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### ***Volunteer Corn Control***

A 2017 study out of South Dakota hits at the yield losses caused by the presence of volunteer corn in soybean fields. Their work showed losses of eight to nine percent when the density of that volunteer corn was one plant per 10 square feet. Not much – but still a loss.

If we think about how densities are often greater in certain areas of the field, we can see from their work a density of one plant per square foot resulted in losses around 70 percent. All of a sudden, a weed potentially difficult to control in soybeans because of its resistance to glyphosate and/or glufosinate, is causing significant yield losses. When coupled with knowledge tank mixes containing 2,4-D or dicamba may reduce effectiveness the Group 2 herbicides (clethodim or quizalofop), and suddenly a seemingly easy ‘fix’, becomes more difficult.

With most of our corn crop planted, POST applications are our most viable option. Start by making sure all clethodim applications done in combination with glyphosate and 2,4-D or glyphosate and dicamba are done in combination with a fully loaded surfactant. Work out of both Indiana and Canada suggest losses of 60 percent (2,4-D plus glyphosate) to 75 percent (dicamba plus glyphosate) when fully loaded surfactants were not used with these combinations. North Dakota work suggests adding a high surfactant oil concentrate to help with volunteer corn applications containing clethodim and glyphosate (neither NIS or AMS improved control). In addition to the use of a more aggressive adjuvant, control reductions can also be minimized by increasing the rate of the Group 2 herbicide to the maximum labelled rate.

For more detailed information, see the *2022 KSU Chemical Weed Control Guide*, available at District Offices or online at: <https://bookstore.ksre.ksu.edu/pubs/SRP1169.pdf>.

### ***Why Didn't My Garden Produce?***

Last week, I hit on rainfall events as a potential issue affecting garden production. I'll wrap up this series focusing on probably the most blamed factor of all: soil fertility.

Soil fertility *can* be an issue. If we don't apply nutrients in a balanced manner, we *can* see nutrient deficiency issues affect garden plants. Injury may be as slight as stunted plants or shortened internodes or as severe as actual discoloration. Only a soil test can show whether soils are nutrient deficient and provide accurate application levels for lime (pH), nitrogen (N), phosphorous (P), and potassium (K).

In the absence of a soil test, we're just guessing about whether fertility is the issue. While often blamed first, most soil tests suggest other issues at work. Many soil test results come back high to very high in P and K with pH's in a neutral zone. Most gardeners apply adequate N, meaning most of our garden problems are likely not because of a nutrient deficiency (too much N *could* be an issue, however...). Still, the only way to know is to pull a soil sample for analysis.

A soil test is a great first step towards ruling out soil fertility as a possible culprit and is pretty easy (and relatively inexpensive...) to do. For information about ruling out soil fertility as a production culprit, check out *Fertilizing Gardens in Kansas*, available online at <https://bookstore.ksre.ksu.edu/pubs/mf2320.pdf> or upon request from any District Office.