

Pale-Striped Flea Beetles in Young Cotton Stands

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Pale-Striped Flea Beetles, *Systema blanda*, are small (3/16 inch) beetles that invade cotton early in the season. Adults bear brown & white longitudinal stripes & jump when disturbed. They feed on cotyledons early on & lower leaves later in the season. Their chewing mouthparts score the upper (most often) & lower surfaces of leaves without causing holes. Wounds bleed sap & scarred tissues turn brown. Flea beetles rarely attack true leaves while cotyledons are present & attractive. Damage is largely cosmetic & often limited to field edges, though remedial action (incl. advanced irrigations) may be needed when the water-balance of a young stand is jeopardized.

Decisions on control actions or advancing irrigations to mitigate flea beetle damage require attention to many factors. Most critical is plant development. If severe damage occurs in the hours after cotyledons emerge, the stand may be jeopardized and action justified. However, more often, damage occurs slowly as the plant develops. As long as there are not other complicating factors that weaken the stand (injury from thrips, disease, etc., but especially poor water relations or suboptimal soil temperatures), the vast majority of stands outgrow this damage without penalty of yield or loss of time. **Generally, emergence of the first true leaf signifies safety of the stand.** Nevertheless, scarring can be dramatic, and under poor growing conditions controls may be required.

Other factors to consider are location in the field and seed treatments. Infestations tend to be spotty, favoring field borders, edges, and nearby drying weedy habitat. In these cases, spot treatments with insecticides may be effective. Also, many neonicotinoid seed treatments provide protection to cotyledons so that a foliar spray is generally unnecessary. Flea beetles may still do some minor feeding despite the seed treatment. They will normally hop when approached; more sluggish movements indicate effects of seed treatment. Foliar sprays, including broad-spectrum insecticides and neonicotinoids, provide sufficient control. **Take great care in early season uses of insecticides, as secondary pest outbreaks can result (esp. mites) and the benefits in yield or timeliness are not proven under normal growing conditions in AZ.** Beneficial arthropods colonize the field early in the season and set the stage for a season full of natural controls of many primary and secondary pests. Under some limited conditions, as determined by examining root development and soil water profile, coming back early with an irrigation on a field edge or small area may be needed to quicken plant development and avoid stand loss.

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