



Tenure, Ownership, and Transition of Agricultural Land Methodology and Quality Measures

ISSN:

Released March 12, 2026, by the National Agricultural Statistics Service (NASS), Agricultural Statistics Board, United States Department of Agriculture (USDA).

Scope and Purpose: The 2024 Tenure, Ownership, and Transition of Agricultural Land (TOTAL) Survey was a comprehensive study of all land, including non-operating landlords of agricultural land. This survey was a follow-on component of the 2022 Census of Agriculture program. The TOTAL survey was conducted in collaboration with the Economic Research Service (ERS) once every 10 years.

The TOTAL survey collected information about both farmers and ranchers who rent agricultural land to other farmers and ranchers, as well as agricultural landlords who do not farm. The survey covers land ownership income, expense, debt, assets, as well as demographic and other landlord characteristics to provide detailed information from all agricultural landowners.

Survey Timeline: Data collection for the 2024 TOTAL survey occurred from January to April 2025. Further analysis and review continued until the results were published on March 12, 2026.

Sampling: NASS used two versions of the TOTAL survey. One focused on operating landlords while the other version was focused on the non-operating landlords. States were combined into the following 5 regions. The Atlantic region consists of the Appalachian and Northeast regions from 2014. In 2024, Alaska and Hawaii were included in the survey.

Atlantic: Connecticut, Delaware, Kentucky, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, Rhode Island, Tennessee, Vermont, Virginia, West Virginia

South: Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, South Carolina

Midwest: Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, Wisconsin

Plains: Kansas, Nebraska, North Dakota, Oklahoma, South Dakota, Texas

West: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming

Operating Landlord – The target population for the TOTAL Operating Landlord survey was all agricultural establishments with more than \$1,000 in agricultural sales (or potential sales). NASS used a dual frame approach, consisting of list frame and area frame components, to provide complete coverage of this target population. From this population, a subset of operations rented out land to others.

NASS maintains a list of farm and ranch operators, known as the list frame. NASS is constantly seeking new operations from outside list sources confirmed to be qualifying farms before being added to the list. A profile of each operation is maintained which indicates what the farm has historically produced and a general indication of size. This information allows NASS to define list-frame sampling populations that are specific to each survey and employ advanced and more efficient sample designs.

The TOTAL Operating Landlord list sample was selected based on a calculated Farm Value of Sales (FVS). All farms on the list frame with an estimated FVS of \$1,000 or more were eligible. The value of sales list frame data need not be exact as it is used to stratify similar list operations into homogeneous groups.

NASS utilized the Sequential Interval Poisson (SIP) sampling method to select the TOTAL Operating Landlord sample. In a SIP sample design, each operation was assigned a Permanent Random Number (PRN) between 0 and 1 from a uniform distribution. A sample can be defined as all operations falling within a specified range of PRNs. This provides a mechanism to control overlap across multiple surveys. Target sample sizes by Farm Value of Sales (FVS) strata determined the probability of selection for each operation.

The area frame contains all land in the United States (except Alaska) and was therefore complete for the TOTAL operating landlord survey. The land was stratified according to intensity of agriculture using satellite imagery. Land in each stratum was divided into segments of roughly one square mile. Segments were optimally allocated and sampled to effectively measure crops and livestock. Annually, NASS collects information from every individual who operates or owns land within a sampled area segment. All farms and ranches found operating in these segments were checked to see if they were included in the list frame TOTAL operating landlord population. Farms and ranches that were not on the list frame were eligible for the TOTAL operating landlord survey so that the target population was completely represented.

The U.S. sample size for the 2024 TOTAL operating landlord survey was 40,282. Each sampling unit was assigned a sampling weight which was used to create the survey estimates.

Non-operating Landlord – The target population for the TOTAL non-operating landlord survey was all landowners who rent out agricultural land but did not operate agricultural land themselves. These types of operations are not commonly maintained on the NASS list frame. To build a frame of non-operating landlords, the NASS area frame was utilized to determine sampling units.

The area frame contains all land in the United States (except Alaska) and was therefore complete for the TOTAL non-operating landlord program. The land was stratified according to the intensity of agriculture using satellite imagery. Land in each stratum was divided into segments of roughly one square mile. Segments were optimally allocated and sampled to effectively measure crops and livestock. Annually, NASS collects information from every individual who operated or owned land within a sampled area segment.

Approximately 15,000 area segments along with administrative information were used to identify these landlords only entities. Entities on the frame without a valid address or without positive acres were excluded from the sampling population. After the list of landlord only operations were built, a stratified, simple random sample was drawn. The TOTAL strata were based on the area frame design strata, which was stratified by land use. The majority of samples in a state were allocated to the cultivated land use strata. All records were included in the sample for states with 500 or fewer records in the sampling population. The non-operating landlord sampling frame in Alaska was built using administrative data only.

The U.S. sample size was 17,293 for the TOTAL landlord only survey. Each sampling unit was assigned a sampling weight which was used to create the survey estimates.

Data Collection: For consistency across modes, the paper version was considered the master questionnaire and Computer Assisted Web Interview (CAWI) and Computer Assisted Personal Interview (CAPI) instruments were built to model the paper instrument. ERS played a significant role in the development of questionnaires. Questionnaire content and format were evaluated annually by NASS and ERS through a specifications process, where requests for changes were evaluated and approved or disapproved. Input varied from question wording or formatting to a program change involving the deletion or modification of current questions or addition of new ones. If significant changes to either the content or format were proposed, a NASS survey methodologist pre-tested the changes for usability. Prior to the start of data collection, all modes of instruments were reviewed, and the CAWI instrument was thoroughly tested.

All federal data collections require approval by the Office of Management and Budget (OMB). NASS must document the public need for the data, show the design applies sound statistical practice, ensure the data does not exist elsewhere, and show that the public was not excessively burdened. The TOTAL survey questionnaires must display an active OMB number that gives NASS the authority to conduct the survey, as well as a statement of the purpose of the survey and the use of the data collected. The questionnaires must include a response burden statement that gives an estimate of the time required to complete the form, a confidentiality statement that the respondent's information will be protected from disclosure, and a statement saying that response to the survey was required by law. For the TOTAL survey, respondents must be informed that their data will be shared with the cosponsor.

In addition to asking the specific economic and cost of production questions, all survey instruments collected information to verify the sampled unit, determine any changes in the name or address, identify any partners to detect possible duplication, verify the farm still qualifies for the target population, and identify any additional operations operated by the sampled operator.

Operating Landlord – The operating landlord questionnaire, along with a pre-survey letter, was mailed to respondents in late December 2024. Mail, web, telephone and face-to-face interview modes of data collection were utilized for the operating landlord survey. Respondents who had failed to return their survey by the end of January 2025 were mailed an additional survey at that time. In late February 2025, NASS began face-to-face enumeration. Data collection continued into late April 2025.

Non-operating Landlord – The landlord only questionnaire, along with a pre-survey letter, was mailed to respondents in late December 2024. Mail, web, telephone, and face-to-face interview modes of data collection were utilized for the landlord only survey. Respondents who had failed to return their survey by the end of January 2025 were mailed an additional questionnaire at that time. In the middle of February 2025, NASS began phone interview follow-up with nonrespondents. In early March 2025, NASS began face-to-face enumeration to attempt data collection on non-respondents. Data collection continued into late April 2025.

Since the non-operating landlord sample was drawn from an area frame, it is possible that the same landowner appeared in multiple segments. To reduce the burden on the respondent, NASS identified these owners and mailed out only one questionnaire. Data from the complete report was replicated onto other reports for the same owner prior to the nonresponse adjustment mentioned later.

Survey Edit: As survey data were collected and captured, they were edited for consistency and reasonableness using automated systems. Reported data were first edited as a “batch” of data when first captured. The edit logic ensured administrative coding follows the methodological rules associated with the survey design. Relationships between data items on the current survey were verified. The edit determined the status of each record to be either “dirty” or “clean”. Dirty records were either updated or certified by an analyst to be accurate. Corrected data were reedited interactively. Only clean records were eligible for analysis tools and summary.

Analysis Tool: Edited economic and cost of production data were processed through an interactive analysis tool that displays data for all reports by questionnaire item. The tool provided various scatter plots, tables, charts, and special tabulations that allowed the analyst to compare an individual record to other similar records within their state and region. These tools made outliers and unusual data relationships evident, and Regional Field Office and Headquarters staff reviewed them to determine if they were correct. Suspect data found to be in error were corrected, while data found to be correct were kept.

Nonsampling Errors: Nonsampling errors are present in any survey process. These errors included reporting, recording, editing, and imputation errors. Steps were taken to minimize the impact of these errors, such as questionnaire testing, comprehensive interviewer training, validation and verification of processing systems, detailed computer edits, and the analysis tool.

Nonresponse Adjustment: Some producers refused to participate in the survey, others could not be located during the data collection period, and some submitted incomplete reports. These nonrespondents were accounted for to make accurate estimates as described below for each of the two versions. Item level nonresponse was accounted for by imputing data where there were missing values. NASS used a multivariate imputation algorithm to impute the missing data.

Operating Landlord – Unit level non-response was accounted for using calibration. Calibration is a weighting technique used in survey sampling to adjust the survey weights for sampled elements so that the weighted sum of a set of benchmark variables equals a pre-determined set of values for the population. The input to the calibration algorithm used for the TOTAL operating landlord survey were the weights generated from the sampling procedures. Sampling weights calculated based on numerous factors so that the sample allocation could be representative of the entire population of farms at the state level for the 15 leading cash receipts states and at the regional level for all other states. Due to survey nonresponse and the possibility of disproportionate responses across different farm types and economic sales classes, weights were adjusted through a calibration algorithm. Calibration adjusted the sampling weights so that the expanded data matched several known commodities, livestock, and farm number published totals. This ensured that the expense data collected accurately represented the expense breakdowns for all farm types and farm sizes which covered the expenses for the entire target population.

Non-operating Landlord – Unit level non-response was accounted for using a single variable calibration technique. Calibration is a weighting technique used in survey sampling to adjust the survey weights for sampled elements so that the weighted sum of a set of benchmark variables equals a pre-determined set of values for the population. The input to the calibration algorithm used for the TOTAL non-operating landlord survey was the weights generated from the sampling procedures. Due to survey nonresponse, weights were adjusted through a calibration algorithm. Calibration for the Landlord Only survey adjusted the sampling weights in two phases.

The first phase multiplied the sampling weight by the ratio of acres owned inside the segment to all owned acres rented out. The acres owned inside the segment was obtained geospatially. The all-owned acres rented out component was obtained from the survey response.

The second phase multiplied the adjusted sampling weight from the first phase by the ratio of non-operating landlord acres target to the sum of reported non-operating landlord acres at a state and strata level. The landlord only acres target was established as acres rented from others minus acres rented to others from the 2022 Ag Census. The reported landlord only acres were summed across state and strata levels to reflect the amount reported by respondents. This ensures that the data collected accurately represented the estimates of the entire target population.

Estimators: The TOTAL survey utilized direct expansions for all survey indications. For both the list and area frame respondents, direct expansions were calculated by summing the reported or imputed values weighted by the calibration adjusted weights. Variance estimates were computed for all expansions. The all landlord direct expansion and variance were the sum of the estimates from the operating landlord and non-operating landlord portions of the TOTAL survey.

Outliers: NASS conducted a formal review of outliers found in the data. Outliers may be caused by aging control data resulting in misstratification, data errors, or the nonresponse and calibration adjustments to the sampling weight.

Operating Landlord – A preliminary calibration and summary were run and any individual record accounting for 0.5 percent of the national expansion for total expenses or 2.5 percent of a regional expansion for total expenses were tagged as an outlier. After verifying the data had not been mis-recorded or mishandled, background information on these outliers was compiled and presented to a National Outlier Board. This Board was a team of NASS and ERS analysts that meet to discuss the national outliers and form a consensus on a course of action. Most outliers are traced back to unique situations that did not exist in the target population as often as a large, calibrated sample weight indicates. The Board reviewed other reports of the same type and sales class as the reported data on the outlier. The Board examined the weights of the comparable reports and most often overrode the outlier's weight with the median weight of the comparable reports. After the extreme outliers were addressed, the Board reviewed the national totals by expense category following the same methodology and, when necessary, overrode the outlier's weight with the median weight of the comparable reports. Finally, Headquarters staff examined outliers found at the state level for the published expense categories. A determination was made as to whether a weight adjustment was justified. Adjustments were not made to all outliers, but they are reviewed closely for accuracy. Once all adjustments were made, the calibration program was executed again to create the final set of weights for summary purposes.

Non-operating Landlord – A preliminary calibration and summary were run and any individual record accounting for 1.0 percent of the national unexpanded estimate for value of land and buildings, or 5.0 percent of a regional unexpanded estimate for value of land and buildings, or 10.0 percent of the state unexpanded estimate for value of land and buildings, or 2.0 percent of the state unexpanded estimate for six other key published variables were tagged as an outlier. These unexpanded outliers were determined to be very large and unique operations that were not representative of others within their state. Most of the weights for these records were adjusted to the result of non-response adjustment phase one (see Non-Response Adjustment). If one of the records identified as an outlier in this stage was a replicated record, the weight was set to zero on all replicates. Therefore, no additional non-response adjustment was applied to these records. Next, another preliminary calibration and summary were run and any individual record accounting for 1.0 percent of the national expansion for value of land and buildings, or 5.0 percent of a regional expansion for value of land and buildings, or 10.0 percent of the state expansion for value of land and buildings, or 2.0 percent of the state expansion for six other key published variables were tagged as an outlier. These expanded outliers were adjusted to the 1st quantile weight of other records within their state and strata if at least four other records existed. If less than five records existed within a particular state and strata, two strata were merged, and calibration was re-run and the adjustment protocol was followed.

Estimation: HQ statisticians executed a summary that generated regional and national level indications for operating and non-operating landlords. RFO and HQ statisticians were responsible for performing a detailed review of their survey results. Any irregularities that were revealed by the summary were investigated and, if necessary, resolved.

There were several types of data that NASS published for this survey. This included the number of acres rented out, types of acres rented out, acres under conservation easement, rights sold and leased, disposal of land, along with other acreage data. Rights leased and sold, disposal of land, and land acquisition were available for all landowners. Acreage data was also published using categorical variables such as the type of rental agreement and how often the lease was renewed. Financial data such as total production expenses and rent received are also published. The accompanying coefficient of variation (CV) for each data item was also published. Values represented in dollars are rounded to the nearest \$1000.

Selected Terms and Definitions

Assets: Assets include the physical resources and financial assets associated with the operation of rented land. Assets are the sum of the value of land and buildings, other assets as of December 31, 2024, and the share rent value of all commodities produced, sold, delivered or removed from the rented land as of December 31, 2024. Assets are available for non-operating landlords. See Value of Land and Buildings and Other Assets.

Acres Rented Out: This land area includes owned acres rented out by non-operating landlords and operating landlords and acreages subleased by operating landlords.

Acres Owned and Rented to Others: This land area includes owned acres rented out by non-operating and operating landlords.

Capital Expenses: These are expenditures used for purchasing long-term items required to produce rental income. Capital expense items include costs for buildings, land improvement, equipment and machinery, land purchased and rented out in 2024, oil, gas rights, and all other capital purchases. Capital expenses on owned acreage rented out are available for all landlords.

Rent: Cash rent is a fixed, predetermined dollar amount received by landlords for the use of rented land. In addition to the amount received for land rented, this includes the amount received for any land an operator may have subleased to others. Cash rent is summarized together with share rent. See Rent Received.

Cash Rental Agreement: A cash rental agreement is where a tenant leases land and pays cash. Acres rented out under this agreement are available for up to three tenants per landlord.

Conservation Easements: Conservation Easements are a legal agreement to place restrictions on the property between the landowners and a government agency or a qualified land conservation organization (called a land trust) to ensure a specific conservation goal is met. The conservation easement is part of the title for the land and includes rights that are otherwise held with the landowner. Conservation easements place (usually) permanent restrictions on the land. These restrictions may prohibit development or subdivision and/or prevent plowing or drainage (e.g. tilling), for example. The landowner, however, still owns the land and can use or sell it for purposes in agreement with the easement, such as farming, ranching, timber production, or hunting. The land itself remains in private ownership, and the landowner still retains all other rights and responsibilities associated with being a property owner. Some examples of conservation goals include maintaining water quality, protecting wildlife habitat, and managing lands to ensure that they are always suitable for agriculture or forestry. These data are available for acres rented out and is not included in rights leased or sold.

Count of Non-operating Landlords: The count of non-operating landlords represents the number of entities which rent land to others. An entity may have multiple owners but is counted as a single landlord. An entity may be privately owned by an individual person or people, a trust, a family-owned entity other than a trust, a non-family entity other than a trust, or some other type. If the same individual landlord represents more than one type of ownership, then the individual is only counted once. For instance, if the same individual owns land privately and is the representative of a corporation — the individual is only counted once. In some instances, two or more parts of an aggregate item may be applicable to the same individual. In such cases, counts of the sub-items do not add to the counts of the aggregate item. For instance, a landlord who rented out both pasture and cropland were counted once for each item. However, the same landlord is still only counted once for all acres rented to others which aggregates pasture, cropland, and other land uses.

Count of Operating Landlords: The count of operating landlords represents the number of operations that rented land to others. In some instances, two or more parts of an aggregate item may be applicable to the same entity. In such cases, counts of the sub-items do not add to the counts of the aggregate item. For instance, a landlord who rented out both pasture and cropland would be included as a landlord count of one.

Cropland: Cropland is land used for producing crops. Cropland includes land in field crops, nurseries, land in hay, land in government programs such as CRP, and land in orchards and vineyard. Cropland is available for acres owned and rented out by all landlords. It does not include cropland used for pasture, which is counted as pastureland.

Development Rights: Development rights are the property rights associated with a landowner's right to develop or subdivide a property. Development rights are more likely to be permanently transferred through a sale or donation than leased, although long term leases (99-year leases) do occur. State and local governments and non-profit organizations, especially in the Northeast, obtain development rights to ensure land remains in agricultural use or to achieve conservation priorities. The transfer of development rights is in some cases referred to as a conservation easement. See Conservation Easement and Rights Leased or Sold. Acreage with the development rights sold are available separately for non-operating landlords and all landowners.

Family-owned Legal Entity: A family-owned legal entity (other than a trust) is owned by family members using types of ownership such as corporations, estates, LLCs, LLP, or legal partnerships. This type of ownership may provide easier entry and exit for family members who enter and leave the landlord business, resulting in better continuity of ownership. This is a new ownership type for the 2024 TOTAL survey. Data for family-owned legal entities are available for non-operating landlords.

Farm Related Income: This income category includes government payments, federal and livestock insurance indemnities, royalty or lease payments associated with the energy (natural gas, oil, wind turbines) or mineral production, and other income associated with the land rented out. See Other Income. Farm related income is available for non-operating landlords.

Flexible or Hybrid Rental Agreement: These agreements are equivalent and are a hybrid of cash and share rental agreements. The landowner receives both a cash payment and a share of the crop value. The exact terms depend on the agreement between a landlord and their tenant(s). Acres rented out for this agreement are available for up to three tenants per landlord.

Free Rental Agreement: A free rental agreement is where a landlord rents land to a tenant and receives no payment for the use of the land. Acres rented out for this agreement are available for up to three tenants per landlord.

Gas Rights: See Oil and Gas Rights.

Government Payments: Government payments consist of direct payments as defined by the 2018 Farm Bill, payments from Conservation Reserve Program (CRP), Wetlands Reserve Program (WRP), Farmable Wetlands Program (FWP), and Conservation Reserve Enhancement Program (CREP), loan deficiency payments, disaster payments, other conservation programs, and all other federal farm programs under which payments were made directly to farm operators. Commodity Credit Corporation (CCC) proceeds, State and local government agricultural program payments, and federal crop insurance payments were not tabulated in this category. The landlord's share of government payments depends on the rental agreement with their tenant(s). Government payments are summarized in farm related income. See Farm Related Income.

Household Assets: Household assets included the financial resources for the principal landlord's household. Household assets are deposits, securities, cash value of life insurance, off-farm operator dwellings, accounts receivable, and cash on hand held by the operator and members of his/her household on December 31, 2024. These data are available for the principal landlords of non-operating landlord entities. See Principal Landlord. The count for these data is the number of principal landlords.

Household Debt: Household debt included the financial obligations for the principal landlord's household. This includes debt on items like mortgages and automobiles. Any debt on the acres rented out was excluded. These data are available for the principal landlords of non-operating landlord entities. See Principal Landlord. The count for these data is the number of principal landlords.

Insurance Indemnities: Indemnities are insurance compensation for the loss of a covered item. Non-operating landlords were asked for the dollar compensation for the loss of crops and livestock. These payments are included in the data reported for farm related income for non-operating landlords. See Farm Related Income.

Landlord Characteristics: Landlord characteristics are demographic and financial descriptions of landlords. For principal landlords, this includes sex, age, race/ethnicity, education level, current work status, primary occupation, the value of household assets, the value of household debt, the number of persons living in their households, and if retired from farming/ranching. See Principal Landlord. The count for these data is the number of principal landlords.

Like-kind Land Exchanges: This is a transaction or series of transactions that allow for the disposal of land and the acquisition of other land without generating a current tax liability from the sale of the first land asset. Data for like-kind land exchanges by acreage and year are new items for the 2024 TOTAL survey.

Mineral Rights: These are the property rights associated with the subsurface mineral resources. Mineral rights for the 2024 TOTAL survey excluded hydrocarbons such as oil and gas, which are summarized separately. Mineral rights are often sold or leased to mining companies but can also be sold to speculators or investment companies. These acreage data are available for land owned and rented out by non-operating landlords and all landowners.

Multiple Ownership Types: Multiple ownership identifies cases where non-operating landlords own land under more than one type of ownership. When data is classified by ownership type, entities with multiple land ownership types appear in this category.

Nonfamily Entity: A nonfamily entity is a legal entity in which all owners are not necessarily close family relatives. Acreage for nonfamily entities is available for non-operating landlords. Other data for nonfamily entities are summarized with other ownership types (excluding privately owned, trusts, and family entities). This is a new ownership type for the 2024 TOTAL survey. These ownership data are only available for nonoperating landlords.

Non-operating Landlord: Non-operating landlords are individuals, trusts, family owned legal entities, non-family owned legal entities or other entities that rent out owned land for agricultural purposes but did not operate a farm or ranch in 2024. The summary data for non-operating landlords were made based on data from the Non-operating Landlord version of TOTAL. For the purposes of this survey, landlords are either operating or non-operating.

Number of Tenants: For this publication, the number of tenants is a count of the number of leases or rental arrangements made by landlords. In cases when multiple landlord respondents may each have rented land to the same tenant, the tenant is counted for each landlord who rented land to that tenant.

Oil and Gas Rights: These are the property rights associated with the subsurface oil and gas resources. Oil and gas rights are often sold or leased to drilling companies but can also be sold to speculators or investment companies. These acreage data are available for land owned and rented out by non-operating landlords and all landowners. Data on oil and gas rights are summarized separately from mineral rights for the 2024 TOTAL survey.

Operating Expenses: Operating expenses are the sum of the ownership expenses and production expenses paid by operating and non-operating landlords on acres owned and rented out. Operating expenses exclude capital expenses. See Production Expenses and Ownership Expenses. This expense is summarized for acres owned and rented out.

Operating Landlord: Operating landlords are farming and ranching operations that also rent out land for agricultural purposes and operated a farm or ranch in 2024. The summary data for operating landlords were based on data from the Operating Landlord version of TOTAL. For the purposes of this survey, landlords are either operating or non-operating.

Other Assets: Other assets include crops owned and stored or off the farm, livestock and poultry owned, production inputs such as feed, chemicals, and fertilizers, tractors, machinery and other equipment, and other non-land assets as of December 31, 2024. The market value of the landlord's share of these items was reported. Other assets exclude the value of land and buildings and are available for non-operating landlords.

Other Income: Other income includes the sales of forest products, income from recreational activities such as hunting and fishing, tax rebates for land preservation, and enrollment in private conservation programs. Other income is summarized with farm related income. See Farm Related Income.

Other Land: Other land is all agricultural land excluding cropland and pasture. It includes woodland. These data are available for agriculture land owned and land rented to others.

Other Ownership: This item includes land ownership arrangements other than privately owned, trusts, family-owned entities, and non-family entities. Municipal ownership or non-profit arrangements and otherwise unspecified types were included here. Other ownership data are available for non-operating landlords.

Ownership Arrangements: Ownership arrangements are the ways non-operating landlords own the land. These arrangements include individual ownership, partnerships, corporation, trusts and other arrangements such as limited liability companies and municipalities.

Ownership Expenses: Ownership expenses are the sum of the interest and fees on debt secured by real estate and not secured by real estate, and taxes paid on owned land and other property such as livestock, machinery, and other farm production items. Ownership expenses are available for acres owned and rented out for all landlords.

Partnership Ownership: Partnerships are business arrangements between two or more landlords. Where more than one individual owned a share in land, the distinction between partnership ownership and individual ownership was made based on how the respondent chose to characterize their ownership. In some instances, data for individual ownership are combined with partnership data.

Pastureland: Pastureland includes cropland pasture, woodland pasture, other pasture and rangeland and these types of land that are in government programs. These data are available for acres owned and rented to others.

Principal Landlord: This is the main non-operating landlord for individual and partnership ownerships. Demographic data for principal landlords are available separately by sex, race, age, and education.

Private Ownership: Private ownership identifies entities holding land as a private person or people. This type of arrangement includes multi-person ownership that is not recognized as a legal entity such as a trust, a corporation, or a legal partnership. This is a new ownership type for the 2024 TOTAL survey. These ownership data are only available for non-operating landlords.

Production Expenses: Production expenses are the sum of landlord's cost for inputs such as chemicals, fertilizer, feed and livestock, fuels, oils and lubricants, repairs and maintenance, insurance for the farm business, cash wages for labor, other operating expenses such as custom work, veterinary services, utilities, marketing and storage, transportation and leasing of machinery and vehicles, and other general expenses. In TOTAL, these are the sum of production expenses for owned land rented out. Production expenses are operating expenses minus ownership expenses.

Race/Ethnicity of Principal Landlord: Data was collected for principal landlords of American Indian/Alaska Native, Asian, Black or African American, Hispanic or Latino, Middle Eastern or North African, Native Hawaiian or Pacific Islander, and White race/ethnicity. The published data items are available for two groups of principal landlords- those who reported their race/ethnicity as White, and did not report another race/ethnicity, and those who reported their race/ethnicity as American Indian/Alaska Native, Asian, Black or African American, Hispanic or Latino, Middle Eastern or North African, Native Hawaiian or Pacific Islander, or reported two or more race/ethnicities.

Recreational and Other Rights: Recreational rights are the rights to use property for the purpose of recreation. Recreational rights include rights to build camps and access to camps and recreational areas and hunting rights. The lease or sale of recreational rights provide the two parties the assurance of limited use by specifying who is using the land for recreational activities. These acreage data are published together with other rights for land owned and rented out by non-operating landlords and all landowners.

Rent Received: Rent received is the sum of share and cash rent payments received on acres rented out. These data are available for operating and non-operating landlords.

Rights Leased: A landowner's property can be thought of as a bundle of rights, including the surface, subsurface, and the air above the property. These rights can be separated through lease. Data are available for oil and gas, mineral, solar, wind, recreational and other rights leased on acreage owned and rented out by non-operating landlords and all landowners. These rights all represent a portion of the land's total value.

Rights Sold: A landowner's property can be thought of as a bundle of rights, including the surface, subsurface, and the air above the property. These rights can be separated through sale. Data are available for oil and gas, mineral, development, and recreational and other rights sold on acreage owned and rented out by non-operating landlords and all land owners. These rights all represent a portion of the land's total value.

Royalty and Lease Payments: When gas, oil and minerals are produced from a leased property, the owner is usually paid a share of the production income. This money is known as a "royalty payment". The amount of the royalty payment is specified in the lease agreement. It can be a fixed amount per ton of minerals produced or a percentage of the production value. Other terms are also possible. Lease payments are paid to landowners who rent their land for wind turbines and solar panels. These payments are summarized in farm related income. See Farm Related Income.

Share Rental Agreement: A share rental agreement is a method of paying rent, where the owner receives a share of the crop, livestock (or product, such as milk or wool) as payment for use of land, buildings, equipment, livestock, etc. Acres rented out under this agreement are available for up to three tenants per landlord.

Share Rent: Share rent income received in 2024 is summarized together with cash rent as rent received. Share rent owed is considered an asset. See Share Rental Agreement and Rent Received.

Solar Rights Leased: Solar rights are the rights to use land to capture solar energy. A landowner's property can be thought of as a bundle of rights, including the surface, subsurface, and the air above the property. However, these rights can be separated through sale or lease. Solar rights typically allow the installation of one or more solar panels and access to the equipment via a road. Solar rights are most often leased to developers or utility companies. These acreage data are available separately for non-operating landlords and all landowners.

Tenant: The tenant is an individual or other entity who utilize the land rented from a landlord. Data are collected for up to three tenants per landlord. Data items by tenant include: how many acres were rented, the number of years rented, the type of rental arrangement, if the tenant is related to the landlord, if the tenant agreement is written, whether the rental arrangement can be adjusted, how often the rental agreement is renewed, and whether the tenant lives in the same county as the landlord. Information for Tenant 1, 2, and 3 are the based on the order the landlord reported the tenants and not necessarily in order by who rents the most acreage. Information on the length of time a landlord has rented to a tenant is divided into two different ways. Tenant 1 information is broken into three groups (0-4 years, 5-9 years, and 10 years or more). Tenant 2 and 3 information is broken into two groups (0-9 years and 10 years or more).

Trust: A trust is an entity created at the direction of an individual in which one or more persons (trustees) hold the individual's property subject to certain duties to use and protect it for the specified purposes and beneficiaries. Most trusts are created by the execution of a written Declaration of Trust which establishes the trust and – specifies the terms and conditions upon which it will be conducted. A trust may be created for the financial benefit of the person creating the trust, a surviving spouse or minor children, other specified beneficiaries, or a charitable purpose. Acreage for trusts is available for non-operating landlords.

Value of Land and Buildings: Market value of land and buildings refers to the amount the land and buildings would sell for under current market conditions. This value also includes the value of oil, gas and mineral rights, orchard trees, vineyards, nursery trees, and trees grown for wood crops. The value may include the value of subleased land for operating landlords. If the value of land and buildings was not reported, it was imputed using the methodology described previously. (See non-response). These data are available for acres rented out.

Wind Rights Leased: Wind rights are the rights to use land to capture wind energy from the air (wind) above. A landowner's property can be thought of as a bundle of rights, including the surface, subsurface, and the air above the property. However, these rights can be separated through sale or lease. Wind rights typically allow the installation of one or more wind turbines and access to the equipment via a road. Wind rights are most often leased to developers or utility companies. These acreage data are available separately for non-operating landlords and all landowners.

Will: A will is a legal instrument in which a person specifies how his/her estate will be managed and distributed after their death.

Purpose and Definitions: Under the guidance of the Statistical Policy Office of the Office of Management and Budget (OMB), the United States Department of Agriculture’s National Agricultural Statistics Service (NASS) provided data users with quality metrics for its published data series. The metrics tables below describe the performance data for the surveys contributing to the publication. The accuracy of data products may be evaluated through sampling and nonsampling errors. The coefficients of variation for each estimated item measure the error due to sampling as well as some nonsampling error. Non-sampling errors are also evaluated by survey response rates.

Sample size is the number of observations selected from the population to represent a characteristic of the population. Operations that did not have the item of interest or were out of business at the time of data collection have been excluded.

Response rate is the proportion of the sample that completed the survey. This calculation follows Guideline 3.2.2 of the Office of Management and Budget Standards and Guidelines for Statistical Surveys (Sept 2006).

Coefficient of variation is a measure of the relative amount of error associated with a sample estimate. Specifically, it is the standard error of a point estimate divided by that estimate, generally multiplied 100 times so that it can be reported as a percentage. This relative measure allows the reliability of a range of estimates to be compared. For example, the standard error is often larger for large population estimates than for small population estimates, but the large population estimates may have a smaller CV, indicating a more reliable estimate. Every estimate for the TOTAL project has a corresponding CV published in the [NASS QuickStats](#) database. NASS has identified the following index to use when evaluating coefficients of variation for TOTAL.

- Low Reliability Estimate. Coefficient of Variation (CV) 30 percent or higher. Caution should be used when using this estimate in any form. Please consult NASS for more information or guidance.
- Medium Reliability Estimate. Coefficient of Variation (CV) between 15 percent and 29.9 percent.
- High Reliability Estimate. Coefficient of Variation (CV) less than 15 percent.

Tenure, Ownership, and Transition of Agricultural Land Sample Size and Response Rate – Region and United States: 2024

Regions ¹	Sample size		Response rate	
	Operating (number)	Non-operating (number)	Operating (percent)	Non-operating (percent)
Atlantic	5,593	2,658	43.5	44.4
South	7,680	2,320	44.1	39.4
Midwest	11,013	5,101	49.1	52.7
Plains	9,338	5,279	40.6	49.0
West	6,658	1,935	48.4	49.7
United States	40,282	17,293	45.3	48.2

¹Regions defined in descriptions below.

Atlantic: Connecticut, Delaware, Kentucky, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, Rhode Island, Tennessee, Vermont, Virginia, West Virginia

South: Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, South Carolina

Midwest: Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, Wisconsin

Plains: Kansas, Nebraska, North Dakota, Oklahoma, South Dakota, Texas

West: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming