

# **Researchers find cereal rye is effective at reducing *Amaranthus* spp. density in soybean crops**

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Cereal cover crops are an effective option for suppressing emergence of *Amaranthus* species and other weeds in soybean. Photo provided by Mark Loux. Credit: Mark Loux.

Fall-planted cover crops are often used as part of an integrated weed control program in herbicide-resistant soybean crops. But researchers writing in the journal *Weed Technology* say not all cover crops are equally effective against Palmer amaranth, waterhemp and other *Amaranthus spp.* weeds.

Their conclusions follow a two-year, multistate study to compare the impact of cereal rye, spring oat, forage radish and annual ryegrass on [weed control](#) and [crop yields](#). The study was conducted in areas with known infestations of *Amaranthus spp.* weeds.

Two herbicide programs were used. The first involved a preemergence residual herbicide, followed by a postemergence application of a foliar and residual herbicide. The second program added a second postemergence application of residual herbicide.

Researchers found there were no variations in weed control or in crop yields among the various [cover crops](#) used as part of an integrated control program with herbicides. Cereal rye, though, consistently reduced the density of *Amaranthus spp.* weeds, even in the absence of herbicides.

"Cereal rye has the most potential to contribute to *Amaranthus spp.* control by reducing weed population density within the first month or so following soybean planting," said research team member Mark Loux of Ohio State University. "As a result, there is a better opportunity to reduce selection for weeds resistant to herbicides used in postemergence

treatments. Cereal rye is also a great choice when [weed](#) density is high or when environmental conditions reduce herbicide effectiveness."

**More information:** Mark M. Loux et al, Influence of Cover Crops on Management of Amaranthus Species in Glyphosate- and Glufosinate-Resistant Soybean, *Weed Technology* (2017). [DOI: 10.1017/wet.2017.30](https://doi.org/10.1017/wet.2017.30)

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