



ILLINOIS
SUSTAINABLE
AG PARTNERSHIP

Illinois Sustainable Ag Partnership – Cover Crop Guide #3

Key management considerations for non-terminal cover crops

1. If you want to get even greater benefits from cover crops, such as increasing carbon or organic matter in the soil, then let cover crops grow longer and do less tillage. On your best drained fields, consider moving to a non-terminal cover crop mix such as ryegrass or clover which will continue to grow over the winter and into the following spring.
2. Suggested mixes for non-terminal cover crops, based on next year's planned crop:
 - a. Going into corn – Oats/Clover/Rapeseed at 70%/25%/5%
 - b. Going into beans – Winter Rye/Rapeseed at 95%/5%
3. Plan carefully for the right time to kill cover crops in the spring. Environmental conditions and growth stage are more important than the calendar date.
4. If you have over wintering cover crops, early termination will release nutrients quicker, especially grasses. Later termination of legumes increases the nitrogen that they can produce.
5. Keep in mind that smaller plants are easier to kill. Ryegrass is easiest to kill pre-joint. Jointing occurs at 7-10" in height. Boot stage is a very poor time to spray. The termination-timing standard for cereal rye is 7 to 14 days ahead of planting.
6. Match herbicides to cover crop and plan on two herbicide applications.
7. Weather conditions can significantly affect herbicide applications and the spring season is known for unpredictable weather. Cloudy, cool, wet conditions can reduce delay application and reduce herbicide effectiveness.
8. Plants must be actively growing for many herbicides to kill the plants. Glyphosate must be applied when the temperature is above 50 degrees and before 2pm so there is sufficient warmth and sunlight available for translocation to occur. Wait 2 days after freezing weather before spraying.

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9. Use additives, but NO triazines or calisto in mix. Use a full rate of glyphosate (10 gallons water/ acre) and include ammonium sulfate (AMS) in the mix at a rate of 8.5 to 17 pounds per 100 gallons of water. AMS is used to counteract the effects of calcium on the chemical and hardness of the water used can also play a role.
10. If the glyphosate application fails, DO NOT respray. Use a full rate of Gramoxone in 30 gallons of water instead once the daytime temperatures have warmed up to above 55 to 60 F. Sunny weather at application is more important with Gramoxone, so spraying in the late afternoon is less effective than a mid-morning application.
11. Cold nights, below 40 F, can reduce activity with both Gramoxone and glyphosate.
12. UAN as a carrier can reduce glyphosate activity on plants but can increase Gramoxone activity. A photosynthesis-inhibiting herbicide, such as atrazine or metribuzen, can enhance activity with Gramoxone but interfere with Glyphosate.

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