Webinar Transcript: America's Diverse Family Farms – 2020 Edition

Good afternoon everyone and welcome to our webinar America's Diverse Family Farms -- 2020 Edition. My name is Jacqueline Michael-Midkiff and I will be your host. As a reminder 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 that's located in the bottom left hand corner of your screen and our speaker will answer questions at the end of the presentation. Our speaker today is Christine Whitt. Christine earned her master's degree in applied economics and management from Cornell University and has bachelor degrees from Virginia Tech in applied economic management and animal and poultry sciences. She is an agricultural economist in the Farm Economy Branch in the Resource and Rural Economics Division of ERS. In addition to being a member of the farm income team, Christine's work includes research related to farm production practices and agritourism. And now, I'll turn it over to Christine to begin the presentation.

Thank you, Jacqueline. So, as Jacqueline said, my name is Christine Witt and today I'm going to be presenting on the report that was released yesterday. Uh that is the title…the America's Diverse Family Farms – 2020 Edition that I wrote along with my co-authors Jessica Todd and James MacDonald. So, let's go ahead and get started. So, the Americas Diverse Family Farms – 2020 Edition describes characteristics of the 2 million U.S. farms in 2019. And this information about the different types of farms is important in understanding the farm sector and farms as a whole. So, this report looks at what these farms are producing, how much they profit, and their participation in federal agricultural programs. And for family farms we're able to look at characteristics of household well-being. And new this year are the section or three sections: one on women and agriculture; direct sales; and succession planning. And the data comes from the 2019 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 USDA's primary source of information on farm businesses and the associated households of the principal operator. The principal operator is the operator who is most responsible for running the farm. I'd also like to mention certain research questions are on rotation and we were able to report on direct sales and succession planning because they were included in the 2019 ARMS. Finally, the 2019 ARMS covers the farm activities during the 2019 calendar year and the survey was conducted early uh 2020 and is the latest available data. So now, let's look at some definitions.

So how exactly do you find a farm and a family farm? So, a farm is any place that's sold or normally would have sold at least a thousand dollars of farm products in a given year. The USDA…the USDA definition is very comprehensive. It means many small farms are counted in the farm count even though many have limited sales. This means the farm sector consists of a wide variety of farms. Many small farms with little sales and mid-size farms with hundreds of thousands of dollars in sales and large farms with millions of dollars in sales. So, an operator is a person who makes the day-to-day vision on a farm. And that means the farm…that means the definition of a family farm and a farm is tied to uh farm ownership. So, uh I should define a family farm. A family farm is any farm where the majority, more than 50 percent of the farm business, is owned and operated by an operator and individuals related to the operator. So, as I mentioned there is a wide variety of farms in the data.

So this leads us to our ERS farm typology. So ERS classifies farms into more homogeneous groups first based on whether the farm is a family or non-family farm. And then we break uh farms into farm sizes uh, which is measured by gross revenue. So, gross revenue includes things such as cash receipts, government payments, and other farm-related income received by the farm. And then for small farms, we break uh those farms into operations um where the principal operator either has the major occupation of farming or has a uh major occupation that is not farming. So now let's take a closer look at the ERS farm typology.

So small family farms are farms that report annual gross revenue less than $350,000. As I said before, small farms are split by the major occupation of the principal operator. The group where farming is not the principal operator's major occupation includes retirement and off-farm occupation farms. Retirement farms are where the principal operator report reports where they are… the principal operator reports they are retired although they continue to farm on a small scale and off farm occupation farms are where the principal operator reports a major occupation other than farming. The other group of small farms consider farming to be their major occupation include low sales farms who have an annual gross revenue less than a $150,000, and moderate sales farms who have an annual gross revenue between a $150,000, and then and less than $350,000.

So, to continue on….Then we have our mid-size family farms and they have an annual gross revenue between $350,000 and less than a million dollars. And then we have our large-scale family farms made up of two groups: first are large family farms and they have an annual gross revenue between a million dollars and less than five million dollars. And our very large family farms and they have an annual gross revenue of 5 million dollars or more. And finally, we have our group of non-family farms. So, this is defined as any farm where an operator and persons related to the operator do not own a majority of the business. And so, it's important to remember non-family farms are not just large farms operated by publicly held corporations. A common example of a non-family farm is a farm operated by unrelated business partners or even a farm operated by a hired manager on behalf of a landowner. In 2019 only 15 percent of non-family farms had gross cash farm income of a million dollars or more. So, with these definitions in mind, let's now look at some of the findings of the report.

We'll start by looking at the distribution of farm counts, land operated, and the value of production using this farm typology. So, we see here that the majority of farms are small family farms, but large-scale family farms have the largest share of the value of production. Small farms represent 90 percent of all farms, 49 percent of acres operated, but only 22 percent of production. Whereas large-scale family farms represent 2.7 percent of farms, but account for the largest share production at 44 percent of production on only 21 of the total acres operated. But in total, family farms represent 98 percent of all farms and 86 percent of production. So now we're going to look at the distribution of value production by this farm typology and get a better idea of the types of commodities that these operations produce.

So just a quick reminder, in case you may have forgotten, small farms have gross cash farm income less than $350,000 and is comprised of retirement, off-farm occupation, low sales and moderate sales farms. Whereas mid-size family farms have a gross cash farm income of $350 ,000 and less than a million dollars. And our large-scale family farms have a gross cash farm income of a million dollars or more and are comprised of large and very large family farms. From this graphic we can see that small family farms produce 45 percent of poultry production including eggs and 46 percent of hay. Small and large-scale farms together account for uh 69 percent of beef production and small farms, it's important to note, small farms generally have cow calf operations, while the large-scale family farms are more likely to operate feedlots. We also see mid-size and large family farms uh account for the majority of cotton and cash grain or oil seed production. Also, large-scale family farms produce the majority of dairy. And finally, non-family farms and large-scale family farms produce the bulk of high-value crops.

So now that we know the types of commodities that these operations produce, let's look at the operating profit margin by farm type. So, this figure shows how profitability varies by the farm typology. So, for those who don't know, the operating profit margin or OPM measures the ratio of operating profit margin to gross income. Operating profit margin is net income plus interest minus an adjustment for unpaid labor. And it is used to measure the resources available to fund a farm's business capital. So, farms with lower OPM may be at a higher risk of financial stress. So, in this figure we have three different OPM categories. First, we have the OPM red zone or our high-risk level. And these operations have an OPM less than 10 percent. Our yellow zone or medium-risk level…these operations have an OPM of 10 to 25 percent. And finally, our green zone is our low-risk level and they have an OPM greater than 25 percent. So, what is noticeable here is that small family farms have a greater share of farms in the OPM red zone. However small farms typically rely on off-farm income. So, the fact that many are in this red zone for the operating profit margin does not necessarily mean these farms are in financial stress. Off-farm income is not captured in the calculation of the OPM. Also remember, many small farms are classified as either retirement or off-farm occupation farms. So, the farm business being profitable is not essential to the continued survival of the farm. Generally speaking, the share of farms that are in the green zone increases with farm size. We see that mid-size, large and very large family farms have between 28 and 39 percent of farms in the green zone. And finally, I like to note that there is a wide range of farm performance within each zone.

So now we're going to shift gears a little bit and I'm going to talk about the farm household income. So, farm household income is composed of two things: farm and off-farm income. So, farm income is net expenses so it can potentially be negative. And self-employed or wage salary jobs are the main sources of off-farm income for farm households.

So, with that in mind, now let's look at the distribution of median household income by farm typology. And just to clarify, when I mean…when I say the word median for median income, that refers to the level at which 50 percent of households have greater income and 50 percent have less. So, in general, we can see farm households do not have low income. Retirement farms and low sales family farms are the only two typology classes with median farm household income below both the median for all U.S. households and median households with self-employed income. So, we compare farm households with…uh sorry, we compare farm households with self-employed income households because farm households are most similar to other U.S. households that own a business. Also, it's important to notice the trend, the distinct trend, and median household income, which increases with farm size. So, I take…I want to take one second, so even though the data is not on the slide, I think it's very important to mention uh in our report we found farm households are generally not low wealth either. So here we're defining wealth as the net worth of a farm household and is calculated by the sum of all farm and non-farm assets minus farm and farm and non-farm debt. Only three percent of all family farms had wealth below the U.S. median household in 2019. And this is largely due to the uh large amount of farmland they typically own.

So now we're going to move on to the three new sections to the report this year and I'm going to start off discussing um the role of women in agriculture. So, we found women are operators in more than half or 51 percent of all farming operations. The graphic on the slide depicts the share of operations with a female principal operator, which is denoted by the blue section of the stacked bar chart. And the red section is the share of operations with at least one female operator. Women are the principal operators on 14 percent of operations and another 37 percent of operations have female operators who were not identified by the respondent as the principal operator. Operations with principal female operators contributed just over four percent of the total value of production in 2019. In addition, the highest share of principal female operators is found among farms specializing in either poultry, at 31 percent, and other livestock, which includes operations such as um horses, bees, sheep and livestock at 30 percent. And also, among operations with at least one female operator, 78 percent of those female operators are the spouse of the principal operator and work on the farm.

So now we're moving on to our second new topic for this year, which is direct sales. So direct sales, for those who don't know, are the sales of commodities produced, raised, or grown on the farm and sold either direct to the consumer or DTC or to the intermediary supply chains that sold directly to two consumers. And for just a brief definition of a supply chain: a supply chain is the sequence of processes involved in the production and distribution of a commodity. So just to give um a bit more uh information on what is and is not included in uh this analysis…So Christmas trees and flowers, nursery products, crafts items and processed products such as jellies, sausages, hams and commodities produced under production contract are excluded from this analysis of direct sales. And when I say direct sales of livestock, this includes selling pre-determined size share of livestock that is raised on the farm and processed for the consumer.

So, with that in mind let's look at our first chart. So here we have the share of total value of direct sales, which are the blue bars, and the share of direct sales by supply chain in the red bars. So, all the…I should also note that all of the blue bars should sum to 100 to give you some reference. So, in 2019, nine percent of operations sold commodities through direct to consumer or DTC or intermediary supply chains. And this amounted to almost eight billion dollars – just over two percent of the total value of farm production. Of these nine percent, 49 percent sell crops and 45 percent sell livestock direct to consumer, whereas only 15 percent sell crops through an intermediary supply chain and 10 percent sell livestock through an intermediary supply chain. Fifteen percent of operations sell commodities using both direct to consumer and intermediary supply chains. Although a small share of direct sales operations sell crops through that intermediary supply chain, these operations accounted for 67 percent of the total value of direct sales.

So now we're going to move on and look at direct sales supply chain by farm type. So, I really want to mention first before we get into the details that because a small share of operations participate in direct sales and these operations are quite small, different gross cash farm income cutoffs are used to group direct sales operations in place of the gross cash farm in cutoffs used earlier for the overall farm typology. So, I'm going to go ahead and quickly define those for us. So first we have our operations. Our first group is operations with a gross cash farm income less than $75,000. Our second group is farms with gross cash farm income greater than or equal to $75,000, but less than $350,000. And finally, we have operations with gross cash farm income equal to or greater than $350,000. So that is, that final group is composed of either mid-size, large-scale family farms and some non-family farms. So, as I said, this graphic looks at the direct sales supply chain by farm type, by the farm types I just defined. So direct sales through intermediary supply chains occurred mainly on farms with greater than $350,000 in gross cash farm income. Farms with gross cash farm income less than $75,000 accounted for 61 percent of direct consumer livestock sales, which is consistent with the large share of small farms overall that specialize in livestock, particularly beef production. Also, farms with gross cash farm income less than $75,000 accounted for 23 percent of direct-to-consumer crop sales, while 55 percent of direct consumer crop sales are by farms with gross cash farm income greater than $350. And this is also consistent with the fact that these larger operations produce most U.S. crops overall. Of that 55 percent, we found 69 percent are operations that are specialized in high value crop production.

So now, we're going to move on and um look at our final new topic, which is succession planning. So, for those that don't know, succession planning usually denotes the gradual transfer of ownership control and participation in the farm business as opposed to estate planning triggered by the principal operators or owners passing. It can also be a limited transfer of ownership such as an inheritance or trust. So technically, you can have a succession plan without someone being identified as a successor. There also may be some inconsistencies in respondents reports of being retired that are used for classifying the farm into the retirement typology group, and what the principal operator reports about his or her retirement plans in the next five years.

So, with that definition in mind, let's go ahead and look at the share of operators who plan to retire in the next five years and their succession plans. So the larger pie chart, which consists of three pieces, breaks down the share of principal operators who are planning to retire in the next five years, not planning to retire in the next five years, and don't know if they will retire in the next five years. The green section of the larger pie…pie shows that 17 percent of principal operators plan to retire in the next five years, while the blue section shows that 52 percent of principal operators do not plan on retiring in the next five years. And the remaining red section is the 30 percent of operators that don't know if they will retire in the next five years. So, now to move on to the smaller pie. So, the smaller pie is made up of six different colored sections and is um made up of the six different types of succession planning options for the principal operator who is planning to retire in the next five years. So of that 17 percent planning to retire in the next five years, over half denoted by the dark red or brown color have not developed a succession plan, while 33 percent of principal operators who plan to retire in the next five years anticipate passing the operation to someone in the family and is shown by the sum of the green and purple sections in the smaller pie chart. So, the purple…purple section shows 17 percent of those operations passing on to family members who currently work on the farm. And the green portion is the 16 percent of principal operators identifying a family member who does not currently work on the farm operation. So principal operators planning to retire in the next five years operate 15 percent of total farmland – a share that is similar to the overall representation and the number of farm operations. So, of that 15 percent of farmland, 48 percent are on operations with principal operators who have already identified a successor. Of the remaining land, um 23 percent is part of operations where the principal operator either has a succession plan that does not include an identified successor and the 29 is part of operations where the principal operator has not yet decided on a succession plan. So based on these findings, within the next five years we estimate about eight percent or less of farmland is likely to become available for purchase from retiring principal operators.

So now let's look at the succession plan type for operations with an identified successor, which is depicted by the stacked bar charts and the share of operations planning to retire in the next five years shown by the standalone blue bar by farm type. So overall, we see from the red section of the stacked bar that family members who work on the farm are most likely to be identified as the successor of the farm operation. And in 2019 we found that um 46 percent of principal operators of retirement farms, and these are farms where the principal operator considers themselves as retired from farming, are planning to retire in the next five years. For these operators, a family member who does not work on the farm is most likely to be identified as the successor of the operation. One distinct trend here is that as farm size increases from small to very large family farms, a greater share of principal operators identified that a family member who works on the farm will succeed them on the operation. And the principal operators of non-family farms are most likely among farm types to identify a non-family member who does not currently work on the farm as their successor.

So now we're going to finish it up with our next two slides and we're going to look at um government payments and federal crop insurance. So first, we're going to look at the distribution of government payments, which includes payments such as um conservation reserve program payments, working land conservation payments, and commodity related payments. And to give you a bit of a frame of reference when looking at this graphic, um so each individual um program payment should sum across all farm types, meaning that all the blue bars should sum to a hundred, all the orange bars should sum to a hundred, all the gray bars should sum to 100, and finally, all the yellow bars should sum to a hundred. So, with that we find that most payments from commodity related and working land conservation programs go to three groups: moderate sales, mid-size, and large family farms. With these three groups…these three groups represent 68 percent working land and 75 percent commodity related payments. The commodity related payments are targeted at production specific commodities and these payments are based on historical production. And working land conservation programs are aimed at uh conserving land currently in production. We see very large family farms and non-family farms received uh only small amounts of commodity related program payments because the commodities they produce, which are typically fruits or vegetables and livestock, are not covered under these programs, whereas the conservation reserve program payment or CRP is targeted at uh conservation by taking environmentally sensitive land out of production. The bulk of these payments, as you can see, are on retirement, off-farm occupation, and low sales farms. And these groups represent 80 percent of total CRP payments in 2019. It's also important to note that the harvested program crop acres track um with commodity related um program payments. And working land program payments um actually have the opposite occurring. They do not track along with um harvested crop acres. And finally, I want to mention um that many farms received no program payments. Sixty-nine percent of farms received no farm-related government payment. So now we're going to wrap things up and look at um…oh actually, I'm going to correct myself. Um, so I'm sorry. So, we found that harvested program acres track with commodity and working land program payments, but the opposite occurs for operations receiving program payments. I messed it up, so I'm correcting myself. So now it's time to move on to the federal crop insurance slide.

So similar to the previous graph here the distribution of participants indemnities and harvested cropland should sum to a hundred across the farm typologies, meaning all the blue bars should sum to a hundred, all the red bars should some to a hundred and all the green bars should sum to a hundred. So federal crop insurance ensures farms from yield or revenue losses, due to events such as bad weather, indemnities highlighted in the green bar are payments from crop insurance to compensate farmers for losses. These are roughly…roughly proportional to acres of harvested crop land. These payments are separate from the government payments shown in the previous figure. What is striking here is that 68 percent of indemnities are received by mid-size and large family farms in 2019. This reflects the high participation rate of these farms at two-thirds of mid-size and large family farms participate in federal crop insurance, as well as the type of commodities they produce, which are typically cash grains and oil seed farms. And they represent 66 percent of farms in federal crop insurance programs.

So now I'm going to um summarize all the main findings and then we'll uh head into questions. But to summarize the report, we found that 98 percent of U.S. farms are family farms and they account for 86 percent of farm production. Although small farms make up 90 percent of the farm count, large-scale family farms have the largest share of the value production at 44 percent. Small farms though still count for almost half of the value of poultry and hay production. We see that some small farms… family farms and each type operate in the low risk zone as do more than 28 percent of mid-size, large and very large family farms. And in 2019, 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.

And to continue on, we found women are operators and over half or 51 percent of all farming operations. And the largest share principal female operators is found among farms specializing in either poultry and other livestock. Also, only 9 percent of farm operations participate in direct sales supply chains with direct consumer crop sales being the most common form of direct sales. We also found that 17 percent of all principal operators plan to retire in the next five years. However more than 60 percent do not have a succession plan or have not yet identified a successor. And finally, 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 gross cash farm income of $150,000 or more. And most U.S. family farms do not receive government payments and are not directly affected by them.

So, with that, thank you for listening. I have included my contact information as well as my two co-authors. And as I said…stated at the beginning, this report was released yesterday, and you can go to the ERS website to find the entire report. And if you are interested in farm structure and organization you can head to the ERS farm structure and organization topic page for more details. And I've included that link as well. So now we are going to open it up for questions.

Thank you, Christine. Um, I do want to remind everyone if you have questions for her, please enter them into the chat feature at the bottom of your screen. And let's go ahead and start with a question, um…What is the share of the value of production attributed to operations with a principal operator that is planning to retire in the next five years?

Sure, that's a great question. So the share of value of production of principal operators planning to retire in the next five years is 12 percent.

Okay great, thanks. Um, you said that you expect eight percent or less farmland to be available over the next five years due to succession. Can you state if there's any variability by region of the U.S.?

You know, that is a really, like um great question, but at this time we have not done any regional analysis um on that topic.

Okay…um, how about…In what year was gross farm income increased from 250,000 to uh…Well actually this says from 250,000 to 250,000 for small farm definition. Um, can you speak to that?

Um, so it should be 350,000 if I misspoke throughout the presentation. We do have…I can tell you that on our farm structure and organization topic page, we do define all of our…our farm typology that was released back in 2013 and small farms should have less than $350,000. So, if I misspoke, I apologize.

Okay, thanks uh thanks for providing the clarification. Um let's see… How about which farm type receives the most total government payments?

Sure, that's another great question. So large family farms receive the largest share of total government payments, but when looking at total government payments as a share of gross fast farm income, we found that non-family farms have the largest average share of government payments compared to gross cash farm income.

Okay…um and I'm going to ask you another one about payments…um…When you said 69 percent of farms received no government payments, did you mean all payments including MFP payments?

That is correct. So, MFP was in our um calculation of um commodity related payments, and so yes, 69 percent received no government payments including MFP.

Okay… All right, now I've got a long one for you. Um…Nearly a third of mid-sized farms are in the green zone on OPM. Digging deeper into the data, what demographic economic commodity market or farming system characteristics distinguish those farms from the other two thirds that are yellow or red?

That is another very good question, but at this time we just uh haven't had the time to do the research on that, but great question. But I can tell you that there is a lot of variation um in those categories…uh, but we don't know, we don't know the demographics or particularly why um they're in those categories other than the fact um that they have a um lower OPM or higher OPM, which categorizes them into their specific zone.

Okay, here's one on insurance…Is the cost of health insurance or in the case of no insurance direct health care costs factored into household wellness? Um…And this is a multi-part here, so does the general multi-year trend in household well-being indicate household well-being is increasing or decreasing in the last couple of years?

So, to the point to the um question about the health insurance, so we don't put or we don't capture any um expenses on or we capture expenses from health insurance, but those um are not calculated in our farm household income. So again, just to remind you when we talk about farm household income, that is um income composed of farm and off farm income so we're not on the off-farm income, we're not netting out any expenses.

Okay, um this one is related to a chart that you showed. Um to start with the distribution of farm program payments, what do you mean by distribution? Are you talking in terms of dollars or in terms of the number of those receiving payments?

Sure, so there's two components to the distribution of government payments. So, we do, we are looking at the share of um each group, the dollar amount that each uh group is receiving divided by the total amount of government payments um for that particular program.

Okay, thanks. And how about…um...Here's one on did you investigate the drivers of direct sales? For example, it would be very interesting to analyze the relationship between access to broadband and direct sales.

That is uh another great um research suggestion, but for this report uh we mostly just focus on um direct sales, supply chains, and the number of or the share of operations participating in direct sales supply chains. We did not go into the um details of why or why not they were participating in a specific supply chain or direct sales overall.

Okay, all right…um…And now we have a clarification question uh just someone that wants to know what does MPF stands for?

Sure, so that stands for market facilitation program.

Excellent, um how about…Can you also report the average area farmed for each type of farmer?

Sure, so I think you are referring to the uh acres operated by farm types and I can put that up on the screen for you…um. So here we see that small family farms operate uh almost 49 percent of all land, mid-size farms operate 23 percent of all land, and large-scale family farms operate 21 percent and non-family farms finally operate 8 percent.

Okay, this uh this next question is kind of a follow-up on uh one that I asked a little bit earlier…um… Has household well-being improved as a general trend in the last five years or ten years?

Um that's another great question, uh but at this time I don't have that exact information um available, but I would be happy to follow up uh regarding that question.

Okay, excellent. And we do have that contact information so we can do that. Alright, um… here's, a okay, here's a good question for you. Uh, this is interesting. You hear a lot about small farms disappearing, but your data don't show that do they?

Um so yes, that's another great question. So I think it's important to remember that the USDA definition of a farm is very comprehensive and includes many small farms um because our cut off is that these farms have to have at least a thousand dollars of farm products, so we're capturing lots of very small farms. Um…So, when you aggregate up and look nationally, you don't see that potential consolidation going on as much, but when you break it out by specific commodities, particularly in dairy, that consolidation uh factor is a bit more evident.

Okay, uh how many acres define each size of farm? And this is uh referring to slide seven.

Can you repeat that question one more time? I'm sorry.

Absolutely, how many acres define each size of farm? And uh they reference slide seven on this.

Um, so yeah, at this time I don't have the specific um number of acres that is represented by each farm. I only have the share um, but we could easily get you that information.

Okay, thank you. Um let's see…Okay here's uh, here's another one. Do you have a similar presentation that includes ethnicity participation rate?

Um…We do not at this moment have very much information on ethnicity participation rates.

Okay thanks for addressing that. And I think that covers um the questions that we have today. So, I just want to thank everyone for joining us and remind you that the webinar is being recorded and it will be posted on the ERS website in the multimedia section of the newsroom. So please have a great afternoon.