मौसम पूर्वानुमान आधारित साप्ताहिक सलाह

Weather Forecast Based Weekly Advisory

(Assumption: Fruit Pruning date - 15/04/2018)

I. Weather Data for the Prevailing Week

Thursday (19/07/2018) -- Thursday (26/07/2018)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr)	R H%	
	Min	Max				Min	Max
Nasik	22-23	25-26	Nashik, Pimpalgaon Baswant, Ojhar**,** Dindori, Vani, Palkhed**: Drizzling** - Thu to Sat. **Good rain –** Sun to Thu Loni, Shirdi, Niphad: **Drizzling** - Thu to Sun. **Light Rain**- Mon & Wed Kalwan, Devla: **Drizzling** - Thu to Sat & Wed, Thu. **Light Rain**- Sun & Tue Satana: **Drizzling** - Thu to Sun & Wed to Thu. **Light Rain**- Mon & Tue	Cloudy	17-23	87-89	84-97
Pune	23	26-27	Pune, Phursungi, Narayangaon, Junnar: **Drizzling** - Thu to Sat. **Moderate Rain –** Sun to Thu. Loni Kalbhor, Uruli Kanchan, Yavat, Patas, Supa, Baramati: **Drizzling –** Thu to Sat & Wed to Thu. **Light Rain –** Sun & Mon. **Moderate Rain –** Tue	Cloudy	15-22	81-86	89-93
Solapur	23	29-31	Solapur, Kati, Nanaj, Vairag, Pandharpur, Barshi **&** Pangri: **Drizzling –** Thu to Thu. Osmanabad, Tuljapur, Latur, Ausa: **Drizzling –** Thu to Sat & Wed to Thu. **Light Rain –** Sun to Tue Kasegaon & Atpadi: **Drizzling –** Thu & Fri. **Light Rain –**Sat to Thu.	Partly Cloudy	15-29	67-74	87-89
Sangli	22	26-27	Sangli, Kavathe Mahankal:: **Drizzling –** Thu to Fri. **Moderate Rain**- Sat to Thu Tasgaon, , Shirguppi**,** Kagvad, Arag Palsi, Vite: **Drizzling –** Thu to Fri. **Moderate Rain**- Sat to thu	Cloudy	17-28	74-81	92-94

			Palus, Valva: **Drizzling –** Thu to Fri **Light Rain –** Mon & Thu **Moderate Rain-** Sun to Thu Shetfal **Drizzling –** Thu to Thu Khanapur:**Drizzling –** Thu to Fri. **Light Rain-** Sat				
Bijapur	22-23	28-29	Bijapur,Tikota, Telsang, Chadchan: **Drizzling –** Thu to Thu.	Cloudy	17-33	67-70	89-90
Hyderabad	23	29-32	Hyderabad, Zahirabad, Medchal: **Drizzling-** Thu to sat & Wed to Thu. **Light Rain-** Sun to Tue	Mostly Cloudy	16-23	59-67	85-88

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: Cane maturity and afterwards stage after foundation pruning

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

Expected pan evaporation: Nil to 4 mm

Amount of irrigation advised

1. All the grape growing regions are forecasted to receive from drizzle to light/moderate rains. The irrigation water application should be based upon the growth of the vines. In case rain exceeds 5 mm on a given day, irrigation water application can be skipped for that day. Generally, under wapsa (field capacity) condition of the soil, do not irrigate the vineyard.
2. In general, there will not be any need to provide irrigation in areas which have witnessed continuous rains since last 3-4 days.
3. The vineyards are at Cane maturity and Fruit Development stage. Provide irrigation through drip @ 3500 - 4000 litre/ha/day in case no rains are received.

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

Cane maturity and Fruit bud development stage:

1. Potassium application is required from Cane maturity stage onwards. Approx. 64 kg of sulphate of potash (soluble grade) should be applied in this stage. Split the application into atleast five doses to reduce the leaching losses of the potassium. Apply 15 kg SOP in two – three splits during this week.
2. The rains have started. The vineyards where sodicity problems are there, apply gypsum to the soil for removal of sodium from the soil exchange complex. In case of calcareous soils, use sulphur for similar purpose.
3. In case of calcareous soils where acute iron deficiency is observed, repeatedly spray 2-3g/L Ferrous sulphate two to three times at 4-5 days interval followed by 15-20 kg/ acre Ferrous sulphate application through drip. The fertigation dose should be split into atleast 3 doses of 5kg each.
4. In case pruning is planned during August to 1st week of September, raise Sunnhemp or Dhaincha for green manuring purpose.

NOTE:

In some vineyards, problem of yellowing of the leaves in the margin along with vein reddening is observed. This is due to potassium deficiency. The deficiency of potassium can be due to insufficient potassium application or calcareous soils affecting the potassium uptake. It could also be due to sodicity problem in the vineyard. This deficiency can lead to more powdery mildew infestation and sucking pest (leaf hopper) injury. In some cases even, it was observed that higher yields of 17-18t/acre were harvested for consecutive few preceding years but the fertilizer application was less. The vines might have exhausted the nutrient reserves and could have led to marginal leaf yellowing.

Under such situation, Potassium deficiency can be corrected by a combination of foliar spray (minimum three to four) of 0.5% sulphate of potassium (5g/litre SOP) and soil application of potassium fertilizers. In sunny days the spraying should be done in morning or evening when humidity is high and temperature is low. Spraying during day time when temperature is high and humidity is low reduces potassium uptake into the leaves. Apply 25 to 50 kg SOP /acre as single dose or via fertigation (in 3 to 4 splits) within one week, depending upon extent/severity of potassium deficiency.

However, for any measures to succeed, calcareous or sodicity conditions should be managed, then only appreciable effect of potassium application can be observed.

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

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

Old vineyard:

The increased vigor in the canopy would results into growing shoots to be more succulent. During the sunshine period, the succulence of new shoots may help to increase the incidence of sucking pest. The damage may lead to leaf curl thereby increasing the chances of leaf fall. Hence, removal of new shoots is given the priority so as to control the pest attack.

New vineyard:

In this garden, the new shoots are growing at faster rate. This will delay the maturity of fruitful canes. Removal of 2-3 basal leaves and training the shoots on wire will help to reduce the microclimate in the canopy thereby reducing the chances of disease development. This will also help in advancing the cane maturity.

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	Moderate	Bacterial leaf spot

There is a possibility of heavy rain in all the regions from 22nd to 26 th July. There can be an increase in incidence of anthracnose in new shoots for which application of thiophenate methyl or carbendazim @ 1g/L is recommended. As the humidity is on the increase along with a lowering of temperature, incidence of downy mildew is a possibility. To control the disease, sprays of potassium salt of phosphoric acid @2g/L+Mancozeb @2g/L may be given where the shoot growth is ongoing. In regions where early pruning was taken and shoot growth has stopped application of copper based fungicides like copper hydroxide @ 2.5-3g/L may be given. The application of mancozeb will also control bacterial leaf spot incidence, if any. Biocontrol agents like *Trichoderma* sp, *Bacillus subtilis* and *Ampelomyces quisqualis* may be applied along with sulphur but not with copper fungicides.

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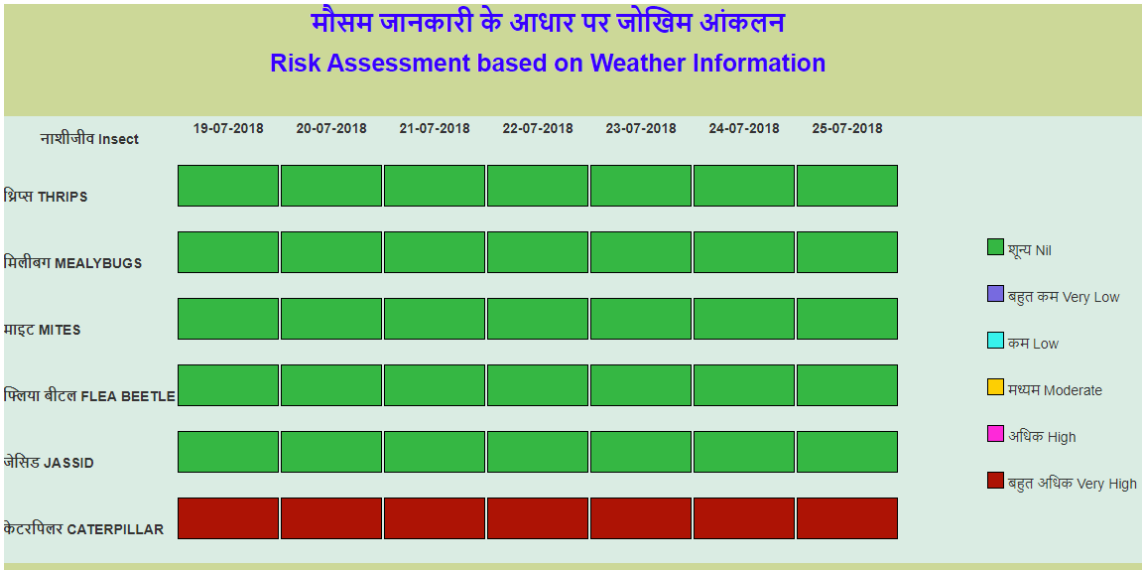
VII. Insect and Mite management. (Dr. D.S. Yadav)



- Spraying of emamectin benzoate 5 SG @ 0.22 gram per litre water or fipronil 80 WG @ 0.06 gram per litre water is effective to manage caterpillars.
- Remove excess shoot to manage thrips populations.
- Vineyards may have higher mealybug infestation as well. However, increase in relative humidity will favour build-up of natural enemies and natural biological control of mealybugs. Therefore, avoid spraying broad spectrum insecticides. Use of insecticides for mealybug control should be avoided. 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 may be used for management of mealybugs as this insecticide does not harm beneficial organisms in the vineyard.
- Mite infestation may be observed on old leaves at some places. Spraying of sulphur 80 WDG @ 2.0 gram per litre water is effective to manage 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.