

7-13-2009

Considerations for Soybean Insecticides and Fungicides

Alison E. Robertson

Iowa State University, alisonr@iastate.edu

Daren S. Mueller

Iowa State University, dsmuelle@iastate.edu

Nate Bestor

Iowa State University

Matthew E. O'Neal

Iowa State University, oneal@iastate.edu

Rebekah Ritson

Iowa State University

Follow this and additional works at: <http://lib.dr.iastate.edu/cropnews>

 Part of the [Agricultural Science Commons](#), [Agriculture Commons](#), [Entomology Commons](#), and the [Plant Pathology Commons](#)

Recommended Citation

Robertson, Alison E.; Mueller, Daren S.; Bestor, Nate; O'Neal, Matthew E.; and Ritson, Rebekah, "Considerations for Soybean Insecticides and Fungicides" (2009). *Integrated Crop Management News*. 618.

<http://lib.dr.iastate.edu/cropnews/618>

The Iowa State University Digital Repository provides access to Integrated Crop Management News for historical purposes only. Users are hereby notified that the content may be inaccurate, out of date, incomplete and/or may not meet the needs and requirements of the user. Users should make their own assessment of the information and whether it is suitable for their intended purpose. For current information on integrated crop management from Iowa State University Extension and Outreach, please visit <https://crops.extension.iastate.edu/>.

Considerations for Soybean Insecticides and Fungicides

Abstract

Several Iowa agribusinesses are offering soybean growers pest management plans that include applications of fungicide and insecticide. Although combining an insecticide and fungicide may be convenient, the results from our 2008 Pesticide Stewardship trials suggest this is a convenience that may not pay off.

Keywords

Plant Pathology, Entomology

Disciplines

Agricultural Science | Agriculture | Entomology | Plant Pathology

[Subscribe to Crop News](#)

Archives

[2015](#)[2014](#)[2013](#)[2012](#)[2011](#)[2010](#)[2009](#)[2008](#)[Previous Years](#)

ISU Crop Resources

[Extension Field Agronomists](#)[Crop & Soils Info](#)[Pesticide Applicator Training](#)[Agronomy Extension](#)[Entomology Extension](#)[Plant Pathology Extension](#)[Ag and Biosystems Engineering Extension](#)[Agribusiness Education Program](#)[Iowa Grain Quality Initiative](#)[College of Agriculture and Life Sciences](#)[ISU Extension](#)

Integrated Crop Management NEWS

[PRINT STORY](#)
[EMAIL STORY](#)
[ADD TO DELICIOUS](#)
[ATOM FEED](#)
[FOLLOW ON TWITTER](#)

Considerations for Soybean Insecticides and Fungicides

By Alison Robertson, Daren Mueller and Nate Bestor, Department of Plant Pathology
Matt O'Neal and Rebekah Ritson, Department of Entomology

Several Iowa agribusinesses are offering soybean growers pest management plans that include applications of fungicide and insecticide. Although combining an insecticide and fungicide may be convenient, the results from our 2008 Pesticide Stewardship trials suggest this is a convenience that may not pay off.

2008 Statewide Pesticide Stewardship Trials

In 2008, we conducted trials at six locations in Iowa to compare calendar based applications of pesticides with applications of pesticides based on insect or disease thresholds. Treatments evaluated were fungicide alone, insecticide alone, or a tank mix of fungicide plus insecticide at either R1 or R3. Data collected from the trials included seasonal exposure of soybean to aphids (measured in cumulative aphid days; CAD), foliar and stem disease severity, yield and much more.

Insecticides. Aphid pressure varied across locations from very high at the ISU Northwest Research Farm (Peak aphids = 4073 per plant on August 17) to low at the ISU Southeast Research farm (Peak aphids = 114 aphids per plant on August 20). The best yield-protection was observed when insecticides were applied at or near the 250 per plant threshold.

When applied on a calendar basis, the highest yields came from plots treated with a foliar insecticide applied at R3 than R1. However, we did not see yield reduction at every location as aphid populations did not always reach damaging levels. Using insecticides when they are not needed is not an efficient use of this tool and may, under some circumstances, result in greater pest problems later in the season.

Last growing season there were numerous reports of growers who had applied an insecticide at R1, when there was no insect pressure, but still had to apply a second dose of insecticide later in the season when soybean aphid reached threshold.

Fungicides. In general, severity of brown spot and anthracnose stem blight were reduced by an application of fungicide at R3. Greater yields were achieved with fungicides applied at R3 compared to R1 applications at all locations. This was no surprise to us, since others have reported similar findings with regards to fungicide timing on soybean. Furthermore, disease pressure within the soybean canopy is usually very low at R1, and increases from growth stage R3 onwards. Therefore, an application of fungicide as a disease management tool makes more sense at R3.

We will continue this research in 2009, but so far we can conclude that applications of either a fungicide alone, an insecticide alone or a tank mix of fungicide plus insecticide at R1 has not been beneficial. Applications of both fungicide and/or insecticide may cause aphid populations to be higher than with no application.

Growers are advised to scout for soybean aphid and apply insecticide when thresholds are reached. Similarly, to improve chances of a significant yield response, fungicide should not be applied before growth stage R3, and fields should be scouted to determine the level of disease pressure before application.

Fungicide Product Update

There were no major changes in product availability over the past year. Two Section 18 labels remain for soybean rust – Punch and Topguard. Remember that the ONLY legal use of these fungicides in Iowa should be targeting soybean rust. Punch will not be available for use on soybean in 2010 so check with local agriculture dealers if product is still remaining at the end of the season. A decision by EPA on Topguard should come sometime in late 2009.

Alison Robertson is an assistant professor of plant pathology with research and extension responsibilities in field crop diseases. Daren Mueller is an extension specialist with responsibilities in the Corn and Soybean Initiative. Matt O'Neal is a professor of entomology with extension and research responsibilities. Nate Bestor is a research associate in plant pathology; Rebekah Ritson is a graduate assistant in sustainable agriculture. Robertson may be reached at (515) 294-6708 or by email at alisonr@iastate.edu; Mueller at (515) 460-8000 or by emailing dsmuelle@iastate.edu; O'Neal at (515) 294-8622 or by emailing oneal@iastate.edu.

This article was published originally on 7/13/2009. The information contained within the article may or may not be up to date depending on when you are accessing the information.

Links to this material are strongly encouraged. This article may be republished without further permission if it is published as written and includes credit to the author, Integrated Crop Management News and Iowa State University Extension. Prior permission from the author is required if this article is republished in any other manner.