

MONTHLY PLANT PROTECTION PRACTICES IN MANGO

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INTRODUCTION:

Mango is the most important fruit crop in India having socio-economic significance. Mango occupies a pre-eminent place amongst fruit crops in India and is called as 'King of fruits' in the country owing to its delicious quality of fruit rich in vitamins and minerals. As a result, mango trees are now become the parts of every house hold, can be seen in large orchards, small orchards, backyards, kitchen garden, roof gardens, hobby gardens etc. Mangoes can cause a great deal of damage in the hope of a variety of pests. These often affect yields and quality. Mango growers can take appropriate plant protection measures without neglect and overcome their potential risks and achieve high quality yields. Monthly plant protection practices are especially important in orchards for the mango growers.

JANUARY

For the mealy bug control in this month, the alkathane tree bands which are generally applied in December month should be cleaned and rearranged by the farmers, if disturbed. To reduce the incidence of mango malformation, Deblossoming of early emerged panicles should be practiced. For efficient pollination and fruit set, arrangement of honey bee boxes in the mango orchards should be undertaken. New young plants should be protected from frost. Irrigation to new plants should be assured to minimize the frost damage. Arrangements should also be made to cover the small non-bearing plants with straw or polyethylene sheets.

FEBRUARY

Prior spraying with Mancozeb (2.5 g / lit.), Karathane or hexaconazole (1 ml / lit.) should be sprayed to control the grey mold diseases. For the control of grey mold, after 10-15days. Go for the spray with karathane or hexaconazole (1 ml / lit.) or tridemorph (1 ml / lit. of water).

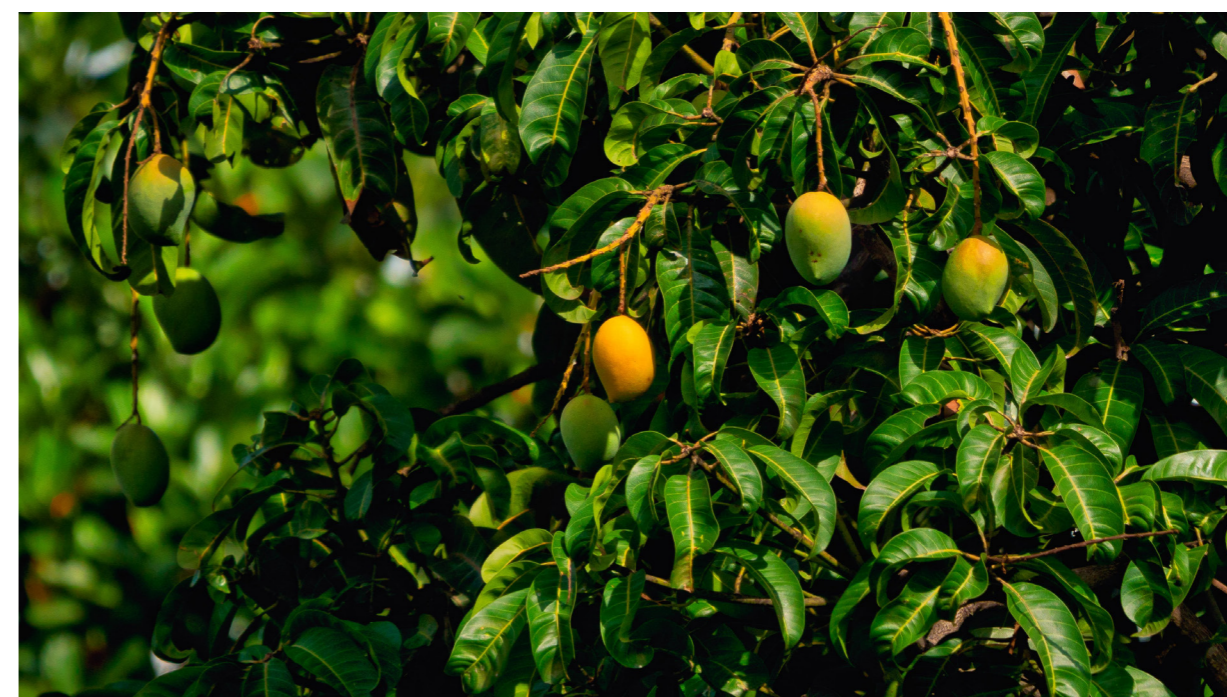
It is also advised that during full flowering, spray of insecticides should be avoided. This may reduce population of beneficial insects which help in pollination.



MARCH:

To control powdery mildew, go for the spray with Dinocap (1 ml/L Karathane) should be done. To control anthracnose disease, spray of carbendazim (2g /L) is advisable if symptoms are seen on the panicles. The spray of copper oxychloride (3 g/L) is advised for control of anthracnose on leaves and twigs.

Note: Under no circumstances plant protection chemicals should not be sprayed during flowering stage. Because, it will wash way the pollen grains as well as it kills the pollinating insects (beneficial insects).





APRIL:

During april month, fruit drop is very common. For controlling the fruit drop, Naphthalene Acetic Acid (NAA) (20 ppm- i.e. 2 g/100 lit. of water) when fruits attain pea size.

During april, the malformed panicles should be cut with sharp and sterile knife and then buried in the soil. On some mango trees, Termites are also seen. If observed, go for the spray with Chlorpyriphos @ 0.2% (200 ml/100 lit. of water).

April month is very important for the fruit growth because summers are generally drier months and plants faces water scarcity and it may ultimately leads to poor fruits development. Therefore, when fruits attain the pea size, farmers should start the irrigation and it should be continued at 10-15 days interval.

If mango hopper attack is observed, then spray with Chlorpyriphos (1 ml/L or 100 ml/100 lit. of water) or dimethoate (0.5 ml/L or 50 ml/100 lit. of water). Fruit fly is one of the serious pests of mango which deteriorates the fruits by eating of pulp which makes the produce unmarketable. Therefore, farmers are suggested to manage this pest in advance and at appropriate time. It can be controlled by use of fruit fly traps (Methyl Euginol, 0.1% + Malathion, 0.1%). To know the population of fruit flies in the mango orchard these traps are hanged in the orchard.

MAY:

Bacterial canker is common during this month. Therefore, proper control measures should be adopted by the farmers in this month with a spray of streptomycin (200 ppm). During this month, farmers should go for irrigation at 7-10 days interval for proper development of the fruits. Spray of borax (1%) should be continued in may month for control of internal necrosis and black tip.

JUNE:

Pest infestation is low in this month. After harvesting, Pruning is done for 10-15 days so that new shoots will appear. To protect them, spray a mixture of Blitox (3 g / lit.) monocrotophos (1.5 ml / lit.) + urea (20 g / lit.) + zinc sulphate (5 g / lit.) on the trees.

In order to practice sorting, grading, and packaging, harvested fruits from different

varieties should not be mixed together. Immediately after harvesting of fruit, they should be first collected at a shady place to remove the orchard heat and thereafter washed and dried before the storage. Immediately after harvest for avoiding injuries caused due to sap flow, the harvested fruits should be subjected to desapping treatment (removal of sap from the stem end attached to fruit)

JULY:

Apply 500 g of nitrogen, 250 g of phosphorus and 500g of potassium should be given after harvesting of fruits. Fertilizer should be applied only after weeds are removed from basins manually or chemically. Farmers are recommended to wash the fruits and dry it before storage. Immediately after harvest for avoiding injuries caused due to sap flow, the harvested fruits should be subjected to desapping treatment.

AUGUST:

A major problem in some regions is the shoot gall maker insect. This insect control is very important in the month of August. Therefore, in the middle of August, spray with quinolphos or chlorpyrifos (2 ml / lit.). And for the control of red rust and anthracnose, spray with Copper oxychloride (Blitox) 3 g/lit. of water

SEPTEMBER:

Repeat spray with Quinalphos or chlorpyrifos (2 ml / lit.) for the control of shoot gall maker insect. If there is still red rust and anthracnose disease persists, repeat spray with Copper oxychloride (Blitox) 3 g/lit. of water.

CONCLUSION:

Profitability of mango growing mainly depends on timely farm operations. Delay in a single activity causes huge losses to the farmers and results in unprofitable venture. Therefore, the adoption of management of insect, pest, diseases and physiological disorders will certainly help to the mango growers for enhancing in their productions, productivity, quality as well as net returns.

OCTOBER:

During October, apply Naphthalene acetic acid (200 ppm) in the first fortnight for reducing the incidence of floral mango malformation. During this month, Die-back symptoms are common. Pruning of dead woods upto 5-10 cm green portion is advisable and spray copper oxychloride (0.3%) twice at 15 days interval. The need for plant protection measures in October may not be so great if the above mentioned plant protection measures are taken regularly from June to September. Therefore, farmers should not be negligent. Farmers should visit their gardens frequently and closely inspect the trees and take appropriate plant protection measures if any of the above mentioned pests and insects are still present.

NOVEMBER:

Die-back symptoms are very common during this month. Therefore, Mango trees can be protected against dieback by pruning dead woods by cutting off only 5-10 cm of green tissue and spraying Copper oxychloride (0.3%) twice every 15 days. Also apply Bordeaux paste on the affected area if gummosis symptoms persist.

DECEMBER:

Mealybug infestation is more during December. For the control of mealybug, Arrange tree banding. The tree trunk should be wrapped with a sheet of alkathane (400 gauge) 25-30 cm wide and 40-60 cm tall. To stop mealy bug insects from climbing on the tree, tie this sheet on both ends and apply grease on its lower end. For the control of mealy bugs, spray with Chlorpyriphos granules (250 g/tree) in the basin is preferable.