2025

Lake Decatur Watershed

Farmland Conservation Program

Preserving Your Farm. Protecting Our Water.

Cover Crop Guide

Rates, Dates, Management, Economics and Suggested Mixes

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Program FAQs

What are the per acre cost-share amounts?

Overwintering, single species cover crop: $85.65

Overwintering, multi-species cover crop: $105.40

Winter-kill, multi-species cover crop: $61.13

How can I apply my cover crop?

Seed can be applied broadcast, aerially or drilled.

What seeding rate do I use? When should I plant?

Rates and dates vary by species and seeding method and can be found on Page 3 of this guide. Additional information on calculating how much seed is needed is outlined on Pages 4 and 5. This information can also be found on the Midwest Cover Crop Council's website under "**Selector Tools**."

Do I always need to plant the whole field?

Not always! We recognize that some parts of the field may have more erosion than others. We've worked with Natural Resource Conservation Services (NRCS) to allow cost-share funds to partial field plantings in certain fields.

What if I don't get my cover crops planted?

If cover crops are not able to be planted, no payment will be given and no penalties will occur. We will try to plant the following year.

This guide refers to the City's USDA-Regional Conservation Partnership Program (RCPP) grant, awarded in 2023 and available through 2027. Please contact the City for specific program details & cost-share rates for the City's other financial incentive programs.

Seeding Dates and PLS

While not an exhaustive list, these are the most cost-efficient, beginner friendly cover crops. For more species suggestions, species, and county specific information, please visit the Midwest Cover Crop Council "**Selector Tools**."

	Species	Macon County Planting Date	Piatt County Planting Date	DeWitt County Planting Date	Broadcast (lbs PLS)	Aerial (lbs PLS)	Drilled (lbs PLS)
GRASSES	Cereal Rye	Jul 18 - Dec 18	Jul 19 - Dec 17	Jul 19 - Dec 17	40-100	40-100	30-90
GRASSES	Winter Wheat	Sep 19 - Oct 30	Sep 19 - Oct 28	Sep 18 - Oct 28	40-100	40-108	30-90
GRASSES	Winter Barley	Aug 29 - Oct 30	Aug 29 - Oct 28	Aug 29 - Oct 28	40-100	40-108	30-90
GRASSES	Winter Triticale	Aug 29 - Oct 30	Aug 30 - Oct 28	Aug 30 - Oct 28	40-100	40-108	30-90
GRASSES	Spring Oats*	Mar 23 - Oct 11	Mar 26 - Oct 11	Mar 27 - Oct 10	60-90	60-90	50-70
BRASSICAS	Rapeseed	Aug 8 - Oct 11	Aug 8 - Oct 11	Aug 8 - Oct 10	2-5	2-6	2-5
BRASSICAS	Camelina	Sept 25 - Nov 8	Sept 22 - Nov 4	Sept 22 - Nov 4	2-6	Not Recommended	2-6
BRASSICAS	Radish*	Jul 18 - Sep 20	Jul 18 - Sep 20	Jul 19 - Sep 18	5-10	5-10	4-8
LEGUME	Crimson Clover	Jul 18 - Oct 11	Jul 19 - Oct 11	Jul 19 - Oct 10	12-25	12 - 25	10-20

* Winter-kill species

Calculating Pure Live Seed (PLS)

NRCS full rates are based on PLS, which asks, "Of the pounds planted, what will grow?" This simple calculation takes into account the purity and germination listed on a seed tag to ensure you're meeting program compliance. It is mostly relevant for a single species planting. It can be found with the following equation:

$$\frac{\text{Desired PLS rate (lbs)}}{\text{(Purity \% x Germ \%)}} = \text{lbs of mix needed}$$

SCENARIO

We want to plant 50 lbs of cereal rye before soybeans based on the following factors:

APPLICATION DETAILS

Application Type: Aerial
NRCS Aerial Seeding Range for Cereal Rye: 40-100 lbs (PLS)

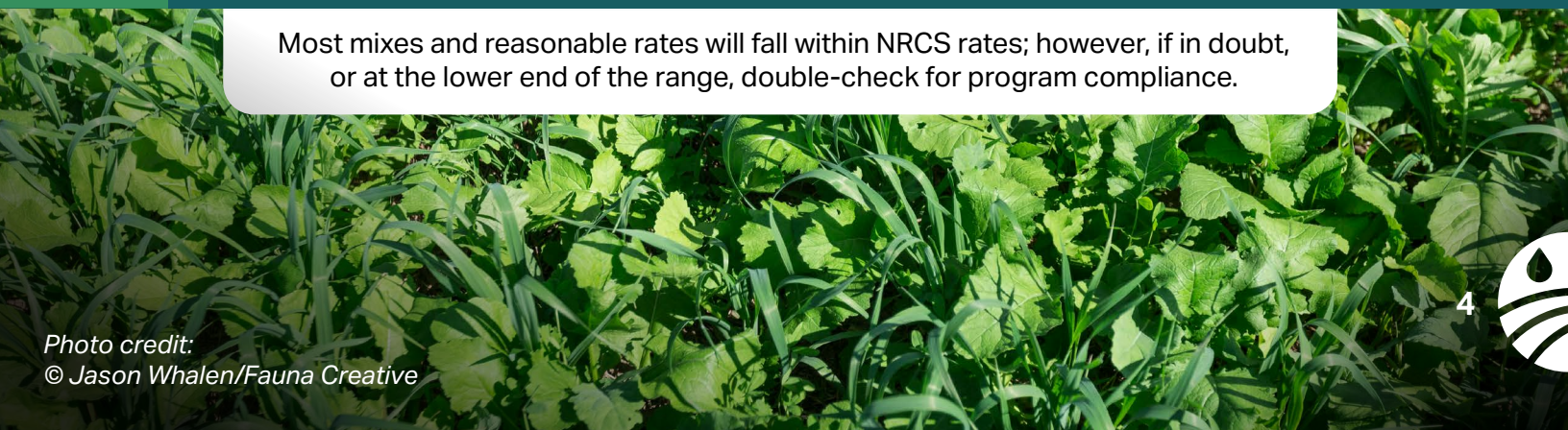
SEED TAG DETAILS

Purity: 99%
Germination: 90%

$$\frac{\text{Desired PLS rate (lbs)}}{\text{(Purity \% x Germ \%)}} \rightarrow \frac{\text{50 lbs PLS}}{\text{(99\% x 90\%)}} = 56 \text{ lbs}$$

(Original Formula) (Our Scenario Numbers) (Amount of mix needed for 50 lbs PLS)

Most mixes and reasonable rates will fall within NRCS rates; however, if in doubt, or at the lower end of the range, double-check for program compliance.



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How Much Seed Do I Need? Multi-Species Mixes.

When using multiple species, each species rate combined must add up to greater or equal to 100%. Again, this is based on PLS, but many mixes far exceed rate requirements.

SCENARIO

We want to aerially apply a mix of 40 lbs cereal rye and 2 lbs rapeseed before our soybeans and want to know if our intended mix meets full rate. We first find the aerial application PLS full rates and look at our seed tags:

CEREAL RYE PORTION

Cereal Rye, Aerial Application: **40-100 lbs PLS**
Seed Tag Values: Purity: **99%, Germ 90%**

PLS CALCULATION

40 lbs Cereal Rye x 99% x 90% = **36 lbs PLS**

% RATE CALCULATION

% Rate Calculation 36 lbs PLS/40 lbs (low end of full rate) = **90%**

RAPESEED PORTION

Rapeseed, Aerial Application: **2-6 lbs PLS**
Seed Tag Values: Purity: **99%, Germ 88%**

PLS CALCULATION

2 lbs Rapeseed x 99% x 88% = **1.7 lbs PLS**

% RATE CALCULATION

1.7 lbs PLS/2 lbs (low end of full rate) = **85%**

Our aerially applied, 40 lbs of Cereal Rye and 2 lbs of Rapeseed is 175% of the full rate requirements and easily passes the 100% threshold. Keep in mind that this was calculated at the low end of the full range rate.

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SUGGESTED MIX

Before Soybeans

Overview

The main component of a mix before soybeans should be cereal rye. **Cereal rye is a low cost option, effective at lower rates, and provides nutrient uptake, fast growth, weed control, and erosion control.**

Brassicas can be a cheap way to add diversity to a mix and provide fast growth/weed control, and a taproot to complement rye's fibrous root system.

Cereal Rye - 40 lbs +

Brassica – 3 lbs

- If applying aerially, consider Rapeseed. It needs early establishment to survive winter.
- If broadcasting, consider Winter Camelina. It could bolt if planted too early.

Termination Guide

Timing:

- If cereal rye is ~14" or shorter: Terminate 10-14 days prior to planting.
- If cereal rye is any height (especially over 14") growers can also "plant green" and terminate the day before, up to five days post planting (but before emergence).

Products:

Plan on at least Roundup®, but potentially 2,4-D as well, depending on weeds present.

Rate:

Most Roundup® labels have cover crop height/rate suggestions, if not for species in mix, choose a similar species as guide.

Estimated Economics

Seed cost = $21

*Application = $5-$25

Termination = $27.50

*Estimated cost = **$53.50 - $73.50**

RCPP Payment =$105.40

Cost = $53.50-$73.50

Net: **$31.90 - $51.90**

*Assuming $5 broadcast cost or $25 aerial cost

SUGGESTED MIX

Before Corn

Overview

The goal of beginner cover crop mixes before corn is primarily to prevent erosion with low risk of significant N tie-up. Wheat and barley are good options for this, as they are much shorter, slower growing plants compared to cereal rye. They can be mixed, but keep in mind that not all species may have the same ideal termination timing, so we recommend sticking with one. Most growers will not be letting the cover crop grow long enough to gain any real benefit from legumes. For that reason, like the soybean mix, we rely on brassicas.

Grass – 35 lbs

- Wheat and barley are two good grass options before corn, though key differences exist: Wheat has better overwintering potential, but typically resumes spring growth and reaches maturity later than barley.

+

Brassica – 3 lbs

- Rapeseed if applying aerially – it needs early establishment to survive winter
- Winter Camelina if broadcast – planted too early will bolt before winter

Termination Guide

Timing:

- Terminate after all species have broken dormancy, 10-14 days before corn planting.

Products:

Plan on at least Roundup®, but potentially 2,4-D as well, depending on weeds present.

Rate:

Most Roundup® labels have cover crop height/rate suggestions, if not for species in mix, choose a similar species as guide.

Estimated Economics

Seed cost = $27

*Application = $5-$25

Termination = $27.50

*Estimated cost = **$59.50 - $79.50**

RCPP Payment = $105.40

Cost = $59.50-$79.50

Net: **$25.90 - $45.90**

*Assuming $5 broadcast cost or $25 aerial cost

SUGGESTED MIX

Winter-Kill

Overview

While not as beneficial for erosion control, weed control or nutrient retention, winter-kill species can be a good choice for those wanting to try cover crops for the first time but nervous about termination or potentially negatively impacting the cash crop. This mix can be applied either aerially into standing crop or broadcast if harvest is early enough. Remember to comply with NRCS dates listed on page. In a mix, the dates for the species with the earliest cutoff date applies for the entire mix to be considered multi-species.

Oats – 50 lbs + **Radish – 3 lbs**

In Crop Application

When aerially applying into a standing crop, typically try to time application when soybeans first start to yellow or corn begins to fire up. Keep in mind that in cases of a late/wet fall, oats and radish can occasionally get tall enough to be clipped by a bean head. This may impact harvest speed and/or machine settings but typically does not cause issues.

Termination Guide

This mix can survive fall's light frosts, but will winter-kill. Occasionally, due to delayed germination, some volunteer radishes can appear in the spring, but should be easily terminated by any regularly scheduled tillage or herbicide pass.

Estimated Economics

Seed cost = $27
*Application = $5-$25
Termination = 0

*Estimated cost = **$32 - $52**

RCPP Payment = $61.13
Cost = $32 - $52

Net: **$9.13 - $29.13**

*Assuming $5 broadcast cost or $25 aerial cost

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For More Information

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