



Summary of the Western Data Users Meeting



**Salt Lake City, UT
May 17, 2007**

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Water and Irrigation Issues as Related to the Farm and Ranch Irrigation Survey

The first half of the Data Users Meeting was focused on the upcoming Farm and Ranch Irrigation Survey (FRIS). This survey is conducted every five years as a follow-on from the Census of Agriculture. This session focused on an exchange of ideas regarding water and irrigation issues, and what the data needs are for the upcoming FRIS.

Bob Bass, Director of the Census and Survey Division in NASS, opened the meeting with the following comments.

The 2003 Farm and Ranch Irrigation Survey provides data that supplement the basic irrigation data collected from all farm and ranch operators in the 2002 Census of Agriculture. Irrigation data from this survey combined with 2002 census data provide one of the most complete and detailed profiles of irrigation in the United States.

As each of you are aware, the 2003 Farm and Ranch Irrigation survey collected data for on-farm irrigation practices in 2003. These data include acres irrigated by category of land use, acres and yields of irrigated and non-irrigated crops, quantity of water applied and method of application to selected crops, acres irrigated by type of water distribution system, and number of irrigation wells and pumps. Also, included are data for irrigation expenditures in 2003 for maintenance and repair of irrigation equipment and facilities; purchase of energy for on-farm pumping of irrigation water; investment in irrigation equipment, facilities, and land improvement; and cost of water received from off-farm water suppliers.

NASS sampled and surveyed slightly more than 25,000 operations for 2003 from farms and ranches reporting irrigated acres in the 2002 census, including American Indian reservations. Farms that reported horticultural crop sales of at least \$10,000 and all institutional, research, and experimental farms were excluded from the project. With this general overview in mind, I would like to open the floor for questions and comments. The 2003 questionnaire is included in your materials and will form a good basis to start our discussion of ways to make the 2009 Farm and Ranch Irrigation Survey more complete and meaningful to data users.

The following is a summary of the floor discussion regarding these issues.

Supplemental Irrigation – Can/should FRIS try to measure this? This method provides just enough water at critical times, but not the full crop need. It is very common in the East, not the West.

1. Called “deficit irrigation” – intentionally stress the plants. Moves back on yield curve as far as economic curve will allow and still earn a profit
2. Can be used in fruit industry: example in UT in 07 due to late frost and low water supplies
3. How good will FRIS (a snap-shot every 5-years) be at measuring this?

Productivity of Wells – The FRIS historically asks beginning depth of water, but not ending depth, so one can not measure fluctuation of ground water table, or determine if there might be a problem that might cause a change in water source to occur. Depth of bowl is the expected lowest water level, so maybe this is a measurement that would be more useful than beginning depth.

Pumping Costs – Depend on the depth of the bowls. If depth drops, then costs increase. How much is this problem occurring – what is the change? Someone claimed the depths in the west had dropped from 2,000 to 3,300 feet. Others claim that eventually they will go down to sea level.

Should FRIS Collect Information on Water Rights – Everyone agreed this was good information to have and will be increasingly important, but producers are probably NOT the right people from whom to get this information. Future pressure points will not be from producers but from developers, power companies, and municipalities. These water users will increasingly put pressure on future needs of water.

Off-Farm Water Sources – There are only a handful of off-farm water sources in Utah, just a few irrigation/canal companies, etc. Many producers get their water through the same few companies - it is redundant to ask each producer when they can all be reported by the company.

Transfer of Water Rights – Contentious issue which affects agriculture. Electric companies in the state of Washington will buy back water from producers at 5-10 times the ag rates just to keep the water in the river for power usage. Is there (will there be) a pattern of more and more dry land farming as agriculture uses less and less water in the West? As kick-off charges for more powerful pumps to pump at greater depths cost more and more, will fewer farmers be able to keep irrigating?

1. Should FRIS pose the question “Are you considering NOT irrigating, and why?”

Reference Date – Maybe 2008 will be a great water year – not representative of trends in irrigation. This is the problem with 5-year intervals between conducting the FRIS. **Are there irrigation data we could gather yearly?** Will “time out” as opposed to “use/lose” change water usage over time and affect decision to return to dry land farming? Data users might prefer a 5-year average for practices, costs, labor, rather than “in this year” values.

Sanitation Issues – This issue was discussed relative to the spinach safety issue that was blamed on water runoff from livestock areas. Some pollution point sources may be

outside the U.S. but affecting border states. Ultimately, the producer will probably not know, or wish to tell us, of location of nearest pollution point sources. Location of nearest the Concentrated Animal Feeding Operations (CAFO) should be identifiable from Geographic Information System (GIS) sources.

Testing water for biological pollutants – Will producers be required to do this eventually? Good Practices dictates that most advanced producers will be able to, especially if they sell into the fresh food market. However, most irrigation water (as in UT) goes on forage crops for which testing will not be required.

Re-used/Reclaimed Water – Would be good to know “What percent of your irrigation water is Reclaimed water?” but it is unclear how to measure it. One individual thinks that most water in West is used 4-5 times on average. Currently FRIS measures tailwater pits, but these are just another “source” of water for irrigators further down stream.

Energy Use – Want to add “Age of Pump” to Section 12, especially for Diesel pumps, as age directly affects energy costs and efficiencies.

Section 15 – Practices – see Supplemental irrigation above. Change the questions from “...in 2008” to “Do you normally do this...” or “Are you using these on a normal basis...?” See Reference Date above...

Section 18 – Improvements – There was much discussion about incentives (lack of) to conserve water.

1. Water is delivered on a “use or lose” basis
2. Laws prohibit increasing acreage on which irrigation water can be used (water spreading is illegal)
3. Institutional requirements limit efficiencies – only lately has there been talk of an opportunity for “time out”
4. To become efficient farmers are limited to cost sharing or switching crops
5. Ask the question “What is prohibiting you from becoming more efficient?”
But this is like Section 18, question 3.

Unintentional Benefits – Wildlife benefits and recreational benefits are side effects of current irrigational practices. Because of their growing value they may limit which future irrigation practices will be allowed (despite improved efficiencies for agriculture).

Water Rates – Be cautious of quality of applied water rates reported by producers. Most water is not metered, so farmer reports **expected** rates, not the **actual**.

Regional Terms – Be careful of using terms that are regional in nature.

1. Subsurface irrigation is not the same as underground injection systems
2. The term “sprinkling” now more and more refers only to high-impact pressure systems – all others should use specific terminology like spinners, pivots, etc. However, some in audience disagreed with this comment and said term “sprinklers” was still understood by most producers.

Regional Results – There is a great variation even within a State of many of the data items, so that state-wide averages are NOT meaningful or useful. For instance, in WA depth of wells can vary from West to East, on average, from 180 feet to over 500 feet. In UT, a few progressive farmers are doing things one way while large numbers of small hobbyists are doing things the “old fashioned” way. State-wide values are not representative. So, several data users asked if they can get access to data sets for different tabulations from the standard published ones. National Agricultural Statistics Service (NASS) discussed the data labs, in which approved research could be accommodated.

GIS Capabilities – A request was made for GIS capabilities that would allow our data to be released as GIS data layer. NASS was open to this possibility but discussed the disclosure issues that would have to be resolved for this type of data product.

General Data Users Interchange

The second part of the Data Users Meeting was opened up for discussion of any other topics regarding agricultural statistics. A panel of experts provided overviews of “what’s new” and/or of particular interest. Panelists included: Jeff Geuder (NASS), Shayle Shagam (WAOB), and Greg Pompelli (ERS).

The following is a summary of the floor discussion regarding these issues.

Ethanol: The expanding number of ethanol plants and the use of corn for producing ethanol makes the statistics on grain stocks even more important. Data users want additional and better information on the flow of grain. Tying back to earlier discussions, ethanol plants are creating new and increasing water demands. There was discussion about how ethanol plants will affect the water available for irrigation.

Speciality Crops: There needs to be more emphasis on these.

Corn: As acreage planted to corn increases, will NASS increase its corn objective yield sample size? NASS indicated that it will review sample sizes. Increased corn acreage has ramifications for other feed products.

Reliability of Data: Would like to see more information to help assess the reliability of various statistical estimates.

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