

2010 Organic Soybean Variety Performance Trials

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Why Organic Trials?

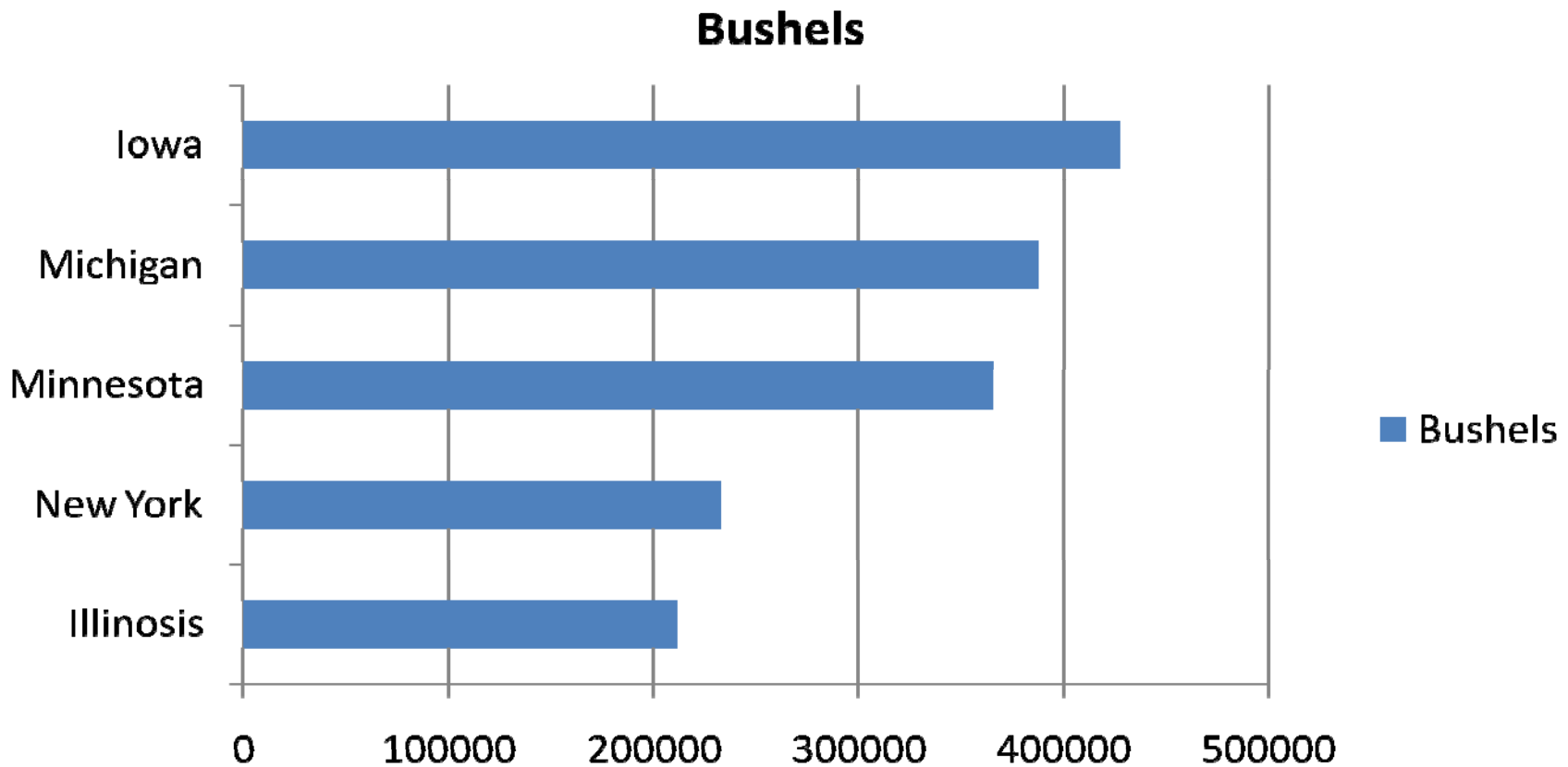
- Selection criteria differs from conventional
- Larger bush types vs straight line shorter plants
- Non GMO
- Food grade (both tofu and soymilk)
- High Protein
- Lack of data in organic conditions

MSU Soybean Breeder

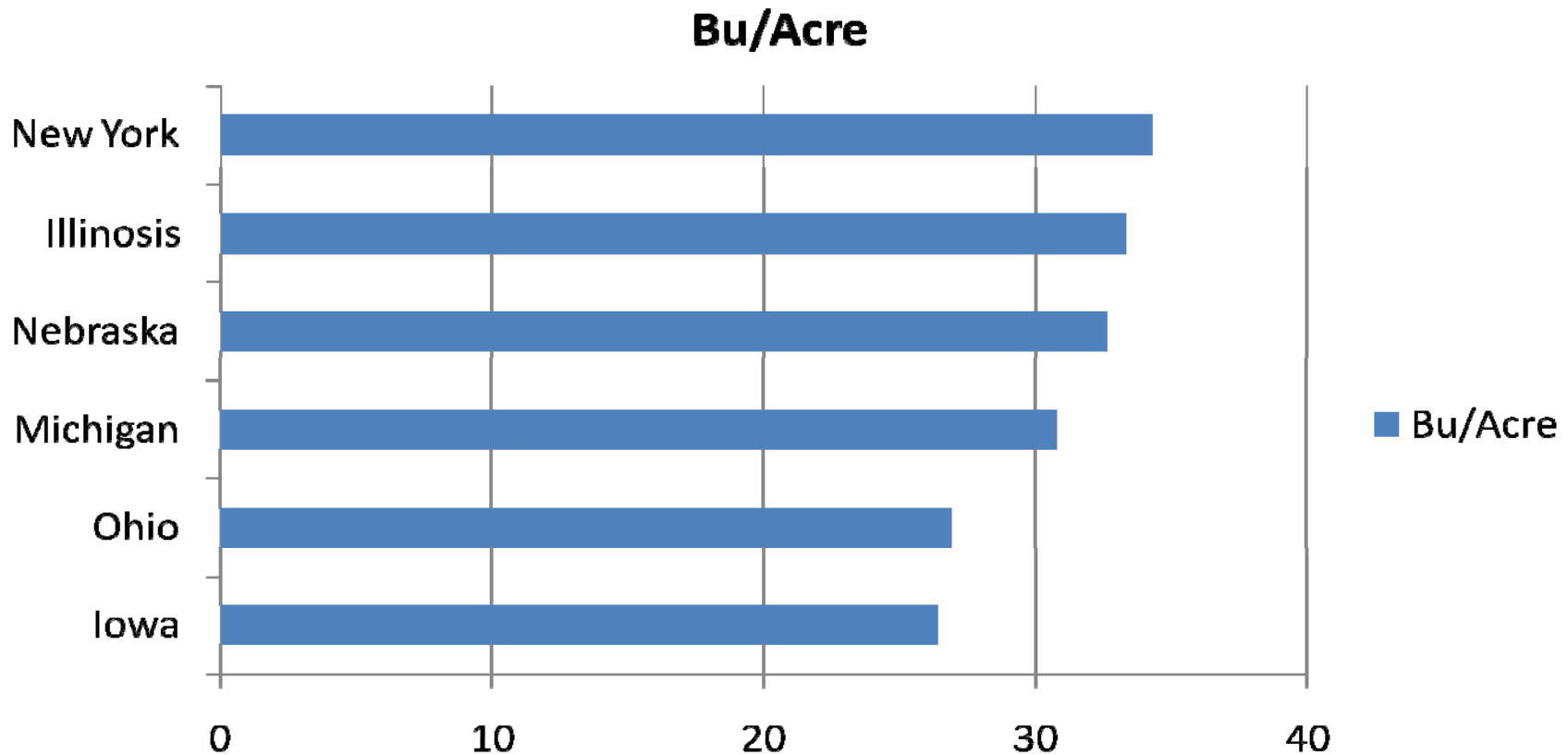
Dr. DeChun Wang



U.S. Organic Soybean Production By State Ranking



Organic Soybean Yields Bu/Acre by States



Why?

- End Users
- Growers
- Old Varieties
 - Yield limiting
- New Varieties
 - Agronomics



On Farm Trial Sites



- 3 locations
(Lapeer, Tuscola, Isabella)
- 3- 4 replications
- 41 varieties
- 10 seed sources
- 15 MSU varieties

Evaluated twice during the growing season





End User Criteria

Protein

Hilum Color

Oil

Seed Size

Taste

Non GMO

Organic

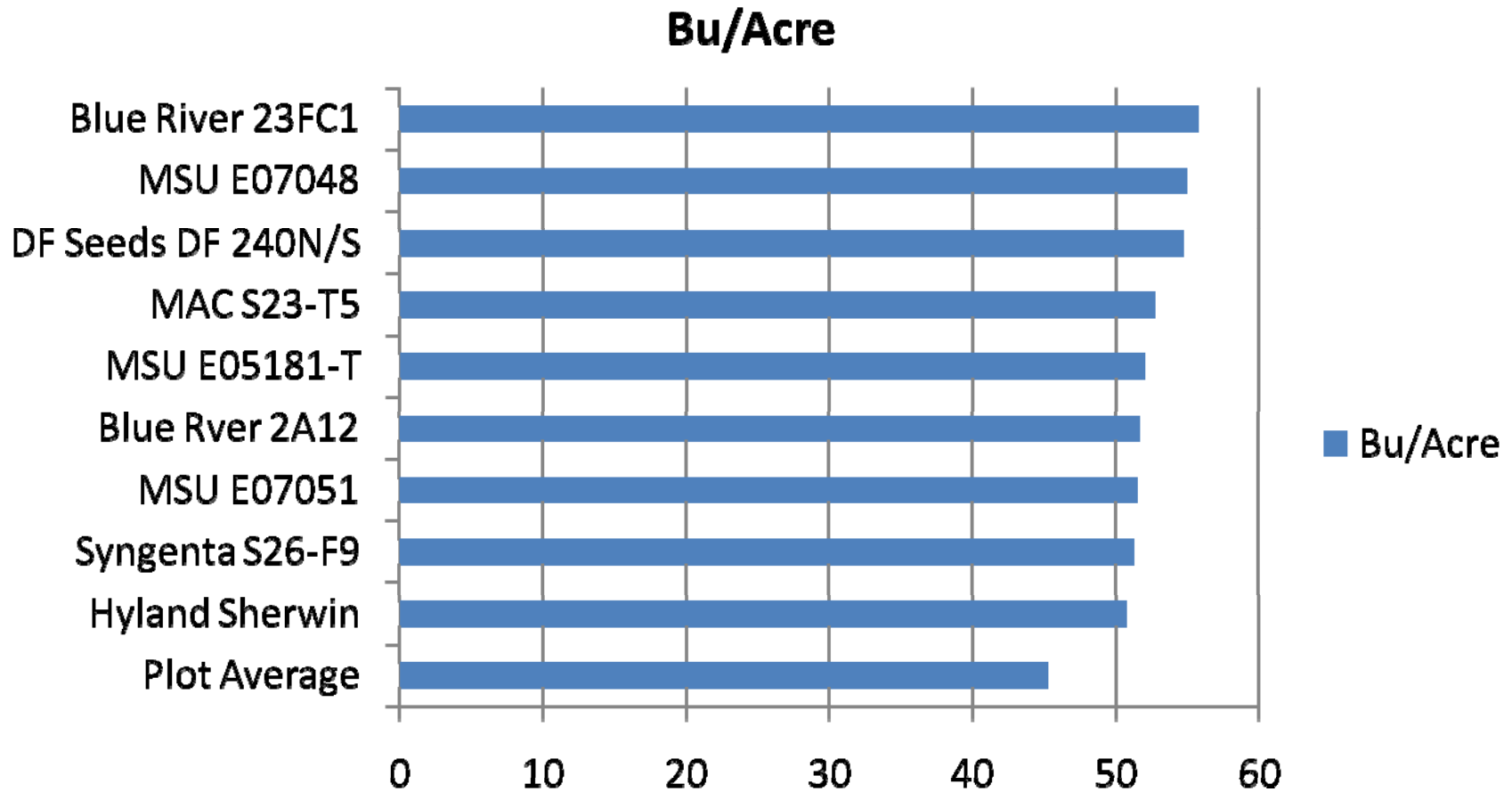


Farmer Criteria

- Yield
- High pod height
- Early Vigor
- Fast Canopy
- Large Bush
- Maturity (2.0)
- Long Standing



Top Yields



Top Yields & High Protein

Variety	% as is Protein	Yield
MSU E07158-T	41.2	42.0
MSU E06331-T	40.0	45.0
MAC IA 2067	40.0	42.5
Organic Bean HP 204	39.9	42.6
Organic Bean IA 2020	39.9	36.6
Organic Bean IA 2041	39.6	42.5
SunOpta SRN-14	39.4	38.5
Vinton 81	39.1	36.1
MN 1505SF	38.9	41.2



More Testing
Needed

Excited about
the Possibilities

Special Thanks

- John Boyse, MSU Soybean Research Program
- DeChun Wang, MSU Soybean Breeder
- Don Brockriede, Lapeer Organic Farmer
- Mark & Steve Vollmar, Tuscola Organic Farmers
- Tom Nelson, Gratiot Organic Farmer

http://anrcom.msu.edu/news/

The screenshot shows a Windows Internet Explorer browser window with the address bar containing <http://anrcom.msu.edu/news/>. The page title is "News for Michigan Agriculture". The browser interface includes a menu bar (File, Edit, View, Favorites, Tools, Help), a search bar, and various toolbars. The website content features a green header with the MSU logo and navigation links: Home, About Us, Contacts, and CANR News. A sidebar on the left lists categories under "Animal Ag" (Beef, Dairy, Horses, Pork, Poultry, Sheep & Goats) and "Plant-based Ag" (Field Crops, Floriculture, Fruit, Nursery & Christmas Trees, Turf & Landscape, Vegetables, Bioeconomy, Business, Home & Garden, Organic Ag). The main content area displays a featured article titled "Farmers have new source for MSU Extension information" with a "Read More" link. Below the article is a "News for now" section with a list of news items:

- [New online resource for MSU Extension information now available](#)
- [Strong communication skills are effective on-farm tools](#)
- [How to register your farm on MarketMaker](#)
- [Managing accounts receivable](#)
- [NOT WANTED: Feral swine in Michigan](#)

The browser's status bar at the bottom shows "Internet" and "100%" zoom level.

http://anrcom.msu.edu/news/category/organic_ag

Category | News for Michigan Agriculture - Windows Internet Explorer

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News for Michigan Agriculture

MICHIGAN STATE UNIVERSITY | Extension

Home About Us Contacts CANR News

Organic Ag

New online resource for MSU Extension information now available
Mar 3, 2011... Farmers looking for the most up-to-date information from MSU Extension have a new online tool at their fingertips.

MSU Organic soybean variety comparison trials available
Mar 3, 2011... Organic producers now have soybean variety performance comparison results from Michigan locations

Strong communication skills are effective on-farm tools
Mar 1, 2011... As agricultural producers strive to improve production methods and productivity, they shouldn't forget that communication skills can help get the job done.

Vertical tillage offers both benefits and challenges for farmers
Mar 1, 2011... Full width vertical tillage increased soybean yields on fine- textured soils and soybean stands may improve. However, there are indications that just one pass may decrease soil quality.

Broad mite: Not your typical Michigan mite
Mar 1, 2011... Many growers saw broad mites for the first time in 2010. Whether or not they make an appearance in 2011 probably depends on the weather.

How to register your farm on MarketMaker
Feb 28, 2011... Increase sales of farm products by registering your farm on Michigan MarketMaker and communicating the attributes of your products to your customers.

Long term opportunities abound for local meat production in Michigan
Feb 28, 2011... Opportunities abound for local meat entrepreneurs; however aligning producer to consumer in

Animal Ag

- Beef
- Dairy
- Horses
- Pork
- Poultry
- Sheep & Goats

Plant-based Ag

- Field Crops
- Floriculture
- Fruit
- Nursery & Christmas Trees
- Turf & Landscape
- Vegetables

Bioeconomy
Business
Home & Garden
[Organic Ag](#)

Useful links

- [Organic Farm Exchange](#)
- [New Ag Network](#)
- [Student Organic Farm](#)
- [Enviro-weather](#)
- [Diagnostic Services](#)
- [Soil and Plant Nutrient Lab](#)
- [Agrifood Safety \(GAPs\) Information from MSUE](#)
- [MSU Product Center for Agriculture & Natural Resources](#)

Internet 100%



News for Michigan Agriculture



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MSU Organic soybean variety comparison trials available

Organic producers now have soybean variety performance comparison results from Michigan locations

Published March 3, 2011



Dan Rossman, Michigan State University Extension

Performance comparisons of 41 non-GMO soybeans varieties were conducted on three organic farms in Michigan. Fifteen of the varieties are outcomes of the Michigan State University food grade soybean breeding program headed up by DeChun Wang (Department of Crop and Soil Sciences). Soybeans from other breeding programs and seed companies throughout the Midwest were evaluated in these trials as well to provide comparisons under Michigan organic conditions. Each entry was replicated three to four times at each site.

The criteria for selecting organic soybean varieties are somewhat different than for conventional food grade varieties. Large bush type varieties are desired by the organic growers while shorter, high yielding compact varieties are selected for the conventional grower. The entries were evaluated twice during the growing season by growers and buyers. Evaluation criteria were plant height, canopy closure, and pod height. Harvest data recorded was yield, plant height, average lodging, protein, oil, seed count and hilum color. Significant differences accrued with all criteria evaluated.

These results are extremely beneficial for organic soybean producers who are looking for higher yielding, more organically adopted varieties that meet the demands of the end users. A 5 bushel difference in yield with food-grade, organic soybeans can easily equate to a \$100 an acre gain.

The results of these trials are printed in the *MSU Extension Mid-Michigan 2010 Crop Report* and the *MSU Extension Field Crops Team On-Farm Research & Demonstration Report*. The results are also available at my web page: www.msue.msu.portal/gratiot.

The research was funded by the seed companies entering varieties to be evaluated. It was also supported by the MSU soybean research team.



Thank you

QUESTIONS?