

Beware of Palmer Amaranth in Grain Screenings

The best way to control Palmer amaranth is to prevent it from spreading.

North Dakota producers need to be vigilant about keeping Palmer amaranth, a particular noxious weed, off their land, according to North Dakota State University Extension specialists.

“Grain screenings are usually a price-competitive source of cattle feed, but they might contain things that you don’t want at any price, such as Palmer amaranth,” warns Karl Hoppe, Extension livestock systems specialist at the Carrington Research Extension Center (CREC).

Grain screenings consist of cracked or small pieces of grain plus foreign matter. The foreign matter can be other kinds of grain, sticks, leaves, insects, rodent feces, fungal bodies such as ergot and sclerotia, and weed seeds. Palmer amaranth has been added to the North Dakota noxious weed list.

“While this weed looks like a pigweed, it is resistant to many of our commonly used herbicide modes of action, it is extremely prolific in its seed production and it can spread like wildfire,” cautions Brian Jenks, Extension weed scientist.

“The best way to control Palmer amaranth is not having it enter your farm,” Hoppe says.

Buying cleaned grain can help keep Palmer amaranth off the farm, but purchased feed isn’t routinely tested for weed seeds.

“Grain screenings usually have some feed value for livestock and are routinely purchased without any idea of weed seed content,” Hoppe notes.

“Grain screenings can carry viable weed seeds that germinate in unusual locations,” he says. “Where the screenings are unloaded can lead to the start of a weed infestation. These areas proliferate in feed yards that do not have fastidious weed control.”

Feeding whole seeds may perpetuate the problem. Some seeds, especially tiny, hard-shelled seeds from Palmer amaranth, can escape digestion by cattle.

“Composting manure should destroy weed seed viability; however, management practices will determine success,” says Mary Keena, livestock environmental management specialist at the CREC.

Making sure the moisture of the compost pile is maintained at 50% and the pile reaches temperatures of 140 to 160 F throughout the composting process is critical, she says. A guide to the process and management of animal manure compost is available at <https://tinyurl.com/AnimalManureComposting>.

“But if just one seed survives being eaten by cattle and escapes the heat in composting, and then is spread onto a crop field, then that one plant can make up to a million seeds in a year,” says Joe Ikley, Extension weed specialist. “Even in direct competition with a crop, these plants can still produce up to 100,000 seeds in a year.”

Hoppe recommends not purchasing screenings from locations that have Palmer amaranth. While few locations in North Dakota have Palmer amaranth, many other states have the weed.

“Another option for cattlemen is to grind the screenings so fine that the seeds are completely destroyed,” he says. “For a small-seeded plant such as Palmer amaranth, aggressive grain processing is needed, and hammer milling is usually the best.

“Be sure to look at grain screenings with attention to weed seeds and consider how best to manage the weeds,” he adds. “That cheap load of feed might turn out to be the most expensive feed-related problem you have encountered.”

He suggests producers also consider possible liability issues of not controlling the noxious weed.

For more information on identifying and controlling Palmer amaranth, visit NDSU Extension’s website at <https://www.ag.ndsu.edu/palmeramaranth>. For additional information on liability issues, go to <https://www.nd.gov/ndda/news/use-screenings-feed-requires-monitoring> or <https://www.nd.gov/ndda/plant-industries/noxious-weeds>.

Images



Palmer amaranth has spread across this North Dakota field. (NDSU photo)

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