

Bean Leaf Beetle

Pest Facts and Impact on Crop

- Latin name is *Ceratoma trifurcata*
- Although the larvae feed on soybean roots, most damage occurs from adult feeding on foliage or pods
- Found east of the Rocky Mountains, wherever soybeans are grown
- No significant natural enemies are known
- Hosts: alfalfa, clover, green beans, wild legumes such as tick trefoil
- Generations per year
 - 3 – Southeast United States
 - 2 – Iowa and Illinois
 - 1 to 2 – Wisconsin
 - 1 – Canada
- Adults overwinter in woodlots and fence rows
- Quickly killed if exposed to temps below 14°F
- Adults may feed on alfalfa in spring before soybeans emerge

Crop Symptom Pictures



Leaf Injury



Area of green stem

Pest ID

Adult:

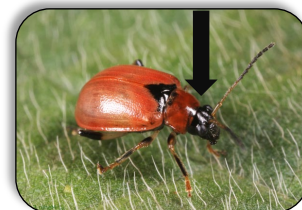
- Bean leaf beetle adults are 1/5 inch long
- Color is typically dark yellow, but may be orange or red
- Wing covers often with four “rectangular” marks, but may have two or no marks
- Best identifying mark—black triangle behind pronotum (neck region)

Bean leaf beetle adults



Larvae:

- Found in soil near roots and resemble corn rootworm larvae
- Body color is white and head color is dark brown/black
- Often found feeding in nodule



Crop Symptoms

- Impact from larvae is unknown, but thought to be insignificant
- Leaf feeding from adults causes little impact unless defoliation exceeds 25 percent
- Pod feeding results in greatest damage and affects both quality and yield
- Adults also transmit bean pod mottle virus, which:
 - Reduces soybean yield
 - Reduces soybean quality
 - Causes green stem and delays harvest

Management Considerations

Resistance

- Neither native nor transgenic resistance are currently available for bean leaf beetle

Beneficial insects (natural enemies)

- Very little impact documented
- Not a recognized deterrent to beetle populations

Planting

- If the field has a history of BLB injury or bean pod mottle/green stem, consider planting slightly later after most BLB adults have moved away from the area
- Pioneer Premium Seed Treatment with insecticide may help reduce damage from overwintering BLB; effect may vary on bean pod mottle infection prevention



Scouting Practices

- Early pod fill stages: R1-R3 – If defoliation approaches 20 to 25 percent and large numbers of BLB adults are present, consider insecticide application, especially if beetles exceed 20 per 20 sweeps of a sweep net
- Decision should be based on increasing or decreasing beetle numbers, costs of control and grain price of soybeans
- Late pod fill stages: R5-R7 – If pod injury is above 10 percent and beetles exceed 3 per sweep, consider insecticide application, especially if other pod feeding insects (grasshoppers) are present
 - Value of control will depend on continuing injury and pod maturity

