Lending A Farm Hand:

Assessing the challenges facing beginning farmers in Minnesota.

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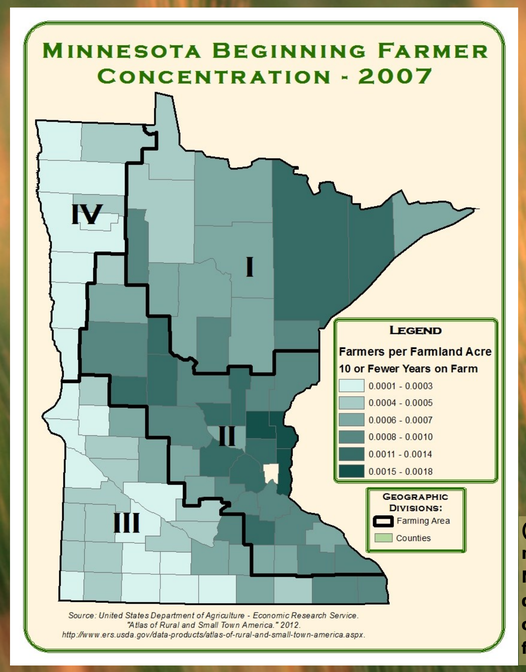
Abstract: Technological advances and mechanization in agriculture have increased farm productivity, but have also decreased the need for farm labor, leading to fewer farmers on larger, conglomerated operations. This produces negative effects on the environment and rural communities, such as decreased use of soil conservation practices and decreased rural social capital. One way to counter this trend is to increase the number of farmers on the land; however, beginning farmers face significant entrance barriers. The first part of this study asks which of these barriers are the most limiting, and the second part asks whether beginning farmer educational and networking programs can help to increase the number of farmers in Minnesota. In order to answer these questions, I conducted interviews of beginning farmers, reviewed prior research, and analyzed county-level geographical statistics relevant to Minnesota agriculture. Through this, I concluded that access to land is the biggest entrance barrier for beginning farmers in Minnesota, and that farmer networking organizations can help to alleviate this problem.



Nick Olson with his family (above, right), and vegetables on their Prairie Drifter organic farm (above left). - photos by the author

(Map 1, left): Using statistics from the USDA, I mapped the concentration of beginning farmers in Minnesota and compared this variable to the dominant regional agriculture type. Region II clearly has the greatest concentration of beginning farmers (fewer than 10 years on a farm).

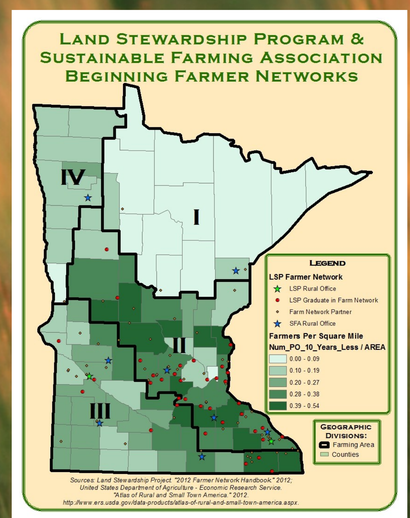
Minnesota Farming Regions explanation:

Area 1: Forest Products, General Farming

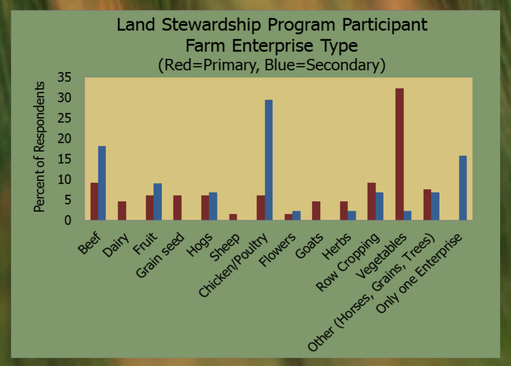
Area 2: Dairy, General Farming

Area 3: Livestock Feeding, General Crops

Area 4: Small Grain Crops



(Map 2, above): I used the addresses of Land Stewardship Project offices, member farms, and Farm Beginnings program graduates to create this map of the LSP's beginning farmer network.



Land Stewardship Project Participant Pre-Course Survey Responses (2009-2010)

Access to Land	
Do not have access to land	**40.65**
Have access to rented land	**20.33**
Own land	**42.28**
Farm Operation Type	
Manage a farm owned by someone else	9.09
Manage own farm	28.93
Employed on a farm	8.26
Volunteer or intern on a farm	6.61
Not engaged in farming activities	45.45
Acreage Farmed	
< 1 - 5	9.09
6 - 10	10.91
11 - 20	9.09
21 - 50	14.55
51 - 100	23.64
100 - 200	16.36
201+	16.36

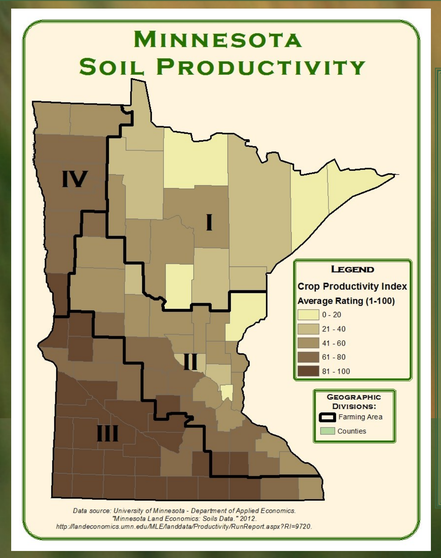
Farm Background	
Farm	28.81
Rural, nonfarm	11.02
Small town	20.34
Suburban	18.64
Urban/city	21.19
Farm Experience	
Home/kitchen gardening	82.93
Dairying/livestock production	34.96
Organic gardening or farming	43.90
Row cropping (corn, soybeans, etc.)	17.07
Commercial vegetable production	12.20
Other (list):	14.63
No prior agricultural experience	7.32
Use Sustainable Practices	
Yes	74.07
No	25.93

Chart and table data compiled from: Land Stewardship Project—Farm Beginnings Program. "Farm Beginning Pre-Course Survey." (Unpublished Data). 2009-2011.

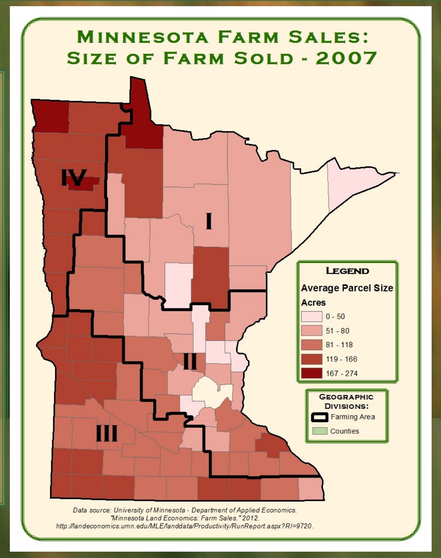
Process: Since I first needed to know why beginning farmers are important for agriculture, I began my investigation by doing a literature review on the causes of farm loss (otherwise known as farm consolidation), and the impacts of larger, fewer farms on the sustainability of the environment and rural communities. Next, I researched why some regions of Minnesota have a greater renewal of farmers than other regions. I next sought information on the recruitment of new farmers, and what entry barriers they faced. By conducting interviews and reviewing prior research from government agencies and non-profit organizations, I was able to determine what challenges limited beginning farmer establishment. I interviewed Nick Olson, a beginning farmer and director for the Land Stewardship Project's (LSP) Farm Beginnings program (see photo above), as well as several dairy farmers from Stearns County. Next, I conducted a comparative geographical analysis of various factors relating to beginning farmer establishment. Finally, through literature reviews and interviews, I was able to see what sort of programs exist for helping beginning farmers overcome entrance barriers.

State Farming Regions	Farming Region I	Farming Region II	Farming Region III	Farming Region IV
2007 Number of Farms	6652	36530	31303	6354
1949 Number of Farms	22510	75884	69570	18040
% Change 1949-2007	**-70.45**	**-51.86**	**-55.01**	**-64.78**
2007 Median Farm Size	144.7	110.7	197.1	287.6
2007 Average Farm Size	263.8	231.0	423.3	724.5
1949 Average Farm Size	138.0	153.0	189.3	300.0
% Change 1949-2007	**91.19**	**50.95**	**123.57**	**141.50**

Regional definitions and Table data compiled from: Knudtson, Arvid and Rex Cox. Upper Midwest Agriculture: Structure and Problems (Statistical Supplement). Minneapolis: Upper Midwest Economic Study, 1962; USDA National Agricultural Statistics Service. "2007 Census of Agriculture, Volume 1, Chapter 2: County Level Data—Minnesota." Table 8.



Using data from the University of Minnesota, I created maps of variables such as average soil productivity per county (map 3, left), and the size of farms sold per county (map 4, right). When compared to the map of beginning farmer concentration above, it is apparent that counties with a higher concentration of beginning farmers also have less productive soils and smaller farms being sold. These differences can be seen both at the county and regional level. Much of the difference in these regions is due to differences in farm type, which is in turn due to differences in topography.



Conclusion: I determined that farming region II (the dairy and general farming region) was unique in several ways. Not only did it have a higher concentration of beginning farmers (map 1), but also had a slower rate of farm consolidation than region III (see table above). From my interviews with Nick Olson and other area farmers, along with reviewing prior studies, I was able to discern that access to quality land and capital are the biggest challenges facing beginning farmers, which can be seen in the maps at left. The farmland in region III is more productive (map 3), but not available to beginning farmers. This is because the farms sold in region III are larger (map 4), thus require more capital for startup. Data supplied by beginning farmer surveys (far left) corroborated that many beginning farmers have no access to land. I concluded that improving opportunities for supplemental off-farm income and developing supportive community networks are crucial for increasing farmer recruitment in Minnesota regions. The Land Stewardship Project is one organization working to build such community networks for beginning farmers (map 2).