WEATHER DATA FOR THE PREVAILING WEEK

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

I. WEATHER DATA FOR THE PREVAILING WEEK

Wednesday (03/07/2019) – Wednesday (10/07/2019)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr)	R H%	
	Min	Max				Min	Max
Nashik	23	26-27	**Nashik, Ojhar, Pimpalgaon Baswant, Palkhed, Dindori, Vani, Niphad** Thu onward Good Rain **Kalwan, Devla,Satana** Wed- Moderate Rain & Fri onward Good Rain	Cloudy	19-29	80-86	92-94
Pune	23	26-27	**Pune, Phursungi, Loni Kalbhor, Uruli Kanchan, Yavat, Patas, Supa, Narayangaon, Junnar** Wed-Thu Moderate Rain & Fri onward Good Rain **Baramati** Thu onward Moderate to Good Rain	Cloudy	15-28	84-87	90-91
Solapur	22-23	27-29	**Solapur** Wed-Sun Light Rain & Mon- Thu Moderate Rain **Nanaj, Kati, Vairag, Barshi, Pandharpur, Kasegaon –** Wed & Sun onward- Moderate Rain, Thu- Sat Light Rain **Latur, Ausa, Pangri, Osmanabad, Tuljapur** Wed-Wed Light to Moderate Rain **Atpadi** Fri onward Good Rain	Cloudy	19-32	69-78	87-91

Sangli	23	27-28	**Sangli, Miraj, Arag, Shirguppi, Kagwad** Wed & Fri onward Good Rain **Walva, Tasgaon, Palus, Palsi, Kavathe Mahankaal, Vita** Fri onward Good Rain **Khanapur** Wed Good Rain & Thu onward Moderate Rain **Shetfal** Wed- Wed Moderate Rain	Cloudy	15-35	68-73	84-90
Bijapur	23	28-30	**Bijapur, Tikota, Telsang, Chadchan** Wed- Wed Fri Light to Moderate Rain	Cloudy	21-39	64-74	87-89
Hyderabad	23-24	30-31	**Hyderabad Wed –** Fri Drizzling to Light Rain & Sat Onward Moderate Rain **Zahirabad, Medchal** Wed - Fri Moderate Rain & Sat Onward Good Rain	Cloudy	21-34	64-70	87-89

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: 82

b) Expected growth stage of the crop: - Sub cane development

Expected pan evaporation: 3-5 mm

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

Expected pan evaporation: 3 to 5 mm

Amount of irrigation advised:

1. In general, there will not be any need to provide irrigation in areas which have witnessed continuous rains since last 3-4 days.

2. 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.
3. If continuous good rains are forecasted, 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) In Solapur, Sangli and Bijapur where the ground water used for irrigation contains more salt.
    ii) Early pruning is planned either in July or August.
4. In case of April pruned vineyards, the vines are at **Cane maturity and Fruit Development** stage. Provide irrigation through drip @ 2000 - 3000 liter/ha/day in case no rains are received.
5. In case of Late pruned vineyards (May), the vines are in **Fruit bud differentiation stage**. Provide irrigation through drip @ 2000 - 3000 liter/ha/day in case no rains are received.

NUTRIENT MANAGEMENT:

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. 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.
3. 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.

NOTE:

In some vineyards, problem of yellowing of the leaves in the margin along with vein reddening is observed. This is due to potassium deficiency. The deficiency of

potassium can be due to insufficient potassium application or calcareous soils affecting the potassium uptake. It could also be due to sodicity problem in the vineyard. This deficiency can lead to more powdery mildew infestation and sucking pest (leaf hopper) incidence.

Under such situation, Potassium deficiency can be corrected by a combination of foliar spray (minimum three to four) of 0.5% sulphate of potassium (5g/litre SOP) and soil application of potassium fertilizers. In sunny days the spraying should be done in morning or evening when humidity is high and temperature is low. Spraying during day time when temperature is high and humidity is low reduces potassium uptake into the leaves. Apply 25 to 50 kg SOP /acre as single dose or via fertigation (in 3 to 4 splits) within one week, depending upon extent/severity of potassium deficiency.

However, for any measures to succeed, calcareous or sodicity conditions should be managed, then only appreciable effect of potassium application can be observed

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

Nil

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

The temperature in the grape growing areas has lowered down to about 30ºC. With this the relative humidity in the atmosphere has been increased to about 90%. Considering the present situation, the growers are advised for the following.

Rootstock planting:

i) Apply DAP @ 25-30 kg/acre basis and Urea @ 5.0 to 6.0 kg/acre as basal dose of fertilizer.

ii) Take a fresh re-cut of rootstock near the ground leaving 2-3 buds if the growth is not satisfactory.

iii) Planting of rootstocks in failed position as a part of gap filling immediately.

iv) Under heavy rainfall condition, rust incidence may be experienced by the grape growers. Spray copper fungicides.

New vineyard:

i) The weather condition is favorable for increasing the growth. Hence, make another instalment of cordon. This will help to develop 3-4 new fruitful canes.

ii) Allow the last growing shoot on a cordon and tie on the wire with sutali.

iii) Apply nitrogen and phosphorous based fertilizers to encourage the growth.

iv) Pinch the new growth at about 3-4 leaf.

v) Spray 6 BA and Uracil for fruit bud differentiation.

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

vii) 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.

Old vineyard:

i) Do not allow the shoot growth. This will delay cane maturity. Hence, shoot pinching, removal of side shoots and removal of 2-3 basal leaf as it is done in case of new vineyard. This will help to reduce the microclimate in the canopy.

ii) The chances of downy mildew and anthracnose on new shoots will be more. Hence, open canopy can be the option. Spray of Bourdeux @ 0.5% may help to control the disease as well as advancing cane maturity.

VI. Disease management (Dr. Sujoy Saha)

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

Good rains are predicted in major grape areas. Application for downy mildew control needs to be done viz. application of potassium salt of phosphoric acid @4g/l +Mancozeb @2g/L. Mancozeb will also give an additional protection against bacterial leaf spot. To protect from anthracnose, spray with thiophenate methyl may be given @1g/L of water. Use of silicon-based adjuvants may be done for better efficacy of fungicides. It is to be noted that spraying should be done only when there is a clear sky of about 1-2 hrs.

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

Days after pruning	Risk of pests				
	Mealybug	Mite	Thrips	Caterpillar	Flea beetle
Sub cane development	High	Moderate to High	Low to Moderate	High	Low

- Due to reduction in temperature and cloudy conditions, mealybug infestation may be noticed. Use of broad spectrum insecticides should be avoided for mealybug control. Buprofezin 25 SC @ 1.25 ml/l water may be given to manage mealybugs. Preventive plant wash, on stem and cordons, of biocontrol agents such as *Verticillium, Metarhizium, Beauveria* may be given.
- 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.
- 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.