



# Farmers' Take On Perennial Wheat for Its Many Possibilities- A Field Day Assessment

*Vicki Morrone\**, *L. Olabisi-Schmitt*, *J. Meyer*, *C. Sprunger*, *S. Tinsley* and *S. Snapp*  
\*Dept of CARRS, Center For Regional Food Systems at Michigan State University

## Overview

- A few pioneers experimented with perennial wheat 85 years ago but practical varieties have only become available in the last 5 years.
- Perennial wheat is a multi-purpose crop that offers economic and environmental benefits.
- This research documents farmers' priorities and perspectives collected during a field day and through farmer interviews.
- A farmer focused field day was held September 2012 at the Kellogg Biological Station, the site of Michigan State University's perennial wheat field nursery and long-term experiments on perennial grains.
- Eleven farmers and nine members of the research team engaged in discussion at this day filled with field visits, focus group discussions, and a priority setting session. Farmers included dairy, pasture, millers, and grain producers.
- In-depth interviews were conducted with 11 farmers to assess their perceptions of perennial grains.

### Perennial Grain Characteristics

- The plant can produce for 2-3 seasons
- Cross b/t intermediate wheat grass and annual wheat
- 24-33% higher in Fe, Mn, Zn, & Cu
- Grain production is about 1/2 of annual wheat
- Crop regrowth is sensitive to drought
- Roots are 5 x greater than annual wheat



This collection of words represents the frequency of terms noted by farmers to indicate their priorities for perennial wheat during the interviews and focus group sessions.



The first year perennial wheat did fairly well in 2012 given the drought conditions and sandy soil.



Cori Nickels (new farmer) checks out the possible yield of perennial wheat.



Seed rep, economist, farmer, and agronomist all come together to discuss perennial wheat as a crop and share their thoughts.



John Edgerton (farmer) and Nikhil Jaikumar (MSU grad student) discuss this crop and possible disease problems.

## Perennial Wheat Attributes

Environment "So many good things"	Sustainability "Need the lastingness"	Economics "Pans out in the end?"	Agronomics "So for which system?"	Market Products "Who knows what other markets?"
Reduce leaching & less pollution	Multi-year	Less planting cost	Best soil type(s) for system	All purpose flour
Erosion control	Plant 1 in 3 years	Grain tradeoff for environmental benefits	Buffer strip*	Straw
Add soil carbon and organic matter	Part of a polyculture	Seed size and volume (its 1/2 the yield of annual wheat)	Cover crop*	Hay
Root turnover-5x more than annual wheat	Perennial system	Agronomic tradeoffs/ Economic benefits*	Mulch for fruit trees*	Animal grazing and grain feed

This table lists farmers' personal priorities of their interest in perennial wheat. Data was collected during brief interviews during farmer focus groups and interviews.



Farmers participated in an exercise to identify their two top priorities for perennial grains: Sustainable, Environmental, Soil, Profitability, Production Practices.

## Farmers Questions and Concerns

Environment	Sustainability	Economics	Agronomics	Market Products
What level of benefits?	Patentable?	Seed cost?	Crop rotation to break pest cycle?	Gluten free grain ?
When & how much soil organic matter?	Stability of genetics?	Risk of inadequate returns?	How to harvest?	Mineral content in grain?
Adaptation in different environments/soils?*	Manage crop through burns- similar to a prairie?	Market opportunities?	Number of years adequate forage production?*	Nutritional content?

This table represents the questions that farmers asked during the focus group and in-person interviews.  
\* Results were collected from intensive, in-depth farmer interviews.



Matt Haan (KBS Dairy) listened intently to farmers' description of needs to make this work.



Sieg Snapp and Scott Swinton (MSU) enjoyed the day talking with farmers.