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An Overview of Farms Operated by Socially Disadvantaged, Women, and Limited Resource Farmers and Ranchers in the United States

Jessica E. Todd, Christine Whitt, Nigel Key,
and Okkar Mandalay





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An Overview of Farms Operated by Socially Disadvantaged, Women, and Limited Resource Farmers and Ranchers in the United States

Jessica E. Todd, Christine Whitt, Nigel Key, and Okkar Mandalay

Abstract

The U.S. Department of Agriculture (USDA) recognizes several groups of farmers who have been historically underserved by the USDA and operates several programs and policies targeting these groups. This report provides an overview of the characteristics of the farms operated by socially disadvantaged (individuals identifying as Black or African American, American Indian or Alaska Native, Hispanic or Latino, and Asian or Pacific Islander), women, and limited resource producers using data from the annual Agricultural Resource Management Survey. The report summarizes measures of farm financial health, credit use, agricultural program participation, and other farm-level characteristics, along with information about the principal operator and the principal operator's household, including household income and wealth.

Keywords: U.S. farms, farm operators, producers, principal operator, farmers and ranchers, farm households, socially disadvantaged farmers and ranchers, underserved farmers and ranchers, limited resource farmers and ranchers, women farmers and ranchers, ARMS

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About the Authors

Jessica E. Todd and Nigel Key are agricultural economists at USDA, ERS. Christine Whitt and Okkar Mandalay are former USDA, ERS agricultural economists.

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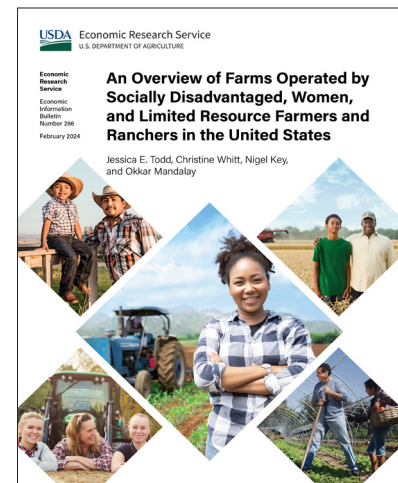


An Overview of Farms Operated by Socially Disadvantaged, Women, and Limited Resource Farmers and Ranchers in the United States

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What Is the Issue?

Several USDA programs target underserved producers to meet their specific needs. This report bolsters information available about farms operated by three groups of underserved producers: (1) socially disadvantaged (SDA), defined as individuals who are Black or African American, American Indian or Alaska Native, Asian, Native Hawaiian or Pacific Islander, and Hispanic or Latino; (2) women; and (3) limited resource (LR) producers, defined as having gross farm sales under \$180,300 in 2020 dollars and whose principal operator's total household income was below the poverty level for a family of four or less than half of the county median income for 2 consecutive years. This information helps support USDA's commitment to improving equity in agriculture. The report summarizes measures of farm financial health, credit use, agricultural program participation, and other farm-level characteristics, and information about the principal operator and the principal operator's household.



What Did the Study Find?

Farms with at least one Hispanic producer (Hispanic farms, 5 percent of all farms) and those with no Hispanic producers but at least one non-Hispanic (NH) SDA producer (NH SDA farms, 4 percent of all farms) differed from farms operated solely by NH White operators in several ways:

- Hispanic and NH SDA farms were less likely to receive farm payments (11 and 21 percent of farms received payments, respectively) than NH White farms (34 percent). Hispanic and NH SDA farms were more likely to specialize in specialty crops, beef cattle, and other livestock, which are not commonly covered by direct Government agricultural programs.
- Hispanic and NH SDA farms were less likely to hold loans from the Farm Credit System or commercial banks than were NH White farms. However, the average amount borrowed among borrowers did not differ across the three farm categories.
- A greater share of Hispanic farms was at financial risk than were NH White farms, according to their current ratio (current assets divided by current debt), while a greater share of NH SDA farms was at financial risk than NH White farms, according to their operating profit margin.

ERS is a primary source of economic research and analysis from the U.S. Department of Agriculture, providing timely information on economic and policy issues related to agriculture, food, the environment, and rural America.

- Twenty percent of NH SDA farms were LR farms, double the rate among Hispanic and NH White farms.

Farms operated entirely by women (women-only operations, 7 percent of all farms) and farms operated by both men and women (joint operations, 44 percent of all farms) differed from men-only operations in many dimensions.

- Women-only farms were more likely to specialize in field crops other than cash grains and livestock other than cattle compared with men-only farms.
- The average value of production per farm was lower on women-only (\$28,492) and joint operations (\$160,468) compared with men-only operations (\$209,083). A similar share of women-only operations received direct Government agricultural payments as did men-only operations, but the average amount received was less for women-only operations (\$7,687 versus \$24,964), which is consistent with their differing specializations and smaller scale.
- Women-only operations were less likely to hold loans than men-only operations.
- Women-only farms were more likely to be LR farms (22 percent) than men-only farms (11 percent).

Differences were also observed between LR farms (9 percent of all farms), non-LR low-sales farms, which have sales below the LR farm sales threshold in the year but do not meet all LR criteria (76 percent of all farms), and high-sales farms (sales above the LR threshold).

- LR farms were more likely to specialize in field crops (other than cash grains), beef, and other livestock than high-sales farms. Non-LR low-sales farms were similar to LR farms in their specializations.
- Consistent with being less likely to specialize in cash grains, LR farms were less likely to receive direct Government agricultural program payments.
- Only 17 percent of LR farms held loans for the farm business at the end of the calendar year compared with 25 percent of non-LR low-sales and 73 percent of high-sales farms.
- The principal operators of LR farms were more likely to be women, older, and Hispanic or NH SDA. LR farms also averaged fewer total operators.

How Was the Study Conducted?

Data came from the 2017–20 Agricultural Resource Management Survey (ARMS), an annual cross-sectional survey of farms in the contiguous United States, excluding American Indian reservations in Arizona and New Mexico, conducted by USDA's National Agricultural Statistics Service (NASS) and Economic Research Service. ARMS data identify LR farms and provide detailed information about each farm's receipt of direct Government agricultural payments, use of credit, and farm operator and household characteristics.

Farms were classified for three population comparisons:

- an SDA comparison of NH White, Hispanic, and NH SDA farms;
- a gender comparison of men-only, women-only, and joint farms; and
- an LR comparison of LR, non-LR low-sales (sales below the LR threshold in the current year but not meeting the rest of LR criteria), and high-sales farms (sales above the LR threshold).

The 4 years of data were pooled to increase the sample size and precision of estimates. All estimates were weighted using the ARMS sampling weights, and variances were estimated according to USDA's NASS recommendations.

An Overview of Farms Operated by Socially Disadvantaged, Women, and Limited Resource Farmers and Ranchers in the United States

Introduction

Since 1990, the U.S. Department of Agriculture (USDA) has recognized several groups of farmers who were historically underserved by USDA programs and policies. Socially disadvantaged (SDA) farmers and ranchers are defined as those belonging to groups that have been subject to prejudice based on group membership, including those who identify as Black or African American, American Indian or Alaska Native, Asian, Native Hawaiian or Pacific Islander, and Hispanic or Latino.¹ The SDA category was expanded in 1992 to include women in some, but not all, programs (U.S. Congressional Research Service, 2021). Limited resource (LR) farmers are those who operate farms with gross sales not more than \$180,300 (in fiscal year 2020 dollars, indexed for inflation each year) and whose total household income is either below the poverty level for a family of four or less than half of the median household income in the county where they live for 2 consecutive years.²

There is limited information available about SDA, women, and LR producers and the farms they operate. The Census of Agriculture (COA) summarizes farms by operator characteristics, including race and ethnicity, but provides limited information about each farm's use of credit and financial health and operator characteristics, such as education and household income and wealth. As directed by sections 14006 and 14007 of the Food, Conservation, and Energy Act of 2008 (7 U.S.C. 2279-1), USDA is required to make the national, State, and county-level application and participation rates available to the public for each program that serves agricultural producers and landowners to conduct oversight and assess whether there is discrimination in outreach and participation. USDA's Race, Ethnicity, and Gender Program Statistics (REGStats) provide some applicant and participant counts by producer race, ethnicity, and gender for many agricultural programs but does not include all programs or applicant data for many programs that are reported in the database (USDA, 2022). Moreover, participant or farm characteristics (other than race, ethnicity, and gender) are not included in any of the data reported in REGStats.

This report uses data from the annual Agricultural Resource Management Survey (ARMS) to fill this gap by providing an overview of farms operated by three groups of underserved farmers and ranchers: SDA, women, and LR producers. The ARMS provides information that is not available from the COA, including statistics on farm credit and farm financial health and descriptive information about farms operated by LR producers.³ In addition, this report describes characteristics of the principal operator (PO) of each farm (the individual reported to be most responsible for the decisions on the operation) and the characteristics of the PO's household. This report adds to the limited household-level information for these underserved groups and may serve as a baseline for evaluating policies and programs that aim to increase equity and inclusion in the farm sector.

¹ P.L. 101-624, §2279, also known as the 1990 Farm Bill or Food, Agriculture, Conservation, and Trade Act of 1990.

² Congress first created a Limited Resource (LR) program with the Agricultural Act of 1978 to provide subsidized low-interest loans to "small and family sized farmers" (Massey, 1994). The definition of an LR farmer was created in 2003 by an interagency committee to provide consistency across all USDA agencies (Hoppe et al., 2007).

³ Nwoha et al. (2007) used 2000–2003 ARMS data to compare farm income and financial health characteristics for USDA's Farm Service Agency loan-eligible farms where the principal operator (PO) was non-White and those farms with a woman PO with all other eligible farms.

Several USDA agencies—including the Farm Service Agency (FSA), Natural Resources Conservation Service (NRCS), the Office of Civil Rights (OCR), and the Office of Partnerships and Public Engagement (OPPE)—have programs targeted toward SDA, women, and/or LR producers, which aim to help promote equity and inclusion in USDA farm programs.⁴ Some programs were developed in response to several reports and settled lawsuits regarding issues of discrimination and unequal access to USDA programs and services (U.S. Commission on Civil Rights, 1965; U.S. Commission on Civil Rights, 1982; USDA, 1997; Feder & Cowan, 2013; Jackson Lewis LLP, 2011; Horst & Marion, 2019), while some existing programs were expanded to target additional resources toward SDA and women producers.

For example, USDA's FSA targets a portion of all Guaranteed, Direct Farm Operating, and Direct Farm Ownership loan funds, Microloan funding, and Youth loans to historically underserved farmers and ranchers, which includes SDA and women producers. In fiscal year 2021, USDA's FSA obligated 6,177 direct and guaranteed loans to SDA and women producers totaling \$1.14 billion, which was 21 percent of all loans and 17 percent of the total amount obligated in 2021 (USDA, Farm Service Agency (FSA), 2021). In 2019, the Government Accountability Office (GAO) summarized the amounts and types of guaranteed loans received by SDA producers, the challenges SDA producers face in obtaining such loans, and the outreach efforts of USDA's FSA and private lenders to overcome these challenges. The GAO noted that the ability to fully evaluate access and the use of agricultural credit among SDA producers is limited because race and ethnicity information is not collected for all borrowers. It can also be difficult to determine the effect of outreach efforts because data on these activities and the participants in outreach programs are limited.

USDA's FSA also runs the Transition Incentives Program (CRP-TIP), which provides 2 additional years of payments to landowners with expiring Conservation Reserve Program (CRP) contracts if owners sell or rent land to a beginning or SDA farmer (women are not considered SDA producers in this program) who returns the land to production using sustainable practices. Johnson (2017) studied the program in Iowa, Nebraska, North Dakota, and South Dakota and could not find any current or interested participants who were SDA producers, noting that many perceived the program to be open only to beginning farmers and ranchers.

USDA's NRCS targets at least 5 percent of funds in the Environmental Quality Incentives Program (EQIP) and the Conservation Stewardship Program (CSP) to SDA farmers (gender alone cannot qualify a farmer as SDA in NRCS programs). While not specific to agricultural producers, the Socially Disadvantaged Groups Grant program (SDGG), run by USDA's Rural Development (RD), provides grants to cooperatives and Cooperative Development Centers to provide technical assistance to SDA groups, including women, in rural areas.

USDA's OPPE runs the Outreach and Assistance to Socially Disadvantaged and Veteran Farmers and Ranchers Program (the 2501 Program). This program distributes funds to entities that provide underserved farmers and ranchers with technical assistance in owning and operating sustainable farms and ranches and provide outreach to increase their participation in USDA programs and services. Entities eligible for such grants include 1890 land-grant institutions, 1994 land-grant institutions, American Indian Tribal community colleges and Alaska Native cooperative colleges, Hispanic-serving and other institutions of higher education, Tribal governments and organizations, or community-based organizations.

USDA's OCR maintains the USDA Minority Farm Register. The goal of this voluntary register is to promote equal access to USDA farm programs and services (such as direct and guaranteed farm ownership and operating loans, marketing loans, and conservation) for minority farmland owners, farmers, ranchers, tenants, and other individuals with an agricultural interest.

⁴ Beginning farmers (producers who have no more than 10 years of farming experience) are another group recognized as being underserved and who are targeted by many USDA programs. The characteristics of beginning farmers were summarized by Key and Lyons (2019).

Data and Methods

Most farm-level statistics on U.S. farms rely on the COA, which takes a census of all farms in the United States every 5 years. While responding to the COA is compulsory, there are still some farms that do not respond, and national totals are the result of weighting the responses that are received. The COA has limited or no information about many farm-level financial characteristics and operator-level measures. As such, we used data from the Agricultural Resource Management Survey (ARMS) Phase III, an annual survey representative of U.S. farms conducted by USDA's National Agricultural Statistics Service (NASS) and Economic Research Service (ERS). The target population for the ARMS Phase III is the official U.S. farm population, the same population used in the COA that is conducted every 5 years, except that geographic coverage does vary. Farms are defined as all establishments that produced and sold (or normally would have sold) at least \$1,000 of agricultural products during the year.

Table 1 summarizes the percentage of all producers (up to four per farm) who fall into each of the racial, ethnic, and gender categories collected in the 2017 COA and the pooled 2017–20 ARMS. Three columns are presented for the ARMS. The first ARMS column includes the share of producers who could not be classified because the characteristic of interest was not reported or inferable from other information reported in the survey.⁵ The second ARMS column re-estimates the share of all producers in these groups when those unclassifiable producers are excluded, and the third column provides the 95-percent confidence interval for these estimates. The ARMS estimates a smaller share of producers who are Asian, Native Hawaiian or Pacific Islander, multiracial, or female than is estimated by the COA. The estimated share of producers who are American Indian or Alaska Native or Black or African American using ARMS data is also smaller than the COA shares, but the confidence intervals of these estimates include the COA share. The ARMS-estimated share of producers who are Hispanic is greater than the COA share, but the confidence interval does include the COA value.

These differences are likely due to two main factors. The first is that ARMS includes less of the U.S. and territory population than does the COA. Specifically, ARMS includes the 48 contiguous United States,⁶ whereas the COA includes every State, as well as Puerto Rico, Guam, the U.S. Virgin Islands, the Commonwealth of Northern Mariana Islands, and American Samoa. In addition, the ARMS does not survey farms on American Indian pueblos and reservations in Arizona and New Mexico; the COA includes them (U.S. Department of Agriculture, National Agricultural Statistics Service, 2019b).

The second factor likely explaining the different estimated producer population shares between the COA and ARMS seen in table 1 is how missing information on operator characteristics is dealt with. USDA's NASS uses various statistical methods to impute (assign values to) missing demographic information for all producers in the COA, whereas NASS does not impute any missing operator characteristics in the ARMS. USDA's ERS does impute some information in ARMS but only for the principal operator, and when race and/or ethnicity are missing, race is imputed to be White, and ethnicity is imputed to be non-Hispanic (NH). We opted to consider only reported race and ethnicity information when classifying farms.

Overall, the producers with missing race information in ARMS represent 8.9 percent of all producers. The producers with missing ethnicity information represent 8.6 percent, and the producers with no gender reported represent 0.4 percent. When these producers are excluded from our analysis of the ARMS data, the

⁵ There is no additional information about producer race or ethnicity in the ARMS, but there is additional gender information. In addition to reporting the gender of up to four operators on the farm, the ARMS respondent is asked to report the total number of male and female producers on the farm. This information was used to infer the gender identity of most producers for which gender was not reported for them separately.

⁶ The ARMS is a sample designed to provide State-level estimates for 15 agriculturally important States. In addition, subnational estimates can be obtained for 5 regions, and the 15 agriculturally important States can be separated from other States in their regions.

estimated shares of producers in each race, ethnicity, and gender category are closer to the shares estimated using the COA, but differences remain. As such, the estimates presented in this report are for the population that ARMS represents and will likely differ from similar estimates in the COA.

Table 1

Share of all farm producers by data source, race, ethnicity, and gender, 2017–20

Race/ethnicity/gender	Census of Agriculture (2017)	ARMS (2017–20)		
	Percent of all producers	Percent of all producers	Percent of classifiable producers*	95 percent confidence interval
Race				
American Indian/Alaska Native only	1.7	1.4	1.5	[1.2, 1.9]
Asian only	0.6	0.4	0.4	[0.3, 0.5]
Black/African American	1.3	1.0	1.1	[0.9, 1.4]
Native Hawaiian/Pacific Islander only	0.1	0.03	0.03	[0.02, 0.05]
White only	95.4	87.7	96.3	[95.9, 96.7]
More than one race reported	0.8	0.5	0.6	[0.5, 0.7]
Unknown race		8.9	(NA)	
Ethnicity				
Hispanic, Latino, or Spanish origin	3.3	3.3	3.6	[3.3, 4.0]
Non-Hispanic	96.7	88.1	96.4	[96.0, 96.7]
Unknown ethnicity		8.6	(NA)	
Gender				
Male	63.9	65.8	66.1	[65.5, 66.7]
Female	36.1	33.8	33.9	[33.3, 34.5]
Unknown gender		0.4	(NA)	

ARMS = Agricultural Resource Management Survey; NA = not applicable.

Note: Demographic data are collected on up to four producers per farm. For ARMS estimates, only reported race and ethnicity characteristics were used (imputed principal operator characteristics were not used) in generating statistics. However, an imputed value of the gender of an operator was used if the value could be inferred from the total number of female and male producers reported in the survey. Race, ethnicity, and gender percentages may not sum to 100 due to rounding.

* Indicates the omission of producers of an unknown race, ethnicity, or gender in each classification group when calculating the percent of all producers in this column.

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service (NASS) 2017 Census of Agriculture and USDA, NASS and USDA, ERS 2017–20 ARMS.

We pooled 4 years (2017–20) of data from the ARMS, which increased the sample size for each comparison. This improved the precision of estimates for the Hispanic, NH SDA, women-only, and LR farms, which can vary from year to year due to small sample sizes. The 2017 survey marked the first year that demographic characteristics for up to four producers (individuals involved in the decisions on the operation for each farm operation) were collected. Prior to that, the ARMS only allowed up to three producers from each surveyed farm operation to be reported in detail.

Monetary values were not adjusted for inflation, and therefore, the estimates are an average of nominal dollars over the period.⁷ All proportions and farm-level means were estimated using the ARMS sampling weights, and variances were estimated using the delete-a-group jackknife estimation, per USDA's NASS sampling and variance estimation design (Kott, 1998).

Identifying Farms Operated by Socially Disadvantaged, Women, and Limited Resource Producers

We separated farms into mutually exclusive groups in order to compare the underserved group or groups with a reference group of farms. In the LR comparisons, the LR farms served as the reference group so that they could be compared with farms with similarly low 1-year sales and farms with higher sales. This section explains how farms were classified for each comparison.

Beginning in 2017, ARMS collected demographic information for up to four producers (individuals involved in the decisions on the operation) for each farm surveyed. In addition, the survey collects household-level information for the principal operator (PO), which includes off-farm income earned by the operator and other members of the household and the farm's gross sales and net operating income in the survey year and previous year. This demographic, farm-level, and household-level information was used to classify farms into groups for analysis.

Race and ethnicity information is collected for up to four producers. Specifically, the ARMS respondent is asked to report whether each producer is Hispanic or not and to which racial groups each operator belongs (White, Black or African American, American Indian or Alaska Native, Asian, or Native Hawaiian or Pacific Islander). The sample size of each SDA racial group is quite small due to the group's small share of agricultural producers in the United States (table 1).⁸ To increase precision (reduce variability) of the estimates, SDA farms were compared with NH White farms and classified into three mutually exclusive groups:

- farms with only NH White producers (NH White farms);
- farms with at least one Hispanic producer of any race (Hispanic farms); or
- farms with at least one NH SDA producer and no Hispanic producers (NH SDA farms).

This approach, which identifies farms with at least one SDA (Hispanic or NH SDA) producer as an SDA farm, is consistent with USDA, NASS's approach to summarizing farms by race and ethnicity of its operators (tables 59 and 61 in USDA, NASS, 2019a) and is consistent with the movement away from classifying farms based on the characteristics of a single operator. Sorting farms into mutually exclusive groups ensures that the comparison group of NH White farms does not include any farms with SDA producers.

The NH White farms served as the reference group for the SDA farms (Hispanic and NH SDA farm categories). A total of 8.1 percent of farms could not be classified into any of the three groups because race or ethnicity information was not reported for any producer. These farms were excluded from the analysis.⁹ The

⁷ The annual inflation rate averaged 1.4 percent between 2017 and 2020 (U.S. Bureau of Economic Analysis [BEA], Gross Domestic Product Price Index, BEA API series code: A191RG).

⁸ For example, sample sizes for NH Black and NH Asian farms are approximately 100 per year or 400 when pooled.

⁹ If the missing observations are missing at random, excluding them will not bias our estimates. USDA, ERS uses a conditional mean approach to impute missing values, and as a result, any missing race and ethnicity information would be imputed as NH White since this group comprises most of the farming population.

final sample for the SDA comparison includes 58,665 farms (54,863 NH White; 2,030 Hispanic; and 1,772 NH SDA farms), with 55,957 farms (52,365 NH White; 1,893 Hispanic; and 1,699 NH SDA) for household-level measures because these measures are only available for family farms (a subset of all farms).

The gender (male or female) of up to four producers at each operation is also collected in ARMS. In addition, each ARMS respondent is asked to report the total number of women and men who make decisions for the operations. We used this information to sort farms into three mutually exclusive groups for the gender comparison: farms operated by only women (women-only), farms operated by both men and women (joint farms), and farms operated only by men (men-only). Men-only farms served as the reference group for both women-only farms and joint farms in our analysis. The final sample size for the gender comparison was 63,169 farms (34,322 men-only; 26,798 joint-run; and 2,049 women-only), with 60,156 farms (32,237 men-only; 25,940 joint-run; 1,979 women-only) for the household-level measures.

For the LR comparison, farms were sorted into three mutually exclusive groups based on whether the PO was an LR producer and the level of gross sales in the year of the survey. LR farms are those where the PO had a total household income (the sum of income from farming and all other income) that fell below the U.S. poverty guideline for a family of four (\$26,200 in 2020)¹⁰ or was less than half of the median household income in the county, and they operated a farm with gross sales less than the threshold for an LR farmer for 2 consecutive years (USDA, Natural Resources Conservation Service (NRCS), 2022).¹¹ Because LR farms by definition have low sales and low household income, we separated all other farms (all nonlimited resource farms) into two groups based on whether their gross sales were below the cutoff for being an LR farm when they were surveyed (non-LR low-sales farms) or above that (high-sales farms). This allowed us to compare LR farms (the reference group) with other low-sales farms that do not meet the conditions of sequential low farm sales and low income that the LR farms do, as well as with farms with higher sales. The final sample for the LR comparison was 63,169 farms (2,987 LR; 29,371 non-LR low-sales; and 30,811 high-sales farms), with 60,156 farms (2,987 LR; 28,583 non-LR low-sales; and 28,586 high-sales farms) for the household-level measures.

Farm Characteristics

U.S. farms are diverse in their specializations, size and scale of production, and participation in Government programs. We compared the distribution of farms in each SDA, gender, and LR group by commodity specializations and typology classification. A farm is considered to specialize in a commodity if at least 50 percent of the farm's value of production is derived from that commodity or group of commodities. Commodity specialization categories are cash grains (e.g., wheat, corn, soybeans, grain sorghum, rice); other field crops (e.g., tobacco, cotton, peanuts); high-value crops (e.g., fruit and tree nuts, vegetables, and nursery and greenhouse); dairy; beef cattle; and livestock other than beef.

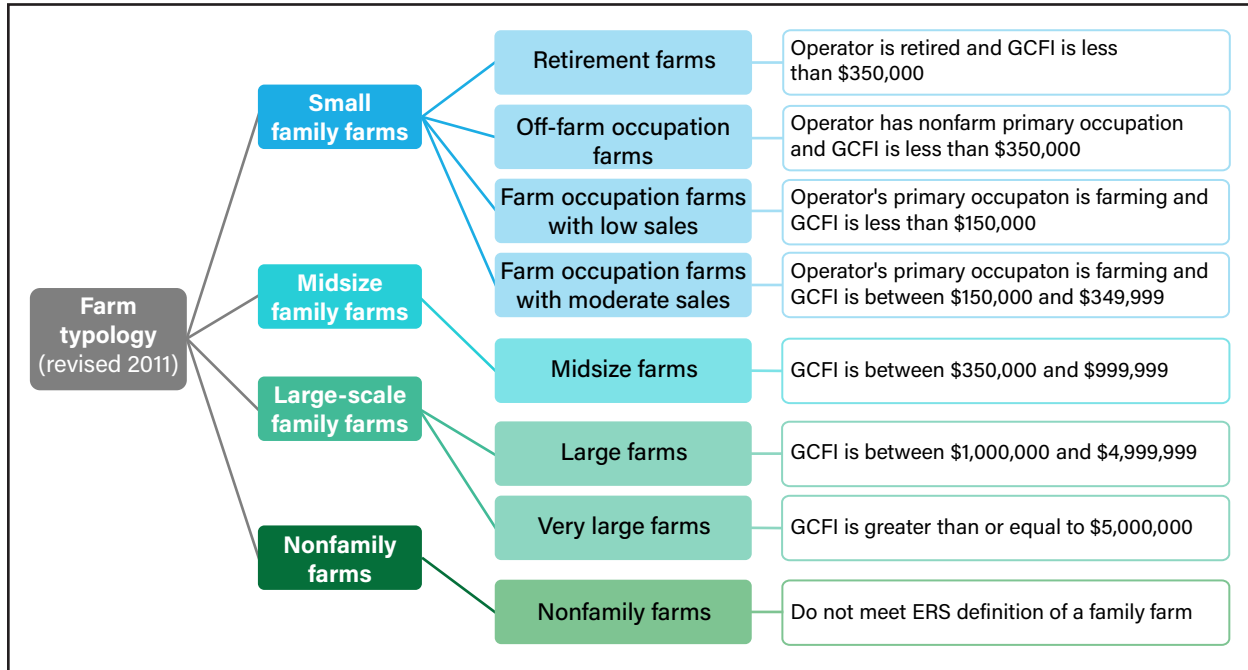
Farms are also categorized using a typology developed by USDA, ERS (Hoppe & MacDonald, 2013) (figure 1). Family farms are defined as any farm where a producer and their family own a majority of the assets in the business and are separated from nonfamily farms, which are those that do not meet the family farm definition. Family farms are further divided into seven categories, depending on the farm's gross cash farm income (GCFI) and the PO's main occupation. Small family farms have a GCFI less than \$350,000 and are sepa-

¹⁰ The poverty guidelines are updated periodically in the Federal Register by the U.S. Department of Health and Human Services under the authority of 42 U.S.C. 9902(2) and are different from the U.S. Department of Commerce, Bureau of the Census' poverty thresholds. See Shrider et al. (2021) for an explanation of how the Census Bureau calculates the poverty thresholds and measures poverty in the United States.

¹¹ The ARMS asks respondents to report the farm's total gross sales, as well as the net operating income (total cash income less production costs and depreciation), and the total off-farm income of the principal operator's household in the previous year. The latter two values are used to determine the total household income in the previous year.

rated into four types: (1) retirement farms (the PO reports being retired from farming),¹² (2) off-farm occupation farms (the PO reports that farming is not their main occupation), (3) low-sales farms (farming is the PO's main occupation and GCFI is less than \$150,000), and (4) moderate-sales farms (farming is the PO's main occupation and GCFI is between \$150,000 and \$349,999). Midsize family farms have a GCFI between \$350,000 and \$999,999, large family farms have a GCFI between \$1 million and \$4,999,999, and very large family farms have a GCFI of \$5 million or more.

Figure 1
USDA, Economic Research Service's complete eight-group farm typology



GCFI = gross cash farm income.

Note: Operator refers to the principal operator, the person most responsible for the decisions on the operation.

Source: USDA, Economic Research Service visualization of typology categories based on definitions by Hoppe and MacDonald (2013).

We also compared several measures of farm size, production characteristics, and the receipt of direct agricultural Government payments. We reported the average value of production on the farm, which includes the value of all commodities sold and the value of contract production, as well as the percent of farms that produce under contract and the average value of that production among contract farms. Land measures include the average total acres of land operated, the average acres operated that are rented, the average acres operated that were cropland, and the average owned acres that are rented to others. Involvement in Government agricultural programs is indicated by whether the farm purchased crop insurance and if the farm received any payments from Government agricultural programs, and if so, which programs and how much was received. Government agricultural program payments are underreported in ARMS such that the weighted total reported in the survey is less than the total paid out as recorded in administrative records (Dubman et al., 2021; McFadden & Hoppe, 2017). This is due in part to the underreporting of payment amounts and the fact that ARMS does not completely cover the population of persons or entities that receive direct payments from agricultural Government programs. We have no evidence to indicate that underreporting differs across the farm characteristics we examined.

¹² The ARMS asks each operator if they are retired from farming, which is a subjective measure. If the principal operator reports being retired from farming and the farm's total gross cash farm income is less than \$350,000 per year, the farm is classified as a retirement farm.

The COA reports on many of these characteristics for farms classified by the race, ethnicity, and gender of the operators (USDA, National Agricultural Statistics Service (NASS), 2019a). A comparison of measures from the 2017 COA for farms with White; Hispanic, Latino, or Spanish; American Indian and Alaska Native; Asian; Black or African American; Native Hawaiian and Pacific Islander; and women producers to similar measures for NH White, Hispanic, NH SDA, men-only, joint, and women-only farms is provided in the appendix (tables A.16 and A.17).

The differences between reported COA statistics and the ARMS statistics reported here partly arise because the COA classification does not produce mutually exclusive groups, ARMS has a more limited coverage of the farm population, and the different time periods covered. Moreover, by combining farms with different types of SDA producers, the estimates obscure the differences among farms operated by producers belonging to different racial groups. The higher rate of receipt of direct agricultural Government payments, as well as the higher average payment amount estimated using ARMS data, is likely because the ARMS 2018–20 surveys captured Market Facilitation Program (MFP) and Coronavirus (COVID-19)-related assistance payments, which were much higher than the traditional Farm Bill and disaster payments in 2017 and are not captured by the 2017 COA (Giri et al., 2021).

Unlike the COA, ARMS collects detailed information about the farm's assets and debt, in addition to farm income. We used this information to construct several financial measures and then compared them across the SDA, gender, and LR farm groups. These include net farm income (NFI), the net worth of the farm (total farm assets less total farm debt), total assets owned by the farm, and total farm debt. We also look closely at farm debt and relative leverage. Not all farms hold debt, so we reported the share of farms within each group that hold farm debt at the end of the calendar year and the share of farms that borrow from different sources, including the Farm Credit System, the Farm Service Agency, commercial banks, savings associations, and other lenders (such as input suppliers, equipment dealers, and the Small Business Association). For borrowers from these sources, we reported the mean amount borrowed.

Financial ratios provide a snapshot of the farms' financial well-being. We compared the percentage of farms in each group that were at high financial risk according to four different financial ratios. The current ratio (current assets divided by current debt) indicates a farm's ability to cover current debt obligations (i.e., whether current assets, when sold and converted to cash, would be able to cover current debt obligations). Having a current ratio of less than 1 indicates that the farm is not able to fulfill its debt obligations by selling its current assets. Farmers without sufficient liquidity in the form of current assets may be forced to sell noncurrent assets, such as real estate or farm equipment, or may have to take out new loans.

The debt-to-asset ratio compares total debt to total assets. A higher debt-to-asset ratio indicates more assets are financed by debt as opposed to owner capital (equity). Having a debt-to-asset ratio greater than 0.55 (or 55 percent) is sometimes used as a threshold for high financial risk (Ahrendsen & Katchova, 2012).

The operating profit margin measures what share of gross income is profit. Having an operating profit margin of less than 10 percent is often used by the USDA as an indicator of high financial risk (Hoppe & MacDonald, 2016).

The final financial ratio we examined is the term debt coverage ratio. This ratio is the income that a household has available to pay its debt (the net farm income from the operation, plus nonfarm income, minus household living expenses, plus interest on term debt) divided by total principal and interest. A larger ratio indicates a bigger margin to cover loan payments. A term debt coverage ratio of less than 1 indicates the farm household is in a repayment capacity "red zone" as it does not have sufficient income to meet its loan payments.

We also summarized producer characteristics at the farm level. These include the total number of producers on the farm, the number of men and women producers, the average age of up to four producers, whether there were any Hispanic producers or any NH Black producers, the highest education of up to four producers (less than high school, high school, some college, 4-year college degree, or more), whether any producers considered farming as not their main occupation, whether any producer was retired from farming, and whether any producer had 10 or fewer years of total farming experience (i.e., a beginning farmer).¹³

Characteristics of Principal Operators

In addition to farm-level producer characteristics, we also summarized and compared the characteristics of the PO on the farm. The PO is the person identified by the ARMS respondent as the producer most responsible for decisions on the operation. In addition to individual characteristics of the PO, such as age, gender, race, ethnicity, education, whether the PO is a beginning farmer, and whether farming is their main occupation, we reported the PO's total household income, income from farming and off-farm sources, total household net worth, assets, and debt.

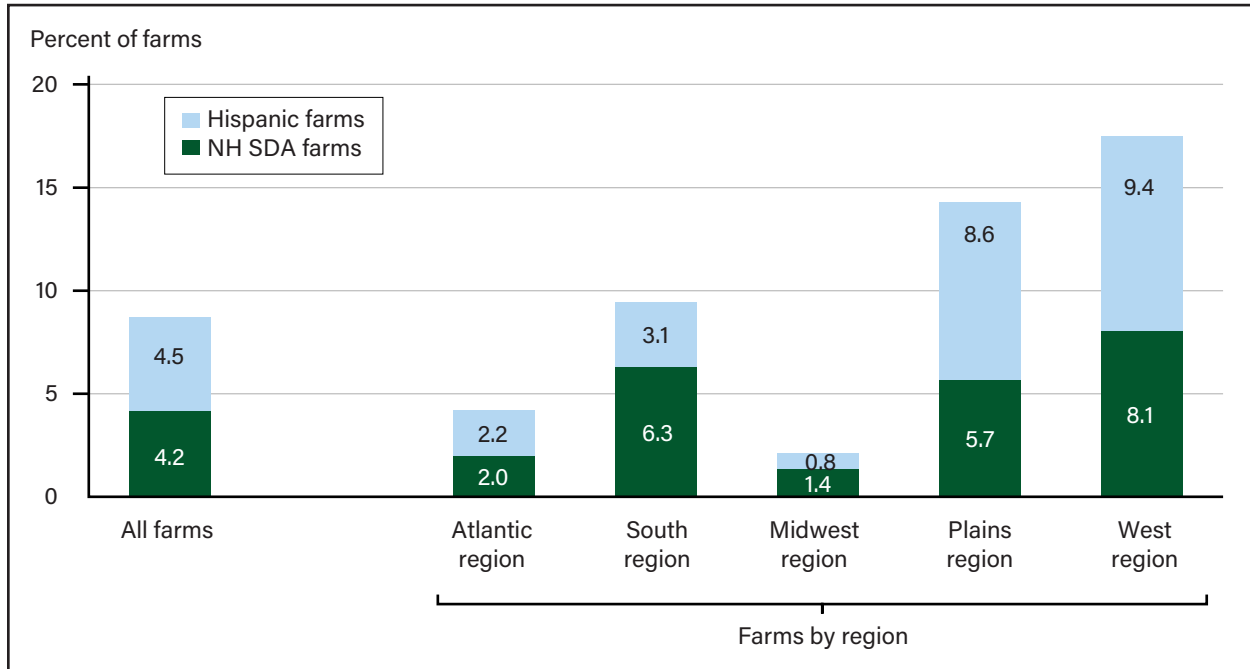
Characteristics of Socially Disadvantaged Farms

During 2017–20, 91 percent of all farms were operated by only NH White producers (NH White farms), while 9 percent were operated by SDA producers—5 percent had at least one Hispanic producer (Hispanic farms), and another 4 percent had at least one NH SDA producer and no Hispanic producers (NH SDA farms) (figure 2). The prevalence of farms operated by SDA producers varies across U.S. regions and may be influenced by access to historical farming patterns, access to credit and agricultural programs, and the supply of available farmland for purchase or rent (Callahan & Hellerstein, 2022). The Plains and West are the regions with the largest shares of Hispanic or NH SDA producers (14 and 17 percent of farms, respectively). The West region had the greatest share of NH SDA producers (8.1 percent). The Midwest region had the lowest share of farms operated by SDA producers at just over 2 percent (figure 3). Among all Hispanic farms, 45 percent were in the Plains region, while 32 percent were in the West region (appendix table A.1). NH SDA farms were a bit more evenly distributed but still heavily concentrated in the Plains region (32 percent) and the West region (30 percent). In contrast, 30 percent of all NH White farms were in the Midwest region, while only 5 percent of Hispanic farms and 9 percent of NH SDA farms were in that region.

¹³ We measured if a producer is a beginning farmer by calculating the total years since they began farming based on the year that each producer is reported to have begun farming any operation. Some USDA agencies count farming experience and thus define who is a beginning farmer differently. USDA's Natural Resources Conservation Service (NRCS) clarifies that it is 10 years of consecutive experience (USDA, NRCS, 2022), while USDA's Farm Service Agency (FSA) counts cumulative experience (USDA, FSA, 2022). USDA's Risk Management Agency's (RMA) definition is more complex and limits beginning farmers to have had an insurable interest of at least 10 percent in a crop or livestock farm as an owner-operator, landlord, tenant, or sharecropper for no more than 5 years (10 years for women) and excludes any years in which the producer was under the age of 18, enrolled in post-secondary studies (not to exceed 5 crop years), or on active duty in the U.S. military (USDA, RMA, 2021).

Figure 2

Percent of all farms that are Hispanic and non-Hispanic socially disadvantaged farms, by region, 2017-20



NH SDA = non-Hispanic socially disadvantaged.

Note: Hispanic farms = farms with at least one Hispanic producer of any race. NH SDA farms = farms with at least one NH SDA producer and no Hispanic producers. Atlantic region: Connecticut, Delaware, Kentucky, New Hampshire, New Jersey, New York, North Carolina, Maine, Maryland, Massachusetts, Pennsylvania, Rhode Island, Tennessee, Vermont, Virginia, Washington, DC, and West Virginia. South region: Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, and South Carolina. Midwest region: Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, and Wisconsin. Plains region: Kansas, Nebraska, North Dakota, Oklahoma, South Dakota, and Texas. West region: Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

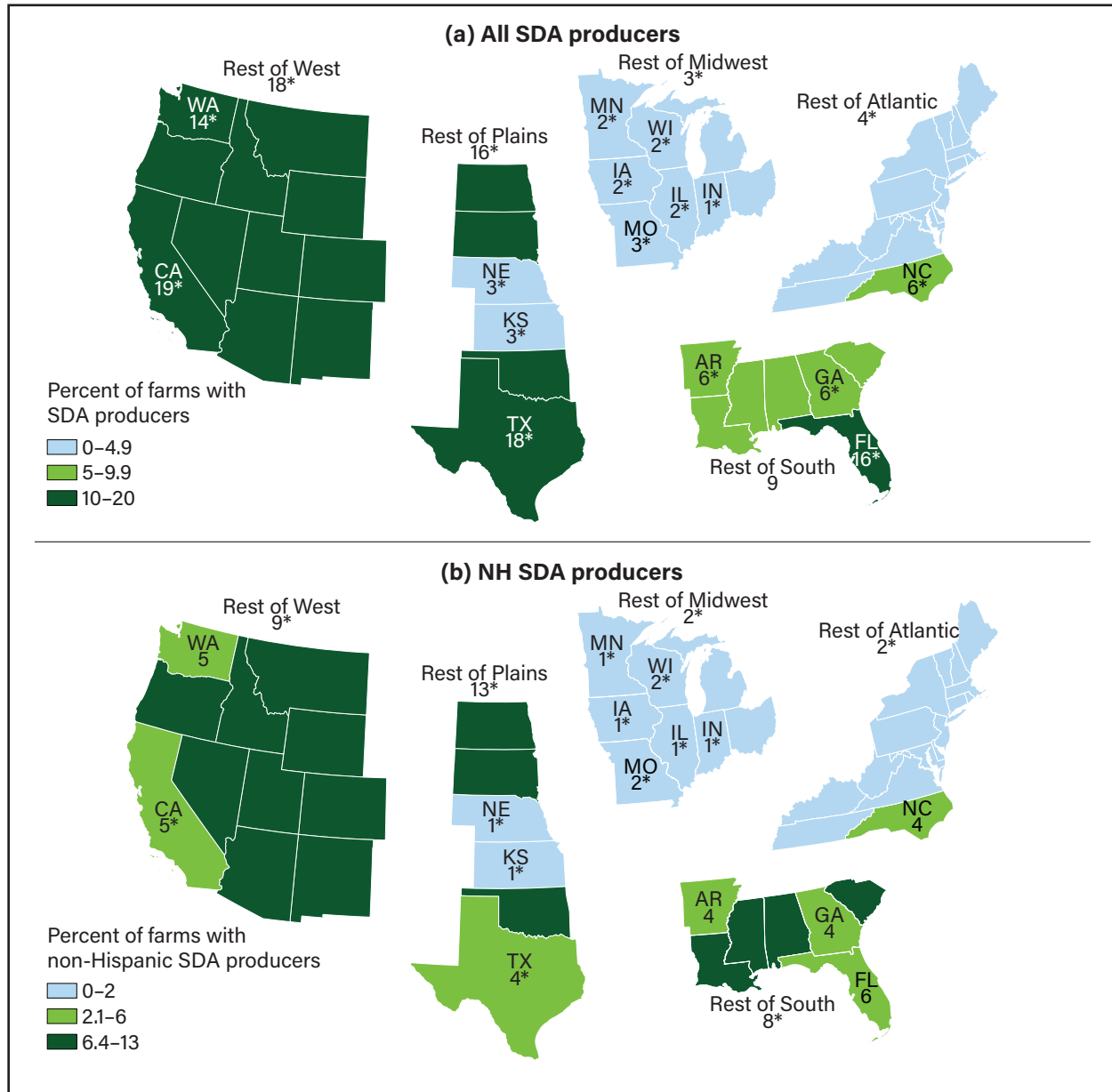
Alaska and Hawaii are not included in the Agricultural Resource Management Survey.

All regional estimates for the percent of farms in the region that are Hispanic farms and the percent that are NH SDA farms are significantly different from the all-farms percent with $p < 0.05$.

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017-20 Agricultural Resource Management Survey.

Figure 3

Percent of farms that are operated by socially disadvantaged producers, by State and regions, 2017–20



SDA = socially disadvantaged; NH = Non-Hispanic.

Note: Farms with SDA producers consist of farms with Hispanic producers and farms with NH SDA producers. Only some agriculturally important States in each region are sampled so that State-level estimates can be obtained (in bold type in the following list).

Atlantic region: Connecticut, Delaware, Kentucky, New Hampshire, New Jersey, New York, **North Carolina**, Maine, Maryland, Massachusetts, Pennsylvania, Rhode Island, Tennessee, Vermont, Virginia, Washington, DC, and West Virginia.

South region: Alabama, **Arkansas**, **Florida**, **Georgia**, Louisiana, Mississippi, and South Carolina.

Midwest region: **Illinois**, **Indiana**, **Iowa**, Michigan, **Minnesota**, **Missouri**, Ohio, and **Wisconsin**.

Plains region: **Kansas**, **Nebraska**, North Dakota, Oklahoma, South Dakota, and **Texas**.

West region: Arizona, **California**, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, **Washington**, and Wyoming.

Alaska and Hawaii are not included in the Agricultural Resource Management Survey.

* Indicates the estimate is statistically different from the national estimate (9 percent for all SDA producers and 4 percent for NH SDA producers), with at least a 90-percent confidence level ($p < 0.10$).

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017–20 Agricultural Resource Management Survey.

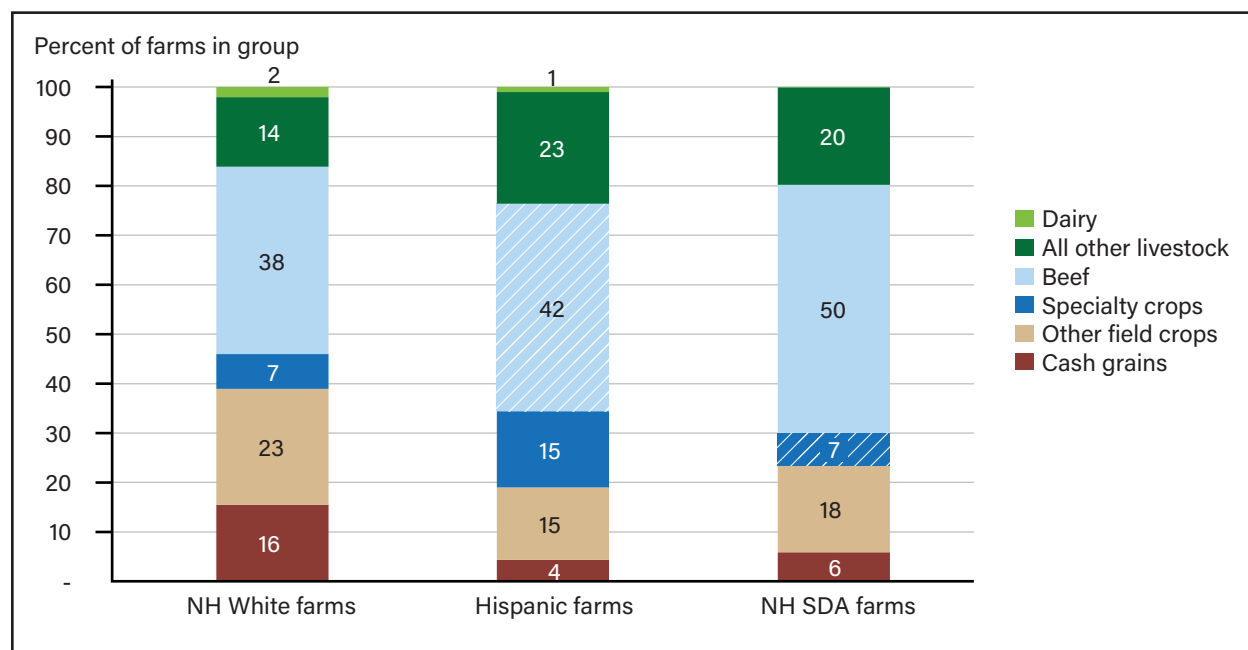
Farm Characteristics

Farms specializing in beef production comprise the largest share of farms across all three categories of farms (NH White, Hispanic, NH SDA)—about 40 percent of NH White and Hispanic farms each and half of all NH SDA farms (figure 4). The prevalence of farms specializing in beef is consistent with the fact that more farms in the United States produce beef cattle than any other commodity (USDA, NASS, 2019a). Other differences in the specializations of the three groups of farms include:

- In total, 70 percent of NH SDA farms specialized in livestock production (beef, dairy, and other livestock), which is greater than the 66 percent of Hispanic farms and 54 percent of NH White farms.
- Fifteen percent of Hispanic farms specialized in specialty crops, such as vegetables and fruit and tree nuts, which is twice the rate of NH White and NH SDA farms (7 percent).
- NH White farms are more likely to specialize in cash grains (16 percent) than Hispanic farms (4 percent) and NH SDA farms (6 percent). NH White farms are also more likely to specialize in other field crops (23 percent) than Hispanic farms (15 percent) and NH SDA farms (18 percent).

Figure 4

Distribution of farms, by commodity specialization, and socially disadvantaged category, 2017–20



SDA = socially disadvantaged; NH = non-Hispanic.

Note: NH White farms = farms with only NH White producers; Hispanic farms = farms with at least one Hispanic producer of any race; NH SDA farms = farms with at least one NH SDA producer and no Hispanic producers. A farm's commodity specialization is the commodity that contributes at least 50 percent of the farm's total production value. Cash grains consist of wheat, corn, soybeans, grain sorghum, rice, and other general cash grains. Other field crops include tobacco, cotton, peanuts, and general crops. Specialty crops include fruits, vegetables, and tree nuts. Totals may not sum because of rounding. Hashed bars indicate the estimate is not statistically different from that for NH White farms, with at least a 90-percent confidence level ($p > 0.10$).

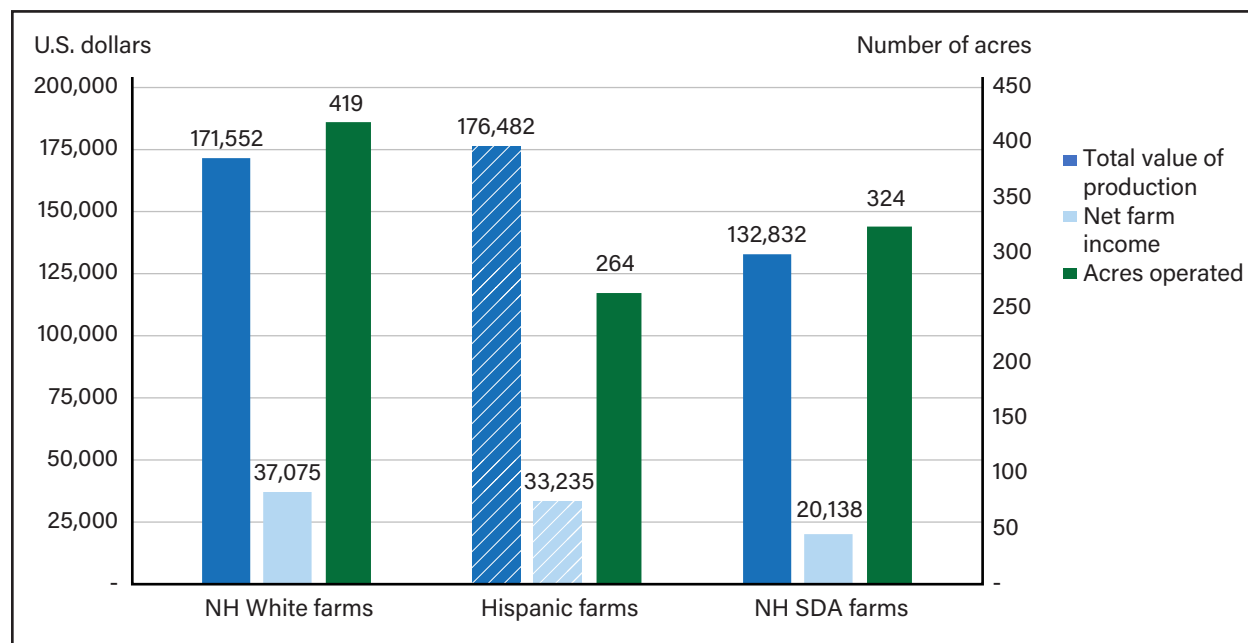
Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA ERS 2017–20 Agricultural Resource Management Survey.

On average, NH White farms operated the largest number of acres (419 acres per farm) (figure 5) compared with Hispanic (264 acres per farm) and NH SDA farms (324 acres per farm).

- The average value of production per farm was similar on NH White and Hispanic farms (\$171,552 and \$176,482, respectively) and was greater than on NH SDA farms (\$132,832). The relatively high value of production, given the fewer average acres on Hispanic farms, may be partly due to their higher concentration in specialty crops.
- NH White and Hispanic farms also had similar average net farm income (\$37,075 and \$33,235, respectively), which was greater than NH SDA farms (\$20,138).

Figure 5

Average value of production, net farm income, and operated acres owned and rented per farm, by socially disadvantaged category, 2017–20



SDA = socially disadvantaged; NH = non-Hispanic.

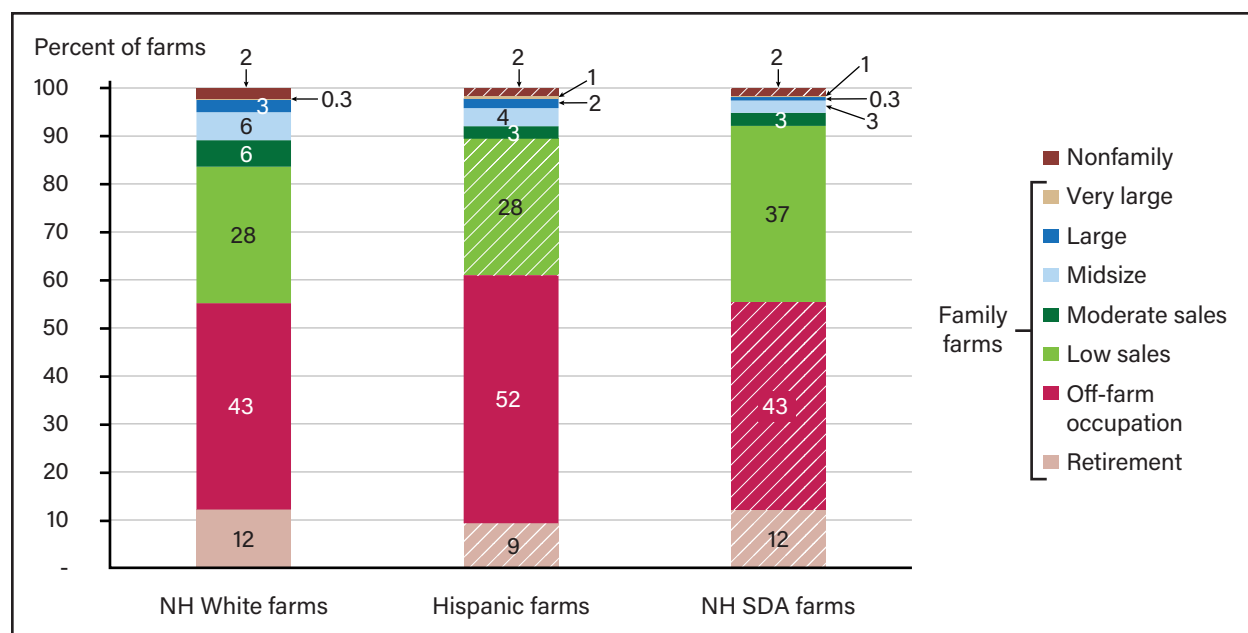
Note: NH White farms = farms with only NH White producers; Hispanic farms = farms with at least one Hispanic producer of any race; NH SDA farms = farms with at least one NH SDA and no Hispanic producers. Hashed bars indicate the estimate is not statistically different from that for NH White farms, with at least a 90-percent confidence level ($p > 0.10$).

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017–20 Agricultural Resource Management Survey.

There were differences in the distribution of farms across typology classifications as well.

- Across all farm groups in the SDA comparison, most farms were retirement and off-farm occupation farms (figure 6); however, a larger share of Hispanic farms were off-farm occupation farms (52 percent) than were NH White farms and NH SDA farms (43 percent).
- Nine percent of NH White farms were midsize family farms or larger, which was greater than the 7 percent among Hispanic farms and the 4 percent among NH SDA farms.
- A greater share of NH SDA farms were low-sales family farms (37 percent) than NH White and Hispanic farms (28 percent).
- Nonfamily farms comprised 2 percent of farms in each SDA category.

Figure 6
Distribution of farms across USDA's ERS farm typology, by socially disadvantaged group, 2017-20



ERS = Economic Research Service; SDA = socially disadvantaged; NH = non-Hispanic.

Note: NH White farms = farms with only NH White producers; Hispanic farms = farms with at least one Hispanic producer of any race; NH SDA farms = farms with at least one NH SDA producer and no Hispanic producers. Nonfamily farms are where a producer and any extended family do not own the majority of the farm business. Family farms are divided into seven categories, depending on the farm's gross cash farm income (GCFI) and the principal operator's (PO) major occupation: (1) retirement farms (where the PO reports being retired from farming and a GCFI less than \$350,000); (2) off-farm occupation farms (where the PO's reports farming as a main occupation and a GCFI less than \$350,000); (3) low-sales farms (where farming is the PO's main occupation and a GCFI less than \$150,000); (4) moderate-sales farms (where the PO reports farming as a main occupation and a GCFI between \$150,000 and \$349,999); (5) midsize family farms (where GCFI is between \$350,000 and \$999,999); (6) large family farms (where GCFI is between \$1 million and \$4,999,999); and (7) very large family farms (where GCFI is \$5 million or more). Hashed bars indicate the estimate is not statistically different from that for NH White farms, with at least a 90-percent confidence level ($p > 0.10$).

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA ERS 2017-20 Agricultural Resource Management Survey.

On average, Hispanic and NH SDA farms received a lower amount of direct agricultural program payments than NH White farms (table 2). This is largely due to the fact that Hispanic and NH SDA farms are less likely than NH White farms to receive payments at all.

- While 34 percent of NH White farms received some form of Government payment, only 21 percent of NH SDA farms and 11 percent of Hispanic farms did so. However, the average total amount of payments received among recipients was not statistically significantly different between Hispanic and NH White farms, but it was lower among NH SDA farms compared with NH White farms (\$17,417 versus \$24,840, respectively).¹⁴

¹⁴ Total and average payments estimated through ARMS are not comparable with administrative values. Administrative data tracks payments to each payee, and race and ethnicity data are marked as observed by a USDA employee. Entity payees are classified into racial or ethnic categories based on the identity of the majority of its producers. Often, race and ethnicity classifications are not observed in administrative payment data. In ARMS, race and ethnicity data for operators are reported by the survey respondent. There are also differences in the unit for which payments are tabulated. ARMS collects farm-level data, and we reported average payments per farm. Administrative payment data provide the total amounts received per payee (generally a producer) across all farms they operate. Some land and livestock owners are not producers and, therefore, not covered by ARMS, but they may also receive payments. Farm-level and payee-level averages are, therefore, not necessarily comparable.

- The pattern of Hispanic farms being the least likely to receive Government payments but receiving an average amount not statistically different from the amount received by NH White farms was observed across all program types.
- The greater likelihood of NH White farms to receive payments is consistent with the fact that these farms were more likely to produce cash grains and other field crops that are more likely to be covered by Government programs.
- The smaller average payments to NH SDA farms are consistent with the farms' smaller average operated acres and lower probability of specializing in commodities that are often targeted by Government programs. However, these factors may not be the only reason for the observed pattern.

Table 2

Average amount of government payments received by farms, percent of farms that receive payments, and average amount received among recipient farms, by program type and socially disadvantaged category, 2017-20

Program type	NH White farms	Hispanic farms	NH SDA farms
Mean U.S. dollars among all farms			
Total direct agricultural government payments	8,322	3,870	3,616
Conservation payments	1,535	501	979
Direct Federal commodity program payments	1,693	561	381
All other direct Federal, State, and local payments	5,094	2,809	2,256
Percent of farms that receive payments			
Total direct agricultural government payments	34	11	21
Conservation payments	16	4	11
Direct Federal commodity program payments	11	3	4
All other direct Federal, State, and local payments	18	7	12
Mean U.S. dollars among recipients			
Total direct agricultural government payments	24,840	33,782	17,417
Conservation payments	9,598	13,006	8,965
Direct Federal commodity program payments	15,144	17,058	10,068
All other direct Federal, State, and local payments	27,555	38,296	19,569

SDA = socially disadvantaged; NH = non-Hispanic.

Note: NH White farms = farms with only NH White producers; Hispanic farms = farms with at least one Hispanic producer of any race; NH SDA farms = farms with at least one NH SDA producer and no Hispanic producers. Bold indicates that the estimate is statistically significantly different from the estimate for NH White farms with $p < 0.10$. Conservation programs include programs such as the Conservation Reserve Program (CRP), Environmental Quality Incentives Program (EQIP), and Conservation Stewardship Program (CSP). Commodity program payments include payments from programs such as Agricultural Risk Coverage (ARC), Price Loss Coverage (PLC), and Dairy Margin Coverage. All other Federal, State, and local programs include Loan Deficiency Payments and Marketing Loan Gains, agricultural disaster payments and ad-hoc programs (including the Market Facilitation Program and the Coronavirus Food Protection Program), loans from the Paycheck Protection Program (PPP), advances from the Economic Injury Disaster Loan (EIDL) program, and other agricultural pandemic assistance. Total direct agricultural government payments is the sum of payments from each of the program types listed separately.

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA ERS 2017-20 Agricultural Resource Management Survey.

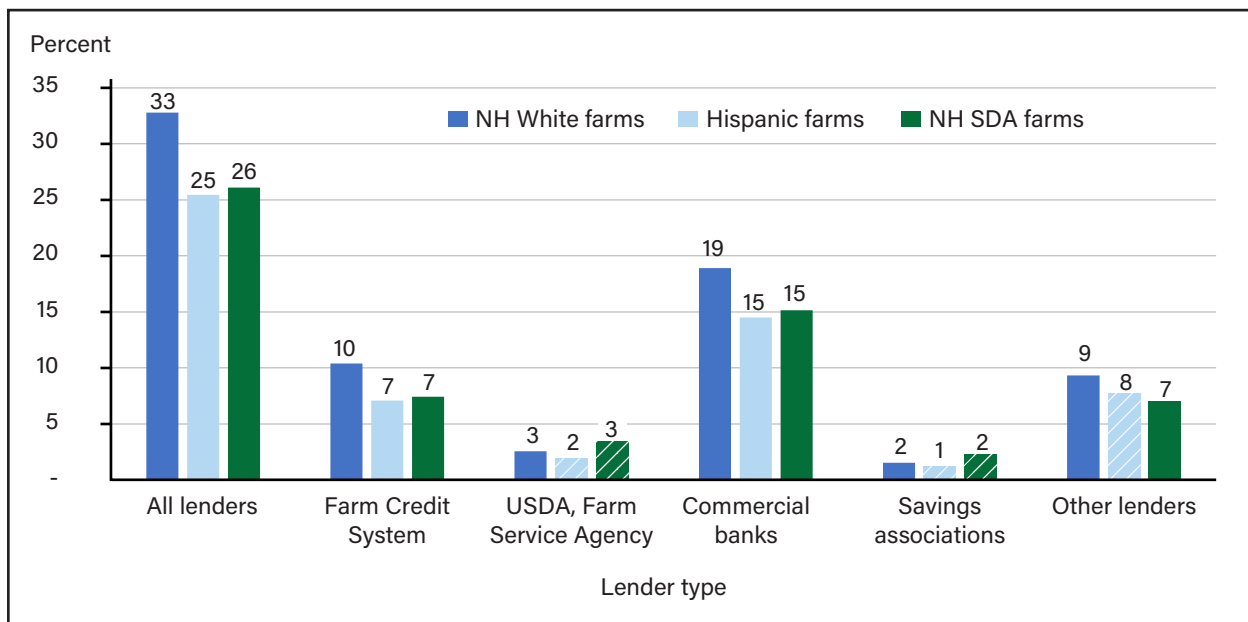
NH White farms had greater average assets (\$1,384,227) than Hispanic (\$961,485) and NH SDA farms (\$900,765) (appendix table A.3). Average debt was also greater among NH White farms (\$123,765) than among Hispanic (\$97,357) and NH SDA farms (\$81,950).

- Most farms in each SDA type do not report having loans for the farm business at the end of the calendar year (figure 7). NH White farms are the most likely to have any type of loan (33 percent), while only one-quarter of Hispanic and NH SDA farms each hold loans.¹⁵
- NH White farms are more likely to take out Farm Credit System (FCS) and commercial bank loans than Hispanic and NH SDA farms. The share of farms with loans from USDA's FSA and savings associations is similar across the three groups of farms in the SDA comparison.
- Although NH White farms were more likely to borrow, the average amount borrowed was similar across the lender types, except for loans from commercial banks and savings associations. NH White farms borrowed an average of \$296,000 from commercial banks, while NH SDA farms borrowed an average of \$232,000 (appendix table A.3). The average amount borrowed from savings associations is similar for NH White farms (\$204,000) and Hispanic farms (\$201,000) but is much lower for NH SDA farms (\$104,000).

¹⁵ Ahrendsen et al. (2022) reported on credit use among beginning farmers and ranchers and among those farms with socially disadvantaged and women primary producers using 2017 Census data. Their measure of use of credit was whether the farm reported paying interest on debt in the annual expenditures. We constructed our indicator of credit use using the debt table in ARMS, where respondents report the terms and balances of each of their loans during the calendar year. Loans taken out and repaid within the same calendar year are not captured in this approach. The advantage of using the debt table is that we can classify loans according to lender type and can observe the outstanding balance at the end of the calendar year. Our farm groups are not perfectly comparable with Ahrendsen et al. because they used the primary producer's characteristics to classify farms, whereas we used all (any) producers. However, our estimates for the percentage of all farms that use credit are similar. In 2017, 35.4 percent of non-socially disadvantaged farmer and rancher farms reported paying interest, which is very close to our estimate of 33 percent of NH White farms having a loan. Ahrendsen et al. estimated about 24 percent of Hispanic farms were paying interest, which is close to our estimate that 25 percent of Hispanic farms have loans. It is more difficult to compare estimates for our NH SDA farm group because Ahrendsen separated farms into more detailed race categories. Their estimates ranged from 22.5 percent among farms with an American Indian/Alaska Native primary producer to a high of 30.2 percent among farms with an Asian primary producer. We estimated that 26 percent of NH SDA farms had loans.

Figure 7

Percent of farms that had loans, by lender type and socially disadvantaged category, 2017–20



SDA = socially disadvantaged; NH = non-Hispanic.

Note: NH White farms = farms with only NH White producers; Hispanic farms = farms with at least one Hispanic producer of any race; NH SDA farms = farms with at least one NH SDA producer and no Hispanic producers. Hashed bars indicate the estimate is not statistically different from that for NH White farms, with at least a 90-percent confidence level ($p > 0.10$). "All lenders" consists of farms that reported having an outstanding loan balance at the end of the calendar year from the Farm Credit System, USDA's Farm Service Agency, commercial banks, saving associations, or other lenders. "Other lenders" consists of the Small Business Administration (SBA), State and county government lending agencies, life insurance companies, trade lenders, contractors, individuals, credit unions, credit card issuers, and any other lenders.

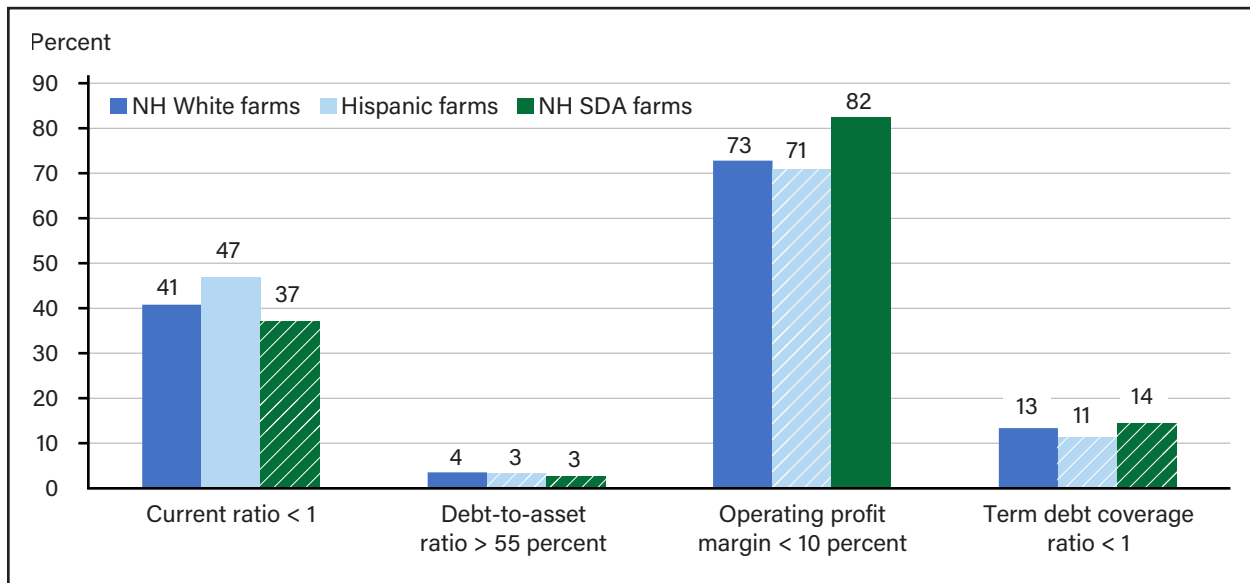
Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA ERS 2017–20 Agricultural Resource Management Survey.

The share of farms identified as being at high financial risk varied depending on the financial ratio considered, but there were few differences across the SDA farm types (figure 8):

- A greater share of Hispanic farms had a current ratio less than 1 (47 percent) than NH White farms (41 percent).
- Of NH SDA farms, 82 percent had an operating profit margin less than 10 percent, which was higher than the 73 percent among NH White farms.
- A small share of farms in each SDA group were at high financial risk according to the debt-to-asset measure (3 to 4 percent) and the term debt coverage ratio (11 to 14 percent), and the estimated percentages among Hispanic and NH SDA farms were not statistically significant compared with those percentages estimated for NH White farms.
- Hispanic and NH SDA farms may have a larger share of farms categorized as higher financial risk since their operations are smaller than NH White farms and are less likely to benefit from the cost savings of economies of scale.

Figure 8

Percent of farms at high financial risk, by socially disadvantaged category, 2017-20



SDA = socially disadvantaged; NH = non-Hispanic.

Note: NH White farms = farms with only NH White producers; Hispanic farms = farms with at least one Hispanic producer of any race; NH SDA farms = farms with at least one NH SDA producer and no Hispanic producers. Hashed bars indicate the estimate is not statistically different from that for NH White farms, with at least a 90-percent confidence level ($p > 0.10$).

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA ERS 2017-20 Agricultural Resource Management Survey.

Consistent with a larger share of NH SDA farms being classified as low-sales small family farms, NH SDA farms are more than twice as likely to be an LR farm (20 percent) than are NH White farms (9 percent) (table 3). NH SDA farms are also more likely to have a woman producer (57 percent) than are NH White farms (53 percent). The average age of producers on Hispanic farms was lower than for producers on NH White farms (57 versus 60 years, respectively), and Hispanic farms were more likely to have a producer with 10 years or less of farming experience (a beginning farmer). Hispanic farms were also more likely to have a producer report that farming was not their main occupation than were NH White farms (68 versus 61 percent, respectively).

Table 3

Selected characteristics of farms, by socially disadvantaged category, 2017-20

	NH White farms	Hispanic farms	NH SDA farms
Farm is a limited resource farm (percent)	9	10	20
Mean number of operators	1.6	1.6	1.8
Farm has a woman operator (percent)	53	50	57
Mean age of operators (years)	60	57	59
Any operator nonfarm primary occupation (percent)	61	68	63
Any operator retired from farming (percent)	15	10	15
Any operator has 10 years or less of farming experience (percent)	20	27	19

SDA = socially disadvantaged; NH = non-Hispanic.

Note: NH White farms = farms with only NH White producers; Hispanic farms = farms with at least one Hispanic producer of any race; NH SDA farms = farms with at least one NH SDA producer and no Hispanic producers. Bold type indicates that the estimate is statistically significantly different from NH White farms, with at least a 90-percent confidence level ($p < 0.10$).

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA ERS 2017-20 Agricultural Resource Management Survey.

Principal Operator Characteristics

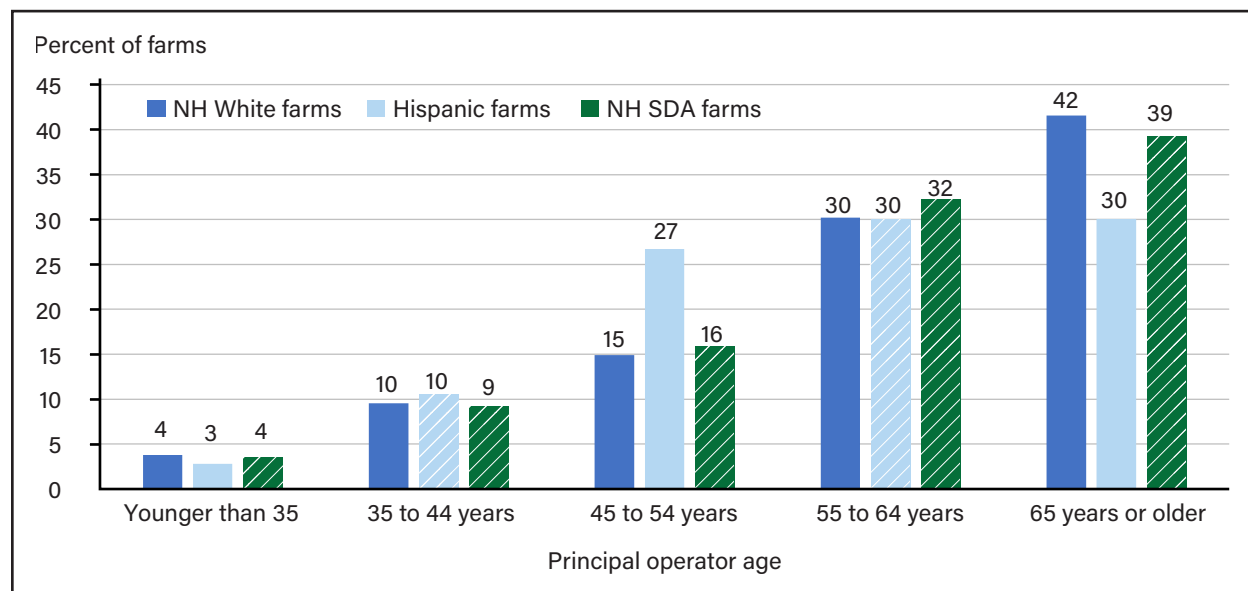
Farms are classified based on the race and ethnicity of all the farm operators without distinguishing between the PO and other producers. This classification system means that some Hispanic farms could have a non-Hispanic PO, and some NH SDA farms could have an NH White PO. While 79 percent of Hispanic farms have a PO who is Hispanic (of any race), 21 percent of the Hispanic farms had an NH White PO, and about 1 percent had a PO who was neither Hispanic nor NH White (appendix table A.4). Among NH SDA farms, 30 percent had a PO who identified as Black or African American, 52 percent had a PO who identified as NH and a race other than White or Black, and 17 percent had an NH White PO.

Other PO demographic characteristics also differed across the SDA farm types.

- POs of Hispanic farms were more likely to be younger than age 65 than POs of NH White or NH SDA farms, while POs of NH SDA farms were more likely to be female than those of NH White farms (figure 9).
- Twenty-seven percent of POs of Hispanic farms were between the ages of 45 and 54 compared with only 15 percent for NH White farms and 16 percent for NH SDA farms.
- Only 30 percent of Hispanic farms had a PO over 65 years old compared with 42 percent of NH White farm POs and 39 percent of NH SDA farm POs. The relative youth of Hispanic farm POs is consistent with the fact that Hispanics as a group are the youngest major racial or ethnic group in the United States (Patten, 2016).
- Eighteen percent of the POs of NH SDA farms were women compared with 14 percent of the POs of NH White farms and 12 percent of the POs of Hispanic farms.

Figure 9

Principal operator age by socially disadvantaged farm classification, 2017-20



SDA = socially disadvantaged; NH = non-Hispanic.

Note: NH White farms = farms with only NH White producers; Hispanic farms = farms with at least one Hispanic producer of any race; NH SDA farms = farms with at least one NH SDA producer and no Hispanic producers. Hashed bars indicate the estimate is not statistically different from that for NH White farms, with at least a 90-percent confidence level ($p > 0.10$).

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA ERS 2017-20 Agricultural Resource Management Survey.

Hispanic farm POs were more likely to be beginning farmers (those with 10 or less years of experience) and correspondingly are less likely to have farming as their main occupation (appendix table A.5). This pattern is also consistent with the relative youth of Hispanic farm POs compared with NH SDA or NH White farms.

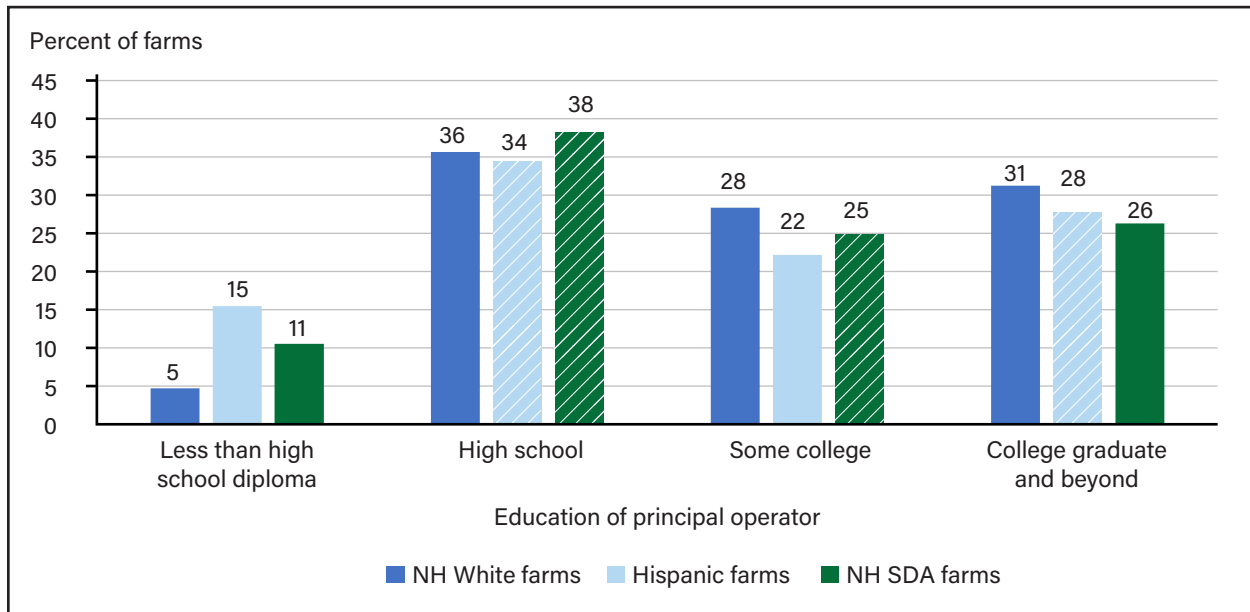
- Twenty-five percent of Hispanic farm POs were beginning farmers compared with 19 percent of NH White farm POs and 18 percent of NH SDA POs.
- Forty-three percent of Hispanic farm POs reported farming as their main occupation compared with 51 percent of NH White and NH SDA farm POs.

POs of NH White farms were more likely to have attended college than POs of NH SDA or Hispanic farms (figure 10).

- Twenty-eight percent of POs of NH White farms attended at least some college but did not receive a 4-year degree compared with 22 percent of Hispanic farm POs. The 25 percent of NH SDA farm POs who attended college without completing a degree was not statistically significantly different than NH White farm POs.
- Thirty-one percent of POs of NH White farms completed a 4-year college degree compared with 26 percent of NH SDA farm POs. Twenty-eight percent of Hispanic farm POs completed college or more education, which was not statistically significantly different from that of NH White POs.

Figure 10

Principal operator education, by socially disadvantaged farm classification, 2017-20



SDA = socially disadvantaged; NH = non-Hispanic.

Note: NH White farms = farms with only NH White producers; Hispanic farms = farms with at least one Hispanic producer of any race; NH SDA farms = farms with at least one NH SDA producer and no Hispanic producers. Hashed bars indicate the estimate is not statistically different from that for NH White farms, with at least a 90-percent confidence level ($p > 0.10$).

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA ERS 2017-20 Agricultural Resource Management Survey.

The PO households of NH SDA farms earned less farm, nonfarm, and total household income than the PO households of NH White farms (table 4). The average income of PO households of Hispanic farms, 21 percent of which had a PO who was not Hispanic, was not significantly different from that of NH White farms.

- The average PO household of an NH SDA farm earned \$8,419 from the farm compared with \$22,163 for the PO household of an NH White farm.
- The average PO household of an NH SDA farm earned \$84,528 off the farm compared with \$97,351 for an average PO household of an NH White farm.
- The average PO household of an NH SDA farm earned \$92,946 from farm and off-farm sources combined compared with \$119,514 for the average PO household of an NH White farm.

Table 4

Principal operator household income, expenditures, assets, and debt, by SDA farm classification, 2017-20

	NH White farms	Hispanic farms	NH SDA farms
	U.S. dollars		
Farm income			
Mean	22,163	19,329	8,419
Median	-1,012	-2,481	-3,210
Off-farm income			
Mean	97,351	100,958	84,528
Median	69,900	72,750	62,750
Total household income			
Mean	119,514	120,287	92,946
Median	79,313	79,214	56,977
Mean net worth, assets, and debt			
Net worth	1,666,501	1,296,795	1,218,995
Total assets	1,863,826	1,451,360	1,367,265
Farm assets	1,182,540	855,140	904,669
Nonfarm assets	681,286	596,220	462,595
Total debt	197,325	154,564	148,270
Farm debt	105,107	68,137	73,519
Nonfarm debt	92,218	86,427	74,751

SDA = socially disadvantaged; NH = non-Hispanic.

Note: NH White farms = farms with only NH White producers; Hispanic farms = farms with at least one Hispanic producer of any race; NH SDA farms = farms with at least one NH SDA producer and no Hispanic producers. Means reported unless otherwise noted. Only means were compared statistically. Bold type indicates that the mean estimate is statistically significantly different from that for NH White farms, with at least a 90-percent confidence level ($p < 0.10$).

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA ERS 2017-20 Agricultural Resource Management Survey.

The PO household's net worth, assets, and debt are higher on NH White farms than Hispanic or NH SDA farms (appendix table A.5).

- The average net worth for the household of an NH White farm PO was \$1.67 million compared with \$1.30 million for a Hispanic farm PO household and \$1.22 million for an NH SDA farm PO household, which is consistent with the younger age of the two latter groups.
- The average total assets for the household of an NH White farm PO was \$1.86 million compared with \$1.45 million for a Hispanic farm PO household and \$1.37 million for an NH SDA farm PO household.
- The average total debt for the household of an NH White farm PO is \$197,325 compared with \$154,564 for a Hispanic farm PO household and \$148,270 for an NH SDA farm PO household.

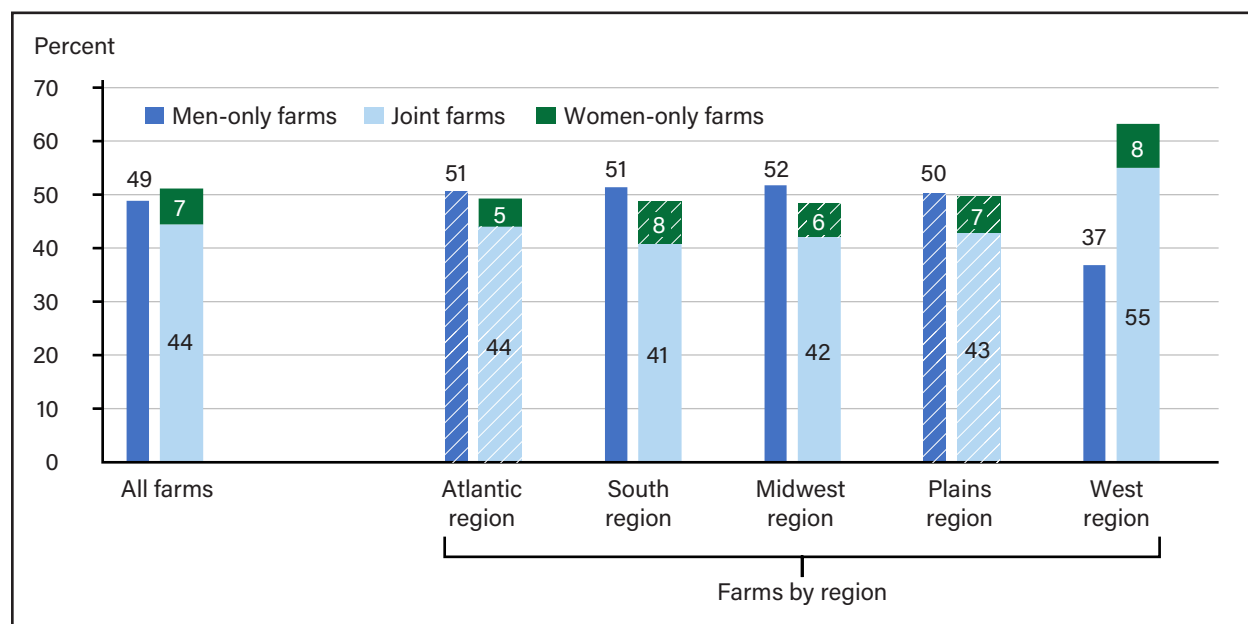
Characteristics of Farms With Women Producers

Between 2017 and 2020, more than half (51 percent) of all farms had at least one woman operator (figure 11). Overall, about 7 percent of all farms were women-only operations, and 44 percent were joint operations (both women and men operators). The rest of farms (49 percent) were men-only operations.

Of the three groups, men-only operations comprised the largest share of operations in each region, except in the West, which includes California and Washington. In the West, 63 percent of operations had at least 1 woman producer, and notably, more than half (55 percent) of all operations were run jointly. About half of the 15 States and remaining regions covered by the ARMS had more operations with at least 1 woman producer (joint and women-only operations) than men-only operations (figure 12). Georgia had the largest share of women-only farms (14 percent) of the 15 States for which State-level estimates are available, but the estimate is not statistically significantly different from the national estimate of 7 percent. There are small differences regarding how all joint and women-only farms are distributed across the five regions compared with men-only farms, but for all three groups of farms, half or more are located either in the Midwest or Plains (appendix table A.6).

Figure 11

Percent of farms that are men-only, women-only, and joint operations, by region, 2017-20



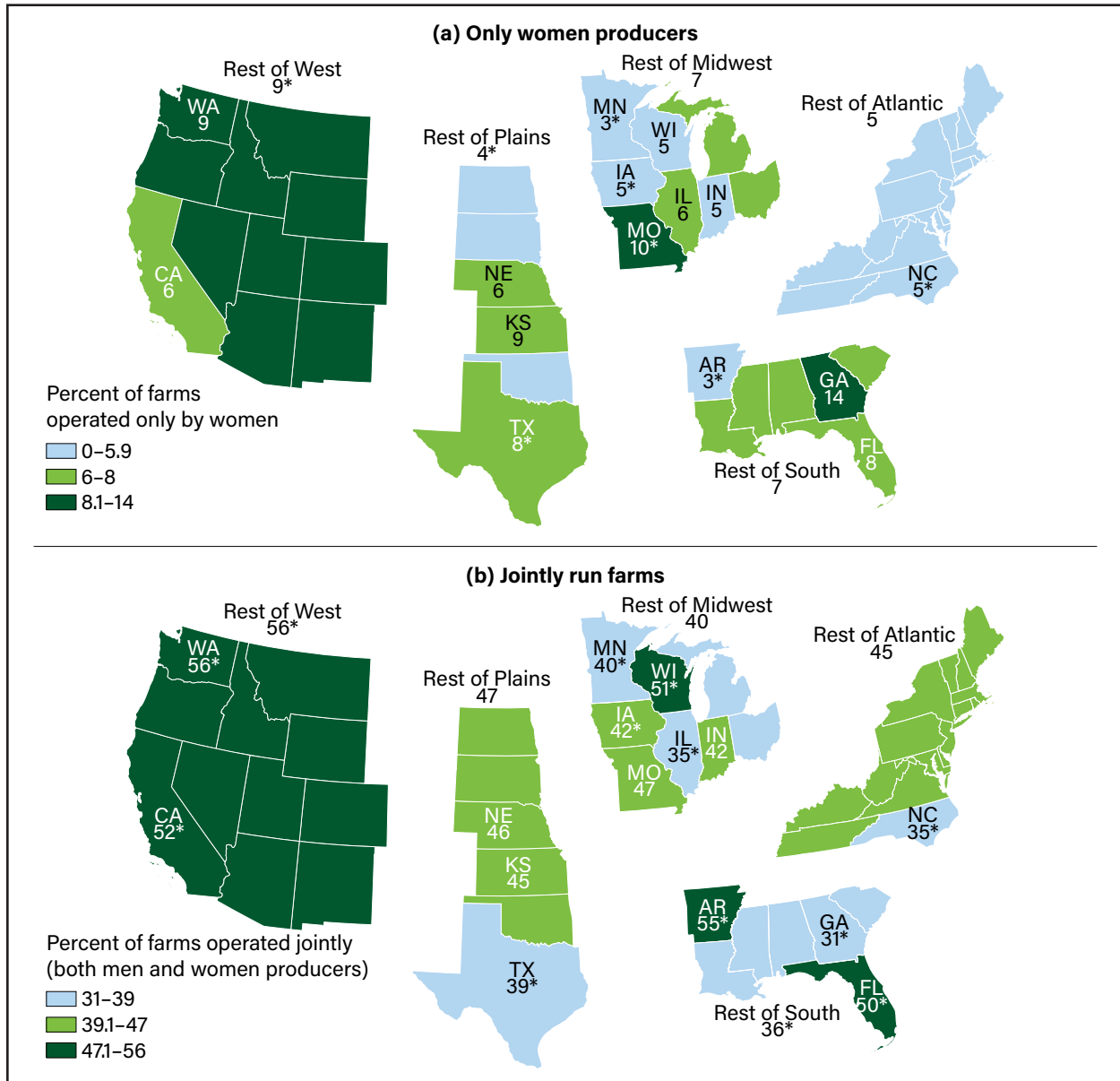
Note: Atlantic region: Connecticut, Delaware, Kentucky, New Hampshire, New Jersey, New York, North Carolina, Maine, Maryland, Massachusetts, Pennsylvania, Rhode Island, Tennessee, Vermont, Virginia, Washington, DC, and West Virginia. South region: Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, and South Carolina. Midwest region: Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, and Wisconsin. Plains region: Kansas, Nebraska, North Dakota, Oklahoma, South Dakota, and Texas. West region: Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming. Hashed bars indicates that the estimate for the percent of farms in the category among farms in the region is not statistically significantly different from the estimate for the percent of farms in the category among all farms with $p < 0.10$.

Alaska and Hawaii are not included in the Agricultural Resource Management Survey.

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017-20 Agricultural Resource Management Survey.

Figure 12

Percent of farms that are operated only by women producers, by State and remaining regions, 2017–20



Note: Only some agriculturally important States in each region are sampled so that State-level estimates can be obtained (in bold type below). Atlantic region: Connecticut, Delaware, Kentucky, New Hampshire, New Jersey, New York, **North Carolina**, Maine, Maryland, Massachusetts, Pennsylvania, Rhode Island, Tennessee, Vermont, Virginia, Washington, DC, and West Virginia. South region: Alabama, **Arkansas**, **Florida**, **Georgia**, Louisiana, Mississippi, and South Carolina. Midwest region: **Illinois**, **Indiana**, **Iowa**, Michigan, **Minnesota**, **Missouri**, Ohio, and **Wisconsin**. Plains region: **Kansas**, **Nebraska**, North Dakota, Oklahoma, South Dakota, and **Texas**. West region: Arizona, **California**, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, **Washington**, and Wyoming.

Alaska and Hawaii are not included in the Agricultural Resource Management Survey.

* Indicates the estimate is statistically different from the national estimate (7 percent for women-only farms and 44 percent for joint farms), with at least a 90-percent confidence level ($p < 0.10$).

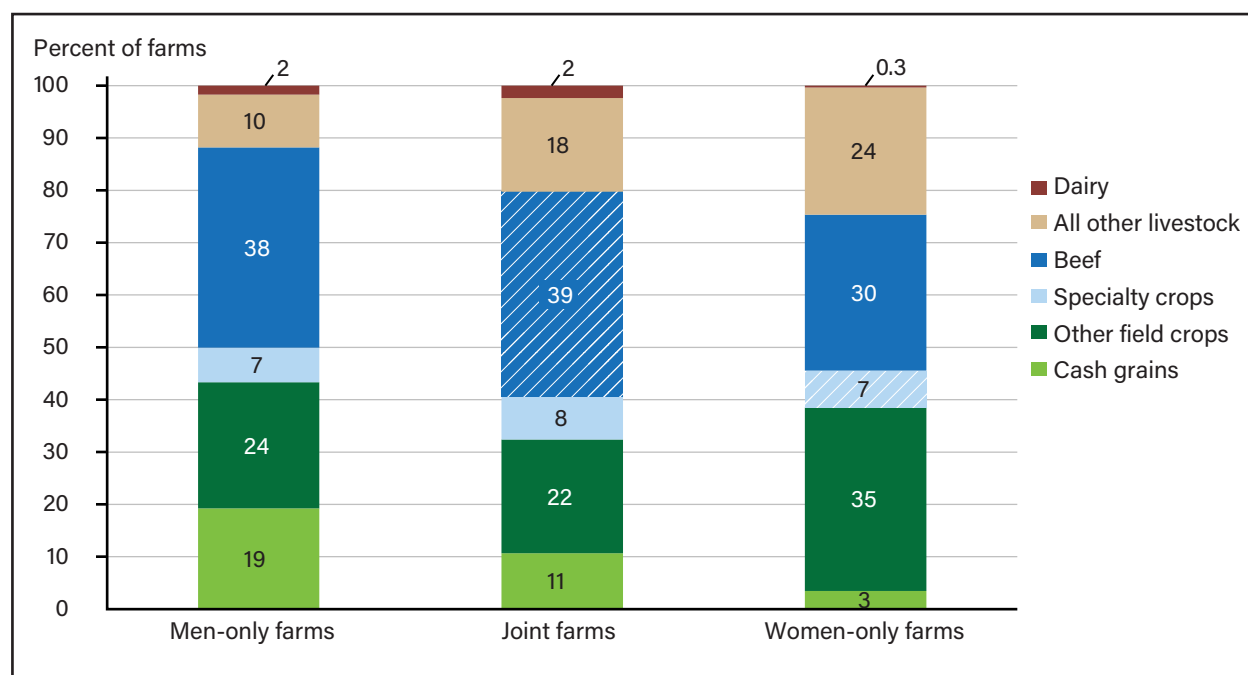
Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017–20 Agricultural Resource Management Survey.

Farm Characteristics

Women-only farms specialized in commodities at different rates than other farms (figure 13). Joint and men-only operations specialized in similar commodities.

- Thirty-five percent of women-only operations specialized in other field crops, and 24 percent specialized in all other livestock production compared with 24 and 10 percent, respectively, for men-only operations.
- About 19 percent of men-only operations specialized in cash grains, which is significantly more than for women-only (3 percent) and joint (11 percent) operations. The share of men-only farms that specialized in cash grains closely matches the share of farms that had Federal crop insurance, which predominantly covers cash grain producers. Eighteen percent of men-only operations participated in the Federal Crop Insurance Program (FCIP) compared with 13 percent of joint and 3 percent of women-only operations.
- Women-only operations were less likely to specialize in beef and dairy production than were men-only and joint operations. About 30 percent of women-only operations specialized in beef compared with 38 percent of men-only and 39 percent of joint operations.

Figure 13
Farm commodity specializations, by producer gender categories, 2017–20



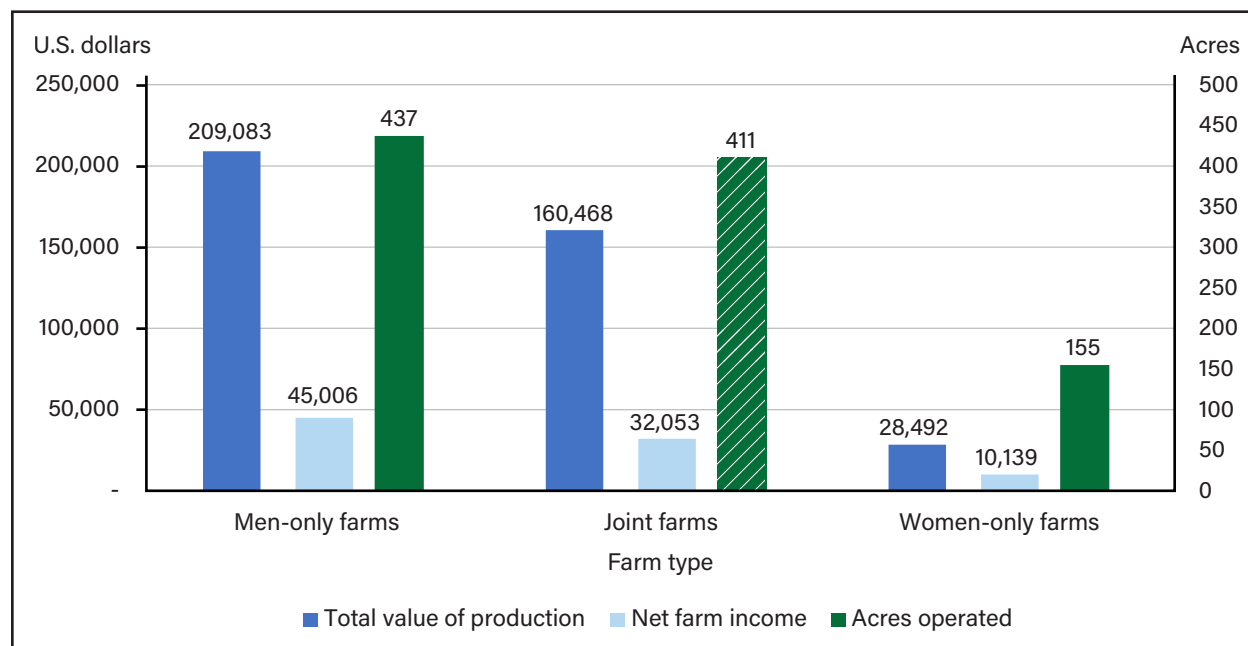
Note: Totals may not sum to 100 due to rounding. A farm's commodity specialization is the commodity that contributes at least 50 percent of the farm's total production value. Cash grains consist of wheat, corn, soybean, grain sorghum, rice, and other general cash grains. Other field crops include tobacco, cotton, peanuts, and general crops. Specialty crops include fruit, vegetables, and tree nuts. Hashed bars indicate the estimate is not statistically different from that for men-only farms, with at least a 90-percent confidence level ($p > 0.10$).

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017–20 Agricultural Resource Management Survey.

Women-only and joint operations had a lower average total value of production and net farm income than men-only operations; women-only farms operated fewer acres than men-only farms (figure 14).

- Women-only operations and joint-run operations had a significantly lower total value of production at \$28,492 per year and \$160,468 per year, respectively, compared with men-only operations at \$209,083 per year.
- Only 2 percent of women-only operations produced commodities under contract, while 9 percent of men-only and 8 percent of joint operations had production under contract. Additionally, women-only operations with production contracts had less production under contract at \$513,644 per year on average, while men-only operations and joint operations had over \$700,000 in production under contract per year on average.
- In terms of acreage, joint operations and men-only operations operated similar-sized farms on average. Women-only operations, however, operated significantly smaller operations when compared with men-only operations. Women-only operations operated 155 acres on average, while men-only and joint operations operated 437 and 411 acres on average, respectively. This could be one factor explaining why, on average, women-only operations have lower average total value of production and net farm income.
- The average net farm income for joint and women-only operations was significantly lower than for men-only operations. On average, the net farm income for men-only operations was \$45,006 per year compared with \$32,053 per year for joint operations and \$10,139 per year for women-only operations.

Figure 14
Average value of production, net farm income, and acres operated, by producer gender categories, 2017-20



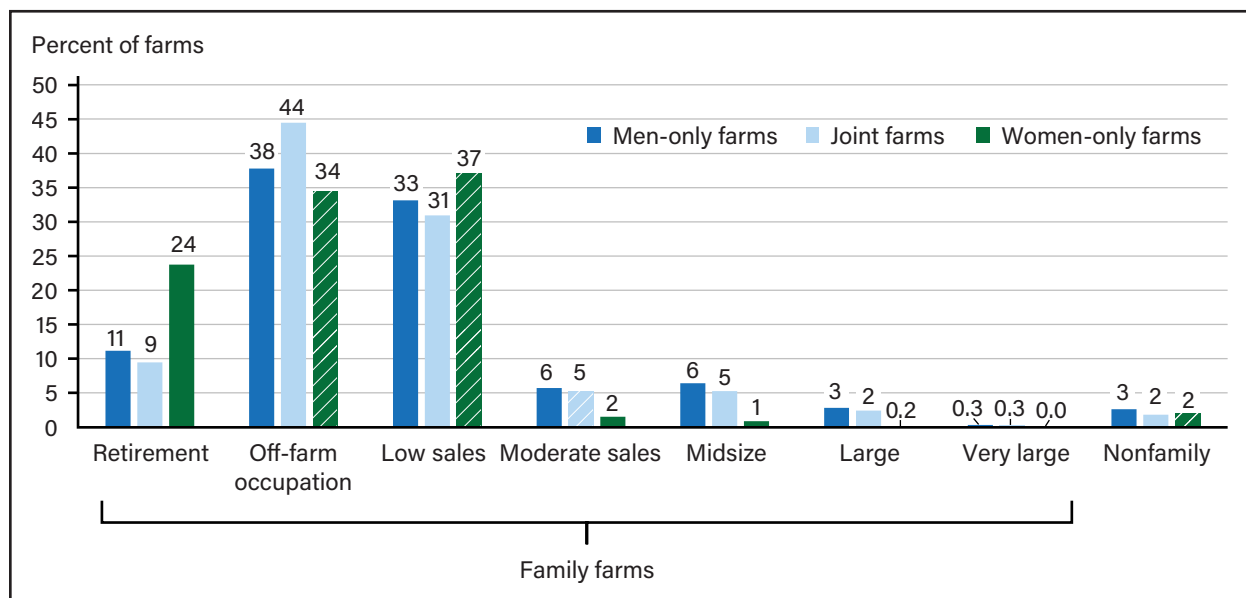
Note: Hashed bars indicate the estimate is not statistically different from that for men-only farms, with at least a 90-percent confidence level ($p > 0.10$).

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017-20 Agricultural Resource Management Survey.

Women-only operations were more likely to be retirement farms and less likely to be moderate, midsize, large, or very large family farms (figure 15).

- Women-only operations had a larger share of retirement farms at 24 percent compared with 11 percent of men-only operations, while 9 percent of joint operations were categorized as retirement farms.
- At 44 percent, joint operations had a larger share of off-farm occupation farms than men-only operations. Joint operations also had a smaller share of low-sales family farms when compared with men-only operations at 31 percent.
- Women-only and joint operations had a smaller share of midsize family farms (1 and 5 percent, respectively) when compared with men-only operations.
- Three percent of men-only operations were large family farms, a larger share than joint operations (2 percent).

Figure 15
Farm typology, by farm gender category, 2017-20



Note: Hashed bars indicate the estimate is not statistically different from that for men-only farms, with at least a 90-percent confidence level ($p > 0.10$). Nonfamily farms are where a producer and their extended family do not own most of the farm business. Family farms are divided into seven categories depending on the farm's gross cash farm income (GCFI) and the principal operator's (PO) major occupation: (1) retirement farms (where the PO reports being retired from farming and a GCFI less than \$350,000); (2) off-farm occupation farms (where the PO reports that farming is not a main occupation and a GCFI less than \$350,000); (3) low-sales farms (where the PO reports farming as a main occupation and a GCFI less than \$150,000); (4) moderate-sales farms (where the PO reports farming as a main occupation and a GCFI between \$150,000 and \$349,999); (5) midsize family farms (where GCFI is between \$350,000 and \$999,999); (6) large family farms (where GCFI is between \$1 million and \$4,999,999); and (7) very large family farms (where GCFI is \$5 million or more).

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017-20 Agricultural Resource Management Survey.

Women-only and men-only operations received some type of Government payment at similar rates (32 and 35 percent, respectively), while joint operations were less likely to receive Government payments (29 percent) (table 5).

- Men-only operations that received Government payments received \$24,964 on average, while women-only operations received \$7,687. Joint-run operations receiving Government payments received \$26,361 on average, which is statistically similar to the amount received by men-only farms.
- A larger share of women-only operations received conservation payments (23 percent) when compared with men-only (17 percent) and joint (14 percent) operations. But on average, men-only operations receiving conservation payments received 50 percent more than women-only operations, which is consistent with the greater area of land operated by men-only operations.
- About 12 percent of men-only operations received Federal commodity program payments, while only 9 percent of joint operations and 4 percent of women-only operations received such payments. On average, men-only operations received larger payments than women-only operations (\$15,489 compared with \$4,645, respectively). This implies that some of the men-only cash grains operations (19 percent of all men-only operations) did not receive commodity program payments or did not report receiving such payments in the ARMS.
- Women-only operations were also least likely to receive other types of agricultural payments (other than conservation and commodity programs). On average, women-only operations receiving other types of Federal, State, or local payments received \$9,314, but men-only and joint counterparts received, on average, almost \$28,000 (table 5).

Table 5

Average amount of Government payments received by farms, percent of farms that receive payments, and average amount received among recipient farms, by program type and producer gender category, 2017-20

Program type	Men-only farms	Joint farms	Women-only farms
Mean U.S. dollars among all farms			
Total direct agricultural Government payments	8,836	7,700	2,470
Conservation payments	1,570	1,419	1,421
Direct Federal commodity program payments	1,833	1,436	173
All other direct Federal, State, and local payments	5,434	4,845	876
Percent of farms that receive payments			
Total direct agricultural Government payments	35	29	32
Conservation payments	17	14	23
Direct Federal commodity program payments	12	9	4
All other direct Federal, State, and local payments	19	16	9
Mean U.S. dollars among recipients			
Total direct agricultural Government payments	24,964	26,361	7,687
Conservation payments	9,261	10,061	6,191
Direct Federal commodity program payments	15,489	15,136	4,645
All other direct Federal, State, and local payments	27,921	29,790	9,314

Note: Bold indicates the estimate is statistically significantly different from that for men-only farms, with at least a 90-percent confidence level ($p < 0.10$). Conservation programs include programs such as the Conservation Reserve Program (CRP), Environmental Quality Incentives Program (EQIP), and Conservation Stewardship Program (CSP). Commodity program payments include payments from programs such as Agricultural Risk Coverage (ARC), Price Loss Coverage (PLC), and Dairy Margin Coverage. All other Federal, State, and local programs include Loan Deficiency Payments and Marketing Loan Gains, agricultural disaster payments, and ad-hoc programs (including the Market Facilitation Program and the Coronavirus Food Protection Program), loans from the Paycheck Protection Program (PPP), advances from the Economic Injury Disaster Loan (EIDL) program, and other agricultural pandemic assistance. Total direct agricultural Government payments is the sum of payments from each of the program types listed separately.

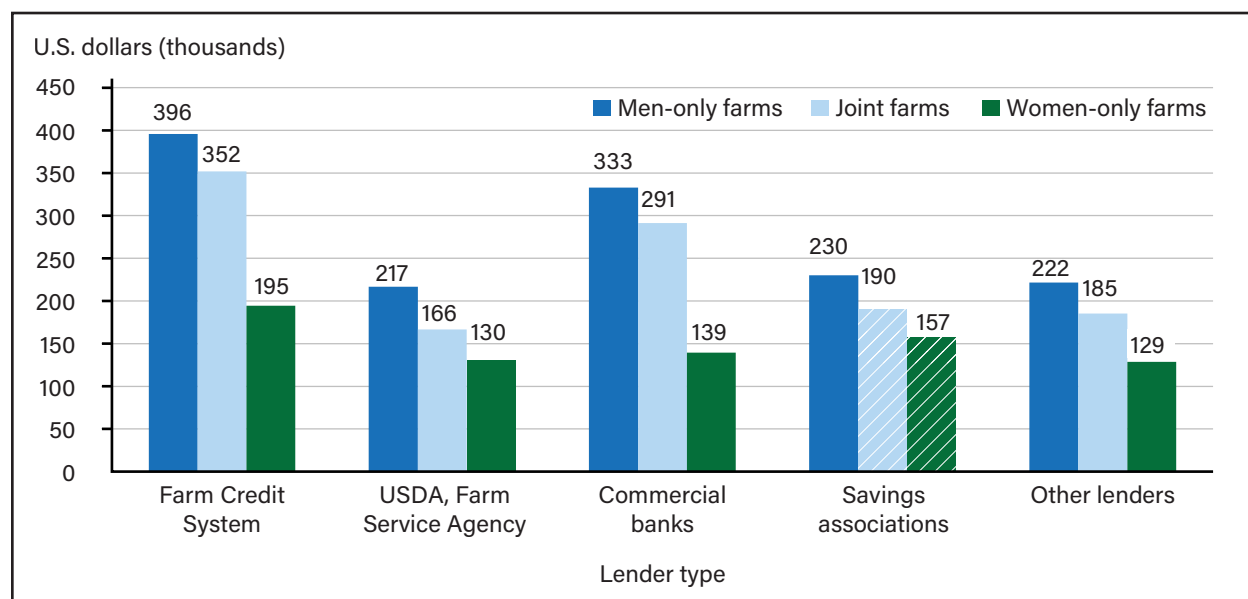
Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017-20 Agricultural Resource Management Survey.

At 35 percent, joint operations were the most likely to report having a loan compared with men-only (30 percent) and women-only (15 percent) operations (appendix table A.8).

- Women-only operations were the least likely to report borrowing from any lender. The share of women-only operations borrowing from each lender category ranged from 1 to 9 percent.
- Commercial banks were the most common source of loans for women-only, joint, and men-only operations, with 9 percent, 20 percent, and 17 percent of farms receiving loans from this type of lender, respectively.
- On average, women-only operations borrowed significantly less from the FCS, USDA's FSA, commercial banks, and other lenders when compared with men-only operations (figure 16).
- Joint operations borrowed less than men-only farms from each lender category except savings associations.

Figure 16

Average amount borrowed among borrowers, by lender type and producer gender category, 2017-20



Note: Hashed bars indicate the estimate is not statistically different from that for men-only farms, with at least a 90-percent confidence level ($p > 0.10$). "Other lenders" consists of the Small Business Administration (SBA), State and county government lending agencies, life insurance companies, trade lenders, contractors, individuals, credit unions, credit card issuers, and any other lenders.

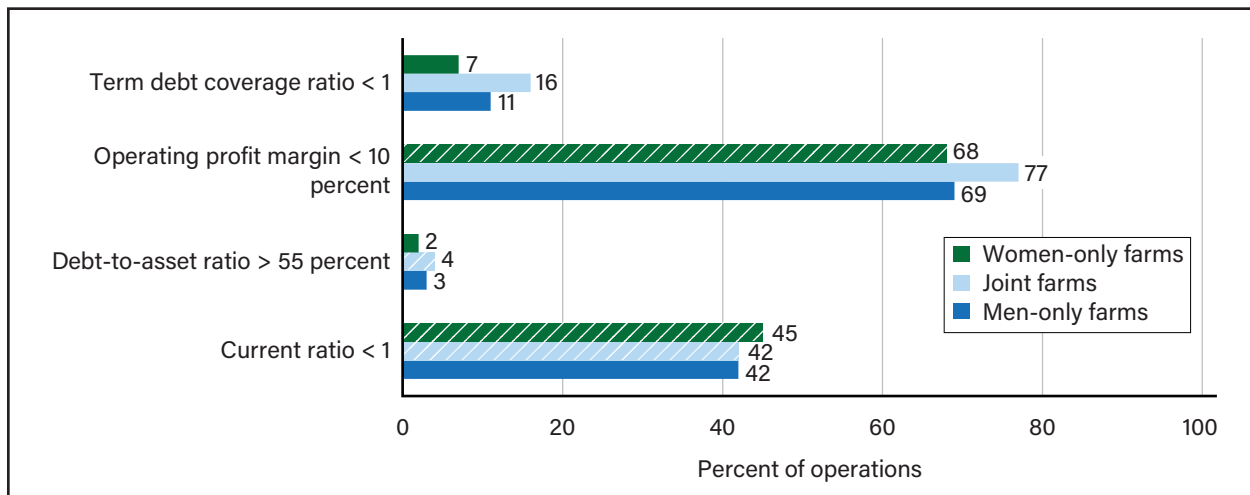
Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017-20 Agricultural Resource Management Survey.

According to several measures of financial performance, women-only operations were less likely to be identified as being at high financial risk than men-only and joint operations (figure 17).

- Women-only operations had the smallest share, at 2 percent, of operations with a debt-to-asset ratio above 55 percent, while 3 percent of men-only and 4 percent of joint operations had a debt-to-asset ratio at the same threshold.
- At 77 percent, joint operations had the largest share of operations with an operating profit margin below 10 percent. This share of joint operations is significantly larger than the share of men-only operations (69 percent) and women-only operations (68 percent).
- Only 7 percent of women-only operations had a term debt coverage ratio less than 1, while men-only and joint operations had significantly larger shares of operations below the term debt coverage threshold, at 11 and 16 percent, respectively.
- Between 42 and 45 percent of men-only, joint, and women-only farms were at high financial risk, according to the current ratio, but the small differences in the estimated shares were not statistically significant.

Figure 17

Share of farms at high financial risk, by financial ratio and producer gender category, 2017-20



Note: Hashed bars indicate the estimate is not statistically different from that for men-only farms, with at least a 90-percent confidence level ($p > 0.10$).

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017-20 Agricultural Resource Management Survey.

When examining the characteristics of the farm producers, women-only operations and joint operations differed in many ways from men-only farms (table 6).

- On average, women-only and men-only operations had one producer, while joint operations had two producers. The average age of the producers on women-only operations was 59 years. Men-only operations had the lowest average producer age at 55 years, while the average producer age on joint farms was 57 years.
- Only 2 percent of women-only operations had any Hispanic producers compared with 4 percent of men-only and joint operations each.
- Women-only and joint operations had a larger share (24 and 15 percent, respectively) of operations with any producer who reported being retired. However, 21 percent of women-only and 24 percent of joint operations had at least one producer with less than 10 years of farm experience (beginning farmers) compared with 15 percent of men-only operations.

Table 6

Operation and operator characteristics, by farm gender category, 2017-20

	Men-only farms	Joint farms	Women-only farms
Farm is a limited resource farm (percent)	11	6	22
Mean number of operators	1.1	2.2	1.1
Mean age of operators (years)	55	57	59
Hispanic operator on farm (percent)	4	4	2
NH Black operator on farm (percent)	2	1	2
NH other non-White operator on farm (percent)	2	3	3
Operator nonfarm as primary occupation (percent)	51	72	55
Operator retired from farming (percent)	12	15	24
Operator has 10 years or less farming experience (percent)	15	24	21

NH = non-Hispanic.

Note: Bold type indicates the estimate is statistically significantly different from that for men-only farms, with at least a 90-percent confidence level ($p < 0.10$).

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017-20 Agricultural Resource Management Survey.

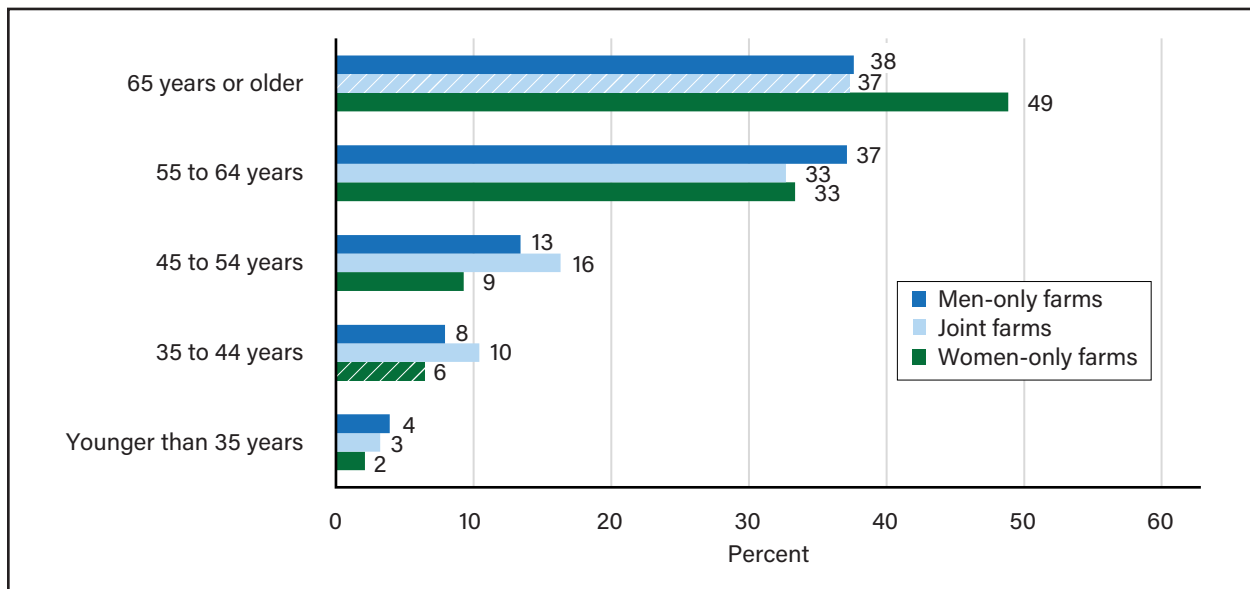
Principal Operator Characteristics

The POs of women-only operations had similar race and ethnicity distributions as men-only operations but tended to be older and more educated (appendix table A.10).

- About 49 percent of POs of women-only operations were age 65 or older compared with about 37 percent of POs of men-only and joint operations (figure 18). The POs of women-only operations were also less likely to be younger than 35 years (2 percent) compared with POs of men-only operations (4 percent). This is not surprising given that nearly one-quarter of all women-only operations are classified as retirement farms, and many may be operated at a small scale by widows.
- Women-only and joint operations had a larger share of POs with 4-year college degrees or more education at 32 percent compared with 26 percent of men-only POs (appendix table A.10). POs of women-only operations were also least likely (3 percent) to not have completed high school compared with POs of men-only operations (5 percent).
- The POs of men-only operations were the most diverse (figure 19), with over 7 percent identifying as Hispanic, non-Hispanic Black, or another NH SDA race. Two percent of women-only farm POs identified as Hispanic, half the rate among men-only farm POs.

Figure 18

Age distribution of principal operators, by farm gender category, 2017-20

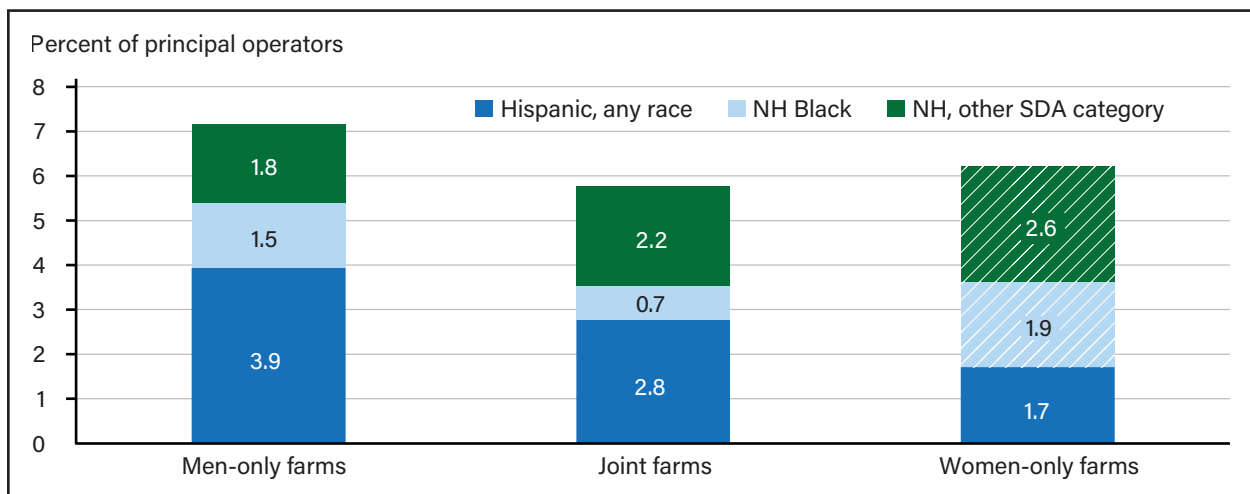


Note: Hashed bars indicate the estimate is not statistically different from that for men-only farms, with at least a 90-percent confidence level ($p > 0.10$).

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017-20 Agricultural Resource Management Survey.

Figure 19

Race and ethnicity of principal operators, by farm gender classification, 2017-20



NH = non-Hispanic; SDA = socially disadvantaged.

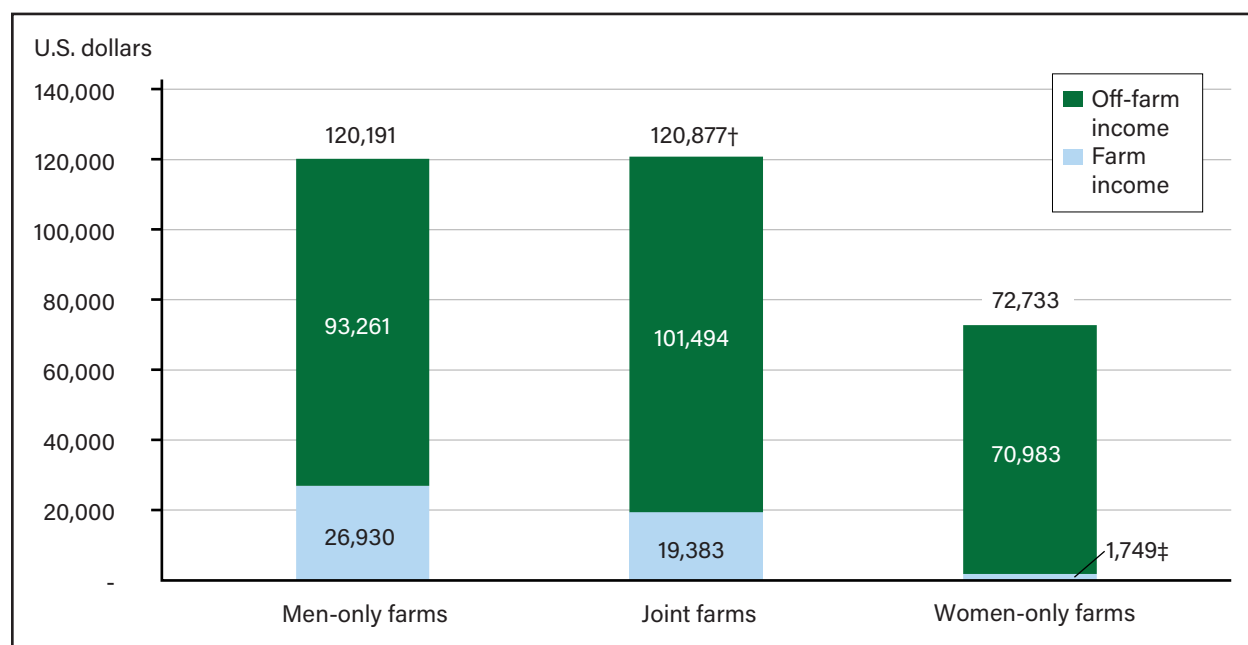
Note: Hashed bars indicate the estimate is not statistically different from that for men-only farms, with at least a 90-percent confidence level ($p > 0.10$).

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017-20 Agricultural Resource Management Survey.

The farm households associated with the PO of women-only operations had lower total household income on average (figure 20), relied more on off-farm income sources, and had lower total net worth, assets, and debt than operations with men producers (appendix table A.10).

- The PO households on women-only operations earned an average of \$1,749 from farming, \$70,983 from off-farm sources, and \$72,733 in total household income.
- The PO households on joint operations had less farm income than men-only PO households (\$19,383 versus \$26,930), and although joint PO households earned more off-farm income on average (\$101,494 versus \$93,261), the average total household income (\$120,877) was not significantly higher statistically than that of men-only PO households (\$120,191).

Figure 20
Average household income, by source and farm gender category, 2017-20



Note: † indicates that the mean is not statistically significantly different from that of all-men farms, with at least a 90-percent confidence level ($p > 0.10$). ‡ The coefficient of variation for this estimate is greater than 50, indicating the mean is not precisely estimated.

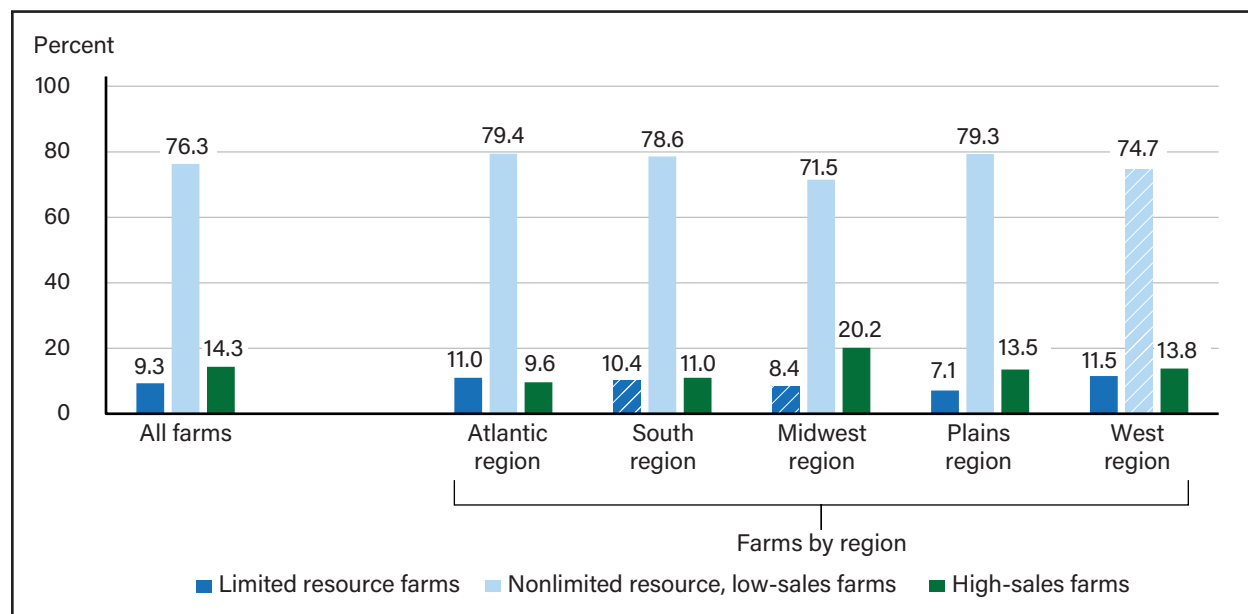
Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017-20 Agricultural Resource Management Survey.

Characteristics of Limited Resource Farms

Between 2017 and 2020, 9 percent of all U.S. farms were LR farms, which means they had low gross farm sales (less than \$180,300 in 2020) and low household income 2 years in a row (figure 21). Another 76 percent of farms had sales below the LR farm sales threshold in the year they were surveyed but did not meet all the criteria for being classified as an LR farm. These farms are referred to as non-LR low-sales farms in this report. The remaining 14 percent of farms were neither LR nor low-sales farms, referred to as high-sales farms. LR farms operated 4.3 percent of agricultural land and contributed 0.8 percent of the total value of production, while non-LR low-sales farms contributed 9.2 percent of total production and operated 36.7 percent of acres.

The share of farms that are operated by LR producers differed geographically (figure 22). The Plains region, which includes Kansas, Nebraska, and Texas, had the lowest share of farms run by an LR producer (7 percent), while the West region, which includes California and Washington, had the largest share (11.5 percent). The ARMS data can also be used to estimate the share of farms run by LR producers in 15 agriculturally important States and the remaining States in each of these regions. In the Midwest, the share of farms run by LR producers was 8 percent but ranged from 4 percent of farms in Illinois and Iowa to 12 percent in Missouri. The West region also showed a large range in share of farms led by LR producers, from 6 percent in California to 14 percent in the remaining States in the region. Overall, about one-quarter of all LR farms were in the Atlantic region, and another quarter were in the Midwest (appendix table A.11). In contrast, only 13 percent of high-sales farms were in the Atlantic region, while nearly 40 percent of high-sales farms were in the Midwest.

Figure 21
Percent of farms in each limited resource category, by region, 2017-20



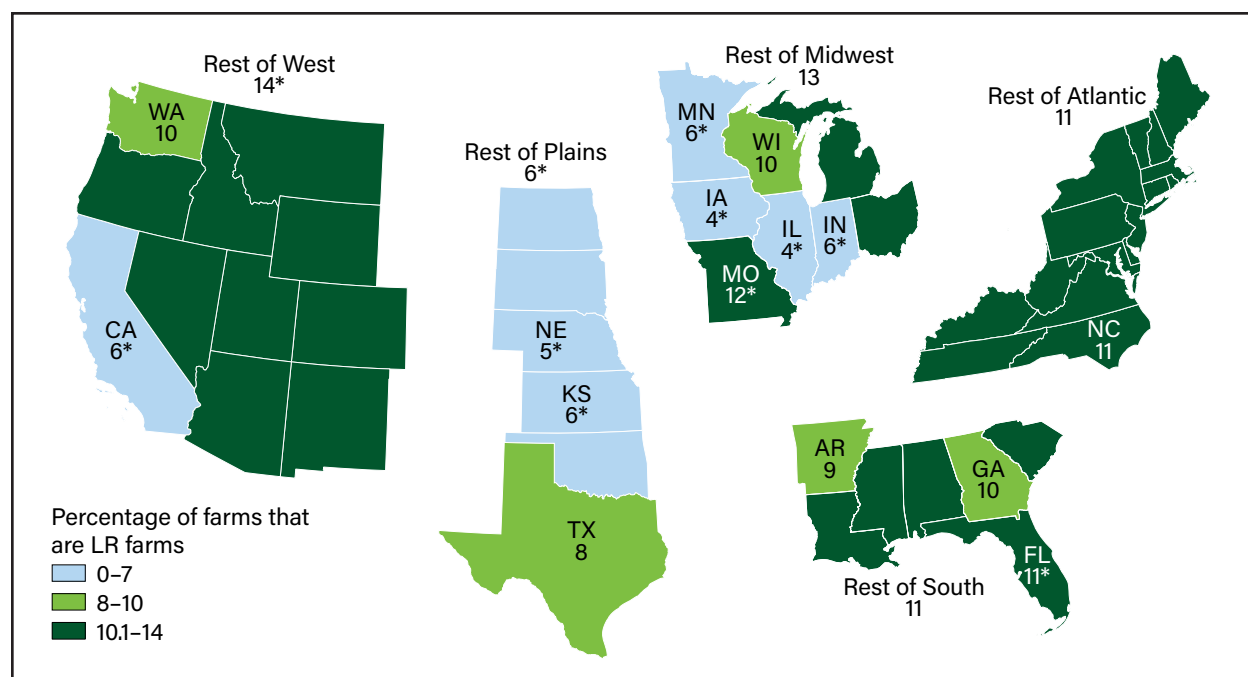
Note: Low-sales farms have gross farm sales below the LR (limited resource) cutoff (less than \$180,300 in 2020). High-sales farms have gross farm sales above the LR cutoff. The estimated percent of farms in each region that are LR, low-sales, and high-sales farms are all significantly different from the estimated percent for all farms (with $p < 0.10$). Atlantic region: Connecticut, Delaware, Kentucky, New Hampshire, New Jersey, New York, North Carolina, Maine, Maryland, Massachusetts, Pennsylvania, Rhode Island, Tennessee, Vermont, Virginia, Washington, DC, and West Virginia. South region: Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, and South Carolina. Midwest region: Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, and Wisconsin. Plains region: Kansas, Nebraska, North Dakota, Oklahoma, South Dakota, and Texas. West region: Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

Alaska and Hawaii are not included in the Agricultural Resource Management Survey.

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017-20 Agricultural Resource Management Survey.

Figure 22

Percent of limited resource farms by State and remaining regions, 2017–20



LR = limited resource

Note: Only some agriculturally important States in each region are sampled so that State-level estimates can be obtained (in bold type below). Atlantic region: Connecticut, Delaware, Kentucky, New Hampshire, New Jersey, New York, North Carolina, Maine, Maryland, Massachusetts, Pennsylvania, Rhode Island, Tennessee, Vermont, Virginia, Washington, DC, and West Virginia. South region: Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, and South Carolina. Midwest region: Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, and Wisconsin. Plains region: Kansas, Nebraska, North Dakota, Oklahoma, South Dakota, and Texas. West region: Arizona, California, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

Alaska and Hawaii are not included in the Agricultural Resource Management Survey.

* Indicates the estimate is statistically different from the national estimate of 9 percent, with at least a 90-percent confidence level ($p < 0.10$).

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017–20 Agricultural Resource Management Survey.

Farm Characteristics

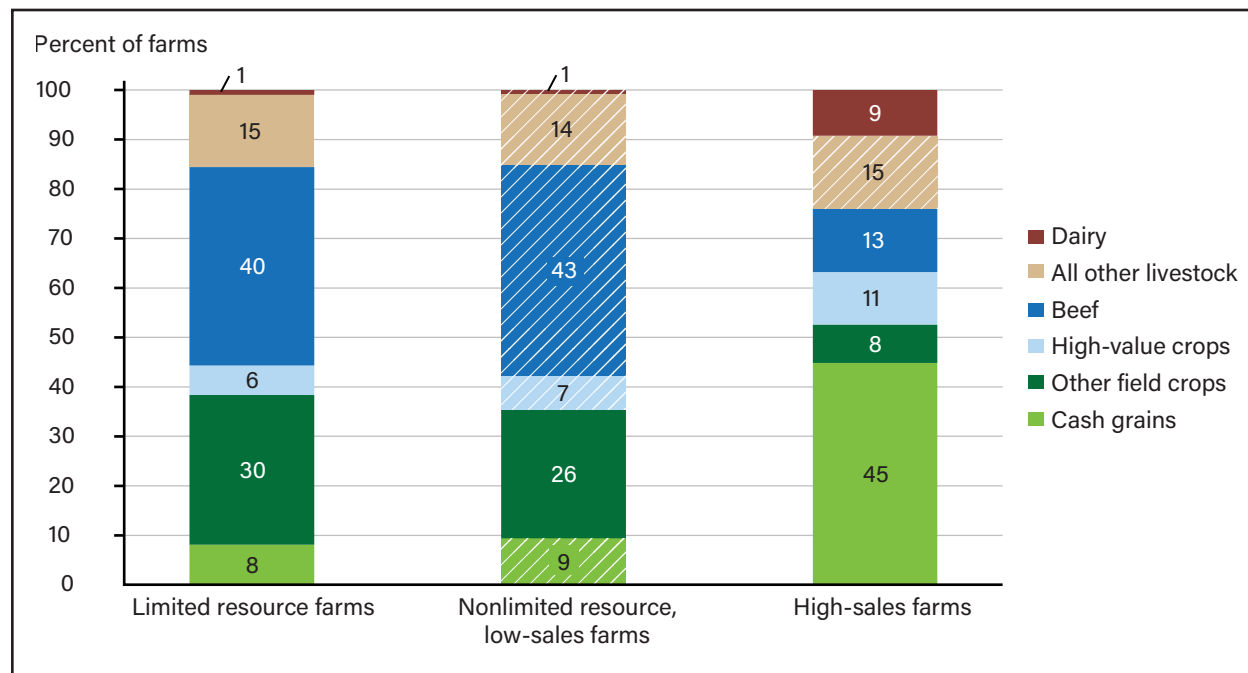
The commodity specializations of LR farms are like those of non-LR low-sales farms but different from high-sales farms (figure 23).

- About 8 percent of LR farms specialized in cash grains (9 percent among non-LR low-sales farms) compared with 45 percent of high-sales farms. Correspondingly, crop insurance was purchased by 6 percent of all LR farms but by 57 percent of high-sales farms.
- However, 30 percent of LR farms specialized in other field crops, which was greater than the 26 percent of non-LR low-sales farms and the 8 percent of high-sales farms.
- The greatest share of LR and non-LR low-sales farms specialized in beef (40 and 43 percent, respectively) compared with only 13 percent of high-sales farms.

- A smaller share of LR farms and non-LR low-sales farms specialized in high-value crops (6 percent and 7 percent, respectively) when compared with 11 percent among high-sales farms.
- Less than 1 percent of LR and non-LR low-sales farms specialize in dairy, while 9 percent of high-sales farms do.

Figure 23

Farm commodity specializations by limited resource classification, 2017-20



Note: Totals may not sum due to rounding. Hashed bars indicate the estimate is not statistically significantly different from limited resource (LR) farms, with at least a 90-percent confidence level ($p > 0.10$). Low-sales farms have gross farm sales below the LR cutoff (less than \$180,300 in 2020). High-sales farms have gross farm sales above the LR cutoff. A farm's commodity specialization is the commodity that contributes at least 50 percent of the farm's total production value. Cash grains consists of wheat, corn, soybean, grain sorghum, rice, and other general cash grains. Other field crops consists of tobacco, cotton, peanuts, and general crops. High-value crops include fruits, vegetables, and tree nuts.

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017-20 Agricultural Resource Management Survey.

Farm-level production, land characteristics, and net income among LR farms (table 7) were consistent with the fact that small-scale production is one criterion for being classified as an LR farm.

- The mean value of production on LR farms was less than \$15,000 per year, while that of non-LR low-sales farms was just over \$21,000 and over \$1.1 million on high-sales farms.
- Only about 1 percent of all LR farms produced under a production contract, while 3 percent of non-LR low-sales farms and 40 percent of high-sales farms did. Further, the mean value of production under contract for those farms that did produce under contract was lower among LR farms at \$54,761 per year compared with \$67,776 on non-LR low-sales farms and \$994,990 among high-sales farms.
- The average acres operated by LR farms was 186, which was like the 195 acres for non-LR low-sales farms but much lower than the 1,675 acres operated by high-sales farms.
- The mean net farm income among LR farms averaged -\$1,230, which was lower than the \$5,953 for non-LR low-sales farms and the \$226,687 for high-sales farms.

Table 7

Value of production and net farm income, by limited resource category, 2017-20

	Limited resource farms	Nonlimited resource low-sales farms	High-sales farms
Total value of production (mean U.S. dollars per farm)	14,435	21,033	1,102,481
Farm has production under contract (percent)	1	3	40
Mean value of production under contract among farms with production contract (mean U.S. dollars per farm)	54,761	67,776	994,990
Net farm Income (mean U.S. dollars per farm)	-1,230	5,953	226,687
Acres operated	186	195	1,675
Operated acres, rented	72	56	870
Acres cropland	51	61	953
Acres rented to others	13	27	33

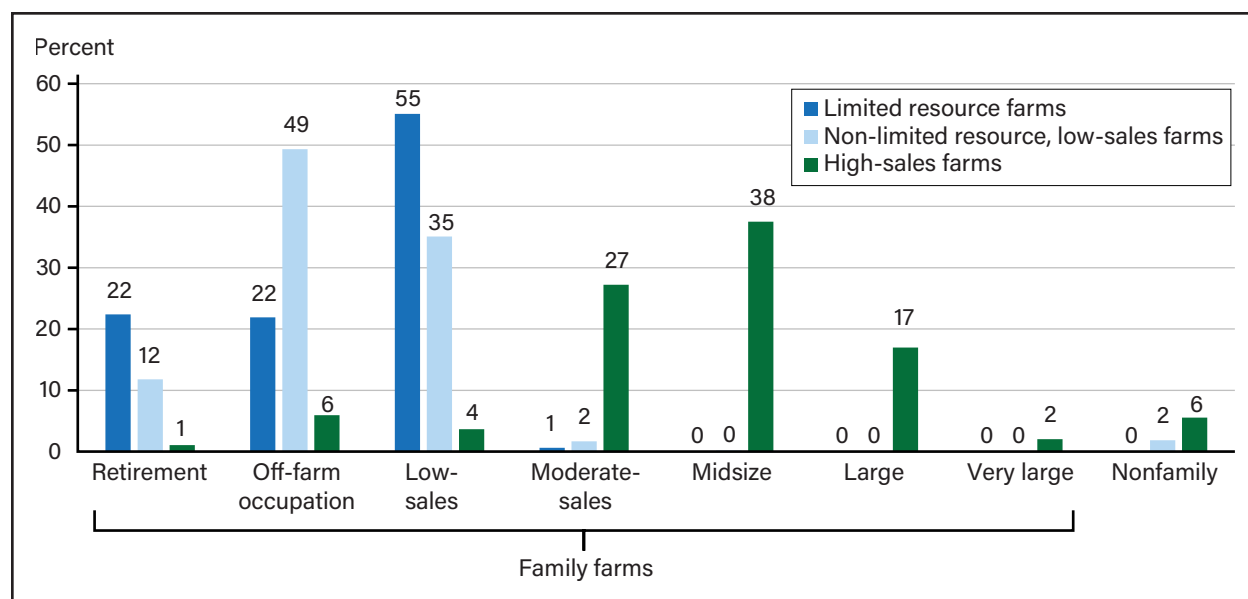
Note: Low-sales farms have farm sales below the limited resource (LR) cutoff (less than \$180,300 in 2020). High-sales farms have gross farm sales above the LR cutoff. Bold type indicates that the value is statistically significantly different from LR farms, with at least a 90-percent confidence level ($p < 0.10$).

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017-20 Agricultural Resource Management Survey.

Nearly half (44 percent) of all LR farms were residence farms (retirement or off-farm occupation farms), whereas 61 percent of non-LR low-sales farms were residence farms compared with only 7 percent of high-sales farms (figure 24).

Figure 24

Distribution of farms, by typology and limited resource classification, 2017-20



Note: Low-sales farms have gross farm sales below the limited resource (LR) cutoff (less than \$180,300 in 2020). High-sales farms have gross farm sales above the LR cutoff. Nonfamily farms are where a producer and extended family do not own most of the farm business. Family farms are divided into seven categories depending on the farm's gross cash farm income (GCFI) and the principal operator's (PO) major occupation: (1) retirement farms (where the PO reports being retired from farming and a GCFI less than \$350,000); (2) off-farm occupation farms (where the PO reports that farming is not a main occupation and a GCFI less than \$350,000); (3) low-sales farms (where the PO reports farming as a main occupation and a GCFI less than \$150,000); (4) moderate-sales farms (where the PO reports farming as a main occupation and a GCFI between \$150,000 and \$349,999); (5) midsize family farms (where GCFI is between \$350,000 and \$999,999); (6) large family farms (where GCFI is between \$1 million and \$4,999,999); and (7) very-large family farms (where GCFI is \$5 million or more).

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017-20 Agricultural Resource Management Survey.

A smaller share of LR farms received any kind of direct agricultural Government payment than did non-LR low-sales and high-sales farms (21 percent compared with 28 and 65 percent, respectively) (table 8).

- Among those farms that did receive payments, the mean amount received was lower among LR farms (\$5,366) than non-LR low-sales and high-sales farms (\$7,605 and \$66,071, respectively). The lower shares of farms receiving payments is consistent with different specializations among LR farms, non-LR low-sales, and high-sales farms, while the lower mean amount received is consistent with lower levels of production and land operated.
- Conservation payments were received by 13 percent of LR farms, which is similar to the 15 percent among non-LR low-sales farms but lower than the 24 percent among high-sales farms.
- Only 3 percent of LR farms reported receiving any commodity program payments compared with 6 percent of non-LR low-sales farms and 37 percent of high-sales farms.
- About 9 percent of LR farms reported receiving other direct payments (excluding conservation and commodity/farm bill payments), while 13 percent of non-LR low-sales farms and 47 percent of high-sales farms did so.

Table 8

Average amount of government payments received by farms, percent of farms that receive payments, and average amount received among recipient farms, by program type and limited resource farm category, 2017-20

Program type	Limited resource farms	Nonlimited re-source, low-sales farms	
		High-sales farms	
Mean U.S. dollars among all farms			
Total direct agricultural government payments	1,150	2,097	43,241
Conservation payments	582	1,023	4,585
Direct Federal commodity program payments	95	221	9,545
All other direct Federal, State, and local payments	472	853	29,111
Percent of farms that receive payments			
Total direct agricultural government payments	21	28	65
Conservation payments	13	15	24
Direct Federal commodity program payments	3	6	37
All other direct Federal, State, and local payments	9	13	47
Mean U.S. dollars among recipients			
Total direct agricultural government payments	5,366	7,605	66,071
Conservation payments	4,545	6,832	19,022
Direct Federal commodity program payments	2,908	3,623	25,878
All other direct Federal, State, and local payments	5,322	6,649	61,869

Note: Bold type indicates a statistically significant difference from the limited resource (LR) mean, with at least a 90-percent confidence level ($p < 0.10$). Low-sales farms have gross farm sales below the LR cutoff (less than \$180,300 in 2020). High-sales farms have gross farm sales above the LR cutoff. Conservation programs include programs such as the Conservation Reserve Program (CRP), Environmental Quality Incentives Program (EQIP), and Conservation Stewardship Program (CSP). Direct Federal commodity program payments include payments from programs such as Agricultural Risk Coverage (ARC), Price Loss Coverage (PLC), and Dairy Margin Coverage. All other Federal, State, and local programs include agricultural disaster payments and ad-hoc programs (including the Market Facilitation Program and the Coronavirus Food Protection Program), loans from the Paycheck Protection Program (PPP), advances from the Economic Injury Disaster Loan (EIDL) program, and other agricultural pandemic assistance. Total direct agricultural government payments is the sum of payments from each of the program types listed separately.

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017-20 Agricultural Resource Management Survey.

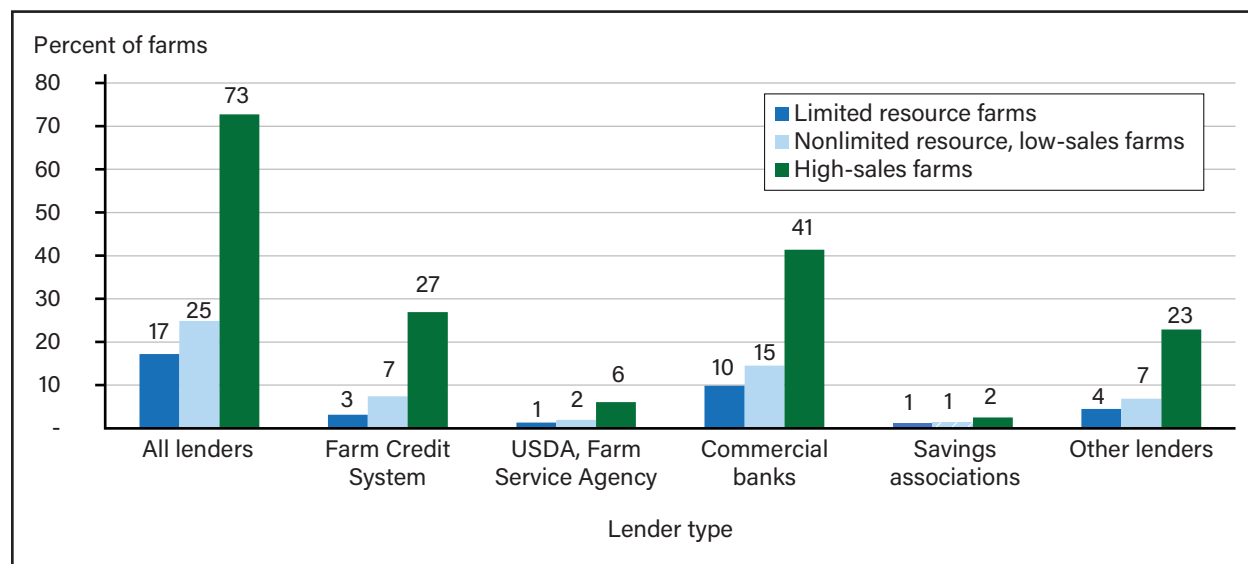
The use of USDA and other credit also differed between LR and other farms.

- About 17 percent of LR farms reported that they held any type of loan, compared to 25 percent of non-LR low-sales farms and 73 percent of high-sales farms (figure 25).
- LR farms were more likely to hold a loan from a commercial bank than any other lender, but a smaller share held such loans than other farm types. Ten percent of LR farms held a loan from a commercial bank, while 15 percent of non-LR low-sales farms and 41 percent of high-sales farms held such loans.
- Only 3 percent of LR farms reported they held an FCS loan, while 7 percent of non-LR low-sales farms and 27 percent of high-sales farms had FCS loans. Shares of farms holding loans from USDA's FSA were lower: 1 percent of LR farms, 2 percent of non-LR low-sales farms, and 6 percent of high-sales farms.
- A small share of all farms borrowed from savings associations: 1 percent of LR and non-LR low-sales farms and 2 percent of high-sales farms.

- LR farms were also less likely to borrow from other lenders, including the U.S. Small Business Administration (SBA). Only 4 percent of LR farms held loans from other lenders compared with 7 percent of non-LR low-sales farms and 23 percent of high-sales farms.
- Consistent with their smaller scale of production, LR farms and non-LR low-sales farms borrowed less on average when they did borrow from each lender type than did high-sales farms, but LR and non-LR low-sales farms borrowed similar amounts when they borrowed. The amount that LR and non-LR low-sales farms borrowed was 25 percent lower than high-sales farms borrowed.

Figure 25

Percent of farms with loans, by lender type and limited resource classification, 2017-20



Note: The hashed bar indicates the estimate is not statistically different from limited resource (LR) farms, with at least a 90-percent confidence level ($p > 0.10$). Low-sales farms have gross farm sales below the LR cutoff (less than \$180,300 in 2020). High-sales farms have gross farm sales above the LR cutoff. All lenders means that the reporting farm had a loan from the Farm Credit System, USDA's Farm Service Agency, commercial banks, saving associations, or other lenders. Other lenders include the Small Business Administration (SBA), State and County Government lending agencies, life insurance companies, trade lenders, contractors, individuals, credit unions, credit card issuers, and any other lenders.

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017-20 Agricultural Resource Management Survey.

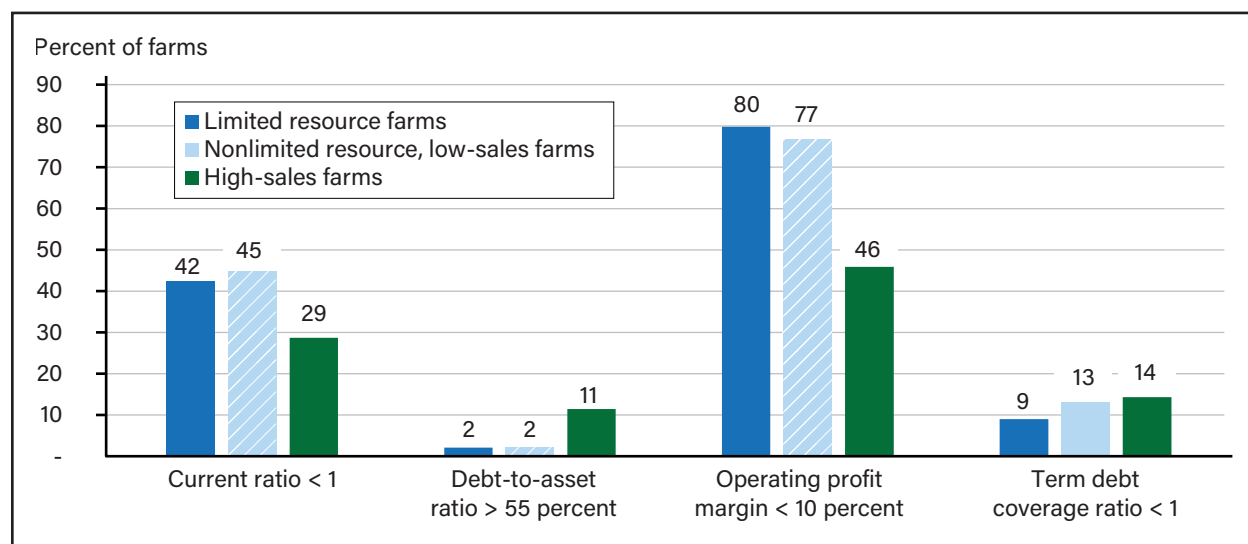
The share of farms that were identified as having high financial risk varied across the measures used (figure 26). The debt-to-asset ratio classified the smallest share of farms as high risk, while the operating profit margin classified the largest share. LR and non-LR low-sales farms had similar shares of farms with high financial risk using the current ratio, debt-to-asset ratio, and operating profit margin.

- Forty-two percent of LR farms (and 45 percent of non-LR low-sales farms) had a current ratio of less than 1, while 29 percent of high-sales farms were classified as having high financial risk using the current ratio.
- Consistent with their lower use of debt, a smaller share (2 percent) of LR and non-LR low-sales farms had a debt-to-asset ratio greater than 55 percent compared with 11 percent of high-sales farms.
- A larger share of LR and non-LR low-sales farms were classified as being at high financial risk as indicated by having an operating profit margin of less than 10 percent—80 percent of LR farms and 77 percent of non-LR low-sales farms compared with 46 percent of high-sales farms. This is likely due in part to the scale of production, where higher sales farms have more opportunities for economies of scale.

- A low term-debt coverage ratio identified 9 percent of LR farms, 13 percent of non-LR low-sales farms, and 14 percent of high-sales farms as having high financial risk.

Figure 26

Percent of farms with high financial risks, by financial measure and limited resource farm classification, 2017-20



Note: Hashed bars indicate the estimate is not statistically different from limited resource (LR) farms, with at least a 90-percent confidence level ($p > 0.10$). Low-sales farms have gross farm sales below the LR cutoff (less than \$180,300 in 2020). High-sales farms have gross farm sales above the LR cutoff.

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017-20 Agricultural Resource Management Survey.

The characteristics of producers across LR farm categories reveal differences in the total number of producers, gender, race and ethnicity, and education (appendix table A.14).

- LR farms have fewer producers (1.4) on average than non-LR low-sales farms (1.6) and high-sales farms (1.8), and producers on LR farms are older on average (62 years of age compared with 56 and 52 years of age, respectively).
- LR farms are less likely to have a woman producer than non-LR low-sales farms (45 percent compared with 53 percent) but similarly as likely to have a woman producer as high-sales farms.

Principal Operator Characteristics

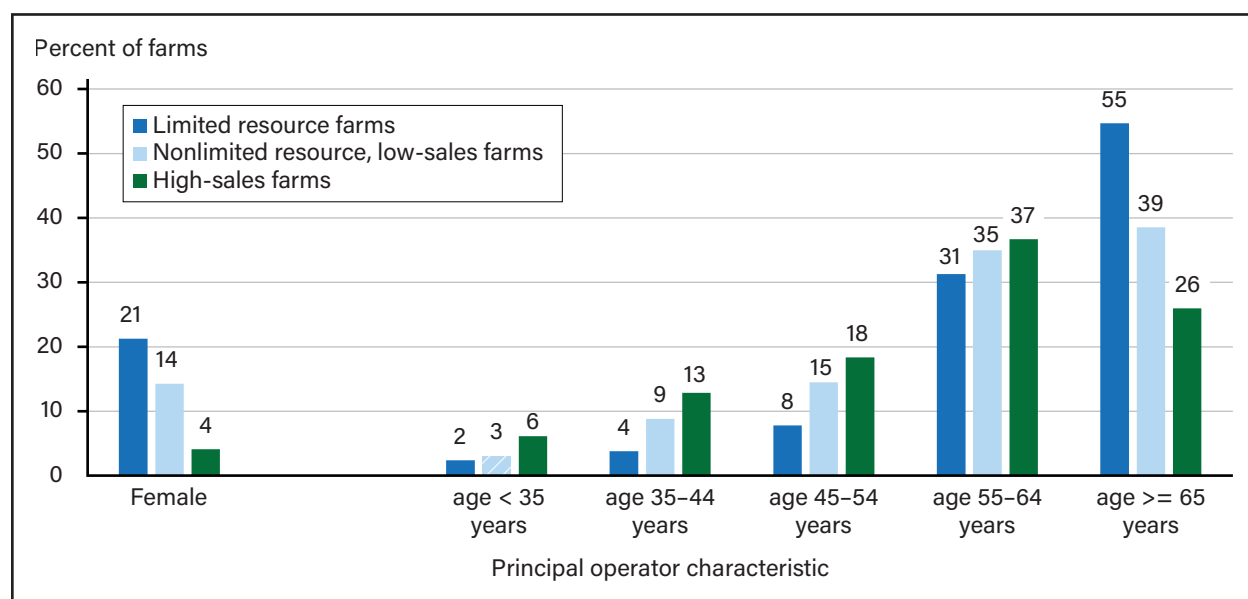
The principal operators (POs) of LR farms differ in several ways from POs of non-LR low-sales and high-sales farms (figures 27–30).

- LR POs were more likely to be women (21 percent) than the POs on non-LR low-sales and high-sales farms (14 and 4 percent, respectively).
- Over half of LR POs were age 65 and older, while 39 percent of the POs of non-LR low-sales farms and only 26 percent of the POs of high-sales farms were age 65 and older.
- Forty percent of the POs of LR farms completed at least some college, while 57 percent of the POs on non-LR low-sales and high-sales farms had some college education.

- In addition, 11 percent of LR POs identified as being an SDA producer (Hispanic or another NH SDA category), which was greater than the 7 percent of POs of non-LR low-sales farms and the 3 percent of POs of high-sales farms.
- Nearly three-quarters of LR POs reported that farming was their main occupation (72 percent), which was greater than the 45 percent of non-LR low-sales POs but less than the 90 percent of the POs of high-sales farms. Almost one-quarter of LR POs reported that they were retired from farming, which is about twice the share of non-LR low-sales POs (12 percent) who reported this. Only 3 percent of high-sales POs reported being retired from farming.
- Seventeen percent of LR POs had 10 years or less of farming experience, which is not significantly different from the 21 percent among non-LR low-sales POs but is greater than the 12 percent among high-sales POs.

Figure 27

Principal operator gender and age, by limited resource farm classification, 2017-20

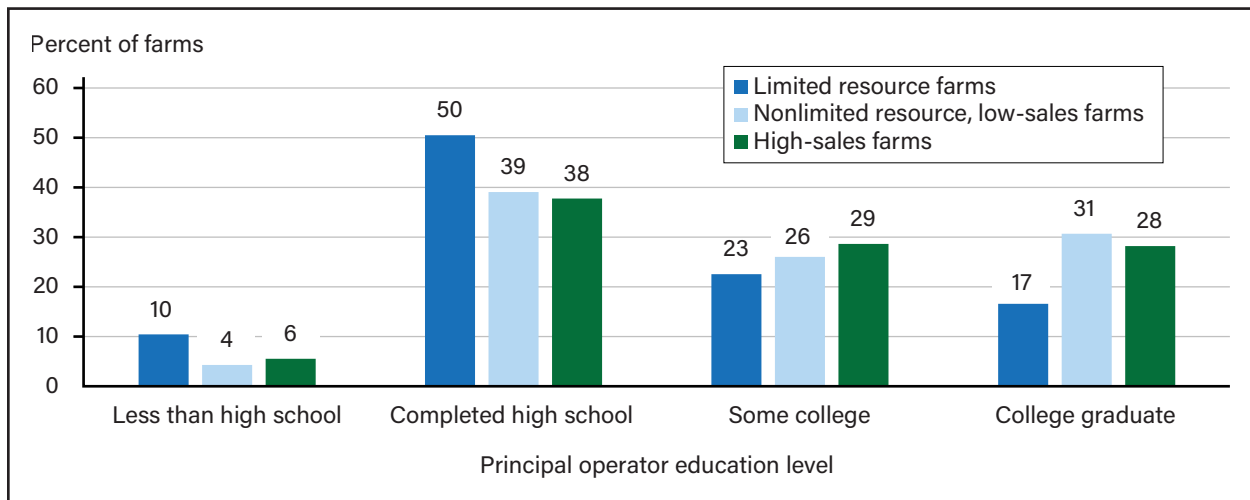


Note: The hashed bar indicates the estimate is not statistically different from limited resource (LR) farms ($p > 0.10$). Low-sales farms have gross farm sales below the LR cutoff (less than \$180,300 in 2020). High-sales farms have gross farm sales above the LR cutoff.

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017-20 Agricultural Resource Management Survey.

Figure 28

Principal operator education level, by limited resource farm classification, 2017-20

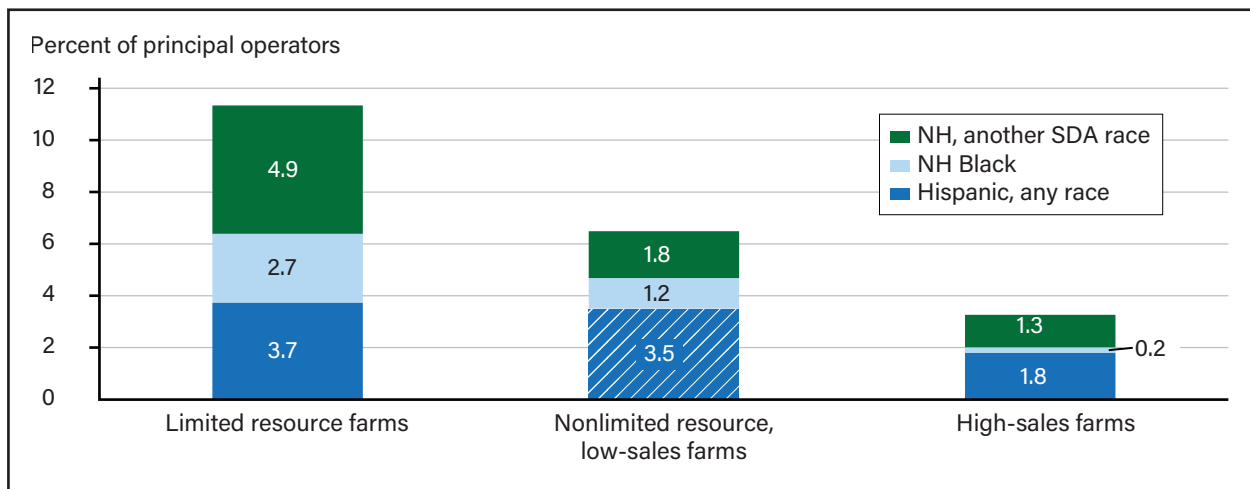


Note: Low-sales farms have gross farm sales below the limited resource (LR) cutoff (less than \$180,300 in 2020). High-sales farms have gross farm sales above the LR cutoff. All estimates for non-LR and high-sales farms are statistically significantly different from that for LR farms, with at least a 90-percent confidence level ($p < 0.10$).

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017-20 Agricultural Resource Management Survey.

Figure 29

Race and ethnicity of principal operators, by farm limited resource classification, 2017-20



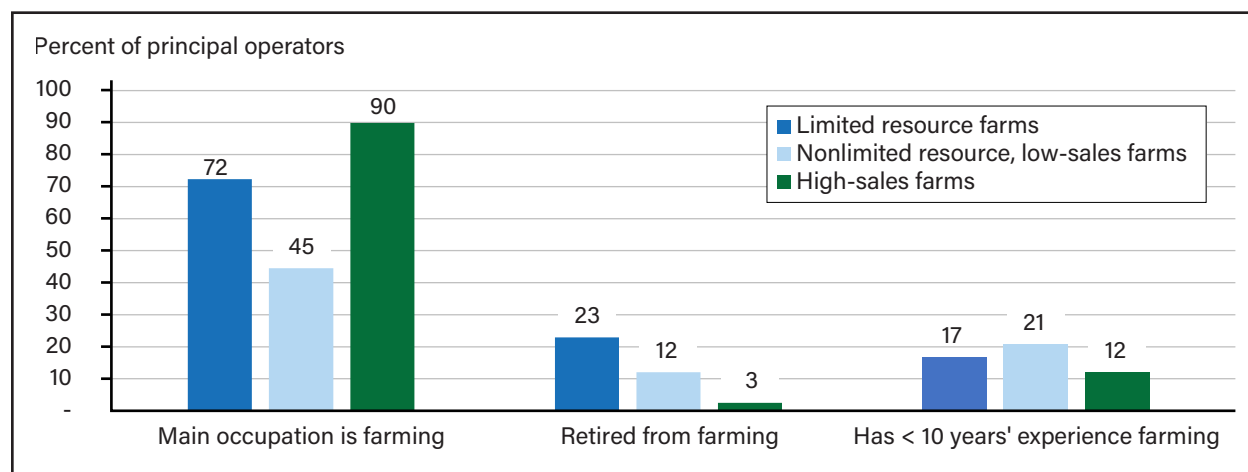
NH = non-Hispanic; SDA = socially disadvantaged.

Note: The hashed bar indicates the estimate is not statistically different from limited resource (LR) farms, with at least a 90-percent confidence level ($p > 0.10$). Low-sales farms have gross farm sales below the LR cutoff (less than \$180,300 in 2020). High-sales farms have gross farm sales above the LR cutoff.

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017-20 Agricultural Resource Management Survey.

Figure 30

Principal operator main occupation, retirement from farming, and farming experience, by limited resource classification, 2017-20



Note: Low-sales farms have gross farm sales below the limited resource (LR) cutoff (less than \$180,300 in 2020). High-sales farms have gross farm sales above the LR cutoff. All estimates for non-LR low-sales farms and high-sales farms are statistically significantly different from estimates for LR farms.

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017-20 Agricultural Resource Management Survey.

Not surprisingly, given that low household income is a characteristic defining LR farms, household income and wealth among LR POs is lower than that of non-LR low-sales and high-sales POs (table 9).

- The mean income from farming among LR PO households was -\$9,365, which is lower than the \$698 among non-LR low-sales PO households and the \$160,578 among high-sales PO households. The differences in median income from farming were smaller but still lower among LR PO households (-\$3,330 versus -\$1,761 (non-LR low-sales PO households) and \$84,104 (high-sales PO households)). These group differences are not surprising given that farm sales were used to classify farms in this comparison.
- LR PO households reported off-farm income that averaged \$15,916, while off-farm income among non-LR low-sales PO households was \$109,546, even higher than the \$72,205 among high-sales PO households. The lower off-farm income among LR farms is expected given that low total household income is a criterion for being classified as an LR farm, while the higher average off-farm income among non-LR low-sales is consistent with the fact that about half of these farms are off-farm occupation farms, where farming is not the main occupation of the PO.
- The mean total income among LR PO households was \$6,551, which is about 25 percent of the Federal poverty level for a family of four. Median income was higher, at \$10,395. In contrast, the mean total household income among non-LR low-sales PO households was \$110,243, and among high-sales PO households, it was \$232,784.
- Average total household expenditures among LR PO households was higher than their average income, at \$32,096, but lower than non-LR low-sales (\$45,226) and high-sales PO households (\$50,144). This suggests that LR may be financing some of their household needs through credit or spending down assets.
- The average total household net worth among LR PO households (\$842,560) was above that for all U.S. households (\$748,800) but less than that among non-LR low-sales (\$1,364,860) and high-sales PO households (\$3,673,688) and all U.S. households headed by someone 55 years or older (\$977,600) (Bhutta et al., 2020).

Table 9

Principal operator household income, expenditures, assets, and debt, by limited resource classification, 2017-20

	Limited resource farms	Nonlimited resource low-sales farms	High-sales farms
	U.S. dollars		
Farm income			
Mean	-9,365	698	160,578
Median	-3,330	-1,761	84,104
Off-farm income			
Mean	15,916	109,546	72,205
Median	13,700	78,952	46,250
Total household income			
Mean	6,551	110,243	232,784
Median	10,395	80,588	145,139
Total expenditures			
Mean	32,096	45,226	50,144
Mean net worth, assets, and debt			
Net worth	842,560	1,364,860	3,673,688
Total assets	880,606	1,495,300	4,352,250
Farm assets	653,485	776,807	3,644,132
Nonfarm assets	227,121	718,493	708,118
Total debt	38,046	130,441	678,562
Farm debt	19,466	31,551	541,221
Nonfarm debt	18,579	98,889	137,341

Note: Low-sales farms have gross farm sales below the limited resource (LR) cutoff (less than \$180,300 in 2020). High-sales farms have gross farm sales above the LR cutoff. Means reported unless otherwise noted. Only means were compared statistically. Bold text indicates that the means are statistically significantly different from those for LR farm households, with at least a 90-percent confidence level ($p < 0.10$).

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017-20 Agricultural Resource Management Survey.

Summary and Discussion

This report presents an overview of the characteristics of farms operated by socially disadvantaged (SDA), women, and limited resource (LR) producers between 2017 and 2020 in the geographic areas covered by the Agricultural Resources Management Survey (ARMS) to expand on the limited public information available about these producers and the farms they operate. ARMS provides information about farms and operators that is not available elsewhere. Because it is conducted annually, ARMS collected information about farm-level receipt of recent large ad-hoc and commodity-linked direct agricultural Government payment programs (the 2018 and 2019 Market Facilitation Programs [MFPs] and the 2020 Coronavirus Food Assistance Program [CFAP]) that came after the 2017 Census of Agriculture (COA) was conducted. ARMS also collects more detailed information than the COA about the use of agricultural credit, and total farm debt and assets, which provides the means to measure farm-level financial health. In addition, ARMS is the only farm survey able to identify LR farms because, unlike the COA and other surveys, it collects both household and farm-level income information for 2 consecutive years (farms and farm households must not exceed an income threshold for 2 consecutive years to be considered LR).

We found that about 9 percent of all farms were operated by at least one SDA producer—5 percent of all farms had a Hispanic producer, and another 4 percent had at least one non-Hispanic (NH) SDA producer. Women were producers on most operations, but only 7 percent of operations were operated solely by women. LR farms were 9 percent of all operations, and the majority (76 percent) of farms had gross sales below the threshold for being classified as an LR farm but did not meet all the criteria to be classified as a LR farm.

Perhaps not surprisingly, we found that SDA, women-only, and LR farms operated fewer acres and earned lower net farm income on average, and were less likely to specialize in cash grains, receive payments from Government farm programs, and hold loans for their farm business than NH White, men-only, and high-sales farms, respectively. Many of the differences across groups in the share of farms that received direct agricultural Government payments and the average amount received are likely due to differences in the types of commodities produced and the scale of production. Analysis by Giri et al. (2022) found that the distribution of total 2020 CFAP payments by a producer's race was closely aligned with the distribution of total 2017 agricultural production. However, barriers, such as limited knowledge about direct farm programs, distance to USDA program offices, or the documentation requirements associated with programs, may limit program uptake by SDA, LR, and women-only farms. One limitation of our analysis is that we could only observe the characteristics of up to four operators per farm and did not know which operators were owners versus hired operators. Since agricultural payments tend to be directed to farm owners, there may be differences in our tabulations across farm types using ARMS operator characteristics that a tabulation based on owner characteristics would provide. Future research can explore whether participation rates differ across farms having different types of producers but similar scales of production and commodity mix.

Prior studies have explored differences in the use of agricultural credit among different groups of SDA or underserved groups (Ahrendsen et al., 2022; Nwoha et al., 2007). Using pooled 2015–17 ARMS data, the Government Accountability Office (GAO) (2019) found that farms with an SDA or woman primary producer comprised 17 percent of all farms but only 13 percent of all farms with debt and that 8 percent of the annual average reported outstanding farm debt was held by farms where the primary producer was SDA or a woman. The GAO (2019) found that SDA and women producers face several challenges in obtaining agricultural credit, including being less familiar with some programs. The report also highlighted that not asking loan applicants about their race and ethnicity limits the tracking and study of lending to SDA producers. Moreover, GAO noted that while Government programs encourage and some require outreach to SDA producers, it has been difficult to measure the impact of such efforts due to a lack of data on outreach efforts and their participants. The data used in this study did not allow us to assess whether the smaller share of farms that use agricultural credit results from a lack of producer access or awareness of credit programs or is due to a lower demand for credit.

We used four different financial ratios (debt-to-asset ratio, operating profit margin, current ratio, and term debt coverage ratio) to identify farms at high financial risk. These indicators varied in the overall share of farms classified as being in the high financial risk category. The debt-to-asset ratio indicated that relatively few farms (from 2 to 11 percent) were in the high financial risk category. Similarly, the term debt coverage ratio also showed a relatively low percentage of farms (from 7 to 16 percent) were at the same kind of risk. These findings are consistent with the small share of farms holding loans for their operations. In contrast, the operating profit margin, which compares sales revenues and other farm income to expenses, indicated a relatively large share of farms (46 to 82 percent) were in the high financial risk category, which is consistent with the large share of farms that earn very little (if anything) from farming. A third measure, the current ratio, which compares liquid assets to current debt payments and other financial obligations and provides a snapshot of a farm's solvency, identified between 29 and 47 percent of farms were at high financial risk. Generally, differences in financial health were greater across gender and LR farm categories than across the SDA farm categories.

Farms classified into one underserved group or farm type were more likely to be classified as underserved by another measure. For example, 20 percent of NH SDA farms were classified as LR farms, a share that was twice as high as that among Hispanic and NH White farms (10 and 9 percent, respectively). Similarly, 21 percent of women-only farms were LR farms, which is more than twice the rate observed among men-only farms (and more than three times the rate among joint operations (men and women operators)). Likewise, principal operators (POs) on LR farms were more likely to be female and identify as Hispanic or as a member of an NH SDA group. Despite commonalities, there is not a complete overlap across categories of underserved producers, which implies that the needs and characteristics of these groups remain distinct, as are likely the tools and approaches needed to reach them.

The well-being of farm producers and their households depends partly on their total income and wealth. ARMS collects information about the PO's household, including the total income received from farm and off-farm sources, as well as nonfarm spending, assets, and debt. Most U.S. farm households earn income from both farm and off-farm activities, and it is well documented that farm households have higher median income and wealth than U.S. households (Whitt et al., 2020). However, the median incomes of LR and NH SDA farm households (\$10,395 and \$56,977, respectively) were below that of all U.S. households (\$67,521 in 2020) and were lower than non-LR farms and NH White farms. Thus, in addition to having lower farm income and fewer assets than other farms and farm households, these underserved producer households were worse off than the median U.S. household.

As the design and structure of USDA agricultural programs and policies continue to evolve to meet the needs of U.S. producers, future research can play an important role in informing policymakers about farmers' ongoing and changing needs. However, data on underserved farm groups are limited. The relatively small number of SDA farms in the United States and their small sample sizes in the ARMS limited our ability to separate SDA farms into more detailed racial groups or to explore differences across U.S. geographic areas. The 2022 ARMS collected an expanded sample of farms having SDA producers, providing a larger sample of farms operated by SDA producers. Whitt et al. (2023) compared some farm and farm household characteristics across farms separated into more detailed race and ethnicity groups using the 2022 ARMS data. Given that a larger share of SDA producers are also women and LR producers, the larger SDA sample in the 2022 ARMS should also provide larger samples of the three groups of underserved farms explored in this report.

A substantial share of farms in past ARMS reported no information about the race or ethnicity of any of their operators, so reducing this nonresponse can also improve data available to study underserved producers. More generally, farm-level survey data will continue to be an important tool for studying farms and their producers as the data are not limited to farm program participants but also include nonparticipants. Nonparticipant data is key to understanding program take-up among all producers and to evaluating the reach and benefits of policies and programs. However, our ability to study these issues may still be limited, as found by Callahan and Hellerstein (2022) with respect to measuring barriers to accessing agricultural land for SDA and women producers. In addition, expanded coverage of USDA Race, Ethnicity, and Gender Program Statistics (REGStats) to include more programs and years could increase the data's usefulness in studying participation in programs targeted to underserved producers.

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Appendix A. Complete Estimates and Results of Statistical Comparison Tests

This appendix provides estimated means for all measures summarized in this report and a summary of the results of the statistical comparison of means across groups (tables A.1–A.15). Means are produced when all farms are included (except any that could not be classified) and when residence farms (retirement and off-farm occupation) are excluded from the analysis. Residence farms are family farms with a gross cash farm income (GCFI) of less than \$350,000, and the principal operator (PO) reports being retired from farming (retirement farms) or that the PO's main occupation is something other than farming (off-farm occupation farms). Residence farms contribute a small share of the total value of production but comprise about half of all U.S. farms.

Tables A.16 and A.17 compare a select set of measures for some groups to similar measures in the 2017 Census of Agriculture (COA).

Table A.1

Distribution of farms across regions, specializations, and farm types, by socially disadvantaged classification, 2017–20

	All farms			Excluding residence farms		
	Non-Hispanic White farms	Hispanic farms	Non-Hispanic socially disadvantaged farms	Non-Hispanic White farms	Hispanic farms	Non-Hispanic socially disadvantaged farms
Percent of farms located in:						
Atlantic region	21	10***	10***	20	12**	11***
South region	13	9***	20***	13	11	23***
Midwest region	30	5***	9***	30	6***	6***
Plains region	22	45***	32***	22	31**	26
West region	14	32***	30***	14	39***	35***
Specializations (percent of farms)						
Cash grains	16	4***	6***	23	8***	6***
Other field crops	23	15***	18**	16	12	14
High-value crops	7	15***	7	9	26***	10
Beef	38	42	50***	35	36	51***
All other livestock	14	23**	20**	13	16	19*
Dairy	2	1***	0***	4	3**	0***
Farm typology categories (percent of farms)						
Retirement farms	12	9	12			
Off-farm occupation farms	43	52***	43			
Low-sales family farms	28	28	37***	63	73***	82***
Moderate-sales family farms	6	3***	3***	12	7***	6***
Midsize family farms	6	4***	3***	13	10**	6***
Large family farms	3	2**	1***	6	5	2***
Very large family farms	0.3	1*	0.3	0.6	1.4**	0.8
Nonfamily farms	2	2	2	5	4	3

Residence farms = retirement and off-farm occupation farms.

Note: Means and proportions (percent) are estimated using the Agricultural Resource Management Survey (ARMS) full sample weights, and variances are estimated using the delete-a-group jackknife estimation.

*** Indicates the estimate is different from that of non-Hispanic (NH) White farms at the 99-percent confidence level; ** at the 95-percent confidence level; * at the 90-percent confidence level. Total sample size is 58,665 farms (54,863 NH White, 2,030 Hispanic, and 1,772 NH socially disadvantaged farms).

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017–20 Agricultural Resource Management Survey.

Table A.2

Farm income, production, acres, and receipt of Government payments, by socially disadvantaged classification, 2017-20

	All farms			Excluding residence farms		
	Non-Hispanic White farms	Hispanic farms	Non-Hispanic socially disadvantaged farms	Non-Hispanic White farms	Hispanic farms	Non-Hispanic socially disadvantaged farms
Average net farm income	37,075	33,235	20,138***	76,057	89,488	44,755***
Total value of production	171,552	176,482	132,832**	357,674	436,356*	279,616**
Value of production under contract	57,845	53,742	66,494	122,974	133,048	143,094
Percent of farms with production under contract	8	6***	5***	16	11**	10***
Mean value of production under contract for farms with production contracts	689,671	958,297**	1,293,143***	793,013	1,161,989**	1,481,672***
Acres operated	419	264***	324*	752	521***	556*
Acres operated that are rented	182	106***	142	350	221**	266
Acres cropland	199	82***	83***	380	170***	139***
Acres rented to others	26	6***	19	27	6***	19
Percent of farms that purchased crop insurance	16	7***	6***	27	15***	8***
Percent of farms with CCC loans	1	0***	0***	2	1***	0***
Percent of farms that receive a direct agricultural Government payment	34	11***	21***	41	20***	26***
Mean amount of direct agricultural Government payments received	8,322	3,870***	3,616***	16,239	9,114***	6,536***
Mean amount of direct agricultural Government payments received among recipients	24,840	33,782	17,417***	39,398	44,561	25,027***
Percent of farms that received conservation payments	16	4***	11***	16	5***	12*
Mean amount of conservation payments received	1,535	501***	979***	2,133	868***	1,143***
Mean amount of conservation payments received among recipients	9,598	13,006	8,965	13,634	18,172	9,888
Percent of farms that received direct commodity payments	11	3***	4***	18	7***	4***
Mean amount of commodity payments received	1,693	561***	381***	3,578	1,406***	749***
Mean amount of commodity payments received among recipients	15,144	17,058	10,068*	19,498	20,431	18,669
Percent of farms that receive any other direct Federal, State, and local payments	18	7***	12***	27	15***	16***
Mean amount of all other direct Federal, State, and local payments	5,094	2,809***	2,256***	10,528	6,840**	4,644***
Mean amount of all other direct Federal, State, and local payments among recipients	27,555	38,296	19,569*	38,452	45,247	29,591

CCC = Commodity Credit Corporation; residence farms = retirement and off-farm occupation farms.

Note: All monetary values are in U.S. dollars. Means and proportions (percents) are estimated using the Agricultural Resource Management Survey (ARMS) full sample weights, and variances are estimated using the delete-a-group jackknife estimation. Total sample size is 58,665 farms (54,863 non-Hispanic [NH] White, 2,030 Hispanic, and 1,772 NH socially disadvantaged farms).

*** Indicates the estimate is different from that of NH White farms at the 99-percent confidence level; ** at the 95-percent confidence level; * at the 90-percent confidence level.

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017-20 Agricultural Resource Management Survey.

Table A.3

Farm assets, debt, loans, and financial health indicators, by socially disadvantaged classification, 2017-20

	All farms			Excluding residence farms		
	Non-Hispanic White farms	Hispanic farms	Non-Hispanic socially disadvantaged farms	Non-Hispanic White farms	Hispanic farms	Non-Hispanic socially disadvantaged farms
Average farm business net worth	1,260,462	961,485***	900,765***	1,971,767	1,740,994	1,212,589***
Average assets	1,384,227	1,058,842***	982,715***	2,205,785	1,948,969	1,355,917***
Average total debt	123,765	97,357**	81,950***	234,018	207,975	143,327***
Percent of farms reporting having a loan	33	25***	26**	42	31***	26***
Percent of farms with loan from Farm Credit System	10	7***	7**	14	12	6***
Percent of farms with loan from the USDA, Farm Service Agency	3	2	3	3	4	5
Percent of farms with loan from commercial banks	19	15***	15**	24	18**	13***
Percent of farms with loan from savings associations	2	1	2	2	2	3
Percent of farms with loan from other lenders	9	8	7*	13	8***	6***
Average amount borrowed (among borrowers) from:						
Farm Credit System	362,711	407,114	333,679	526,268	533,668	806,403
USDA, Farm Service Agency	183,488	179,852	204,116	248,841	201,608	205,282
Commercial banks	302,733	292,008	240,394**	445,910	489,403	471,915
Savings associations	201,741	201,338	105,251	255,815	284,291	88,292
Other lenders	196,091	210,695	134,598	267,625	460,627	264,256
Average amount borrowed by all farms from:						
Farm Credit System	37,638	28,830	24,806*	72,536	64,036	46,748*
USDA, Farm Service Agency	4,686	3,493	7,102	8,204	7,684	9,239
Commercial banks	57,182	42,377***	36,400***	106,810	85,718**	63,471***
Savings associations	3,010	2,466	2,402	4,382	4,419	2,331***
Other lenders	18,276	16,222	9,428***	34,534	35,904	17,023***
Percent of farms with a current ratio < 1	41	47**	37	33	42**	30
Percent of farms with a debt-to-asset ratio > 55 percent	4	3	3	5	6	4
Percent of farms with an operating profit margin < 10 percent	73	71	82***	71	70	84***
Percent of farms with a term debt coverage ratio < 1	13	11	14	13	10	8***

Residence farms = retirement and off-farm occupation farms.

Note: All monetary values are in U.S. dollars. Means and proportions (percents) are estimated using the Agricultural Resource Management Survey (ARMS) full sample weights, and variances are estimated using the delete-a-group jackknife estimation. Shaded cells indicate the coefficient of variation for the estimate is greater than 50 percent. Total sample size is 58,665 farms (54,863 non-Hispanic [NH] White, 2,030 Hispanic, and 1,772 NH socially disadvantaged farms).

*** Indicates the estimate is different from that of NH White farms at the 99-percent confidence level; ** at the 95-percent confidence level; * at the 90-percent confidence level.

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017-20 Agricultural Resource Management Survey.

Table A.4

Other farm characteristics, by socially disadvantaged classification, 2017-20

	All farms			Excluding residence farms		
	Non-Hispanic White farms	Hispanic farms	Non-Hispanic socially disadvantaged farms	Non-Hispanic White farms	Hispanic farms	Non-Hispanic socially disadvantaged farms
Percent of farms that are limited resource farms	9	10	20***	10	12	26***
Average number of operators on farm	1.6	1.6	1.8	1.7	1.7	1.9
Percent of farms with a woman operator	53	50	57*	51	52	55
Number of men operators	1.1	1.1**	1.1	1.1	1.2	1.2
Number of women operators	0.6	0.5	0.7**	0.5	0.6	0.7*
Average age of operators (years)	60	57***	59	61	60**	61
Percent of farms with an Hispanic operator	NA	100	NA	NA	100	NA
Percent of farms with a NH Black operator	NA	NA	34	NA	NA	32
Percent of farms with an NH SDA operator (other than NH Black)	NA	NA	66	NA	NA	68
Percent of farms where the highest education of operators is:						
Less than high school degree	4	12***	8**	5	15***	9
High school degree	28	34**	33*	30	34	40**
Some college	29	21***	24*	28	18***	20**
4-year degree or more	39	33**	35	38	33	31*
Percent of farms where an operator reports:						
Farming is not main occupation	61	68***	63	24	26	25
Being retired from farming	15	10**	15	5	4**	5
Having 10 years or less farming experience	20	27***	19	16	18	14

NH = non-Hispanic; SDA = socially disadvantaged; NA = not applicable; residence farms = retirement and off-farm occupation farms.

Note: Means and proportions (percents) are estimated using the Agricultural Resource Management Survey (ARMS) full sample weights, and variances are estimated using the delete-a-group jackknife estimation. Total sample size is 58,665 farms (54,863 NH White, 2,030 Hispanic, and 1,772 NH SDA farms).

*** Indicates the estimate is different from that of NH White farms at the 99-percent confidence level; ** at the 95-percent confidence level; * at the 90-percent confidence level.

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017-20 Agricultural Resource Management Survey.

Table A.5

Principal operator and household characteristics, by socially disadvantaged classification, 2017-20

	All farms			Excluding residence farms		
	Non-Hispanic White farms	Hispanic farms	Non-Hispanic socially disadvantaged farms	Non-Hispanic White farms	Hispanic farms	Non-Hispanic socially disadvantaged farms
Principal operator is female (percent)	14	12	18*	12	15	15
Average age of principal operator (percent)						
Younger than 35 years	4	3*	4	4	3	3
35 to 44 years	10	10	9	8	7	7
45 to 54 years	15	27***	16	11	18**	11
55 to 64 years	30	30	32	28	33	30
65 years or older	42	30***	39	48	39***	50
Education of principal operator (percent)						
Less than high school diploma	5	15***	11***	5	19***	14**
High school	36	34	38	38	35	44
Some college	28	22***	25	28	18***	18***
College graduate and beyond	31	28	26*	29	27	24
Race/ethnicity of principal operator (percent)						
Non-Hispanic White	100	21***	17***	100	21***	15***
Hispanic, any race	NA	79***	NA	NA	78***	NA
Non-Hispanic Black	NA	0	30***	NA	NA	28***
Non-Hispanic socially disadvantaged other than Black	NA	1*	52***	NA	1	56***
Operator's main occupation is farming (percent)	51	43***	51	97	96	98
Operator is retired from farming (percent)	13	10	13	1	1	1
Operator has 10 years or less farming experience (percent)	19	25**	18	13	13	13

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	All farms			Excluding residence farms		
	Non-Hispanic White farms	Hispanic farms	Non-Hispanic socially disadvantaged farms	Non-Hispanic White farms	Hispanic farms	Non-Hispanic socially disadvantaged farms
Household farm income						
Mean	22,163	19,329	8,419***	50,263	65,194	25,946***
Median	-1,012	-2,481	-3,210	1,802	-350	-1,826
Household off-farm income						
Mean	97,351	100,958	84,528**	64,418	75,684	65,511
Median	69,900	72,750	62,750	46,150	45,000	39,185
Total household income						
Mean	119,514	120,287	92,946***	114,682	140,878*	91,456
Median	79,313	79,214	56,977	61,158	62,053	38,967
Total household expenditures	44,742	46,668	37,912	41,111	50,391	32,047***
Household net worth	1,666,501	1,296,795***	1,218,995***	2,148,235	1,913,418	1,393,593***
Total household assets	1,863,826	1,451,360***	1,367,265***	2,429,307	2,148,591	1,580,546***
Farm assets	1,182,540	855,140***	904,669***	1,843,160	1,505,589*	1,214,137***
Nonfarm assets	681,286	596,220*	462,595***	586,146	643,002	366,409***
Total household debt	197,325	154,564***	148,270***	281,072	235,173*	186,953***
Farm debt	105,107	68,137***	73,519***	199,475	136,588***	127,168***
Nonfarm debt	92,218	86,427	74,751***	81,597	98,585	59,784***

NA = not applicable; residence farms = retirement and off-farm occupation farms.

Note: Monetary values are in U.S. dollars. Means and proportions (percents) are estimated using the Agricultural Resource Management Survey (ARMS) full sample weights, and variances are estimated using the delete-a-group jackknife estimation. Medians were not compared statistically. Shaded cells indicate the coefficient of variation for the estimate is greater than 50 percent. Total sample size is 58,665 farms (54,863 non-Hispanic [NH] White, 2,030 Hispanic, and 1,772 NH socially disadvantaged [SDA] farms), with 55,957 farms (52,365 NH White, 1,893 Hispanic, and 1,699 NH SDA) for household-level measures.

*** Indicates the mean estimate is different from that of NH White farms at the 99-percent confidence level; ** at the 95-percent confidence level; * at the 90-percent confidence level.

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017–20 Agricultural Resource Management Survey.

Table A.6

Distribution of farms across regions, specializations, and farm types, by gender classification, 2017–20

	All farms			Excluding residence farms		
	Men-only	Joint	Women-only	Men-only	Joint	Women-only
Percent of farms located in:						
Atlantic region	21	20	16**	20	19	16
South region	13	12***	15	13	11***	19
Midwest region	30	27***	26	31	27***	26
Plains region	25	23*	25	24	23	21
West region	12	19***	19***	12	20***	17**
Specializations (percent of farms)						
Cash grains	19	11***	3***	26	16***	4***
Other field crops	24	22**	35***	19	17**	31***
High-value crops	7	8**	7	8	10***	9
Beef	38	39	30***	34	36	35
All other livestock	10	18***	24***	10	16***	20***
Dairy	2	2***	0.3***	3	5***	1***
Farm typology categories (percent of farms)						
Retirement farms	11	9**	24***			
Off-farm occupation farms	38	44***	34			
Low-sales family farms	33	31**	37	65	67*	89***
Moderate-sales family farms	6	5	2***	11	12	4***
Midsize family farms	6	5***	1***	13	11**	2***
Large family farms	3	2***	0.2***	6	5	0.4***
Very large family farms	0.3	0.3	0.0***	1	1	0***
Nonfamily farms	3	2***	2	5	4**	5

Residence farms = retirement and off-farm occupation farms.

Note: Means and proportions (percents) are estimated using the Agricultural Resource Management Survey (ARMS) full sample weights, and variances are estimated using the delete-a-group jackknife estimation. Shaded cells indicate the coefficient of variation for the estimate is greater than 50 percent. Total sample size is 63,169 farms (34,322 men-only, 26,798 joint-run, and 2,049 women-only farms).

*** Indicates the estimate is different from that of men-only farms at the 99-percent confidence level; ** at the 95-percent confidence level; * at the 90-percent confidence level.

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017–20 Agricultural Resource Management Survey.

Table A.7

Farm income, production, acres, and receipt of government payments, by farm gender classification, 2017–20

	All farms			Excluding residence farms		
	Men-only	Joint	Women-only	Men-only	Joint	Women-only
Average net farm income	45,006	32,053***	10,139***	82,470	65,189***	18,200***
Total value of production	209,083	160,468***	28,492***	388,394	326,090***	56,858***
Value of production under contract	69,100	54,347***	9,538***	130,717	111,654**	20,656***
Percent of farms with production under contract	9	8***	2***	15	14*	3***
Mean value of production under contract for farms with production contracts	770,374	718,440	513,644***	883,678	820,675	649,738**
Acres operated	437	411	155***	712	718	231***
Acres operated that are rented	195	173	28***	338	321	53***
Acres cropland	219	174***	52***	374	324***	68***
Acres rented to others	26	25	37**	26	31*	32
Percent of farms that purchased crop insurance	18	13***	3***	27	22***	5***
Percent of farms with CCC loans	1	1**	0***	2	2	0***
Percent of farms that receive a direct agricultural government payment	35	29***	32	43	37***	33***
Mean amount of direct agricultural government payments received	8,836	7,700***	2,470***	15,502	14,729	3,511***
Mean amount of direct agricultural government payments received among recipients	24,964	26,361	7,687***	36,075	39,912**	10,483***
Percent of farms that received conservation payments	17	14***	23***	18	15***	22
Mean amount of conservation payments received	1,570	1,419*	1,421	2,104	2,014	1,424***
Mean amount of conservation payments received among recipients	9,261	10,061	6,191***	11,659	13,530*	6,358***
Percent of farms that received direct commodity payments	12	9***	4***	18	15**	5***
Mean amount of commodity payments received	1,833	1,436***	173***	3,418	2,958**	332***
Mean amount of commodity payments received among recipients	15,489	15,136	4,645***	19,430	19,330	7,272***
Percent of farms that receive any other direct Federal, State, and local payments	19	16***	9***	27	24**	12***
Mean amount of all other direct Federal, State, and local payments	5,434	4,845**	876***	9,980	9,757	1,755***
Mean amount of all other direct Federal, State, and local payments among recipients	27,921	29,790	9,314***	37,650	40,426	15,241***

CCC = Commodity Credit Corporation; residence farms = retirement and off-farm occupation farms.

Note: All monetary values are in U.S. dollars. Means and proportions (percentages) are estimated using the Agricultural Resource Management Survey (ARMS) full sample weights, and variances are estimated using the delete-a-group jackknife estimation. Shaded cells indicate the coefficient of variation for the estimate is greater than 50 percent. Total sample size is 63,169 farms (34,322 men-only, 26,798 joint-run, and 2,049 women-only farms).

*** Indicates the estimate is different from that of men-only farms at the 99-percent confidence level; ** at the 95-percent confidence level; * at the 90-percent confidence level.

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017–20 Agricultural Resource Management Survey.

Table A.8

Farm assets, debt, loans, and financial health indicators, by farm gender classification, 2017–20

	All farms			Excluding residence farms		
	Men-only	Joint	Women-only	Men-only	Joint	Women-only
Average farm business net worth	1,306,345	1,236,926*	766,266***	1,918,360	1,893,310	891,911***
Average assets	1,431,902	1,363,510*	793,836***	2,136,283	2,121,460	929,059***
Average total debt	125,557	126,584	27,570***	217,923	228,150	37,148***
Percent of farms reporting having a loan	30	35***	15***	37	42***	16***
Percent of farms with loan from Farm Credit System	10	11**	4***	12	14**	4***
Percent of farms with loan from the USDA, Farm Service Agency	2	3	1***	3	3	1***
Percent of farms with loan from commercial banks	17	20***	9***	21	24***	10***
Percent of farms with loan from savings associations	1	2***	1	1	2**	0***
Percent of farms with loan from other lenders	8	10***	3***	11	13***	4***
Average amount borrowed (among borrowers) from:						
Farm Credit System	395,713	351,862*	194,568***	550,858	516,274	251,346***
USDA, Farm Service Agency	216,654	166,462**	130,367*	288,986	212,478***	135,912***
Commercial banks	332,988	291,359**	139,347***	470,681	437,511	160,835***
Savings associations	229,970	190,133	157,478	293,665	226,191	282,355
Other lenders	221,506	185,419**	128,595***	296,877	258,627*	183,642*
Average amount borrowed by all farms from:						
Farm Credit System	37,936	38,408	7,386***	67,008	70,583	10,357***
USDA, Farm Service Agency	5,315	4,644	1,110***	8,804	7,295	2,037***
Commercial banks	57,787	58,211	12,302***	98,715	103,996	15,841***
Savings associations	2,687	3,557*	1,942	4,111	4,925	766***
Other lenders	18,534	19,243	4,029***	32,395	34,649	6,514***
Percent of farms with a current ratio < 1	42	42	45	37	36	43*
Percent of farms with a debt-to-asset ratio > 55 percent	3	4	2*	5	5	3*
Percent of farms with an operating profit margin < 10 percent	69	77***	68	67	74***	73*
Percent of farms with a term debt coverage ratio < 1	11	16***	7***	11	15***	6***

Residence farms = retirement and off-farm occupation farms.

Note: All monetary values are in U.S. dollars. Means and proportions (percents) estimated using the Agricultural Resource Management Survey (ARMS) full sample weights, and variances estimated using the delete-a-group jackknife estimation. Shaded cells indicate the coefficient of variation for the estimate is greater than 50 percent. Total sample size is 63,169 farms (34,322 men-only, 26,798 joint-run, and 2,049 women-only farms).

*** Indicates estimate is different from that of men-only farms at the 99-percent confidence level; ** at the 95-percent confidence level; * at the 90-percent confidence level.

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017–20 Agricultural Resource Management Survey.

Table A.9

Other farm characteristics, by gender classification, 2017-20

	All farms			Excluding residence farms		
	Men-only	Joint	Women-only	Men-only	Joint	Women-only
Percent of farms that are limited resource farms	11	6***	22***	12	7***	21**
Average number of operators on farm	1.1	2.2***	1.1***	1.2	2.3***	1.0***
Percent of farms with a woman operator	NA	100	100	NA	100	100
Number of men operators	1.1	1.1**	NA	1.2	1.2	NA
Number of women operators	NA	1.1	1.1	NA	1.1	1.0
Average age of operators (years)	55	57***	59***	51	57***	51
Percent of farms with an Hispanic operator	4	4	2***	3	4	2*
Percent of farms with a NH Black operator	2	1**	2	1	1	2
Percent of farms with an NH SDA operator (other than NH Black)	2	3***	3	2	3***	2
Percent of farms where the highest education of operators is:						
Less than high school degree	5	3***	3***	6	4*	5
High school degree	37	20***	28***	37	23***	32
Some college	27	29***	33**	26	8***	32
4-year degree or more	31	48***	36**	31	46***	32
Percent of farms where an operator reports:						
Farming is not main occupation	51	72***	55*	7	44***	4***
Being retired from farming	12	15***	24***	2	8***	2
Having 10 years or less farming experience	15	24***	21**	10	19***	16***

NH = non-Hispanic; SDA = socially disadvantaged; residence farms = retirement and off-farm occupation farms; NA = not applicable.

Note: Means and proportions (percents) estimated using the Agricultural Resource Management Survey (ARMS) full sample weights, and variances estimated using the delete-a-group jackknife estimation. Total sample size is 63,169 farms (34,322 men-only, 26,798 joint-run, and 2,049 women-only farms).

*** Indicates estimate is different from that of men-only farms at the 99-percent confidence level; ** at the 95-percent confidence level; * at the 90-percent confidence level.

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017-20 Agricultural Resource Management Survey.

Table A.10

Principal operator and household characteristics, by gender classification, 2017-20

	All farms			Excluding residence farms		
	Men-only	Joint	Women-only	Men-only	Joint	Women-only
Principal operator is female (percent)	NA	15	100	NA	15	100
Average age of principal operator (percent)						
Younger than 35 years	4	3*	2***	4	3	2**
35 to 44 years	8	10***	6	6	8***	6
45 to 54 years	13	16***	9***	10	11	5***
55 to 64 years	37	33***	33**	42	33***	45
65 years or older	38	37	49***	39	45***	42
Education of principal operator (percent)						
Less than high school diploma	5	5	3***	5	6**	4
High school	45	35***	36***	52	40***	48
Some college	24	28***	29**	21	26***	24
College graduate and beyond	26	32***	32***	23	28***	23
Race/ethnicity of principal operator (percent)						
Non-Hispanic White	93	94***	94	94	94	94
Hispanic, any race	3.9	2.8***	1.7***	3	3	2
Non-Hispanic Black	1.5	0.7***	1.9	1	1	2
Non-Hispanic socially disadvantaged other than Black	1.8	2.2*	2.6	2	2	2
Operator's main occupation is farming (percent)	56	51***	54	97	97	98
Operator is retired from farming (percent)	12	10**	25***	1	1	2
Operator has 10 years or less farming experience (percent)	17	20***	26**	11	14**	21***
Household farm income						
Mean	26,930	19,383***	1,749***	53,393	45,564***	3,889***
Median	-86	-2,187	-477	2,760	240	450
Household off-farm income						
Mean	93,261	101,494*	70,983***	62,725	71,436***	52,801**
Median	61,990	75,946	53,750	49,156	55,000	45,000
Total household income						
Mean	120,191	120,877	72,733***	116,118	116,000	56,689***
Median	73,539	85,426	56,248	62,362	64,774	48,981

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	All farms			Excluding residence farms		
	Men-only	Joint	Women-only	Men-only	Joint	Women-only
Total household expenditures	43,345	47,012***	38,455***	40,854	43,865**	34,449***
Household net worth	1,651,062	1,687,554	1,163,689***	2,020,816	2,184,282**	1,194,432***
Total household assets	1,853,083	1,894,788	1,263,742***	2,299,136	2,469,249**	1,298,261***
Farm assets	1,191,105	1,194,569	734,131***	1,727,406	1,839,745*	835,326***
Nonfarm assets	661,979	700,219	529,611***	571,730	629,504*	462,935***
Total household debt	202,021	207,234	100,054***	278,321	284,967	103,829***
Farm debt	104,003	108,842	26,408***	180,772	196,525*	35,026***
Nonfarm debt	98,018	98,392	73,646***	97,549	88,442	68,803**

Residence farms = retirement and off-farm occupation farms.

Note: All monetary values are in U.S. dollars. Means and proportions (percents) estimated using the Agricultural Resource Management Survey (ARMS) full sample weights, and variances estimated using the delete-a-group jackknife estimation. Medians were not compared statistically. Shaded cells indicate the coefficient of variation for the estimate is greater than 50 percent. Total sample size is 63,169 farms (34,322 men-only, 26,798 joint-run, and 2,049 women-only farms). For the household-level measures, the sample includes 60,156 farms (32,237 men-only, 25,940 joint-run, and 1,979 women-only farms).

*** Indicates the mean estimate is different from that of men-only farms at the 99-percent confidence level; ** at the 95-percent confidence level; * at the 90-percent confidence level.

Source: USDA, Economic Research Service using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017-20 Agricultural Resource Management Survey.

Table A.11

Distribution of farms across regions, specializations, and farm types, by limited resource classification, 2017–20

	All farms			Excluding residence farms		
	Limited re- source farms	Nonlimited resource, low-sales farms	High-sales farms	Limited re- source farms	Nonlimited resource, low-sales farms	High-sales farms
Percent of farms located in:						
Atlantic region	23	21	13***	23	21	13***
South region	14	13	10***	16	14	10***
Midwest region	25	26	39***	24	25	39***
Plains region	18	25***	23***	18	24***	23***
West region	19	15**	15**	19	16	15
Specializations (percent of farms)						
Cash grains	8	9	45***	9	12***	44***
Other field crops	30	26*	8***	23	23	8***
High-value crops	6	7	11***	7	9	11***
Beef	40	43	13***	45	43	13***
All other livestock	15	14	15	15	12	14
Dairy	1	1	9***	2	1	10***
Farm typology categories (percent of farms)						
Retirement farms	22	12***	1***			
Off-farm occupation farms	22	49***	6***			
Low-sales family farms	55	35***	4***	99	90***	4***
Moderate-sales family farms	1	2***	27***	1	4***	29***
Midsized family farms	0	0***	38***	0	0***	40***
Large family farms	0	0***	17***	NA	0	18
Very large family farms	0	0	2***	NA	0	2
Nonfamily farms	0	2***	6***	NA	5	6

LR = Residence farms = retirement and off-farm occupation farms.

Note: Means and proportions (percents) are estimated using the Agricultural Resource Management Survey (ARMS) full sample weights, and variances are estimated using the delete-a-group jackknife estimation. Shaded cells indicate the coefficient of variation for the estimate is greater than 50 percent. Total sample of 63,169 farms (2,979 limited resource (LR), 29,379 non-LR low-sales, and 30,811 high-sales farms). Atlantic region: Connecticut, Delaware, Kentucky, New Hampshire, New Jersey, New York, North Carolina, Maine, Maryland, Massachusetts, Pennsylvania, Rhode Island, Tennessee, Vermont, Virginia, Washington, DC, and West Virginia. South region: Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, and South Carolina. Midwest region: Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, and Wisconsin. Plains region: Kansas, Nebraska, North Dakota, Oklahoma, South Dakota, and Texas. West region: Arizona, California, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

Alaska and Hawaii are not included in the Agricultural Resource Management Survey.

*** Indicates the estimate is different from that of LR farms at the 99-percent confidence level; ** at the 95-percent confidence level; * at the 90-percent confidence level.

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017–20 Agricultural Resource Management Survey.

Table A.12

Farm income, production, acres, and receipt of government payments, by limited resource classification, 2017–20

	All farms			Excluding residence farms		
	Limited resource farms	Nonlimited resource, low-sales farms	High-sales farms	Limited resource farms	Nonlimited resource, low-sales farms	High-sales farms
Average net farm income	-1,230	5,953***	226,687***	-2,270	8,671***	239,952***
Total value of production	14,435	21,033***	1,102,481***	18,284	33,551***	1,158,279***
Value of production under contract	821	1,764***	398,690***	1,348	3,315***	412,724***
Percent of farms with production under contract	1	3***	40***	2	4***	40***
Mean value of production under contract for farms with production contracts	54,761	67,776**	994,990***	57,949	83,875***	1,043,472***
Acres operated	186	195	1,675***	200	293***	1,754***
Acres operated that are rented	72	56	870***	66	88*	914***
Acres cropland	51	61***	953***	57	85***	1,001***
Acres rented to others	13	27***	33***	11	29***	34***
Percent of farms that purchased crop insurance	6	8	57***	8	11***	58***
Percent of farms with CCC loans	0	0	5***	0	1	5***
Percent of farms that receive a direct agricultural government payment	21	28***	65***	23	31***	66***
Mean amount of direct agricultural government payments received	1,150	2,097***	43,241***	1,321	2,837***	45,557***
Mean amount of direct agricultural government payments received among recipients	5,366	7,605***	66,071***	5,863	9,124***	68,914***
Percent of farms that received conservation payments	13	15	24***	11	15**	24***
Mean amount of conservation payments received	582	1,023***	4,585***	512	1,062***	4,765***
Mean amount of conservation payments received among recipients	4,545	6,832***	19,022***	4,837	7,178**	19,652***
Percent of farms that received direct commodity payments	3	6***	37***	4	8***	38***
Mean amount of commodity payments received	95	221***	9,545***	146	390***	10,088***
Mean amount of commodity payments received among recipients	2,908	3,623*	25,878***	3,426	4,823**	26,752***
Percent of farms that receive any other direct Federal, State, and local payments	9	13***	47***	12	17***	47***
Mean amount of all other direct Federal, State, and local payments	472	853***	29,111***	663	1,384***	30,704***
Mean amount of all other direct Federal, State, and local payments among recipients	5,322	6,649**	61,869***	5,569	8,337***	64,658***

CCC = Commodity Credit Corporation; residence farms = retirement and off-farm occupation farms.

Note: All monetary values are in U.S. dollars. Means and proportions (percents) are estimated using the Agricultural Resource Management Survey (ARMS) full sample weights, and variances are estimated using the delete-a-group jackknife estimation. Shaded cells indicate the coefficient of variation for the estimate is greater than 50 percent. Total sample of 63,169 farms (2,979 [LR], 29,379 non-LR low-sales, and 30,811 high-sales farms).

*** Indicates the estimate is different from that of LR farms at the 99-percent confidence level; ** at the 95-percent confidence level; * at the 90-percent confidence level.

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017–20 Agricultural Resource Management Survey.

Table A.13

Farm assets, debt, loans, and financial health indicators, by limited resource classification, 2017-20

	All farms			Excluding residence farms		
	Limited resource farms	Nonlimited resource, low-sales farms	High-sales farms	Limited resource farms	Nonlimited resource, low-sales farms	High-sales farms
Average farm business net worth	659,522	814,140***	3,882,083***	746,009	1,055,659***	4,044,604***
Average assets	680,313	847,777***	4,522,974***	772,476	1,095,363***	4,712,206***
Average total debt	20,791	33,637***	640,891***	26,467	39,704***	667,602***
Percent of farms reporting having a loan	17	25***	73***	19	25***	73***
Percent of farms with loan from Farm Credit System	3	7***	27***	3	7***	27***
Percent of farms with loan from the USDA, Farm Service Agency	1	2**	6***	1	2	6***
Percent of farms with loan from commercial banks	10	15***	41***	11	14**	42***
Percent of farms with loan from savings associations	1	1	2**	2	1	2
Percent of farms with loan from other lenders	4	7***	23***	5	7***	23***
Average amount borrowed (among borrowers) from:						
Farm Credit System	121,262	117,411	755,053***	163,937	146,362	771,516***
USDA, Farm Service Agency	103,910	106,068	346,286***	106,825	131,950	348,659***
Commercial banks	104,900	112,592	699,095***	114,298	129,474	725,266***
Savings associations	113,722	121,902	482,740***	103,581	94,606	512,151***
Other lenders	72,061	78,693	410,758***	91,191	91,754	419,826***
Average amount borrowed by all farms from:						
Farm Credit System	3,773	8,678***	203,241***	5,336	10,576**	210,448***
USDA, Farm Service Agency	1,372	2,087	21,034***	1,507	2,712	21,488***
Commercial banks	10,337	16,370***	289,400***	12,548	18,584***	301,648***
Savings associations	1,406	1,646	11,419***	1,774	1,291	11,857***
Other lenders	3,200	5,377**	94,034***	4,368	6,768*	98,479***
Percent of farms with a current ratio < 1	42	45	29***	36	41	29**
Percent of farms with a debt-to-asset ratio > 55 percent	2	2	11***	2	2	11***
Percent of farms with an operating profit margin < 10 percent	80	77	46***	87	79***	46***
Percent of farms with a term debt coverage ratio < 1	9	13***	14***	10	12	14***

Residence farms = retirement and off-farm occupation farms.

Note: All monetary values are in U.S. dollars. Means and proportions (percents) are estimated using the Agricultural Resource Management Survey (ARMS) full sample weights, and variances are estimated using the delete-a-group jackknife estimation. Total sample of 63,169 farms (2,979 limited resource (LR), 29,379 non-LR low-sales, and 30,811 high-sales farms).

*** Indicates the estimate is different from that of LR farms at the 99-percent confidence level; ** at the 95-percent confidence level; * at the 90-percent confidence level.

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017-20 Agricultural Resource Management Survey.

Table A.14

Other farm characteristics, by limited resource classification, 2017-20

	All farms			Excluding residence farms		
	Limited resource farms	Nonlimited resource, low-sales farms	High-sales farms	Limited resource farms	Nonlimited resource, low-sales farms	High-sales farms
Average number of operators on farm	1.4	1.6***	1.8***	1.4	1.6***	1.8***
Percent of farms with a woman operator	45	53***	45	40	51***	44
Number of men operators	0.9	1.0***	1.3***	0.9	1.1***	1.3***
Number of women operators	0.5	0.6***	0.5	0.4	0.6***	0.5*
Average age of operators (years)	62	56***	52***	59	53***	52***
Percent of farms with an Hispanic operator	5	4	3**	4	4	3*
Percent of farms with a NH Black operator	3	1**	0***	2	1	0**
Percent of farms with an NH SDA operator (other than NH Black)	5	2***	2***	7	2***	2***
Percent of farms where the highest education of operators is:						
Less than high school degree	9	4***	5***	10	4***	5***
High school degree	43	28***	25***	45	30***	25***
Some college	26	28	30*	24	26	30***
4-year degree or more	21	41***	41***	21	40***	40***
Percent of farms where an operator reports:						
Farming is not main occupation	37	71***	27***	9	29***	22***
Being retired from farming	24	14***	6***	2	4***	5***
Having 10 years or less farming experience	16	20**	18	13	13	18**

NH = non-Hispanic; SDA = socially disadvantaged; residence farms = retirement and off-farm occupation farms.

Note: Means and proportions (percents) are estimated using the Agricultural Resource Management Survey (ARMS) full sample weights, and variances are estimated using the delete-a-group jackknife estimation. Total sample of 63,169 farms (2,979 limited resource [LR], 29,379 non-LR low-sales, and 30,811 high-sales farms).

*** Indicates the estimate is different from that of LR farms at the 99-percent confidence level; ** at the 95-percent confidence level; * at the 90-percent confidence level.

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017-20 Agricultural Resource Management Survey.

Table A.15

Principal operator and household characteristics, by limited resource classification, 2017-20

	All farms			Excluding residence farms		
	Limited resource farms	Nonlimited resource, low-sales farms	High-sales farms	Limited resource farms	Nonlimited resource, low-sales farms	High-sales farms
Principal operator is female (percent)	21	14***	4***	17	15	4***
Average age of principal operator (percent)						
Younger than 35 years	2	3	6***	3	2	6***
35 to 44 years	4	9***	13***	3	5***	13***
45 to 54 years	8	15***	18***	8	7	18***
55 to 64 years	31	35**	37***	38	39	37
65 years or older	55	39***	26***	48	47	26***
Education of principal operator (percent)						
Less than high school diploma	10	4***	6***	11	4***	6***
High school	50	39***	38***	55	49*	38***
Some college	23	26**	29***	19	22	28***
College graduate and beyond	17	31***	28***	15	25***	28***
Race/ethnicity of principal operator (percent)						
Non-Hispanic White	89	94***	97***	89	94***	97***
Hispanic, any race	3.7	3.5	1.8***	3	2.9	1.8*
Non-Hispanic Black	2.7	1.2**	0.2***	2	1.2	0.2**
Non-Hispanic socially disadvantaged other than Black	4.9	1.8***	1.3***	6.1	1.6***	1.3***
Operator's main occupation is farming (percent)	72	45***	90***	100	97***	96***
Operator is retired from farming (percent)	23	12***	3***	0	1	2***
Operator has 10 years or less farming experience (percent)	17	21*	12**	14	14	11
Household farm income						
Mean	-9,365	698***	160,578***	-10,404	2,695***	169,826***
Median	-3,330	-1,761	84,104	-3,850	-816	88,773
Household off-farm income						
Mean	15,916	109,546***	72,205***	14,861	74,896***	66,705***
Median	13,700	78,952	46,250	12,500	59,680	43,897
Total household income						
Mean	6,551	110,243***	232,784***	4,457	77,591***	236,531***
Median	10,395	80,588	145,139	9,255	61,113	143,425

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	All farms			Excluding residence farms		
	Limited resource farms	Nonlimited resource, low-sales farms	High-sales farms	Limited resource farms	Nonlimited resource, low-sales farms	High-sales farms
Total household expenditures	32,096	45,226***	50,144***	32,116	39,974	49,834***
Household net worth	842,560	1,364,860***	3,673,688***	912,372	1,476,385***	3,789,722***
Total household assets	880,606	1,495,300***	4,352,250***	954,170	1,600,170***	4,488,069***
Farm assets	653,485	776,807***	3,644,132***	743,632	986,102***	3,794,355***
Nonfarm assets	227,121	718,493***	708,118***	210,538	614,068***	693,715***
Total household debt	38,046	130,441***	678,562***	41,798	123,786***	698,347***
Farm debt	19,466	31,551***	541,221***	25,015	36,874***	563,697***
Nonfarm debt	18,579	98,889***	137,341***	16,783	86,911***	134,650***

Residence farms = retirement and off-farm occupation farms.

Note: All monetary figures are in U.S. dollars. Means and proportions (percents) are estimated using the Agricultural Resource Management Survey (ARMS) full sample weights, and variances are estimated using the delete-a-group jackknife estimation. Medians were not compared statistically. Shaded cells indicate the coefficient of variation for the estimate is greater than 50 percent. Total sample of 63,169 farms (2,979 limited resource [LR]; 29,379 nonlimited resource low-sales; and 30,811 high-sales farms). For household-level measures, the sample includes 60,156 farms (2,979 LR, 28,591 non-LR low-sales, and 28,586 high-sales farms).

*** Indicates the mean estimate is different from that of limited resource farms at the 99-percent confidence level; ** at the 95-percent confidence level; * at the 90-percent confidence level.

Source: USDA, Economic Research Service (ERS) using data from USDA, National Agricultural Statistics Service and USDA, ERS 2017–20 Agricultural Resource Management Survey.

Table A.16

Comparison of farm-level characteristics in the 2017 Census of Agriculture and 2017-20 ARMS, by producer race and ethnicity groups

	2017 Census of Agriculture							2017-20 ARMS		
	All farms	Farms with White producers	Farms with Hispanic producers	Farms with American Indian or Alaska Native producers	Farms with Asian producers	Farms with African American or Black producers	Farms with Native Hawaiian or other Pacific Islander producers	Non-Hispanic White farms	Hispanic farms	Non-Hispanic socially disadvantaged farms
Number of farms	2,042,220	1,973,006	86,278	60,083	18,338	35,470	4,341	NA	NA	NA
Average acres	441	431	372	978	160	132	240	419	264	324
Average value of production	190,245	193,132	252,267	58,885	406,669	39,928	163,776	171,552	176,482	132,832
Percent of farms with direct government payments	31	32	12	14	11	23	14	34	11	21
Average amount received in direct government payments, receiving farms	13,906	14,004	15,492	12,601	14,000	7,108	12,704	24,840	33,782	17,417
Total number producers	3,399,834	3,269,778	112,451	79,198	25,310	48,697	5,296	NA	NA	NA
Average number producers per farm	1.7	1.7	1.3	1.3	1.4	1.4	1.2	1.6	1.6	1.8
Percent of farms that are family farms	96	96	95	96	93	96	93	97.8	98.4	98.5
Average age of producers (years)	57.5	57.5	55	56.6	54.9	60.8	54.9	59.9	56.8	58.9

NA = not calculated; ARMS = Agricultural Resource Management Survey.

Note: All monetary values are in U.S. dollars.

Source: USDA, Economic Research Service (ERS) using data from 2017 Census of Agriculture, United States Summary and State Data, Volume 1, Geographic Area Series, Part 51, tables 1, 5, 6, 52, 59, and 61. USDA, National Agricultural Statistics Service and USDA, ERS 2017-20 Agricultural Resource Management Survey.

Table A.17

Comparison of farm-level characteristics in the 2017 Census of Agriculture and 2017-20 ARMS, by producer gender groups

	2017 Census of Agriculture		2017-20 ARMS		
	All farms	Farms with any female producers	Men-only farms	Joint farms	Women-only farms
Number of farms	2,042,220	1,139,675	NA	NA	NA
Average acres	441	340	437	411	155
Average value of production	190,245	129,792	209,083	160,468	28,492
Percent of farms with direct government payments	31	26	35	29	32
Average amount received in direct government payments, receiving farms	13,906	13,077	24,964	26,361	7,687
Total number producers	3,399,834	1,227,461	NA	NA	NA
Average number producers per farm	1.7	1.1	1.1	2.2	1.1
Percent of farms that are family farms	96	97	97.4	98.2	98.0
Average age of producers (years)	57.5	57.1	55.3	56.7	58.7

NA = not calculated; ARMS = Agricultural Resource Management Survey.

Source: USDA, Economic Research Service (ERS) using data from 2017 Census of Agriculture, United States Summary and State Data, Volume 1, Geographic Area Series, Part 51, 1, 5, 6, 52, and 57. USDA, National Agricultural Statistics Service and USDA, ERS 2017-20 Agricultural Resource Management Survey.