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Agricultural Land Values and Technology Use Survey

Interviewer's Manual

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Purpose

The purpose of this survey is to collect information on the values of farmland and buildings as well as the access and uses for modern technology among farmers. This information will be used to prepare estimates of state-level farmland values and technology adoption rates from data collected in this survey.

Information on the value of farmland:

1. Provides an indication of the largest farm asset, land, as part of the financial condition of the farm sector.
2. Is an indication of the need for credit, informing the design of credit programs to assist farmers.
3. Measures the year-to-year fluctuation of land values and net worth.
4. Is used by agricultural bankers, lenders, appraisers, and farm managers to evaluate farmland values.

Information on technology use:

1. Provides an estimated percentage of farmers that have access to the internet as well as to the types of internet access used.
2. Measures adoption trends of new technology in the agricultural sector such as precision agriculture and the use of computers, smartphones, and tablets.
3. Helps private and public sectors in promoting technology use in rural communities.

Background

Agricultural Land Values

Because there are only about 5,000 farms sold annually in the United States, and we are estimating the value of all land and buildings, sales alone are not a large enough of a sample; so, we are asking land operators for their best judgment as to the value of the land they operate.

Farmland values are one of the major indicators of the financial health of farmers. Farmland is in demand for both agricultural and non-agricultural uses. Land is a primary source of collateral in obtaining operating loans, so changes in farmland values alter the ability of farmers to purchase additional farmland and to finance operating costs.

A few respondents may have a difficult time providing land values information. Do NOT use the tax assessed or appraised value. The survey is designed to have respondents report the total market value of their land and buildings, as the questions states. Market value is the value at which the land and buildings could be sold. Read the introduction closely to be sure the respondent knows that the land values are referring to the entire farm.

Technology Use

While most civilians living in urban and sub-urban communities have access to the internet and technological innovations, the same cannot be said of farmers who live and work in remote rural communities. Both the private and public sector have an interest in introducing and expanding technology use to these rural communities due to the many advantages it can provide. In order for officials to provide sufficient and accessible internet for those in remote communities, we are asking operators about their current access to the internet, computers, and recent technology to track the adoption rate of technology.

Recent technological innovations can help farmers with their operations. From improved farming efficiency with precision agriculture to buying and selling materials and goods respectively on the internet, technological adoption is aimed at improving the lives of farmers regardless of where they live or operate.

Some respondents may have problems accurately reporting the types of technology they have. Keep in mind some people may be averse to technological advancements, and some may not understand the details or devices they use themselves. When reading the questionnaire, be prepared to provide examples of devices to help the respondent in accurately reporting what they have. If a respondent mentions “wireless” or “wi-fi” as a form of internet, ask if the wireless signal comes from inside their home and whether they have a satellite dish to narrow down the internet type. Many devices are wireless and “wireless” can be easily mistaken as the source.

Section 1: Acreage

Item 1: Total Acres Operated

Total acres include any land under the same land operating arrangement identified on the Face Page. Be sure the respondent understands that you are asking about all land operated under the operating arrangement (partnership, corporation, LLC, individual) identified on the Face Page.

If a member of a partnership, corporation, or organization also has individually operated land, this is considered two different land operating arrangements. Any land operated individually must not be included on a partnership, corporation, or organization questionnaire; any land operated in a partnership, corporation, or organization operation must not be included in an individual operation.

If the operator's residence is a part of the farming operation on the Face Page, remember to include the operator's residence in the total acres operated.

Item 1a- Acres Owned

Include:

1. All land owned by the operation identified on the Face Page as of April 1.
2. Land owned by this operation but rented, leased, managed, or administered by others.
3. Land owned by the operator, spouse, or dependent children under title, purchase contract, homestead law, or as an heir or trustee of a divided estate.
4. Cropland, pasture, orchards, woods, waste, idle land, and land enrolled in government programs.
5. Land currently considered non-agricultural, but having potential to have livestock or crops in future years.
6. Land rented out on a fee-per-head or Animal Unit Month (AUM) basis.
 - a. This privately owned land must be reported by the landowner rather than the operator.

Exclude:

1. Separate parcels of non-agricultural land permanently withdrawn from agricultural use. This includes land in subdivisions and commercial buildings.

Item 1b- Acres Rented From Others

Renters might report only cropland acres rented and forget to include areas of woodland or wasteland in the rented parcel. This often happens if the rent is based on the acres of cropland. If the renter has the responsibility of looking out for the owner's interest on the woodland and wasteland, this acreage should be included as part of acres rented from others.

Include:

1. All land the operation identified on the Face Page rents from others as of April 1.
2. Land rented from others (private individuals, partnerships, corporations, and Federal, State or local governments) for which the operation:
 - a. Pays cash rent on a per acre basis.
 - b. Pays for the land with a share of the crop (either standing or harvested).
 - c. Uses rent-free.

Exclude:

1. Grazing land rented on a fee-per-head or Animal Unit Month (AUM) basis, including public lands the operation has grazing rights, sole use, or year-round use of.
2. Land operated by someone else where the operation's livestock are being fed under contract (such as a commercial feedlot).

Item 1c- Acres Rented to Others

Include land this operation owns or rents from others, that is rented or subleased to another operation as of January 1.

Include:

1. Land rented to others for cash, a share of the production, or other proceeds.
2. Pasture or grazing land rented to others on a per-acre basis.
3. Land this operation allows others to use rent-free.
4. Land managed for a fee or salary by someone else.
5. Privately owned land administered by a Public, Industrial, Or Grazing Association agency as part of a range grazing unit on a fee-per-head or Animal Unit Month (AUM) basis through exchange-of-use.

Exclude:

1. Land enrolled in a government program; Conservation Reserve Program (CRP), and other diverted lands.
2. Land worked by sharecroppers on this operation.
3. Land used by a son or daughter for 4-H or FFA projects when the parent's equipment or facilities are used.
4. Land used for a crop grown under contract, if the landowner furnished machinery or controls the seeding, growing, and harvest of the crop.

5. Land used for pasturing someone else's livestock when payment is made on a fee per-head or AUM basis.
6. Land used by the operation to feed livestock under contract for others, such as a custom feedlot.

Item 2- Total Acres Operated

Add acres owned (Item 1a) and rented from others (Item 1b). Subtract acres rented to others (Item 1c) and record the balance in the 900 Code Box (Item 2). Confirm this total with the respondent.

Section 2: Land Values

Total Market Value of Land and Buildings (Item 1)

Market value is the value on April 1 at which the land could be sold under current market conditions if allowed to remain on the market for a reasonable amount of time. This value should be for the most likely purpose the land would be sold, including non-agricultural uses such as residential or commercial development purposes. It is preferred that the respondent report specific dollar amounts for the land value questions. However, the respondent may only be able to provide a range of values, rather than a single value.

If the value range is narrow relative to values for the same type of land in the area, then the midpoint for the range is acceptable, because it would reflect a close approximation of the current market value.

Example 1: If the respondent reports a value of "between \$2,000 and \$3,000 dollars per acre," the midpoint (\$2,500) is a good approximation of the actual market value of the land. You should enter \$2,500 in the item box.

Example 2: If the land is in an area under high developmental pressure, and the respondent reports a range of "\$10,000 to \$15,000"; record \$12,500 in the item box.

If the respondent reports a very broad range, however, the midpoint of the range may not be a good approximation of the current market value. If the range is so broad that the midpoint may not reflect the current market value, you should probe for an explanation. The respondent may be reporting values based on different uses the land could be sold for. In this case, do not record the midpoint unless it can be established that this midpoint price could be obtained on the "current" market.

Example 3: If the respondent reports a range of "\$1,000 if the land were sold for farming, to \$10,000 if the land was sold to a developer", the midpoint (\$5,500) probably does not reflect the actual current market value of the land. Do not record \$5,500, unless it is likely this price could be obtained on the "current" market.

If the respondent does report a range of possible values based on different uses for which the land could be sold for, ask the respondent which use is the most likely the land could be sold for in the current market.

When it is impossible to determine a current market value based on reported ranges, record DK (Don't Know) next to the appropriate box or boxes and write notes to explain the situation.

Do not suggest answers to respondents. For example, do not prompt respondents with values reported by other respondents in the area. Do not use assessed value because it might not represent the market value.

Record the operator's best estimate of the Total Market Value of all Land and Buildings operated on April 1 in the "999" code box. The value reported should represent the value of the land, houses, barns and other buildings as if they were sold at the current market conditions. The real estate tax assessment value should not be used. Do not deduct real estate marketing charges from the operator's estimate.

Enter the value in total dollars. Do not record a value per acre. Often the value per acre does not adequately account for the impact that the value of houses and buildings can have on the total value.

If the operator is unable to report the total value, write DK (don't know) next to the cell and write notes to explain the situation

Land in Farms:

Include:

1. The operator's home, all houses for hired labor and houses occupied by partners or relatives.
2. All farm buildings, such as livestock/poultry facilities, barns, cribs, silos, equipment shops, grain bins, storage sheds, etc.
3. Permanent plantings in orchards, groves, vineyards, Christmas trees.
4. Include the value of water rights, mineral rights, grazing permits that go with the land, etc.
5. Permanently installed irrigation equipment and frost protection systems.

Exclude:

1. Processing facilities such as cotton gins, packing sheds, commercial elevator facilities, even if they are owned by and located on the operation.

Value Change Direction and Percent Change in Total Market Value of Land and Buildings (Items 1a and 1b)

Item 1a indicates if land increased, decreased, or did not change from the previous year. Item 1b indicates by what percent. First, try to get a response to the direction (increase, decrease, no change). The direction alone provides an important piece of information when comparing this year to last year. Check the appropriate direction box (item 518).

If an increase or decrease is checked, proceed by asking for the percent change in item 1b. The percent change is expected to be from 1 to 50. The percent change may be 50 or larger in special cases such as areas adjacent to commercial or residential developments where the value could double in one year.

Some examples of what you may get:

Respondent Response	Enumerator Action
8 percent increase over last year.	Check Increase (item 1a), Enter 8 (item 1b).
3 percent decrease from last year.	Check Decrease (item 1a), Enter 3 (item 1b).
No change from last year.	Check No Change (item 1a), Leave Percent Blank.

If the respondent is unable to report the percent, record DK (don't know).

Acres and Market Value per Acre: Cropland (All, Irrigated, Non-Irrigated), and Pasture (Items 2, 3 and/or 4)

You will be collecting the current market value of all cropland and permanent pasture located in this operation. This includes land reported in Section 1, whether rented or owned by the operation. Values for each type of land are necessary because values may be significantly different for different types of land. For example, cropland is normally valued higher than pastureland.

Do not ask for values for types of land that are not present on this operation. For instance, if the operation does not have any permanent pasture, proceed to the next item.

If the respondent reports the same value for all types of land (or unusual values, such as pasture that is worth more than cropland), verify the answers and make notes on the questionnaire to explain the situation. Unusually high or low values should also be documented with notes.

The reported land value for the different land types should exclude the value of dwellings and buildings. The value of capital improvements (fencing, drainage tiles, irrigation systems, etc.) that are part of the land and would be sold with the land should be included in the reported value of the land.

Acres and Market Value per Acre: Cropland (All, Irrigated, Non-Irrigated) (Items 2 and 2a and/or items 3 and 3a)

Depending on your State's questionnaire, you will obtain the applicable acres and average value per acre for either all cropland or irrigated and non-irrigated cropland.

Cropland Acres and Value per Acre – Cropland acres and value per acre should be included for all land used to grow field crops, vegetables or harvested for hay. Land that switches back and forth between cropland and pasture should be valued as cropland. Hay land, idle cropland and government program set aside cropland should be included when valuing cropland, and summing acres.

Non-irrigated vs. Irrigated (cropland) – States asking irrigated and non-irrigated cropland separately should only include cropland acres as defined. The value of specialized permanent crops (orchards, vineyards, groves, nursery stock, Christmas trees, etc.) should be recorded, as appropriate. The value of these permanent type crops such as orchards, groves, and vineyards, should include the value of the trees and vines because they are attached to the land and would be sold with the land. These types of permanent crops are usually worth more than other traditional cropland.

Non-irrigated cropland is cropland that receives moisture by natural means only, and does not have irrigation facilities and equipment such as wells, pumps, canals, ditches, reservoirs, lakes, tanks, ponds, rivers, streams or creeks; which are usually present or on nearby irrigated cropland acres.

Irrigated cropland is land that normally receives or has the potential to receive water by artificial means to supplement natural rainfall. Irrigated cropland may consist of both land that will or will not be irrigated during the current year, but still has the facilities and equipment to do so. Irrigation facilities and equipment such as wells, pumps, canals, ditches, reservoirs, lakes, tanks, ponds, rivers, streams or

creeks are usually present or on nearby acres. Irrigated cropland is normally worth more than land without irrigation potential or facilities.

If the respondent is unable to provide acres or an average value per acre for cropland, record DK (don't know) for the corresponding boxes (510, 410, 511, 411, 512, or 412, Code Box) and record notes to explain the situation.

Acres and Market Value per Acre: Pasture (Items 3 and 3a or Items 4 and 4a)

Permanent pasture, grazing or grassland - Record the acres and average value per acre for land that is normally grazed by livestock. Remember that pasture does not need to have livestock grazing on it on January 1 or during the current year in order to be valued as permanent pasture, grazing or grassland.

Exclude Cropland pasture; Cropland pasture should be included and valued as cropland (Item 2).

If the respondent is unable to provide acres or an average value per acre for pasture, record DK (don't know) for the 513 or 413 Code Box.

Acres within an American Indian Reservation (Item 5)

This is a screening question for those operating land within an American Indian reservation in Arizona, Colorado, Nevada, New Mexico, and Utah. This question was added to allow the respondent to be eligible for the technology use questions in section 3.

Section 3: Technology Use

This information will measure trends and changes in the use of technology in farm and ranch businesses.

Item 1: Precision Agriculture Practice Use

Examples of precision agriculture practices to manage crops and livestock includes global positioning (GPS) guidance systems, GPS yield monitoring and soil mapping, variable rate input applications, use of drones for scouting fields or monitoring livestock, electronic tagging, precision feeding and robotic milking. Regardless of how item 1 is answered, continue to item 2.

Item 2: Computer Use by Type

When conducting business for the farm or ranch, this question identifies any computers owned or used by the operator. If the operator lives at another location off-farm, the computers are counted if they are used in any way for the farm. This also includes any devices used by the operator or partners to access the internet on behalf of the farm. Regardless of how they answered item 2, continue item 3.

Item 3: Internet Access

When answering access to the internet the operator should include availability at both their residence and at the physical farm operation. If they answered “Yes” to this question, be sure they answered positively to item 2. If they did not, just ask how they accessed and insert their answer into item 2. If they answered “Yes” to item 3, proceed to item 4. If they answered “No” to item 3, then skip to Section 4.

Item 4: Internet Access by Type

Internet access is available in many formats. Answer all questions as they relate to the operator or partners. Record the type of internet access type used not listed in item 4e. If they mention “Wi-Fi” as an “other” option, ask if their Wi-Fi is accessible only at their home, and, if it is, whether they have a dish or not. If it is accessible at home only and no dish is present, it is likely broadband but if a dish is present then it is likely Satellite. If the “Wi-Fi” is neither broadband nor satellite, then they are likely referring to a cellular plan. Keep their “other” responses otherwise if you can not deduce what type of internet they are trying to report or if it is a unique type of internet that did not need correction.

Item 5: Internet Use by Activity

Identify what type of business farmers or ranchers conducted online for the farm. If they responded with “No” for all three subitems, that is a legitimate response since they can do other things such as research and check weather reports for the benefit of the farm.

Item 6: Accessing National Agricultural Statistics Service (NASS) website

This identifies if the farmer or rancher accessed the NASS websites specifically for any reports or research information in the past 12 months.

Item 7: Accessing United States Department of Agriculture (USDA) website

This identifies if the farmer or rancher accessed the USDAs websites for any reports or research information in the past 12 months, excluding NASS. If they answered “YES” to the prior item 6, it does not mean they will answer “YES” to item 7. The question also asks if they conducted any form of

agricultural business with the USDA, which is a separate type of business interaction from the questions asked in item 5.

Item 8: Accessing Other Federal Government Websites

This identifies if the farmer or rancher accessed any Non-USDA Federal Government websites for any reason, which includes research, business, or general inquiries. The second question in item 8 is specifically looking for conducting any form of agricultural business interaction with the federal government that is not done through the USDA. If they answered “Yes” to 8b, then 8a is expected to be “Yes” as well. However, if 8a is “Yes”, it doesn’t necessarily mean that 8b has to be “Yes”.