Getting the Facts and Figures for Farming

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USDA’s Agricultural Statistics Board meets monthly in Washington, DC, behind locked doors, unable to leave their guarded quarters, and with phones disconnected. The Board reviews the results of well-defined surveys of the Nation’s agricultural sector and prepares the official facts and figures that will influence America’s biggest business. Only authorized individuals may enter the Board’s area during a full-scale lockup, and no one leaves until the report is released at the set time of 3:00 p.m.

Tools for Decisions

The released estimates are tools to help farmers and ranchers work out their planting, breeding, feeding, storing, purchasing, and marketing plans. Exactly how the data may be used depends on the user and the marketing move planned. A farmer may decide to cut hog production or switch from corn to soybeans, or feed more cattle. A shipper may order more or fewer boxcars.

These official estimates are the meeting ground for producers and those they deal with across the agricultural network. Producers can’t operate independent from other market factors. They are affected by the transactions of commodity buyers and speculators, program adjustments by legislators, and decisions by chemical and equipment manufacturers, transportation firms, lending institutions, and so on. University, government, and private economists use the estimates to predict supply and demand conditions farmers are likely to encounter.

Without the Board’s evaluations of agriculture, farmers and others would have to rely on information furnished by companies and commodity interests with sufficient resources to generate their own estimates.

Neither Bull Nor Bear

Some farmers feel that these official crop and livestock reports depress market prices and that they would be better off without them. But realistically, it is the supply actually entering the market in relation to existing demand that controls the price. Studies have found that farm product prices are as likely to rise as fall following release of a USDA statistical report. Simply abandoning crop estimates could not help the producer. It is
impossible to conceal for long an unusually large or short potential supply because too many buyers would know it from their own private sources.

The Board's special security conditions are imposed because many agricultural commodities are heavily traded on the futures market, and anyone with advance USDA information would have an unfair advantage. No one outside the Board has access to the data before release, nor does anyone influence its decisions.

The Board annually issues several hundred reports covering 120 crops and 45 livestock and related products, plus summaries of prices, labor, farm numbers, and other topics. The Board—a part of USDA's National Agricultural Statistics Service (NASS)—also publishes local and regional information through 44 field offices serving all States. Together, these continuing series of reports help maintain an orderly association between the production and marketing elements of agriculture. The information is readily available to the public, being released at a scheduled date and time to assure equal access.

Data Sources

Sample surveys provide the information for most of the estimates. What is happening with the total group can be accurately inferred from contacts with a scientifically selected portion of the producers. This method yields reliable results and is far cheaper and quicker than attempting to make a complete count.

Survey contacts are made by mail, telephone, personal interviews, and in-the-field counts and measurements of growing crops. In some instances, farmers living in randomly selected land segments are asked for information about their crops, livestock, and other items. The total acreage in these segments is less than 1 percent of all the land area in the 48 contiguous States, but well-designed survey techniques assure that these segments represent the Nation's agriculture.

A significant point about these surveys is that producer participation is always voluntary. There are no penalties for non-cooperation, nor is anyone paid to report. The survey program has operated this way since Congress gave the Patent Office $1,000 in 1839 to "collect statistics and distribute seeds." Any information a farmer gives in a survey is strictly confidential. The survey responses are used only to form State and national estimates.

Much of the input for yield estimates of major crops comes from on-the-spot examination of crops in the field. In a recent season, sample plots were set up in 1,900 typical corn fields in 10 major corn-producing States, over 1,900 soybean fields in 15 States, over 2,500 winter wheat fields in 17 States, and 1,400 cotton fields in 6 States.

The sample units are quite small; for corn, a two-row section 15 feet long; for wheat, three drill rows 21.6 inches long; for
soybeans, a two-row section 3 feet long; and for cotton, a double row section 10 feet long. Monthly during the growing season, field workers visit the units to count and measure plants and immature fruit. These measurements are translated into yield forecasts by mathematical models. At maturity, the crop in the sample plots is carefully harvested and sent to a laboratory for weighing and moisture determination.

From Soup to Nuts

Crop reports estimate the acreages that farmers intend to plant in the coming season, the acres planted and harvested, production and disposition of the crop, and remaining stocks. Forecasts of yield for major crops are issued monthly during the growing season. Estimates of grain stored on farms come from survey responses by farmers. For grain stored off farms, data is collected from mills and elevators, oilseed processors, and USDA's Agricultural Stabilization and Conservation Service. The program for livestock, dairy, and poultry covers a wide variety of items ranging from eggs in incubators through ice cream manufacturing. Each month, the Board reports the prices received by farmers, and ratios commonly used to evaluate the purchasing power of farm commodities. Other reports deal with such items as cold storage holdings, mink, honey, floriculture, and the weather.

Why's and Wherefore's

Why do farmers, buyers, processors, and many others take the time and trouble to provide information on production, supplies, prices, and marketing plans? Check these questions and answers for the reasons.

How Do These Estimates Help?
Farm organizations use them for planning programs; so do legislators. Extension economists and private farm management consultants use them as a basis for advising farmers. Agricultural industries, farm supply and service companies, transportation and processing firms, bankers, and credit associations use them, too.

Advance indications of supplies also avoid severe price adjustments that might otherwise result at harvest-time when crops actually hit the market. Without the advance indications, the uncertainty itself would be enough to require additional precautions by food marketers and suppliers that would add considerably to their costs and yield lower prices for producers.

Do Farmers Give Honest Answers to Survey Questions?
Virtually all the farmers who cooperate on these surveys answer the questions the best they can. They recognize that the final estimates can be no better than the raw data they provide.
Aren't the Estimates Always Changing?
Forecasts of such things as farrowing plans and planting intentions certainly will change when the pigs are born or the crop is in the ground. Monthly crop yield forecasts reflect the effects of recent weather and other factors on production. The idea is to keep estimates current, not hold on to out-of-date information.

Why Must Some People Report So Often?
NASS surveys use a sample of just a few carefully selected producers representing all farmers and ranchers. The sample is changed periodically to include different land area and farmers. However, larger producers may be included more often because their operations have a greater impact on the total situation.

Detailing One Survey
Each June, NASS conducts a major survey where farmers are visited by field interviewers—enumerators—for a firsthand account of agricultural activities.

The midyear survey collects data on crop acreages, grain stocks, number of farms and land in farms, livestock inventories, pigs farrowed, economic data, and other agricultural items for State, regional, and national estimates.

Enumerators use aerial photographs to account precisely for land within the boundaries of the selected area segments. After locating each appropriate farmer, the enumerator explains the purpose and importance of the survey and asks a specific series of questions. All survey answers are carefully recorded. The completed questionnaires are sent to State offices where they are checked for completeness and consistency for use in making the estimates.

A number of quality controls in data collection maintain the integrity of the survey. These include careful selection and training of about 2,000 part-time enumerators, use of detailed instruction manuals, close field supervision, built-in questionnaire checks, comparison of reported acreages with those measured on the aerial photographs, and visual checks of some segments by supervisors.

Sampling errors for major agricultural items from the midyear survey average about 4 to 8 percent on a State basis, about 2 to 3 percent on a regional level, and about 1 to 2 percent for U.S. totals. A sampling error of 2 percent means that chances are about 19 out of 20 that the estimate is within 4 percent of the result that would be obtained if the same procedure were used to survey the entire population rather than just a sample.
Credibility and Law

A number is no better than its reputation. Users must have confidence in the timeliness and reliability of the data and in the integrity of the issuing organization. Farmers, business people, and Government officials make decisions involving billions of dollars a year on the basis of agricultural estimates.

The overriding need for integrity, reliability, and impartiality in agricultural estimates is reflected in the laws, regulations, and procedures that govern the work of NASS.

Five titles and 17 separate sections of the U.S. Code are specifically addressed to issuing crop and livestock estimates. They govern such major operations as security procedures, confidentiality of reported data, and the exact timing for release of major reports.

The law also specifies penalties that can be imposed upon employees. Any employee disclosing any data or crop information before official release, or engaging in trading on the commodity markets, is subject to a $10,000 fine and 10 years in prison. Intentionally issuing false information may mean a $5,000 fine and 5 years in prison.

Continuous Support for Data Collection

The public, through congressional appropriation, has seen fit to continuously support this Federal statistical program for 125 years. Almost as continuously, the data accuracy has been improved. While the accuracy of today’s estimates is considered to be generally adequate, there is a growing need for it to improve even more, according to both data users and providers. This is increasingly apparent as more and more marketing decisions are based on information provided in NASS reports. NASS will continue doing its best to meet such needs, while being as prudent as possible in spending taxpayers’ money.

A complete catalog of national crop, livestock, and price reports is available from the Agricultural Statistics Board, Room 5829-South, U.S. Department of Agriculture, Washington, D.C. 20250.

For information about individual State estimates, contact the appropriate State Statistical Office.

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Box 1071
Montgomery 36192

Arizona
201 E. Indianola
Suite 250
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Alaska
Box 799
Palmer 99645

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Box 3197
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California
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Box 4369
Helena 59604

Idaho
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Boise 83701

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Box 81069
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