

Visit our Web site to learn about ongoing research, like host plant resistance to the soybean aphid.

www.soybeanaphid.info

Just the facts, please!

Do aphid resistant soybean varieties require a refuge?

Because the resistance gene was introduced into plants with traditional breeding techniques, a refuge is not mandated by the Environmental Protection Agency.

When will aphid resistant varieties be commercially available?

Growers should be able to purchase aphid-resistant varieties in 2010.

Will host plant resistant varieties be aphid-free?

None of the known host plant resistance genes provides complete protection from the soybean aphid. Resistant plants will have fewer aphids compared to conventional plants, but do not expect fields to be aphid-free (Figure 1). Growers should still regularly scout fields to determine if aphid populations exceed the economic threshold and spray accordingly.

Is the economic threshold still applicable for resistant varieties?

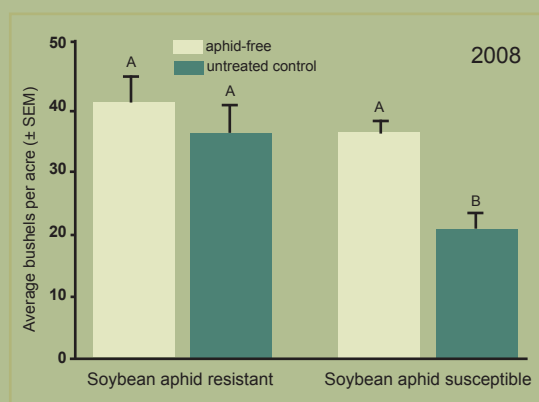
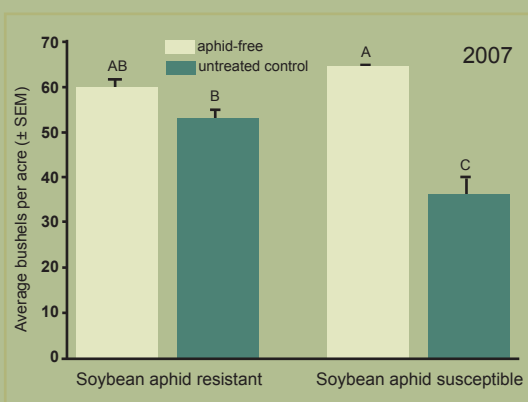
There is ongoing research to determine if the economic threshold of 250 aphids per plant is still appropriate for aphid-resistant soybean varieties. For now, continue to use the standard threshold, knowing that soybean aphid populations may not develop as quickly in fields planted with aphid-resistant varieties.



▲ Iowa State University Extension field demonstrations showcase new management tools like aphid-resistant soybeans. Photo: Iowa State University

Will growers still need to treat aphid-resistant varieties with an insecticide for aphid control?

Insecticide use may be necessary in some years. Aphid populations in Iowa research plots planted with aphid-resistant soybean varieties exceeded the economic threshold in 2007 and 2008, requiring an insecticide application for yield protection (Figure 2).



▲ **Figure 2.** Average soybean bushels per acre (± standard error of the mean) in 2007 and 2008 at the Iowa State University Research Farm in Story County (O'Neal and Chiozza, unpublished data). Aphid-free plots were treated with an insecticide three times each season. Untreated control plots were never treated with an insecticide. Different letters indicate a significant difference in yield.