

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 (11/10/2018) -- Thursday (18/10/2018)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr)	R H%	
	Min	Max				Min	Max
Nashik	21-22	35-36	No Rain	Clear to Partly Cloudy	03-10	26-28	56-66
Pune	22	35-36	Pune Light Rain- Wed Phursungi, Narayangaon, Junnar, Loni Kalbhor, Uruli Kanchan, Yavat, Patas, Supa, Baramati No Rain	Clear to Partly Cloudy	03-13	27	62-76
Solapur	23-24	34-37	Solapur, Nanaj, Kati, Barshi, Pangri, Vairag, Osmanabad, Tuljapur, Kasegaon, Pandharpur, Latur, Ausa No Rain Atpadi Light Rain-Next Thu	Clear to Partly Cloudy	04-15	36-43	59-75
Sangli	22-23	34-36	Sangli, Miraj, Arag, Kagvad, Shirguppi, Tasgaon, Vite, Kavathe Mahankal Light Rain – Next Thu Palus, Valva, Palsi Moderate Rain – Wed, Light Rain – Next Thu Shetfal, Khanapur No Rain	Clear to Partly Cloudy	03-12	38-49	52-66
Bijapur	23-24	34-37	Bijapur, Tikota, Telsang, Chadchan No Rain	Clear to Partly Cloudy	05-18	20-26	52-69
Hyderabad	20-21	33-34	Hyderabad, Zahirabad, Medchal No Rain	Partly Cloudy	03-14	34-44	66-80

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: 26 days

b) Expected growth stage of the crop: - 3-5 leaf stage

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

Expected pan evaporation: 5 to 7 mm

1. The irrigation water application should be based upon the growth of the vines. Generally, under wapsa (field capacity) condition of the soil, donot irrigate the vineyard.
2. Most of the vineyards have already crossed cane maturity stage. The irrigation water application should be such as to avoid new shoot growth as this may lead to development of disease and pests. Emphasis should be to maintain existing leaf in healthy condition and avoid leaf fall till it is desired.
3. In many grape growing areas still, low rainfall has been received. The salts might not have been leached sufficiently. Wherever, sulphur / gypsum were used for removing sodium from exchange complex, there is need to flood the root zone. In case water is available in canal/ well, flood the root zone to leach the salts. Before flooding remove the mulch from the bunds.
4. During shoot growth stage (fruit pruning season), apply irrigation through drip @ 7000-9,800 L/ acre/ day. Further, in case vigour is more than desired, then reduce irrigation water application by half to 3500 - 4900 L/ acre.
5. 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)

Fruit pruning season

Pre-Pruning operation:

1. Soil, petiole and water reports will give information on extent of buildup of sodicity in soil. Apply gypsum @ 150-200 kg/acre to the soil for removal of sodium from the soil exchange complex. In case of calcareous soils, use Sulphur @ 100 kg/acre for similar purpose. Gypsum/sulphur should be properly mixed in soil and for better utilization efficiency it should be mixed with FYM and incorporated into soil. The soil should be moist. After approx. 20 days adequate irrigation should be provided to leach sodium from the soil.
2. If soils are calcareous in nature, then apply 50 kg sulphur between the vines in the soil atleast 15-20 days before pruning. The sulphur should be properly mixed in the soil for improving its efficacy in taking care of calcium carbonates. The efficacy of sulphur is improved if FYM/ Compost are applied along with sulphur and mixed in the soil.
REMEMBER: Sulphur should not be left on the surface of the bund. This will not help in removing calcium carbonate from the soil.
3. Remove mulch applied during Foundation pruning and loosen the soil for improving movement of water through the root zone to reduce salts accumulated in the root zone. Organic mulch can be mixed in the soil to improve the porosity of the soil.
4. Apply FYM/ other organic sources including green manuring atleast 12-15 days before pruning. Application of organics improves the nutrient and water retention in the root zone and reduces nutrient losses from the profile.
5. In calcareous soil, if planning to add single super phosphate, mix with FYM and then apply. This will improve phosphorus use efficiency as well as reduce the phosphorus fixation in calcareous soil.
6. Efforts should be made to reduce the soil pH (pH exceeding 7.6). Apply less decomposed organic matter sources like FYM or green manure like Dhaincha etc. to the soil before pruning. Elemental sulphur @ 25-50 kg/acre could lead to more reduction in soil pH values.

Shoot growth stage:

1. Based upon the soil test value, during shoot growth stage apply urea @ 15kg / acre this week in two splits. If the soil is calcareous, instead of urea apply ammonium sulphate @ 20 kg/ acre in two splits this week. Depending upon the crop vigour, regulate nitrogen application.
2. If the crop is between 5 leaf to prebloom stage, apply Zinc sulphate and Ferrous sulphate @ 15 kg/ acre based upon soil test value. 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 pruning, 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.

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

1. Nil

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

Established old garden:

In the vineyard where the pruning is completed and bunches are at pre-bloom stage, the removal of excess bunches need to be done. This will help to utilize maximum food material for nourishing growing bunch. Hence, removal of excess bunches and also excess shoots should be given priority. This practice should be followed during the period of 14 to 16 days after fruit pruning. Under the situation of rainfall or cloudy weather during this stage, incidence of downy mildew may become problem. Removal of excess shoots and also removal of side shoots may help to reduce the microclimate required for the build up of this disease.

Grafted vineyard:

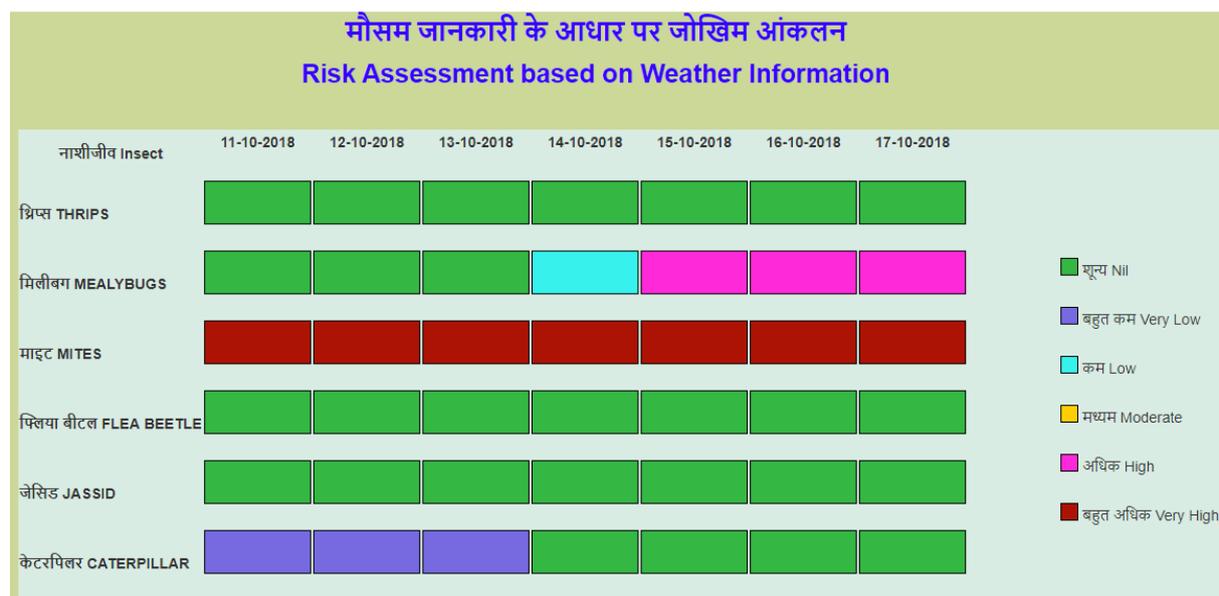
In these vineyards, removal of suckers on rootstock should be done regularly. This will help for easy and early bud sprouts. Many of the time, the growers are swabbing the buds with hydrogen cyanamide at lower concentration under the condition of delayed or no sprout. This results in drying of bud after sprouting. Hence, instead of swabbing of bud with hydrogen cyanamide, the growers are suggested to spray the buds with water twice in a day. This will help in increasing the relative humidity in the vineyard thereby increasing the percent bud sprouts.

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

Days after pruning	Risk of diseases			
	Downy mildew	Powdery mildew	Anthraco nose	Others (specify)
26	Low	Nil	Nil	Nil

Soil drenching with *Trichoderma* sp may be carried out. In Indapur region there is a probability of drop in temperature. If there is an occurrence of dew due to the lowering of temperature prophylactic spraying with potassium salt of phosphoric acid@2-3g/l or mancozeb@2.5g/l may be carried out.

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



- 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.
- 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.
- 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.

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.