STRAWBERRY GROWERS NZ

Bugs that feed in flowers

Nysius huttoni, Sidnia kinbergii (in the Mirid family), *Nezara viridula (green veggie bug)*

Damage:

There are several species of bugs that feed on strawberry flowers and developing seeds, causing the fruit to develop with a classic "catface" tip, or be otherwise misshappened. They are sucking insects, and when they feed on developing seeds (achenes), the plant embryo dies and fails to produce the hormones required to make the berry develop normally. Bugs also inject their saliva into the plant as they feed, causing deformed cells and, when they feed on ripe fruit, a nasty flavour in the fruit which dissipates within hours.

Identification:

Mirid nymph (left) and adult (middle)

Green veggie bug nymphs

"Catfacing" damage

Young nymps look a little like aphids, but are fast moving. Adults look quite different from nymphs. Green Veggie Bugs, while green as adults, are black as nymphs. "Catfacing" damage from bug feeding can be at the tip end, or it can be diffuse distortion over the whole berry.

The species of bugs causing the damage to strawberries are not well catalogued in NZ, and are different than the species causing damage in other parts of the world (Europe, North America). Recent work in Victoria, Australia, has shown that their species of Nysius causes only minor damage to strawberries, while the Mirid family of bugs caused more damage.

Catfacing can also be caused by cold weather during pollination or early fruit development, so look for bugs in flower clusters to confirm. Damage from flower feeding takes 3-4 weeks to become apparent on fruit. Feeding can also reduce fruit size without distortion.

Spread:

Bugs have a wide pallet and many plant hosts. Though the bug species involved aren't fully catalogued in NZ, similar species in other countries build up on weeds and crops in the landscape (such as lucerne) and when their food dries out or is harvested, they migrate to nearby strawberries.

Control: (see second page)

Pre-flower	There is an idea that a trap crop of lucerne (a favourite food source of Mirid bugs), monitored and sprayed with a broad spectrum insecticide before nymphs become mobile adults, would prevent migration of the bugs into strawberries. This theory has not been tested in NZ.
Flowering and fruiting	Scout to determine when bugs appear in the strawberry crop (place tray under plant, beat the plant with your hand three times on the opposite side to the tray). Thresholds have not been established for bugs in NZ strawberries. While there are predatory bugs that feed on these pest bugs, in California their presense in strawberry fields does not keep the pests below damaging levels. Young nymphs are much easier to kill with sprays than adults, and be aware that effective sprays (broad spectrum) will disrupt beneficial mite predators.