मौसम पूर्वानुमान आधारित साप्ताहिक सलाह
Weather Forecast Based Weekly Advisory

(Assumption: Fruit Pruning date - 10/10/2016)

I. Weather Data for the Prevailing Week

Thursday (20/10/2016) - Thursday (27/10/2016)

Location	Temperature		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr)	R H%	
	Min	Max				Min	Max
Nasik	18-20	31-32	**No Rain** Nasik, Ojhar, Pimpalgaon Baswant, Vani, Palkhed, Dindori, Shirdi, Loni, Rahata, Niphad, Kalwan, Devla, Lasalgaon, Satana.	Clear	02-10	31-37	69-83
Pune	19-20	34-35	**No Rain** Pune, Phursungi, Loni Kalbhor, Uruli Kanchan, Yavat, Rahu, Patas, Pargaon, Supa, Baramati, Narayangaon, Junnar.	Clear	03-18	32-43	67-82
Solapur	19-22	34-35	**No Rain** Solapur, Nanaj, Kati, Atpadi, Vairag, Pandharpur, Kasegaon, Barshi, Pangri, Kari, Latur, Ausa, Osmanabad, Tuljapur.	Clear	02-21	22-26	56-77
Sangli	19-21	32-33	**No Rain** Sangli, Miraj, Shirol, Arag, Shirguppi, Kagvad, Kavate Mahankal, Palus, Valva, Palsi, Shetfal, Vite, Khanapur	Clear – Partly Cloudy	02-21	28-36	62-83
Bijapur	21-22	33-34	**No Rain** Bijapur, Tikota, Telsang, Chadchan	Clear – Partly Cloudy	03-21	20-26	60-66
Hyderabad	17-19	30-31	**No Rain** Hyderabad, Medchal, Zahirabad, Rainlaguda.	Clear	00-18	35-40	37-67

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: 8 to 25 days

b) Expected growth stage of the crop: Ponga stage to 5-leaf stage

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

Expected pan evaporation: 4 to 6 mm

All recommendations are per acre/hectare basis.

Amount of irrigation advised:

During shoot growth stage, apply irrigation through drip @ 6800 L/ acre/ day for Nasik and Sangli regions and from 8500 to 10,200 L/ acre/ day for other regions. Further, in case vigour is more than desired, then reduce irrigation water application by half to 3400 L/ acre/ day for Nasik and Sangli regions and 4250 L/acre/ day for other regions.

During Flowering to setting stage, apply irrigation through drip @ 2800 L/ acre/ day for Nasik and Sangli regions and from 3360 L/ acre/ day for other regions. Further, in case vigour is more than desired, then reduce irrigation water application by half to 3400 L/ acre for Nasik and Sangli regions and 4250 L/acre for other regions.

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

1. **Before fruit pruning:** Apply FYM/ compost/other organic sources including green manuring atleast 12-15 days before fruit pruning. If possible mix 200 kg Single super phosphate in the FYM (based upon soil test) and apply in the soil. Application of organics improves the nutrient and water retention in the root zone and reduces nutrient losses from the profile If soils are calcareous in nature, then apply 50 kg sulphur between the vines in the soil. In case of calcium carbonate content more than 15 % apply 100 kg sulphur per acre in the root zone. The sulphur should be properly mixed in the soil for improving its efficacy in taking care of calcium carbonates. Mixing of sulphur along with organics lead to better utilization of sulphur for reducing calcium carbonate in the root zone along with reduction in soil pH also.
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 @ 20 kg/ acre in two splits this week. Depending upon the crop vigour, regulate nitrogen application.
3. 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 puning, the petiole test stated that boron was deficient then apply boric acid @ 1.5 kg to 5 kg depending upon the soil test value. Apply one kg boric acid at a time.
4. Apply 10 kg Magnesium sulphate per acre if the crop is between 5 leaf to prebloom stage.
5. If sodicity problem is there, apply 10 kg Sulphate of potash per acre in 2 splits this week.
6. Do not apply any nitrogen based fertilizer just before Flowering to Setting stage to avoid problems of kooj (inflorescence necrosis). Apply 5 kg Phosphoric acid in two splits this week.

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

In the present situation in many places either very less number of bunches has been reported or very small bunches are observed in Maharashtra. Hence, it becomes very much necessary to carry out bud testing. This will facilitate to identify the correct fruitful zone and accordingly pasting of hydrogen cyanamide will be done. This will solve the above problem. One more thing growers can do is that based on bud testing or without testing report they may apply the paste of hydrogen cyanamide not only on two buds but also on more number of buds so that they may not miss the bunches.

This is the time to go for fruit pruning immediately after pruning the paste of hydrogen cyanamide may be applied. This must be applied at once only and this should be based on cane thickness. If canes in the vineyards are of variable thickness then naturally paste has to be applied of variable concentration of hydrogen cyanamide. This will improve the uniformity as well as more and quick sprouting of the buds.

VI. Recommendation for canopy management (Dr. R.G. Somkuwar)

Thinning of excess shoots should be done at 14 - 16 days after fruit pruning.

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

If the vines stand at a 3-5 leaf stage application of Dimethomorph@1g/L+mancozeb 75WP@2g/L or Iprovalicarb+propineb @ 2.25g/L or Mandipropamid@ 0.8g/L or Dimethomorph +ametoctradin@0.8g/L or Cymoxanil +Mancozeb WP@2g/L should be done before Saturday to protect against downy mildew. In places where downy mildew is observed, Fosetyl-Al 80WP@ 4 g/L or Potassium salt of phosphorus acid @ 4 g/L as a tank mix with mancozeb 75WP@2g/L or propineb 70WP @3g/L may be sprayed. For powdery mildew application of Difenoconazole @0.5ml/Lor tetraconazole @ 0.75 ml /L or hexaconazole @ 1ml/L or flusilazole @ 12.5ml/100L should be done at 7-10 days interval, especially in vineyards which are at flowering stage.

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

Risk levels of different insects

Thrips	Caterpillars	Mealybug	Jassids	Flea beetle	Mites
Moderate to high	Moderate to High	Very High	Low	Very high	Nil

- In newly pruned vineyards where buds are in swollen stage there is a very high risk for infestation of flea beetle and mealybugs.
- The relatively drier conditions due to no rains, warmer temperature, moderate relative humidity and clear sky during coming week may favour thrips population built up in early pruned vineyards where sprouts have come out.
- To prevent colonization and further spread of mealybugs on new sprouts and tender growth, removal of dead bark on the stems and a complete plant wash (main stem, cordons and canes) with buprofezin 25 SC @ 1.25 ml/ lit (use 1.0 – 1.5 lit of water per vine) is recommended within 1 – 2 days after pruning. Alternatively plant wash with entomopathogeic fungi, *Beauveria bassiana* + *Lecanicillium lecanii* ($2x10^8$ spores/ml) @ 5.0 + 5.0 mL/L (water volume 1.5 liter/vine) twice at weekly interval may be given.
- Preventive spray of Imidacloprid 17.8 SL @ 0.3 ml/lit at swollen bud stage/ sprouting stage is advised against flea beetle, mealybugs and thrips.
- In case the leaf eating caterpillar damage is seen due to light rains in some areas, take spray of Fipronil 80 WDG 0.06 g/lit or Emamectin benzoate 5 Sg @ 0.22 g/lit. This will also take care of thrips and jassids.
- Spray of *Sl*NPV, a viral biopesticide @ 250 LE/ha may also be useful for controlling caterpillar damage

Crop advisory relevant to different places is prepared by experts, considering forecasted weather, crop growth stages in majority of vineyards and ground information on incidence of different conditions in different grape growing areas received from regular interaction with progressive grape growers. No claims are made on its correctness.

Usefulness of this information may be communicated to us at director.nrcg@icar.gov.in.