



Q: I used no-till to plant my soybeans the last several years. The last two years I've had difficulty controlling waterhemp. I may go back to using a chisel plow if I have a waterhemp problem this year. Will tilling the soil reduce my waterhemp problem?

A: As you know, I am a committed no-tiller, but there are some good reasons for tilling soil. I do not believe that waterhemp control is one of those reasons. Let's review why waterhemp has become a problem in the last several years. First, the last several springs have been much wetter than normal. Research out of Minnesota indicated that dry spring weather can cause dormancy in several pigweed species. Our wet springs probably stimulated a greater percentage than normal to germinate. We have also treated many of our soybean acres with ALS-inhibitor herbicides. These herbicides have been part of a very cost-effective means of soybean weed control. Unfortunately, their mode of action makes it easy to select weed types that are tolerant or resistant to one or more of the ALS-inhibitor herbicides. So, the combination of wetter than normal springs and the predominant use of a single mode of action weed control program have contributed to Missouri's waterhemp problem.

One of the concerns is the use of diphenyl ether herbicides applied post emergence. These herbicides often cause considerable leaf damage.

As you know, waterhemp produces small seeds that need to be close to the soil surface to germinate. More seeds will be left near the soil surface as tillage intensity is reduced. In a Wisconsin study, 60% of all weeds seeds in the seedbank were found in the upper 1/2 inch of soil with no-tillage. That percentage was reduced to 30% with reduced tillage (chisel plow).