

WEATHER DATA FOR THE PREVAILING WEEK

(Assumption: Fruit Pruning date- 15/09/2019)

I. WEATHER DATA FOR THE PREVAILING WEEK

Thursday (10/10/2019) – Thursday (17/10/2019)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr) Min-Max	R H%	
	Min	Max				Min	Max
Nashik	20-21	30-32	<p>Nashik, Ojhar, Pimpalgaon Baswant, Dindori, Vani Palkhed Thu & Sat- Drizzling, Fri-Good Rain, Sun & Next Thu Light Rain.</p> <p>Shirdi, Loni Thu - Fri Drizzling, Sat Good Rain, Sun & Wed - Next Thu Light Rain.</p> <p>Niphad, Kalwan, Devla, Satana Thu-Sun & Wed Drizzling, Next Thu Moderate Rain.</p>	Clear to Cloudy	02-18	48-64	82-93
Pune	20-22	30-31	<p>Pune, Phursungi Thu - Fri Good Rain, Sat-Sun & Wed Light Rain, Mon Drizzling, Next Thu Moderate Rain.</p> <p>Narayangaon, Junnar Thu Good Rain, Fri -Sat Moderate Rain, Sun & Wed - Next Thu Light Rain</p> <p>Loni Kalbhor, Uruli Kanchan, Yavat, Patas, Supa, Baramati Thu- Fri, Sun & Wed - Next Thu Good Rain, Sat Moderate Rain, Mon Drizzling</p>	Partly to Mostly cloudy	00-18	56-65	85-94

Solapur	22-23	30-32	<p>Solapur, Nanaj, Kati, Pandharpur, Kasegaon, Atpadi Thu& Wed - Next Thu Good Rain, Fri & Sun Moderate Rain, Sat & Mon Light Rain</p> <p>Vairag, Barshi, Pangri Thu to Sun & Next Thu Moderate Rain, Wed Good Rain</p> <p>Osmanabad, Tuljapur Thu, Sat & Wed Moderate Rain, Fri & Next Thu Good Rain, Sun Light Rain</p> <p>Latur, Ausa Thu- Fri & Next Thu Good Rain, Sat & Wed Moderate Rain, Sun Light Rain</p>	Partly to Mostly cloudy	02-17	56-67	84-94
Sangli	22	29-32	<p>Sangli, Miraj, Shirguppi, Kagwad, Arag, Tasgaon, Palus, Valva, Kavthe Mahankal, Vita, Palsi Thu, Mon & Next Thu- Good Rain, Fri, Sun & Wed- Moderate Rain, Sat- Light Rain</p> <p>Shetfal, Khanapur Thu, Wed & Next Thu - Good Rain, Fri & Mon- Light Rain, Sat & Sun- Moderate Rain</p>	Partly to Mostly cloudy	00-19	62-68	87-97
Bijapur	21-22	29-31	<p>Bijapur, Tikota, Telsang, Chadchan Thu, Mon, Wed & Next Thu- Good Rain, Fri & Sat- Light Rain, Sun- Moderate Rain</p>	Partly to Mostly cloudy	01-18	62-72	89-97
Hyderabad	21-22	28-30	<p>Hyderabad, Medchal, Zahirabad Thu To Next Thu- Moderate to Good Rain.</p>	Partly to Mostly cloudy	00-14	73-79	94-100

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: 25

b) Expected growth stage of the crop: - Early pruning stage

III) Nutrient and Irrigation Management (Dr. A K Upadhyay)

Expected pan evaporation: Nil - 4 mm

Amount of irrigation advised:

1. In many areas rainfall has been forecasted. Previous week also many areas have received abundant rains.
2. Most of the unpruned vineyards have already crossed cane maturity stage and mostly the soil is at or above wapsa condition. Do not irrigate the vineyard as any new leaf/ shoot growth will lead to development of disease and pest. Emphasis should be to maintain existing leaf in healthy condition and avoid leaf fall till it is desired.
3. In areas of Solapur, Sangli and Bijapur the ground water used for irrigation contains more salt and less and poor quality irrigation water was used during Foundation pruning season, remove the mulch and allow the bund/ rootzone to be fully wet with water received from rains for leaching of salts for subsequent fruit pruning.
4. In areas of Solapur, Sangli and Bijapur where less rainfall was received, poor quality water was used and the quantity of available water is less, it is advised to flood the root zone (only) with water to leach out the salts and wet the entire soil depth before pruning and then cover with mulch. Thereafter irrigate as per availability of water.

Shoot growth stage:

1. During shoot growth stage (fruit pruning season), apply irrigation through drip @ 5000- 6000 L/ acre/ day. Further, in case vigour is more than desired, then reduce irrigation water application by half to 2500 - 3000 L/ acre.
2. Still if growth is more, stop the irrigation till such time the growth is brought under control and then start irrigation.
3. 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.

Nutrient management:

1. Due to continuous rains earlier and also improper potassium management, the canes may not be mature. It is advised to spray SOP @ 5g/L twice followed by 15-20 kg SOP/acre through drip in two splits.
2. 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.

Pre-pruning operations – Fruit pruning season:

1. In many of the grape growing areas in Nasik, Sangli and other areas, continuous spells of rains were received, the soils are already saturated. This has affected the rooting activity. Due to prolonged saturation, the roots may have started decaying. **Do not disturb the soil in the root zone even if pruning is being taken up. Wait for the soil to come to the wapsa condition before any soil related intervention has to be done.**
2. In case pruning is planned during October, raise Sunnhemp or Dhaincha for green manuring purpose.
3. Test the soil and irrigation water, to plan for nutrient and water management during fruit pruning season.
4. 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. The application should be alongwith FYM/compost etc. They should be mixed in the soil and not left on the top.
5. 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.
6. In case in calcareous soils, if SSP is applied as basal dose, mix with FYM/compost etc. to avoid phosphorus fixation.
7. 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.

Fruit pruning season:

1. In case organic fertilizers are applied, check the C:N ratio. Lower the C:N ratio more the nitrogen release, hence possibility of enhanced growth. Control nitrogen application based upon growth of vine.
2. 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 @ 25 kg/ acre in three splits this week. Depending upon the crop vigour, regulate nitrogen application.
3. If sodicity problem is there, apply 10 kg Sulphate of potash per acre in 2 splits this week.
4. Until and unless leaves are fully developed do not go for any foliar application of nutrients. It will lead to wastage of spray.
5. The quantity of nutrients to be applied through foliar, depends upon canopy size.
6. 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.
7. Apply 10 kg Magnesium sulphate per acre if the crop is between 5 leaf to prebloom stage.
8. If soils are calcareous, spray Sulphate of potash and Magnesium sulphate @ 2-3g/L depending upon leaf age during prebloom stage.

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

Due to rains this week, pruning may be postponed. If somebody wants to prune vineyards upto 20th Oct, it is time to carryout defoliation.

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

Problems of new growth in vineyard:

During the last week, the rainfall continues thereby increasing the moisture in the soil particle of the root zone. During day time, the temperature also increased by which the relative humidity was also increased. This situation was favorable to increase the gibberellins in the vine. The increased gibberellins supported to increased shoot vigor. Under this situation, high shoot vigor is experienced. However, with the continuous rains during these days, the incidence of anthracnose and downy mildew was observed in the vineyard. The organism responsible for infection if not controlled in time may enter into the matured cane thereby making positive entry into the bunch after the fruit pruning.

Hence, control of anthracnose should be taken seriously. Just removal of green portion from matured cane and throwing out from the field will help to control the disease to a larger extent. Since the

relative humidity in the atmosphere is high, the new shoots will again grow. Hence, spray of bourdeaux mixture @ 1% concentration will help to leaf scorching on this new growth. Due to this the new growth will slow down.

Grafting success and problems:

In newly grafted grape vineyard, the incidence of downy mildew is more on emerging shoots. The grafting was done on two shoots and both shoots were tied to bamboo with the help of sutali. On each shoot, two buds were retained, hence from four buds four shoots were developed in one place. The growing shoots at about 5-7 leaf stage, making the dense canopy in graft joint zone. With the increase in humidity and temperature, the incidence of downy mildew is likely to increase. This will result into complete failure of grafting success. Hence, removal of 2-3 basal leaf, retention of only healthy and straight growing shoot will help to reduce the microclimate in this zone so that the disease inoculum will be reduced.

VI. Disease management (Dr. Sujoy Saha)

Days after pruning	Risk of diseases			
	Downy mildew	Powdery mildew	Anthracnose	Others (specify)
25	HIGH	NIL	LOW	Bacterial leaf spot Rust

For downy mildew control application of potassium salt of phosphoric acid @4g/l +Mancozeb @2g/L may be done. Please note use of copper should not be done where potassium salt of phosphoric acid is used. Mancozeb will also give an additional protection against bacterial leaf spot disease. In regions where cloudy conditions are prevailing, but with high humidity, foliar application of Bacillus sp @ 2g/L or Trichoderma sp @ 4-5g/L may be done. Care should be taken not to apply biocontrol agents where copper formulations are applied. In pre-pruned areas application of chlorine-di-oxide should be done@2ml/L in the evening hours.

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

Preventive plant wash, on stem and cordons, of biocontrol agents such as Verticillium, Metarhizium, Beauveria may be given for caterpillar and mealybug management.

In case of thrips or caterpillar infestation, application of fipronil 80 WG @ 0.0625 g per litre or emamectin benzoate 5 SG @ 0.22 g per litre water is effective.

For the management of flea beetle, imidacloprid 17.8 SL @ 0.4 ml/L or lambda cyhalothrin 4.9 C @ 0.5 ml/L water may be used.