



Winter Annual Weeds and No-Till Farming

What Are Winter Annual Weeds?

An annual weeds job is to produce seed so that the species will continue on next year, everything else is secondary. Unlike summer annual weeds such as foxtail or velvet leaf which typically germinate and produce seed within a summer growing season, winter annuals actually germinate in the fall and begin growing before winter. During winter these weeds go into dormancy, but at the first signs of spring, winter annuals come out of dormancy, bolt and produce seed before corn and beans are usually planted.

What Are Some Winter Annual Weeds?

Some commonly seen and problem winter annual weeds include henbit, horseweed (mares tail), pennycress, shepherds purse, curly dock, perennial dandelion and the mustard family.



Henbit



Mares Tail



Curly Dock



Shepherds Purse



Pennycress



Tansy Mustard

Are We Seeing More Winter Annual Weeds in No-Till?

As the use of no-till farming increases, winter annual populations and problems in the fields seem to be increasing. Many producers, especially in dry-land situations, have found that one of the benefits of no-till is that it helps conserve moisture but, no-till may not interfere with the life cycle of winter annual weeds like tillage does. Consequently, many no-till users



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feel they are having more winter annual weed problems in their fields than they had when they used more tillage. Another speculation on why winter annuals are popping up more in

no-till fields is the increased use of Roundup-Ready soybeans. Since Roundup has no residual there is no long term control of weeds. When conventional soybeans were the norm, traditional herbicides provided residual control that kept many of the winter annuals from germinating or growing in the fall.

Can Winter Annual Weeds Do Much Damage?

Research at the University of Nebraska shows that winter annuals can use as much as three inches of soil moisture in 30 days. In another study, Agriculture and Agri-Food Canada, concluded that 8% to 11% of the soils moisture could be saved by controlling winter annuals early. "[Winter Annual Weed Pest Alert](#)" Remember, patches of winter annuals are a preferred area for cutworms to lay their eggs in.

Controlling Winter Annuals?

The biggest issue for control is timing. Herbicides used to control winter annuals work best when applied before the weeds have bolted. Typically, this means checking fields early and spraying as soon as temperatures warm up enough for fast plant growth to begin. Studies done by the University of Nebraska regarding spring applied products and the percentage of winter annual weed control experienced are (1) 2,4-D with 65% control, (2) 2,4-D plus Banvel with 83% control, (3) Atrazine COC with 100% control and (4) Roundup with 93% control. The University of Missouri did a fall application study for henbit and documented the following results (1) Canopy with 100% control, (2) Canopy XL with 98% control and (3) Sencore with 94% control. In most cases, a herbicides effectiveness or control can also be influenced by the air temperature at which the herbicide was applied. In many situations, cooler application temperatures than the manufacturer recommends may render a herbicide less affective.

CREDITS: University of Nebraska
 University of Missouri
 Kansas State University