TIP SHEET

INTERSEEDING INTO CORN

INTERSEEDING GOALS

- Establish cover crop early to improve cover crop variability and fall harvest efficiency
- Diversify plant community to feed soil microbes
- Advance soil health through improved soil structure and increased organic matter over time
- Keep soil covered; Increase water infiltration

CONSIDERATIONS

- Fields must be weed free. Interseed at the final cultivation or herbicide application. Following interseeding there are few weed control options. Residual herbicides may negatively affect cover crop establishment. Read and follow all herbicide label directions.
- Fields with herbicide resistant or troublesome weeds may require residual herbicides or several POST applications and may not be good choices for interseeding.
- Earlier maturing corn hybrids may be beneficial in competitive environments.
- Aim for corn populations between 32,000 and 35,000 plants/A.
- Select shade tolerant cover crop species. University of Wisconsin research has demonstrated success with annual ryegrass, cereal rye, radish, and medium red clover. Local research has demonstrated success with annual ryegrass, medium red clover, and dwarf Essex rape.

EXPECTATIONS

- Cover should germinate 7-10 days after planting
- Cover will go dormant with shading of corn; the cover crops will look very weak. If the cover crop is too competitive yield loss is possible.
- Moisture throughout growing season is important for covers to survive

TIMING/APPLICATION CONDITIONS

- V3 to V5 corn stage
- Cover should germinate 7 to 10 days post planting

SEEDING RATE FOR SOME SHADE TOLERANT SPECIES (rates & costs may vary, i.e. for mixtures)

Soybeans following Corn

- Annual Ryegrass, 9 to 12 lbs. /A (cost ~ $0.75/lb.)
- Medium Red Clover, 3-4 lbs. /A (costs vary & may range from $1.50 to $3.00/lb.)
- Dwarf Essex Rape, 1 lb. /A (cost ~ $1.00/lb.)

Corn following Corn (for approximate seed costs, see above)

- Annual Ryegrass, 6 to 10 lbs./A
- Medium Red Clover, 10 to 12 lbs./A
- Dwarf Essex Rape, 1 lb./A

SEEDING METHODS

1. Drill (application cost ~ $11 to $12/A)
   Advantages: Drill provides consistent depth and seeding rate control.
   Disadvantages: Drill needs to be modified, should match corn planter width unless planted with RTK
2. 28% Fertilizer applicator with an air applicator attached (application cost ~ $10 to $15/A)

-over-

SEEDING METHODS (continued)

Advantages: Can spread fertilizer and seed together (reduce passes over field); no need to purchase additional equipment

Disadvantages: Fertilizer may burn some of the germinating cover crop, resulting in cover stand loss.

3. Spinner spreader (application cost ~ $3 to $5/A)
   Advantages: Can spread with a fertilizer pass
   Disadvantage: Lacks soil to seed contact and potential for fertilizer burn resulting in stand loss
4. Modified corn cultivator or rotary hoe with a seed delivery system (application cost ~$ 7 to $14/A)
   Advantages: Incorporates seed into soil
   Disadvantages: Disturbs soil; Not suitable for no-till systems
5. Aerial– plane or helicopter (application cost ~$13-$17/A)
   Advantages: Can seed almost anytime and not limited by wet soil
   Disadvantages: Lacks seed to soil contact; generally, 25 to 50% higher seed rate

SPRING COVER CROP MANAGEMENT

If the cover crop overwinters there are several spring management options:

- Herbicide Termination: Terminate the cover crop 14 days prior to planting. Soil fertility and residue management should be considered at planting. The cover crop should be actively growing, and weather conditions should be a minimum of 40° at night and 50° during the day for a minimum of 3 days prior to and following termination. Read and follow all label directions. Crop insurance requirements may require a specific termination timeline.
- Tillage- Several tillage passes may be necessary for cover crop termination and may be undesirable for soil conservation.
- Crimping- Utilizing a roller-crimper to termination susceptible cover crop species is a great option and provides a long-lasting mulch to control weeds and retain moisture.
- Plant Green- Planting green involves planting into a living cover crop and terminating following planting. Ensuring proper seed placement and residue management is critical.

REFERENCES & RESOURCES

Interseeding:

-University of Wisconsin-

Considerations for Interseeding: http://ipcm.wisc.edu/blog/2017/05/considerations-for-2017-cover-crop-interseeding/

No-till drill modification for Interseeding: http://ipcm.wisc.edu/blog/2017/07/video-modifying-a-no-till-drill-for-cover-crop-interseeding/

Spring Interseeding Update:http://ipcm.wisc.edu/blog/2018/05/winter-rye-interseeding-spring-update-video/

-Penn State Extension- Cover Crop Interseeder: Improving the Success in Corn: https://extension.psu.edu/cover-crop-interseeder-improving-the-success-in-corn

Use, Benefits, and Species Selection:

-UW-Extension- Cover Crops in Wisconsin- https://fyi.uwex.edu/covercrop/

-Purdue Agriculture- *Midwest Cover Crops* ***Field Guide,*** 2nd Ed. ID-433; Midwest Cover Crops. Available for purchase at: https://ag.purdue.edu/agry/dtc/pages/ccfg.aspx

-Midwest Cover Crops Council- Multi State/Provinces Organization sharing cover crop knowledge - http://mccc.msu.edu/

Herbicide and Cover Crop Interactions:

-University of Missouri- http://weedscience.missouri.edu/extension/pdf/cover_crop_carryover_slideshow.pdf

-Purdue University- https://ag.purdue.edu/btny/weedscience/Documents/covercropcarryover.pdf

-Penn State- http://extension.psu.edu/plants Or https://extension.psu.edu/herbicides-persistence-and-rotation-to-cover-crops

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