Cover crops are increasingly being used as a crop management tool to protect and improve soils, as well as achieving other farm goals. Research and farmer experience have shown cover crops to be effective in suppressing weeds, improving nutrient management, addressing soil compaction, and improving soil structure, soil organic matter, and overall soil health. For these reasons, Missouri farmers have steadily increased their cover crop use, to approximately one million acres in 2018.

For fields that have been flooded recently or otherwise were unable to be planted with a cash crop, cover crops are a field management strategy to seriously consider. Financial assistance from state and federal sources is discussed below, as are rules pertaining to crop insurance, pesticide regulations, and other considerations. Cover crops can certainly prove valuable in kick-starting soil biology that has been damaged by prolonged flooding, and helping suppress weeds and prevent erosion in fields that would otherwise sit idle. They may also be a source of income if they are hayed or grazed, though some restrictions may apply (see below).

Crop insurance rules under “prevent plant” situations pertaining to cover crops

Cover crops are allowed on fields that have been classified as “prevent plant.” You can use a cover crop to help protect the soil and suppress weeds, while still receiving a crop insurance payment, as long as you carefully follow the guidance on dates and approach as outlined in the options below (for more complete RMA information visit: https://www.rma.usda.gov/en/Fact-Sheets/National-Fact-Sheets/Prevented-Planting-Insurance-Provisions-Flood).

If planting during the “late planting period” for commodity crop, then:

- Do not hay or graze the cover crop before November 1. If you hay or graze it before November 1, you will not be eligible to receive a prevented planting payment for your first crop (such as corn or soybeans)
- If planting AFTER the “late planting period” for a commodity crop, then the cover crop can be hayed or grazed before November 1 and the producer will still receive 35 percent of a prevented planting payment for your 1 crop, or if haying or grazing is delayed till after November 1, then a full prevented planting insurance payment can be received.

Of course, if the cover crop is not hayed or not grazed at all, then the above restrictions don’t apply and the cover crop can be planted at any time during the summer.

Other cover crop factors to consider in addition to crop insurance:

- What residual herbicides, if any, have been applied to the field this year, and how will that affect a cover crop? Producers are advised to follow the herbicide label, including for situations where grazing of the cover crop is being considered.
- What is the goal for cover crop use? Suppressing weeds? Preventing erosion? Creating a source of forage? The goals will affect the selection of cover crop species and timing of planting.
- Are state or federal incentive payments for cover crops being requested? If they are received, some rules related to the incentive payments may apply.

Cover crop goals and planting periods

For optimum weed management, plant at least two or more cover crop species and include species that grow vigorously for the season at hand. If being planted for grazing, adjust the cover crop mix to get maximum forage biomass for the relevant planting period.
If planting in June or July, a mix of warm-season grasses and broadleaf species is appropriate:

From the grass cover crop species, consider warm-season species such as sorghum-sudan and/or pearl millet (in areas that may stay wet, consider Japanese millet)

- see more information on the millets at: https://extension.missouri.edu/g4164

From the legumes, consider warm-season species such as cowpeas and/or sun hemp (using both in a mix is good as they have different growth habitats)

Other broadleaf (non-legume) warm-season covers to consider include buckwheat and sunflower.

- see more information on the buckwheat and sunflowers at: https://extension.missouri.edu/g4163 and https://extension.missouri.edu/g4701

Some cool season species can be added to the cover crop mix if seeding will not happen until the latter half of July. Adding one or more brassicas and one or more cool season grasses and legumes would be appropriate.

If not planting until August or later, then focus on using cool-season cover crop species (most warm-season species will get little growth if planted in late summer, and will be killed by the first light frost).

A good mix of cover crops for August planting would be using a winter cereal (such as cereal rye, triticale or winter wheat), possibly a spring cereal like oats, a brassica (such as radishes, turnips, rapeseed, or canola), and a winter annual legume (such as crimson clover, balansa clover, hairy vetch, or Austrian winter peas).

If the cover crop mix is to be grazed, adjustments in the mix can be made to get the optimum forage value, depending on expected time of grazing. With a November 1 date for receiving full prevent plant crop insurance payment, focusing on cool season cover crops for a grazing mix would be of much more value than warm season species that will likely frost kill by November 1. Oats will provide the greatest fall growth among the cool season cereals, though a mix of oats with winter-hardy cereals like winter rye or triticale can extend the grazing period, including providing a spring grazing window. Among the brassicas, turnips are most popular for late fall cattle grazing, though radishes and canola/rapeseed can be grazed as well. Austrian winter peas if planted in August can obtain modest fall growth and contribute to a fall grazing mix. Certain herbicide restrictions are important to be aware of for grazing fall cover crops

Incentive payments for cover crops

The Missouri Soil and Water Conservation Program, operated by Missouri DNR, works with local soil and water conservation districts across Missouri to offer a variety of conservation funding, including incentive payments for cover crops. The Soil and Water Program does not allow haying of cover crops, and normally requires them to be planted in a no-till fashion. Grazing is allowed once cover crops reach a minimum height. See more information at: https://dnr.mo.gov/env/swcp/service/swcp_cs.htm

The Missouri Natural Resources Conservation Service (NRCS) also offers a wide variety of conservation incentive programs, including for cover crops. Particularly relevant is the Environmental Quality Incentives Program (EQIP). It is possible a special signup for planting cover crops on fields impacted by flooding or in a prevent plant status may be provided for summer 2019, but no decision had been made at the time of this publication release.

For more information on cover crop selection and management:

See the University of Missouri Extension guide on cover crops at: https://extension.missouri.edu/G4161

See the University of Missouri Extension guide on warm-season forages at: https://extension.missouri.edu/g4661

For general seeding rates, dates, and depths, see the University of Missouri Extension guide at https://extension.missouri.edu/g4652

Visit the Midwest Cover Crop Council website at: http://mccc.msu.edu

This information on cover crops was developed by Dr. Rob Myers, Adjunct Associate Professor of Plant Sciences at University of Missouri.