मौसम पूर्वानुमान आधारित साप्ताहिक सलाह
Weather Forecast Based Weekly Advisory

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

I. Weather Data for the Prevailing Week

Thursday (06/10/2016) - Thursday (13/10/2016)

Location	Temperature		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr)	R H%	
	Min	Max				Min	Max
Nasik	19-22	26-29	**Sun Light Rain and Mon Medium Rain** Nasik, Ojhar, Pimpalgaon Baswant, Vani, Palkhed, Dindori. **Sat- Wed Light Rain** Shirdi, Loni, Rahata, Niphad, Kalwan, Devla, Lasalgaon, Satana.	Cloudy	05-21	59-78	92-98
Pune	19-22	27-29	**Sat Medium Rain and Mon -Thu Light Rain** Pune, Phursungi. **Sat-Wed Light Rain** Loni Kalbhor, Uruli Kanchan Yavat, Rahu, Patas, Pargaon, Supa, Baramati. **Fri -Thu Light Rain** Narayangaon, Junnar.	Cloudy	05-23	60-76	94-97
Solapur	21-22	29-31	**Tue-Thu Light Rain** Solapur, Nanaj. **Thu (13/10) Light Rain** Kati, Atpadi. **Sun -Thu Light Rain** Vairag. **Sat-Wed Light Rain** Pandharpur, Kasegaon, Barshi, Pangri, Kari, Latur, Ausa. **Sat-Sun Light Rain** Osmanabad, Tuljapur.	Partly Cloudy	06-23	58-66	93-97
Sangli	19-22	28-30	**Fri-Mon Light Rain** Sangli, Miraj, Shirol, Arag, Shirguppi, Kagvad **Thu (13/10) Medium Rain** Kavate Mahankal **Sat-Thu Light Rain** Palus, Valva. **Tue-Thu Light Rain** Palsi, Shetfal, Vite. **Sat-Sun Light Rain** Khanapur	Partly Cloudy	08-26	55-69	95-100
Bijapur	21	29-31	**Fri-Thu Light Rain** Bijapur, Tikota, Telsang, Chadchan	Partly Cloudy	06-29	56-64	93-97
Hyderabad	19-22	28-29	**Thu-Mon Light Rain** Hyderabad, Medchal, **Sat-Tue Light Rain** Zahirabad,Rainlaguda.	Partly Cloudy	06-24	57-76	84-100

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:

b) Expected growth stage of the crop

90-150 days- Buildup of storage

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

Expected pan evaporation: 0 - 5 mm

All recommendations are per acre/hectare basis.

Amount of irrigation advised:

Foundation pruning season: 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. Soil and Nutrient requirement (Dr. A.K. Upadhyay)

121 days upto Fruit pruning

1. 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.
2. Remove plastic/ organic mulch 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. Soil and water testing for proper nutrient and water management needs to be carried out.

Fruit pruning season

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. During shoot growth stage, apply irrigation through drip @ 8500 L/ acre/ day. However, in case of rains, if wapsa condition is there, then postpone irrigation water

application for a day or two at least depending upon soil type or if the leaves show cupping or curling symptoms. Further, in case vigour is more than desired, then reduce irrigation water application by half to 4250 L/ acre.

3. 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.
4. 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 boron @ 1.5 kg to 5 kg depending upon the soil test value. Apply one kg boron at a time.
5. Apply 10 kg Magnesium sulphate per acre if the crop is between 5 leaf to prebloom stage.
6. If sodicity problem is there, apply 10 kg Sulphate of potash per acre in 2 splits this week.

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

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

1. Leaf removal either by chemical or manually to be done 15 days before fruit pruning (in case of healthy leaf) or 10 to 12 days in case of 40% leaf fall. Bud testing under microscope before pruning will help to know the status of fruitful buds available for pruning.
2. Under the situation of bud sprout stage, after fruit pruning (7 to 9 days after fruit pruning), removal of stagnated water from the field need to be done. This will help to reduce the fillage

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

The ensuing week is likely to have clear conditions and light rains are forecasted Saturday onwards in and around Sangli region. Dusting of mancozeb 75 WP @ 2.5 kg per acre is advised for downy mildew management if the vines are at the sprouting stage. 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. If the vines are at flowering stage 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. As there is a possibility of dew, application of spray oil (mineral oil) @ 2ml/L will help in reducing the retention of water in cluster at flowering stage. Shoot pinching should be followed to remove excess growth and to reduce plant vigour difenoconazole 25EC@ 0.5ml/L or Fluopyram 200+Tebuconazole 200-400SC@ 0.5ml/L.

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

Risk levels of different insects

Thrips	Caterpillar	Mealybug	Jassids	Flea beetle	Mites
Low	High	Moderate to High	Low	Low	Moderate to High

- Weather conditions prevailing during coming week in majority of the grape areas will be characterised by low to moderate rainfall, built up of high relative humidity and cloudy conditions. As such there will be high risk for infestation of new and tender growth by two insect pests viz., leaf eating caterpillar (*Spodoptera litura*) and flea beetle (*Scelodonta strighicolis*)

***Spodoptera* management:**

- Weed removal using cultivator will help to destroy full grown larvae and pupae of this pest in soil
- Application of entomopathogenic fungi, *Metarrizium anisopliae* or *Beuveria bassiana* @ x 10^6 cfu/ml will be effective as high RH will help establish hese bioagents
- *Spodoptera litura* Nuclear Polyhedrosis Virus (SlNPV) @ 250 LE/ha may also be used
- Alternatively, spray of emamectin benzoate 5 SG @ 0.22 g/liter water can be given
- Moths can be collected by installing light trap @ 1/ha or pheromone trap (Spodlure) @ 10/ha

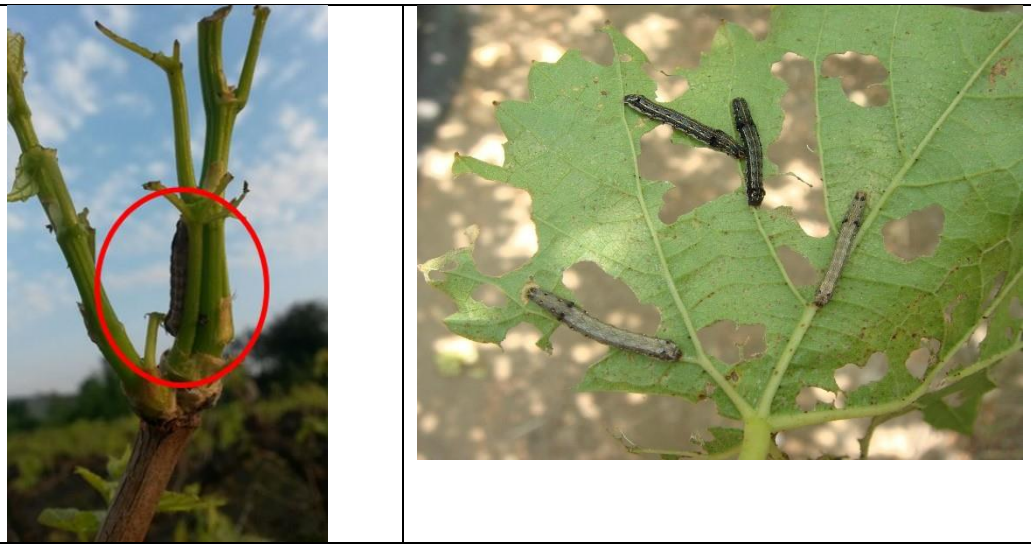

Figure 1. *Spodoptera litura* larva feeding on tender shoots and leaves of grapes

Management of flea beetle, thrips and mealybugs on new growth:

- Spraying of imidacloprid 17.8 SL @ 0.3 ml/lit
- Buprofezin 25 SC @ 1.25 ml/L water may be used to manage mealybugs, if required.

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.