy should be given in the vineyard.

2. Grafted vines:

Due to reduction in minimum temperature the vegetative growth of grafted shoots will be slow. At least 5-6 mature buds during the time of re-cut will be required during Jan-Feb month. At the time of re-cut, 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. Shoot pinching should also been done so as to arrest the vegetative growth and initiate the cane maturity.

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

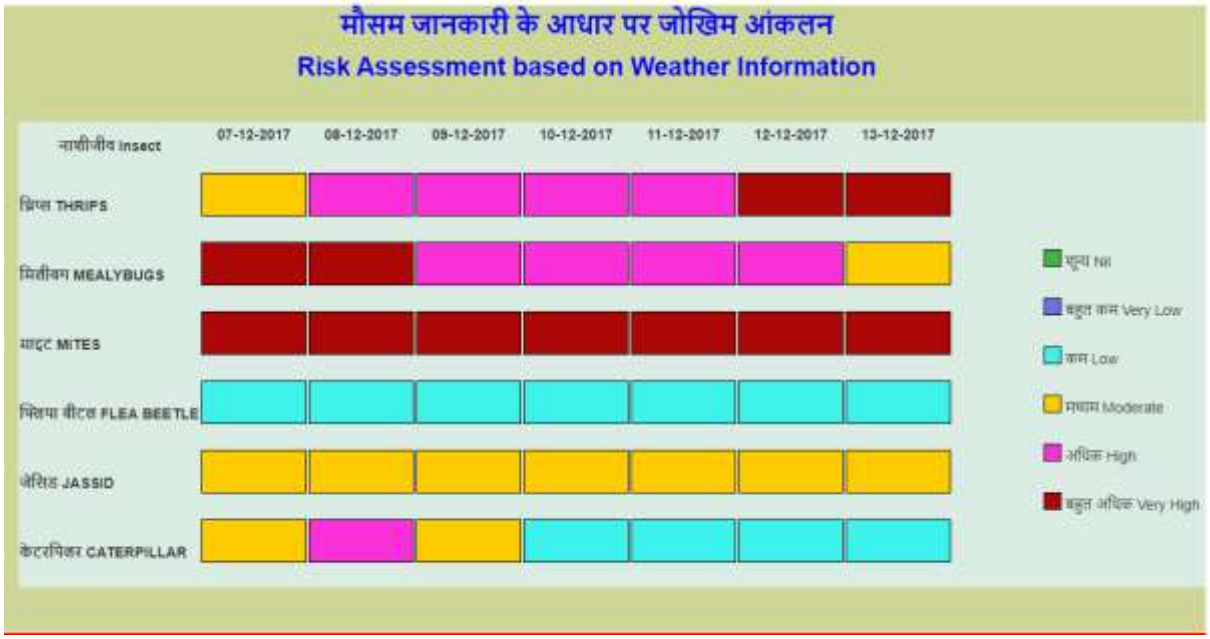
Days after pruning	Risk of diseases			
	Downy mildew	Powdery mildew	Anthracnose	Others (specify)
53	Low	Medium	Nil	Nil

The weather will be cloudy in most grape growing areas. Drizzles may occur and powdery mildew might increase as sporulation will be more. For powdery mildew management, at post-berry setting stage 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. At the pre-flowering stages, 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 done. Application of potash/mono-potassium phosphate/ calcium chloride or sulphate also indirectly controls the disease. For those vines which are in flowering stages there can be a risk of downy mildew. If there is a probability of rains application of Cymoxanil +Mancozeb WP@2g/L or 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 may be done. If there is no probability of rains application of Mancozeb 75WP @2.5-3g/L may be done..

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)



- Vineyards may have higher thrips 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.
- Emamectin benzoate 5 SG @ 0.22 g/L water is effective to manage thrips, jassid and caterpillars.
- Buprofezin 25 SC @ 1.25 ml/L water is effective for management of mealybugs.
- Mite population may start building up in the vineyards, therefore, careful monitoring is essential. Sulphur 80WDG @ 2.0 g/L water is effective against mites.

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.