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Report The New Generation of Farmers and Ranchers Infusing U.S. Agriculture

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communication tool to

extend the reach of projects,
as well as to highlight

evolving issues shaping

the future of the food

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These reports are tools to

inform and stimulate

discussion among

stakeholder on options and

alternatives to key issues.

Who will be the next generation of farmers and ranchers to drive the engine of U.S. agriculture? This question has been asked for decades, especially when the economic cycles of agriculture are in a downturn.

When a severe economic crisis gripped U.S. agriculture in the 1980s many young adults decided not to seek careers in production agriculture. They may not have had the finances needed to build an operation or may have been so affected by the experiences of their parents that they opted for another field of work.

The current multi-year down cycle of economic stress may precipitate the same query. It is too early in the cycle to clearly identify the long-term impacts, but today's young, beginning and small farmers are exhibiting traits that may help them not only bridge this downturn but thrive in the years ahead. Like their predecessors, today's young and beginning farmers likely have higher overhead costs than established operations. That's where the similarities may end.

"The young farmer of today is very agile, very innovative and somewhat more resilient. Most are in the 25 to 45 age range," says David Kohl, Professor Emeritus of Agricultural Economics at Virginia Tech. Unlike the 1980s, today's young farmers are often more business-oriented than production-oriented. The 1980s wiped out poor production mangers; this cycle is wiping out the below-average business managers, he notes.

"Compared to the 1980s, today's young farmers are focused on diversifying their income," Kohl continues. "They are into the gig income—it might be a towing business, or seed sales or a drone service. They are looking for opportunities to diversify their streams of cash flow. They are really agri-entrepreneurs."

Many of today's young/beginning farmers have worked in other businesses off the farm, returning to agriculture with a higher business IQ and management skills. "And if they don't have the knowledge they need, they go out and find it," Kohl says. He cites a strong focus on building working capital, and a willingness to try different options to accomplish that goal. Using a baseball analogy, he adds, "Instead of a home run every time, they are happy to score singles" if it builds working capital.

Today's young and beginning farmers are focused on market opportunities and "ways to exploit those markets," according to Gary Matteson, Vice President of Beginning, Small Farmer Programs and Outreach with Farm Credit. "They have a better market channel perspective."

Matteson notes that many of today's beginning farmers are not in conventional agriculture. "More of these [operators] are in the spectrum of smaller, direct-to-consumer marketing or retail producers," he explains. "They have more levers to throw to manage markets and risk."

Decisions on crop insurance—a primary risk management tool of commodity crop producers—"are made months in advance of harvesting a crop, making it more of a defensive strategy," says Matteson. For young farmers in nonconventional production, flexibility and the ability to quickly respond to current situations is vital, he continues.

Young producers are also bringing new approaches to conventional operations. For example, a young farmer returning to a family's traditional cow-calf operation may introduce a grass-fed beef product to fill a new market demand. "Even if it's the same crop or product, young producers are looking for profit in a higher net marketing channel—be it specialty crop, identity preserved or non-GMO," Matteson says. "These younger farmers have grown up with the internet and know how to identify opportunities, find markets and gain knowledge of who is doing what."

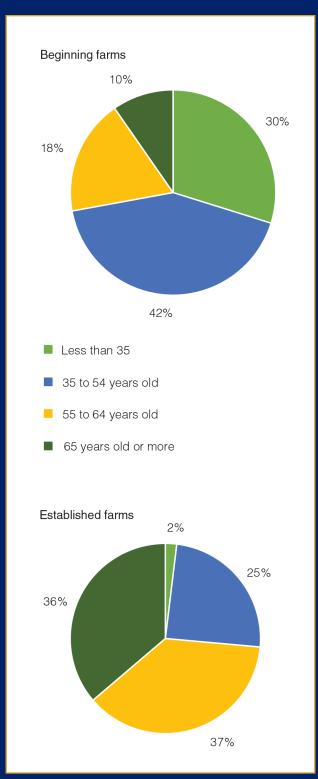
Kohl agrees. "Young producers today are in touch with what the consumer wants, and they have aligned to the marketplace," he says.

Young and beginning producers with direct-to-retail operations are "fewer in number and fewer in acres," Matteson notes. "But many communities want to see such operations succeed. [These operations] are part of the strength of the rural community and the community wants to help them succeed."

While it may be beneficial to be near an urban area, where CSAs (Community Supported Agriculture) or

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Figure 1 – Age distribution of principal operators of beginning and established farms producing at least \$10,000 of output, 2013-17



Source: An Overview of Beginning Farms and Farmers, USDA Economic Research Service Brief Number 29, September 2019

Definitions and statistics

- Based on the 2012 Census of Agriculture, Farm Credit calculates that 25.8% of all farms in the United States are beginning farms, Matteson reports. "We believe this more accurately represents the distribution of beginning farmers in farm businesses, as well as demonstrating that the pipeline of beginning farmers to future farm ownership is robust," says Matteson. Farm Credit defines a beginning farm as any operation that includes as an operator a beginning farmer—defined as having "10 years or less of farming or ranching management experience at the date the loan was originally made." A borrower's beginning farmer status is assessed each time a loan is serviced, modified or renewed, typically every 1 to 3 years, Matteson reports.
- The U.S. Department of Agriculture (USDA) defines a beginning farmer as someone who has materially and substantially participated in the operation of any farm or ranch for 10 years or less. (https://www. ers.usda.gov/topics/farm-economy/beginninglimited-resource-socially-disadvantaged-and-femalefarmers/). USDA's Farm Service Agency (FSA) has no age specification for a beginning farmer but requires experience to be at least three years and no more than 10 years. While USDA agencies are generally in agreement on a definition of a beginning farmer, there may be differences in the definition of a beginning farm.
- In 2017, USDA's National Agricultural Statistics Service (NASS) changed its census publication to define beginning farms "as operations where any producer or principal producer has fewer than 10 years' experience." (USDA-NASS 2019). In the previous definition, the principal operators had no more than 10 years of experience on the farm they were currently operating. NASS also changed how they count beginning farms by now reporting the number of farms with beginning farm operators and the number of farms with beginning principal farm operators. These operations may be made up of all beginners, or some beginners and some established.
- In September 2019, USDA's Economic Research
 Service released the report, An Overview of
 Beginning Farms and Farmers, (https://www.ers.usda.
 gov/publications/pub-details/?pubid=95009), which
 was compiled from data gathered in USDA's 20132017 Agricultural Resource Management Survey
 (ARMS). Notable items include:
 - ERS defines a beginning farm or ranch as "one on which all the operators have had no more than 10 years of experience as a farm or ranch operator."

- o 67% of beginning farm principal operators worked off-farm in 2017, compared to 45% of established farm operators. While beginning farm households earned almost as much total household income as established farms, off-farm income represented a greater share of total income for beginning farms (77%) than it did for established farms (56%), according to the ERS report.
- o During the four-year time period, there were an average of 898,100 operators with no more than 10 years of farming experience on any operation. A little more than half were operators of beginning farms, with the remainder being operators on farms where not all the operators were beginning farmers.
- 30% of beginning farm principal operators were 35 years of age or younger, compared to only 2% of principal operators of established farms. Ten percent of beginning farm principal operators are 65 years of age or older, compared to 36% of established farm operators. (Figure 1)
- o Among farmers with at least \$10,000 of production, the average age of the principal operator of beginning farms is 43 years, compared to 63 years for operators of established farms.
- The 2017 Census of Agriculture, (https://www.nass. usda.gov/Publications/AgCensus/2017/Full_Report/ Volume_1,_Chapter_1_US/usv1.pdf), which was released in April 2019, reports:
 - o The average age of all producers is 57.5 years, up from 56.3 in 2012.
 - o In 2017, one in four producers is a beginning farmer (10 years or less of experience). Average age is 46.3 years. The 2012 numbers are similar, but not an exact comparison due to procedural changes in the Census.
 - 32% of beginning farmers were 55 years of age or older, with 12% were years or older. In 2012, 35% of beginning farmers were 55 years of age or older, and 13% were 65 years or older.
 - 8.4% of all producers were less than 35 years of age in 2017, compared to 8.1% in 2012.
 The number of producers who are less than 35 years of age increased 11% between 2012 and 2017; this compares with a 3% increase in all producers.
 - o 95.9% of U.S. farms and ranches are familyowned businesses in 2017, down from 96.7% in 2012.

farmers markets may be more plentiful, it's not required for direct-to-consumer marketing, Matteson and Kohl agree. The internet has made it possible for producers well away from urban centers to cultivate the opportunities available in those direct sales markets.

Entering existing operations

A significant number of young and beginning farmers and ranchers today are entering existing operations—often existing family-run operations. This poses its own set of challenges for all the generations involved.

"Very few existing businesses have room for the extra overhead of adding another employee—even if it is a son or daughter," says Nate Franzén, President of the Agricultural Banking Division of the First Dakota National Bank of Yankton, S.D. "The challenge [for a beginning farmer] is how to go back and bring something to the operation that adds value—to not be a drag but a lift to that operation. An operation can't add overhead that doesn't pay for itself."

Kohl estimates 40% of the young farmers and ranchers going into an existing family operation are not successful. The business operation may not be of a size or scope to support multiple generations. Too often, "the parents and grandparents are the biggest problem. They don't have the mindset to allow the younger generation to grow the business," Kohl explains. "The son or daughter who goes back to a family operation and is not involved in management decisions within a year or two will be a hired hand for life. They are caught in the ball of confusion and it's a disaster."

Another 20% of these young operators returning to existing family operations are on the fence—they could succeed or fail, according to Kohl. The remaining 40% are often 5th, 6th or 7th generation farmers. "The older generation is willing to allow the transfer of good skill sets to the next generation—to develop the budgets and meet with the lender," Kohl says. "This kind of transition is successful."

Franzén is seeing young farmers bringing new enterprises into existing businesses. "A common element of young and beginning farmers is that they embrace technology," he explains. "Sometimes the older generations struggle to keep up or are just not proficient with technology. That's a real value the younger generation bring—they understand technology and can help implement it in the operation."

Young/beginning farmers are also creative in how they use their resources and assets to diversify income streams in an operation. Franzén cites a young farmer who added a sheep/lamb enterprise—it required less capital investment that other options and offered profitable market opportunities. Other farmers have started offering services—such as manure

hauling, earth moving or snow clearing—which meet a need in the community. Traditional agricultural production is still the focus of many of the farmers and ranchers with whom Franzén works "but there is a lot more evaluation of diversification to enhance the revenue stream. Some of that diversification is more agribusiness than production—though perhaps linked to production."

The role of the lender

While supportive of young and beginning farmers, the criteria lenders use in making and reviewing loans for these operations "are no different than any other client," Franzén says. The borrower "needs options that make sense and are viable. That's true regardless of the business cycle," he continues. "We need to understand as best we can the business IQ and management skills of the borrower."

Matteson admits a direct-to-retail seller may pose challenges for lenders. "The hard mental mindshift is lending to a marketing plan as opposed to a bushel-based per-acre expectation," he says. "There is a higher chance of reward, but lenders need to understand the market-based operation."

Many lenders have programs to help young and beginning farmers build and refine their management expertise. Farm Credit Mid-America (which serves Indiana, Ohio, Kentucky and Tennessee) offers the Know to Grow program, a two-day workshop in which participants assess the financial strengths and weaknesses of their respective operations to help improve farm profitability and financial performance. For more than two decades, other Farm Credit associations nationwide have offered educational workshops for young and beginning farmers, as well. Kohl has also been involved in the development and delivery of blended online education to more than 1,000 young and beginning farmers through AgFirst Farm Credit Bank's Farm Credit University program. (https://www.fcuniversity.com/home.aspx)

Matteson notes Farm Credit also offers special programs to beginning farmers with lower interest rates or equity requirements, but the borrower often must participate in financial training sessions. These sessions polish the borrower's management skills and "help the borrower know what the lender is looking for in financials," says Matteson. "It's encouragement for the borrower, and encouragement for the borrower to communicate with the lender."

Since 2012, First Dakota has offered a Beginning Farmer Program, a year-long educational experience for young borrowers getting started in agriculture. Participants must be 21 years of age, and most have college or two-year educational degrees. "We look at business IQ, business management, family business dynamics, marketing trends in

the industry, strategic planning and leadership both within their operation and within the industry," Franzén explains.

The program also examines consumer preferences. Franzén took this year's class to Minneapolis to visit urban farms and farmers markets with the goal of gaining a broader understanding of what drives consumer preferences and buying habits. To combat the trap of talking only to each other, "we need to make a point to travel to see markets in other areas, and learn what consumers want," he says.

Not every young or beginning farmer stays in the business, Franzén notes. "Some have exited by their own choice. They don't like what they see on the horizon or they see better management options in other places," he explains.

Public policies to support young, beginning and small farmers fall primarily in the area of assistance when purchasing land. Many states offer programs to provide beneficial lending rates to young, beginning and small farmers. For example, since the 1980s the Agricultural Development Division of the lowa Finance Authority has offered loan and tax credit programs to assist beginning lowa farmers.

The lowa Beginning Farmer Loan Program assists new farmers in acquiring agricultural property. These loans are financed by participating lenders or contract sellers with the issuance of federal tax-exempt bonds. Interest received on contract sales or direct loans by individuals is also exempt from state income taxes. The tax-exempt interest income earned by lenders and contract sellers enables them to charge borrowers a lower interest rate—typically 20% to 25% below market rates. The farm being purchased can be no more than 30% of the median county farm size.

On the federal level, the U.S. Department of Agriculture offers direct farm ownership and operation loans to beginning farmers. The Agriculture Improvement Act of 2018 also includes provisions for beginning and farmer rancher coordinators in each state to develop plans for outreach and technical assistance in county and area USDA offices. In other provisions of the Act, beginning farmers are eligible for a new Soil Health and Income Protection Program, as well as Next Generational Agriculture Technology Challenge awards. The awards are for development of mobile technology that removes barriers to marketplace entry for beginning farmers and ranchers.

Tools for generational transfers

Many organizations and financial institutions offer farm owners and operators tools to help keep their businesses viable now and into the future, including generational transfers.

For example, First Dakota National Bank's Keep Farmers Farming program (https://www.firstdakota.com/agriculture/keep-farmers-farming) helps operators address such issues as strategic planning, best business practices and succession planning. The program was created in 2014 after members of the bank's Agricultural Advisory Committee voiced concern about wealth and generational transfers. In its five years of operation, the program "has helped more than \$1.5 billion in assets get positioned for transition" through estate and succession planning, according to Nate Franzén, President of the Agricultural Banking Division of First Dakota.

Operators do not have to be borrowers of First Dakota to use the fee-based service, explains Alan Hojer, who heads the consultancy program. Fees are determined based on services the farm and ranch operators request to meet the demands of the operation, and the size of the operation. "Scale does change the level and impact that the complexities [of transitions] are having on the operation. But the issues are similar between all," says Hojer.

"We are third-party facilitators," says Hojer. "It is basically a discovery process that ultimately helps people learn about themselves and to identify what fits their needs. The answers are all within them. They just need someone to help them bring it out."

Hojer and his wife, Pam, started their own farm enterprise in 1992, later bringing their son into the operation. Observing the success of this transition, neighbors came to Hojer asking for advice on doing the same in their operations. That lead to his work with the First Dakota program. "I like problem solving and helping people," he says, adding that 35-years in sales developed his ability to draw information out of people, as well as his ability to handle conflict.

There are many informational resources on the options for achieving generational transfers of assets but putting that information into practice can be paralyzing. "When the anxiety level [of the farm and ranch operators] is high enough it brings recognition that they need help," Hojer explains. "It is the anxiety that gets people to open up and recognize that the answers are within them."

A frequent challenge is what Hojer calls "the legacy of how [the transfer] is supposed to be done—that the operation must be kept unified and that any separation of it is failure." The older generation in the family may be burdened with "the unwritten promise that they are to carry the farm on to the next generation," Hojer says. "Once they understand that legacy can be defined differently, they are on board. This brings a fresh approach to finding the right strategies for the operation."

Hoyer works to help farmers and ranchers see their options. "We want [them] to understand what they are up against—the odds of failure and the challenges in place that need to be overcome," he continues. "They may be able to stay unified, or they may not have the skills to keep it unified. Those are some of the answers that come out in our discussions, as well as an understanding that there are multiple paths to success—not just one."

In some cases, the operations future may not be with another generation of the family, but with a new operator, says Hojer. "In some situations, [programs which] match retiring farmers with beginning farmers, can be more successful than just keeping the operation going in the family. The older generation can select who has the skills needed and with whom they want to work," he adds. "With family you may have no options. You are born with those who become your future partners, regardless of skill or character."

lowa State University's Beginning Farmer Center provides educational materials to beginning farmers in need of resources on diverse farm management issues, multigenerational operations working through transitions, and retiring farmers seeking opportunities to transition their operations to the next generation of farmers. Since 1994, the Center's *Ag Link* program has helped match retiring farmers with young people interested in getting started in farming. Center Director David Baker estimates more than 160 matches have been completed through the program, with the average farm about 600 acres.

AgLink's beginning farmers are generally in their mid-30s, college-educated and married with small children, Baker reports. Most are not farming today, though some are doing so on a small scale. Most have a connection to agriculture, often through a distant relative. The retiring farmers interested in transitioning their operations may not have children or immediate family members to whom they can transfer the farm. If the farmer has children, they have often built careers off the farm and are not interested in pursuing production agriculture.

The transition takes time. To make it a reality, both parties must commit to the process and establish a plan for the transition.

While Ag Link focuses on connecting beginning farmers and retiring farmers, the Center's Returning to the Farm program focuses on the challenges of transitioning multigenerational farms, specifically adding a new generation to an existing farming operation. The goals, perspectives and talents each family member brings to the table in multi-generational operation—capital, labor, technical knowledge or management expertise—can generate separate and often conflicting goals, Baker notes. The ability to transition an operation from one generation

to the next may well depend on the ability of each individual to address those issues.

In the 13 years he has worked at the Center, Baker has seen several common aspects of the transition process:

- Prisk management: If they are college educated, beginning farmers may be accustomed to regular annual incomes of \$50,000 to \$60,000 per year or more. But annual net farm income can vary widely year-to-year—as the 2019 crop year so clearly demonstrated—threatening the resilience of beginning operations. Beginning farmers need to be risk takers who know how to manage that risk.
- Business plans: A business plan is mandatory—to test goals being articulated and to lay out a clear path for reaching the goals. Regardless of the size of the operation, or whether the transition is multigenerational or retired to beginning farmer, this management tool is vital is communicating clear and realistic expectations for everyone involved. It is also a living document, that must constantly be monitored, amended as needed and communicated.
- Sound management: A successful transition requires a manager focused on the business—not a way of life. Managers need to know how to carry out the business plan, how to leverage borrowed capital, and when to ask for help—with farm work or management issues.
- Common goals: Farm owner/operators are often married couples. If both partners are working in the business, sharing the same goals and supporting each other in the challenges, there is a greater probability of success—regardless of whether they are beginning, retired or mid-career.
- Communication: Whether it is between spouses, family business partners, or the beginning and retiring farmer, sound communication skills and clear communication of goals and actions is vital to success. Its importance cannot be over stressed, Baker says.
- Succession planning: Whether a retiring farmer or individuals within a multi-generational farm, a specific plan for succession planning is a necessary part of business planning. Some lenders require it.
- Diverse operations: Size of operation does not determine success: While the number of mid-sized operations is declining, there is growth in small niche farms, or in operations with value-added products or services, especially if viable retail sales outlets exists via farmers markets, roadside stands or metropolitan areas.

Balance sheets for beginning and experienced operations, 2012 and 2018

FINPACK (http://finpack.umn.edu) is a farm financial planning and analysis software system developed and supported by the Center for Farm Financial Management at the University of Minnesota. The software is used by agricultural producers, professionals, educators and lenders as they work with more than 50,000 producers to analyze their businesses each year. Twelve farm management education programs using the FINPACK software currently contribute data to a database known as

FINBIN (http://finbin.umn.edu). Average data for a users' selected query is available through FINBIN; individual producer information is not available. (Learn more about the database at: https://finbin.umn.edu/home/GetStarted.)

The 12 management education programs are located in 11 states: Illinois, Michigan, Minnesota, Missouri, North Dakota, Nebraska, Ohio, South Carolina, South Dakota, Utah and Wisconsin.

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Financial performance measures of farm operations, 2012 and 2018

	In operation 11 to 40+ years		In operation 10 years or less	
	2012 Group Median	2018 Group Median	2012 Group Median	2018 Group Median
	(2,881 operations)	(2,451 operations)	(744 operations)	(836 operations)
Net farm income	197,828	30,572	90,685	26,855
Rate of return on assets (cost)	12.1	1.4	14.2	3.6
Rate of return on equity (cost)	17.4	-0.6	30.7	4.4
Operating profit margin (cost)	27.6	5.0	27.0	10.5
Asset turnover rate (cost)	45.3	29.1	55.3	40.0
Current ratio	2.54	1.39	2.11	1.41
Working capital	294,705	101,541	78,084	32,125
Working capital to revenue ratio	39.9	19.0	27.6	19.8
Term debt coverage ratio	3.37	0.94	3.18	1.52
Total assets	2,524,597	2,878,718	838,396	821,546
Total liabilities	784,199	976,596	423,883	439,837
Net worth	1,568,950	1,696,023	350,936	307,396
Change in retained earnings	163,011	9,936	81,243	29,759
Net worth change	205,377	21,444	91,161	37,746
Farm debt to asset ratio	36	41	54	60
Total debt to asset ratio	35	38	54	58
Change in earned net worth %	18	1	40	16
Net nonfarm income	13,162	16,013	17,891	28,728
Family living / owner withdrawals	s 53,536	49,987	36,959	32,996
Income tax (accrued)	5,253	1,258	275	0
Farm capital purchases	126,770	49,000	69,333	28,705
Total crop acres	735	729	295	271
Crop acres owned	203	176	0	0
Crop acres cash rented	366	391	169	190
Machinery investment per acre	558	670	290	231

Education and management experts agree that producers who choose to participate in farm management programs tend to have higher business IQ and more accurate records than the nationwide averages. (An overview of calculations and definitions of various financial ratios and measures is available at: https://www.cffm.umn.edu/wp-content/uploads/2019/02/FarmFinanceScorecard.pdf)

The chart on page 7 shows selected performance measures for two groups of farmers—those farming 10 years or less and those farming from 11 years to more than 40 years. For each group, data is provided for 2012, when agricultural economic conditions were strong, and 2018, the most recent year for which FINBIN data is available. The variation in sample numbers from 2012 and 2018 reflects reporting variances in when data is available from the respective management programs, as well as variances in who participates in the analysis program year-to-year. The data presented is for whole farms rather than individual enterprises.

Here is a closer look at some of the numbers, with additional comments from David Kohl of Virginia Tech, and Pauline Van Nurden, Extension Economist at the University of Minnesota's Center for Farm Financial Management.

- During the six-year period, operations in business
 11 to 40+ years saw net farm income decline
 84.5%. Operations in business 10 years or less saw
 a 70% drop in net farm income.
- The younger operations have higher debt-toasset ratios than the more established operations.
 The ratio has increased about equally for the two groups over the six-year period.
- While they were more leveraged, the younger operations were more efficient, as reflected by the Asset Turnover Rate, i.e. the ability to generate revenue from assets.
- On average, because of better utilization of assets, asset turnover rate and higher profit margin through revenue and cost management, the

- younger operations had a higher rate of return on assets (ROA) in this downcycle, potential evidence of their business IQ, agility and innovativeness, says Kohl. Another consideration is that younger operators often receive assistance that is not easily quantified on a balance sheet income statement, such as reduced land rent or machinery use provided by family members, Van Nurden adds.
- The Term Debt Coverage Ratio reflects the ability of the operation to meet debt payments. With a ratio of 1.52, the younger operations appear to be weathering the down cycle better than the older operations, with a ratio of 0.94. "This could be due to the younger operations having more nonfarm income and 'gig' income from other enterprises as they diversity their income streams, allowing them to be able to service their debt obligations and still make money in the downturn," says Kohl.
- The net worth of the 11 to 40+ years group increased 8% during the six-year period. For the 10 years or less group, net worth declined 12%. "The largest percentage of the net worth change value for each group for each of the years represented is coming from retained earnings," says Van Nurden.

For experienced farmers, the change in retained earnings is more than 16 times greater in 2012 as compared to 2018. "In 2012, retained earnings were 79% of net worth change. The remainder is from land value changes (or other asset valuation changes), and changes in deferred liabilities," Van Nurden continues. "Beginning farmers had more profits in 2012 and this definitely slowed into 2018. Yet, much of their net worth change, even in 2018, is coming from profits and retained earnings."

 Over the six-year period, operators 10 years or less report a 60% increase in net nonfarm income, compared with a 22% increase for the older operator group. Kohl notes that the younger operations had lower family living/owner withdrawals and higher nonfarm income.

