

ICAR-NATIONAL RESEARCH CENTRE FOR GRAPES, Manjri, Pune.



WEATHER DATA FOR THE PREVAILING WEEK

Thursday (21/11/2024)– Wednesday (27/11/2024)

	Temperature (°C)				Wind Speed	R H%	
Location	Min	Max	Possibility of Rain	Cloud Cover	(Km/hr) Min- Max	Min	Max
Nashik	15-16	30-31	Nashik, Dindori, Ozar, Kalwan, Vani, Loni , Palkhed, Pimpalgaon Baswant – Thu – Wed – No Rain.	Clear to cloudy	7-13	23-28	42-53
Pune	14-15	28-29	Pune, Phursungi, Loni Kalbhor, Uruli Kanchan, Patas, Yavat, Narayangaon, Baramati, Indapur– –Thu – Wed – No Rain.	Clear to cloudy	8-10	25-26	44-51
Solapur	15-16	30-31	Tuljapur, Ausa, Vairag, Barshi, Nannaj, Solapur, Pandharpur, Latur – Thu–Wed–No Rain.	Clear to cloudy	12-14	22-26	51-52
Sangi	16-1 ≆	150332J	Shetphal, Walva, Palus, Kawtha, Khanapur Vita, Shirguppi, Palsi, Mirai - Thu - Wed - No Rain	Clear to cloudy	11-14 c Dunc	24-26	48-52
Vijayapura ICAR	15-16	30-31	Chadchan, Tikota, Vijayapura, Telsang – Thu – Wed –No Rain.	Clear to cloudy	14-15	24 126 H	5 2-63
Hyderabad	15-16	29	Hyderabad, Medchal, Zahirabad – Thu – Wed –No Rain.	Clear to cloudy	7-8	27-30	52-67
Satara	15-16	29-30	Satara, Phaltan, Khatav– Thu – Wed–No Rain.	Clear to cloudy	7-8	29-30	51-55
Ahmednagar	13-14	29-30	Akole, Sangamner, Rahata, Kopargaon, Karjat, Jamkhed, Ahmednagar, Shrigonda – Thu – Wed –No Rain.	Clear to cloudy	9-11	23-26	44-53
Jalna	13-14	28-29	Ambad, Ghansavangi, Mantha, Jalna, Jafrabad –Thu–Wed – No Rain.	Clear to cloudy	8	21-28	51-63
Buldhana	14-15	30-31	D.raja, Sindkhed, Buldana, Chikhli – Thu – Wed – No Rain.	Clear to cloudy	7-9	23-30	41-54
Kolhapur	18-19	32-33	Kagal, Karveer, Gagan-bavada– Thu–Wed – No Rain.	Clear to cloudy	8-10	31-35	55-57
Bengaluru Rural	18-19	27-28	Anekal, Doddaballapur, Bengaluru-east, Bengaluru-north, Bengaluru – Thu–Wed – No Rain.	Clear to cloudy	11-13	37-52	91-95

Belagavi	17-18	29-30	Belagavi, Gokak, Chikodi, Athni – Thu–Wed – No Rain.	Clear to cloudy	9-10	33-39	61-67
Bidar	15	30	Bidar, Basavakalyan, Humanabad – Thu–Wed – No Rain.	Clear to cloudy	8-9	30-32	59-64
Bagalkot	15	29-30	Bagalkot, Jamkhandi, Hungund, Mudhol – Thu–Wed –No Rain.	Clear to cloudy	13-14	26-28	55-66

Note: Above weather information is summary of weather forecasting given in following websites

https://www.wunderground.com/?cm_ven=cgi

https://imdagrimet.gov.in/weatherdata/BlockWindow.php

https://www.timeanddate.com/weather/india

ICAR-National Research Centre for Grapes does not claim accuracy of it.

II. Soil and Nutrient management

a. Number of days after Fruit pruning: 66 Expected Pan-gyaporation: आंड्राठ Gamgitine केन्द्र, पुण ICAR-National Research Centre for Grapes, Pune Soil and Nutrient management :

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Shoot Growth stage

- In case organic fertilizers are applied, check the C:N ratio. Lower the ratio more the nitrogen release, hence possibility of enhanced growth. Control nitrogen application based upon growth of vine.
- 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 @ 25 kg/ acre in three splits this week. Depending upon the crop vigour, regulate nitrogen application.
- 3. If sodicity problem is there, apply 10 kg Sulphate of potash per acre in 2 splits this week.
- Until and unless leaves are fully developed donot go for any foliar application of nutrients. It will lead to wastage of spray.
- 5. The quantity of nutrients to be applied through foliar, depends upon canopy size.
- 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.

- 7. Apply 10 kg Magnesium sulphate per acre if the crop is between 5 leaf to prebloom stage.
- 8. If soils are calcareous, spray Sulphate of potash and Magnesium sulphate @ 2-3g/L depending upon leaf age during prebloom stage.

Flowering to setting stage:

- 1. Donot apply any nitrogen based fertilizer just before Flowering to Setting stage to avoid problems of kooj (inflorescence necrosis).
- Apply 3-4 kg Phosphoric acid in two to three splits this week. Remember that the pH of the irrigation water should be near 6.0. OR apply SSP @ 125kg/acre as basal application. SSP should be mixed with FYM/Compost before application to minimize phosphorus fixation.

if SOP not applied, then apply 15 kg SOP in case low temperature and cloudy conditions terecasted during flowering stage int अन्संधान केन्द्र, पण tetiole nutrient testing: At 70% capfall stage, petiole samples should be taken for mutrient analysis. The leaf opposite the bunch should be removed for sampling and be icar Berry Development stage:

- 1. After Berry setting, continue initially with Phosphoric acid application @ 2 kg followed by 5 kg 12-61-0/acre.
- 2. If the berry size is from 2-4mm, spray calcium @ 2g Calcium Chloride / Calcium Nitrate per litre. Target sprays immediately after GA application (preferably next day) for better absorption.
- 3. If the berry size is from 5-8mm, spray calcium @ 2g Calcium Chloride / Calcium Nitrate per litre. Target sprays immediately after GA application (preferably next day) for better absorption.
- After 6-8 mm berry size, start application of nitrogen in the form of ammonium sulphate
 @ 25kg /acre in 4 splits in calcareous soil and as urea @ 15 kg/acre in other soils in 3 splits. Follow this up with Sulphate of potash or 0-0-50 @ 25 kg/ acre in 3-4 splits for next two weeks.

III. Canopy Management

Based on the weather data and growth stages, following suggestions are offered for vineyard management in old vineyard.

- Pre-pruning preparation need to be followed. Approximately 15 days before the fruit pruning, a mixed spray of ethephon @ 2.5 to 3.0 ml/L water + 0.52.34 @ 5.0 g/L water should be taken up for leaf fall.
- 2. At the time of spray, the vine should be under stress. Hence, water withholding before 5-6 days of actual spray is required.
- 3. The quantity of water for spray will depend upon the leaf retention on a vine as in many of the grape vineyard due to disease infection, the leaf fall ranging from 10 to 60% is experienced.
- 4. Apply well decomposed farm yard manure @ 5-6 trollies per acre. In addition, based on the soil test report, SSP @ 300kg, DAP @ 50 kg, zinc, boron, ferrous sulphate, and magnesium sulphate should be added in the trench.

- 7. In the absence of bud testing report, fruit pruning can be done leaving 1-2 buds after the knot on sub-cane while retaining shorter internodes o straight cane.
- Swabbing of canes with hydrogen cyanamide will depend on the cane diameter, weather condition in the grape vineyard and the bud condition (percentage of bud swelling). However, under normal condition, the concentration of hydrogen cyanamide can be 35-40 ml/L water.
- 9. Avoid swabbing of buds immediately after pruning. However, this can be performed on the next day for better results.
- 10. On 8th to 9th days after fruit pruning, the bud sprouting will initiate. During this stage change in weather (rainfall/cloudy weather) will increase the gibberellins in grapevine thereby leading to fillage.

- 11. To control the fillage, spray of cytokinin based PGR (6BA @ 10 ppm or CCC (as per Annexure-5) and 0.0.50 @ 0.75 to 1.0 g/L or 0.9.46 or 0.40.37 @ 0.75 to 1.0 g/L water can be sprayed on the vine.
- 12. Removal of excess shoots during the period of 14 to 17 days should be done. This will help for aeration in the canopy thereby reducing the microclimate that will help to control the downy mildew incidence and inflorescence rot.
- 13. First spray of GA_3 @ 10 ppm should be done at parrot green stage of a bunch while the second spray after 5 days of first spray to be done. This will help to obtain loose and bunch after berry setting by the process of cell multiplication and cell elongation.
- 14. To increase the efficiency of GA₃, pH of the spray solution should be 5.5 to 6.0. The water used for spraying should be of good quality.
- 15. If possible, spraying should be done when the relative humidity in the atmosphere is above 60%. During this time, the leaf is in active phase so that the absorption can be increased.



Days after	Risk of diseases						
n un prunng	Downy mildew	Powdery mildew	Anthracnose	Others (specify)			
66	High	Low	High	Bacterial spot- High Rust-Nil			

IV. Disease management

In Sangli areas where bacterial spot and anthracnose were prevalent on berries, Mancozeb 75 WP @2-3g/L, and two sprays of Kasugamycin 5% +Copper Oxychloride 45% WP @750g/ha,

may be given. Application of Copper Sulphate 47.15% + Mancozeb 30% WDG@5g/L or Thiophenate methyl/carbendazim @1g/L will provide a good control against anthracnose. Drip application of Trichoderma should continue at fortnightly intervals. If there is moisture on the leaf, dusting with mancozeb@ 3-5kg/acre should be done. There can be an initiation in powdery mildew infection in some areas and an application of sulphur 80WDG @2-3g/l may be given. Application of triazoles or cyflufenamid 5%EW @ 500g/ha should be done to prevent severe infection of powdery mildew. Foliar application of Bacillus subtilis formulation @ 2g/L may be given as well. There is no need to spray for downy mildew management as there is no prediction of adverse weather conditions. However, 1-2 foliar sprays of potassium salt of active phosphorus @ 4g/l may be given.



Bacterial spot



Anthracnose



Downy mildew

V. Insect and Mite Pest Management

Growth Stage: flowering, berry setting to berry development after fruit pruning

- In case of caterpillar and thrips infestation, application of emamectin benzoate 5 SG @ 0.22 g per litre or cyantraniliprole 10 OD @ 0.7 ml per litre water is effective.
- For flea beetle management, Imidacloprid 17.8 SL @ 0.4 ml/L or spinosad 45 SC @ 0.25 ml per liter water at night is effective.
- Vineyards may have moderate mealybug infestation as well. Do not spray any broad spectrum insecticides such as chlorpyrifos, dichlorvos, methomyl, profenophos, etc. for mealybug control. Higher humidity will favour development of natural enemies which will slowly kill mealybugs. In case chemical spray is required, prefer buprofezin 25 SC @ 1.25 +

Metarhizium anisopliae 3 ml per litre of water for spot plant wash. Aphid infestation may be noticed in Sangali area, regular insecticides used for other insects HIT HIT CIT HIT CIT HIT HIT HIT HIT HIT IS A CIT HIT IS A CIT

• Inducidences of new species of stem borer (red colour larva) may be noticed under barking Sangali, Solapur, Nashik, Pune, Bijapur grape areas. Remove the loose bark and give good plant wash mainly targeting cordons and main trunk with *Metarhizium anisopliae* @ 3 ml/l.

