



Michigan Wheat Program Project GREEN Wheat Priorities

The goal of the Michigan Wheat Program is to improve the profitability of wheat production by increasing grain yields, promoting cost-effective production inputs, and addressing threats to grain quality. The MWP recognizes the need for conducting applied research; assessing and understanding markets and potential markets; developing and delivering information and educational programs; and encouraging communications and collaboration within the production sector and between industry partners. The following are some priority research and educational objectives by category.

Agronomic practices:

- improve the efficiency and management of nitrogen fertilizer;
- identify plant nutrients that may be limiting grain yields;
- refine management practices to improve wheat establishment;
- promote sound harvesting practices to minimize harvest losses and optimize grain quality;
- study the use and benefits of cover crops;
- measure the effects of crop rotations on the performance of wheat and subsequent crops;
- assess the interaction of planting dates, fertilization, and seeding practices;
- identify differences in varietal response to agronomic inputs;
- evaluate opportunities for double cropping;
- monitoring/researching water quality issues;
- develop a network of cooperators willing to participate in on-farm research;
- identify varieties and practices advantageous to growers who have soils that are less conducive to wheat (i.e. poorly drained or excessively droughty) or who are located in the northern lower peninsula;
- study seasonal weather patterns to help explain and predict the variability of wheat yields and quality in a given season; and to identify management strategies that could potentially mitigate adverse weather effects.
- Test variable seeding rates for wheat.
- Broadcast/incorporation of wheat with tillage tools for high-speed planting to get more acres of wheat planted with greater return on investment.
- Studies to measure/quantify carbon sequestration of wheat crop including, but not limited to, life cycle analysis for wheat.

Pest management:

- evaluate the efficacy of fungicides, herbicides and insecticides;
- develop management strategies to mitigate losses due to pests;
- identify and assess diseases threatening wheat;
- evaluate the interaction of pesticides, varieties and agronomic practices;
- develop strategies to manage Fusarium head scab to insure a quality product for end-users.

Variety development and evaluation

- identify new public and private varieties that may prove beneficial to MI growers;
- evaluate the response of wheat lines and varieties to high management practices;
- develop superior varieties exhibiting greater yield potential, disease resistance and grain quality;
- initiate or collaborate on efforts that address the quality losses due to Fusarium head scab, Preharvest sprouting and late maturity amylase activity.

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Marketing, economic and production analysis:

- identify financially feasible production and marketing practices;
- understand current markets and their potential/saturation;
- understand the flow of MI wheat in the marketplace;
- disseminate information regarding current market trends and marketing strategies;
- explore new market uses;
- explore new markets including niche markets;
- explore options for developing markets to serve MI companies;
- identify and summarize current production practices employed by MI growers.

Education and outreach activities

- develop and implement strategies to expedite the adoption of sound and profitable practices;
- develop educational products such as bulletins, fact sheets, research summaries, and powerpoint presentations that address issues related to a profitable wheat industry;
- identify and implement methods that promote information delivery;
- supply cutting edge information to growers to make economically sound production decisions;
- share sound information with growers regarding potential new markets and opportunities;
- assist growers in participating in on-farm research;
- encourage participation in the national wheat yield contest as a means to identify key management practices of high yield producing farmers.
- Projects such as the Great Lakes Yield Enhancement Network (YEN) that help growers understand how to increase wheat yields and provide opportunities for networking and sharing of ideas with other farmers.