Introduction to Working with These Tools

Background
Cover crops provide multiple benefits to farming systems. Incorporating more "green" plants into the landscape during the "brown" months helps protect water quality and maintain natural cycles for water, carbon, nutrients and soil organisms. Cover crops also improve soil health and reduce soil erosion and nutrient loss. But knowing how best to incorporate cover crops, which species to use, when to plant and terminate, and how to add cover crops without affecting primary cash crop management can be confusing.

Two new online tools – the Iowa Cover Crop Decision Tool, by the Midwest Cover Crops Council, and SmartMix Calculator™, a cover crop worksheet by Green Cover Seed – are now available to help you figure out which cover crop species will work best based on a range of farm- and location-specific criteria.

This handout explains the basics of working with these exciting new cover crop planning tools. It is recommended that you use both tools in conjunction with each other for maximum benefit.

1. Cover Crop Decision Tool

This tool was developed by the Midwest Cover Crops Council, with Iowa-specific information added by the Iowa Cover Crop Working Group. County-specific cover crop information is available to help farmers improve their cover crop selections.

To get started:
1). Select your state and county.
2). Select the crop you will plant, your planting date and estimated harvest date. (You can enter other details, like your drainage class and your goals).
3). The calendar chart will automatically update based on your selections. Use this information – and the color-coded key (3a) – to determine when and how a cover crop can successfully be established in your county.
4). Use the information to determine which seeding method will be the most useful.

Note: Use this tool with the SmartMix Calculator™ (details on back) for the most complete information.
2. **SmartMix Calculator™**

This tool was developed by Green Cover Seed, based in Bladen, Neb.

**Why use it?**

- It lets you choose from nearly 50 different species of legume, brassica, grass and broadleaf cover crops to make the mix that best fits your farm.
- You can vary seeding rates to achieve a diverse cover crop mix.
- The calculator automatically analyzes your mix for carbon-to-nitrogen ratio, nitrogen fixation or grazing potential, winter tolerance, diversity index, and frost tolerance.
- The calculator estimates seeds per acre, which will aid you with stand counts to determine establishment success.
- The seeds per pound, seeds per acre, price per pound and total cost of your mix are immediately available.

**To get started:**

1. Select your general location based on your proximity to a major highway, then your average annual rainfall, maturity stage you want the cover crop to reach and seeding method.
2. Select cover crop species that are determined to be more successful for your farm. *(Note: Use the Cover Crop Selector Tool to help you figure this out.)*
3. Get estimates of key business details, like total pounds of seed needed, approximate cost of the mix and estimates of mixing, bagging and shipping costs if you choose to purchase your mix from Green Cover Seed.

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**Cover Crop Tool Contacts & Resources**

**Cover Crop Decision Tool**

Tom Kaspar  
- National Laboratory for Agriculture & the Environment  
- Executive Committee of Midwest Cover Crop Council  
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**SmartMix Calculator™**

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**PFI Farminar – Intro to the Cover Crop Decision-Making Tools**

Sarah Carlson  
This webinar, held March 19, 2013, provides an overview to using the Cover Crop Decision Tool and SmartMix Calculator™. Access it for free at: [http://practicalfarmers.org/farminar](http://practicalfarmers.org/farminar)