



Foliar Aphids

June 27, 2013

One of our Agriculturalists has seen a few fields that have foliar aphids on sugarbeets plants. They have been identified as Black Bean Aphid. However, there are two basic types of foliar aphids that can affect sugarbeets; Green Peach Aphid (*Myzus persicae*) and the Black Bean Aphid (*Aphis fabae*).

The Black Bean Aphid is a dark olive green to black while the Green Peach Aphid is a light to dark green or pinkish color, with distinctive red eyes. They also have a noticeable three dark lines run down the dorsum (top surface of the insect's body).

An aphid has piercing sucking mouthparts, and feeds by inserting these mouthparts into plant tissue and sucking out the sap, thus producing honeydew on the leaves making the leaves sticky.

Aphid population levels are heavily influenced by temperature, rainfall, and the present of natural enemies present. Aphid eruptions are most common in hot dry weather. As a word of caution, when pesticides are applied don't forget that pesticides not only control aphids but natural predator too.

Aphids' infestations commonly begin on young, tender leaves near or in the midpoint of the crown and start along the field borders. As their population increases, the aphid will colonize older leaves. Bean Aphids are hardly ever found on the top surface of the leaves (unlike the Peach Aphid), but rather found on the underside of the sugarbeet leaves. Severe aphid populations may destroy foliage, even in mature sugarbeet plants.

Green peach Aphid, wingless



Black Bean Aphid, wingless



Black Bean Aphids on a Leaf



G. Martus, 2013

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Monitoring and Treatment Decisions

Observer sugarbeet plants and gauge the aphid population and the amount of direct feeding damage to plants. To help determine damage levels caused by aphids' feeding, please refer to the two tables below:

Damage Level	Aphid Infestations and Associated Injury
0	No visual injury; no aphids, or if aphids present, confined to isolated winged individuals.
1	No visual injury; aphids present in small colonies in center leaves of plants; up to 20% of center leaf surface covered with aphids but no plant stunting.
2	Margins of leaf curled inward toward midrib; aphids present on most leaves, covering between 20-40% of leaf surface; obvious honeydew and plant stunting.
3	Leaves severely curled but petioles upright; aphids present on all leaves, covering 40-60% of leaf surface; honeydew prevalent and plant severely stunted.
4	Leaves severely curled; aphids covering 60-80% of leaf surface.
5	Plant collapsed; aphids covering 80-100% of leaf surface.

Plant age in weeks from emergence	Treat if 3-5% of plants reach damage level
Up to 4	1
4-8	2
8-12	2
12-16	2-3
16-20	2-3
20-24	3
24 and up	3-4

Table Source: University of California

As a last recourse, pesticides can be used to control aphids. Below is a list of pesticides to control both species of aphids.

Chemical Control

Lorsban Advanced (*Chlorpyrifos*) 0.75 pt/acre
 Lannate LV (*Methomyl*) 0.75-3 pt/acre