# Grazing Cover Crops

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Cover crops are not new, but are receiving wider attention due to their soil and environmental benefits. Whether used for reducing erosion, nutrient management, or improving soil quality, they have been gaining wider adoption and interest from farmers and are supported by university research studies. Fall-seeded winter rye, or brassicas such as radish, or spring frost-seeded red clover into winter wheat, are good examples. They serve a variety of functions in a cropping system; they improve water infiltration, conserve soil moisture, and protect water quality. Further benefits: soil biology enhancement and health, and herbicide and fertilizer reductions that help reduce costs and improve farm profits.

Diverse 12-species cover crop mix seeded post-wheat harvest.

Grazing cover crop mix seeded into summer annual provides additional good quality forage.

Grazing cover crops is an additional value dairy and livestock producers can incorporate into cropping systems. They produce exceptionally high-quality forage in short periods of time, which can improve forage production in flat spots in the grazing season (i.e., mid-summer, late fall, early winter, early spring prior to pasture green up). The value of cover crops lies in winter feed cost reduction and grazing season extension beyond the normal growing season.

Grazing cover crops on crop acres adds livestock manure to the soil. This helps sustain a different soil biology organism set that relies on manure as a food source, improving soil structure and capturing and making these nutrients available for crops the next season.

Despite known benefits, there are concerns about soil compaction from grazing. Research studies show some level of greater soil density may be detected, however, subsequent crop yields showed no economic difference. Multi-year, multi-location trials demonstrated no change in corn grain, corn silage, or soybean yields the season after cover crop grazing. University of Wisconsin established solo and mixed seeding of spring and winter small grains, demonstrating fall and early spring forage and milk potential.

Monoculture covers such as forage oats, winter rye, or forage radish are common. However, farmers are experimenting with multi-species mixes or cocktails to capture multiple benefits, combining grasses, legumes, and forbs into a seeding mix. These may be simple binary mixes, complex 12-species cocktails, or more.

A cover crop seeded with the intent of forage for grazing needs adequate time to establish. Earlier seeding dates in August result in greater biomass accumulation as well as root development compared with seedings later into September or October. This matches well with wheat harvest or early silage harvest. There are both warm- and cool-season cover crop options, but an August seeding will favor cool-season cover crops, which, if selected for frost tolerance, may accumulate dry matter well into October. Cover crop yield is influenced by species, seeding date, soil moisture, and fertility. When intended for grazing, single species seeding rates should be at the high end of the seeding range. For mixes with multiple cover crop species, take the full seeding rate for each species and divide by the number of species in the mix. Depending upon the species selection, mixes can quickly become expensive, requiring thoughtful consideration of the species to be incorporated. Cover crops tend to be highly palatable, and overgrazing is a concern. Leaving adequate residue to protect soil is essential, more so on highly erodible landscapes.

Prior to cover crop planting, review your herbicide selections on the current crop for residual activity for the planned cover crop as well as any potential forage or grazing restrictions. The UW-Madison IPM program has more information regarding this at: ipcm.wisc.edu/download/pubsPM/2019_RotationalRestrictions_final.pdf.

If you are considering cover crops for grazing, the Midwest Cover Crop Council has developed a Cover Crop Selection Tool and includes grazing as an option at mccc.msu.edu/covercroptool with recommended species.