

Cover Crop

FY15 Aerial Seeding Instructions

MA-340

Introduction

This practice involves seeding cover crops into actively growing cash crops using a helicopter or airplane.

Aerial application also allows seeding to be done when it is physically impossible to use ground equipment, such as when crops are present, or when the soil is too wet.

Germination and growth of the cover crop begins before the existing crop has been harvested – this helps ensure that the cover crop is planted during the appropriate time.

Another benefit with aerial seeding is that more acres can be seeded in less time. Helicopters typically seed between 300-500 acres per day. Many farmers find that the labor savings to be very valuable.

Even though there are many advantages with aerial seeding, it can also be more risky than drilling or incorporation. Soil conditions (compaction, residue, moisture), shading, harvest operations, and weather can all impact the success of the cover crop.

Seed Selection and Rate

Producers should select cover crop seed based on resource concerns (e.g. erosion, low organic matter) using the MA 340 Cover Crop Planting Specification Guide. A plan for cover crop termination in the spring should be developed.

Typically winter rye seeded at 110 pounds per acre will be the most common cover crop to be planted by aerial application. This is often the best choice for producers who have no experience with aerial seeding. Do not plant larger seeds like field pea using aerial methods.

Producers may use multi-species mixes (blends) from seed companies and may plant at rates recommended by the seed company, providing that all species in the mix are planted during the appropriate seeding dates outlined in MA 340 Cover Crop Planting Specification Guide.



Target Crops

Aerial seeding in MA is appropriate for seeding in silage corn, soybeans, small grains, and pumpkins. Aerial seeding is also appropriate for post-harvest establishment of a cover crop, e.g. after sweet corn is harvested and chopped.

Timing

Timing of cover crop establishment **is critical**.

- Seeding should take place a **minimum of 2-3 weeks prior to harvest**, or else the seedlings may sustain too much damage from harvest operations when during early growth stages.
- **Small grain crops should be flown on no earlier than 6 weeks prior to harvest**. The longer the cover crop stays shaded, the more it loses energy to recover after harvest operations.
- **Grasses, brassicas, and clovers may be seeded more than 6 weeks before harvest**. For example, coated annual ryegrass and radish may be seeded in late July or early August even if corn is not harvested until the end of September.
- If corn is harvested after the first week in October, typically winter rye (or a winter rye-hairy vetch mix) is the best cover crop. The success rate of the cover crop decreases the later corn is harvested in October.



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Preparation for Seeding Day Logistics

- Helicopters need a 10,000 square foot area landing area (100 ft. X 100 ft.) with no electric wires or trees in the vicinity, i.e., helicopter pilots prefer landing trajectories similar to airplanes;
- The landing area should have good access for helicopter support vehicles (mechanics, fuel);
- The landing area surface preferably will be short grass; a recently mown hay field is ideal.

Management and Termination

- Avoid driving on fields and harvesting 2 weeks after seeding. After 2-3 weeks harvest may continue as planned;
- Manure may be applied over the cover crop after corn harvest, though excessive traffic should be avoided;
- There may be extra bird and/or rodent activity from the seed on the soil surface;
- Expect some seeding in incidental areas;
- Cover crops may be harvested or grazed if herbicide labeling permits such use.

Certification

- Contractor will provide an invoice with # of acres seeded and seeding rate, as well as a map of flight path within field boundaries.

Aerial Seeding Contractors

Participants may use any aerial seeding service to establish cover crops. The contractor list below represents companies in the region with a 14 CFR Part 137 Operating Certificate. Aerial seeding companies not on this list should contact Tom Akin (thomas.akin@ma.usda.gov) with a copy of the Part 137 Operating Certificate to be added to the list.

JBI Helicopter Service

720 Clough Mill Road
Pembroke, NH 03275
Phone: 603-225-3134
Fax: 603-224-9050
sales@jbihelicopters.com
<http://www.jbihelicopters.com>

CR Helicopters

111 Perimeter Road, Gate G
Nashua, NH 03063
Phone: 603-881-4356
Fax: 603-578-5553
pilot@crhelicopters.com
<http://crhelicopters.com>

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Request for Aerial Cover Crop Assistance

To help coordinate assistance for aerial seeding for 2015, it is recommended that interested producers complete the attached form with the help of NRCS field office staff. Producers should relay information (via email, fax, or phone) to an aerial seeding company for a quote **by June 15, 2015**. After a quote is received, producers should discuss EQIP funding opportunities for aerial seeding with NRCS staff.

Operator Name: _____

Farm Name: _____

Town and County: _____

Crop that will be interseeded¹ (e.g. corn, winter squash, pumpkins): _____

Indicate cover crop species, seeding rate, and acres to be seeded in table below

<input type="checkbox"/>	Cover Crop	Minimum Seeding Rate (lb/ac)	Total Acres	# of Fields
<i>Typical crops</i>				
<input type="checkbox"/>	Winter Rye	110		
<input type="checkbox"/>	Triticale	110		
<input type="checkbox"/>	Oats	100		
	Annual Ryegrass & Radish	30 + 3		
	Annual Ryegrass & Crimson Clover	18 + 20		
<i>Add custom cover crops below</i>				
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				

Aerial seeding contractors may provide a quote to: 1) fly on seed that you purchase, or 2) fly on seed that is purchased for you. Seed that is purchased as part of a bulk order (typically winter rye) may be a low cost option. Do you want your quote to include the cost for winter rye seed supplied by the contractor?

Yes No, I will supply my own seed Both, I'd like to compare costs

¹It is also appropriate to aerial seed cover crops after cash crop harvest or as a frost seeding technique. If the cover crop is not going to be interseeded, please write in the crop conditions at time of seeding (e.g. sweet corn, after harvest).