

Theme Overview: Addressing the Challenges of Entry into Farming

Mary Clare Ahearn

JEL Classifications: Q12, Q14, Q18

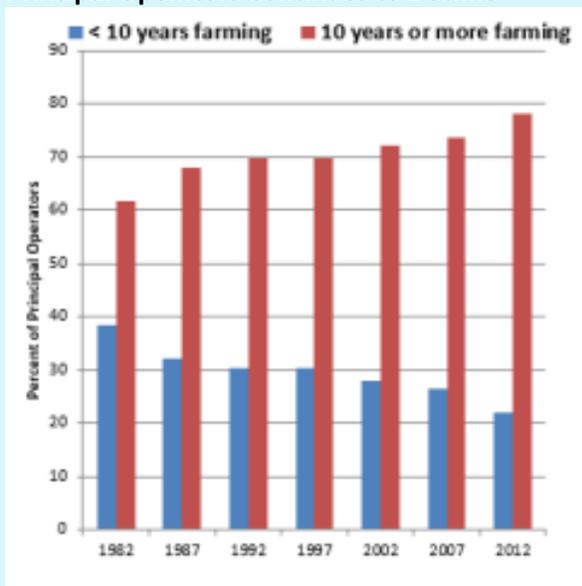
Keywords: Beginning Farmer, Farm Bill, Farmland Ownership

The latest Census of Agriculture reported that 22% of farms met the definition of a beginning farm—that is, those farms with a principal operator who has operated the same farm for less than 10 years. The share of farms that are classified as beginning farms by this definition has been declining for at least the past three decades (figure 1).

Articles in this Theme

- **Beginning Farmer and Rancher Development Program – Accomplishments in the Making**
Jill S. Auburn, Denis Ebodaghe, Desiree K. Rucker-Ross and Wesley R. Dean
- **Off-farm Income: Managing Risk in Young and Beginning Farmer Households**
Heidi J. Bubela
- **Beginning Farmer Credit and the Farm Service Agency’s Role**
Charles B. Dodson and Bruce L. Ahrendsen
- **Beginning Farmer Policy Options for the Next Farm Bill**
Juli Obudzinski

Figure 1: The Number and Share of Beginning Principal Operators Continues to Decline



Source: USDA, NASS, Census of Agriculture

In 2012, the average age of principal farm operators was 58.3. Nearly one-third were 65 years old or more and only 6% of principal farm operators were under 35 years old. Policy makers often refer to the aging farmer population as an indicator that policies are needed to foster entry into farming, but many factors are affecting the farmer’s age distribution. First, farmers are living longer as is the rest of the population, and the tax code encourages them to transfer their land to their heirs at the time of their death rather than sell it before their death and incur likely higher capital gains taxes. The farming lifestyle and investment opportunities are attractive to more senior farmers and their families, as well as younger farmers. Aside from the increasing number and share of older farmers, there has been an absolute decline in the number of young farmers. Aspiring young farmers are now attending college at a rate equal to the general population, thereby delaying their planned entry into farming. In 2011, 25% of all

farmers had attained a four-year college degree compared to 28% for the general population—in 1964, only 4% of farmers and 8% of the general population had a college degree. Furthermore, many young aspiring farmers choose to work in an off-farm job before entering farming to gain the experience or to save for the needed capital investments of farming, or most likely both.

Individuals enter farming, or aspire to enter farming, at all ages. In 2012, 37% of beginning principal operators were 55 years or older and only 19% were under 35. Note that many beginning farmers are starting their businesses later in life, with potentially different financing and training needs than those of younger farmers.

Identifying the Challenges

While there is no objective measure of what is the "right" number of beginning farms, there is clearly a consensus that a diverse and innovative agricultural sector is an important policy goal for a variety of reasons, including national security. For this reason, a variety of public policies have addressed the challenges faced by beginning farmers in the hopes of stemming the loss of beginning farmers. According to a variety of sources, including the Beginning Farmer Advisory Group to USDA and the National Young Farmer's Coalition, the major challenges of entering farming are access to farmland, capital, and farming expertise.

Beginning in 1980, Congress required the Farm Credit System to serve the credit needs of young and beginning farmers and small farms (12 U.S.C. Sec. 2207). The Farm Credit System, established by Congress in 1916, is a group of financial cooperatives that serve the agricultural and rural community in meeting their borrowing needs in local and regional markets.

In addition to the Farm Credit System, the USDA's Farm Service Agency (FSA) meets the credit needs of U.S. agriculture and is authorized—along with a variety of other programs targeted to beginning farmers—through the primary farm and food policy legislation, usually developed every five years:

- Since the 1992 Farm Act, lawmakers have offered beginning farmers special terms on FSA loan programs.
- The 2002 Farm Act provided additional loan support and preferential conservation payments.
- In 2008, prior initiatives were expanded and the law established grants for training programs directed at beginning farmers and ranchers, under the so-called Beginning Farmer and Rancher Development Program. The 2008 Farm Act, also facilitated transition of farmland to beginning farmers for land that was under contract with the Conservation Reserve Program.
- The latest Farm Act, in 2014, continued and in some cases expanded these initiatives and established a special outreach program for veteran's who were beginning farmers, provided beginning farmer incentives under the crop insurance programs, made permanent the microloan program, and expanded opportunities for beginning farmers engaged in value-added agriculture.

There was some speculation that, since nonfarm jobs opportunities were declining during the Great Recession, young people would be attracted to agriculture by the relatively high returns. However, the record-breaking returns to the farm sector during the period of the recent recession have been followed by declines in real net farm income for the past three years. The high returns experienced by the agricultural sector at the macro level has also meant that farmland prices, and correspondingly land rents, have increased. So, the attraction for new entrants to the relative high returns in agriculture has been coupled with the increased barriers posed by higher land acquisition prices and rents. While net

farm income commonly varies on an annual basis, land prices and rents are somewhat "sticky" downward.

Evidence of Success

As the 2012 Census of Agriculture data has shown us, to the extent that returns have been high relative to other sectors of the economy, they have not reversed the decline in the number of beginning farms. However, there is some evidence of success by young beginning farmers, including through their expansion in farm size, relative to older beginning farmers (Ahearn, 2013; Katchova and Ahearn, 2015). Older beginning farmers enter at a farm size that subsequently changes little with time, likely because many of these older beginning farmers are entering farming for the lifestyle and investment opportunities after engaging in a successful nonfarm career. This underscores the importance of measuring success relative to goals.

There is also some evidence that beginning farmers may find a successful niche in the direct marketing of agricultural products, for example, through farmers markets (Thilmany McFadden and Ahearn, 2013). Key (2016) reported that beginning farmers that had positive sales of agricultural products in 2007 and sold in direct markets were more likely to report positive sales in 2012 than other beginning farmers without direct market sales in 2007. This finding was true, regardless of farm size.

Perhaps, the interest in urban agriculture will become a growth opportunity for beginning farmers in the future. A bill was recently introduced in the U.S. Senate to support urban agriculture entitled the "Urban Agricultural Act of 2016." The bill has received widespread support from diverse groups including the major general farm groups—that is, the National Farmers Union and the American Farm Bureau Federation, as well as the Food Action Policy Network, and the National Young Farmers Coalition, among others. The bill proposes an important research component to better understand appropriate risk management tools, food safety, and environmental and economic factors affecting success of urban agriculture.

Progress through Policy Actions

The four articles of this theme address the widely acknowledged barriers to entry faced by beginning farmers: adequate access to farming expertise by Auburn, et al., as well as two articles on access to land and capital—one by Bubela and another by Dodson and Ahrendsen. In addition, the theme includes an article by Obudzinski who considers the possible direction of the next major farm legislation with regards to fostering the success of the future entrants into farming.

The Food, Conservation, and Energy Act of 2008, appropriated \$75 million for FY 2009 to FY 2012 to develop and offer education, training, outreach and mentoring programs to enhance the sustainability of the next generation of farmers through the Beginning Farmer and Rancher Development Program (BFRDP). The Agriculture Act of 2014 provided an additional \$20 million per year for 2014 through 2018. Auburn, Ebodaghe, Rucker-Ross, and Dean, provide an analysis of the program in their article and show that, from 2009 to present, 256 awards have been made, totaling more than \$126 million with at least one in every state. The authors describe the types of BFRDP and, while it is always difficult to quantify the outcome of training programs, they also summarize indicators of tangible results. This includes helping people enter farming and ranching, and helping those who are in their first decade of farming or ranching be more profitable, better stewards of the land, or stronger contributors to their communities.

Heidi Bubela, a Senior Portfolio Analyst with the Farm Credit Services, discusses the importance of off-farm income to farm households in risk management, especially new entrants into agriculture. The Farm

Credit System has a legislative mandate to meet the credit needs of both young and beginning farmers. Off-farm employment has long been recognized as a major source of income and a source of health insurance for the majority of farm households. In addition, farm lenders are very cognizant of the value of off-farm income in managing the risks of farming, smoothing income, and servicing farm debt, especially for new entrants into farming, but continuing throughout the life-cycle.

Charles Dodson and Bruce Ahrendsen consider the role of USDA's Farm Service Agency (FSA) in meeting the needs of beginning farmers both through direct lending and by guaranteeing loans made by other lenders. FSA describes itself as the "lender of first opportunity," in part because of the assistance it provides beginning farmers, including through the new and popular "microloans." Moreover, with expectations for reduced sector income, FSA's role in serving the credit needs of those rejected by commercial lenders may increase at least in the short run. By jointly considering the FSA loan data base and the Agricultural Resource Management Survey, the authors are able to consider the loan portfolio of beginning farms by farm size and whether or not the farm was managed with multiple generations of family members.

Juli Obudzinski, a Senior Policy Specialist with the National Sustainable Agriculture Coalition, considers options for enhancing the policies and programs of past legislation to further address the needs of the beginning farmer population in the upcoming farm bill discussions. The Coalition is an active voice to policy makers in Washington, D.C. in representing over 100 grassroots organizations to advance the sustainability of agriculture, food systems, natural resources, and rural communities. Obudzinski supports enhancing the established BFRDP, the loan programs, the Transition Incentives Program to provide incentives to those with expiring CRP contracts to transfer land to conservation-minded new farmers, and crop insurance programs. She also forwards some interesting new ideas to consider. For example, she suggests engaging Land Trusts and offering tax incentives to increase the access of new farmers to farmland.

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Author Information

Mary Clare Ahearn (mahearn54@aol.com) is a Senior Agricultural Economist and Choices Editor, Washington, D.C.

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Beginning Farmer and Rancher Development Program – Accomplishments in the Making

Jill S. Auburn, Denis Ebodaghe, Desiree K. Rucker-Ross and Wesley R. Dean

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Keywords: Beginning Farmers and Ranchers, Extension Models, Farm Programs, Farm Transitions, Government, USDA

Since the 2011 *Choices* theme on beginning farmers and ranchers (Thilmany McFadden and Sureshwaran, 2011), both societal interest and government support for new farmers and ranchers have grown considerably. Many agencies within the U.S. Department of Agriculture (USDA) including the National Institute of Food and Agriculture (NIFA) increased their emphasis on new farmers as a result of the 2014 Agriculture Act, or “farm bill” (Williamson, 2014), and the USDA has integrated information and support from across the Department in a coordinated effort that includes a comprehensive web resource encouraging new farmers to use the full range of USDA programs, whether specifically targeted at beginners or not (USDA, 2016). Most USDA programs consider a new or beginning farmer to be someone who has been operating a farm or ranch less than ten years, or someone who aspires to enter farming or ranching.

Since 2009, the Beginning Farmer and Rancher Development Program (BFRDP), run by NIFA, provides grants to organizations for education, mentoring, and technical assistance initiatives for beginning farmers or ranchers. Its primary goal is to increase the number, success and sustainability of beginning farmers and ranchers in the United States by providing them knowledge, skills, and tools needed to make informed decisions. This goal is achieved through competitive grants to collaborative State, tribal, local, or regionally-based networks or partnerships of public or private entities, who carry out three kinds of projects: standard grants, educational enhancement teams, and a national clearinghouse.

Since its inception in 2009, BFRDP has made 256 awards totaling more than \$126 million, at least one in every state (Figures 1 and 2). Current funding is \$20 million per year (less “sequestration”) for the years 2014-2018, provided in the 2014 Agriculture Act.

(See Figures 1 & 2 on the following page)

Figure 1: Map of BFRDP Projects Funded 2009-2012

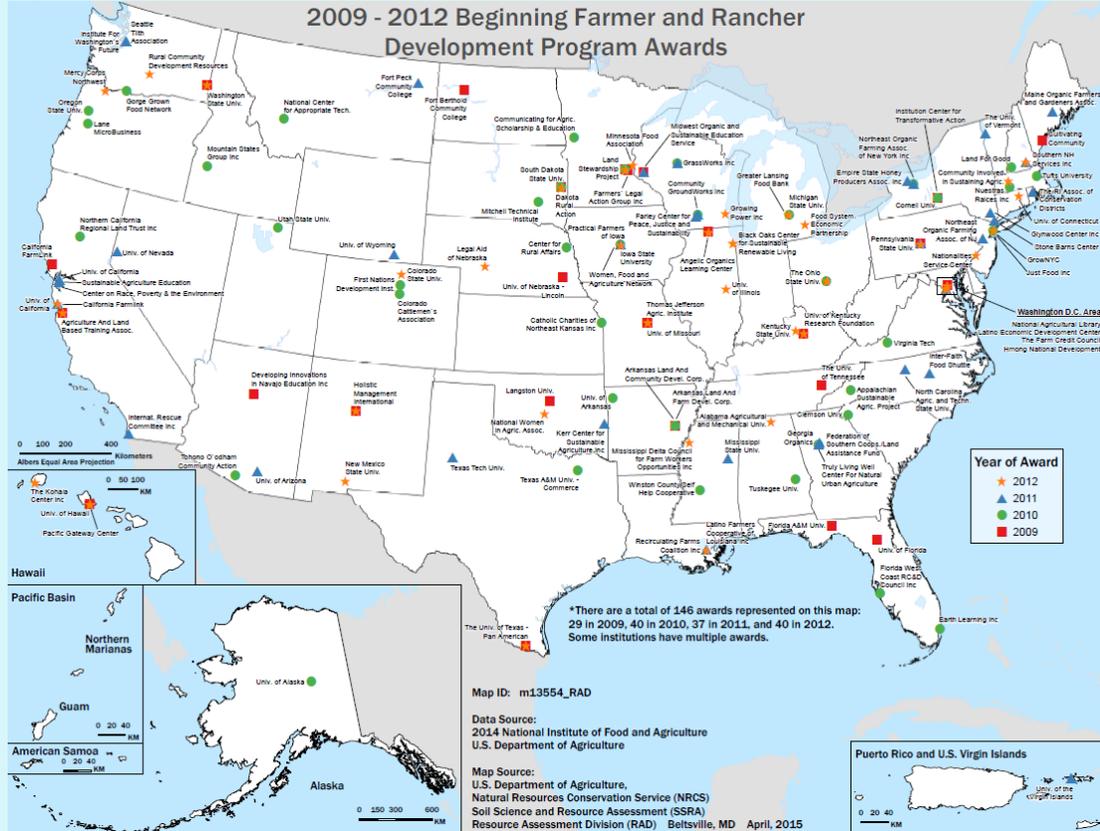
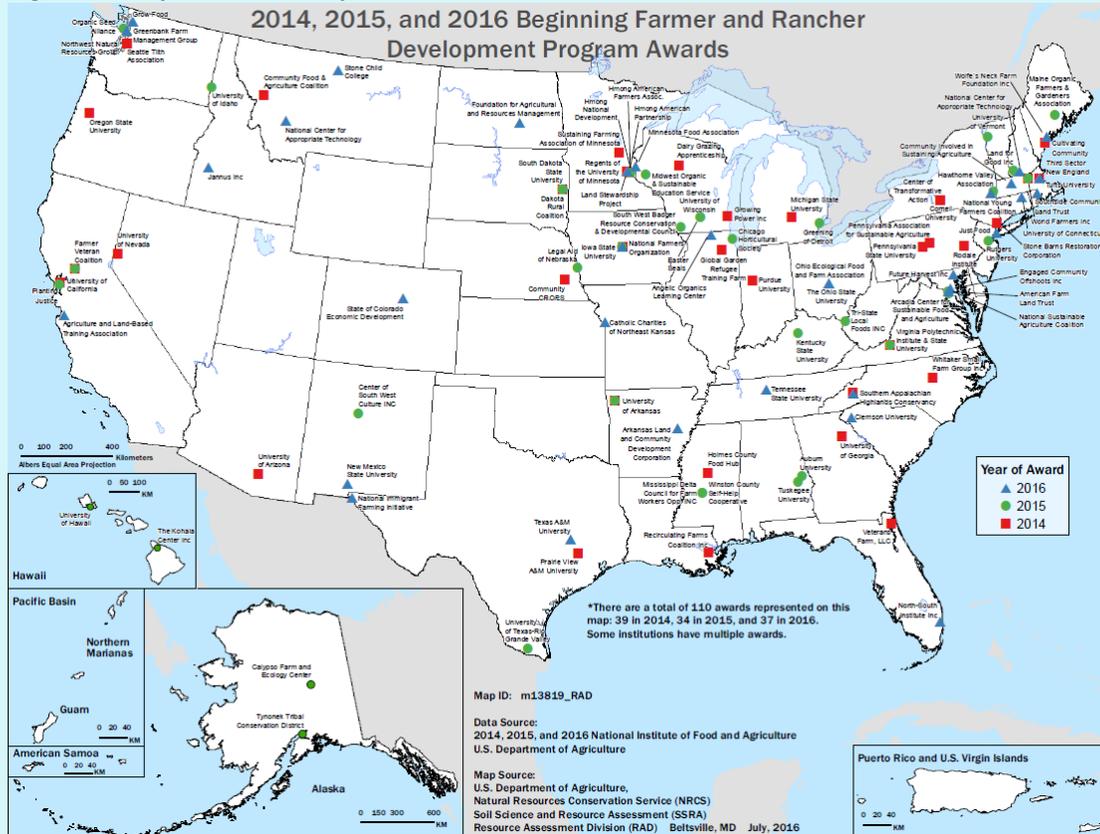


Figure 2: Map of BFRDP Projects Funded 2014-2016



Source: USDA-NRCS, 2016

Project Types

Standard grants address the unique training, education, outreach, and technical assistance needs of beginning farmers and ranchers in a particular local or regional setting. They offer workshops and hands-on experience in the full range of topics needed by aspiring and new farmers: farming and ranching methods, marketing strategies, natural resource conservation strategies, financial and business planning, management, and more. Since most are three-year projects, those funded in 2009-2012 have been completed, whereas most projects funded in 2014-2016 are still underway. Funded projects use a wide variety of educational and technical assistance methods. Some offer workshops, demonstrations, and classes across a state or a multi-state region. Such projects often have several tracks for people at different stages in their exploration of farming and ranching, such as an introductory seminar for “explorers,” a more in-depth workshop or course for more serious students, and a season- or year-long series of workshops for the most committed. Hands-on experiences and interactions with practicing farmers are nearly always involved, often supplemented by on-line training or tools. By contrast with statewide or multi-state projects, some projects are highly localized, offering more intensive experiences such as apprenticeships, mentoring, or the opportunity to farm for a few years in a protected setting, commonly referred to as an “incubator farm”.

Educational Enhancement Team projects do not serve farmers directly. Rather, they “train the trainers” and help enhance other beginning farmer and rancher education programs in the nation. Typically, they focus on a particular audience, region or topic, for which the team reviews beginning farmer and rancher curricula and programs, identifies gaps, and develops and disseminates materials and tools to address the gaps. (Box 1).

Box 1: Educational Enhancement Teams: Helping the Trainers

Seven BFRDP Educational Enhancement Team (EET) projects are currently active, funded in 2014-2016. One concerns a key topic (land access), two address specific audiences (women and immigrants), and two involve educational methodologies (apprenticeships and the farmer-led Farm Beginnings curriculum). Two more EETS were funded in 2016 to work with NIFA on two program priorities: evaluating completed projects, and assisting less experienced applicants.

The seven current EET projects are:

1. American Farmland Trust and its partners are leading an effort to improve new farmers’ access to land, including securing land from retiring farmers and non-operating landlords.
2. The University of Vermont is leading a national learning network for educators working with beginning farm and ranch women.
3. Two dozen organizations that operate refugee and immigrant farming incubator projects are working together to improve their effectiveness under the leadership of ISED Solutions.
4. Tufts University is starting a new project in 2016 to improve the use of farm apprenticeships.
5. Land Stewardship Project is leading a 2016 project to expand the Farm Beginnings Collaborative to more states.
6. A retrospective evaluation of BFRDP projects funded in 2009-2012 is being conducted by a team led by the National Sustainable Agriculture Coalition.
7. The New Entry Sustainable Farming Project is working with the NIFA program staff to improve guidance for inexperienced BFRDP applicants.

Five additional, completed team projects, funded in 2009-2012, supported two collaborative networks—the Farm Beginnings Collaborative and a training network among organizations in the Northeastern United States.—and projects on financial management, asset building, and livestock environmental stewardship (USDA-NIFA, 2013).

BFRDP also funds a national clearinghouse that provides information to new farmers and support to those who work with them. The first national clearinghouse, operated by the National Agricultural Library and its partners, developed Start2Farm.gov, which has since been incorporated into the main USDA web site for new farmers. In 2014, BFRDP re-competed the clearinghouse award, with a new result. The Farm Answers (FarmAnswers.org) digital library of publications, videos, presentations, apps, and on-line courses, provides the nation’s largest source of information for beginning farmers and those who work with them—over 4,000 items and growing. They are organized by topic (multiple topics under the main headings of business management, marketing, people, production, and taxes & legal); format (written material, video, audio, presentation, online course, app, or website), production/marketing system (including local, organic, or urban), commodity type, and location (national, regional, or state).

Figuring out where to start with such a large collection can be daunting, so Farm Answers has a “toolbox” section that features ten or so top-level items on each of a number of high-priority topics, such as business planning, financial management, direct marketing, commodity marketing, organic agriculture, urban agriculture, farmland access, farm transition planning, and food safety.

Farm Answers also houses information on hundreds of new farmer programs nationwide, plus blogs and news feeds, social media, and much more. It is operated by the University of Minnesota’s Center for Farm Financial Management, in partnership with USDA-NIFA and the other BFRDP funded projects.

Target Audiences

BFRDP serves new farmers and ranchers of all types – small, mid-size, and large; organic and conventional; commodity producers and specialty crop growers; young people and second-career farmers. Applicants to BFRDP are required to describe their target audience and their needs, and explain how the proposed project will address their specific needs. While some projects focus on a particular topic, most cover a range of topics in production, marketing, and business management, since most new farmers have needs in all of those areas.

In addition, there are two audiences specified by Congress for particular attention. By law, at least 5% of BFRDP funds must go to projects serving military veteran beginning farmers and ranchers, and at least 5% of BFRDP funds must go to projects serving socially-disadvantaged, limited-resource, or farmworker beginning farmers and ranchers. NIFA has met or exceeded these amounts in each year of the program (Table 1).

Table 1: Allocation of BFRDP Funds to Target Audiences in Recent Years

	2014	2015	2016
Number of awards	39	34	37
Total amount awarded	\$18,900,000	\$17,800,000	\$17,800,000
Share of funds serving military veterans	8.00%	10%	9.70%
Share of funds serving socially-disadvantaged	50%	50%	47%

The focus on socially-disadvantaged, limited-resource, and farmworker audiences began in 2009, and the requirement to allocate funding to projects serving them was at a higher level (at least 25% of funding) from 2009 to 2012 (Farm Security and Rural Investment Act of 2002). Socially-disadvantaged groups are defined as those whose members have been subjected to racial, ethnic, or gender prejudice because of their identity as members of a group without regard to their individual qualities (Consolidated Farm and Rural Development Act of 2003). In the Agricultural Act of 2014, the

requirement was reduced to 5%, but the applications received and those awarded funding continue to exceed the earlier requirement (Agricultural Act of 2014). More than half of the funded projects serve one or more socially-disadvantaged audiences with a portion of their effort and funding. Some projects concentrate their efforts on a single audience of interest, but in some others, two or more groups, each with expertise and contacts in a particular culture or community, collaborate successfully (Box 2).

The focus on military veterans was new in the 2014 Agriculture Act, although veterans had been among the audience in a few previously funded projects. The rationale for the focus on veterans is two-fold: the skills and abilities that they developed in the military may be applicable to managing a farm or ranch, and the farm or ranch may be a hospitable or even therapeutic setting for a veteran. (Donoghue et al., 2014) While some veterans are among the audiences of many BFRDP projects, we count funds toward the 5% requirement only to the extent that the programming is specifically tailored to veterans (Box 3- next page).

In 2011, based on data from the first two years of projects funded in 2009 plus data from the first year of projects funded in 2010, grant recipients reported that more than 38,000 new and potential farmers participated in 5,122 BFRDP project events, including a variety of courses, workshops, and other interactions, mainly face-to-face (USDA-NIFA, 2012). The total number of participants does not account for duplication across multiple events in the same program, however. Over the next two years, a total of 56 projects funded in 2009-2012 reported more than 23,000 participants in 2012 and more than 50,000 participants in 2013, again without accounting for duplication.

We calculated the maximum number of participants in any single event, per project, and summed those numbers across projects, as a more conservative (minimum) estimate of participants served each year. This total was 9,952 in 2012 and 24,241 in 2013. The larger numbers in 2013 include the wider

Box 2: Immigrant Led Community Based Organizations in Minnesota: The Hmong American Farmers Association and the Latino Economic Development Center

Two intertwined projects and organizations in Minnesota demonstrate how the BFRDP program has both served socially-disadvantaged, limited-resource populations, and has built the capacity of immigrant and ethnic minority run organizations to provide services. These projects are staffed by and deliver services to Hmong and Latino farmers in Minnesota. Although both groups of farmers have prior experience in food production, they face linguistic and cultural barriers as well as structural conditions such as limited land access that limit the successful growth of their businesses.

In 2012, BFRDP awarded the Latino Economic Development Center (LEDC) and their sub-awardee the Hmong American Farmers Association (HAFA) the funds to pursue the Comprehensive Intercultural Training for Beginning Latino and Hmong Farmers and Ranchers project. This project focused on developing culturally specific farming curriculum and training modules, sessions, and workshops; and encouraged a land-based cooperative approach for growing and marketing foods. By the end of the grant in 2015, it had helped Hmong farmers who had initially been selling at local farmers' markets to cooperatively expand their sales to local groceries and a school. Latino farmers were able to develop cooperative marketing arrangements with other local farmers and arranged contracts with restaurants. This more efficient marketing resulted in increased sales and profits. On completion of this project, BFRDP awarded to HAFA as the lead and LEDC as a collaborator the funds to pursue the Beginning Farmer Training for Socially Disadvantaged Hmong and Latino Immigrants project through 2018. The new project builds upon lessons from the initial grant and takes a train-the-trainer approach to feature a culturally-appropriate curriculum delivered respectively by Hmong and Latino farmers to other Hmong and Latino farmers in their own language.

reach of several projects with online courses and other web-based content. For example, the University of Arkansas reported that their online course reached over 10,000 people, including 500 veterans (box 3). Nearly all BFRDP projects involve face-to-face interactions, but the addition of online courses and other web-based content is becoming more common.

For projects that reported participation by target audience, the audience breakdown is shown in Figure 3, again calculated as the sum of the maximum per project for each audience, to avoid duplication. The relatively low number for veterans reflects the fact that veterans were not a target audience for BFRDP until the 2014 Agriculture Act. The relatively large number of Native American participants in 2012 is due to one project that worked across 13 communities in its final year. The total of all socially-disadvantaged, limited-resource and farmworker participants is 54% of the total number of participants for whom demographic data were reported, well over the 25% target in the farm bill at the time, although this estimate is approximate since not all projects reported demographic data.

Focus on Results

Since its inception, BFRDP and its grantee partners have had a strong focus on tangible results. This includes helping people enter farming and ranching, and helping those who are in their first decade of farming or ranching be more successful in tangible ways: more profitable, better stewards of the land, or stronger contributors to their communities. NIFA and its national clearinghouse partners have worked with grantees on a set of metrics to use in reporting project results (USDA-NIFA, 2015). Measures include the number or percentage of the audience for a project (or a project component) who learn something new, decide to take an action, or do take an action. These results are

Box 3: Serving Those Who Have Served: Armed to Farm, Sustainable Agriculture Training for Veterans

The National Center for Appropriate Technology (NCAT) has received funding from BFRDP since 2010, when it led a project that provided training to over 1,100 beginning farmers in workshops geared toward the local food market opportunities of The North Carolina Ten Percent Campaign. They also collaborated on a poultry, livestock, and agroforestry project led by the University of Arkansas that served several hundred military veterans, among other audiences (Donoghue et al., 2014).

The 2014 Farm Bill provided additional authority for BFRDP to provide preference for veteran farmer and rancher participation, by specifying at least 5% percent of funds be used for programs and services that support the needs of veteran farmers and ranchers. NCAT's previous accomplishments led them to continue to collaborate with the University of Arkansas's 2014 BFRDP award enhancing existing course modules to provide experiential opportunities for veterans through Armed to Farm Workshops and Trainings, developing and expanding networking, and establishing mentoring systems supporting a new generation of farmers. Through on farm demonstrations and internship programs focused on military veterans in Arkansas and Missouri, the program has continued its accomplishments and objectives into its second year. Armed to Farm has successfully sponsored 48 veterans and their families to attend the Southern Sustainable Agricultural Working Group Conference, hosted military Farmer Veteran networking session and attending the University of Arkansas VetSuccess on Campus Open House.

In FY 2016, NCAT was awarded a BFRDP grant that will serve a 100% veteran audience in Montana through a partnership with Great Falls Community College, Farmer Veteran Coalition and others, training at least 45 military veterans per year in the three year grant cycle. Their objective continues to support veteran farmers through providing intensive training, one-on-one technical assistance and partner workshops. They plan to integrate farm business planning and technical assistance. A second 2016 award to NCAT and partners will lead a similar program for veterans in Vermont, New Hampshire, Maine, Massachusetts, and other northeast states.

measured soon after project activities (for example, a survey at the end of a workshop or course) or in follow-up later in the project.

In the first round of projects—those funded 2009-2012—the shared outcome measures and the systems for tracking them across multiple projects were developed and adjusted over the course of the projects. As a result, we do not have a complete and consistent set of data for outcome analysis of those projects. Most projects reported some measures, but not every project reported on every type of measure. We do have considerable partial data that provide some insights into cumulative results and a basis for improving the future collection and reporting of data.

Based on surveys taken after training events during the first two years of BFRDP by those projects that reported data, 81-85% of participants experienced an increase in knowledge, attitude or skill (USDA-NIFA, 2012). In 2012 and 2013, 85% of participants reported a change in knowledge, attitude or skill for those projects reporting on knowledge measures.

Those projects that were able to assess changes in behavior in 2010 or 2011 reported that 57-63% of participants changed farming practices after one or two years, and 26-30% changed business practices (USDA-NIFA, 2012). In 2012 and 2013, 43% of participants reported a change in farming or business practices.

Collecting and aggregating data on participation and results across very diverse projects has been very challenging. The data cited above were pulled from annual project reports by the BFRDP clearinghouse at the National Agricultural Library (NAL) in the early years, and then entered by project directors or extracted by NAL in subsequent years. This experience informed improvements that were made with the new clearinghouse award to the University of Minnesota Center for Farm Financial Management (CFFM). The Results Verification System that CFFM developed for BFRDP can be seen online at the Farm Answers website (CFFM, 2016a). This website usefully leverages the CFFM's considerable experience by incorporating information from their Risk Management Education Program (CFFM, 2016b).

BFRDP recently funded a retrospective evaluation of the projects funded in 2009-2012, to take place in 2016 and 2017. The project team will identify short, medium and long-term outcomes of funded projects, through content analysis of project reports and a survey of project directors. The results will be used to identify factors contributing to successful outcomes and to make recommendations to improve program operations and future outcome reporting and evaluation methodologies.

BFRDP and other USDA programs receive valuable public input from the USDA Advisory Committee on Beginning Farmers and Ranchers, and BFRDP and its funded partners benefit from the improvements to programs and the coordination across the Department in evidence at the USDA new farmer web site (USDA, 2016).

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Author Information

Jill S. Auburn (jauburn@nifa.usda.gov), **Denis Ebodaghe** (debodaghe@nifa.usda.gov), and **Wesley R. Dean** (Wesley.Dean@nifa.usda.gov) are National Program Leaders. **Desiree K. Rucker –Ross** (Desiree.Rucker@nifa.usda.gov) is Biological Sciences Program Specialist, National Institute of Food and Agriculture, USDA.

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Off-farm Income: Managing Risk in Young and Beginning Farmer Households

Heidi J. Bubela

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It is well documented that farm households over the past several decades have increasingly relied on off-farm income sources and primarily off-farm employment. This trend of increasing off-farm labor participation rates and income is particularly important to those entering agriculture: young and beginning farmers. Much of the contemporary focus on young and new entrants to agriculture has been on the growth of various direct-to-consumer marketing channels. However, the continuance of traditional production agriculture relies on developing the next generation of farmers as well.

Record farm earnings during the late 2000s and early 2010s potentially created an opportunity to bring young people back to the farm to participate in a family operation or begin their own. During the recent agricultural boom—particularly in the cash grains arena—record net farm incomes were more than sufficient to sustain and grow most operations. Strong cash flows were a particular benefit to young and beginning farmers, whose barriers to entry can be quite high. While agricultural lenders still viewed off-farm income as a financial strength, it served as an ancillary income source.

Farm sector profitability peaked in 2013, and the sector is currently in a more moderate-income period driven by lower commodity prices. With the exception of weather or other unforeseen events, the forecast for the cash grain sector remains steady as the adjustment toward a more normal supply-demand situation continues.

As an example, University of Illinois at Urbana-Champaign's corn, soybean, and wheat crop budgets for 2016 include highly productive cropland in northern and central Illinois—land that may yield 20% or more above the national average (Schnitkey, 2016). Considering the current costs of production, budgets show revenues will be high enough to provide a return to land; however, profits will not fully cover the costs of average cash rent. This shortfall affects young farmers in particular since they tend to rent a larger proportion of the acres they farm compared to other age groups due not only to the high cost of good cropland, but also to the lack of availability and competitiveness in certain land markets (USDA-NASS, 2012). Although cash rents will likely fall given sustained low prices, these adjustments will occur slowly.

The trend of increasing off-farm income and its growing role in farm household finances has enabled many young and beginning farmers the means to enter agriculture. It will play an even larger part in allowing these groups to maintain viable operations during this current period of adjustment. This is true not only in the cash grains sector, but also in other agricultural sectors in which income is moderating. Compared to earlier generations of farm households, off-farm income has shifted from a supplementary income source to an important risk management tool for young and beginning farm households, and the implications of this trend are only positive.

Young Farmer Demographics

There has been a growing interest in understanding the challenges of the young and beginning farmer populations, especially those who spend the majority of their working time in farming. It is important to note, however, that although most young farmers are beginning farmers, most beginning farmers are not young

farmers. Most farmers, especially those not operating large farms, spend the majority of their work time in off-farm jobs. That's an indication of how important access to off-farm jobs is for the farmer population, at large. However, the role of off-farm income can be just as important to farmers who spend the majority of their work time on the farm, especially the young and beginning farmers. Table 1 provides the U.S. Department of Agriculture (USDA) definitions of the various groups and respective population numbers from the 2012 Census of Agriculture.

Even though there are fewer overall farmers than 10 years ago, the young farmer population today represents a proportionally similar percentage as in 2002 as shown in Table 2. Based on the latest USDA Census of Agriculture in 2012, nearly 6% of total principal operators who report farming as their primary occupation are less than 35. Although proportionally similar in 2002 and 2012, a slight increase in this segment occurred between 2007 and 2012 following a drop between 2002 and 2007. The 2012 Census of Agriculture estimates that the young principal operators who report farming as their primary occupation segment of the population grew nearly 10% from 2007. This growth from 2007 to 2012 was driven by young people managing sizable operations of sales levels of \$250,000 and greater. It is reasonable to assume that record net farm incomes during this period drew some of these young farmers into agriculture or at least was an influential factor. Another influential factor may have been the 2008 Farm Act which authorized a Transition Incentive Program (TIP) to promote the transfer of Conservation Reserve Program (CRP) land coming back into production to beginning—and socially disadvantaged—farmers engaged in sustainable practices (USDA-ERS, 2013). The 2008 Farm Act also provided for management training programs specific to beginning farmers (USDA-ERS, 2013).

Table 1: Principal Operators by Primary Occupation, Experience, and Age, 2012

	Major Occupation		
	All	Farming Occupation	Nonfarm Occupation
All Principal Operators	2,109,303	1,007,904	1,101,399
Principal Operators who are Beginning (on present farm)	469,098	175,110	293,988
Principal Operators who are Young	119,833	55,394	64,439
Young and Beginning Principal Operators	90,944	40,499	50,445

Source: USDA-NASS Census of Agriculture 2012

Notes: Notes: There is one principal operator self-identified per farm. Primary occupation is based on where the individual allocates the most work time. Young is identified as younger than 35. Beginning is based on have 9 years or less of experience on current farm.

Table 2: Principal Operators by Primary Occupation and Age

	2002	2007	2012
All Principal Operators	2,128,982	2,204,792	2,109,303
Principal Operators with Farming as a Primary Occupation	1,224,246	993,881	1,007,904
Young Principal Operators with Farming as a Primary Occupation	70,393	50,579	55,394
Young Principal Operators with Farming as a Primary Occupation as a Share of All Principal, Farming Occupation Operators	5.7%	5.1%	5.5%

Source: USDA-NASS Census of Agriculture 2002-2012

Structural demographic changes may also be spurring growth in young farmer numbers. The much larger millennial generation, the oldest of which are now in their mid-30s, has replaced Generation X in the young farmer population. In fact, those born from the early 1980s to the early 2000s already represent the largest group of American workers and could make up half of the U.S. workforce within five years (Maguire, 2016). Many of the millennial generation are just beginning their careers, providing agriculture a large potential pool of young people to cultivate and retain in farming.

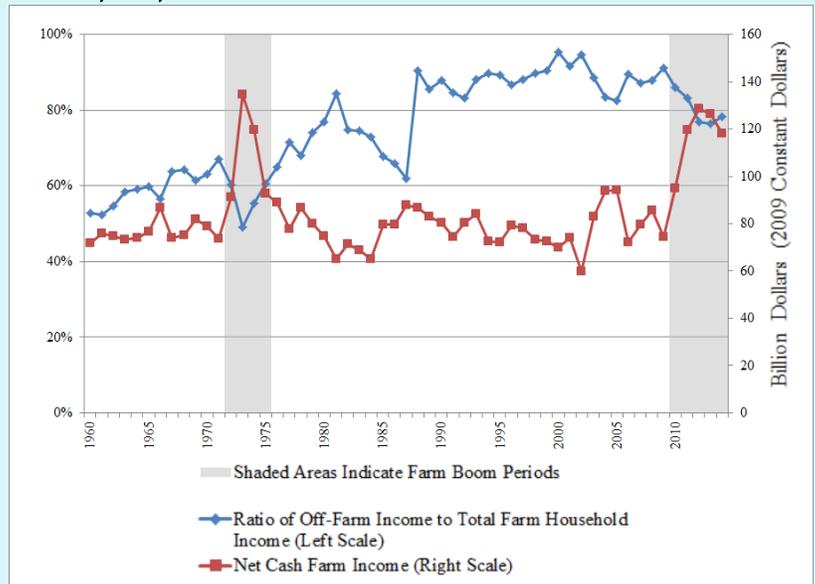
Farm Household Reliance on Off-Farm Income

Farm households prior to the 1970s derived the majority of household income from the farm. In the 1970s, as the general labor force increased, off-farm income began to make a major contribution to farm household income levels. Figure 1 shows off-farm income as a percent of farm household income and in relation to U.S. net cash farm income (USDA-ERS, 2015). It is important to note that this chart considers all farms and that the majority of farms are very small and rely almost strictly on off-farm income (USDA-ERS, 2015). Although off-farm income for a household is, in general, a stable income source, it will fluctuate as a percent of the total due to swings in farm income from year to year. However, even in boom periods, it has still contributed substantially to household income. In 1973, the peak year of net cash farm income during the agricultural boom of the 1970s, a weighty 49% of total farm household income came from off-farm sources. Fast forward to 2012, another record year of net cash farm income, off-farm income comprised 77% of total farm household income.

In times of stress, off-farm income plays an even larger role. Most notable, in the severe agricultural crisis of the 1980s, off-farm income began to play a mitigating role, as it offset diminished farm returns. On average, the households with positive incomes had higher incomes from off-farm sources than those with negative incomes (Ahearn, 1986). In multiple low farm income years since, off-farm income has surpassed 90% of total household income.

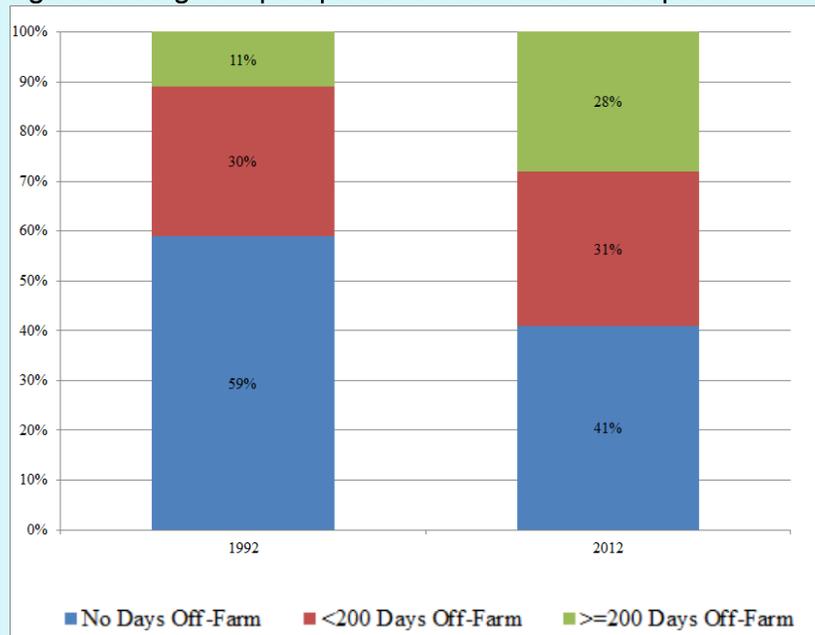
Over the past several decades, average off-farm household income gained parity with and now surpasses average U.S. household income. The USDA Census of Agriculture reports the percent of principal operators working off-farm has fluctuated around 50-60% since 1969, while the share reporting working 200 days or more, essentially full-time off the farm, increased from 32% to 40%. Among those

Figure 1: Share of Farm Households' Total Income from Off-farm Sources, U.S., 1960-2014



Source: USDA-ERS, 2015

Figure 2: Young Principal Operator Off-farm Labor Participation



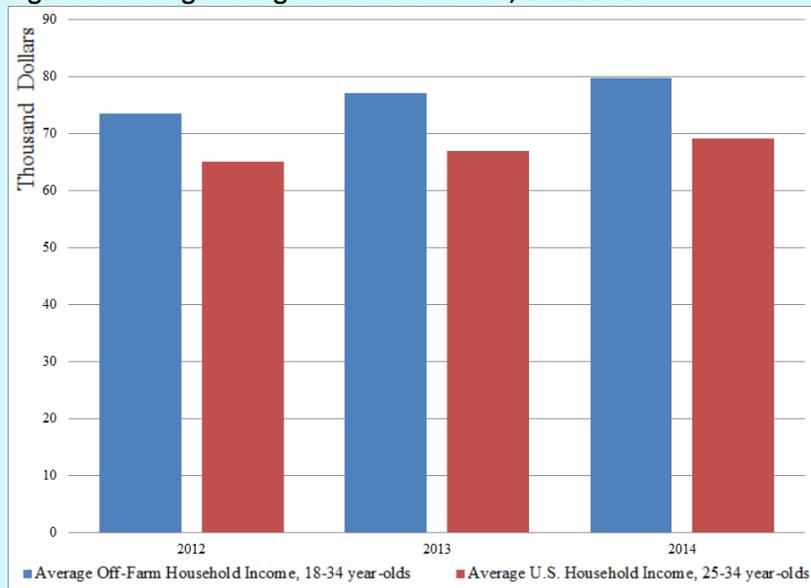
Source: USDA-NASS Census of Agriculture, 1992, 2012

reporting farming as their primary occupation, the shift has been more pronounced, as those working full-time equivalency off the farm more than doubled just in the past twenty years from 7% in 1992 to 16% in 2012. This trend, in part, explains the much faster 5.4% annualized growth in average off-farm income from 1980-2014 compared to 2.8% for total household income.

The increasing reliance on off-farm income extends to young and beginning farmers as well. Figure 2 illustrates this shift. According to the 1992 USDA Census of Agriculture, 41% of under-35-year-olds whose principal occupation was farming worked off-farm, with 11% working 200 or more days off-farm. Twenty years later, in 2012, 59% worked off-farm, with 28% working 200 or more days off-farm. Young farmers had a 15% higher rate of participation in off-farm work than the 35- to 64-year-old age group did in 2012. The trend with beginning farmers should reflect a similar pattern, as there are more young farmers who have been farming for fewer than ten years than in any other age groups.

Higher off-farm labor participation rates may translate into higher average levels of income for the young farmer population. Average off-farm household income for young farmer households currently surpasses the average U.S. household income for the less than 35-year-old population, as shown in Figure 3. The 2014 USDA Agricultural Resource Management Survey (USDA-ARMS) estimates over \$79,000 in average off-farm household income for all farm households with operators less than 35 years old. This includes both households with and without off-farm income. In comparison, the U.S. Census Bureau reports a lower \$69,000 in average total household income for the 25-34 year old population segment.

Figure 3: Average Young Household Income, 2012-2014



Source: USDA-ARMS, U.S. Census Bureau, 2014

Off-Farm Income Opportunities

As farm businesses are becoming more complex, the skills needed to profitably manage them often overlap with those skills in demand by non-farm businesses. A recent study found that when farm operators and their spouses work off-farm, they are more likely to hold a management or professional occupation. This is particularly true among operators of large farms (Brown and Weber, 2013). Wages among management or professional occupations are higher on average than in other occupations, thus boosting the farm household's off-farm income. Among those who hold a management or professional position, more than half have a college degree. Technology is also opening avenues for professionals in rural areas. Telecommuting among the non-self-employed population has grown 103% since 2005 (Global Workplace Analytics, 2016). Many professional occupations now lend themselves to telecommuting. The link between managing a successful farming operation and more robust off-farm job opportunities is attractive to young and beginning farmers.

Role in Risk Management

Off-farm income serves as both an income source and a risk management tool, because it reduces the impact that farm income variability has on household income. Farm income has been, is, and will likely remain volatile. Key, Prager, and Burns (2015) find that farm income is the most variable of all household income sources: farm income (77%), agricultural payments (3%), non-farm wage income (10%), and other non-farm income (10%). For crop farms, farm earnings range from 60% to 90% of total income variation as asset size increases. Off-farm income can

stabilize income flows, because off-farm wages are much less variable than farm income. Off-farm income provides a steady source of funds for the farm household, particularly for young and beginning farmers who tend to face more variation relative to their assets than operators of larger, more established farms do.

In comparison to other risk management tools, off-farm income is truly a decoupled income flow. Although not a replacement for crop insurance, government payments, or other instruments that play an important role in managing the volatility of farm income in most crop operations, off-farm income is not dependent on changes in farm policy or commodity prices, yields, or input costs, making it a key proactive risk management tool. For example, young principal operators who report farming as their primary occupation today and grow field crops farm an average of nearly 400 acres of cropland (USDA-NASS, 2012). Thus, a corn farmer would have to receive an average payment, from a previously noted farm related risk management source, of more than \$70 per acre annually on a 400-acre operation to equal the income that one or more farm household members would earn off-farm—if they were to earn the equivalent of the average per capita U.S. income (U.S. Census Bureau, 2014). While this level of payment could be realizable given extremely low revenues or yields, it is certainly not a sustainable source of long-term income. Only revenue or yield declines below a threshold level typically trigger payments, and the threshold level could continue to decline in future periods as prices fall below previous years' levels. The given example in no way minimizes the need for government payments or other farm income risk management tools, but instead is intended to emphasize that payments are tied to variables of which off-farm income is independent. Legislative bodies and agencies design government programs and tools such as crop insurance to provide support, and with some programs, transition assistance to operations in periods of lower farm incomes. Off-farm income generates liquidity and builds earned net worth independent of yields and prices.

Off-farm labor participation often allows for other avenues of managing risk outside of the operation, but within the farm household, namely health insurance. Off-farm labor may provide employer-paid or subsidized health insurance. Employer-sponsored healthcare coverage motivates off-farm labor participation of farm operators and spouses (Ahearn, El-Osta, and Mishra, 2013). There is a strong positive relationship between the probability of health insurance coverage and off-farm employment. Although the Affordable Care Act (ACA) has provided more mechanisms for farmers to obtain insurance, the purchase of health insurance can place a higher cost burden on a young and beginning farmer's operation. Any decline in off-farm labor participation resulting from the ACA is expected to be negligible as the majority of farm households with off-farm income rely on it as a major source of income (Ahearn, Williamson, and Black, 2015).

Link with Household Well-Being

Multiple studies have found a relationship between off-farm income and farm household well-being. Farm households with off-farm income consistently have lower and less variable debt repayment capacity utilization ratios than farms without such income (Briggeman, 2011). Nehring and Hallahan (2015) find that U.S. rice farms with earned off-farm income have consistently higher farm and household returns. The effect of off-farm income is not only financial but also influences the allocation of time and resources as well. In the same study, they observe earned off-farm income generally boosts both scale and technical efficiency (Nehring and Hallahan, 2015). Fernandez-Cornejo (2007) finds that the adoption of managerial time-saving technologies significantly relates to higher off-farm income for U.S. corn and soybean farmers. As off-farm income-generating pursuits increase, household-level efficiency is higher across all corn and soybean farm sizes than farm-level efficiency alone.

Opening a Wider Door to Capital

The increasing role of off-farm income in the farm household over the past half century has not only helped sustain the farm household during periods of income volatility, but also encouraged more young and beginning farmers to enter into agricultural production by making credit more easily obtainable. One of the primary hurdles for young and beginning farmers is access to capital. Capital needs can often be more intense for those in production agriculture. Agricultural lenders recognize this need. The Farm Credit System has a legislated mandate and mission to provide sound and constructive credit to young, beginning, and small farmers. In 2001, when the Farm Credit System began reporting this information, they made 33,000 loans to young farmers, who are defined slightly differently than the USDA's rule as less than 36 years old. In 2015, when the young farmer population was smaller, they originated nearly twice the loans, 62,000, for three times the amount as in 2001. Loans made to beginning farmers more than doubled over this period. According to the USDA Census of Agriculture data, the

percent of young farmers, principal or otherwise, whose operations held debt increased from 2007 to 2012, indicating larger credit needs, credit that is more available, or likely a combination of both.

Many agricultural lenders utilize federal or state guarantee programs to extend credit to young and beginning farmers who may not otherwise qualify. Lenders may also use other credit tools such as exceptions to underwriting standards or specifically designed loan covenants. While lenders need these tools to continue to assist the next generation of farmers, many young and beginning farmer loans qualify for credit without concessions. This trend will likely continue, as a larger proportion than previous generations of young and beginning farm households generate significant off-farm income. Off-farm income can not only make credit more easily obtainable but can also preclude the need for guarantees, cosigners, or additional restrictions on credit that create more of an administrative burden on the farmer.

Lenders analyze the repayment capacity of a borrower. Typically, lenders factor all income—farm and off-farm—into this evaluation. A dollar of wages goes into the same pool as a dollar of net farm income. However, a lender may handle a dollar of farm income differently than a dollar of off-farm income. Agricultural lenders usually analyze multiple years of earnings to evaluate repayment capacity. Due to the volatility in farm income from year to year, lenders may sensitize farm earnings to obtain a more normal income projection for the operation. This means that lenders adjust farm earnings during boom years toward more normal trend levels. However, the sensitivity does not typically work in reverse; lenders are not likely to boost farm earnings up in lean years to increase repayment capacity measures. Earned off-farm income is unadjusted, unless a mitigating circumstance alerts the lender that it is going away or will substantially change. Given higher-than-average farm earnings, lenders may weigh a dollar of off-farm income in essence more heavily than a dollar of farm income. This is sound portfolio management, as the lender is accounting for the volatility factor in farm income that makes that repayment stream on average less stable on a per-dollar basis than other sources, such as earned off-farm income. The greater the dispersion of possible future outcomes in the form of varying farm income levels, the higher the farmer's level of exposure to uncertain returns and the lender's level of potential risk exposure.

According to data from the USDA, households operating commercial farms—defined as gross cash farm income of over \$350,000—generated a \$168,000 median net farm income and a \$45,000 median off-farm income in 2014 (USDA-ERS, 2016). A farm household with the median level of off-farm income receives a greater than 25% increase in repayment capacity compared to having only farm income. USDA forecasts total net farm income in 2015 to fall close to 40% from 2014. Assuming stable off-farm income levels from 2014 to 2015, this translates to a 40–50% increase in farm household repayment capacity given a median level of off-farm income over farm income alone. This improvement in repayment capacity is proportionally greater for smaller operations in which farming is the operator's primary occupation. Of course, aside from the income statement, the benefits of off-farm income to the young and beginning farmer flow over to the balance sheet side in terms of increased liquidity and equity.

Implications for the Young Farmer

For the young and beginning farmer sector, the implications of increasing off-farm work participation and incomes are very positive. The growing technical, financial, operational, and managerial skill set needed to run a farm translates into skills demanded off the farm. In addition, the availability and opportunities of off-farm employment continue to widen as more employers engage in flexible work arrangements valued by the young millennial generation. As more members of the farm household participate in off-farm employment, the demand for greater efficiency, both on the farm and in the household, increases. This, in turn, drives further productivity and innovation.

Off-farm income will sustain many young operations in smoothing the variability that farm income generates throughout the farm's economic cycle, strengthening the probability of remaining, expanding, and succeeding in agriculture. It can diffuse the extent to which these operations experience financial stress in the current and near future. Those in agriculture can argue that as operation size grows—and farm income accounts for the majority of household income, bringing with it reserves and net worth—the need for off-farm income diminishes. However, industry participants must not overlook the importance of off-farm income in transitioning a young and beginning farmer's operation to that stage. Off-farm income promotes the stability of the farm household's finances. It generally makes capital more readily obtainable. Off-farm income is a viable and important risk management tool for today's young and beginning farmers.

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Author Information

Heidi J. Bubela (hbubela@1stfarmcredit.com) is Senior Portfolio Analyst at 1st Farm Credit Services in Normal, IL. The author expresses appreciation to Krista Swanson (kswanso@1stfarmcredit.com) for helpful comments.

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Beginning Farmer Credit and the Farm Service Agency's Role

Charles B. Dodson and Bruce L. Ahrendsen

JEL Classifications: G21, Q14, Q18

Keywords: Beginning Farmer, Farm Credit, Farm Finance, USDA

Over its 70-year history, the U.S. Department of Agriculture (USDA) Farm Service Agency (FSA) and its predecessor, the Farmers Home Administration (FmHA), has been an important source of credit for young and beginning farmers. FSA supplies credit through a combination of loans made directly to farmers (direct loans) and through Federal guarantees of loans made by commercial lenders (guaranteed loans) (USDA-FSA, 2012 and 2016). The combination of farm consolidation, resulting in greater capital needs, and increased transition of agricultural land as landowners age, will likely result in a continuing need for FSA credit programs to overcome any barriers to entry for start-up and beginning farmers.

What Is a Beginning Farmer?

For purposes of FSA loan eligibility, a beginning farmer is defined to be any individual involved in the operation of a farm who has 10 or fewer years of farming experience. They comprise a large and diverse population. Data from the USDA's Agricultural Resource Management Survey (ARMS) indicated 22% of all farms in 2014 had a beginning farmer as either a primary, secondary, or tertiary operator. Many beginning farmers, however, were neither young nor appeared capital constrained. Nearly half of all beginning farmers in 2014 were over age 55. And over 60% of all farms with a beginning farmer reported no debt, with an average net worth of over \$700,000. Many of the farm operations with a beginning farmer and no debt were also small, averaging less than \$50,000 in annual value of farm production, and representing less than 20% of the total dollar value of farm production by all farms with a beginning farmer.

Note on Methods

The Agricultural Resource Management Survey (ARMS) of farms does not provide sufficient information to fully determine FSA loan eligibility. However, we used it to identify the subset of beginning farms more likely to be eligible for FSA credit programs. This subset of farms differs from earlier studies which examined all beginning farms (Ahearn, 2011; Ahearn and Newton, 2009). Excluding beginning farms without debt, as well as non-family farming entities and farmers identifying themselves as retired from farming, provides a better indication of the number of beginning farmers that may be currently eligible and/or demand FSA loan programs.

The ARMS data were merged with USDA-FSA data on direct and guaranteed loans outstanding as of December 31, 2014 using a unique USDA customer identifier, common to both the ARMS and FSA loan files. The resulting combined dataset accurately identifies FSA borrowers and corrects for any under-reporting among ARMS respondents and was used to estimate the share of beginning farmers receiving FSA loans (McMinn, 2015). McMinn found that more than 10 percent of FSA borrowers inaccurately classified their farm operations as having no end of year farm debt on the ARMS for 2001, 2004, 2006, and 2007. Also, those responding as not having end of year farm debt were found to have an average FSA total debt outstanding of \$80 thousand to \$273 thousand depending on the loan program.

Not all farms with a beginning farmer meet FSA loan eligibility criteria. FSA loan eligibility is determined by local county staff based on guidelines and criteria published in Federal regulation. Qualified applicants for direct and guaranteed loans must have the necessary skills and knowledge to effectively manage a farming operation and the majority of the labor used on the farm must be supplied by the applicant or a family member. Furthermore, eligible applicants must be unable to obtain credit through a commercial lender despite having a good credit history and a feasible business plan. Applying some of these criteria to ARMS survey data indicated approximately 176,000 farms, or less than half of all beginning farms, were likely eligible for FSA credit programs at calendar year-end 2014.

Differing Roles for Direct and Guaranteed Loans

FSA direct and guaranteed loans are delivered through distinctly different mechanisms. Direct loans are made and serviced by FSA's 2,106 county offices. Although local offices may get direction from the State and National offices, decisions regarding a direct loan are made primarily by local staff. Guaranteed loans are originated and serviced by qualified commercial, cooperative, or nonprofit lenders. Applications for a loan guarantee are made by qualified lenders to a local FSA office. Under a loan guarantee, FSA guarantees repayment of up to 95% of the principal balance. All loan guarantees are loss sharing, which means FSA will reimburse the lender for losses incurred if the loan goes into default, including loss of loan principal, some accrued interest, and certain liquidation costs.

Not only do FSA direct and guaranteed loan programs have different delivery mechanisms, they also have different roles. The direct program addresses specific concerns related to social equity, while the guarantee program primarily has the broader role of addressing market failures resulting from informational asymmetries (OMB, 2004). Information asymmetries occur because lenders lack sufficient information with which to properly evaluate farm loan requests. Beginning farmers, for example, may have difficulty persuading lenders of their repayment ability because of their shorter track record. Generally, the uniqueness of farming and its income variability and uncertainty is considered to make informational asymmetry more likely.

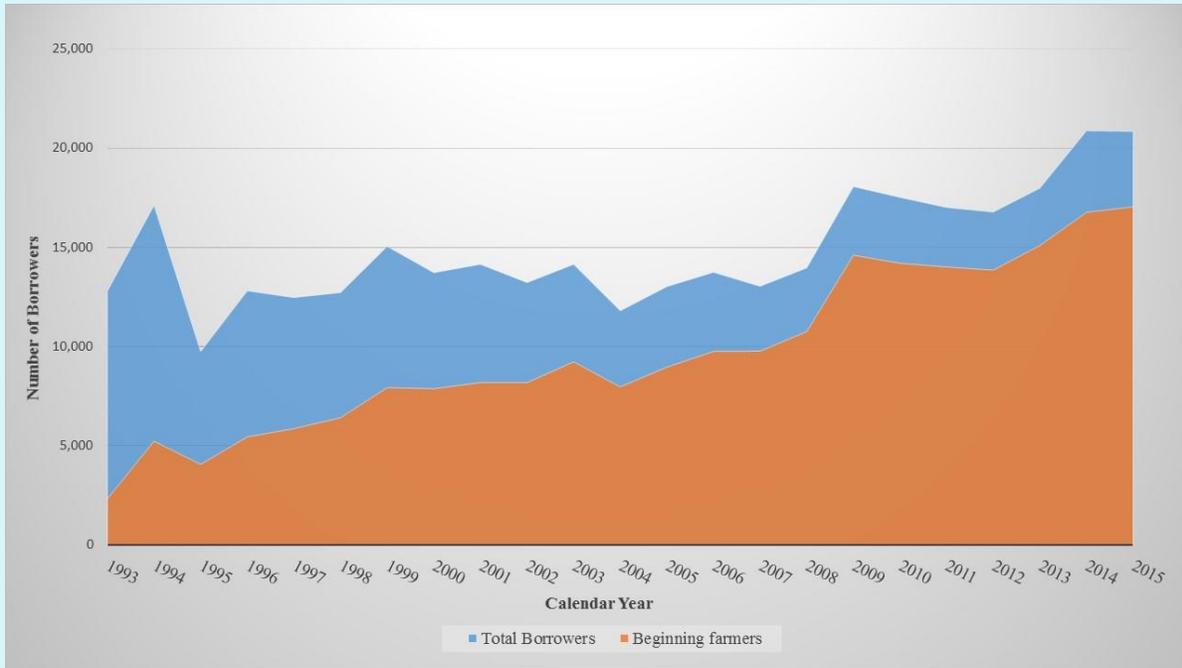
Reflecting FSA's social equity role, direct loan programs almost exclusively serve beginning, veteran, and socially-disadvantaged farmers. Through reducing risk, FSA guarantees lower a lender's costs, thereby encouraging lenders to make more farm loans (USDA, 2006). Commercial banks, primarily small community banks, have been the primary users of FSA guarantees, accounting for 80% of obligations since 2011 (Dodson, 2014).

FSA's Role in Serving Beginning Farmers

Though the aging population of U.S. farmers is frequently cited as justification for beginning farmer programs, the primary economic rationale is to lessen barriers to entry arising from access to capital. A combination of low and variable returns, combined with a need for large capital investment, presents a substantial barrier to new farm entrants. The provision of FSA direct and guaranteed loans attempts to lessen these entry barriers. Though explicit goals and special programs to serve beginning farmers were only introduced with the Agricultural Credit Act of 1992, FSA credit programs have always served younger farmers who were getting started in farming. A USDA study conducted a decade after the creation of FmHA found their borrowers were typically younger, beginning farmers, facing capital constraints (Bierman and Case, 1959). Similar conclusions have been reached in later studies (Herr, 1969; Herr and LaDue, 1981; Dodson and Koenig, 2003; Nwoha et al., 2007).

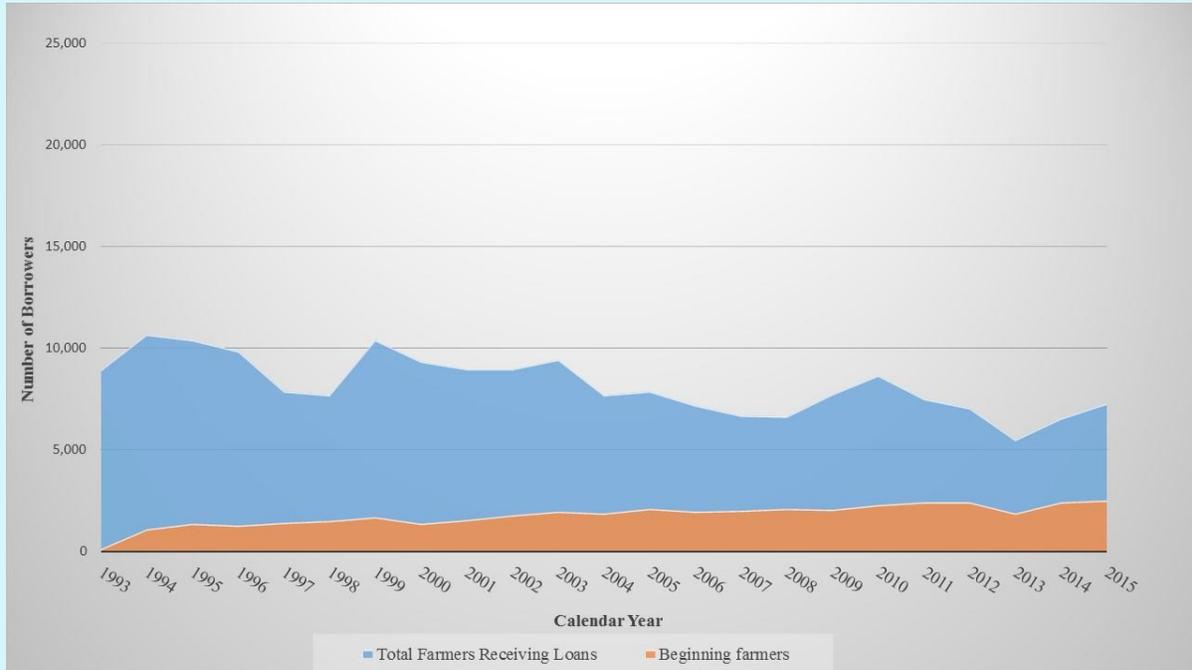
With enactment of the Agricultural Credit Act of 1992, FSA's role in serving beginning farmers became explicit with targets based on the share of loan obligations going to beginning farmers. Reflecting their different policy roles, targets have been higher for direct programs than for guaranteed: 75% of all direct Farm Ownership (FO) and Operating (OL) loan funds and 35% of all guaranteed loan funds were targeted to beginning farmers for fiscal year 2016. Consequently, in recent years, beginning farmers have comprised a majority of all direct loan borrowers. For 2011-2015, 82% of all new direct borrowers have been beginning farmers compared to 34% for all new guaranteed borrowers (Figures 1 and 2).

Figure 1: Number of FSA Borrowers Receiving New Direct Loans, for Beginning and All Borrowers, Calendar Years 1993-2015



Source: USDA-FSA. OBFN Database.

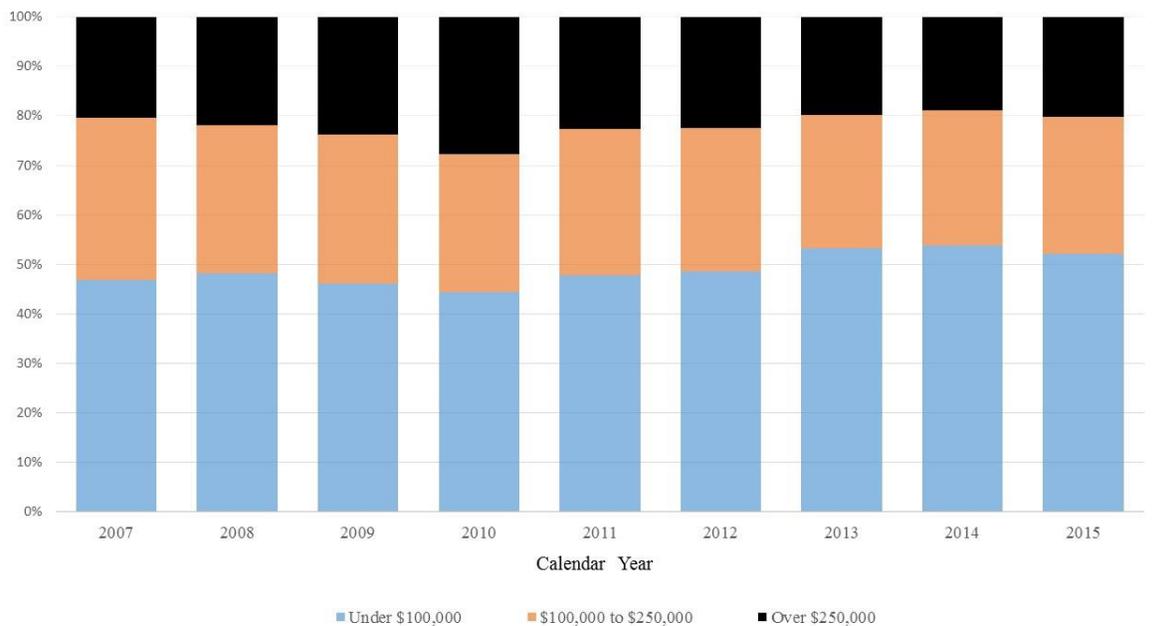
Figure 2: Number of FSA Borrowers Receiving New Guaranteed Loans, for Beginning and All Borrowers, Calendar Years 1993-2015



Source: USDA-FSA, OBFN and Guaranteed Loan System (GLS) Databases.

In recent years, FSA has taken steps to simplify the application process for its beginning farmer credit programs. For example, the FSA direct microloan lending program was introduced in 2013 to increase the supply of credit to small start-up beginning operations requiring small amounts of capital. The introduction of microloans in 2013 likely contributed to increases in the number of direct loan borrowers (Figure 1) and the share of direct loan borrowers on smaller farms—those with under \$100,000 in annual sales (Figure 3).

Figure 3: Share of FSA Borrowers Receiving New Direct Loans by Annual Farm Sales per Farm, Calendar Years 2007-2015



Source: USDA-FSA Farm Business Plan Database.

Beginning Farm Categories

We identified 4 categories of indebted beginning farms based on the number of operators and farm size:

- Farms where the primary operator is a beginning farmer and the farm is operated by a single operator or an operator and spouse with,
 - Under \$100,000 in annual farm production, and
 - \$100,000 or more in annual farm production.
- Farms with two or more operators, excluding spouses, where at least one operator is a beginning farmer where:
 - Operators were multi-generational, where 25 or more years separated the age of the beginning farmer and at least one other operator, and
 - All other farms with multiple operators.

The latter 2 groups included secondary and tertiary farm operators, who are not explicitly eligible for FSA loans. In addition to many other criteria (USDA-FSA, 2012), a qualified applicant must "...substantially participate in the operation", excluding many secondary and tertiary operators from eligibility. However, secondary and tertiary operators may be eligible as co-applicants of a farming entity, provided the primary operator also applies and is eligible. Secondary and tertiary operators may also apply as individuals, provided they develop a business plan demonstrating an aspect of a farming enterprise where they are the primary provider of labor and management.

Beginning Farmers Are Diverse

Among the nearly 176,000 indebted beginning farms (Table 1), there was substantial variability in farm size and structure, generating differences in credit needs and risk profiles (see Box 2). For example, a start-up operated by a single individual and their spouse will have different credit needs than someone attempting to enter an established commercial farming operation.

Table 1: Financial and Structural Characteristics of Indebted Beginning Farms by Number of Operators and Farm Size, December 31, 2014^a

	Single Operator ^b		Multiple Operators		All Indebted Beginning Farms
	Small (<\$100,000)	Commercial (≥ \$100,000)	Multi-generational ^c	All Other	
Number of farms	103,117	36,651	18,223	17,807	175,798
	-dollars per farm-				
Farm assets	540,142	1,727,606	3,618,769	1,778,855	1,232,307
Real estate	450,358	1,091,137	2,310,818	1,150,081	847,679
Farm debt	126,234	526,563	709,230	497,672	307,752
Operating loans	16,082	133,642	158,726	123,124	66,259
Nonreal estate	18,657	104,259	156,314	80,274	56,996
Real estate	91,494	288,662	394,190	294,273	184,497
Net worth	413,908	1,201,043	2,909,539	1,281,183	924,555
Farm production	17,710	772,923	1,085,634	635,211	348,406
Net farm income	-1,246	110,298	195,334	159,878	58,707
Distribution of total:	-percent-				
Farms	58.7	20.8	10.4	10.1	100.0
Debt	24.4	35.5	23.7	16.5	100.0
Value of farm production	3.0	46.3	32.3	18.5	100.0
Debt-to-asset	23.4	30.5	19.6	28.0	25.0
Rate of return on assets	-3.6	3.7	3.8	7.5	2.4
Farm income to household income	-7.9	52.0	44.7	17.4	18.0
2 nd or 3 rd operator is beginning farmer ^d	36	34	84	62	44
Farm type					
Cattle	33.2	14.7	25.4	24.0	27.6
Dairy	1.2	10.0	15.1	4.3	4.8
Corn-soybean	9.8	36.8	21.9	22.4	17.9
Specialty crop	5.4	8.3	9.7	10.6	7.0
Poultry	1.6	10.0	3.0	4.6	3.8

Source: USDA Agricultural Resource Management Survey (ARMS), 2014.

^a Beginning farms include farms with an operator with 10 or fewer years of experience, but excludes those beginning farms without debt, as well as non-family farming entities and those farms with an operator identifying themselves as retired.

^b Including spouse as secondary operator.

^c Defined as 25 or more years separating the ages of the beginning farmer and at least one other operator.

^d Or spouse is a beginning farmer.

The smaller, more traditional farm, operated by a single operator and a spouse, still represents the most common beginning farm. Well over half (59%) of indebted beginning farms, had less than \$100,000 in annual farm production and were operated by a single operator or single operator with a spouse (Table 1). While representing a majority of all indebted beginning farms, only one-fourth of all beginning farm debt was owed by this group, most of which was real estate debt. On average, small, single operator farms are not profitable and, consequently, rely heavily on non-farm sources of income. Further, as agriculture has become more concentrated, smaller farms now account for a small share of the value of U.S. farm production. While representing 76% of total farms, farms with less than \$100,000 in production contributed less than 5% of the total value of U.S. farm production in 2014. Because of low returns and high capital requirements, it will be difficult for many of these small-scale operations to be economically sustainable, including those with beginning farmers. Averages can disguise profitable small farms, however. In addition, small farms overall can be important to the rural economy. Since they represent a significant share of the total farm population, small beginning farms have impacts on economic activity, especially in more rural areas. Moreover, they may be important in some market niches, such as apiculture, organic vegetables, pick-your-own, or community-supported-agriculture (Newton, 2014). Because purchasing a small farm represents a feasible and popular method for a beginning farmer to enter farming, demand for beginning farmer loans from this group will likely remain strong.

Compared to smaller farms, credit is more important to farms with \$100,000 or more in farm production operated by a single operator and their spouse. While representing 21% of all indebted beginning farms (Table 1), this group held over a third of all beginning farm debt and had an average debt-asset ratio of 30.5%. Also, their credit needs were more varied with a larger share of credit being used to finance working capital and other non-real estate needs. Beginning farmers in this size group were more reliant on the farm business, with farm income accounting for more than half of their household income.

But, the more traditional farm operated by a single operator and their spouse has become less important in overall farm production. Increasingly, farms are being organized using complex business structures with multiple operators. Also, future farm entrants may be more likely to enter farming by “buying into” an established operation. Over 20% of all indebted beginning farms in 2014 had multiple operators, where the beginning farmer was either a primary, secondary, or tertiary operator and was not a spouse of the primary operator. Also these operations tended to be large, accounting for just over half of all beginning farm production and 40% of all debt owed by beginning farms.

For a beginning farmer on a multiple-operator farm, credit needs may differ from the traditional sole proprietorship. About half of multiple-operator beginning farms were multigenerational, defined as having 25 or more years of difference in the ages of the operators. For these, a beginning farmer may need credit to purchase the interest of other owners. While multiple-operator beginning farms comprise a small share of beginning farms, they tend to be associated with larger commercial farms, account for a larger share of the farm production, and are likely to represent a growing need for credit.

FSA Credit Represents Important Credit Source to Beginning Farmers.

FSA’s overall market share for direct lending is 2 to 3% (USDA-ERS, 2016). However, this understates the relative importance of FSA loans to targeted groups, especially beginning farmers. At the end of 2014, 14% of all indebted beginning farms had either an FSA direct or a guaranteed loan outstanding (Table 2). Direct and guaranteed programs serve unique groups with direct programs tending to serve smaller operations. Most direct beginning farms were single operators with less than \$100,000 in annual farm production while most guaranteed beginning farms were single operators with production of over \$100,000.

[Place Table 2 here]

While most new direct loan volume has gone to farms with under \$100,000 in sales, larger farms were actually more dependent on FSA credit. Among indebted beginning farms with \$100,000 or more in farm production operated by a single operator and their spouse, more than one in four had either a direct or guaranteed loan outstanding in 2014 (Table 2). Both direct and guaranteed loans are important to this group, with 21% having a direct loan and 15% having a guaranteed loan outstanding. This dependence on FSA credit may be indicative of the financial pressure faced by this group of beginning farmers. While these commercial-sized, single operator farms were more profitable than smaller single-operator farms, farm labor requirements likely limit opportunities for off-

farm employment. Consequently, over half their household income is from the farm business which tends to be much more variable than income from off-farm sources. This greater reliance on variable farm income, combined with their shorter credit history, likely contributes to commercial lenders' unwillingness to lend to this group of beginning farmers, thus making them eligible for FSA credit programs.

Table 2: Indebted Beginning Farms with a Direct or Guaranteed FSA Loan by Number of Operators and Farm Size, December 31, 2014^a

	Single Operator ^b		Multiple Operators		All Indebted Beginning Farms
	Small (<\$100,000)	Commercial (≥ \$100,000)	Multi-generational ^c	All Other	
Share of indebted farms with FSA program loans	-percent-				
Direct	10	21	6	9	11
Guaranteed	2	15	4	3	5
Either direct or guaranteed	11	27	7	11	14
Distribution of Farm Loan Program Borrowers					
Direct	50	38	5	8	100
Guaranteed	26	61	7	6	100
Either direct or guaranteed	46	40	5	8	100

Source: USDA ARMS 2014 and USDA FSA Farm Loan Database for December 31, 2014.

^a Beginning farms include farms with an operator with 10 or fewer years of experience, but excludes those beginning farms without debt, as well as non-family farming entities and those farms with an operator identifying themselves as retired.

^b Including spouse as secondary operator.

^c Defined as 25 or more years separating the ages of the beginning farmer and at least one other operator.

Even though FSA lending programs have not traditionally served non-primary operators, they nevertheless, play an important role as a credit source to multiple-operator farms with a beginning farmer. Among multigenerational beginning farms, which had an average net worth of \$2.9 million, 7% had a direct or guaranteed loan outstanding in 2014. The share is even greater for all other multiple-operator beginning farms, with 11% having a direct or guaranteed loan in 2014. Thus, while the farm business may appear financially strong and commercially creditworthy, the beginning operators involved may not be so.

Policy Choices

As agricultural production continues to shift to larger complex operations with multiple operators, it may be necessary to consider the importance of beginning farmers in multiple-operator farms. As described in the box entitled 'Beginning Farm Categories', while secondary and tertiary operators are not eligible, by themselves, some are FSA borrowers. This suggests that they are likely meeting eligibility requirements by applying as an individual and developing a business plan where they are the primary operator. Policy actions may be considered which enable FSA greater flexibility to finance beginning operators desiring to 'buy into' an established operation as a non-primary operator.

With expectations of lower commodity prices and reduced incomes over the next several years, commercial lenders may exercise greater discretion in providing credit, resulting in an overall increase in demand for FSA credit programs. In addition, a combination of aging farmers and landowners suggests an increase in the transition of agricultural land, likely leading to a greater need for loans to beginning farmers to purchase real estate. FSA and

policymakers may need to consider options to allocate scarce lending resources depending on ultimate policy goals. If a goal is to focus on beginning farm groups where FSA loan programs are more consequential, the target group would be beginning farms of \$100,000 or more in annual farm production. At more than one in four of these commercial, single operator beginning farms having an FSA loan, this is the group most dependent on FSA credit. In contrast, if a goal is to focus on the largest number of beginning farms, those with sales under \$100,000 may well be the target group.

In order to reach more beginning farmers, it also may be necessary to reduce delivery costs, as can be achieved using microloans. Since their inception, microloans have expanded to include direct farm ownership and operating loans of up to \$50,000. Even though microloans utilize an abbreviated application process, a microloan to a more established farm may require much of the same information as required for a non-microloan and, therefore, require significant staff time to process. An even more streamlined process similar to FSA youth loans could be developed which targets start-up farmers with smaller credit needs and few assets, and may enable FSA to continue to serve more small farms in an increasingly efficient manner.

Another option, when combined with FSA's traditional lending, involves providing assistance to beginning farmers using methods other than loans. In 2016, FSA is providing \$2.5 million in cooperative agreements to groups providing technical assistance to beginning farmers, socially-disadvantaged farmers, and veterans that involve financial literacy and other educational vehicles.

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Author Information

Charles B. Dodson (Charles.Dodson@wdc.usda.gov) is a Senior Agricultural Economist, Economic and Policy Analysis Staff of the U.S. of Agriculture Farm Service Agency.

Bruce L. Ahrendsen (ahrend@uark.edu) is Professor, Department of Agricultural Economics and Agribusiness, Division of Agriculture, University of Arkansas.

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Beginning Farmer Policy Options for the Next Farm Bill

Juli Obudzinski

JEL Classifications: Q12, Q15, Q18

Keywords: Access to Land, Beginning Farmers and Ranchers, Farm Bill, Risk Management

Conversations about the way we grow, process, and consume our food are increasing in America. As the public's interest has grown, so too has the infrastructure to support such things as "farm to table" supply chains, a growing organic food market, and sustainably produced meats and dairy products. Federal policies have begun to respond to the public's growing interest in more sustainable food systems, yet major impediments remain. Some of the biggest obstacles to overcome are those faced by young and first-time farmers, particularly the challenge of accessing the land and capital needed to enter and establish themselves in the field. As the 2018 Farm Bill approaches, Congress will have an extraordinary opportunity, coming only once every five years, to level the playing field for beginning farmers and break down the barriers holding back the growth of sustainable agriculture in our country.

The high start-up costs of entering farming mean steep barriers to entry. This may mean the industry's potential for growth and innovation is stunted. As of 2012, beginning farmers made up only a quarter of all farmers in the United States (USDA-NASS, 2014). While it is not clear what is an appropriate share of beginning farmers, we do know that this has been a declining share of the nation's farmers since at least 1982 (Ahearn, 2013). Today, the average American farmer is over 58 years old—a number that has been slowly but steadily climbing for the last 30 years (USDA-NASS, 2014). Farm operators 65 years and older now make up the fastest growing group of farmers.

A majority of our current agricultural policies and support programs are targeted by default toward an older generation of farmers, many of whom may soon face retirement and begin to grapple with questions of farm succession or transfer. Farmers and ranchers entering the field today have specific needs and face new challenges, different from those of their older peers. Beginning farmers are younger on average than more established farmers, (USDA-NASS, 2014) and generally have less access to credit and capital. They also tend to operate smaller farms, have more diversified operations, and are likely to increasingly come from non-farm backgrounds. Many beginning farmers also struggle to find available land, even if they have the credit and capital to purchase it (Shute, 2011). To ensure a successful future for U.S. agriculture, policymakers need to take these differences into account and tailor programs and resources to meet the needs of our country's next generation of farmers.

Beginning farmers have rarely been at the center of Congressional debate on U.S. agricultural policies. We have seen increased attention to this important issue in each of the last five farm bills, however, and it is not unreasonable to expect even more in the next round. (Note: The interested reader can learn more about the existing programs described below by visiting the U.S. Department of Agriculture's or the National Sustainable Agriculture Coalition's website.) If Congress is to make real progress in paving the way for America's future farmers and ranchers, they will have to tackle serious issues in the 2018 Farm Bill, including:

- access to affordable farmland;
- access to appropriate credit options and relevant training resources; and
- lack of adequate risk management options for new farmers.

Increasing Access to Land

Nearly 100 million acres of U.S. farmland are set to change hands over the next five years, according to the latest data released by USDA's National Agriculture Statistics Service (USDA-NASS, 2015). Of this, just 21 million acres, or 23%, is expected to be sold to a non-relative, meaning that only a very small portion of our nation's farmland will be available for new, non-heir farmers.

According to a recent report released by the Economic Research Service (ERS) (Bigelow, Borchers, and Hubbs, 2016), landowners not actively engaged in farming currently own 30% of U.S. farmland. Some of these non-farming landowners are retired farmers, farmers' widows, or non-farming relatives, the majority of who choose to hold onto their inherited farmland and rent it out instead of selling the land to an aspiring or beginning farmer.

Compounding the difficulty of an already tight real estate market is the rising value of farmland over the past decade. Farmland inflation rates have increased by nearly 150% over the past 15 years, rising to well over \$10,000 per acre in some states that are facing high development pressure or investor interest (USDA-NASS, 2016).

A surge of interest in farming coupled with the escalating cost of and competition for productive land has made access to land the top challenge identified by new and young farmers nationwide. If we are to make real progress on improving access to farmland, the 2018 Farm Bill will need to include policies that encourage and support the timely transfer of farm businesses and properties in ways that support both retiring farmers and our next generation of young and beginning growers.

Following are just a few of the potential approaches to land access and transition that may receive consideration in the next farm bill:

Transition CRP Land to New Farmers

With the Conservation Reserve Program (CRP) fully subscribed, we can expect a significant amount of currently enrolled land to come back into production as contracts expire each year. If past trends continue, the land coming out will be among the more productive, less marginal acres enrolled in the program, suitable for livestock and in some cases cropping. In the 2018 Farm Bill, Congress will have an opportunity to continue to enhance incentives that can help get this land into the hands of new farmers and ranchers. While the past two farm bills have provided resources to incentivize the transfer of expiring CRP acres to new conservation-minded farmers through the Transition Incentives Program (TIP), high demand for the program has consistently outstripped available funding. TIP could be scaled up in the 2018 Farm Bill, both in size and scope, in order to better connect retiring and beginning farmers in CRP-rich states. Existing funding rests at \$33 million for the current farm bill cycle, though the Congressional Budget Office (CBO) projected full demand for the option at \$83 million (CBO, 2011). Doubling TIP funding or simply including TIP in the CRP baseline in the upcoming farm bill would help ensure that no farmer is turned away from the program due to insufficient funding.

Engage Land Trusts in Protecting Affordability of Farmland

Significant opportunities exist to engage our country's land preservation organizations in prioritizing farmland conservation easements that protect the affordability of farmland and encourage farmland transition. A conservation easement allows a land trust or other similar entity to purchase the

development rights on a specified property to protect the farmland from being sold for purposes other than farming. To achieve this, farm bill programs such as the Agricultural Conservation Easement Program, could be amended and expanded to prioritize conservation easements that protect the affordability of farmland, have an identified successor or succession plan, or involve a transfer of a farm to a young or beginning farmer. These policy changes could create a new, powerful tool to increase access to affordable farmland for the next generation of farmers, while ensuring our nation's farmland remains productive into the future.

Incentivize Sale of Farmland through Tax Incentives

While changes to the federal tax code are not normally included in the farm bill, the 2008 Farm Bill did include a tax title. The precedent set by the 2008 Farm Bill could set the stage for the inclusion of new tax policies to support beginning farmers in the next farm bill. There are a number of potential tax policies that, if included, would create significant opportunities for young and beginning farmers, including: capital gains breaks for farmland sales to qualified beginning farmers; tax credits for long term, conservation-friendly leases to new farmers; and improvements in the long-standing first-time farmer state "aggie" bond program.

Expanding Credit and Training

Access to credit, along with developing strong financial and business skills, is critical for any farmer—particularly those just beginning their careers in agriculture. Rarely do new and aspiring farmers have enough liquid assets to purchase or lease all the equipment, inputs, and land they need outright; more often they must seek credit and loans to get their businesses started. Federal and commercial loan programs are critical because they allow farmers to purchase the supplies they need when they need them, which means they can get their crops in the ground and begin reaping the fruits of their labor sooner.

Historically, new farmers have faced greater difficulty in accessing credit than more established farmers, who can boast greater assets and collateral, and a more predictable production and revenue history. Just as with any "start up" business, private lenders in the agriculture sector often consider beginning farmers to be a risky investment not worth taking. Congress established both the Farm Credit System (FCS) and USDA's Farm Service Agency (USDA-FSA) in order to service farmers who may not be able to easily access other loan and credit services.

Congress first made serving the credit and loan needs of beginning farmers a priority in 1980, when they enacted a statutory requirement that the Farm Credit System prioritize lending to young, beginning, and small (YBS) farmers. One hundred years since its creation, the Farm Credit System now holds roughly 40% of all farm business debt in the country, with 22% of its farm loans servicing beginning farmers in 2015 (FCS, 2016; Koenig, Iannetta, and Potter, 2016).

Both the 1990 Farm Bill and 1992 Agricultural Credit Act included major policy initiatives to expand the focus of FSA loan programs on beginning farmers. Since then FSA has made great strides in servicing beginning farmers; today over 70% of total FSA direct real estate loans and 64% of FSA direct operating loans support new farmers and their farm businesses (USDA-FSA, 2015). One program, in particular, that has seen significant success has been the public-private partnership Down Payment Loan Program (DPLP). DPLP has financed over 12,000 new and beginning farmers as of 2015, helping aspiring farmers to buy their first farmland and creating opportunities for beginning farmers to expand (USDA-FSA, 2015).

More recent changes to FSA programs have further opened doors for new farmers—especially those pursuing “non-traditional” markets or production methods, including organic, grass fed, value-added or direct-to-consumer/retail. The establishment of a new FSA Microloan Program, which better meets the needs of new farmers with smaller financial expenses, and the expansion of Farm Storage Facility Loans so that they can better serve beginning farmers growing for local markets, have created new credit options that reflect the changing face of agriculture.

Of course, there is still progress to be made in expanding credit to new farmers and providing them the tools, training, and products they need to launch and sustain successful farm businesses. Of particular importance given the recent downturn in the farm economy, access to appropriate and reliable credit options are likely to be topics of much debate in upcoming farm bill. Among the many policy options that may be considered are:

Index USDA Farm Ownership Loans to Reflect Farmland Inflation Rates

With the recent surge in agricultural land prices, moderated only slightly by lower commodity prices more recently, many farmers are struggling to find adequate loan financing options. The current statutory cap on FSA direct farm real estate loans is \$300,000—a figure that has not been adjusted for inflation since 2008. Farmland real estate values, on the other hand, have increased by nearly 40% since FSA loan caps were last raised (USDA-NASS, 2016). This mismatch has significantly hindered the ability of FSA to provide appropriate levels of credit that adequately reflect the reality of how expensive farmland has become. Since farmland, as in most real estate markets, differs and fluctuates to different degrees by region and state, the next farm bill could potentially address this issue by adjusting and then indexing the maximum loan amount to regional farmland inflation rates.

Preserve USDA Loan Funding for Small and Beginning Farmers

Given the recent downturn in the farm economy and lower commodity prices, many banks and other lending institutions are looking to USDA to provide federal guarantees on the loans they make to more established farmers. As Congress continues to work on how best to target federal credit resources, it will be imperative that beginning farmers are not left out of the conversation. Demand for loans already far outstrips available funding, and the average size loan is just a fraction of the current loan caps for both direct and guaranteed loans. That suggests that raising the caps could entice larger, more established farms to dominate the resource pool, potentially blocking access to credit for many small and beginning farmers. Congress will therefore need to proceed very carefully on this issue.

Enhance the Farm Credit System Mission to Serve Beginning and Diverse Farmers

As the FCS begins its second century, Congress might consider some expansions to improve the System’s mission to serve beginning farmers. For instance, the 1980 statute does not include minority farmers or returning veterans. In farm bills since that time, many FSA lending provisions have incorporated those underserved borrowers as priorities, and a parallel change is perhaps overdue in the FCS’s YBS mandate. Given the substantial interest among beginning farmers in the expanding local and regional food market, consideration might also be given to making it a declared objective of the FCS to serve the credit and related needs of YBS farmers and the businesses upon which they rely that are necessary to the growth and vitality of local and regional farm and food systems. Going even a step further, Congress might encourage the FCS to support its borrowers by helping to build, expand, or improve infrastructure and markets for locally or regionally produced agricultural products.

Expand Support for Beginning Farmer Financial and Business Training

Agriculture is a knowledge-intensive and experience-driven occupation, one which can take a lifetime to completely master. Many aspiring farmers entering the field today are first generation farmers, those who come from non-farming backgrounds and may not have had the opportunity to acquire important

farming skills and techniques through hands-on experience. With increasingly complex food safety regulations and financial and marketing environments, farmers today are required to obtain much more specific expertise across a broader portfolio of issues. In order to ensure that beginning farmers and ranchers can develop and maintain successful farm businesses, training and support programs will be essential in ensuring that they have the necessary technical skills and business acumen.

The Beginning Farmer and Rancher Development Program (BFRDP) is USDA's most substantial program targeted at providing these critical resources and training for new farmers. The program has invested \$124 million into 252 beginning farmer training initiatives in every state across the country over the past eight years (USDA-NIFA, 2016).

In the 2018 Farm Bill, advocates may seek support for a doubling of funding for this unique and critical program. An even more ambitious option that may gain traction during the farm bill debates would be to double funding for BFRDP's core training program and triple total funding so that the program could also support advanced initiatives linking retiring farmers to young and beginning farmers. Such an initiative, if funded, could also offer a public-private savings incentive to provide new, low-income farmers with the chance to save enough to acquire their first farm assets. It would not be surprising to see these and other related options receive increased attention as the farm bill reauthorization approaches.

Improving Risk Management Options for New Farmers

Adequate risk management strategies are critical to any farming operation and are especially important in a farmer's first few years, during which they may have few assets or savings to fall back on in case of a crop failure or lower than anticipated revenues. Beginning farmers need to consider the full gamut of risk management techniques from production, enterprise, and market diversification to resource-conserving farming practices. Access to federal crop insurance products is also critical.

The federal crop insurance program has been around since the 1930s, and over the course of the last decade it has become the keystone of our nation's farm safety net. Unfortunately, federal crop insurance has not adequately served all of U.S. agriculture; particularly underserved groups include beginning farmers, farmers of color, and those pursuing local, value-added, organic, and other rapidly growing markets.

As of 2014, federal crop policies covered 233 million acres of farmland across the country. Of those 233 million acres, however, only 1.3% were owned and operated by beginning farmers (USDA-RMA, 2016). Because most crop insurance policies are based on a five-year production history, beginning farmers often struggle to obtain coverage that accurately reflects their current and projected production levels as they incrementally scale up their operations over the course of 5, 10, or even 15 years.

The 2014 Farm Bill took some first steps toward expanding risk management options to beginning farmers and other traditionally underserved farmer groups. One was to increase premium subsidies by 10% for those with five or fewer years of farming experience. Another notable change was the introduction of Whole Farm Revenue Protection (WFRP). WFRP is a new type of revenue-based coverage designed to provide coverage for diversified farming systems and to expand risk management options for small and mid-scale, diversified, organic, local food producers, and integrated crop and livestock farms. Currently, however, WFRP requires farmers to provide four years of production history in order to be eligible to purchase the insurance—effectively blocking new farmers from utilizing the coverage in their first few years of production—when they are arguably the most in need of insurance coverage.

Reforms to our nation's crop insurance programs have already been a hot item of debate this year (Barnaby, 2016), and it will surely come up in discussions around the next farm bill. Some of the crop insurance reform policy proposals we expect will receive attention during the farm bill debate cycle include:

Expand Crop Insurance Benefits

Changes to crop insurance programs made in the last farm bill, including discounts on crop insurance premiums, waiving fees for catastrophic coverage, and the option for new farmers to utilize production histories from farms they take over, have increased access to crop insurance for many beginning farmers. Unfortunately, these benefits only last for the first five years a farmer is in operation, a divergence from all other USDA programs, which consider anyone farming 10 years or less to be eligible for beginning farmer benefits. Given the difficulties that beginning farmers face in accessing revenue-based insurance policies, which generally require five years of production history, Congress might consider extending crop insurance benefits for beginning farmers to at least the 10-year mark used by other USDA programs.

Improve Risk Management Assistance Payments for Beginning Farmers

For beginning farmers who cannot access crop insurance through other means, USDA offers basic risk management coverage through FSA's Non-Insured Disaster Assistance Program (NAP). In the past, farmers have often referred to NAP as the "not a penny" program because it hardly ever paid out for any losses claimed on their farms. This stemmed from the program providing such a low coverage level that a farmer had to demonstrate the loss of over half of their crop before receiving a NAP payment.

Significant improvements were made to NAP in the 2014 Farm Bill, including new buy-up coverage levels. One option Congress might consider in 2018 would be a premium discount for NAP buy-up coverage for beginning farmers. An even more fundamental change that Congress may consider during the 2018 Farm Bill debate would be to model a new FSA-delivered on-ramp to federal crop insurance after the existing NAP, making the new program available to all beginning farmers at highly subsidized rates while they build their production histories and become better candidates for federal crop insurance.

Level the Playing Field for New Farmers

The federal crop insurance program serves as a critical part of our nation's farm safety net, but the benefits of this public investment have not been shared equitably amongst all farmers, nor have the consequences of the rapid expansion of crop insurance policies impacted all farms equally. The availability of unlimited, deep premium subsidies in recent years has dramatically reduced the risk for the country's largest farms, freeing up capital for these large operations to further increase their size by purchasing land at higher prices than would be possible without the subsidies (Duffy, 2016).

The capitalization of program benefits into land values has been well documented as it relates to farm programs payments (Ifft, 2015), however research directly pertaining to crop insurance's influence has been less prevalent (Duffy, 2016). The overall effect of the competitive advantage created by unlimited crop insurance subsidies has been that smaller and more diversified farms and beginning farmers are less able to compete with their larger counterparts for land, further exacerbating the difficulty beginning farmers face in gaining access to farmland.

Debates on farm program reform have always been extremely contentious. Some in agriculture advocate for no changes to be made to the federal crop insurance program. These constituencies often warn that any changes to the program may cause destabilization, weakening the farm safety net for all farmers. Others in agriculture, however, believe change is not only possible, but also inevitable. They

have grown increasingly critical of the unlimited subsidies to our nation's largest and wealthiest farms by the federal crop insurance program (Land Stewardship Project, 2014). They believe that reform is not only needed to create a fair and level playing field for farmers, but also that it is necessary for establishing a new generation of farmers and to secure broad public support for agricultural risk management programs. The issue of crop insurance reform, including beginning farmer impacts, is sure to come to the forefront during the 2018 Farm Bill debate.

A Farm Bill for the Future

The latest Census of Agriculture shows that the number of Americans in farming has decreased by 20% in less than ten years. With an updated Census coming out next year, it is anyone's guess whether the ongoing aging-out of our nation's farmers will continue, or if we might finally witness a reversal in the trend. In any event, if we are truly concerned with the future of U.S. agriculture, policymaking must focus far more than it has to date on supporting our future generations of farmers and ranchers.

The 2014 Farm Bill took many positive steps toward better supporting young and beginning farmers; perhaps most importantly, USDA was provided with new and strengthened means by which they could provide much-needed credit, training, and technical assistance. Unfortunately, the investments made in the 2014 bill were nowhere near enough to trigger a reversal in the declining numbers of beginning U.S. farmers and ranchers.

Building on the policy strides made by recent farm bills, the 2018 Farm Bill could become a "farm bill of the future" by adopting an ambitious agenda to support the next generation of farmers. The tools provided in previous farm bills have made a dent in slowing the aging of U.S. agriculture, but it is very clear that greater investment and a more coordinated national strategy is needed to buck the trend and ensure that beginning farmers have the necessary support to successfully pursue a farming career. This next farm bill presents an opportunity to go beyond just making a dent; it represents an opportunity to dismantle barriers for beginning farmers, leaving a legacy that will reshape the future of U.S. agriculture. The opportunity exists, but only if we seize the moment.

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Author Information

Juli Obudzinski (jobudzinski@sustainableagriculture.net) is Senior Policy Specialist, National Sustainable Agriculture Coalition, Washington, D.C. The National Sustainable Agriculture Coalition (NSAC) is an alliance of grassroots organizations that advocates for federal policy reform to advance the sustainability of agriculture, food systems, natural resources, and rural communities.

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