Weather Forecast Based Weekly Advisory

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

I. Weather Data for the Prevailing Week

Thursday (25/08/2016) - Thursday (01/09/2016)

<table>
<thead>
<tr>
<th>Location</th>
<th>Temperature Min</th>
<th>Temperature Max</th>
<th>Possibility of Rain</th>
<th>Cloud Cover</th>
<th>Wind Speed (Km/hr) Min</th>
<th>Wind Speed (Km/hr) Max</th>
<th>R H% Min</th>
<th>R H% Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nashik</td>
<td>22-23</td>
<td>28-29</td>
<td>Thu- Fri  Light Rain Palkhed, Vani, Satana, Chandwad, Yeola.</td>
<td>Cloudy</td>
<td>11-18</td>
<td>66-74</td>
<td>91-94</td>
<td></td>
</tr>
<tr>
<td>Pune</td>
<td>23</td>
<td>29</td>
<td>Fri – Sat  Light Rain Narayangaon, Junnar, No Rain in Other Grape areas</td>
<td>Cloudy</td>
<td>11-23</td>
<td>66-69</td>
<td>91-94</td>
<td></td>
</tr>
<tr>
<td>Solapur</td>
<td>23-24</td>
<td>32-33</td>
<td>Sunday Onward Light Rain</td>
<td>Partly Cloudy</td>
<td>11-18</td>
<td>52-56</td>
<td>86-90</td>
<td></td>
</tr>
<tr>
<td>Sangli</td>
<td>22-23</td>
<td>29</td>
<td>Thu and Sun-Thu Light Rain Sangli, Miraj, Shirol, Shirguppi, Arag, Kagwad, Sun- Mon Light Rain and Tue- Wed Medium Rain Khanapur</td>
<td>Cloudy</td>
<td>08-24</td>
<td>63-66</td>
<td>92-97</td>
<td></td>
</tr>
<tr>
<td>Bijapur</td>
<td>22-23</td>
<td>30-32</td>
<td>Mon-Thu  Light Rain Bijapur, Tikota, Telsang, Chadchan</td>
<td>Cloudy</td>
<td>18-23</td>
<td>52-66</td>
<td>81-92</td>
<td></td>
</tr>
</tbody>
</table>

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.bbcweather.com-weather/1269750, etc..
II.  
   a) Days after pruning:
   b) Expected growth stage of the crop
      90-140 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:
   - 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)

   Through fertigation:
   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. In case pruning is scheduled during October, green manuring with Sunnhemp / Dhaincha is advised. In sodic soils, dhaincha is preferred.
   3. Remove 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.
   4. If Fruit pruning is planned during September, go for soil and water testing for proper nutrient and water management.
   5. Apply FYM/ other organic sources including green manuring atleast 12-15 days before pruning. If possible mix 200 kg Single super phosphate in the FYM 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.
   6. If soils are calcareous in nature, then apply 50 kg sulphur between the vines in the soil. The sulphur should be properly mixed in the soil for improving its efficacy in taking care of calcium carbonates.

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

   As per the present growth stage application of growth regulators are not required.

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

   1. Timely pruned vineyard: Under the condition of light rains with high R. H. (80% and more), there will be new growth. It is advised to pinch the shoots regularly to avoid delay in cane maturity.
   2. Grafting on rootstock: The present period is ideal for grafting since the temperature and R. H. required for graft success is available. Selection of scion should be taken from completely matured cane. The canes selected should be dipped in the carbendazim solution (1.5 g/lit) for about 2 – 3 hours. This will help to avoid the diseases.
VII. Disease management (Dr. S.D. Sawant and Dr. Sujoy Saha)

The cloudy conditions and light rains will expose the vines to powdery mildew disease. Application of sulphur@ 1.5 – 2.0 g/L is recommended. A follow-up application of chitosan 10% @ 2ml/L should be done for better efficacy of the fungicides by preventing their wash off during the rains Light rains might occur in Nashik and Sangli region during Sat-Sun. Application of mineral oil@ 2ml/L will also help in removal of water droplets from the leaf surface. Application of biocontrol agents like Bacillus sp @ 2g/L or Trichoderma sp @ 4g/L or Ampelomyces sp @ 4-5g/L are advised during this stage. No systemic fungicides should be applied at this stage. In areas where bacterial spot is observed application of mancozeb 75WP@ 2g/L may be done..

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

Risk levels of different insects

<table>
<thead>
<tr>
<th>Thrips</th>
<th>Caterpillar</th>
<th>Mealybug</th>
<th>Jassids</th>
<th>Flea beetle</th>
<th>Mites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>High</td>
<td>Moderate to High</td>
<td>Low</td>
<td>Low</td>
<td>Moderate to High</td>
</tr>
</tbody>
</table>

- Due to prevalence of high relative humidity coupled with drizzling rains and cloudy conditions in most of the grape growing areas, the caterpillar (Spodoptera litura) infestation may continue. Spodoptera litura Nuclear Polyhedrosis Virus (SINPV) @ 250 LE/ha may be used for biological control of these caterpillars. Alternatively, emamectin benzoate 5 SG @ 0.22 g/liter water can be given.
- With high relative humidity, the activity of mealybug natural enemies such as predatory coccinellids and parasitoids will increase and help in reducing mealybug population. Avoid spraying broad spectrum insecticides to conserve these natural enemies. If ant population is noticed, application of entomogenous fungi, Metarhizium anisopliae @ 10⁶ cfu/ml can be given. The prevailing high humidity will help in establishing this entomogenous fungi and managing both ants and mealybugs. Buprofezin 25 SC @ 1.25 ml/L water may be used to manage mealybugs, if required.
- For the management of mites, sulphur 80 WDG @ 2.0 g/L water is effective.
- Excess shoot growth due to high humidity conditions may help to build up thrips population and reduce coverage during insecticide applications, therefore, excess shoot growth should be removed to reduce thrips incidence.

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.