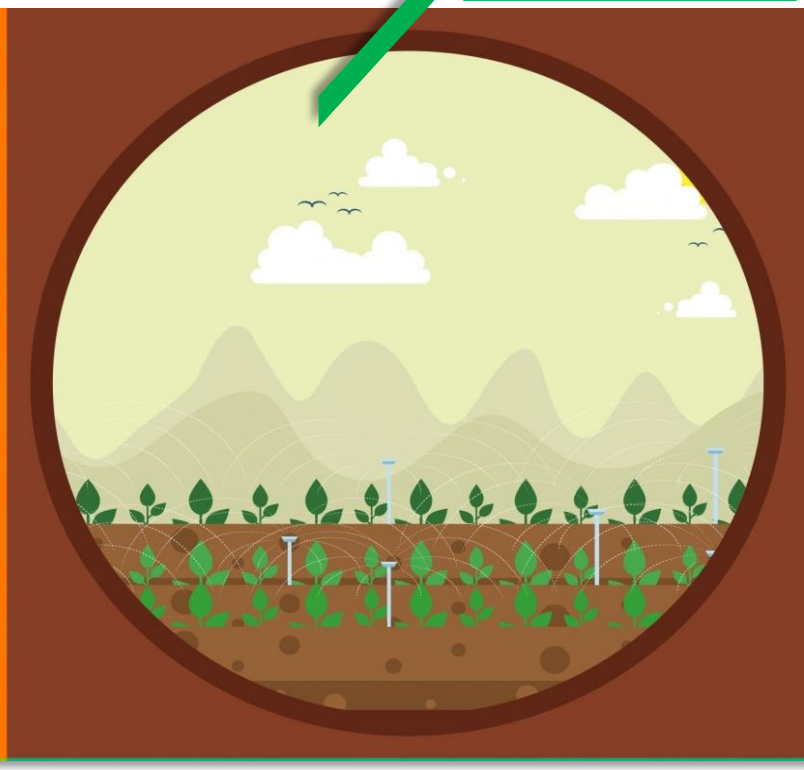
Agro-Advisory for the State of Maharashtra

November 13-26, 2020



Compiled & edited by :
RN Singh, Scientist, Ag. Meteorology

Contributors:
Members of Agro Advisory Committee

Technical Support :
Pravin More , STA -Computer

ICAR-National Institute of Abiotic Stress Management
Baramati, Pune, Maharashtra

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Advisory No. NIASM/MH/20-15 **Date: November 12, 2020**

1. Weather Forecast Summary for 13-26 November, 2020 (As per IMD, New Delhi)

- As the rainy season is over, there may be no rainfall in upcoming weeks.
- The maximum temperature may vary between 26-30 ºC, remaining up to 3 ºC below normal in most parts of the state.
- The minimum temperature may vary between 14-18 ºC, remaining up to 2 ºC below normal in most parts of the state.

2. Agro-advisory for the period 13-26 November, 2020

2.1. Crop Management

- In already sown **chick pea** and **sorghum**, the crops should be kept weed free for first 30-35 days of sowing.
- Sowing of **wheat** should be completed by first fortnight of November. Sowing of 100-125 kg ha^{-1} should be done at proper depth and at optimum soil moisture condition.
- Farmers planning for **maize** should carry out sowing with seed rate of 15-20 kg ha^{-1}.
- Shoot thinning in forward pruned **grape** orchard to be done between 15-18 days after pruning, to avoid loss of food storage in canes.
- Spraying of GA3 @ 10 ppm at correct **pre-bloom stage in grape** between 18-21 days after pruning is important for getting desired bunch elongation.
- Canopy management practices in **dragon fruit** are to be started after fruiting season is over.

2.2. Managing Soil Stresses

- Undertake sowing of rainfed linseed, sorghum, chick pea and safflower in Akola, Yavatmal and Wardha districts during clear weather and moist field condition. The recommended rate of N: P: K application for these crops are given below –

Crop	N:P:K dose (kg ha^{-1})
Linseed	30:15:15
Sorghum	80:40:40
Chick pea	20:50:40 and 40 kg S ha^{-1}
Safflower	40:40:20

- At the time of sowing **wheat**, apply N: P: K @ 60:60:40 kg ha^{-1} in the moist field conditions. Apply another 60 kg ha^{-1} of Nitrogen at 3 weeks after sowing i.e., at crown root initiation (CRI) stage.
- In **grape** orchard, regulate nitrogen fertilization based on shoot vigour. At shoot growth stage apply urea @ 40 kg ha^{-1} in two splits. If the soil is calcareous, replace urea with ammonium sulphate @ 60 kg ha^{-1} in three splits doses. Apply zinc sulphate and Ferrous

sulphate @ 40 kg ha^{-1} each and Boron @ 4-12.5 kg ha^{-1} at shoot growth stage based on soil test report.

- At pre-bloom stage in **grape** apply magnesium sulphate and Sulphate of Potash @ 25 kg ha^{-1} each in two split doses at 5-leaf to pre-bloom stage. If soils are calcareous, additionally give one spray of sulphate of potash and Magnesium sulphate @ 2-3 g L^{-1} each at this stage.

2.3. Managing Biotic Stresses

- To avoid **blight** on young mango leaves, precautionary spray of Carbendazim (12%) + Mancozeb (63%) @ 1 g L^{-1} should be given.
- For disease free, vigorous seedling growth, wheat seed should be treated with Thiram (2.5 g) followed by *Azotobacter* (25 g) + PSB (25 g) kg^{-1} seed.
- For management of seed and **soil borne diseases** in chickpea, seed should be treated with Carbendazim (2.5 g)/ Carboxin (1 g)/Thiram(2.5 g)/Trichoderma (4 g) kg^{-1} seed.
- Based on weather forecast there is moderate risk of major **grape diseases**. Prophylactic application of Hexaconazole or Difenoconazole @ 1 ml L^{-1} and of Dimethomorph @ 1 g L^{-1} + Mancozeb 75 WP @ 2 g L^{-1} or Iprovalicarb+Propineb @ 2.25 g L^{-1} may be done for management of powdery and downy mildew, respectively.
- To avoid **brown rot** due to *Phytophthora* in citrus orchards, the second spray on tree skirts (stem and branches avoiding foliage) of Fosetyl-AL @ 2.0 g L^{-1} to be done, if not done earlier.
- Follow the **integrated pest management** practices in both field as well as horticultural crops which includes-
  1. Follow deep ploughing to expose the dormant stages of insects
  2. Clean cultivation to remove the alternate hosts of insect pests
  3. Erect bird perches
  4. Setting up of pheromone traps, light traps, sticky traps.
  5. Use of neem based insecticides
  6. Use bio-pesticides like, *Pseudomonas, Lecanicillium lecanii, Beauveria bassiana, Bacillus thuringiensis* etc.
  7. Application of need based insecticides after ensuring the extent of damage.

2. 4. Managing stresses in Animals

2.4.1. Livestock

- The Cows/Buffaloes showing the symptoms of heat should be mated within 12 – 18 hours of their exhibiting the signs of heat/estrus. Deworming should be done with consultation with local veterinarian in cattle, sheep and goats.
- Provide mineral mixture 30-40 g day^{-1} to cattle for improving immunity and the reproduction efficiency.
- Feed oral calcium liquid 50 ml day^{-1} to avoid metabolic disorders in milking animals.
- Haemorrhagic septicaemia (HS) is most likely to occur in three districts. Ahmednagar, Nashik, and Thane have very high risk.

- There is very high risk of Peste des Petits Ruminants (PPR) in five districts of Maharashtra. Ahmednagar, Gadchiroli, Nashik, Osmanabad and Pune district. Vaccination for Haemorrhagic Septicaemia and Peste des Petits Ruminants (animals above 3 month of age) may be done in consultation with the local veterinarians.
- There is very high risk of Black quarter (BQ) in Osmanabad district; and Sheep and goat pox in Solapur, Nashik and Pune districts. Very high risk of Swine fever is predicted in Bhandara, Chandrapur, Gadchiroli and Wardha districts. Vaccination may be done in consultation with the local veterinarians.

2.4.2. Fisheries

- During winter season, the temperature of surface water gets lower than bottom and fish prefers bottom layer, hence it is recommended to maintain the water level up to 6-7 feet.
- During winter season, the length of the day and intensity of the light decreases, the dissolved oxygen (DO) depleted due to reduced photosynthetic activity, hence it is recommended to maintain DO by adding fresh water or by using aerators.
- Generally, in colder season feed intake of the fish is reduced due to reduced temperature and the digestive systems of the fish shrinks, hence it is recommended that feeding of the fish should be reduced by 50-75 % and even if more cold stop feeding.
- Feed fish with low protein diet in cool season.
- Farmers are suggested not to use organic manure viz. cow dung, poultry droppings, and pig dung in the pond.
- During winter, the chance of microbial infection are more, hence recommended to treat pond water with potassium permanganate @ 1-2 kg ac^{-1} or limestone @ 50-100 kg ac^{-1} and salt @ 100 kg ac^{-1}.

3. COVID 19 - Precautionary measures for agricultural activities

3.1. General advisory as per Ministry of Agriculture, Govt. of India

- As with passing day more and more relaxation has been provided from Government side, more care needs to be taken particularly social distancing and avoiding contacts with outsiders with unknown history or persons migrated from red zone.
- In manual field operations of harvesting/picking, accomplish the operation in 4-5 feet spaced strips assigning one strip to one person.
- Stagger the field operations wherever possible and avoid engaging more number of persons on the same day.
- Prefer mechanized operations over the manual wherever feasible.
- All machines should be sanitized at the entry point and at regular intervals.
- All transport vehicles, gunny bags or other packaging material should be sanitized.

3.2. Livestock and Poultry

- Wash hands with soap and water before and after milking of lactating animals and clean the utensils thoroughly.
- Don’t allow visitors to enter animal premises and use mask and maintain social distancing while distribution/sell of milk.

- Use of hand sanitizer or washing hands frequently need to be practiced routinely while carrying out various day to day operations.
- All the bio-security measures need to be followed strictly in the poultry farms.

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