WEATHER DATA FOR THE PREVAILING WEEK

(Assumption: Fruit Pruning date- 15/04/2019)

I. WEATHER DATA FOR THE PREVAILING WEEK

Thursday (15/08/2019) – Thursday (22/08/2019)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr)	R H%	
	Min	Max				Min	Max
Nashik	22-23	25-27	**Nashik, Ojhar, Pimpalgaon Baswant, Dindori, Vani** Thu- Light Rain, Fri- onwards Good Rain **Palkhed, Kalwan, Devla, Niphad,Shirdi, Loni, Satana** Sat Good Rain	Mostly Cloudy	04-15	77-85	92-96
Pune	23	25-28	**Pune, Phursungi, Narayangaon, Junnar** Fri Onward Good Rain **Loni Kalbhor, Uruli Kanchan, Yavat, Patas, Supa, Baramati** Thu-Sun Moderate Rain & Mon onward Good Rain	MostlyCloudy	01-14	76-84	91-95
Solapur	22-25	27-30	**Solapur, Nanaj, Kati, Vairag, Barshi, Pangri, Pandharpur, Kasegaon** Thu- Thu Light to Moderate Rain **Osmanabad, Tuljapur, Latur, Ausa** Thu- Sun Light Rain & Mon onwards Good Rain **Atpadi** Fri onward Good Rain	Partly Cloudy	03-14	61-65	87-89
Sangli	22-24	26-29	**Sangli,Palus, Valva, Shirguppi, Kagwad, Miraj, Arag, Tasgaon, Kavathe Mahankaal, Vita, Palsi** Fri onward Good Rain **Khanapur, Shetfal** Thu- Sat Light Rain & Sun onwards Moderate Rain	Partly to MostlyCloudy	02-15	72-78	92-96

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: 124

b) Expected growth stage of the crop: - Initiation of cane maturity to cane maturity

Expected pan evaporation: Nil to 3 mm

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

Amount of irrigation advised:

1. All the grape growing regions are forecasted to receive from light to good rains. In general, there will not be any need to provide irrigation in those areas which have witnessed continuous rains since last 3-4 days.
2. As good rains are forecasted in many areas, remove the mulch and allow the bund/ rootzone to be fully wet with water for leaching of salts. This is especially important for the following conditions:
   i) Iin Solapur, Sangli and Bijapur where the ground water used for irrigation contains more salt and less and poor quality irrigation water was used during Foundation pruning season.
   ii) Fruit pruning is planned in August especially in Satana, Bori and Indapur.
3. The vineyards are at Cane maturity and Fruit Development stage. Provide irrigation through drip @ 2000 - 3000 litre/ha/day in case no rains are received and the soil moisture is below wapsa condition and cloudy weather prevails.

NUTRIENT MANAGEMENT

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. Apply magnesium sulphate @ 10 kg/acre in two splits followed by one foliar spray @ 3-4g/L.
3. As the rains are in progress in many areas, 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.
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.

Pre-pruning operations – Fruit pruning season:

1. In case pruning is planned during September, raise Sunnhemp or Dhaincha for green manuring purpose.
2. 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.

3. In case in calcareous soils, if SSP is preferred and applied as basal dose, mix with FYM/compost etc. to avoid phosphorus fixation.
4. Test the soil and irrigation water, to plan for nutrient and water management during fruit pruning season.
5. In areas where rains have not been received and the irrigation water availability is less, it is suggested 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.

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

NIL

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

Considering the growth stage and weather, the growers are advised for the following.

Rootstock planting:

i) Apply urea @5kg/acre once through drips for succulence of shoots.

ii) Pinch the excess shoot growth after three feet height.

iii) Tie the shoots to the bamboo with the help of sutali.

iv) Retain only three selected shoots of rootstock.

New vineyard:

i) Apply potash @ 4-5kg/acre basis so as to arrest the vegetative growth and encourage cane maturity.

ii) The incidence of downy mildew may be more during this week. Hence, removal of side shoots, pinching the growing shoot tip, removal of 2-3 basal leaf, etc will help to control the disease.

iii) Spray Bordeaux mixture @ 0.5% to initiate cane maturity and control diseases.

Old vineyard:

i) Shoot pinching at regular interval will help to advance the cane maturity. This will also help to control anthracnose.

ii) Spray potash @ 4-5g/L water depending upon the shoot maturity level. Application through basal dose will also help to control the shoot growth.

iii) Remove 2-3 basal leaf on the growing shoot. This will avoid build-up of micro climate thereby reducing the chances of disease incidence.

iv) Spray Bordeaux @ 0.75 to 1.0% depending upon the cane maturity. This will help in controlling the disease as well as advancing cane maturity.

I. Disease management (Dr. Sujoy Saha)

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

The preceding heavy rains during last week has caused waterlogging in many areas and the incidence of diseases is likely to increase. Anthracnose may be incident on the new leaves and Thiophenate methyl or Carbendazim @1g/litre should be applied for its control. If the anthracnose infection is heavy application of Fluopyram+Tebuconazole @0.5ml/litre may be done at 5-7 days interval. For downy mildew control application of potassium salt of phosphoric acid @4g/l +Mancozeb @2g/L may be done. Mancozeb will also give an additional protection against bacterial leaf spot disease. There should be no confusion regarding bacterial spot symptoms on leaf (fig 1a) and anthracnose (fig 1b) as control measures are different. In vines which are not waterlogged in Sangli, the incidence of rust is heavy and immediate control measures need to be taken. Application of triazoles like hexaconazole@1ml/L or tetraconazole @ 0.75 ml /L or flusilazole@ 12.5ml/100L or difenconazole@0.5ml/L needs to be done at 5 days interval to control the disease. Application of tebuconazole@0.5ml/L or in combination with trifloxystrobin @0.175ml/L will also be helpful in controlling the disease. In vines where rust is yet to be incident, application of chlorothalonil@2g/L or copper oxychloride/hydroxide @2.5g/L should be done as a preventive measure. In fact, after two application of triazoles, application of chlorothalonil or copper oxychloride/hydroxide needs to be done to prevent secondary spread.

Fig1(a)

Fig1(b)

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

Days after pruning	Risk of pests				
	Mealybug	Mite	Thrips	Caterpillar	Flea beetle
Cane maturity and afterwards	Moderate	Moderate	Low	High	Low

- In case of 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.
- Mite infestation may start appearing, therefore, monitor the vineyards carefully. If mite infestation is observed, sulphur 80 WDG @ 1.5-2.0 gram per litre or abamectin 1.9 EC @ 0.75 ml/l water is effective.
- Remove excess shoot to manage thrips populations.
- Vineyards may have moderate mealybug infestation as well. However, higher 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.