

Leading Edge

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Scouting soon after plants emerge allows you to give attention to potential issues early before they become big problems.

The Power of Preparation

Keep on top of problems in your fields with crop scouting

Scout early and scout often are words to live by for a farmer. Identifying potential issues early, like crop disease, pest or weed infestation, or nutrient deficiency, gives you the chance to stifle a small problem before it becomes a big one. So pack the scouting essentials—plastic bags for collecting samples or a camera, a spade or trowel for examining roots, a tape measure, a magnifying glass, and a knife—and head out into the field.

Know your fields

Before crop scouting, there are several key pieces of knowledge you should be aware of in order to get the most out of your time inspecting fields.

- Know the economic injury level—the breakeven point where it makes economic sense to begin treating your crops for disease. The same applies for the economic threshold for pest infestation, or the level of infestation at which pest control becomes beneficial.
- 2. Know the history of your fields and consider the impact of details such as herbicides applied the previous year.
- 3. Know the characteristics of a healthy crop, then look for signs of crop damage such as thinning, stunting, early dying, discoloration, or damaged stems or leaves. Each disease and insect will cause specific damage to a crop, so it is also important to be familiar with the symptoms of a wide variety of infestations and diseases, including pests and their life cycles.



Stunted plants may indicate nutrient deficiencies early, allowing time for side-dressing if needed.

- 4. Analyze the weather, crop stage, weed development, and pest biology so scouting occurs at the right time.
- 5. When scouting for pests, be aware that different sampling methods are appropriate for different pests.

Keep track of the facts

Record keeping is perhaps the most important step in crop scouting. Records should include: the field location; how the samples were collected; data collected at each site; plant counts; row spacing; stage of crop development; and crop damage, if it is present. Use clear language so you can benefit from the report year after year.

In the past, record-keeping was done by notebook or scouting forms, but new technology is making this easier. Smartphone apps are continually evolving, and a multitude of agricultural apps are available as tools for crop scouting. Farm Progress recently introduced an app to help identify weeds, which allows you to search by month, location, crop, and weed type.¹ Other crop scouting apps, such as Trimble's "Connect Farm" app, allows farmers to map field boundaries and input scouting information.

Drones or UAVs can also be used as a scouting tool to take aerial photos of crops. They can be helpful in identifying areas of crop stress as well as weeds or pest infestations.



Drones give you a bird's eye view of potential problems.

When it comes to resistant weeds there is an even better reason to keep good scouting records. "Herbicide-resistant weeds have been around for decades, but more recent developments, such as glyphosate-resistant giant ragweed, marestail, and waterhemp, have changed the game. This is where good scouting of fields and accurate record keeping can help raise our batting average," said Clarke McGrath, partnership program manager of ISU's Corn and Soybean Initiative.² If a patch of weeds is consistently resisting herbicides, it might be time to try a different approach.

Always a good investment

Thorough crop scouting has many benefits: improved weed, insect, and disease control, an understanding of opportunities for improved equipment performance, and the development of accurate records of each fields' history. When these benefits come together with good management, improved yields are the result.

Endnotes

- 1 Willie Vogt, "Scouting Tool Offers Weed ID Help," Farm Progress, April 10, 2014, <u>http://farmprogress.com/story-scouting-tool-offers-weed-id-help-13-111071</u>, accessed on June 6, 2014.
- 2 Clarke McGrath, "Keep Ahead of Nature's Curveballs," Farm Progress, June 2011, <u>http://farmprogress.com/california-farmer/library.</u> <u>aspx/keep/ahead/of/natures/curveballs/41/51/1161</u>, accessed on June 6, 2014.

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