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The New FARM Program: A Model for Supporting Diverse Emerging Farmers and Early-Career Extension Professionals

Abstract

As early-career Extension educators challenged by societal, structural, agricultural, and fiscal trends, we designed a multiyear educational program to support the diverse needs of emerging specialty crop producers in northwest Michigan. This article presents outcomes of that program. We explore how Extension professionals can develop impactful programs that address the varied needs of the next generation of agricultural producers. We provide an overview of the New FARM program, addressing the rationale, program objectives, program logistics, evaluation results, and implications. We hope the New FARM program will serve as a useful model for early-career Extension professionals.

J R. Sirrine Community Food Systems Educator

Systems Educator
Michigan State
University Extension
Suttons Bay, Michigan
sirrine@anr.msu.edu

Cheryl L. Eschbach

Extension Specialist, Program Evaluation Michigan State University Extension Grand Rapids, Michigan cpeters@anr.msu.edu

Erin Lizotte

Statewide Pest Management Educator Michigan State University Extension Cadillac, Michigan taylo548@anr.msu.ed

N. L. Rothwell

Extension Specialist and Northwest Michigan Horticultural Research Center Coordinator Northwest Michigan Horticultural Research Center Traverse City, Michigan rothwel3@anr.msu.ed u

Introduction

The New FARM (Farmer Assistance and Resource Management) Program was a multiyear beginning farmer educational and leadership development program created by our multidisciplinary team of four early-career Extension professionals. The program was designed to (a) enhance the success of beginning farmers in northwest Michigan and (b) establish lasting relationships between beginning farmers and Extension. In this article, we provide the program rationale by detailing specific challenges faced by beginning farmers in northwest Michigan. We also discuss the program objectives and educational sessions and provide program evaluation results and impacts. Program results demonstrate that the New FARM program helped develop relationships among beginning farmers and between beginning farmers and Extension, succeeded in developing the leadership potential of many participants, and enhanced environmental stewardship and farm viability in northwest Michigan.

Rationale

Over the last two decades, structural, demographic, institutional, and societal trends have created challenges for

the next generation of U.S. farmers. These trends include a decline in agricultural acreage (-4.8%) from 2007 to 2012 (U.S. Department of Agriculture [USDA] National Agricultural Statistics Service [NASS], 2014c), often occurring as a result of development pressure (Sorensen, Greene, & Russ, 1997); increasing land costs (Nickerson et al., 2012); and increasing average farmer age over the last 30 years (USDA NASS, 2014c). As a result, the number of beginning farmers, generally described as those with fewer than 10 years on their current farms, declined by 20% between 2007 and 2012 (USDA NASS, 2014a).

In spite of these challenges, there has been an increase in "nontraditional" agricultural ventures, such as community-supported agriculture, farmers' markets, food hubs, direct marketing, value-added agriculture, and sustainable production (USDA NASS, 2014b). Also, more women and minorities are entering farming today than at any time historically. For example, Hispanic principal operators increased by 21% from 2007 to 2012 (USDA NASS, 2014a). Additionally, today's farmer is more likely to spend some time working off the farm (USDA NASS, 2014a). Nontraditional producers often have different needs than Extension's more conventional clientele (Sharp, Imerman, & Peters, 2002), and Buttel (1991) contended that in past years, Extension has overlooked the needs of smaller-scale and alternative producers. He suggested that a sole focus on traditional, large-scale commodity growers without attention to new clientele is one of several liabilities responsible for the declining influence of Extension.

The debate over Extension's relevancy amid changing public priorities and fiscal constraints has continued over the past decade (Ahearn, Yee, & Bottum, 2003; Bull, Cote, Warner, & McKinnie, 2004; Joint Task Force on Managing the Changing Portfolio of the Cooperative Extension Service, 2006; Milburn, Mulley, & Kline, 2010; Schmitt & Bartholomay, 2009; West, Drake, & Londo, 2009), and many early-career Extension educators are challenged to establish themselves as they attempt to respond to multiple and varied stakeholder needs. Exacerbating this challenge are recent and impending retirements of senior Extension educators (Borr & Young, 2010), who leave with decades of institutional knowledge and long-term established relationships critical to forging responsive programming.

Within this context, we explore how Extension professionals can develop impactful programs that address the diverse needs of the next generation of agricultural producers. Many have provided commentary on the evolving role of Extension and how to best serve emerging farmers:

- Serve all agricultural clientele, both large and small, within the context of a broader rural development model (Buttel, 1991).
- Expand program planning to include stakeholders from the onset, increase experiential learning opportunities, and focus on problem-solving and critical thinking skills (Trede & Whitaker, 1998).
- Develop clear, measurable behavioral objectives to better justify and evaluate the impact of educational programs (Boone & Boone, 2005).
- Create networks with agricultural groups and service providers, build relationships with farmers, and provide opportunities for socialization as a part of educational events in order for farmers and educators to learn from each other (Franz, Piercy, Donaldson, Westbrook, & Richard, 2010).
- Form relations among and with diverse agricultural producers for impactful outcomes and an important foundation of future support (Ochterski & Frenay, 2010).

- Build farmer-to-farmer networks (Crawford, Grossman, Warren, & Cubbage, 2015).
- Embrace program innovation (Meyer, Boyce, & Meyer, 2015).

Michigan's Agri-food System

Michigan's agri-food system is the state's second largest industry, is responsible for \$91.4 billion in economic impact, and accounts for a quarter of all jobs in Michigan (Knudson & Peterson, 2012). Because of favorable climatic conditions, Michigan's farmers are able to produce the second highest diversity of crops after California. Northwest Michigan farms are responsible for a significant portion of the state's fruit production. Recent agricultural advances in the region include wineries, community-supported agriculture, direct marketing operations, value-added opportunities, and a growing agritourism sector. As a result, the annual economic impact of agriculture is four times more important in northwest Michigan (\$140 million) than in the rest of the state (Krieger, 2009).

Despite this sizable economic impact, Michigan lost approximately 378,000 ac of agricultural production land (USDA NASS, 2012) between 1982 and 2010 and is expected to lose over 70% of its farms that range in size from 50 to 500 ac (Ferris, 2001) between 2000 and 2040. Northwest Michigan's fruit belt is ranked as some of the most development-threatened, high-quality farmland in the United States (Sorensen et al., 1997). In addition to loss of acreage in the targeted region, emerging farmers are also faced with other challenges: inadequate knowledge of farm succession, increasing land costs, residential development, increasing production costs, complexity of managing specialty crops, lack of understanding of agricultural policy, and few options for developing relationships and leadership skills.

As a team of four early-career (<10 years) Michigan State University (MSU) Extension professionals (a community food systems educator, an integrated pest management educator, a district horticulture educator, and an Extension specialist in program evaluation), we created the New FARM program to support the diverse needs of emerging specialty crop producers in northwest Michigan. We developed the program on the basis of (a) the highly successful multiyear Kellogg Farmers Study Program (Miller, 1976), of which a major focus was to "develop a nucleus of informed agricultural and rural leaders across Michigan" (p. 6); (b) a 2007–2009 internal Extension needs assessment that revealed a deficit in assistance for beginning farmers; (c) program evaluation results that overwhelmingly recommended further reaching and more intensive programs targeting beginning farmers; (d) input from several prominent northwest Michigan farmers who participated in a Leadership Development for Improved Fruit Marketing program in the 1970s; and (e) a desire to develop relationships with the next generation of growers and build support for Extension.

Behavioral Objectives

The New FARM program objectives and multiyear curriculum were developed through input from an advisory committee consisting of MSU Extension educators, four participants from the 1970s fruit industry leadership program, four agricultural representatives, focus groups of emerging and established farmers, and community members active in agriculture (e.g., local land conservancies, Michigan Farm Bureau, Michigan Agricultural Commissioners, fruit processors, and winery and restaurant operators). A formal needs assessment was conducted at a regional Farm Routes to Prosperity conference attended by over 30 young and/or beginning farmers who provided detailed suggestions on desired content and training topics.

The New FARM program behavioral objectives were developed around five themes: environmental stewardship, farm succession, network development, farm business opportunities, and leadership. Specifically, the expectations were that New FARM participants engaged in a multiyear educational effort would achieve the following goals:

- Increase comprehension and implementation of environmental stewardship strategies to improve farm sustainability.
- Increase comprehension and implementation of farm succession strategies to improve farm viability and sustainability.
- Broaden farmer support networks by developing relationships with other farmers having diverse operations,
 Extension professionals, elected officials, and resource providers to increase farm viability.
- Increase understanding and adoption of alternative marketing strategies and value-added opportunities to improve farm management and viability.
- Develop leadership skills to improve farm management and ensure that agriculture maintains a voice in regional economic development strategies.

New FARM Program Logistics

As the creators of the program, we shared responsibility for its development, coordination, and oversight. Roles were determined on the basis of areas of expertise, interests, and funding. For example, two team members took the lead in grant writing, and another was responsible for the comprehensive program evaluation. A total of \$204,994, from multiple funding sources, supported the program over 3 years (Table 1). Forty-two participants paid a one-time, sliding-scale fee, based on income and scholarships. Scholarships were provided to husband/wife applicants or those with demonstrated need. Local associations, including commodity groups and regional land conservancies, assisted with scholarships. Variation in allowable expenses among the funding sources provided flexibility for learning events outside traditional classroom settings. With assistance from our team, New FARM participants wrote and submitted a local Rotary Charities grant to support the program. This activity helped develop relationships and provided participants with practical grant-writing knowledge. In addition, the proposal brought to light the potential of emerging farmers in the region, and Rotary Charities has further funded other opportunities for new producers.

Table 1.New FARM Program Funding Sources (3 Years)

Funding source	Amount
Participant program fee contributions	\$8,750
Local agricultural organizations (Leelanau Horticultural Society, Grand Traverse Fruit Growers' Council, The Leelanau Conservancy, Cherry Marketing Institute)	\$10,000
Philanthropic organizations: Rotary Charities	\$47,720
U.S. Department of Agriculture grant, Beginning Farmer and Rancher	\$138,524

Development Program

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Total funding \$204,994

The New FARM advisory board assisted in the implementation of the program. A topical list of educational sessions and key partners are presented in Table 2, and expenditures are shown in Table 3. Although MSU Extension professionals provided educational content, expert speakers and local resource agencies were included on the basis of areas of expertise. Educational sessions included experiential learning events whenever possible. To further develop relationships outside a conventional setting, we incorporated travel as a key component of the program. In fall 2009, the program was kicked off with an overnight trip. This successful baseline event prompted us to continue to include multiple opportunities for travel and informal networking.

Table 2.New FARM Program Time Line of Education, 2009–2012

Month and		
year	Session	Key partner(s)
Nov. 2009	Introduction to the New FARM Program	MSU Extension educators; New FARM advisory board
Dec. 2009	Serving on a Board	MSU Extension—Government and Public Policy; agricultural industry representatives
Jan. 2010	Economics and Financial Literacy	U.S. Dept. of Agriculture Farm Service Agency; Greenstone Federal Credit Union; Rotary Charities
Feb. 2010	Managing Public Relations	Regional media; Michigan Farm Bureau
Mar. 2010a	International Fruit Tree Association Annual Meeting and Post-Tour	Scientists and farmers from around the world
Apr. 2010	Building a Sustainable Business	Small Business Development Center; MSU Product Center; Traverse City SCORE
Sep. 2010	Alternative Marketing Strategies	Agritourism operation owners
Oct. 2010 a	Planning for Farm Succession	Beginning Farmer Center, Iowa State University; The Leelanau Conservancy
Nov. 2010	State Agricultural Policy; Meeting Lawmakers at the Capitol	Michigan senators and representatives; Michigan Dept. of Agriculture; Michigan Dept. of Natural Resources; lobbyists
Jan. 2011	Federal Farm Policy and Farm Bill	U.S. Senator Debbie Stabenow
Feb. 2011	Environmental Stewardship	U.S. Dept. of Natural Resources Conservation Services; Grand Traverse Conservation District; Michigan Dept. of Agriculture
Mar. 2011a	Agriculture and Labor Management	Michigan Farm Bureau; Michigan Occupational Safety and Health Administration; U.S. Dept. of

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Apr. 2011	Cherry Federal Marketing Order Tour	Michigan Cherry Committee, Cherry Marketing Institute and West Central Michigan
Oct. 2011	Northwest Michigan's Agricultural Diversity	New FARM participants
Nov. 2011	Certification, Branding, and Alternative Marketing	Food Alliance; USDA Organic; Demeter USA Biodynamic
Feb. 2012	Agriculture in the 21st Century: An International Tour	Multiple farmers, researchers, scientists, South Island, New Zealand

Note. MSU = Michigan State University.

aProgram event was open to the general public.

Table 3.New FARM Program Expenditures, 2009–2012

Donations

Budget category	and participant dues	Rotary Charities	USDA BFRDP	Total
Travel (overnight travel, per diem, and lodging)	\$13,744	\$31,146	\$85,309	\$130,199
Participant/trainee support costs (speaker costs, subsistence, tuition, venue fees, etc.)	\$3,801	\$7,174	\$14,700	\$25,675
Other direct costs (materials and supplies)	\$1,205	\$4,910	\$8,040	\$14,155
Indirect costs (overhead)	\$0	\$0	\$30,475	\$30,475
Total expenditures				\$200,504

Note. USDA BFRDP = U.S. Department of Agriculture Beginning Farmer and Rancher Development Program.

Program Participants

There were a total of 42 participants in the New FARM program, in addition to our four-member team. Collectively, nearly all were under the age of 40 when the program began. In general, New FARM participants were young, white, and rural; 20% were women; and 10% self-reported as being socially disadvantaged or limited-resource farmers as defined by the U.S. Department of Agriculture (USDA) (2014). Potential participants for the New FARM program were actively recruited through monthly regional newsletters, an informational website, weekly radio programs, and direct solicitation. Potential participants completed an extensive application that detailed the New FARM program objectives and time commitment. Applicants were screened by the New FARM advisory board; no applicants were rejected. A baseline assessment was collected as part of the application

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process (Table 4). We wanted to learn about participants' backgrounds in order to tailor the activities to their interests and needs as well as to utilize their connections for speakers and tours.

Table 4.

Highlights from the October 2009 New FARM Program Baseline Assessment Survey (N = 28)

Topic	Participant data
Farming background	Farming experience and educational backgrounds varied. Participants were not just farmers, although 100% had some farming experience.
Crops farmed	64% grew cherries (sweet and tart), 50% grew apples, 18% grew pears, 14% grew plums, and 14% grew vegetables.
Family history	71% were raised on a farm.
Occupational status	48% worked off-farm; others worked seasonally or part time. Only 7% were full-time farming at the start of the program.
Education	100% were high school graduates, and all but one had at least 1 year of college education. Average college experience was 3.3 years. 14% had certificates in a specialization, 11% had an associate's degree, 36% had a bachelor's degree, and 11% had a master's degree.
Experience with farm-based organizations and leadership	50% had no previous experience in farm-based organizations; 50% had never served in a leadership role.
Future plans	100% saw themselves farming in the future, even in 30 years, and never retiring.
Standards for judging future success	"Quality of the land" and "respect from the community" were standards participants planned to use to judge themselves and their agricultural operations.

In the baseline assessment, participants identified skills needed and challenges in current farming and community environments. Skills they identified needing included gaining confidence in public speaking, grasping domestic and international agricultural policy, and building relationships with elected officials and agricultural leaders. We also identified start-up challenges for farmers new to agriculture: problems with landlords and problems with family members, such as keeping family and business separate, mixed views on change, lack of financial control, and old-fashioned role expectations. A majority (71%) said that access to land was a problem because of financial limitations, limited expansion options, and waiting for property to sell.

The New FARM Program Evaluation Plan and Associated Results

The program evaluation plan included objectives and a program logic model specifying inputs, outputs, and outcomes. Evaluation of the New FARM program was based on participatory principles, and over the 30-month program, participants engaged in formative and summative evaluations (Eschbach, Sirrine, Lizotte, & Rothwell, 2016). During year 1 activities, nine formative evaluations were captured. The formative evaluations were brief retrospective "pre/post" surveys collected at the end of an educational event, for which participants indicated the impact(s) of the educational program (*strongly disagree, disagree, agree, strongly agree*). Survey statements were outcome-focused and related to the specific event. For each event evaluated, a paper survey or an online survey was administered. Short-term evaluations allowed us to demonstrate the success of the program in progress reports we distributed to the various funders. Survey methodology included calculating a change score for each participant by subtracting the preevent rating from the postevent rating. If an individual changed in the positive direction as expected from the education, that individual was counted as improved or increased on that outcome. These formative evaluations focused on measuring short-term outcomes, such as increased awareness, new knowledge gains, and introduction to new skills or resources. Highlights from the year 1 formative program evaluations include the following results:

- 50% of the participants expanded their knowledge of environmental stewardship resources in Michigan;
- 100% improved their knowledge of how to plan for farm succession and better understood farm succession resources;
- 100% felt increased motivation to plan ahead for farm succession;
- 100% made a personal contact with local land conservancy representatives;
- 88% who traveled to the state capitol made personal contacts with state legislators;
- 100% improved their knowledge of farm business resources, components of business planning, and skills necessary to start a new or expand an existing farm enterprise;
- 100% felt inspired by exposure to alternative marketing strategies;
- 100% gained confidence asking elected officials about their opinions related to agriculture; and
- 100% increased their confidence to begin a new farm business.

In year 2, the evaluation focus turned to outcome measurement. Intermediate outcomes from the logic model were measured at the program midterm (January 2011, n = 23) through the use of a facilitated participatory design (Cousins & Whitmore, 1998). Using USDA Beginning Farmer and Rancher Development Program outcomes as a template, we asked participants to indicate whether they had changed behaviors or farm practices as a result of education, resources, or networking related to the New FARM program (Table 5).

Table 5.

Midterm Evaluation Highlights, January 2011 (N = 23)

% of

participants

Change in behavior or practice

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Expanded awareness of and changed marketing strategies and outlets	100%	
Began networking with, developing new relationships with, and buying services and goods from other program participants	100%	
Changed farming/growing operations or land management practices to improve farm viability (e.g., planted high-density apples, built a chemical storage facility, added a farm stand, invested in goats, added an agritourism component)	61%	
Developed or revised farm plans (e.g., developed farm transfer plans, received new loans for land, tried farmland preservation efforts)	43%	

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In year 3, a special qualitative evaluation captured reflective essays from the 39 participants who traveled to New Zealand for the international tour capstone experience. A final wrap-up session and program graduation occurred in March 2012. Twenty-one participants engaged in a facilitated group evaluation, similar to the midterm evaluation. Longer-term outcomes projected for the project also were measured and included increases in farm revenue, amount of food produced, and local food sales since the start of the program. Recordings of outcomes were tallied, and percentages were developed through discussions and consensus (Table 6).

Table 6. Final Evaluation Highlights, March 2012 (N = 21)

	% of
Change in behavior or practice	participants
Applied practical knowledge to improve the sustainability of the farming operation (e.g., added integrated pest management practices, monitored soil fertility)	89%
Improved management or leadership role on the farm, decision-making skills in action on the farm (specifically, used information from sessions on labor management and food safety regulations)	89%
Planned to seek a leadership position in the futurea	86%
Modified or expanded current marketing practices to begin producing value-added crops	57%
Purchased, leased, or took over family farming operations	43%
Acted on land stewardship (e.g., completed Michigan Agriculture Environmental Assurance Program certification)	50%
Realized increase in farm revenue (e.g., increased community-supported agriculture income, increased pasture-based poultry, added hop processor facility, sold merchandise)	38%
Realized increase in amount of food produced (e.g., improved crops [cherries], expanded fruit stand for direct sales, added pork to current operation)b	48%

57%

Realized increase in local food sales (e.g., gained new customers, joined local farmers' markets, participated in farm-to-school programs, sold jams and other food products locally, secured new direct sales)

aNotably, 50% had assumed leadership positions during the New FARM program time frame. Examples: Township Planning Commissioner (2), statewide Michigan State University Extension Council member, Vintners Association president, American Farm Bureau Young Farmers & Ranchers Committee chair, Northwest Michigan Horticultural Research Foundation Board (4), state representative candidate for Michigan's 104th District. bTwo well-represented industries were hops production for breweries and apple growing for cider production.

Finally, participants offered qualitative reflection on how participation in the New FARM program helped increase the resiliency of northwest Michigan's agricultural economy writ large. One participant offered the following particularly insightful observation: "Knowing the next generation of farmers in northwest Michigan is an asset to the viability and resiliency of our community. Having a bond with the people who will be shaping the landscape of northwest Michigan agriculture is essential for our economic growth if we are to compete in the global marketplace. Personally, knowing these individuals is a great comfort. The vast expertise contained within this group has pushed me to be a better farmer. Adding to this is the quality driven attitude displayed by the New Zealand farming community. Those invaluable skills and relationships built in this program will make it possible for me to assert leadership in arenas once thought to be inappropriate."

Implications

The changing landscape of U.S. agriculture presents both challenges and opportunities for early-career Extension professionals. Namely, how can we develop impactful programs that address the diverse needs and learning styles of the next generation of agricultural producers? Our multidisciplinary team of early-career Extension professionals sought to answer this question and others through development of the multiyear New FARM program. In doing so, we took away several lessons, which we discuss here. We also offer our impressions, which we hope to validate through long-term follow-up participant surveys, and our thoughts about opportunities for improvement.

Lessons Learned

Relationship building is one of the most important functions Extension can serve. As overwhelmingly indicated by New FARM participants, a major success of the program was networking and the resultant development of relationships among new farmers. The program offered an opportunity for dialogue, relationship building, and colearning among farmers of diverse backgrounds. The farmer-to-farmer network is still strong, with many farmers sharing knowledge and equipment with one another. Relationships also were built between new farmers and agricultural organizations, such as regional land conservancies, commodity groups, and local grant-making organizations, that likely will lead to enhanced farm viability.

The program was successful in developing the leadership potential of many young farmers. Participants took early roles in facilitating workshops, seeking funding, recruiting guest speakers, and coordinating tours. As demonstrated in Table 6, many participants have taken on leadership positions on their farms and in

government, agencies, agricultural commodity organizations, and their communities, undoubtedly facilitating the future success of agriculture in the region.

It is possible to enhance environmental stewardship and economic development in the agri-food system. Ultimately, we want farming to be a viable option for generations of young farmers in our region. While we are certain that 100% of the credit cannot be attributed to the New FARM program alone, participants have improved environmental stewardship, diversified their operations and invested in their farms, hired employees, developed plans for farm succession, and become more engaged in their communities as a result of education, resources, and networking.

Impressions and Opportunities

Research-based information delivered from a trusted source is valued by traditional and nontraditional agricultural producers. Although Extension is no longer the sole source of information for farming education, we believe this circumstance makes the role of Extension, as one of the few long-standing sources of research-based information, increasingly relevant. The new generations of farmers in many regions of the United States are increasingly diverse, both demographically and agriculturally. It is our contention that Extension should maintain support for traditional clientele but also embrace and support new clientele. We believe that Extension programs have the capacity to build relationships among diverse sets of agricultural producers. Long-term follow-up surveys will be useful in determining whether Extension continues to be a valued source of information.

Multiyear educational initiatives, such as the New FARM program, may offer long-lasting mutual benefits for early-career Extension professionals. Although the New FARM program is no longer active, support for Extension may be improved because New FARM participants are taking leadership positions in government, agencies, and their communities. Extension may benefit formally from participants' involvement on Extension's statewide advisory council and informally from their participation in other leadership positions. Although concrete indicators of support may remain elusive, long-term program evaluations should be conducted to determine whether programs such as the New FARM program can increase the success of beginning farmers and create a base of support for Extension moving forward.

Relationships developed between Extension and stakeholder organizations are crucial. Developing a formal network with agricultural stakeholders helped us leverage funding for scholarships, program development, and more. Partner funding served as required matches for larger USDA grant opportunities that are still in existence for Extension to competitively pursue. This partner network allowed us to apply for and receive Rotary Charities funding, representing only the second time Rotary Charities had granted money to an agricultural program, even though the agri-food system is an economic driver in the region. The New FARM program helped connect regional economic development professionals with agricultural producers. Extension can continue to serve an important role by both facilitating relationships between agricultural producers and the general public and developing outreach efforts that help educate local consumers about where their food is grown.

Conclusion

The New FARM program sought to address many of the challenges facing emerging farmers in northwest Michigan. In this article, we presented a detailed discussion of the program's conception, development, implementation, and successes and opportunities for improvement. Although young and emerging farmers in northwest Michigan produce crops unique to the region, they also contend with issues similar to those confronting

others looking to enter the profession across the nation. We hope the New FARM program will serve as a model for other educators and agricultural interests so that farming remains a viable and sustainable profession into the future.

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