

Fruit Bagging- A Good Agriculture Practice in the King of Fruits

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SUMMARY

Mango is a delicious fruit, full of carbohydrates, vitamins A and C, minerals and dietary fibers. Major problem, in trade of mango fruit among countries, is attack of many species of fruit flies. An easy way to control the pest under discussion is the use of chemical pesticides which leads to other relevant problems like health hazards linked with persistency of chemicals and onset of resistance in the pest. In present study, covering or wrapping fruits with cosmetic paper bags is another technique by which chemical and fruit fly free mangoes can be harvested. On the other hand, the fruits without bagging had more than 55% damage done by the fly.

INTRODUCTION

Mango (*Mangifera indica* L.) has many varieties in the world which may differ in colour, taste, aroma and flavor depends upon the climatic zones, soil types and people's choice. Beside the consumption of mango as ripened fruit, it can also be used by value addition such as pickles, jams, mango leathers, squashes and juices etc. various insects like bees, flies, hoppers, midges, bugs, beetles, mealy bugs and fruit flies damage the fruits, shoots, inflorescence for nectar, food and shelter.

Fruit fly *Bactrocera dorsalis* (Tephritidae :Diptera) is most notorious and destructive insect pest of mango. The insect have long, sharp and pointed ovipositor by which it lays eggs on ripening fruit. It punctures fruit skin to lay her eggs and latex exudes from the fruits thus the process of deterioration starts. Later, legless creamy white colored larvae emerge from eggs called maggots feed on the pulp of the fruit resultantly deteriorate the shape and taste of the fruit. The attacked fruit is now the house of bacteria, fungi and deterioration increases with rotting. Rotten fruit is for no use and fall down the ground. In this way, the fruit damages the fruit in both qualitatively and quantitatively.

To control the fruit flies, many techniques are being utilized including chemical sprays, mechanical, physical methods, pheromone traps and baits. As an easy job pesticide chemicals are used in large scales to control various insect pests including the tephritids, resultantly development of resistance in pests against the chemicals. So, every new chemical pesticide loses its effectiveness against fruit flies due to resistance. Pheromone traps are used to attract males and food baits are commonly used to trap both male and female fruit flies.

Bagging

Bagging the fruit can be an effective approach to control the fruit fly infestation. The objective of this method to protect fruit from pests and diseases ,enhance quality and to increase value for export. The horticultural department has introduced a novel initiative in mango cultivation. Across 50,000 hectares in the district is cultivating mango. In the year 2021, as the part of pilot project, department of horticulture has given 90,00,000 cosmetic covers to 1,30,000 acres. Farmers tried this initiative with distribution of these covers and received amazing results. Besides all these, these cosmetic covers are made of wood pulp and these covers are layered with wax substance and thus preventing entry of water when it get wet during rains. The fruit grown in Krishna district of Andhra Pradesh was wrapped with cosmetic covers to ensure its improved growth and keep it protected from pests, insects and birds. The technic best serves short trees where the yield is within arms length. All that one needs to do to ensure his crops remain pest-free is to tie his produce with these wrappers when they are the size of a lemon, and keep it like that till the harvesting stage.

CONCLUSION

Due to pest attack especially fruit flies, the desire to boost the export of fruits especially mango from the country will remain merely a daydream, control of fruit flies with pesticides facing problem of contamination and most countries do not allow entry of such fruits in their borders with residues of chemicals. It was observed that there was no attack of the pest on the fruits that are covered and gives best export quality where sensation

was found at market. Fruit bagging is the best way to avoid fly attack for production of export quality fruits of mango. There are many benefits that comes with this, they protect the fruits from pesticides, as the fruits stay safe from the pests inside the cover. Also during heavy wind condition, as the cover is tied to branch the fruits do. The fruit also stays longer in the tree, firm without much damage.. 3-4 chemical sprays at the time of fruiting can be controlled to single spray so that investment on pesticides could be minimized.

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