Executive Summary

Grains - Statewide Team Plan of Work 2015:

Grain crops, including corn, soybeans, and small grains generates over a billion dollars in Wisconsin. The UW-Extension Grain team works to generate research-based information and deliver it to grain producers and agricultural professionals through publications, oral and written media, workshops, field days, and on-farm demonstrations. The emphasis for this team is on proactive, current information addressing emerging issues in three areas: Grain Crop Agronomy, Integrated Pest Management, and Grain Economics.

Situation Statement: Best known for its dairy industry, Wisconsin is also a major cash grain producer, ranking ninth among the states for corn grain production and sixteenth for soybeans. In addition, Wisconsin is third in oat acreage and produces approximately 265,000 acres of winter wheat. Wisconsin's 4,100,000 acres of corn and 1,550,000 acres of soybeans, plus small grains produced here represent over $2.7 Billion in value (2013 statistics). Over the past 10 years there has been an increase in acres of grain crop production in Wisconsin, in part due to higher demand from the production of renewable energy. The grain team also recognizes the growing acreage of organic production in the state and efforts are underway related to organic grain crop production as well.

The economic and environmental sustainability of individual cash grain enterprises is closely linked to crop management decision-making and the use of economically sound production practices. Economic efficiency is improved when growers have the knowledge to select among available tools to address both crop challenges and opportunities effectively. Cooperative Extension is uniquely positioned to provide current unbiased information to assist Wisconsin farmers in evaluating these tools and making choices appropriate to their individual operations and goals.

The complexity of grain production systems requires an integrated management approach. Team Grains has identified three broad areas of focus to address current and future issues faced by grain producers in Wisconsin. These are: Grain Crop Agronomy, Integrated Pest Management, and Grain Economics.

Intended Outcomes

1. Wisconsin grain producers and agricultural professionals will gain knowledge and implement best management practices for grain crops production and profitability.
2. Wisconsin grain producers and agricultural professionals will gain knowledge of and apply economic decision tools to improve their profitability.
3. Wisconsin grain producers and agricultural professionals will gain knowledge of emerging pest management issues, and increase their capacity to respond with integrated pest management practices.
4. Wisconsin grain producers and agricultural professionals will increase adoption of management practices that sustain Wisconsin soils, improve soil, and water quality and are economically profitable.

Action Plan:

GRAIN CROP AGRONOMY

As crop production systems and crop genetics change, Wisconsin grain producers face new challenges to maximize crop production and/or profitability. In many instances, maximum production is not equal to maximum profitability. In-field research, testing, and demonstration of practices ensure that producers will have solid recommendations as well as provide an effective means for farmers to gain knowledge and skills.

Needed county educational programs should focus on maximum economic yield and risk mitigation. We will commit to developing information on:

1. Cost control of crop production
2. Where can I cut?
3. Maximum Return To Nitrogen (MRTN) continuing validation research (Laboski)
4. N form, rate, split applications
5. Cost of production budgets

For these topics, resources will be developed or updated. These include a protocol for an on-farm demonstration, Badger Plots (on-farm research), a fact-sheet, and a power point presentation. These will be made available on the Team Grains website. Agriculture agents across the state are encouraged to utilize these resources as a foundation for local educational programs.

GRAIN ECONOMICS

The Economics Work Group will work with the Center for Dairy Profitability staff to update crop budgets:

1. Continuous corn cost of production
2. Corn after soybean cost of production
3. Soybean
4. Oats
5. Wheat

Second, update Ag Ventures Grain Marketing curriculum, focusing on the cost of production and the game. Coordinate with the Farm Team on developing grain marketing programs.

Third, it will develop curriculum materials (Power Point presentations, Fact Sheets) for these modules and sponsor a showcase of the modules and materials for agents.

Fourth, obtain local cash grain prices to evaluate local basis in grain marketing.

INTEGRATED PEST MANAGEMENT

New/Revised Activities for 2015:

1. We will investigate incorporating the UW IPM Field Day with the Agronomy Soils field day in an effort to reach a larger number of people with pest management information.
2. Certified Crop Advisor (CCA) Training will transition to YouTube videos from webinar. New videos will be produced as needed.
3. 7 Pest Management Update meetings will be scheduled for 2015. The Arlington and Janesville Locations will be combined in an alternate location.
4. Crop Care Clinics will be offered to agents in "menu" style and can include the following sessions
    a. Cover Crop Carryover
    b. Corn Rootworm Management
    c. Soybean Diseases
    d. Soybean pre-emerge herbicide selection
    e. Spray table
    f. Corn Stalk rots (optional)

Extension Factsheet will be developed for Fungicide use on:

1. Alfalfa
2. Corn grain
3. Corn silage
4. Soybean
5. Wheat
6. 5x7 cards for corn rootworm management will be developed for each of the following topics
    a. Corn rootworm scouting
    b. Nodal Injury Scale

SOIL MANAGEMENT

This group has formed their own team and will provide reports to the Grain Team. They will develop educational field days and winter meetings along with demonstrations and research on the use of cover crops to improve soil and water quality, reduce nitrogen losses, and reduce soil erosion.

Primary Team Grain Website

http:fyi.uwex.edu/grain

Evaluation Plan/ Timeline

2015 evaluation will be on-going and adapted by Grains Team members as appropriate to the specific activities being conducted by workgroups. It will include written and oral surveys of participants in educational programs at the county, regional, and state level. When appropriate, follow up surveys will be conducted to assess longer term impacts of knowledge gained and practices implemented. In addition to numerical data collected, the Grain Team will provide result narratives, and impact statements.

Intended Outcome 1

Wisconsin grain producers and agricultural professionals will gain knowledge or implement best management practices for grain crops production and profitability.

Impact indicators

1. Number of farmers who gained knowledge about research-based information that controls input costs for grain crop production.
2. Number of agricultural professionals who gained knowledge about research-based information that controls input costs for grain crop production.
3. Number of farmers that implemented best management practices for crop production.
4. Number of agricultural professionals that implemented best management practices for crop production

Intended Outcome 2

Wisconsin grain producers and agricultural professionals will gain knowledge of and apply economic decision tools to improve their profitability.

Impact Indicators

1. Number of farmers who gained knowledge of economic decision tools to evaluate cropping system changes to improve their profitability.
2. Number of agricultural professionals who gained knowledge of economic decision tools to evaluate cropping system changes to improve profitability.

Intended Outcome 3

Wisconsin grain producers and agricultural professionals will gain knowledge of emerging pest management issues, and increase their capacity to respond with integrated pest management practices.

Impact Indicators

1. Number of farmers who gained knowledge of integrated pest management practices in grain crops for established and emerging pests.
2. Number of ag professionals who gained knowledge of integrated pest management practices in grain crops for established and emerging pests.
3. Number of farmers who have implemented integrated pest management practices in grain crop production.
4. Number of ag professionals who have assisted farmers in implementing integrated pest management practices in grain crop production.

Intended Outcome 4

Wisconsin grain producers and agricultural professionals will increase adoption of management practices that sustain Wisconsin soils, improve soil and water quality and are economically profitable.

Impact Indicators

1. Number of farmers and ag professionals who gained understanding of current and emerging soil and water management practices.
2. Number of farmers and ag professionals who utilized information to decide whether or not to install tile drainage
3. Number of farmers and ag professionals who implemented cover crop management practices that protect or improve soil and water quality.

COVER CROPS

I. Research needs – need more scientifically collected data on use and management as well as costs and benefits of cover crops and cover crop options:

A large priority for the UWEX Cover Crops Workgroup this year is to increase activity related to research and data collection on cover crops use and benefits. Much of this will be through collaborative on-farm research projects throughout the state. There are four niches for cover crop use identified as priority areas for trial and data collection:

1. Following winter wheat or other small grain harvest (when not associated with alfalfa establishment).
2. Vegetable crop rotations – options following green beans, sweet corn and potatoes
3. Following corn harvested as silage
4. Aerially seeded (or otherwise broadcast seeded) into standing corn and soybeans

Protocols: Guidelines for on-farm research trials will be put out on the UWEX Cover Crops Google Community page. CCWG members can respond with suggestions. Note: As of April 1, two sets of guidelines have been prepared by Matt Ruark (following corn silage and following wheat/small grains) – attached here.

Research trials are encouraged to follow the guidelines of, and participate in, the Badger Plots program.

2. Research and education grant proposals:

SARE Professional Development Grant: Increasing the capacity of agency staff and agricultural professionals to increase farmer adoption of cover crops in Wisconsin

PI: James Stute, Michael Fields Agricultural Institute

Co-PI: Katie Wantoch, Dunn County agriculture agent
Video recording equipment, coordination of Northern WI demo plot sites, identify and work with farmer host for demo plot site in Dunn County, educational delivery team at each outdoor learning event.

Co-PI: Heidi Johnson, Dane County crops and soils educator
Coordination of Southern WI demo plot sites, identify and work with farmer host for demo plot site in Dane County, University of Wisconsin - Extension
Drs. Matt Ruark and Francisco Arriaga, UW State Specialists
Educational delivery team at each outdoor learning event, existing resources/fact-sheets/publications drafted by state specialists.

County Agents: Dan Marzu, Lincoln/Marathon County, Jamie Patton, Shawano County, Ted Bay, Grant County. Identify and work with farmer host for demo plot sites, educational delivery team at each outdoor learning event, delivery team at each outdoor learning event.

3. Farm Technology Days 2015 – Dane County

Demonstration plots and a display of cover crops options for Wisconsin will be established at 2015 Wisconsin farm Technology Days August 25-27. The exhibit will provide farmers, educators, conservationists and others with education and information on the environmental and economic opportunities associated with cover crop niches in Wisconsin crop rotations. Led by Nick Baker and Kevin Shelley.

4. Communications – internal to the workgroup:

The CCWG leadership team reminds all members to use the UWEX CCWG Google Community page for helping all members keep up to date on activities, projects news and opportunities relevant to research and outreach programming in cover crops. The Google community can be accessed through your CES account. You may have to develop your Google plus profile first. The Google community has tools for communication and navigation that an e-mail list serve does not. Contact Liz Bosak for more information and to be approved for this closed community ebosak@wisc.edu.

At the same time, it is suggested to continue to reach out beyond the workgroup for things like field day announcements, and that any events also be posted on the ANRE master calendar via Jennifer Lord.

Cover crops list Serve
UWEX website