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COMMON PESTS IN STRAWBERRY: an introduction

There are many pests that inhabit strawberry crops, the pests below are not specific to strawberries and can be found in many other crops. They represent some of the most damaging or rapid breeding species that you can find and it would be an uncommon year to see none of those listed below in some form whether in a large commercial crop or a small garden.

APHIDS

Aphids are a common pest in many crops including strawberries, they are persistent and difficult to remove fully from a crop. There are a number of species and most aphids can breed asexually, not needing a male to produce live young or lay eggs. This means even small numbers in a crop can swell very quickly. Aphids also have winged morphs that allow for the spread of colonies amongst the crop. The threshold for needing to start dealing with aphids is very low as a result.

Most species will shelter on the underside of leaves or on the petioles and runners.

Example of aphids sheltering on the undersides of leaves

Example of winged and wingless members of an aphid colony

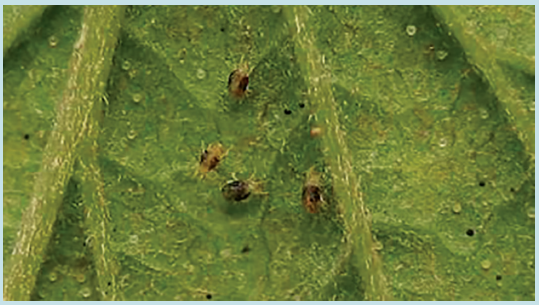
Damage

Many of the species cause different damage to crops, all of these species damage plants by sucking sap out of cells, with some species this damage can cause plant distortion. This sap is then excreted as a substance called “honeydew” that is a contaminant to the crop and can cause secondary diseases to form. The physical presence of aphids and their cast skins can also be a contaminant to the fruit and some species of aphid will transmit viruses when feeding.

TSSM

Two spotted spider mite (TSSM) are very small pests that are present in a wide variety of crops. They are around half a millimetre in size and a hand lens is highly recommended for seeing them. Depending on the crop each female mite can lay between 50 and 100 eggs, the development time varies significantly with temperature. At 15°C the life cycle of the spider mite is approximately 35 days, at 25°C it is approximately 9 days. Populations can increase very rapidly with high temperatures, and they develop better in lower humidity.

Towards the end of the season when it gets to approximately September, the mites slow down and enter "diapause" where they stop feeding and laying eggs to overwinter. Due to the halt in feeding they are hard to kill with insecticides at this point.



Example of two spotted spider mite and eggs on the underside of leaves

Example of webbing caused by large infestations

Damage

Similarly to aphids spider mite damage the crop by sucking the contents from plants cells, this damage often leaves pale or yellow spots on the leaves. Particularly bad infestations of spider mite will cause a webbing on the leaves, which can be an indicator of the severity of the infestation. The signs of damage from spider mites are often more visible than the mites themselves.

THRIPS

Thrips are very small, slender bodied insects about 1-2mm in length. They are present in many soft fruit crops including strawberry. Thrips will often inhabit in and around the flower head, often hiding behind the calyx (see image below). The period of their activity is largely between April and September which varies with species.

There are many species present in strawberry crops, though identification is almost impossible without a high power microscope. The importance of the species is significant as one species known as "Western Flower Thrips" *(Frankliniella occidentalis)* is resistant to a great number of chemical insecticides.

Chemical applications are successful against most of the other species however. Applications of the biological control *Neioseiulus (Amblyseius) cucumeris* will feed on the larval stages that can be found in the crop but care needs to be taken as it is currently understood that not all species breed actively in strawberry crops. Applications of *Orius laevigatus* can attack adults but they need higher temperatures to establish well. Some of the other species prefer to breed elsewhere, in nearby hedgerows, the bark of trees and in flowering weeds and then migrate into the crop where they cause damage.

Example of thrips damage to fruit

Example of a thrips present on the calyx

Damage

They feed on pollen and cause crop damage by feeding on plant sap and oviposition eggs into plant tissue. Their presence in a crop can be a contaminant and the damage can lead to downgrading of fruit quality. The damage in strawberry is known as "bronzing" where the white fruit gains brown speckling that lowers the quality.

VINE WEEVIL

Vine weevil are a potentially damaging pest to soft fruit crops. They vary in size but are approximately 8-12mm long as adults with dull black and orange markings. The larvae are white, legless and have a brown head capsule, they often hold themselves in a “C” pattern or shape. The adults are active all year round but the larvae are active from late summer through to winter.

The adults are nocturnal so the chances of seeing them in the crop during daytime is very slim, they will often hide in sheltered areas until nightfall. A more reliable way of monitoring their presence is through traps or looking for notching.

All vine weevil are female, breed without males and can lay up to 1600 eggs in their lifetime under optimal conditions. It only takes one individual to start a population in enough time. Contamination of crop areas can often happen by adults clinging to crates or plants that are moved around. Eggs are typically laid from April through to September/October. Taking around two weeks to hatch at 20°C.

Example of an adult vine weevil next to the damage caused

Example of vine weevil larvae in the root zone

Damage

Vine weevils cause two types of damage, the adults cause “notching” on leaves where they bite into the surface. This damage is seldom hazardous for the plant if it’s large enough. The main issue with vine weevil comes from their larvae. The larvae live in the soil/growing media and feed on the roots of the crop. Large infestations can lead to weak growth, stunting and plant death.

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