The three major sunflower head infesting insects, namely sunflower head moth, banded moth and seed weevils, should be scouted in sunflower fields.

Pheromone trap based monitoring is showing sunflower and banded moths in all trap locations in the Front Range Area and northeastern Colorado (www.nocopestalert.org).

Younger sunflower moth larvae feed primarily on florets and pollen. Older larvae tunnel through immature seeds and other parts of the head. As the larvae feed and spin silken threads, the dying florets and frass give the sunflower head a trashy appearance.

Insecticide applications are made at early bloom (R5.1) to prevent moths from laying eggs. Pheromone traps may be used to monitor moth activity. Less than one sunflower moth trapped per night is considered low risk, while more than four moths trapped per night is considered high risk and justification for treatment.

If visual scouting is used instead of pheromone traps, consider treatment if more than two sunflower head moths per five plants is observed while scouting during early bloom.

Banded sunflower moth adults are most active during the early morning and early evening. During the day they rest quietly underneath the lower leaves of sunflower plants. Larvae feed primarily on seed and florets in the central portion of the head. A single larva may feed on three to five seeds. As many as 30 larvae have been found in a single head.

Scouting in the early morning or early evening will provide the most accurate counts.

Pheromone traps can be used to determine when scouting should be started, but a pheromone-based treatment threshold is not available. When scouting, sample sites should be 75-100 feet from the edge of the field. Use an X-pattern, counting moths on 20 heads per sampling site for a total of 100 heads. One moth per two plants is the currently accepted economic threshold level.

Red and gray sunflower weevils are both small weevils found in sunflower heads. Egg laying

begins at the outer edge of the head and progresses inward, following seed development.

Adults may be found from June to September. If seed weevil infestations are encountered late in the year, harvest may be delayed to avoid bringing infested seed into storage. Larvae emerging in storage will not damage additional seeds, but their bodies will remain in the storage.

Insecticide applications are made to prevent adults from laying their eggs. Treat red sunflower weevil on oilseed sunflower when about 30 percent of the plants have reached the R5.1 stage. The economic threshold ranges from 5-15 weevils per head, depending on plant population and market conditions (see the High Plains IPM guide for details).

Confection sunflower should be treated to avoid quality penalties if less than 10-15 percent of the plants have reached R5.1 and one or more red sunflower seed weevil can be found per head. Gray sunflower seed weevil is thought to be economically insignificant under most conditions.

Scouting for red sunflower seed weevil can be difficult because of its distribution in the field and because of its habit of hiding in the heads. Start scouting when the yellow ray petals are first visible and stop when the majority of the plants in the field have passed 70 percent pollen shed (R5.7), or when the action threshold has been exceeded.

Avoid taking seed weevil counts from plants in field margins as they tend to congregate in these areas and counts will not be representative of the entire field. Count five sets of five plants, distributed across the field in an X-pattern.

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