

Cover Crops in Iowa: Seeding Rate Guide

Interested in trying a small plot of cover crops? This guide can help you calculate the seeding rate in pounds per test strip based on the Midwest Cover Crop Council's Decision Tool. The example below is for a 12 row X 50 ft. drilled test plot. The calculations are for eight common cover crop single species and two mixtures that Iowa Learning Farms and Practical Farmers of Iowa are using in three research projects. A blank version is on the back to calculate seeding rates to fit your test plot.

1. Calculate the area of the test plot

$$\text{Test Plot Size} = \frac{(12 \text{ rows} \times 2.5 \text{ ft/row} \times 50 \text{ ft})}{43,560 \text{ sq ft/acre}} = 0.034 \text{ acre}$$

2. Use Table 1 below to determine the lbs/acre of the cover crop species

Cover Crop Species	lb/acre	Cover Crop Species	lb/acre
Winter Cereal Rye, VNS	75	Hairy Vetch	15
Annual Ryegrass	13	Turnips	5
Oats	70	Crimson Clover	12
Radish	8	Rapeseed	5

Table 1: cover crop species seeds pounds per acre

3. Calculate the seeding rate for the test strip

Seeding Rate: $\frac{z^*}{\text{see Table 1 for values}}$ = lbs/acre X 0.034 acre/test plot = X lbs/test plot

Per row seeding rate = X lbs/test plot/# of rows

Calculation Results

Cover Crop Species	lb/row	lbs/test strip	Cover Crop Species	lb/row	lbs/test strip
Winter Cereal Rye, VNS	0.22	2.58	Hairy Vetch	0.04	0.52
Annual Ryegrass	0.04	0.45	Turnips	0.01	0.17
Oats	0.20	2.41	Crimson Clover	0.03	0.41
Radish	0.02	0.28	Rapeseed	0.01	0.17

Table 2: Single Species cover crops

Mix Before Soybeans			Mix Before Corn		
Cover Crop Species	lbs/acre	lbs/test strip	Cover Crop Species	lbs/acre	lbs/test strip
Winter Cereal Rye, VNS	32.0	1.1	Hairy Vetch	10	0.3
Radish	3.5	0.1	Oats	52	1.8
Rapeseed	3.0	0.1	Radish	4	0.1
Total	38.5	1.3	Total	66	2.3

Table 3: Mixtures**

**These mixtures are being used for a National Conservation Innovation Grant and were chosen to provide a legume, grass, and brassica before each cash crop. Consult with your local NRCS office to match any mixture to your cover crop goals.

Calculate your own seeding rate (lbs/ac) for your test area

A digital calculator tool is available the “Cover Crops” page on our website: www.extension.iastate.edu/ilf/

1. Calculate the area of the test plot

Test Plot Size = $\left(\frac{\text{_____ ft wide X _____ ft long}}{43,560 \text{ sq ft/acre}} \right) = \text{_____ acre/test plot}$ (a)

2. Use this table to determine the lbs/ac of the cover crop species for a *single species****

Cover Crop Species	lbs/acre	Cover Crop Species	lbs/acre
Winter Cereal Rye, VNS	75	Hairy Vetch	15
Annual Ryegrass	13	Turnips	5
Oats	70	Crimson Clover	12
Radish	8	Rapeseed	56

3. Calculate the seeding rate for the test plot

Species: _____

Seeding Rate = $\frac{\text{_____ acre/test strip}}{\text{insert (a) value from above}} \times \frac{\text{_____ lbs/acre}}{\text{insert value from table above}} = \text{_____ lbs/test plot}$

Species: _____

Seeding Rate = $\frac{\text{_____ acre/test strip}}{\text{insert (a) value from above}} \times \frac{\text{_____ lbs/acre}}{\text{insert value from table above}} = \text{_____ lbs/test plot}$

Species: _____

Seeding Rate = $\frac{\text{_____ acre/test strip}}{\text{insert (a) value from above}} \times \frac{\text{_____ lbs/acre}}{\text{insert value from table above}} = \text{_____ lbs/test plot}$

*** To recalculate the mixtures provided in Table 3, multiply the lbs/acre for each species in the mixture by the (a) value in Step 1.

For more information on cover crops, visit:

- Practical Farmers of Iowa: www.practicalfarmers.org
- Iowa Learning Farms: www.extension.iastate.edu/ilf/
- Iowa Department of Agriculture and Land Stewardship: www.cleanwateriowa.org
- Midwest Cover Crop Council: www.mccc.msui.edu



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