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 (12/07/2018) -- Thursday (19/07/2018)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr)	R H%	
	Min	Max				Min	Max
Nasik	22	25-26	Nashik, Pimpalgaon Baswant, Ojhar**,** Dindori, Vani, Palkhed**: Drizzling -** Thu to Sat. **Moderate rain -** Mon to Thu. **Good rain –** Sun Loni, Shirdi, Kalwan, Devla, Niphad, Satana : **Drizzling -** Thu to Sat. **Light Rain-** Sun to Thu	Cloudy	15-27	87-89	95-98
Pune	22-23	26	Pune, Phursungi: **Drizzling -** Thu to Sat. **Moderate Rain –** Sun, Mon, Wed, Thu. **Good rain –** Tue Loni Kalbhor, Uruli Kanchan, Yavat, Patas, Supa, Baramati: **Drizzling –** Thu to Sat & Mon to Thu. **Light Rain –** Sun Narayangaon, Junnar: **Drizzling –** Thu to Sat. **Moderate Rain –** Sun To Thu	Cloudy	14-27	81-86	88-93
Solapur	23	29-30	Solapur, Kati, Nanaj, Vairag: **Drizzling –** Thu to Fri & Sun to Thu. **Light Rain –** Sat Osmanabad, Tuljapur, Ausa: **Drizzling –** Thu to Fri & Mon to Thu. **Light Rain –** Sat & Sun Latur: **Drizzling –** Thu to Fri & Mon to Thu. **Light Rain –**Sun. **Moderate Rain –** Sat Pandharpur: **Drizzling –** Thu to Thu Kasegaon & Atpadi: **Drizzling –** Thu & Fri. **Light Rain –**Sat & Mon to Thu. **Moderate Rain –** Sun. Barshi **&** Pangri: **Drizzling –** Thu to Fri & Mon to Thu. **Light Rain –**Sun *Thunderstrom	Cloudy	15-29	68-71	88-90
Sangli	22	26-28	Sangli, Miraj: **Drizzling –** Thu to Sat. **Moderate Rain-** Sun to Thu	Cloudy	14-27	74-80	89-94

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr)	R H%	
	Min	Max				Min	Max
			Tasgaon, Palus, Valva, Kavathe Mahankal: **Drizzling –** Thu to Sat & Mon. **Moderate Rain-** Sun, Tue, Wed. Shirguppi**,** Kagvad, Arag: **Drizzling –** Thu to Sat. **Moderate Rain-** Sun to Thu Shetfal & Khanapur: **Drizzling –** Thu to Thu. Palsi, Vite: **Drizzling –** Thu to Sat. **Light Rain-** Mon to Thu. **Moderate Rain-** Sun				
Bijapur	22-23	27-28	Bijapur,Tikota, Chadchan: **Drizzling –** Thu to Thu. Telsang: **Drizzling –** Thu to Sun & Tue to Thu. **Light Rain-** Mon & Tue	Cloudy	22-36	68-79	86-91
Hyderabad	23	29-31	Hyderabad: **Light Rain-** Thu to Sun & Tue, Wed. **Moderate Rain –Mon &**Thu Zahirabad: **Light Rain-** Thu to Sat & Mon to Wed. **Moderate Rain –** Sun & Thu Medchal: **Drizzling –** Fri to Sun & Tue, Wed. **Light Rain-** Thu. **Moderate Rain –** Mon to Thu	Partly Cloudy	18-27	66-74	88-90

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: 87 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: 3.5 to 5 mm

Amount of irrigation advised

1. All the grape growing regions are forecasted to receive from drizzle to 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, donot 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. In case of April pruned vineyards, the vines 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.

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.

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)

1. Unwanted growth of shoot must be controlled by topping and should not use chemicals like paclobutrazol.
2. Don't spray any PGR or Growth regulator during rainy days
3. Control the weeds grown in vineyard by hand weeding

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

Old vineyard

In the vineyards at cane maturity stage, high vigor is observed sue to rains and increased relative humidity in the atmosphere. The increased vigor will increase the gibberellin content in the vine thereby delaying the cane maturity. The succulent growth will be prone to the attack of downy mildew incidence and also sucking pest. Retention of new growth will also contribute for losses of reserved food material in the cane. Hence, pinching of shoot tip only

and training of shoots on the cordon will help to advance the cane maturity. Avoid hard pinching of green shoots since; this will encourage the emergence of more side shoots. Removal of 2-3 basal leaf will help to reduce the microclimate. During this period, only open canopy can help to advance the cane maturity and reduction in microclimate thereby reducing the chances of fungal diseases.

Fig. Only tip is removed

Fig 2: Open canopy

Rootstock management:

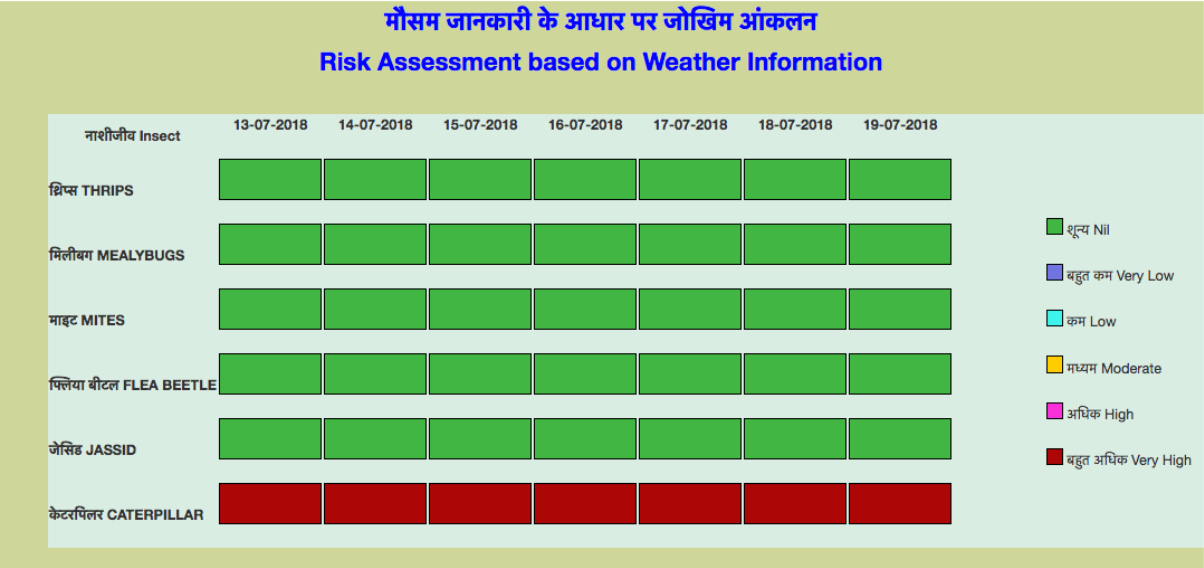
In this garden, from the available shoots, only three healthy, straight growing and disease free shoots are to be trained to bamboo. Care to be taken that the selected shoots are trained to the bamboo before grafting. The spread of shoots on the ground will encourage the root formation on the buds. Soil application of fertilizer like nitrogen and phosphorus can be supplied to the rootstock plants. On older leaf of rootstock, rust will be severe problem. Hence, the spraying with Chlorothalonil @ 1.5g/lit can be useful

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

Days after pruning	Risk of diseases			
	Downy mildew	Powdery mildew	Anthracnose	Others (specify)
87	Moderate	Moderate	Moderate	Bacterial leaf spot; Rust

There is a possibility of moderate rain in all the regions. To control powdery mildew sulphur @ 2g/L should be applied. 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, and there is a dip in temperature along with it, 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.

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.