



**COLORADO STATE UNIVERSITY
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Colorado State University Extension Golden Plains Area Extension

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Chemical Fallow vs Cover Crops

(Julesburg, Colo.)

Agronomy Agent's Corner #14

Todd Ballard

Chemical Fallow vs. Cover Crops

When a cash crop is not present in your field, two options are available for managing the land until the time is right to resume crop production. Chemical fallow allows for aggressively reducing the weed seed bank. Cover crops contribute to soil organic matter while shading out weeds. Both have drawbacks as well. Chemical fallow continues the trend of selecting for herbicide resistant weeds. Cover crops use some of our limited water resource. With either choice, property taxes and rent continue to be charged.

Following an herbicide label for plant back restrictions allows for applying a wider selection of herbicides during chemical fallow than during crop growth. Rotating among these options is one way to limit the buildup of herbicide resistant weeds in your fields. For grass control, acetyl coa enzyme (ACCase) inhibitors will be more commonly used in the coming years during wheat and grain sorghum production. Coaxium wheat varieties are already available. Several sorghum seed companies will soon be releasing hybrids resistant to ACCase inhibitors as well. Limiting the use of these herbicides during chemical fallow will preserve their efficacy for a longer timeframe. S-Metolachlor, topramezone, and asulam can all be used in chemical fallow to control grass.

Two frequent weeds of concern in our area are kochia and Palmer amaranth. I am currently continuing a study started by John Spring to test the efficacy of multiple herbicides and tank mixes for controlling kochia. The study includes atrazine, metribuzin, mesotrione, sulfentrazone, isoxaflutole, and dicamba. Palmer amaranth has been common in irrigated fields for several years. Recently it has been observed with increasing frequency in dryland production. Pyroxasulfone has been successful in controlling Palmer amaranth in sunflower production (Meyer, 2020).

Cover crops are more commonly used in areas with thirty or more inches of rain on an annual basis than here. A rapidly emerging cover crop like oats can shade out weeds before they are competitive. Legume cover crops like sunn hemp contribute to the soil profile nitrogen content. Cover crops with a large tuber like Daikon radish reduce soil compaction. The choice of which cover crop to use depends on the field issue you are trying to address. A cocktail of many cover crops is an option to consider too. All cover crops will contribute to soil organic matter and reduce soil erosion. Care must be taken with cover crops to minimize the water that is lost to evapotranspiration (Cropwatch, 2012). Extensive water uptake by a cover crop in a dryland system will not leave adequate water for the next crop to emerge.

Works Cited

Meyer, R.F. 2020. Personal communication 12 Nov. 2020.

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<https://cropwatch.unl.edu/cover-crop-options-after-corn-or-soybean-harvest> retrieved 16 Nov. 2020. Posted 12 Oct. 2012.

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