Advisory on grapes (To be updated on Wednesday evening)

(Assumption: Pruning date-15/04/2016)

I. WEATHER DATA FOR THE PREVAILING WEEK

II. Thursday (28/07/2016)- Thursday (04/08/2016)

Location	Temperature		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr)	R H%	
	Min	Max				Min	Max
Nashik	22-23	24-27	**Thu-Thu Light Rain** Niphad, Pimpalgaon Baswant, Palkhed **Wed Light Rain** Shirdi, Yeola, Satana. Rains likely Eastern Western part of Nasik upto 4th Aug	Cloudy Sun- Wed	11-27	81-89	95-97
Pune	22-23	25-27	**Fri- Mon and Wed** **Light to Medium Rain** Pune, Phursungi, Narayangaon, Junnar, **Sun-Mon and Wed** **Light Rain** Yavat, Patas, Baramati.	Cloudy Sat Onwards	11-26	72-81	89-94
Solapur	23	28-30	**Thu-Thu** **Light Rain** Solapur, Nanaj, Vairag, Barshi, Kasegaon, Pangri, Kati, Kari, Atpadi Tuljapur Latur, Ausa, Osmanabad Pandharpur	Partly Cloudy	09-29	62-67	84-92
Sangli	22-23	25-28	**Thu-Thu Light Rain** Sangli, Miraj, Shirguppi, Arag, Bedag, Kagwad, Shirol. **Drizzling to Very Light Rain in other area's**	Cloudy Sat Onwards	11-31	73-81	91-94
Bijapur	22	27-29	**Light Rain** **Thu and Sat** Bijapur,Tikota, Telsang **Sat- Sun** Chadchan	Partly Cloudy	16-35	68-85	88-96
Hyderabad	22-23	27-30	**Light Rain to Medium Rain** **Thu- Thu** Medchal, Rainlaguda, Hyderabad, Zahirabad	Cloudy	05-29	73-74	91-96

III.

II. a) Days after pruning:

b) Expected growth stage of the crop

90-140days-Build up of storage

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

Expected pan evaporation: 0-5 mm

Amount of irrigation advised:

Presently the vines are at Cane maturity and Fruit Development stage. In general there will be no need to apply irrigation as the soils are already at field capacity (wapsa condition). Irrigate the vineyard only if the vines start showing moisture stress i.e. leaf cupping/ curling. Then, apply irrigation through drip @ 2800 litre/acre/day.

IV. Nutrient requirement (Dr. A.K. Upadhyay)

Through fertigation:

1. Potassium needs to be applied through drip during this stage.
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.
3. 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.
4. In case pruning is scheduled during August, green manuring with Sunnhemp / Dhanicha is advised. In sodic soils, dhaincha is preferred.

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

No application of growth regulators is required during the ensuing week

VI. Any specific recommendation for canopy management (Dr. R.G. Somkumar)

1. **Timely pruned vineyard**: Under the condition of light to medium rains with R. H. more than 80%, there will be new growth at faster rate. This will delay the cane maturity. Control of shoot growth by shoot pinching will help to control the growth. Spray of soluble grade potash (0:0:50) @ 4-5g/litre water2-3 times may also help to advance the cane maturity.
2. **Late pruned vineyard**: The late pruned vineyard will face the problem of shortage of sunlight required for effective fruit bud differentiation. Hence, repeated doses of phosphorous with minimum quantity through spray and drip along with recommended growth regulators (6-BA and uracil) will help to achieve fruitfulness. The growth may be arrested by reduction of irrigation (under no rainfall condition) and shoot pinching.
3. **Rootstock planted gardens**: Under the situation of weak and reduced growth of rootstock plants, shoot thinning retaining only three shoots will help to achieve shoot thickness required for grafting. Selective application of phosphatic and nitrogenous fertilizer is required at this stage.

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

Canopy clearance is a must for the management of powdery mildew. The lower leaves should be tipped so that the spray of the fungicides can reach deep inside the canopy for disease management. If powdery mildew is present in the field, dusting of sulphur 80%WG @ 5-6 kg /acre should be done. A follow-up application of chitosan 10% @ 2ml/L should be done for better efficacy of the sulphur. In the Western Nashik region and Sangli, where there is a possibility of light rains, incidence of downy mildew and anthracnose may be observed. Potassium salt of phosphorous acid 2-3 g/L + mancozeb 2.0 g/L as tank mix is recommended to control both the diseases. In and around Solapur region, bacterial spot may be seen which can be effectively controlled by Mancozeb 75%WP@2-2.5g/L.

VIII. Insect and Mite management. (Dr. D.S. Yadav and Dr B.B. Fand)

Thrips	Caterpillar	Mealybug	Jassids	Flea beetle	Mites
Low	Very High	Low	Low	Low	Low

Take care of leaf eating caterpillar in your vineyards:

- The prevalance of high relative humidity coupled with drizzling rains and cloudy conditions in majority of the grape growing areas may increase the risk for infestation of leaf eating caterpillar (*Spodoptera litura*).
- *Spodoptera litura* Nuclear Polyhedrosis Virus (SlNPV) @ 250 LE/ha may be helful in controlling the caterpillars
- Need based spraying of relatively safer chemicals: Emamectin benzoate 5 SG @ 0.22 g/liter of water can effectively control the larvae of leaf eating insects

Other important considerations:

- The high relative humidity coupled with drizzling rains and cloudy conditions are congenial for population built up of natural enemies like predatory coccinellids and parasitoids that help to check the infestations of mealybug in vineyards. Hence, use of broad spectrum insecticides that adversely affect the NEs of insect pests should necessarily be avoided. Alternatively, use of entomogenous fungi, *Metarhizium anisopliae* @ 10^6 cfu/ml will be helpful. The prevailing high humidity will help in establishing this entomogenous fungi and managing infestations of both mealybugs and ants associated with them.
- For the management of mites if required, sulphur 80 WDG @ 2.0 g/L water is effective.
- **Remove excess shoot growth to check thrips population**: Excess shoot growth due to high humidity conditions may lead to build up thrips population and reduce coverage during insecticide applications