



Iron Range Agriculture Group Meeting

Thursday, March 2, 2017

11:00 am -1:00 pm

@Northeast Service Cooperative Office (off hiway 169)

5525 Emerald Avenue, Mt. Iron - next to Merritt Elementary

Lunch provided - **PLEASE RSVP to:**

sgiorgi@ramsmn.org 218-780-8877

AGENDA:

11:00 – welcoming and introductions

11:10 – David Abazs – who was a member of the research team that provided the study and report on agriculture in NE Minnesota will be our guest speaker. David Abazs, has been farming the last 30 years in Finland MN. His family farm, Round River Farm, provides organic vegetables through a CSA marketing system. As researcher Co-PI "Defining the Agricultural Landscape of the Western Lake Superior Region" he quantified the potential for a regional food system and its social and economic impacts. In 2000 his family was awarded Farm Family of the Year "New Initiative" award and in 2013 were awarded the Farm Family of the Year. David also designed, installed and got operational Victus Aquaponics Facility and worked as a MISA Senior Fellow on the St. Paul campus. He manages the Wolf Ridge Organic Farm, designed to provide all of the vegetables for over 140,000 meals served. The farm has high tunnels, a timber frame outdoor classroom, and Vegetable Processing building and we are currently clearing and opening fields to further increase production. He also directs the OCA AgroEcology Center/Farm developing a 10 acre permaculture operation and community organic farming operation.

Noon – Lunch

12:20 – Angela AL Dynkaritch – President American Bank of the North

Will speak on the subject of small farm or ag loans, the challenges, the opportunities, etc.

Other items of interest open for discussion.

Please share this with other local farmers who are not on our list!

Agriculture

March 2nd, 2017

Northeast Service Cooperative

11:00 a.m. – 1:00 p.m.

In Attendance: Steve Giorgi, Doug Learmont, Jordan Metsa, Lorrie Janatopolous, David Abazs, Brian Bluhm, Keith Nelson, Heather Lindula, Marlise Riffel, Wendy Perdi, Melissa Roach, George Pliml, Kendall Dykhus, Jim Takala, Jan Takala, Kate Paul, Sean Lindula, Lauren Adamczyk, Jim Adamczyk, Sara Ferkul and Elaine Santi

Presentation given by David Abazs. David and his family own a farm in Finland, MN named Round River Farm. There are many difficulties that farms face, short growing season, rocky terrain, frost and many more. Round River Farm is powered by a renewable energy system. Powered by solar, water, wind and physical labor. They also have a greywater treatment system. They also had a vegetable oil powered car for a period of time. The farm does provide foods to the schools in Tofte, Finland and Silver Bay. They also offer shares that can be purchased. <https://www.round-river.com/csa>. They also started to attend farmers markets.

David started to research if we could grow the food we need for this region to feed the population? Based on the Standard American Diet (SADiet), we could produce 76% of the food locally, 17% of the food needed for that diet cannot be grown locally. David and UMD worked together, along with a group of doctors, nutritionists and dieticians to develop a diet of foods that could be grown locally. They have developed the Western Lake Superior Healthy Diet. Using the new diet, it would circulate approximately \$1 billion throughout the area per year. And would create about 20,000 new jobs in our region.

(Summary: http://www.d.umn.edu/gac/pdfs/HFHL_4pg.pdf)

Discussion on the Superior Grown Logo, which approved by MN Grown.

<http://www.sfa-mn.org/lake-superior/farm-directory/>

<http://minnesotagrown.com/>

<http://goodfoodnetwork.org/>

David has also been involved in a project at Victus Farm in collaboration with UMD Center for Sustainable Community Development and the city of Silver Bay.

<http://www.d.umn.edu/external-affairs/homepage/13/victus.html>

Victus Farm is a large aquaponics facility. It has four 7,500 gallon troughs that support the hydroponic growth of many plants.

<http://www.d.umn.edu/external-affairs/homepage/13/victus.html>

AgroEcology Center in Finland at the Organic Consumers Association's farm. This is a dead of winter greenhouse. <http://www.lcnewschronicle.com/news/lake-county/4223700-new-greenhouse-unveiled-finland#.WLB4gP8gj> U.facebook

Wolf Ridge Organic Farm has many activities happening at this farm. They have three main focuses, production first, education second and then research. They have approximately 350 students come through the farm every week. They grow, harvest, process and deliver food. The processing center includes an area for washing, storing and freezing vegetables. They are learning new ways to preserve food for longer periods of time. They also have an education facility that focuses on eating healthy and the benefits that come with healthy eating and farming methods. They also have pollinator gardens and research fields.

<https://wolf-ridge.org/explore/wolf-ridge-organic-farm/>

Tom Bartovich from American Bank also attended the meeting to have a discussion about programs and agricultural loans that may be of assistance to farmers. There is a requirement of having insurance on your farm or livestock. They can be difficult for some farmers because of the costs associated with insuring cattle. They will also look at cash flow. They will work with government programs if they are available. And can discuss payments.

Minnesota Department of Agriculture also offers scholarships for the Beginning Farmer FBM education program. This program helps farmers learn business management.

<http://www.mda.state.mn.us/food/organic/bizmgmt/beginningfarmerfbm.aspx>

Future group topics:

Silvaculture and Silvapasture

Hops Marketing

Agricultural Utilization Research

Having a representative from the Ag Extension Committee come and speak.

Defining the Agricultural Landscape of the Western Lake Superior Region

Realities and potentials for a healthy local food system for healthy people

Summary of Results
Funded by the Healthy Foods, Healthy Lives Institute
Dept. of Food Science and Nutrition
University of Minnesota



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Research Components and Goals

The goal of this research was to describe the agricultural landscape of a fifteen county area in Northeast Minnesota and Northwest Wisconsin, including its capacity to provide food for the regional population. There were four components to the research: geographic information system (GIS) analysis was used to describe the land-use of the region and its capacity for regional crops; in-depth ethnographic interviews with farmers documented their current practices and informed of challenges and potential for expanded production; the creation of a "regional pattern" diet and the capacity to produce it in comparison to the Standard American Diet (SAD), and finally, an economic analysis to describe the impact a local food system can have on the sustainability of the Western Lake Superior Region. These four components were completed; some minor modifications are discussed in methods and results below.

Geographic Information Systems Analysis

A fifteen county region was identified based on physical aspects of the region but the social and cultural nature and functions within this region. Iron County was added to our original fourteen county proposal after a suggestion from an agricultural extension agent with a good understanding of how that county's farmers identified their growing region. A 479,856 (2008 census) human population lives within this 18.6 million acre region. The economic value of the food consumed within this region totals over 1.26 billion dollars (2006 food dollars estimates) while the food production on-the-farm dollars total over 193 million dollars. The USDA 2007 census reveals that this farm value was produced from 5,602 farms averaging crop sales of \$31,903 per farm with the average farm size equaling 216.5 acres. These are the data which we based our research on as we developed our methodology and work plan.

To determine our agricultural land potential, we conducted a geographic information systems overlay process using

variables representing suitable land available for food production. We eliminated land covered by lakes, rivers, or wetlands (35% of our region). We then eliminated all the land with a fifteen percent slope or steeper and developed land, removing another 9% area. Forty-five percent of the land was left in MN (6,093,900 acres) and seventy percent of the area remained in WI (about 3,459,200 acres). We then used county digital soil surveys (SSURGO) with a crop productivity index to further restrict the land to soils with a better than average productivity (by county). Finally, areas were eliminated that were defined as "forest" (any type) by the GAP land use data. In Minnesota a total of 1.232 million acres remained meeting all "suitable" criteria, and in Wisconsin, the total "suitable" was 460 thousand acres. This amounts to about 9% of the total area in the fifteen counties. Table 1 lists the acres meeting all "suitable" criteria by county. Figure 1 illustrates the total of 1.692 acres, a conservative estimate of the amount of land that is available for future agricultural pursuits in building a regional food system.

Figure 1. Acres meeting "suitable" criteria are shown in brown.

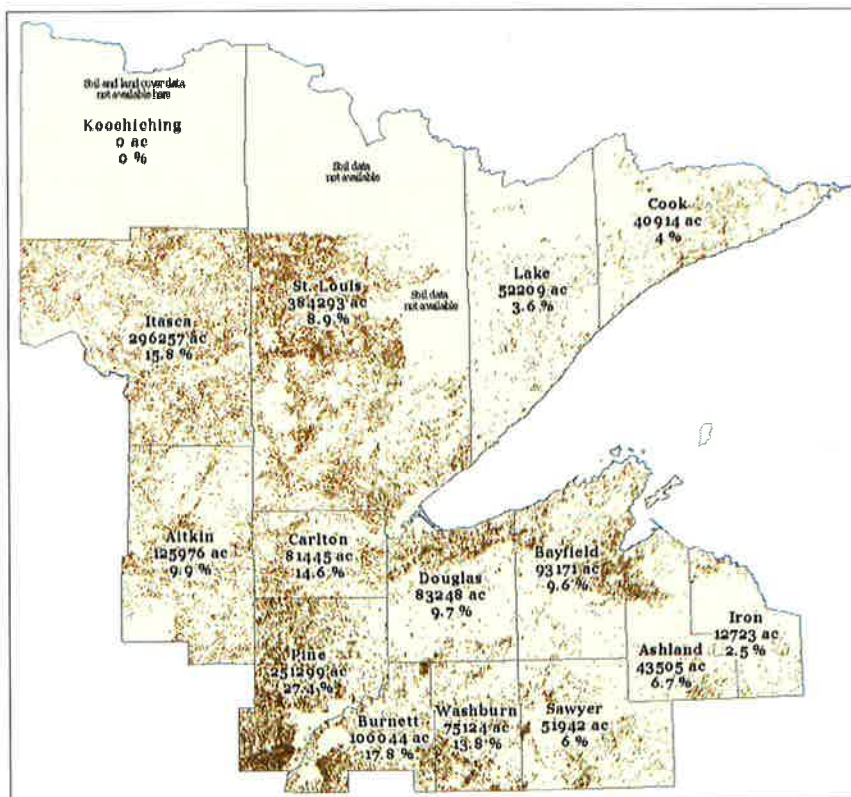


Table 1. Acres meeting "suitable" criteria by county.

County Name	State	Acres Meeting Criteria
Aitkin	MN	125,976
Carlton	MN	81,445
Cook	MN	40,914
Itasca	MN	296,257
Koochiching	MN	0
Lake	MN	52,209
Pine	MN	251,299
St. Louis	MN	384,293
Ashland	WI	43,505
Bayfield	WI	93,171
Burnett	WI	100,044
Douglas	WI	83,248
Iron	WI	12,723
Sawyer	WI	51,942
Washburn	WI	75,124
TOTAL		1,692,150

Ethnographic Interviews

We interviewed 26 farmers, 13 conventional farmers and 13 organic or certified organic producers of meat, dairy, fruit, grain, CSA vegetable, vegetable greenhouse production and wild harvests. The interviews revealed a wide range of perspectives and some common threads.

Strengths of the existing food production landscape in our region include:

1. Dedicated producers who have years of commitment and knowledge of their soils, customers and climate;
2. Independent and experimental producers who learn effectively both from trial and error and by using available educational resources (i.e. agricultural extension; publications; nonprofit agricultural groups, such as Sustainable Farming Association; fellow farmers, etc.);
3. Diverse lands, soils, and microclimates that lend themselves to a variety of crops, production scales and approaches;

Constraining conditions on the local/regional food system include:

1. Cool, short growing season and challenging soils;
2. Meager economic benefits of producing food under current commodity-market driven system;
3. Limited labor resources for intensive production (related to 2)
4. Minimal presence of infrastructure for processing and distributing foods;
5. Limited access to mass consumer markets (related to 4);
6. A population of producers without clear plans or fiscal means for their own retirement and/or succession for their operations.

Nutrition Research: Western Lake Superior Healthy Diet (“regional pattern”) diet

A group of individuals were identified and asked to participate in the development of a “Western Lake Superior Healthy Diet” (WLSHD) that would address growing, health and cultural issues. The group of doctors, nutritionist and dietitians along with expertise with Native American medical issues including diabetes and heart disease was formalized. The group was given the task to answer some broad questions that will likely lead to subsequent nutritional research on Western Lake Superior regional foods:

1. Quantify this region’s food consumption based on the average Standard American Diet (SAD) pattern?
2. What would be an optimal diet pattern for WLSR that focuses as much as possible on local, seasonally available foods?
3. How would a regional diet particularly benefit people of the region in addressing health problems (e.g. diabetes) that particularly trouble indigenous populations?”

All task force members agreed that the most significant aspect of the WLS Healthy Diet is the total reduction of calories as compared to the Standard American Diet (SAD). This fact alone would provide many benefits for health. The other aspect of the new diet is that it contains no additional (added) calories of sugar. This recommendation as well, will help reduce suffering from health issues throughout our region. The group developed a healthy diet that can be 100% grown in our limited growing region. This diet provides the basis of a statistical comparison of building a local food system using the Standard American Diet (SAD) and the new regional diet. A graph summarizing elements of this diet in comparison to the Standard American Diet is shown in Figure 3.

We evaluated the amount of land that would be needed to meet the local portion of the Standard American Diet (SAD) and the new regional (WLSHD) diet. The final results show that a total of 500,671 regional acres, or 1.04 acres per person to provide the

Figure 2. WLSHD vs. SAD

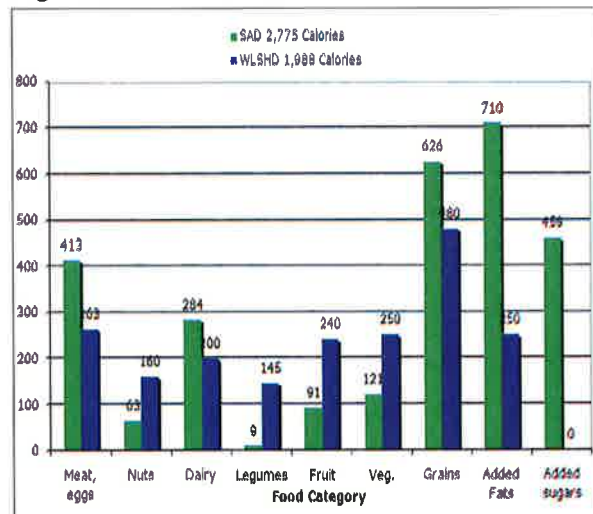
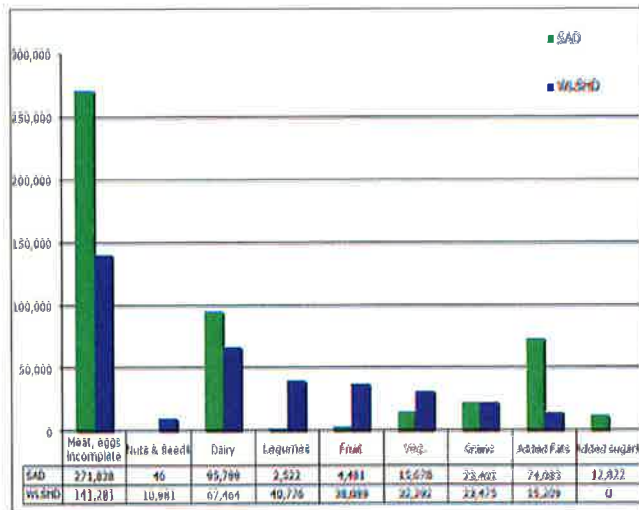


Figure 3. Acres needed for WLSHD vs. SAD diet



local portion (84 percent) of the Standard American Diet (SAD).

For the Western Lake Superior Healthy Diet, 369,567 regional acres, or 0.77 acres per person would be needed to grow the food for our current population (Figure 4).

Economic Analysis

We attempted to analyze the economic impact of building a local food system by using the IMPLAN model, a business tool that calculate direct, indirect, and induced impacts of increased local food production at the county level.

Unfortunately, the baseline farming numbers generated through the model could not be reconciled with other sources and local knowledge. For example, Lake County’s agricultural baseline in IMPLAN amounted to \$2,596,392 for the farming sectors needed in the food production analysis, including \$1,777,686 of poultry and egg production. There are no significant poultry and egg production facilities in Lake County other than a few homesteads and farms that offer a few dozen eggs each week. This and other unsubstantiated numbers caused us to abandon the model.

Building a local food system would indeed have a significant economic impact for our region. We developed economic scenarios using alternative, manual methods to determine that a 100% local diet would add thousands of additional jobs and additional revenues of over \$952,559,068 per year. The non-farm portion of the food dollar and the health care impacts of embracing a 100% local food system is over 1 billion dollars per year for the Western Lake Superior Region.

Discussion

The qualitative data gathered is significant primarily for the ways that they point to a local food production system that is fragmentary and largely dependent on the efforts of people who have a commitment to food production that outweighs actual economic sustainability. Food producers in our region work long hours for economic returns usually not sufficient to support their households. Such conditions do not result in an economic sector that draws new producers willing to expand the overall productivity of the regional food system.

Growers/producers who have been in business for more than a few years have carefully honed their production to focus on products that they know do well under their conditions, and for which they know they have a viable market. While certain crops (i.e. potatoes) have been historically grown at larger scales in parts of our region, current producers largely focus on higher value crops (i.e. greenhouse tomatoes, raspberries, smoked fish) that can be directly sold to consumers in order to maximize the return on their labor. Most of the producers interviewed report that they are at or near maximum productive capacity for their circumstances, and few report intentions to appreciably expand their operations. In fact, many regional food sectors have seen significant decline in the numbers of producers (i.e. the number of commercial fisherman on western Lake Superior has fallen from a reported early/mid-20th century peak of several hundred to less than 20, with only a few making close to a full-time living from fishing).

For the regional food system to grow, food production will need to become more economically viable (through consumer willingness to pay premiums for “local” food; through value added processing opportunities for producers; through enhanced labor resources, etc.) to motivate current and/or new producers to expand.

Despite these recognized challenges, this grant provided our region with enough information to begin to focus on the “right” questions. We now know that our region can produce enough food for the people that live in this region today and on into the future. We also have given birth to a new regional diet that can provide a local healthy diet choice as we move to more fully develop a regional food system.