



## REQUEST FOR VARIANCE TO MISSOURI COVER CROP 340 FOR THE NFWS PARTNERSHIP FOR CLIMATE SMART COMMODITY GRANT WITH MISSOURI SOYBEAN GROWERS

### REQUEST

Missouri Soybean Growers Association requests a variance from the Conservation Practice Standard (CPS) Cover Crop 340 to allow the reduction of cover crop planting rates and termination timing as part of the practice implementation under the NFWF Farmers for Soil Health Partnerships for Climate Smart Commodity grant in Missouri.

### JUSTIFICATION

- Our hypothesis: any reduction in GHG benefits that would come from lower seeding rates will be overcome by the number of producer participants gained and overall impact will be greater over time.
- A 25% reduction in planting rates to remove barriers to adoption for farmers new to cover crops, providing lower risk and simplified options for producers new to cover crops.
- Applies only to planting methods that place seed into the soil.

### SUPPORTING DOCUMENTATION

| Incorporated Planting Rates |              |   |
|-----------------------------|--------------|---|
| Species                     | Current Rate | Requested Variance Rate                 |
| Cereal Rye                  | 40 lbs/acre  | 30 lbs/acre                             |
| Wheat                       | 40 lbs/acre  | 30 lbs/acre                             |
| Triticale                   | 40 lbs/acre  | 30 lbs/acre                             |
| Barley                      | 40 lbs/acre  | 30 lbs/acre                             |
| Oats                        | 40 lbs/acre  | 30 lbs/acre                             |
| Oats/Radish*                |              | Oats @ 30 lbs/acre<br>Radish @ 1lb/acre |

### NHQ RESPONSE

CPS Cover Crop 340 allows the cover crop selection (species, single, mix) to be based upon the producer’s objective and the treatment of a resource concern.

NRCS references the cover crop seeding guidance provided by Land Grant University Extension services including regional Cover Crop Councils.



Conservation plantings are designed by NRCS to achieve 20-40 plants per square foot. Using seeds per pound and pure live seed, NRCS develops seeding rates to meet this objective. The conservation practice is analyzed for cumulative direct and indirect effects of implementing the practice as specified in Cover Crop 340 for NEPA compliance.

### **Cereal Rye**

Midwest Cover Crop Council winter cereal rye recommendation is 30-90 lb/A pure live seed (PLS) drilled. If using 15- or 30-inch planter rows, use the low end of drilled seeding rate.

NRCS evaluation at 30 lbs/acre PLS cereal rye is found to support meeting the conservation plants per square foot.

### **NRCS Response for Cereal Rye:**

The request to lower the seeding rate of cereal rye cover crop to 30 lbs PLS/acre is approved.

Cereal rye termination date can impact plant available nitrogen and reduce corn yields. Midwest Cover Crop Council recommends termination at least 2 weeks before planting corn.

### **Wheat**

Midwest Cover Crop Council wheat, winter seeding rate recommendation is 40-80 lbs PLS/acre.

NRCS evaluation of wheat at 30 lbs PLS/acre does not provide sufficient plants per square foot for conservation purposes.

### **NRCS Response for Wheat**

The request to lower the seeding rate of wheat cover crop to 30 lbs PLS/acre is approved contingent upon:

- (a) Water and wind soil erosion is controlled with no visible sheet, rill or wind soil movement observed at the site.
- (b) Cover crop will not be used for grazing.

### **Triticale**

Midwest Cover Crop Council triticale seeding rate recommendation is 40-80 lbs PLS/acre.

NRCS evaluation at 30 lbs PLS/acre triticale is found to support meeting the conservation plants per square foot.

### **NRCS Response for Triticale:**



The request to lower the seeding rate of triticale cover crop to 30 lbs PLS/acre is approved.

### **Barley**

Midwest Cover Crop Council barley seeding rate recommendation is 50-80 lbs PLS/acre.

NRCS evaluation at 30 lbs/PLS/acre barley does not provide sufficient plants per square foot for conservation purposes.

### **NRCS Response for Barley**

The request to lower the seeding rate of barley cover crop to 30 lbs PLS/acre is approved contingent upon:

- (a) Water and wind soil erosion is controlled with no visible sheet, rill or wind soil movement observed at the site.
- (b) Cover crop will not be used for grazing.

### **Oats**

Midwest Cover Crop Council seeding recommendation for Oats is:

Oats, spring: 30-60 lbs PLS/acre

Oats, black: 40- 60 lbs PLS/acre

Oats, winter: 60-100 lbs PLS/acre

NRCS Missouri Cover Crop 340 implementation requirement for all oats is 40 lbs PLS/acre.

NRCS evaluation of oats seeded at 30 lbs PLS/acre is found to support meeting the conservation protection plants per square foot.

### **NRCS Response for Oats**

The request to lower the seeding rate of oats cover crop to 30 lbs PLS/acre is approved.

### **Oats/ Radish Request:**

Midwest Cover Crop Council oats/radish seeding rate recommendations are:

Drilled: 32-40 lb/A Oats, 1.5-3 lb/A Oilseed Radish

Planter: If using 15 or 30 inch planter rows, use the low end of drilled seeding rate.

Overseeding: 40-60 lb/A Oats, 2-4 lb/A oilseed radish.

NRCS evaluation at 30 lbs/acre PLS oats will achieve the conservation protection plants per square foot. Radish seeding rate at 1 lb/acre may not achieve one plant per square foot, and the goals of using Radish in the cover crop mix may not be achieved at this rate.



U.S. DEPARTMENT OF AGRICULTURE

**NRCS Response for Oats/Radish:**

The request to lower the seeding rate of the oat/radish cover crop mix to 30 lbs PLS/acre oats and 1 lb PLS/acre radish is approved contingent upon:

- a) Cover crop will not be grazed.

NRCS approval of the reduced seeding rate is based on evaluation of a cover crop purpose to reduce wind and water erosion. Other purposes of implementing a cover crop with reduced seeding rates may not achieve desired results. Adding a cover crop into the crop rotation does increase the management.

NHQ Status: Approved, Name: Dr. Betsy Dierberger, National Agronomist, Date: August 1, 2024.

Concurrence: