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Wind Speed and Herbicide Application

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Wind Speed and Herbicide Application

Abstract

The anticipated increase in dicamba and 2,4-D use associated with Xtend™ and Enlist™ crops will require enhanced stewardship to prevent problems with off-target movement. While many factors influence herbicide drift, high wind speeds pose the greatest threat of moving herbicides off the intended target.

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Wind Speed and Herbicide Application

January 17, 2017

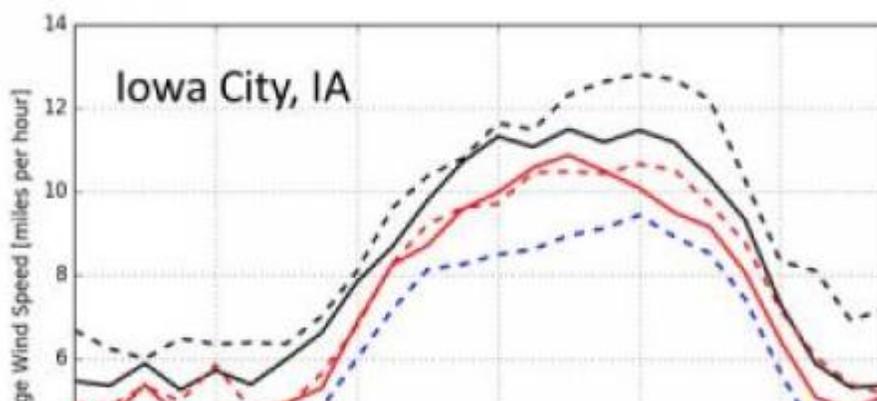
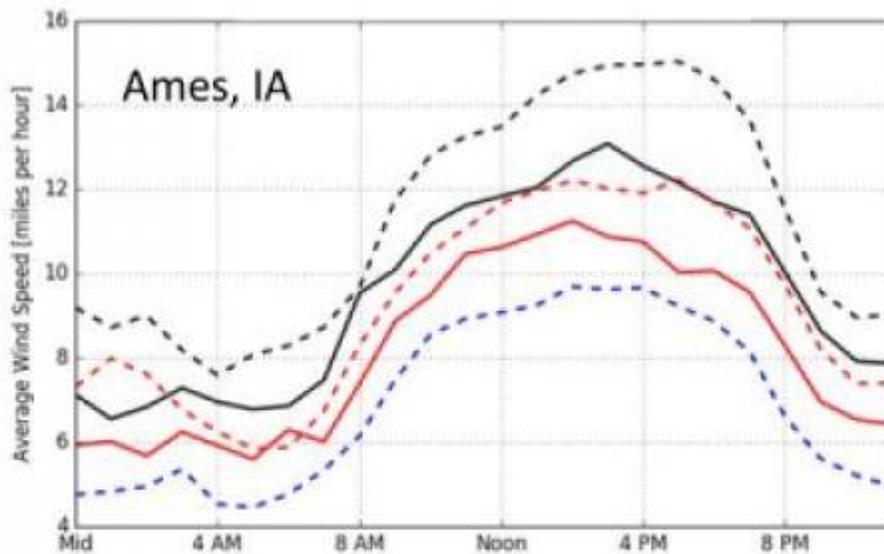
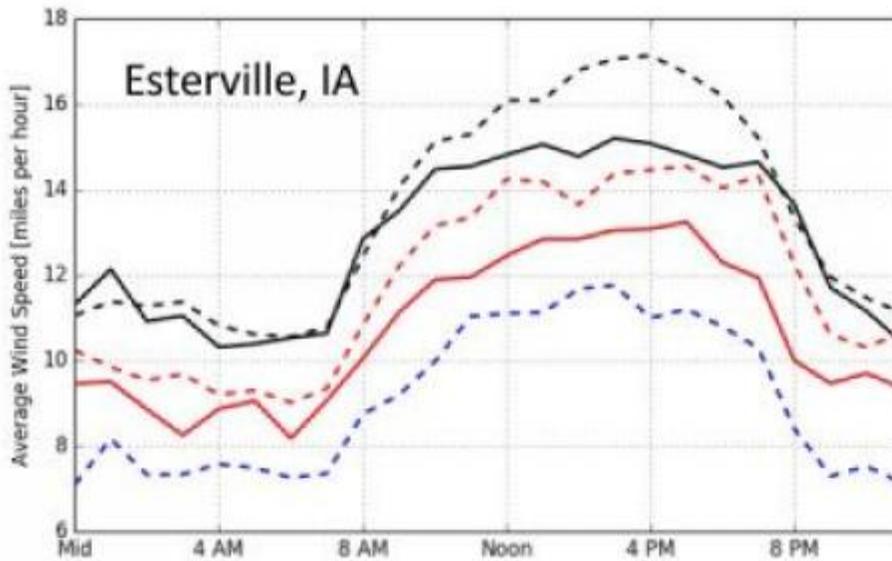
The anticipated increase in dicamba and 2,4-D use associated with Xtend™ and Enlist™ crops will require enhanced stewardship to prevent problems with off-target movement. While many factors influence herbicide drift, high wind speeds pose the greatest threat of moving herbicides off the intended target.

The labels for Group 4 herbicides approved with the new herbicide-resistant crops specify not to apply when wind speeds exceed 15 MPH. Other labels (e.g. Laudis, Cobra, etc.) specify 10 MPH as the maximum wind speed for application. Spraying when winds exceed label restrictions is not only illegal, but can override steps taken to eliminate off-target movement (e.g. low-drift nozzles, low spray pressure, etc.).

Anyone who has experienced an Iowa spray season understands the struggle in finding suitable times to apply pesticides. Wind speeds averaged over a 30-year period at three Iowa locations are displayed in Figure 1. During the day, wind intensity generally begins to increase around 7:00 a.m. and peaks around 4:00 p.m. Winds are stronger early in the growing season, and also are stronger in northwest Iowa compared to other areas of the state. The graphs illustrate how wind speed limits the time available for pesticide applications. During much of the day, average wind speeds are close to, or exceed, maximum levels specified on herbicide labels, especially early in the growing season.

The high sensitivity of certain plants to Group 4 herbicides increases the risk, and therefore liability, associated with applications of these products. The new Group 4

herbicide products clearly state preventing spray drift is the responsibility of the spray applicator. Determining wind speeds, documenting the presence of nearby sensitive plants, following label guidelines, and using good judgment is important with any pesticide application, but is essential with the new Group 4 products.



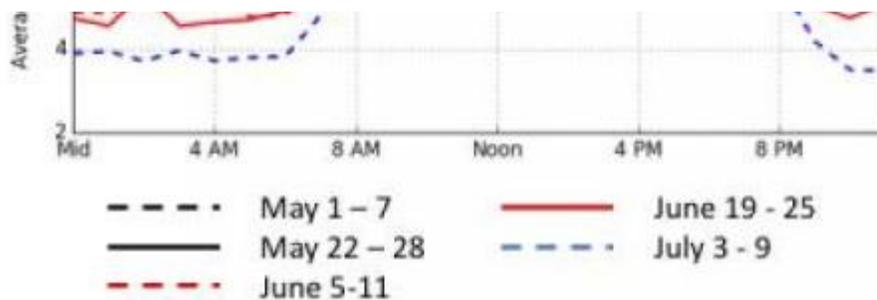


Figure 1. Average wind speeds (1987-2016) as affected by time of day and date at three Iowa locations. Wind speed measured at a 30 foot height.

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Category: [Weeds](#)

Tags: [spray drift](#) [dicamba](#) [2,4-D](#) [Enlist](#) [Xtend](#) [drift](#) [wind speed](#)

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Dr. Bob Hartzler is a professor of agronomy and an extension weed specialist. He conducts research on weed biology and how it impacts the efficacy of weed management programs in corn and soybean. Dr. Hartzler also teaches undergraduate classes in weed science and weed identificatio...