Transcript: America's Diverse Family Farms 2019 Edition

Good afternoon everyone and welcome to our webinar, America's Diverse Family Farms 2019 Edition. My name is Kellie Burdette and I will be your host. This webinar is being recorded and will be posted on the ERS website next week. At any time during the webinar, you may enter a question into the chat feature on your screen, and our speaker will answer at the end of the presentation. Our speaker today is Christine Whitt. Christine is an agricultural economist in the Farm Economy Branch of the Resource and Rural Economics Division of USDA's Economic Research Service. Her research examines how U.S. agricultural policy and the farm economy affect U.S. farm business finances and production, and the well-being of their associated households. Christine earned her Master's in Applied Economics and Management from Cornell University. I think we're ready to start, so Christine, you can now begin your presentation.

Good afternoon, my name is Christine Whitt and as Kellie said I am an agricultural economist in the Farm Economy Branch for the Economic Research Service. Today I would like to present a webinar on a report released earlier today titled, America's Diverse Family Farms: 2019 Edition, and this report is now available on our website. So, to get started, I want to give a brief overview of the report.

So, this report describes characteristics of the two million U.S. farms, what they produce, farm profitability, receipts of government payments, and participation in agricultural federal programs. Information about the different types of farms is important in understanding the farm sector and farms.

The data for this report come from the 2018 Agricultural Resource Management Survey or ARMS. ARMS is a unique, annual survey, conducted by the Economic Research Service and the National Agricultural Statistics Service, or NASS. ARMS is the USDA's primary source of information on farm businesses, and associated households of the principal operator. Principal operators are the operators who are most responsible for running the farm. The 2018 ARMS covers the farm activities during the 2018 calendar year. The survey was conducted in early 2019 and is the latest available data. So, before we get into the report, I want to go over some definitions of what a farm is and what a family farm is.

So, the USDA defines a farm as any place that's sold or normally would have sold at least $1,000 worth of farm products in a given year – and this is a fairly comprehensive definition – it means many small farms are counted in our farm count, even though many have limited sales. This means that the farm sector consists of a wide variety of farms: many small farms with little sales; midsized farms with hundreds of thousands of dollars' worth of sales; and large farms with a million dollars in sales; and then a family farm is any farm where the majority, or more than 50 percent of the business, is owned and operated by an operator and individuals related to the operator. So, now I'm going to talk about how exactly we classify these farms.

So, the diversity of farms leads us to the ERS farm typology. This helps us classify farms into more homogeneous groups based on similar characteristics. First, we determine whether a farm is a family farm or a nonfamily farm. Then we break out family farms based on farm size measured by gross revenue, and gross revenue is a measure of income received by the farm. This

measure is a gross measure, so expenses are netted out. And then for our classification of small farms, we break it out further, depending on the principal operator, what they declare is their major occupation. So now we'll go over our exact ERS farm typology.

So, we start off with small farms, and these are farms that report annual gross revenue less than $350,000. As I said before, small farms are then split into two different groups based on what they declare as their major occupation. So, for farms that declare farming is not their major occupation, we have two groups: we have retirement farmers, or where principal operators report that they are retired although they continue to farm on a small scale; we have off-farm occupation farmers, where the principal operators report a major occupation other than farming. And then our other group where farming is the main occupation. This is as I said, where principal operators report farming is the major occupation: we have low-sales farms, with an annual gross revenue of less than $150,000; and moderate-sales farms, with annual gross revenue between $150,000 and less than $350,000.

And to continue that typology – we have midsize family farms and they have an annual gross revenue between $350,000 and less than a million; and then we have our large-scale family farms, which includes large family farms with annual gross revenue between $1,000,000 and less than $5,000,000; and then very large farms, which have an annual gross revenue of $5,000,000 or more; and then we have nonfamily farms and these are farms where the operator or persons related to the operator do not own a majority of the business. Nonfamily farms are not just large farms operated by publicly held corporations. A common example of a nonfamily farm is a farm operated by unrelated business partners. Another example is a farm operated by a hired manager on behalf of a landowner. In 2018, 15 percent of nonfamily farms had gross cash farm income of a million or more, so the majority of nonfamily farms are either small or midsize farms.

With these definitions in mind, we will now look at the findings of the report. We'll start by looking at the distribution of farm count, land operated, and value of production using the farm typology. So the majority of farms are small family farms, but large-scale farms have the largest share of the value of production. Small farms represent 90 percent of all farms, 48 percent of the acres operated, but only 21 percent of production. Whereas large-scale family farms represent 2.7 percent of farms, but account for the largest share of production at 45.9 percent of production on only 19.5 percent of total acres operated. Family farms as a whole represent 98 percent of all farms and 88 percent of production.

Now we look at the distribution of the value of production by farm typology and commodities produced. So just as a reminder, the group of small farms has annual gross revenue less than $350,000 and this is compressing the retirement off-farm occupation, low-sales, and moderate-sales classes; and midsize farms have annual gross revenue of $350,000 to less than $1,000,000; and large-scale farms have annual gross revenue of $1,000,000 or more compressing large and very large family farms. So here we see that small farms produce 56 percent of poultry production, including eggs, and 50 percent of hay production. Midsize and large family farms account for the majority of cotton, cash grains, or oil seed production, and large-scale family farms also produce the majority of dairy. Nonfamily farms and large-scale farms produce the bulk of high-value crops and beef. The large scale and nonfamily beef operations are most likely the large feedlot operations.

Now we're going to look at the operating profit margin by typology. So the operating profit margin, or OPM, measures the ratio of operating profit to gross income. Operating profit is net income plus interest minus an adjustment for unpaid labor. It is used to measure the resources available to fund a farm's business capital. Farmers with a low OPM may be at a higher risk of financial stress. This figure breaks OPM into three risk categories. First we have the red zone which is high risk and these are farms with OPM less than 10 percent, and then we have the yellow zone or medium risk with OPM between 10 and 25 percent, and then the green zone or low risk and these farms have OPM greater than 25 percent. What's noticeable about small farms is small farms have a greater share of farms in the OPM red zone; however, small farms typically rely on off-farm income, so that many are in the red zone for the operating profit margin does not necessarily mean that the farm is in financial stress. Off-farm income is not captured in the OPM calculation. Remember that many small farms are classified as retirement or off-farm occupation, so the farm business being profitable is not essential to the continued survival of the farm. Generally, the share of farms that are in the green zone increases with farm size. Midsize, large, and very large family farms have between 37 percent and 42 percent of farms in the green zone. It is also important to note that there is a wide range of farm performance within each zone.

So now we're going to shift gears and focus on the farm household. So farm household income is composed of farm and off-farm income. The farm income measure is a net measure, so it can be negative because we're netting out expenses. So off-farm income mostly comes from self-employment or wage or salary jobs. Other types of farm income include transfer income such as social security, investments, pension, 401k plans, and income from capital gains.

So with that in mind let's look at median household income by farm type. So the median income is the level at which 50 percent of households have greater income and 50 percent of households have less than the median income. So this is a distribution of the median household income by farm typology and, in general, farm households do not have low income. Retirement family farms and low-sales farms are the only two typology classes with median farm income below the median of all U.S. households and median U.S. households with self-employed income. We compare farm households with self-employed income because farm households are most similar to other U.S. households that own a business. Also, notice that there is a distinct trend that median household income increases as farm size increases. Something that is not included in the slide, but is important to mention, is that farm households are also not generally low wealth either. Wealth is defined as the net worth of a farm household and is the sum of all farm and non-farm assets minus farm and non-farm debt. Only 3 percent of all family farms had wealth below the U.S. median household in 2018. This is largely due to the amount of farmland farms typically own.

So now that we've talked about farm income let's talk about this important aspect of off-farm income and see what percent of principal operators and spouses are working off the farm. So many family farm households combine farm and off-farm income to generate income and receive other benefits from an off-farm job. Over 41 percent of U.S. family farms fall into this "off-farm occupation typology class" and just a reminder, those are principal operators who declare an occupation that is not farming. Over 80 percent of those operators, from the off-farm typology class, work off the farm, as do 60 percent of their spouses. Principal operators of large-

scale family farms are less likely to work off the farm than are operators of small and midsize family farms. Only 11 percent of principal operators of large farms and 3 percent of those at very large farms also hold off-farm jobs.

So as I mentioned, farmers also have multiple reasons for taking an off-farm job so now we're going to look at one of those reasons which is health care. So here we see that where the spouses of the principal operator held an off-farm job, a majority reported that healthcare benefits was one of the reasons for working off of the farm. While principal operators, particularly of large scale farms and farming occupation small farms, were less likely to cite health care benefits as a reason for working off the farm.

So now that we've looked at income and we've looked at who's working off the farm let's now look at where these farmers are working. But before we get into that, I want to go over our ERS collapsed farm typology. So on the next slide we are using the collapsed farm typology that compresses our large typology we've been using into three subclasses. So first we have our commercial farms. This includes midsize family farms, large scale farms, and nonfamily farms. And then we have intermediate farms and this includes small family farms whose operators cite farming as a principal occupation and this again includes low- and moderate-sales family farms. And then lastly, we have our rural residence farms and this includes retired and off-farm occupation farms.

So now we can look at where exactly we see these principal operators working. So the occupations of farm operators who work off the farm differ from those of the general U.S. workforce. Among operators of commercial and intermediate farms who also hold an off-farm job, 15 percent to 18 percent are working in farming, fishery, or forestry occupations compared to about 1 percent of the U.S. workforce. In general, farm operators are more likely to work in goods-producing occupations and are less likely to work in service occupations. These occupational choices may reflect location with good-producing activities more likely to be in rural areas.

So now we're going to change gears and look at the legal organization of family farms and this determines how farm income is taxed. So we see that 90 percent are organized as a sole proprietorship owned by a single individual or family, and they account for 61 percent of production. Relatively few farms are organized as C corporations and these are regular corporations. Only 1 percent are organized as these C corporations, and they account for 10 percent of production. C corporations are taxed as a farm entity and shareholders are not individually taxed. It's important to note that corporations do not mean nonfamily. There are many family farms organized as C corporations. Ninety percent of family farms are organized as a “pass-through entity” and they account for 88.5 percent of production. This includes all farms except C corps and others. A pass-through entity means any profits or losses is passed to the owner, partner, or shareholder, and tax is paid at the individual level on their personal tax returns.

So now we're going to look at the distribution of government payments by farm typology. So here we see this distribution and we're focusing on Conservation Reserve Program payments or CRP payments, working-land conservation payments, and commodity-related payments. Each

colored bar should sum up to 100 percent. So, most payments from commodity-related and working-land conservation programs go to these three groups: moderate-sales, midsize, and large farms, representing 76 percent working-land and 72 percent commodity-related payments. Commodity-related payments are targeted at production specific commodities. Payments are based on historical production. Working-land conservation programs are aimed at conserving land currently in production. Very large family farms and nonfamily farms received very small amounts of commodity-related payments because the commodities they produce, which are typically fruit or vegetable and livestock, are not covered by these programs. CRP is targeted at conservation by taking environmentally sensitive land out of production. The bulk of these payments are going to retirement, off-farm occupation, and low-sales farms. These three groups represent 76 percent of total CRP payments in 2018. It's important to note that many farms receive no payments. Seventy-two percent of farms received no farm-related government payment in 2018.

So lastly we are going to look at the distribution of crop insurance indemnities, acres harvested, and participation across farm typology. So this graph is similar to the previous one that the same colored bars should add up to 100 percent. So federal crop insurance insures farms or farmers from yield or revenue losses due to events such as bad weather. Indemnities in the green bar are payments from crop insurance to compensate farmers for losses. These are roughly proportional to acres of harvested cropland. These payments are separate from the government payments shown in the previous figure. What is striking is 67 percent of indemnities are received by midsize and large family farms in 2018. This reflects the high participation rates of these farms. Two-thirds of midsize and 3/4 of large farms participate in these federal crop insurance programs, as well as the types of commodities produced. So for example, a lot of these farm programs cover cash grains and oil seeds farms, and this represents 65 percent of farms in the federal crop insurance program. Participation in federal crop insurance programs has increased substantially over the last few decades. In 1989, the program covered about a million acres, and in 2018 about 300 million acres were covered.

So to wrap up we see that 98 percent of U.S. farms are family farms and they account for 88 percent of farm production. Although small farms make up 90 percent of the farm count, large farms have the largest share of the value production at 46 percent and small farms still count for over half of the value of poultry and hay production. Some small farms in each type operate in the low-risk zone, as do more than 37 percent of midsize, large, and very large farms. To continue, in 2018, about 43 percent of farm households had income below that of the median for all U.S. households and 3 percent had wealth less than the U.S. median. Farm spouses who work off the farm cite healthcare benefits as one of the important reasons for working off the farm. And lastly, CRP payments mostly go to retirement off-farm occupation and low-sales farms, while commodity-related and working-land payments go to family farms with annual gross revenue of $150,000 or more. Also, most U.S. family farms, however, do not receive government payments and are not directly affected by them.

So thank you for listening. As I mentioned before the America's Diverse Family Farm report 2019 Edition is now available on our website. if you have any continued interest in the farm structure or organization you can go to our ERS topic page and that concludes this presentation. Thank you.

Thank you, Christine. We do have a few questions and I'd like to ask those now if I could. Here's the first question: which typology of farms have been seeing the largest increase in the number of bankruptcies filed?

That's a very good question. We actually do not have data on farm bankruptcy by typology, but that is definitely something interesting to look into.

Alright here's another question: farm numbers are relatively steady, what changes have been seen in farm typology since the commodity boom collapse in 2013 or 2014? Fewer moderate-sized farms? Growth in large-scale farms?

I'm pretty sure that we've seen for a number of years now, with most farm or commodity types there's been a consolidation of small farms into larger farms. I mean that's just a very typical observation that we've had for the past probably 20 years or more now, and that's just a continuation of what we've been seeing with these lower commodity prices. But yeah, that's still an overarching observation that we've seen of this consolidation within commodity types.

Good. Here's another question: which farms had a median income below both the median income for all U.S. household and median income for U.S. households with self-employed income?

Could you repeat that? I'm sorry I didn't catch the last part of that question. Yeah, which farms had a median income below both the median income for all U.S. household and median income for U.S. households with self-employed income? Okay, yes, so we see that…sorry let me get to the slide real quickly. We see that retirement and low-sales family farms are the two typology classes that have median farm income below both the median income for all U.S. households and the median income for self-employed households.

Here's a question, is there a means by which researchers can access and use the data set for research questions?

Yes, so we have a great data tool for the data that was used for this. So just a reminder that data that we used is the 2018 Agricultural Resource Management Survey or ARMS, and we have a great functioning ARMS web tool that you can go on and find almost all of these data and it's an extremely interactive web tool, and we also have videos posted on the site talking about how to use the web tool, and we even have an API that allows researchers to download the data onto their own program and they can then put that data into whatever statistical package they feel most comfortable using, and we have videos that show users how to go about using this API in three different ways: in Excel, Postman, and R. So, I highly recommend if anyone has a research question and wants to use the data to go check out the ARMS web tool.

Great, and what types of farms are most likely to have an off-farm job?

So, we found that off-farm occupation farmers are the most likely at 83 percent of those operators have an off-farm job.

Alright, and I have one last question for you Christine. What percent of all farms cited health care benefits as a reason for having an off-farm job?

Sure, so we found that 63 percent of all principal operators and 66 percent of all spouses for all family farms cited health care benefits as one reason for having an off-farm job.

Alright, well you know that's all the questions that we have, so this concludes our webinar. Thank you all, everybody, for joining us and have a great day.