



A modern rotary hoe can be just the tool for the job in certain situations.

The Rotary Hoe

A dependable pinch hitter in your equipment lineup

In springs with frequent hard rains the often overlooked rotary hoe is in high demand, and farmers who own one are everyone's best friend. The benefits this traditional tool provide, including emergence assistance, soil warm-up, and weed control, make a strong case for investing in a newer rotary hoe model. Will we see the same this spring? Only Mother Nature knows, but keep the rotary hoe in mind—it might be just the tool for the job.

Combat crusting, enhance emergence



The crust formed after a hard rain can impede crop emergence, eventually hurting stand counts. Photo courtesy of Gingerich Farms.

in this situation, plants are stuck under the crust while leaves begin to unfurl, causing your stand count to experience

significant loss. Gently breaking the crust minimizes the need to replant, saving you the cost of more seed as well as the fuel costs associated with replanting.

Soybeans are very likely to experience difficulty emerging in these situations, and corn may also benefit from the crust being broken. In either case, checking your fields by stirring the soil after a hard rain to determine whether a pass with a rotary hoe could help save your stand count is advisable. Run the hoe a few yards into the field to see if seedling damage is occurring before hoeing the entire field.

Low-cost weed control

Iowa State University Extension Weed Specialist Mike Owen has stated, "A rotary hoe is one of the most effective and cost-effective weed management strategies you can use."¹ Owen is an expert in weed control who has been consulted frequently as weeds are becoming increasingly resistant to herbicides, partially due to the wider use of conservation tillage practices.

Re-introducing some light tillage like the kind you get with the rotary hoe can be a component of the solution. While not a good idea on highly erodible land, hoeing may be useful in other settings, according to Owen. He noted in an interview with Ft. Dodge, Iowa-based *The Messenger* in January 2013 that in response to the need to manage weeds with a more varied approach, some growers are using a rotary hoe designed for high-residue areas.² The rotary hoe is a good fit for those committed to min-till, strip-till, or no-till since it causes very little residue, and as a result, it en-

hances infiltration and prevents erosion.³ As a bonus, while the rotary hoe removes weeds, it aerates soil around growing plants.

When weed control is your goal with the rotary hoe, hit the field three to five days after planting when the soil is firm and dry. A rotary hoe can be used on weeds either pre- or post-emergence. However, it is most effective used on weeds that are in the “white thread stage,” before they have emerged above the ground. Rotary hoeing midday to late afternoon works well—the sun will help dry out weed roots. Hot temperatures and wind are added aids in ensuring weed termination.

After herbicide application, if there is an insufficient amount of rain to activate it, the rotary hoe can come to the rescue. It helps to incorporate your herbicide, making sure you benefit from the money you’ve spent and cutting down on the need to reapply.

When rotary hoeing for weed control, you should not have to fear appreciable crop damage for crops planted one to two inches underground that have yet to emerge. After emergence, stand losses of five to seven percent are expected.

Weeds you can expect to control with a rotary hoe include shallow-germinating, small-seeded annual weeds such as wild mustard, kochia, pigweed, foxtail, and nightshade. Large-seeded, deep-germinating weeds and perennials cannot be controlled with the rotary hoe.



For performance in today's conservation tillage conditions, you'll need a rotary hoe with a modern wheel design that handles more residue, like this 3700 Ridge-Till [Rotary Hoe from Yetter](#).

Tips for effective and efficient rotary hoe operation

- Most rotary hoes can be operated with low-horsepower tractors. Using the smallest tractor appropriate for the job will cut down fuel costs and limit soil compaction.
- If you know you will want to make a pass with a rotary hoe post-emergence to manage weeds or combat crusting, plan ahead to account for the potential seedling loss

at planting with an increased seeding rate.⁴

- Corn can be hoed practically any time after planting until the crop is 4-5" tall. There is one exception: from when the spike is within 1/2" of the soil surface until the one-leaf stage if the soil is loose. Avoid hoeing then to prevent excessive covering.⁵
- Soybeans should not be hoed from the crook stage, just before emergence, until approximately five to seven days after emergence, when beans are in the one- to two-trifoliate leaf stage.⁶ Take care when hoeing not to knock off the cotyledon.
- Don't expect the same performance in conservation tillage conditions from an old rotary hoe (one more than 30 years old) as you would from a newer model hoe. Wheels on most newer hoes are spaced for self-cleaning with tines from adjacent wheels helping to dislodge stalks.⁷ If you want the rotary hoe to come to your rescue today, invest in a newer model.
- In high-residue conditions, such as min-till or no-till, offset wheels can be beneficial because they prevent crop damage due to residue buildup on the rotary hoe wheels.
- Rotary hoes are meant to be operated at a high speed of 7 to 10 miles per hour or more to take full advantage of the rotary hoe wheels.
- Drive in the same wheel tracks as your planter to reduce compaction.
- Watch the wear on your rotary hoe wheels. If overly worn, they will not operate optimally, especially if your goal is breaking up soil crusting.

Although not effective in every situation, when certain conditions converge, nothing gets your crops back on track like the rotary hoe. Like the pinch hitter in a baseball game, you can count on this tool to knock it out of the park when the time comes.

Endnotes

1 Syl Marking, “Don’t Snub The Rotary Hoe,” March 15, 1998, <http://cornandsoybeandigest.com/dont-snub-rotary-hoe>, accessed May 13, 2014.

2 Darcy Dougherty Maulsby, “Fighting ‘super weeds,’” *The Messenger*, January 6, 2013, http://www.messengernews.net/page/content_detail/id/553884/Fighting--super-weeds-.html?nav=5003, accessed May 13, 2013.

3 Marking.

4 Ibid.

5 Ibid.

6 Ibid.

7 Mark Hanna and Mahdi Al-Kaisi, “Use the rotary hoe for soil crusting,” *Integrated Crop Management*, May 7, 2001, <http://www.ipm.iastate.edu/ipm/icm/2001/5-7-2001/hoecrust.html>, accessed May 13, 2014.

Visit www.yetterco.com to review past issues of the *Leading Edge* and to find Yetter products that maximize your yield potential.

Notice – The information contained in this guide is offered in good faith by Yetter Mfg. Co., Inc. to further the understanding of no-till farming. However, the use of the information provided is beyond the control of Yetter Mfg. Co., Inc. and in no case shall Yetter Mfg. Co., Inc. or any seller of its products be responsible for any damages which may occur from the use of this information. All such risks shall be assumed by the user.

Yetter Manufacturing Co., Inc. | 109 S. McDonough | Colchester, Illinois 62326
Phone: 800-447-5777 | FAX: 309-776-3222 | www.yetterco.com | E-mail: info@yetterco.com