मौसम पूर्वानुमान आधारित साप्ताहिक सलाह

Weather Forecast Based Weekly Advisory

(Assumption: Fruit Pruning date - 15/09/2018)

I. Weather Data for the Prevailing Week

Thursday (20/12/2018) -- Thursday (27/12/2018)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr)	R H%	
	Min	Max				Min	Max
Nashik	12-17	28-30	**No Rain**	Clear	02-17	25-31	61-65
Pune	15-19	29-32	**No Rain**	Clear	01-15	31-36	55-67
Solapur	18-21	29-33	**Osmanabad, Tuljapur, Ausa Tue and Wed** - Drizzling **Pandharpur, Kasegaon, Vairag, Barshi, Pangri** **Tue** - Drizzling	Clear to Partly cloudy	03-19	30-37	55-68
Sangli	16-20	29-32	**Sangli, Miraj, Arag, Kagwad, Shirguppi, Shetfal, Palsi** **Tue** - Drizzling **Khanapur** **Wed-** Drizzling	Clear	02-15	36-41	70-78
Bijapur	17-21	28-32	**Chadchan** **Tue and Wed** - Drizzling	Clear	03-18	34-46	56-87
Hyderabad	16-18	27-29	**No Rain**	Clear	03-08	38-53	73-85

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: **94** days

b) Expected growth stage of the crop: - Berry development stage after October pruning

III. Water management (Dr. A.K. Upadhyay)

Expected pan evaporation: 3.5 to 5 mm

1. Possibility of rains in pockets of Sangli, Solapur and Bijapur, apply irrigation only if the soil is not in wapsa condition.
2. During Flowering to setting stage, apply irrigation through drip @ 2,000 to 3,500L/ acre/ day.
3. From Berry development stage onwards till maturity, apply irrigation through drip @ 6,000- 7,600 L/ acre/ day for Nasik, Pune and Hyderabad region and from 7,600 – 8,500 for Sangli, Solapur and Bijapur region. Further, in case vigour is more than desired, then reduce irrigation water application to 3,500 – 5,000L/ acre. Still if you are not able to control the vigour, stop irrigation till such time growth is controlled.
4. Practice mulching to keep the bunds moistened. This will reduce the salinity build up in the root zone due to evaporation of the moisture from the surface of the bund.

IV. Soil and Nutrient requirement (Dr. A.K. Upadhyay)

1. Inflorescence necrosis could be a issue in dense canopy. Remove side shoots and reduce canopy to allow penetration of the sunlight for proper aeration. Manage canopy for adequate sunlight and air movement within the canopy for avoiding/ minimizing problems of kooj (inflorescence necrosis).

Flowering to setting stage:

1. Do not 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 3-4 kg Phosphoric acid in two to three splits this week. Remember that the pH of the irrigation water should be near 6.0.
4. Go for petiole sampling at Full bloom stage (2/3rd Cap fall stage). The petiole sampled should be opposite the bunch.

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.

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

- If the two sprays (ESS) for berry sizing at 3-4 & 7-8 mm berry size is over, do not apply flood irrigation. This may result in berry cracking.
- 1 or 2 sprays of Micronutrient mixtures or Sea weed extracts must be applied for keeping leaf activity at its maximum potential. This may help in getting optimum berry size.

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

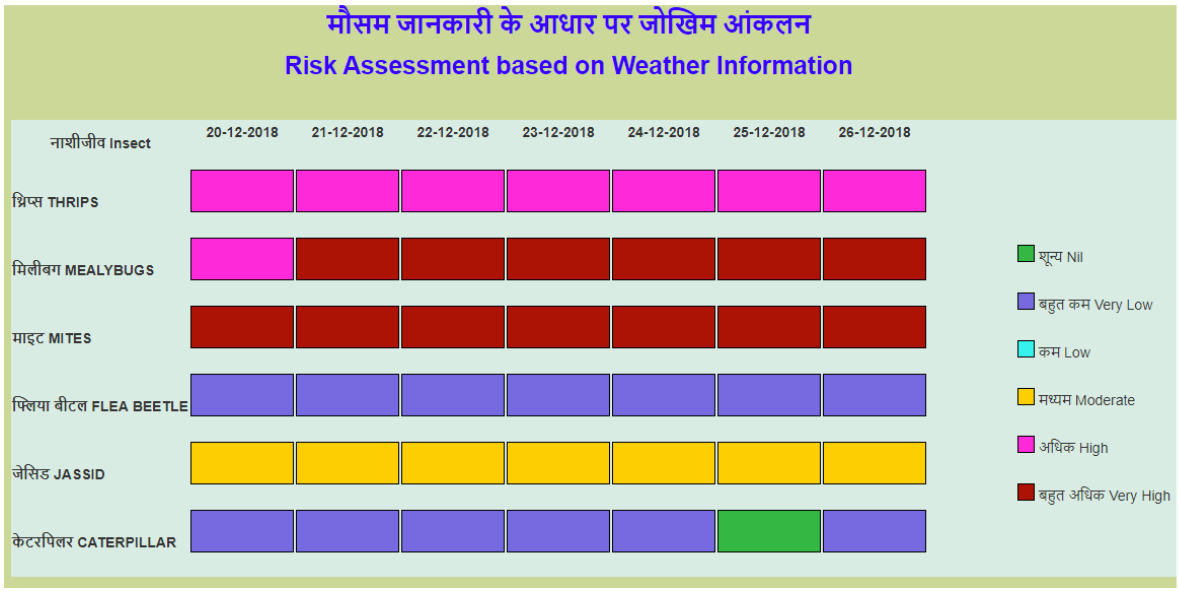
Nil.

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

Days after pruning	Risk of diseases			
	Downy mildew	Powdery mildew	Anthracnose	Others (specify)
94	Moderate	Moderate	Nil	Nil

There is a probability of heavy dew in irrigated areas which will predispose the vines to downy infection. If there is any infection, the infected regions should be clipped off to remove the inoculum source. If the crop is less than 60 days a spray of Cyamoxanil+Mancozeb @3.0g/L followed by Fosetyl-Al @3g/L or potassium salts of phosphoric acid@4g/L may be given. If the berries are for export, Fosetyl-Al or potassium salts of phosphoric acid may be given upto 75-80 days but if it is for China, it should not be given after 60 days. Application of chlorine-di-oxide 20-25 ppm@2ml/L may effectively be used at this stage to control downy mildew without any residues or detection issues. In case of powdery mildew management, application of sulphur 80WP@2g/L or *Ampelomyces quisqualis* @6-8g/L(where there is low temperature) at this stage will also be beneficial. Berry cracking and Ukdaya is a problem which is associated with untimely rainfall, excess irrigation as well as variation in diurnal temperature. Application of potash/potassium will be beneficial at this stage in the form of potassium-bi-carbonate. If potassium salts of phosphoric acid had been applied earlier, it will be beneficial at this stage. Application of formulations of silicon will also give resistance to diseases as well as increase the shelf life of the berries.

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



- Entomogenous fungus such as *Metarhizium*, *Beauveria* and *Lecanicillium* can be used for plant wash at 15 days interval to reduce mealybug populations. If, insecticide application seems inevitable, the only buprofezin 25 SC @ 1.25 ml/L water (PHI 45 days) may be used for management of mealybugs as this insecticide does not harm beneficial organisms in the vineyard.
- Sulphur 80 WDG @ 1.5-2.0 g/L water may be applied if mite infestation is observed.
- Spraying of emamectin benzoate 5 SG @ 0.22 gram per litre water or cyantraniliprole 10 OD @ 0.7 ml per litre water is effective to manage thrips.
- Spraying of imidacloprid 17.8 SL @ 0.4 ml/L water or emamectin benzoate 5 SG @ 0.22 gram per litre water or lambda cyhalothrin 5 CS @ 0.5 ml per litre water or buprofezin 25 SC @ 1.25 ml/L water are effective to manage jassids

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.