WEATHER DATA FOR THE PREVAILING WEEK

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

I. WEATHER DATA FOR THE PREVAILING WEEK

Thursday (24/10/2019) – Thursday (31/10/2019)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr) Min-Max	R H%	
	Min	Max				Min	Max
Nashik	20-21	26-30	**Nashik, Ojhar, Pimpalgaon Baswant, Dindori, Vani Palkhed** Thu, Mon, Wed- Light rain. Sat, Sun, Tue & Next Thu- Moderate rain. **Shirdi, Loni** Thu to Sun & Next Thu- Good rain. Mon to Wed- Moderate rain. **Niphad, Kalwan, Devla, Satana** Thu, Sat, Sun & Wed- Good rain. Fri, Mon & Tue- Light rain. Next Thu- Moderate rain.	Mostly Cloudy	04-27	60-76	90-94
Pune	20-21	26-29	**Pune, Phursungi** Thu & Mon- Good rain. Fri & Sat- Moderate rain. Sun & Tue To Next Thu- Light rain. **Narayangaon, Junnar** Thu, Fri & Mon- Good rain. Sat, Sun, Tue & Wed- light rain. Next Thu- Moderate rain. **Loni Kalbhor, Uruli Kanchan, Yavat, Patas, Supa, Baramati** Thu to Sat & Next Thu- Good rain. Sun, Mon & Wed- Moderate rain. Tue- Light rain.	Mostly cloudy	04-25	65-76	89-92
Solapur	22	28-30	**Solapur, Nanaj, Kati, Pandharpur, Kasegaon, Atpadi** Thu to Sat, Mon & Wed- Good rain. Sun & Next Thu- Moderate rain. Tue-Light rain.	Partly to Mostly cloudy	05-23	65-77	90-93

			Vairag, Barshi, Pangri Thu to Sat & Wed- Good rain. Sun to Tue & Next Thu- Moderate rain. d **Osmanabad, Tuljapur, Ausa** Thu to Sat & Mon- Good rain. Sun, Tue & wed- Moderate rain. Next Thu- Light rain**.** **Latur** Thu, Fri, Sun, Tue & Wed- Moderate rain. Sat & Mon- Good rain. Next Thu- Light rain.				
Sangli	21-22	26-29	**Sangli, Miraj, Shirguppi, Kagwad, Arag** Thu & Fri- Good rain. Sat to Next Thu- Light rain. **Tasgaon, Palus, Valva** , **Kavthe Mahankal**, **Vita, Palsi** Thu, Fri & Sun-Mon- Good Rain. Sat, Tue & Next Thu- Moderate Rain. Wed- Light Rain. **Shetfal** Thu, Sun, Tue to Next Thu- Moderate Rain. Fri & Mon- Good Rain. Sat- Drizzling. **Khanapur** Fri, Sat & Next Thu- Light Rain. Sun to Tue- Moderate Rain. Wed- Good Rain.	Partly to Mostly cloudy	06-26	67-82	91-93
Bijapur	21	27-29	**Bijapur, Tikota, Telsang, Chadchan** Thu- Sun Light to Moderate Rain Mon onwards Good Rain	Partly to Mostly cloudy	07-25	64-79	91-96
Hyderabad	21-22	28-29	**Hyderabad, Medchal, Zahirabad** Thu-Sun & Wed-Next Thu- Good Rain. Mon-Tue Moderate Rain.	Partly to Mostly cloudy	04-16	75-82	97-98

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: 39

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

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

Expected pan evaporation: 0 - 2 mm

Amount of irrigation advised:

1) Almost all areas are forecasted to receive rains. Previous week also many areas have received abundant rains.
2) No need to apply irrigation as the soils are already saturated with water either during this week and rains are forecasted that is likely to further add to that.

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 if soil is in wapsa condition.
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.
3) 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. **Donot 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.**
4) As the rains are forecasted and the soil is already saturated with water, no basal application of fertilizers as well as fertigation should be followed.
5) If the rootzone is saturated then donot apply any fertilizer. Growth will be slow, donot worry. As and when the soil comes into field capacity (wapsa), root activity will increase and the growth will progress. After that only fertilizer should be applied.
6) Twice foliar spray of SOP @ 2-4 g/L in this week depending upon the canopy of the vines should be carried out.
7) In case leaf yellowing is observed due to minimal root activity, spray urea (0.5g/L) + zinc sulphate (0.25g/L) followed by Magnesium sulphate @ 2-3g/L at 5-7 leaf stage during prebloom stage.
8) **Petiole nutrient testing: At 70% capfall stage, petiole samples should be taken for nutrient analysis. The leaf opposite the bunch should be removed for sampling.**

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

1) Under the continuous rainfall situation, the gibberelins in vine increases thereby increasing the chances of bunch conversion into fillage. Under such condition, external application of cytokinin based PGR eg. 6BA will support to stop the fillage.
2) Under the continuous rainfall condition, GA3 spray at pre-bloom stage (parrot green color stage of a bunch) should be avoided. The spray can be given only after the clear weather. Under late

condition, the concentration can be increased form 10 ppm to 15 ppm. To increase the efficiency of GA3, use citric acid or urea phosphate to bring the pH of spray solution at 5.5 to 6.0.

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

Problems of diseases in the grape vineyard:

During the last week, the continuous rain is experienced in majority of the grape growing regions. The continuous rainfall resulted into reduction in maximum and minimum temperature and increase in relative humidity in the grape vineyard. This condition has created helped in increase in inoculum of downy mildew and also on the new shoots/growth anthracnose. In spite of continuous sprays, the growers are unable to control the disease. The possible reasons for these conditions are as below.

1) **New growth on vine before fruit pruning:**

In majority of the vineyards, new shoot (before leaf fall/fruit pruning) are found infected with anthracnose, bacterial blight or downy mildew diseases. Since the vine is not being pruned immediately, the control of diseases on such vine is generally neglected. The inoculum load of these diseases is more on such vines. The neighboring plot if pruned, gets inoculum immediately.

Following measures are to be followed.

i) These plots are to be sprayed with contact fungicides or with 1% Bourdeaux mixture so as to control the disease.

ii) In case of larger area, pruning should be started form the west side or along with the wind direction.

iii) New growth should be removed immediately.

2) **The vineyard where fruit pruning is done:**

In this vineyard, even after continuous sprays, the disease control is becoming difficult. Following reasons might be responsible.

1) Increase in humidity in the canopy
2) Reduced or no sunlight for absorption of fungicides.
3) Late removal of excess shoots.
4) Use of only contact fungicides in the vineyard

Following measures are suggested.

i) Removal of excess shoots immediately after bunches are visible.

ii) Removal of 2-3 basal leaf on each shoot.

iii) Spray systemic fungicides after 4 or 5 leaf. This will develop the resistance power of leaf.

iv) Under the condition of continuous rains, follow dusting instead of spray.

v) Use sticker or spreader under rainy days spray.

VI. Disease management (Dr. Sujoy Saha)

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

For downy mildew control application Metiram 44% +Dimethomorph 9% WG @ 2.5g/L or Dimethomorph@1g/L + Mancozeb@2g/L(tank-mix) L or Iprovalicarb+propineb @ 2.25g/L or Mandipropamid@ 0.8g/L or Benalaxyl-M 4% +Mancozeb 65% WP @2.75g/L should be applied. In case of high humidity areas where rains are prevalent, application of Fosetyl-Al @1.5-2g/L or 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. Dusting of Mancozeb @ 4-5kg/acre during the rains may be done. No spraying should be done while the rains are on, but may be done only when there is an open sky for two hours. 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 Sangli region where anthracnose is prevalent application of thiophenate methyl @1g/L should be continued. A mineral oil spray may be given if water accumulates in the bunches or if the vines are in late flowering stage.

VII. Insect and Mite Pest Management (Dr. D.S. Yadav)

- Caterpillar (*Spodoptera litura*) infestation may increase in most of the grape areas as humidity is high. Caterpillars may chew on buds and new sprouts. For the management of caterpillars, emamectin benzoate 5 SG @ 0.22 g/litre or fipronil 80 WG @ 0.06 g/litre water may be given during night.
- Remove loose bark and give preventive plant wash with buprofezin 25 SC @ 1.25 ml/litre water. At 15 days interval, plant wash with entomopathogenic fungi viz. *Metarhizium, Beauveria* and *Lecanicillium* may be useful for controlling mealybugs and ants.
- Give soil drenching with *Metarhizium* just after fruit pruning to manage thrips, ants and flea beetle stages in soil.
- Do not spray any broad spectrum insecticides such as chlorpyrifos, dichlorvos, methomyl, profenophos, etc. for mealybug control. Higher humidity will favour development of natural enemies which will slowly kill mealybugs. In case chemical spray is required, prefer buprofezin 25 SC @ 1.25 ml per litre of water for plant wash.
- Incidences of new species of stem borer (red colour larva) may be noticed under bark in Sangali, Solapur, Nashik, Pune, Bijapur grape areas. Remove the loose bark and give good plant wash mainly targeting cordons and main trunk with broad spectrum insecticides, for example, lambda cyhalothrin 5 CS @ 2.5 ml/l.