

**Soil Quality Enhancement Activity – SQL04 – Use of cover crop mixes**



**Enhancement Description**

This enhancement is for the use of cover crop mixes that contain two (2) or more different species of cover crops or cultivars of a single species.

**Land Use Applicability**

Cropland, Pastureland

**Benefits**

The use of a cover crop mixture that contains two (2) or more species is often more effective than a planting of single species cover crop. Cover crop mixtures adapt to variation in soils, increase biomass production, provide broader spectrum of weed control, have better winter survival and ground cover and attract a range of beneficial insects. Nutrients can be trapped or produced depending on existing soil conditions and plants used. Mixes can be a grass/legume, multiple cultivars of a single species, or a mix containing plants with different growth patterns, e.g. fast and slow, tall and short

**Conditions Where Enhancement Applies**

This enhancement applies to crop land use acres (excluding permanent hayland) and pasture land use acres.

**Criteria**

1. Cover crop mixes must contain a minimum of two (2) different plant species or two (2) different cultivars of a single species with differing maturity dates.
2. Cover crop species will be selected from state specific lists. The list of approved cover crops is available at the local NRCS Field Office. Verify plant adaptation to the area prior to planting.
  - a. If the application is in an existing perennial pasture:
    - i. Select cover crop species that will establish when overseeded.
    - ii. Develop a prescribed grazing plan that supports the cover crop activity.
3. For applications on cropland, crops planted following the cover crop must be no-tilled.
4. Nutrient applications for crops following cover crop should consider nitrogen fixation from leguminous cover crops.

**Adoption Requirements**

This enhancement is considered adopted when two different plant species or two cultivars of a single species are planted on the land use acre.

**Documentation Requirements**

1. Written documentation for each year describing, in detail, the following items:
  - a. Cover crop species used and dated planted,



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- b. Date and amount of fertilizer applied,
  - c. Method to kill cover crop and date completed, and
  - d. Crop planted after cover crop and method used.
  - e. As applicable, a copy of the prescribed grazing plan.
2. A map showing fields where the enhancement is applied.
  3. Photographs of a representative number of fields showing cover crop mix.

### **References**

Ball, D.M., C.S. Hoveland, and G.D. Lacefield, 2007. Southern Forages, 4<sup>th</sup> Ed. International Plant Nutrition Institute, Norcross, GA.

Barker, David J, MacAdam, Jennifer W., Twain, J. B, and R. Mark Sulc. 2012. Forage and Biomass Planting, Conservation Outcomes from Pastureland and Hayland Practices: Assessment, Recommendations, and Knowledge Gaps. Allen Press, Lawrence, Kansas, Chapter 2:43-110.

Sainju, U.M., W.F. Whitehead and B.P. Singh. 2005. Biculture Legume–Cereal Cover Crops for Enhanced Biomass Yield and Carbon and Nitrogen. *Agron. J.* 97:1403–1412.

USDA-NRCS, 2014. NRCS Cover Crop Termination Guidelines. Version 3

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