

COVER CROP SEEDING METHODS

*Valuable considerations for cover crop
planting techniques in Illinois*



ILLINOIS
SUSTAINABLE
AG PARTNERSHIP

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Making **cover crop seeding decisions** can be a complicated process. The Illinois Sustainable Ag Partnership developed this guide to help producers understand the benefits and considerations of various cover crop application methods.

The **pre-harvest seeding methods** offer flexibility in species selection and length of season for cover crop establishment. Often times, cost of the seed may be greater using these methods because it requires a higher seeding rate.

It should be noted that all seeding methods will require **adequate soil moisture** to optimize cover crop performance. The rainfall symbol used in these evaluations is indicative of the need for rainfall after application of that method and is not directly tied to the need for soil moisture.

The symbols included in the guide's legend, used to categorize each application method, are a starting point to show **relative differences between methods**. Specific applicability will ultimately depend on a grower's individual system, equipment, and conditions.



Beginner-friendly

Aerial Broadcast (Airplane) **

Timing: Pre-Harvest, Late Summer / Early Fall

Application cost: \$\$\$

Other considerations:

- Increased seeding rates applicator logistics (seed delivery, scheduling, equipment)
- Not offered by all applicators.
- Are there obstructions near my field? Will potential uneven spreading impact my cash crop?

Time efficiency
(acres / day)



Rainfall



Equipment
Considerations



Seed to soil
contact



Air seeder (VT Mounted)*

Timing: Post-Harvest

Application cost: \$\$

Other considerations:

- Combines field operations
- Requires time/labor of an operator/seed tender
- Need to ensure proper tool depth for proper seed placement

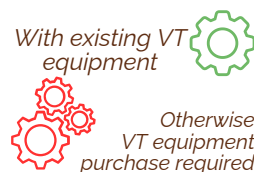
Time efficiency
(acres / day)



Rainfall



Equipment
Considerations



Seed to soil
contact



Beginner-friendly



Beginner-friendly

Broadcast (Ground)**

Timing: Post-Harvest

Application cost: \$

Other considerations:

- VR fertilizer capability limited by spreader configuration
- Light tillage to incorporate seed increases establishment
- Combines Field Operations
- Increased Seeding Rates

Time efficiency
(acres / day)



Equipment
Considerations



Rainfall



Seed to soil
contact



Beginner / Intermediate

Seed Drill*

Timing: Post-Harvest

Application cost: \$\$\$

Other considerations:

- Labor/Equipment Intensive
- Equipment Availability
- Needs calibrated and cleaned out for different mixes

Time efficiency
(acres / day)



Equipment
Considerations



Rainfall



Seed to soil
contact



Intermediate

Narrow Row Planter (15-20")*

Timing: Post-Harvest

Application cost: \$\$

Other considerations:

- Precision Seeding
 - Planter Offset
 - Bio Strip-till
- Increased Acres on Planter
- Species Options Limited by Seed Plates

Time efficiency
(acres / day)



Equipment
Considerations



Rainfall



Seed to soil
contact



Legend:

*Cost assumes self-application **Cost assumes custom application. Cost estimations do not include cost of seed.

Time efficiency
(acres / day)



High Medium Low

Rainfall Needed
Post-Seeding



Rainfall
required

Rainfall
beneficial but
not required

Equipment Considerations



Simple installation
/ use existing
equipment



Specialized
equipment
required

Seed to soil
contact



Low Medium High



Advanced

Aerial Broadcast (UAV/Drone)**

Timing: Pre-Harvest, Late Summer / Early Fall

Application cost: \$\$\$

Other considerations:

- Ideal for small/irregular fields
- Ideal for low rate species
- Specialty service not widely available

Time efficiency
(acres / day)



Equipment
Considerations



Rainfall



Seed to soil
contact



Advanced

Air seeder (Header mounted)*

Timing: At Harvest

Application cost: \$

Other considerations:

- Combines field operations
- Requires additional monitoring and fill time
- Requires changes to harvest field operations, labor, timings etc.
- Adjust combine spread pattern to match harvest width

Time efficiency
(acres / day)



Equipment
Considerations



Rainfall



Seed to soil
contact



In-Crop High Clearance (Hagie)**

Timing: Pre-Harvest

Application cost: \$\$

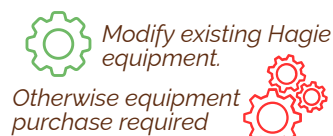
Other considerations:

- Spreads workload
- Requires a skilled operator

Time efficiency
(acres / day)



Equipment
Considerations



Rainfall



Seed to soil
contact



Advanced

Interseeding (Early seeding)*

Timing: In-crop, early season, spring/summer

Application cost: \$\$\$

Other considerations:

- Unique opportunity for livestock producers to have silage plus grazing
- Late timing offers wider species selection
- Be aware of herbicide and grazing restrictions
- Mixed results with cover crop establishment

Time efficiency
(acres / day)



Equipment
Considerations



Rainfall



Seed to soil
contact



Advanced