

021517ERS_2 America's Diverse Family Farms Transcription

Good afternoon everyone and welcome to our webinar America's Diverse Family Farms: 2016 Edition. My name is Kellie Mendonca 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 at the bottom left corner of your screen and our speaker will answer at the end of his presentation. Our speaker today is Bob Hoppe. Bob is an economist in the Structure, Technology and Productivity Branch at the Economic Research Service U.S. Department of Agriculture. In addition to authoring America's Diverse Family Farms, Bob's areas of research also include general farm structure, small farms, large scale farms and women farmers. I think we're ready to start. So Bob you can now begin your presentation.

Hi. I'm Bob Hoppe. I am going to be talking about America's Diverse Family Farms the 2016 Edition. That's a brochure that was published by ERS last December, December 2016.

The brochure emphasizes the diversity of farms in the United States. The information about the different types of farms is important in understanding the farm sector and the farmers that are involved in farming. One of the main conclusions of the brochure is that farming is still overwhelmingly an industry of family businesses but these family businesses differ in size and other characteristics. Most of the data are from the 2015 Agricultural Resource Management Survey or ARMS. ARMS is a annual survey of farm businesses and the associated principal operators that run the farms. A principal operator is the operator most responsible for running the farm. ARMS uses sample weights to accurately represent farms and production in the United States. It's connected by the National Agricultural Statistical Service or NASS and ERS. We also have one slide that's based on Census of Agriculture data, but other than that the data is from, is from ARMS. Before we get any further we need to do some definitions of farms and family farms. A farm is any place that's sold or normally would have sold at least a \$1,000 worth of farm products in any given year. It's the standard USDA definition. Now the family farm is any farm where the majority of the business is owned by the operator, the principal operator and people that are related to the principal operator. The relatives do

not need to live in the same household as the operator, they can live someplace else.

By this definition about 99 percent of U.S. farms are classified as family farms.

Now the \$1,000 definition means that there are many farms are going to be counted in the, in the farm count even though they have very little production. And their sales are limited. So as a result farms are very diverse. They range all the way from small retirement and residential farms all the way up to enterprises with sales in millions of dollars. Now in response to the diversity of U.S. farms. ERS developed this farm typology which leads to the next slide.

The typology classifies farms into more homogeneous groups based on whether the farm is a family farm or not. Farm size which we measure by gross revenue. For our measure of gross revenue we add the sum of crop and livestock, cash receipts, government payments and other farm related income such as custom work or production contract fees and it's measured before, before subtracting expenses. And then finally the third criteria for small farms, occupation of the principal operator is used to separate farms into different categories.

The main goal of the classifications is to classify farms together that have similar characteristics.

Okay the typology starts by looking at small family farms and that's defined as, as any farm has gross revenue of less than \$350,000. These farms are further based on the occupation of the, of the operator. We have retirement farms, off-farm occupation farms and farming-occupation farms. Now the last group we subdivided into two categories, the low-sales farms that have gross revenue less than \$150,000. And moderate-sales farms that have gross revenues of \$150,000 up to \$349,999. That gets us out of the small farm category, the next largest category is midsize family farms. The gross revenue of these farms ranges between \$350,000 and just under a million dollars. Okay large-scale family farms have, have gross revenue of at least one million dollars and this is subdivided into two groups. Large family farms with revenue between a million and just under 4 million and very large family farms with gross revenue above 5 million or equal or greater than 5 million. And not only are these nonfamily farms, these are farms that didn't meet the family farm definition and the operators and the people related to the operator do not own the majority of the business. A little bit more information on nonfamily farms. They're not just large farms operated but publicly held corporations. A common example of nonfamily farm would be a farm run by unrelated

business partners or another example might be a farm that's operated by a hired manager for a family of the absentee land owners and not always are the farms large either. Sixty one percent of nonfamily farms are small. The gross revenue is less than \$350,000.

Next we're going to look at the distribution of the number of farms land operated and the value of production among the different farm types.

We'll focus on the red slice of the pie.

First that's small family farms.

They count for 90 percent of all farms. They operate about half of the farmland. Value of production that was only about a quarter of the value of production for the U.S. but there are some commodities where, where small farms are particularly important.

They account for about 57 percent of poultry and eggs, mostly under contract and 52 percent of hay. The largest scale, the largest share of production occurs among large scale family farms at 42 percent and they're doing that with only 3 percent of the farms. If you add up all the family farm slices there, the family farms, the different types together account for 99 percent of farms and 89 percent of production.

Now large scale family farms current share of production reflects a long term shift in production to larger farms. What we're looking at in the top two layers in the graph are million dollar farms. There are farms that have gross revenues above a million dollars. We divide that into two groups, smaller million dollar farms, they range in revenue from 1 million to just under five and then larger million dollar farms from five million and up.

You move over on the left hand side, in 1991, they had about a third of the agricultural production. By 2015, they had a little bit more than half. Of the larger million dollar farms accounted for about 23 percent of production in 2015. And the smaller million dollar farms accounted for 29 percent.

The specialization differs between the two groups the larger million dollar farms are about 38 percent and specialize in its specialty crops like vegetables, fruits, and tree nuts and so forth and another 25 specialize in dairy. About half of the smaller million dollar farms specialize in cash greens.

Now those million dollar farms, you're looking at in the previous slide including in both family and nonfamily farms and if you look at how those million dollar farms were organized about 90 percent were family farms.

Nonfamily corporations only amounted to about 3 percent. And 80 percent of the nonfamily corporations reported no more than 10 shareholders.

In the other slice there, the yellow slice that's the people like the unrelated partners that we're talking about before.

Now this graph is the one that's based on Census data we started with the 1982 Census and then looked at cropland over the next one, two, three, four, five, six, seven censuses to 2012, the most current census and we calculated the, the average cropland for crop farm each year and it stays right above just above 200.

Despite the shift in production upward I think if I remember correctly the range is like from 222 acres to 259 acres and something on that order. So the bottom line there in the mean cropland doesn't really very, very much. But changes were happening. Actually the changes in cropland were fairly small but the largest and smallest croplands grew. The crop farms grew in number but the farms in the middle declined. But overall the total, number of, of crop farms changed. They did not change, the numbers stayed the same but who actually made that up changed. So with only a small change in the total cropland and total crop farms acreage is just, just kind of meandered. Now we have another measure called an midpoint for cropland.

In 1982, it was 600 acres and we interpret that as in 1982, half the land was on farms that had more than 600 acres and half the land was on farms that had less than 600 acres. So by 2012, the midpoint increased to about, about 1,200 acres so that meant by that time half of the acres that were on farms of 1,200 acres and half was on farms with less than 1,200 acres. So you can see the shift, shifting concentration upwards here.

Now one thing that was new to this was that you know technology allowed farmers to, a single farm or a single farm family to operate more and more acres.

Now we're back to ARMS data again this shows the you know how probability differs by farm size in 2015. Our measure of profit here is the operating profit margin which is the ratio of operating profit to gross income. Operating profit essentially it's just net income plus interest minus an adjustment for unpaid labor. What it measures is the resource that's available to fund the farm's business capital which is you know critical to a farm continuing business. For each, each typology group we divide farms in the three categories based on their risk of potential fiscal problems. The red category is the red zone that's a relatively high risk of fiscal problems, financial problems, operating margin was less than 10 percent. In the yellow zone and it's medium risk level and it's the operating profit margin ran from 10 to 25 percent. And in the green zone it's the low risk level and that's for farms that have an operating profit margin of greater than 25 percent. The thing that's striking about small farms is that a large share that's in the red zone that ranges from 59 percent

to 74 percent. Now small farms typically rely heavily on off-farm income so that you know the chances are that they're not going to go out of business immediately, they can they can hang on. Now other small farms are more profitable. There's about 14 to 27 percent of the small farm groups were, were in the green zone. But the share that's in the green zone increases with size once you get away from the small farm categories. You can see it go up with size as we move from middle midsize family farms to large and very large family farms. And you'll note that, that none of the midsize and large scale farm categories had a majority of their farms in the red zone.

In the next couple of slides we're going to be looking at 2 USDA supports for farm and government payments and federal crop insurance. This graph is set up a little bit differently than the ones we've been looking at. If you look at the three color bars we've got Conservation Reserve Program payments, working land conservation payments, and commodity-related payments. And what we're looking at is the distribution of each of these types of payments over all farms in the United States. So bars that were given, that were given color add up to 100 percent. So if you took the for instance the Conservation Reserve Program and added the 33 percent for retirement farms added in the 27 percent for occupation, off-farm occupation farms down you know down the line like that, all those bars that add up to 100 percent.

And this represents a distribution as of 2015 and it's from ARMS.

Now one thing it's striking is that most payments from commodity weren't related, that's the red bars and the working land conservation programs, that's the light blue bars go to three groups, the moderate sales, midsize and large categories. These programs are targeted production specific commodity. About 74 percent of the payments went to these three groups. There's something similar happened if you look at the light blue working land bars in those same three groups. Mid, moderate, excuse me moderate size, midsize and large. The share of, of payments that went to those three groups was 80 percent. And these programs also target production indirectly by focusing on, on land that's in production. The Conservation Reserve Program is a little bit different. It pays farmers to take environmentally sensitive land out of production, retirement or off-farm occupation and those sales of farms as you can see are about 79 percent of these payments in 2015.

So important thing to remember is that are not all farms are getting government payments.

72 percent of all farms receive no government payments in 2015.

This graph is similar to the previous one except it's looking at federal crop insurance. Federal crop insurance insures farmers against losses from things like bad weather for example. Indemnities, that's the red bars are payments from crop insurance to compensate for losses. They are roughly proportional to, to acres of cropland. And again this is before the bars of a given color add up to 100 percent. Also remember that the indemnities are not included in the previous government payments graph. They are separate programs and they have separate data. Now midsize and large family farms together receive about 69 percent of indemnities and part of that reflects the participation in the programs. About two thirds of midsize farms and three quarters of large farms participate in the federal crop insurance. Now overall only about one sixth of U.S. farms participate in an insurance program. And federal crop insurance has grown in recent decades. The bottomline insured tripled from about a million acres in 1989 to 300 million acres in 2015.

Next we're going to look at operator household income. Each bar gives the, gives the operator household income for that farm type, the median. It's in thousandths, of the 63 in the retirement category for instance means 63,000. That the income includes income from both farm and off-farm sources. In the box up at the top gives some figures we're going to use for comparison. The median income for all U.S. households, the median income for all U.S. households with a self-employed head. Now for each type of farm operator household, the income is higher than the \$52,000 median for, for all U.S. households. And this is true for small farm households despite their low profitability levels. These households particularly those who are operating in retirement, off-farm and low sales farms rely heavily on off-farm income. Now since farmers are self-employed, we also compared farm operator household income with that for all U.S. households that reported a self-employed head. And for all farms the, the two estimates were fairly close, for all farm households the median household income was \$77,000 which is practically identical to the median for U.S. households that are self-employed with \$78,000. In most cases the, for most of the typology groups the operator household income was larger than the comparable one for the self-employed at the U.S. level. Exceptions were retirement and low sales farms which were somewhat below the U.S. average for households with a self-employed head.

Income is important to farm households well-being but so is their wealth. This graph is set up similar to the previous one except it's looking at household wealth instead of, instead of income.

Each bar shows in median household wealth in thousands of dollars for a given farm type in 2015. Wealth here is equal to net worth minus the difference between assets and liabilities. I mean in this case we're considering both farm and nonfarm assets and liabilities. And again the box gives some median figures for all U.S. households and households with the self-employed head for comparison purposes. Now median wealth for all operator households was, was \$827,000 in 2015. That reflects the value of their assets especially farmland. And then the relatively low debt levels of some farmers. Now for each type of farm household, median wealth was higher than that for all U.S. households at \$82,000 and U.S. households with the self-employed head at \$365,000. Only 3 percent of farm households had less wealth than the median for all U.S. households.

That's kind of the highlights from the brochure and I'll close with some conclusions and implications. Farming is still overwhelmingly made up of family businesses. They account for, family farms account for 99 percent of all farms and about 90 percent of production. Small farms account for 90 percent of the farm count, but only 24 percent of production. The largest share of production actually occurs on large scale family farms. Production is shifted to farms with gross revenues of one million or more since 1991 but most of the farms this large are still family farms and those organized as nonfamily corporations generally have no more than 10 stockholders.

CRP payments go to different farms than the other government payments. CRP targets environmentally sensitive land and their payments go largely to retirement, off-farm occupation and low sales farms. And commodity related and working land payments target production either directly or indirectly. So they go to moderate sales, midsize and large family farms. Distribution of crop insurance is roughly proportional to cropland as a result midsize and large family farms receive about 69 percent indemnities and farm households in general are either low-income nor wealth. Their, for each typology group, both median household income and wealth are above the medians for all U.S. households.

If you like to contact us about the brochure or related topics, you can see our email addresses here. The report itself is available on the, on the web, on our website. We also have a farm structure and organization topic page

that might be interesting to you and we have an ERS ARMS web tool that allows you to use ARMS data to generate your own tables using various classification variables including the typology. That, this concludes the presentation.

Thank you Bob. We have a few questions for you. So I will tell you about those right now. Jim is asking in your presentation you showed that a number of small family farms is about 90 percent of all farms. You hear a lot about farms increasing in size and consolidation. Is that true and how is that reflected by the ERS typology?

So what's happened over the years is the farms in the middle, middle size classes have either you know gone out of business or downsized to a retirement farm perhaps or gotten bigger and gone into, into the larger farm category. But the, there's a large, over the years, has been a large increase in very small farms let's say with gross sales or gross revenue less than \$10,000. And that kind of stabilizes the count. But that production is shifting to the larger farms.

Alrighty and we have another question from Elisa. Operating profit margins seem very low for all farms but especially small ones. Why or how do they stay in business or do they or are they replaced every year by other small unprofitable farms?

When an operating profit margin, there's, there's a there's a deduction for an opportunity cost of, of, of the farm, farmer and farm household labor on farms that are not incorporated. So that means that that's generally it's estimated by taking hours of, of, of work provided by the farm and the farm family multiplying it by the farm, regional farm average. So that's not a cash expense. So you know if the farmers can accept a low rate of return on his labor, he can keep, you can still keep in business. Another thing that can going happen is they can you know basically live on their off-farm earnings or whatever they have as a job or other, other sorts of off-farm income that might make sense particularly if land was appreciating and they wanted to hold on you know hold on to the land as investment. So you know given that they work, a lot of them work off-farm or are semi-retired and you know getting retirement income. They only aren't that, you aren't totally relying on on the farm income so they can, they can get by.

Alright, we have a question from Richard, has the cost of farmland gone up very much over the last 10 years?

Yes I believe that it has that's outside my area but...

Alright and I've got a question from Jonathan. The long standing trend toward big farms accounting for bigger percentages of production. Is there any reason to think that, that will change any time soon?

That's a good question. And you know in some of the other countries in the world they've, you know, they've gotten really huge farms you know like in excess of 25,000 acres or so. But it seems like in the United States there's some characteristics of small farms and help or family farms and help and continue to have some flexibility on working off-farm during high labor period. You'll float between labor periods on the farm. They can get, you know like economies of scale. It's not like automobile manufacturers you know huge economies of scale, a lot of economies of scale can be captured fairly low level. Whether this, the other thing is that farming requires kind of a very intense local knowledge base about how you go about soils on your farm and local pests and how cattle react to the weather in your area. You'll fit you know, so that it takes a long time to learn and it's, it's not easily taught. So there are some advantages that small farm operators and family farm operators do have.

Alright Keith is asking a question. Lawmakers often compare family farms to large corporate farms. Now since over 90 percent of farms are family farms, do you think this is a misrepresentation? Are they confusing the word corporate for the word large?

I think there's an element of confusion of corporate with the word large. You know some of these family farms are quite large but they're you know but they're still run as a family business.

Thank you and we have a question from Martha. Does ERS calculate midpoint acreages for individual crops and where would we find a difference between like cattle or fruit or vegetable crops among this data?

We've calculated, you know the midpoint acreages for a variety of crops and over a period where you look at like from 1987 to 2012 they tend to kind of double or triple. And then the, it's a little different in and that's true for field crops and specialty crops. You know it's, it's pretty universal. In the case of livestock, the increases can be you know really startling you know like what's happened recently and in hogs you know what I mean we were calculated you know the head of dairy cattle if you use that instead of acreage to get the midpoint and in dairy, and hogs have had a big increase recently and then in the past you know like in the 60s and 70s

something similar happened to broilers and head cattle on feedlots. In the case of livestock it's, it's more like there's some big industrial or big changes in industry like the inducing of integration to broilers that causes a real large increase for a period and then it kind of levels off. But yes we've done we've done a report in 2013 and looked at midpoints in various crops and livestock. If the person is interested, you can get their contact information and I can send them the link to that report.

Alright, thank you Bob. Well I think that's all the questions we have time for today so thank you all for joining us and have a great day.