WEATHER DATA FOR THE PREVAILING WEEK

Date of Fruit Pruning: 15/09/2021

Thursday (24/03/2022)–Wednesday (30/03/2022)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr) Min-Max	R H%	
	Min	Max				Min	Max
Nashik	17-21	36-38	Nashik, Dindori, Ozar, Vani, Palkhed, Kalwan, Pimpalgaon Baswant, Loni Thu-Wed- No Rain.	Clear to cloudy	11-14	10-13	21-51
Pune	19-21	36-38	Pune, Phursungi, Loni Kalbhor, Uruli Kanchan, Patas, Yavat, Narayangaon, Indapur, Baramati Thu- Wed- No Rain.	Clear to cloudy	13-15	10-17	24-62
Solapur	21-24	37-38	Vairag, Latur- Thu, Wed- Drizzing to Light Rain. Barshi, Tuljapur- Thu-Drizzling. Nannaj, Ausa- Thu, Wed, Fri-Drizzling. Pandharpur Wed- Drizzling. Solapur – Fri, Sat, Wed- Drizzling	Clear to cloudy	09-16	13-21	32-48
Sangli	22-23	35-37	Sangli, Shetfal, Arag, Kagvad Palus, Miraj, Tasgaon, Shirguppi, Kawthe, Palsi-Fri, Sat, Wed- Drizzling to Light rain, Walva, Khanapur Vita –Fri- Drizzling.	Clear to cloudy	11-15	14-27	60-63
Vijayapura	21-24	37-38	Vijayapura, Chadchan, Tikota & Telsang – Thu,Fri & Wed- Drizzling.	Clear to cloudy	09-15	17-23	47-59
Hyderabad	21-23	33-37	Hyderabad, Medchal, Zahirabad –Sun, Wed – Drizzling	Clear to cloudy	10-15	16-19	51-64
Satara	21-22	37-39	Satara, , Phaltan , Khatav- Fri – Drizzling	Clear to cloudy	09-15	12-24	42-72
Ahmednagar	19-22	38-40	Ahmednagar, Shrigonda, Sangamner, Jamkhed, Rahata, Karjat, Kopargaon, Akole- Thu- Wed- No Rain.	Clear to cloudy	13-19	10-16	17-38
Jalna	21-23	36-40	Ambad, Jalna, Gansawangi, Mantha, Jafrabad - Thu- Wed- No Rain.	Clear to cloudy	12-16	07-16	14-29
Buldhana	21-25	31-34	Buldana,Chikhli, Sindkhedraja, D.raja- - Thu- Wed- No Rain.	Clear to cloudy	07-13	08-10	14-30
Kolhapur	23-25	31-34	Kagal, Karveer - Thu- Wed- No Rain. Gagan-bavada- Sun- Drizzling.	Clear to cloudy	06-08	23-43	80-88

Bengaluru Rural	21-22	31-33	Anekal- Bengaluru-east, Bengaluru-north, Bengaluru-south, Doddaballapur- Thu- Drizzling to Light Rain.	Clear to cloudy	09-13	21-37	62-83
Belagavi	22-24	36-38	Belagavi, Gokak-Thu, Fri & Sat- Drizzling to Light Rain, Khanapur- Fri & Sat- Drizzling, Chikodi- Thu, Fri – Drizzling, Athni - Thu- Wed- No Rain	Clear to cloudy	09-13	24-35	72-90
Bidar	22-23	36-38	Bidar, Humnabad- Sat- Drizzling, Basavakalyan - Thu, Fri & Sat- Drizzling to Light Rain	Clear to cloudy	09-14	13-20	35-47
Bagalkot	21-24	34-37	Bagalkot, Mudhol, Hungund - Thu, Fri & Sat- Drizzling to Light Rain, Jamkhandi- Thu, Fri - Drizzling	Clear to cloudy	09-13	20-25	56-63

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. Water management (Dr. A.K. Upadhyay & Yukti Verma)

A) Days after pruning : 193 days

B) Pan evaporation : 7.5 to 9 mm

1. From Veraison stage onwards till maturity, apply irrigation through drip @ 12,750 – 15,300 L/ acre/ day.
2. After foundation pruning, during shoot growth stage, apply 12,750 – 15,300 L/acre per day of irrigation water. If EC of the irrigation water is less than 1 dS/m, then apply 10,200 – 12,300 L/acre per day.
3. In case vigour is more than desired, then reduce irrigation water application to 6,000 – 7,500 L/ acre. Still if you are not able to control the vigour, stop irrigation till such time growth is controlled.

4. **Cover the cordons of the pruned vines with shadenet**, if available, for uniform sprouting as well as reducing the irrigation water needs by 20-25 %. Shadenet coverage will reduce the temperature impact on the cordons. However, remove shadenet after 3-5 leaf stage. If shadenet is not available, spray the cordons with water during the peak heat period i.e. 2-3 pm to reduce the heat effect on the buds.
5. In case there is **probability of less irrigation water availability**, then flood the bund (not whole vineyard) at pruning and mulch the bunds. Flooding the bund will reduce the accumulated salt load in the root zone and mulching will reduce the evaporation of water from soil surface. Thus, this will reduce the salt load in the soil and at the same time saturate the soil leading to proper sprouting. Further, in case less irrigation water is available still the newly emerging shoots will not be damaged due to salinity.
6. In case the soil is under wapsa (field capacity) condition, donot irrigate the vineyard.
7. Practice mulching to keep the bunds moistened. This will reduce the salinity build up in the root zone due to evaporation of the moisture from the surface of the bund.
8. Flooding the vineyard is not advised as it will lead to wastage of water. Concentrate irrigation water application in the root zone only.

Soil and Nutrient management

Ripening to Harvest stage:

1. Apply Sulphate of potash or 0-0-50 @ 25 kg/ acre in 3-4 splits for next two weeks. Total potassium application (SOP) should be approx. 60 kg/acre during this stage. Follow this up with Magnesium sulphate @ 10 kg/acre in two splits.
2. Spray Magnesium sulphate and potassium sulphate @ 3g/L in calcareous soil.
3. Possibility of powdery mildew infection. Build up potassium levels in grapevine either through foliar spray @4-5 gm SOP/L and drip @ 15 kg SOP/L if not applied since last 20 days.
4. Manage canopy for adequate sunlight and air movement within the canopy for avoiding/ minimizing problems of berry cracking.

Rest Period

After the harvest of grapes during February – March, vine reserves are exhausted. After foundation pruning, till photosynthetically active leaves are formed, it is the vine reserves that contribute to the growth and development of the vines. Hence, following is advised:

1. Provide only need based irrigation to protect the existing leaves from drying and also contribute towards increasing the reserves of the vines through photosynthetic activity. The quantum of irrigation water applied should be approx. 7000 – 7500 L/ acre, once in a week. If temperature exceeds 38°C, apply the same every fourth day. Care should be taken to reduce/stop the water in case new growth is observed on the shoot.
2. Apply 10-15 kg urea, 25-30 kg SSP and 10-15 kg Sulphate of Potash per acre every 15-20 days till foundation pruning is not done.
3. Flooding the vineyard is not advised as it will lead to wastage of water. Concentrate irrigation water application in the root zone only.

Foundation pruning:

1. If planning for foundation pruning in next 10- 15 days, it is advised to get soil and water analysed for planning nutrient and water application schedule for foundation pruning season.
2. 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. Mixing of sulphur with FYM/ compost further improves its efficacy.
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.

Shoot growth stage:

1. Apply 50 kg urea/ acre in 5-6 splits after sprouting. In calcareous soils, donot apply urea, instead use Ammonium sulphate @ 85 kg/acre in atleast 7-8 splits from sprouting onwards.

2. In case of vigorous growth of shoots, stop nitrogen application and wait for the growth to stabilize before resuming nitrogen application. If still the growth continues, then reduce irrigation. Then resume when growth is maintained at desired level.
3. Based upon soil test value, apply Zinc sulphate @10 kg/acre along with Ferrous sulphate @10kg/acre followed by Magnesium sulphate @15kg/acre in atleast 2 splits during 5-7 leaf stage. Boron application should be strictly based upon soil and petiole test.
4. In calcareous soils, spray magnesium sulphate and potassium sulphate @2 gm each/ L during active growing stage.

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

- NIL

IV. Disease management (Dr. Sujoy Saha)

Days after fruit pruning	**Risk of diseases**			
	Downy mildew	**Powdery mildew**	**Anthracnose**	**Others (specify)**
193	Nil	Nil	Nil	Bacterial spot-Nil Bunch rot-nil

Trichoderma application through drip should be given before pruning.

V. Insect and Mite management. (Dr. D.S. Yadav)

Growth Stage: Berry development and veraison stage after October pruning

1. Buprofezin 25 SC @ 1.25 ml/L (PHI 65 days) water or spirotetramat 15.31 OD @ 700 ml/hectare (PHI 60 days) may be used for the management of mealybugs. In case PHI cannot be maintained for application of insecticides, tag mealybug infested vines and wash with any trisiloxane polyether-based surfactant @ 0.3 ml per litre water with water volume 10-12 litres per vine with single gun at high pressure to wash off the mealybugs. It should be followed by washing with plain water.
2. Mite infestation may increase in most of the grape areas. Sulphur 80 WDG @ 1.5-2.0 g/L or Abamectin 1.9 EC @ 0.75 ml/L (PHI 30 days) or Bifenazate 22.6 SC @ 0.5 ml/L (PHI 30 days) water may be applied if mite infestation is observed.
3. All the cracked/damaged berries should be removed from the grape bunches. These berries should be destroyed by burying them minimum two feet deep in the ground away from the vineyards. It will reduce the scavenging fly population in the vineyard. Ripe banana can act as a good attractant for these scavenging flies. Therefore, banana traps can be made and installed at the rate 5 per acre. To make a banana trap, take a container with small holes at sides and put a fully ripe banana inside it cut into pieces. Pour 2-3 drops of spinosad 45 SC on the banana. Cover the mouth of the container with inverted paper-cone keeping a small hole at the bottom for fruit flies to enter. The berry cracking of grapes should be managed by following suitable viticultural practices.
4. For thrips management in new vineyards after recut, give regular applications at 7-10 days interval of effective insecticides such as spinosad 45 SC @ 0.25 ml/l, spinetoram 11.7 SC @ 0.3 ml/l, cyantraniliprole 10 OD @ 0.7 ml/l, emamectin benzoate 5 SG @ 0.22g/l or fipronil 80 WG @ 0.0625 g/l water when thrips population is 5 per shoot or above.

वृद्धि अवस्था: अक्टूबर प्रूनिंग के बाद बेरी विकास और वेराईजन अवस्था

• ब्यूप्रोफेज़िन 25 एससी @ 1.25 मिली / लीटर पानी (पीएचआई 65 दिन) या स्पाइरोटेट्रामैट 15.31 ओडी @ 700 मिली / हेक्टेयर (पीएचआई 60 दिन) का उपयोग मिलीबग के प्रबंधन के लिए किया जा सकता है। यदि इन कीटनाशकों के प्रयोग के लिए पीएचआई को बनाए नहीं रखा जा सकता है, तो मिलीबग संक्रमित अंगूर

के पौधों को टैग करें और किसी भी ट्राइसिलोक्सेन पॉलिथर-आधारित सर्फैक्टेंट @ 0.3 मिली प्रति लीटर पानी (पानी की मात्रा 10-12 लीटर प्रति पौधा) उच्च दबाव में सिंगल गन से धोएं। बाद में सादे पानी से भी धोएँ।

• अधिकांश अंगूर क्षेत्रों में माइट का संक्रमण बढ़ सकता है। माइट के नियंत्रण के लिए सल्फर 80 डब्ल्यूडीजी @ 1.5-2.0 ग्राम / लीटर या एबामेक्टिन 1.9 ईसी @ 0.75 मिली / लीटर (पीएचआई 30 दिन) या बाईफेनाजेट 22.6 एससी @ 0.5 मिली / लीटर (पीएचआई 30 दिन) पानी का प्रयोग किया जा सकता है ।

• सभी फटे / क्षतिग्रस्त मणियों को अंगूर के गुच्छों से निकाल देना चाहिए। इन मणियों को अंगूर के बगीचों से दूर जमीन में न्यूनतम दो फीट गहरा दफन करके नष्ट कर देना चाहिए। यह अंगूर के बगीचों में फल मक्खी की आबादी को कम करेगा। पका हुआ केला इन फल मक्खियों के लिए एक अच्छा आकर्षण का काम कर सकता है। इसलिए, केले के ट्रेप को 5 प्रति एकड़ की दर से लगाया जा सकता है। केले के ट्रेप को बनाने के लिए, साइड में छोटे छेदों के साथ एक कंटेनर लें और उसके अंदर पूरी तरह से पके हुए केले को टुकड़ों में काट लें। केले पर स्पिनोसैड 45 एससी की 2-3 बूंदें डालें। उल्टे कागज-शंकु के साथ कंटेनर के मुंह को कवर करें जिसमें फल मक्खियों के प्रवेश के लिए नीचे एक छोटा छेद रखें। अंगूरों की बेरी क्रैकिंग का प्रबंधन उपयुक्त प्रथाओं का पालन करके किया जाना चाहिए।

- री-कट के बाद नए अंगूर के बागों में जब थ्रिप्स की आबादी 5 प्रति शूट या उससे अधिक हो तो प्रबंधन के लिए, स्पिनोसैड 45 एससी @ 0.25 मिली/ली, स्पाइनटोरम 11.7 एससी @ 0.3 मिली/ली, साइनट्रानिलिप्रोल 10 ओडी @ 0.7 मिली/ली, एमेमेक्टिन बेंजोएट 5 एसजी @ 0.22 जी/ली या फिप्रोनिल 80 डब्ल्यूजी @ 0.0625 ग्राम/ली पानी जैसे प्रभावी कीटनाशकों के नियमित 7-10 दिन के अंतर पर प्रयोग करें।