



Bagrada Bug Management Tips for the Low Desert

Cropping System Considerations:

- Sudangrass, cotton and alfalfa seed crops may be considered key sources of Bagrada bug infestations for fall cole crop plantings. Anecdotal observations suggest that cole crops planted adjacent to or near these crops may be at a high risk from Bagrada bug infestations.
- Desert habitat can also be a source of Bagrada bugs due to the abundance of cruciferous weeds (london rocket, shepherdspurse, wild mustards) and other host plants that flourish from winter/monsoon rains.
- Fields established adjacent to or near grassy areas, weedy drains, river bottoms and residential areas may also serve as a source of heavy Bagrada bug numbers, again due to the availability of host plants.

Monitoring and Scouting:

- Inspecting plants during the early morning (6:00-9:00 am) may be misleading. Adults are generally most active in fall cole crops fields from mid-morning (10:00 am) to late afternoon day (4:00 pm) when temperatures exceed 90°F. When sampling for Bagrada, look for fresh feeding signs on cotyledons and young leaves (see images below). Be sure to carefully inspect cracks in the soil and dirt clods where adults commonly seek shelter when the temperature is hot.
- Transplanted cole crops: Begin scouting for Bagrada bug adults the next morning following transplanting. The bugs can be difficult to find on plants when sprinklers are on, so when sprinklers are turned off at night or early morning carefully inspect all the leaves for the presence of adults and fresh feeding symptoms. Also carefully inspect the soil underneath the plant.
- Direct-seeded cole crop plantings: Begin scouting immediately upon seedling emergence prior to the stand being "lined out" (3-4-days post-wet date in early September). Bagrada bugs have been observed feeding on broccoli seedlings just as the cotyledons are appearing. Damaged or desiccated seedlings that appear wilted can be a result of Bagrada feeding. On larger seedlings at the 1-2 leaf stage or larger, inspect for adults underneath cotyledons and leaves, as well as the stem at the soil surface.

Chemical Control:

- Preventing the adults from feeding on plant terminals and small cotyledons is critical to establishing and maintaining a quality stand. An action threshold has not yet been established, but anecdotal observations thus far suggest that prolonged feeding by 1 adult per 3 row ft of seedlings or transplants can cause stand losses or unacceptable plant damage.
- Contact insecticides appear to provide the most effective control during this period. Following insecticide treatments inspect the soil for dead adults. Also, adults will also feign death when disturbed.
- Soil-applied neonicotinoid (e.g., imidacloprid) and diamide (e.g., Coragen) insecticides do not adequately preventing feeding damage to transplants and direct seeded crops.
- Pyrethroids (i.e., Capture LFR) banded over the seedline at planting have shown to provide ~7 days control of adults on direct-seeded broccoli.
- Chemigation with pyrethroids during stand establishment can provide effective, short-term knockdown of adult populations.
- On transplants, chemigations should be initiated upon the first signs of adults or damage. Our trials to date have shown that treatments for flea beetles have coincided with the presence of Bagrada bugs.
- On direct-seeded crops, consider a prophylactic chemigation when seedling first emerge (3-4 days after wet date), particularly if the grower has planted to a stand. Subsequent irrigation runs will likely dilute the chemical and may require additional treatments.
- Once stands have become established, foliar sprays with pyrethroids (e.g., bifenthrin, Lambda cyhalothrin), chlorpyrifos, methomyl, and neonicotinoids (i.e., dinotefruon, clothianidin) can provide effective adult control; length of control will likely depend on rates, coverage, spray frequency, tank-mix combinations, & duration of adult migration from outside the field.



Bagrada bug feeding symptoms on 4 day old cauliflower transplant.



Bagrada bug feeding signs on broccoli cotyledons 2 days after emergence.



Fresh feeding signs on 2-leaf stage broccoli (left), older feeding signs on a week old cauliflower transplant (right).