

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 (28/06/2018) -- Thursday (05/07/2018)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr)	R H%	
	Min	Max				Min	Max
Nasik	22-23	26-29	Light Rain- Sat Moderate Rain- Sun-Wed Good Rain- Next Thu Nashik, Pimpalgaon Baswant, Ojhar, Dindori, Vani, Light Rain- Sun-Mon, Wed-Thu Moderate Rain- Tue Kalwan, Devla, Satana, Niphad, Palkhed, Light to Moderate Rain- Sun-Thu Loni, Shirdi	Partly cloudy	13-27	73-82	90-94
Pune	23	27-29	Good Rain – Sun-Thu Pune, Phursungi, Narayangaon, Junnar Light to Moderate Rain- Sun-Thu Loni Kalbhor, Uruli Kanchan, Yavat, Patas, Supa, Baramati,	Partly to Mostly cloudy	10-26	68-75	88-91
Solapur	23	30-32	Light Rain Thu ,Sun-Thu Solapur, Kati Light Rain Sun-Mon, Wed-Thu Moderate Rain Thu and Tue Nanaj, Barshi, Vairag, Pangri Light Rain Thu ,Sat-Thu Pandharpur, Kasegaon, Atpadi, Osmanabad, Tuljapur, Latur, Ausa	Cloudy	10-21	64-69	89-91
Sangli	22	27-29	Moderate Rain Sun-Tue and Thu Good Rain - Wed Sangli, Miraj, Shirguppi, Kagvad, Arag, Moderate Rain- Sun-Thu Tasgaon, Palus, Valva, Palsi, Vite, Kavathe Mahankal, Khanapur Light Rain – Thu and Mon-Thu Shetfal,	Cloudy	12-26	68-72	87-92
Bijapur	22	29-31	Moderate Rain Wed, Light Rain- Fri, Sun-Tue, Thu Bijapur, Tikota, Telsang, Moderate Rain Mon and Wed, Chadchan	Mostly cloudy	15-29	59-93	87-92
Hyderabad	23-24	32-34	Moderate Rain Sun, Tue, Thu Good Rain- Mon and Wed Hyderabad, Medchal, Zahirabad	Partly to Mostly cloudy	05-23	46-57	83-87

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: 73 days

b) Expected growth stage of the crop: - Initiation of cane maturity stage after foundation pruning

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

Expected pan evaporation: 3 to 5 mm

Amount of irrigation advised

1. All the grape growing regions are forecasted to receive from light 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, do not apply irrigation.
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 litre/ha/day.
4. In case of Late pruned vineyards (May), the vines are either in Fruit bud differentiation stage. Provide irrigation through drip @ 3500 litre/ha/day in case no rains are received. Any deficit during this stage could reduce the vine yield by 8- 10% during Fruit pruning season.

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

Fruit bud differentiation stage

1. During fruit bud differentiation stage, based upon soil test values, apply 45 – 50 kg phosphoric acid or 250 kg SSP in case the soils are deficient in phosphorus. Phosphoric acid application is desirable in calcareous soils.
2. At 45 DAP, perform petiole test to know the nutrient content of the vines. The petioles should be collected from 5th leaf from the base of the shoot counting the leaves even if they have been removed.
3. In case of soils where irrigation water used has sodium exceeding 100ppm, moisten the bund and mix gypsum in the moistened soil @ 100 kg /acre. In case of calcareous soils apply sulphur @ 75kg/acre. This should be followed by application of SOP @ 25-30 kg/acre or 0-0-50 in splits through drip.
4. 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.

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.

- 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.

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

Avoid the water logging condition in vineyard for prevention of aerial roots. Hence drainage system may be planned before vineyard planting. Do not go for hard pinching, this may result in buds sprout.

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

During the coming week following practices will have to be followed

1) **Grape rootstocks:** After the re cut, there might have been new sprouts in more numbers. If all the new shoot are retained, all the shoots will be weak due to the competition for food material among themselves. At the time of grafting we need a shoot with 8 to 10 mm diameter at least one feet above the ground. Hence, thinning of excess shoots by retaining only three with straight growing, healthy and disease free needs to be followed.

On old leaf, after the rainfall there may incidence of rust. In severe cases grower may experience complete leaf fall. Control of this disease by application of chlorothalonil @1.5 g/lit water will keep the rootstock plants healthy.

2) **New vineyard:** In this gardens, with the continuous rainfall the temperature in the atmosphere reduces while the relative humidity increases. This condition becomes favourable for increased shoot vigour. Taking the advantage of present situation, extending the cordon will benefit and the grower can develop extra 2 to 3 fruitful canes.

Application of PGR and fertilizer will be crucial at this time. The fertilizers containing only phosphorus and potash will support for fruit bud differentiation in the new shoots. To keep the new growth under check, shoot pinching need to be followed.

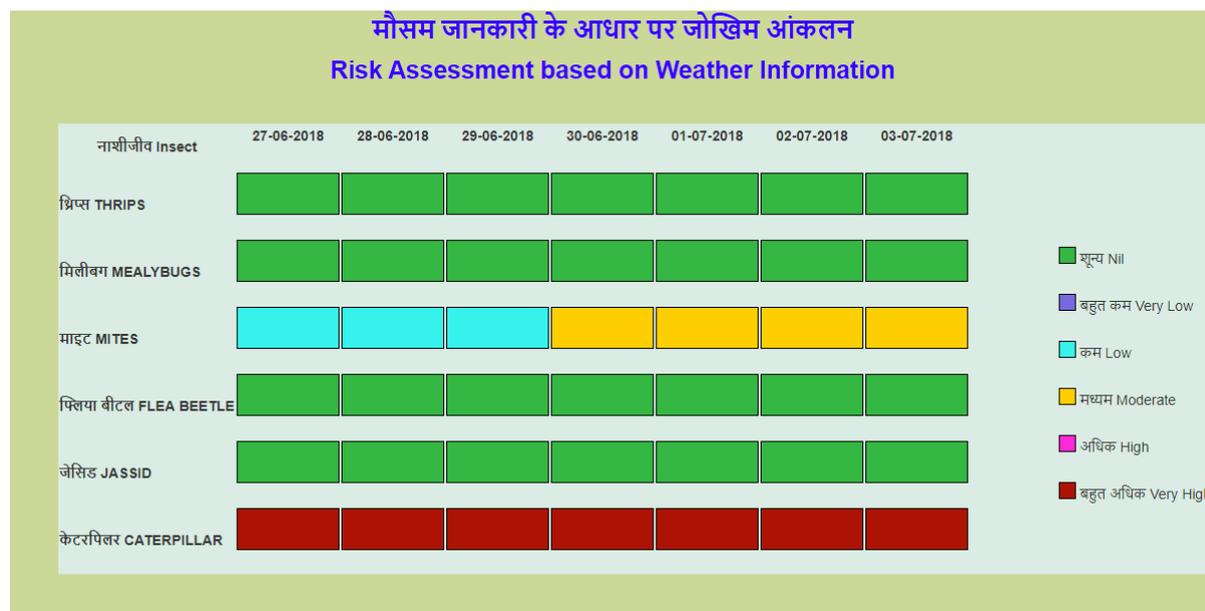
3) **Old vineyard:** In this gardens, change of weather encourages vegetative growth. Hence, shoot pinching and spray of potash and Bourdeaux mixture can help to keep the growth under control and also advance the shoot maturity.

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

Days after pruning	Risk of diseases			
	Downy mildew	Powdery mildew	Anthracnose	Others (specify)
73	moderate	low	moderate	Bacterial leaf spot

Heavy rains are expected on Tue-Wed. On Sunday-Monday the chances of rains are low and hence all management practices for downy mildew should be over by Monday. 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. Sprays of potassium salt of phosphoric acid @2g/L+Mancozeb @2g/L may be given where the shoot growth is ongoing for control of downy mildew. Trichoderma formulations @4-5g/L may be applied in case of latter but it should not be applied where copper formulations are used. There can be an increase in incidence of anthracnose in new shoots for which application of thiophenate methyl or carbendazim @ 1g/L is recommended. The application of mancozeb will also control bacterial leaf spot incidence, which might be there as the humidity increases.

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.
- Spraying of sulphur 80 WDG @ 2.0 gram per litre water is effective to manage mites.
- 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.
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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.