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Report to Sen. George McGovern; by Elmer B. Staats, Comptroller General.

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The accuracy, reliability, and timeliness of the Department of Agriculture's Statistical Reporting Service (SRS) reports and their usefulness to farmers were evaluated. The SRS is responsible for preparing national and State forecasts and estimates pertaining to current and near-future supplies of agricultural products. The purpose of publishing such data is to help farmers make production and marketing decisions. Findings/Conclusions: Farmers were not using SRS reports because they were not aware of the reports' availability or because they believed that the reports were inaccurate, untimely, or irrelevant. This problem is the result of poor communications between SRS and the farmers. In addition, SRS's internal evaluation system does not ask for farmers' views on their information needs or on proposed SRS program modifications. The system lacks formal procedures which have limited its effectiveness. SRS's statistical practices could be improved by eliminating some of the subjective judgments presently used in developing estimates and forecasts and by using weather information in arriving at forecasts and estimates. The Bureau of the Census and SRS are attempting to maintain two separate mailing lists of the same farm population; such duplication is costly to the Government. Most of the obstacles to consolidation of the two functions stem from restrictions placed on Census information. Recommendations: The Secretary of Agriculture should: conduct a national campaign aimed at identifying farmers' data needs and reactions to the Service program modification and making farmers aware of the information available to them, stressing the usefulness of the information; make sure that farmers receive SRS information by improving distribution; formalize procedures for the SRS's internal evaluation system; and direct the research division to experiment with models using variables to increase the accuracy of early season forecasts and reduce the amount of subjective

judgment. The Secretary of Commerce should direct the Bureau of the Census to discontinue its farm operators mailing list and use the list developed by SRS. The Congress should amend legislation to provide the SRS with needed information. (RRS)

5946

REPORT BY THE

Comptroller General

OF THE UNITED STATES

RELEASED
4/19/78

The Statistical Reporting Service's Crop Reports Could Be Of More Use To Farmers

The Department of Agriculture's Statistical Reporting Service's primary mission is to disseminate reports which will assist farmers in making production and marketing decisions.

Farmers are not receiving the full benefit of the reports, however, due to an inadequate communication system. The Statistical Reporting Service and the Department of Commerce's Bureau of the Census list-building efforts should be consolidated to eliminate duplication and to reduce Federal expenditures.

GGD-78-29
APRIL 13, 1978

COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-137762.34

The Honorable George McGovern
United States Senate

Dear Senator McGovern:

This report covers the results of our work at the Department of Agriculture's Statistical Reporting Service, pursuant to your request. In addition, the report examines certain activities at the Bureau of the Census, which relate to the collection of agriculture statistics.

Our review disclosed that the Service needs to do more to (1) insure that farmers are receiving Service reports directly, (2) improve its relationship with the farmers, (3) strengthen its internal review system for evaluating usefulness of data, and (4) improve its statistical procedures for developing forecasts and estimates. In addition we believe Census should no longer maintain its list of farm operators and use the list being developed by the Service.

The Service generally agrees with the conclusions and recommendations in this report and has initiated steps to implement our recommendations. Unlike the Service the Department of Commerce's Office of Federal Statistical Policy and Standards does not agree with our conclusions as to how farmers should benefit from Service data. It states that Service reports focus on supply information (production and stocks), which provides only part of the economic picture farmers need for making their production and marketing decisions.

The Bureau of the Census does not agree with our recommendation that Census should discontinue maintaining a list of farm operators and use the Service list when it covers 95 percent of all farm operators. Census officials believe that the purposes for which the Service and Census maintain a list of farm operators are only partially compatible, the development of a farm directory by the Service is not consistent with the intent of establishing the Standard Statistical Establishment List, and the present maintenance of two separate mailing lists by Census and the Service does not result in a major duplication of effort. However, the

Office of Federal Statistical Policy and Standards generally agrees with our recommendation.

As arranged with your office, unless you announce its contents earlier, we plan no further distribution of this report until 30 days from the date of the report. At that time we will send copies to interested parties and make copies available to others upon request.

Sincerely yours,

Comptroller General
of the United States

REPORT OF THE
COMPTROLLER GENERAL
OF THE UNITED STATES

THE STATISTICAL REPORTING SERVICE'S CROP REPORTS COULD BE OF MORE USE TO FARMERS

D I G E S T

The Department of Agriculture's Statistical Reporting Service needs to improve its reporting services to better accomplish its primary mission of helping farmers make sound production and marketing decisions. Statistical procedures also need strengthening. In addition, GAO believes that the Statistical Reporting Service and the Department of Commerce's Bureau of the Census list-building efforts should be consolidated to eliminate duplication and reduce Federal expenditures.

SERVICE COMMUNICATION WITH FARMERS SHOULD BE IMPROVED

The Service should do more to inform the farmer of its many reports on agricultural products. Some of the farmers who received these reports found them to be useful in making production and marketing decisions. However, most farmers GAO interviewed were not using the reports either because they were not aware of their availability or because they believed them to be inaccurate, untimely, or irrelevant.

GAO believes the Service statistics, for most of the crops reviewed, are the best available. The Service should improve its information program to farmers by (1) explaining the methods used to collect the data, (2) explaining its usefulness, and (3) obtaining farmers' reactions to the reports.

STATISTICAL PROCEDURES CAN BE IMPROVED

Service estimates and forecasts can be improved by (1) reducing the amount of subjective judgment used in developing them and (2) using such variables as short-term weather information to improve their accuracy. To test the effectiveness of these procedures, GAO developed a simplified model for forecasting winter wheat

and soybean yield, incorporating short-term weather information. The model provided forecasts as accurate as the Service forecasts for early season estimates. Because of these results, the Service should experiment with and adopt, if appropriate, estimating and forecasting methods similar to those GAO tested.

NEED TO CONSOLIDATE CENSUS AND STATISTICAL REPORTING SERVICE LIST-BUILDING EFFORTS

A complete list of farm operators should be developed, consolidated, and maintained by the Service to eliminate duplication and reduce Federal spending. The Service farm directory would cover 95 percent of all farm operators and be more comprehensive than lists developed to date by Census. Use of the Service list will eliminate duplication as well as the cost presently incurred by Census to maintain its mailing list. This cost is estimated at $1.8 million for the 1978 Census of Agriculture. However, most of the obstacles to consolidation stem from statutory restrictions placed on Internal Revenue Service and Census information. While GAO recognizes Congress' intent and the need to keep an individual's information confidential, in this case duplication and unnecessary Government spending have resulted.

RECOMMENDATIONS

GAO recommends that the Congress:

--Amend Public Law 26 U.S.C. 6103 to allow the Internal Revenue Service to provide the Statistical Reporting Service with the following information for statistical purposes only: name and address of farmer, social security number, gross sales, gross profits, business location, number of farm laborers, and labor cost.

--Amend Section 8(b) of title 13 to allow Census to provide the following information to the Statistical Reporting Service from the Census of Agriculture for

statistical purposes only: name and address of farmer, social security number, gross sales, gross profits, business location, number of farm laborers, labor cost, type of livestock, type of crop grown, and size of farm.

GAO recommends that the Secretary of Agriculture:

--Conduct a national campaign aimed at (1) identifying farmers' data needs and reactions to the Service program modifications and (2) making farmers aware of the information available to them and the usefulness of such information, stressing its use for making production and marketing decisions.

--Make sure that farmers receive Service information directly by improving distribution.

--Formalize procedures for the Service's internal evaluation system.

--Direct the Service research division to experiment with models using variables, such as precipitation and temperature, to increase the accuracy of early season forecasts and reduce the amount of subjective judgment used in arriving at forecasts.

GAO recommends that the Secretary of Commerce direct the Bureau of the Census to discontinue maintaining its own farm operators mailing list and use the list presently being developed by the Service when it covers 95 percent of all farm operators.

AGENCY ACTIONS AND UNRESOLVED ISSUES

The Service agrees with the conclusions and recommendations in this report and has taken steps to implement the recommendations.

The Bureau of the Census does not agree that it should discontinue maintaining a list of farm operators and use the Service list. Census officials believe that the purposes for which the Service and Census maintain a list of farm operators are only partially compatible. They also believe the development of a farm directory by the Service is not consistent with the intent of establishing the Standard Statistical Establishment List and the present maintenance of two separate mailing lists does not result in major duplication of effort. GAO disagrees for reasons discussed in the report.

Contents

ABBREVIATIONS

GAO	General Accounting Office
IRS	Internal Revenue Service
SRS	Statistical Reporting Service

CHAPTER 1

INTRODUCTION

At the request of Senator George McGovern, we evaluated the reliability, accuracy, and timeliness of the Department of Agriculture's Statistical Reporting Service (SRS) reports and their usefulness to farmers. SRS was recently absorbed into the newly organized Economics, Statistics, and Cooperative Service of the Department of Agriculture. We also evaluated certain Bureau of the Census activities relating to collection and publication of agriculture statistics.

STATISTICAL REPORTING SERVICE

SRS is the principal Department of Agriculture agency responsible for the collection and publication of data on domestic agriculture. It prepares estimates on many aspects of the agricultural economy, including crops and livestock. SRS also issues numerous reports at varying frequencies.

SRS has a field network of 44 State statistical offices which serve all States. These offices conduct surveys and recommend crop and livestock estimates for the States to the Crop Reporting Board 1/ which develops and publishes official State and national estimates.

Federal appropriations finance the collection of national and State estimates for major commodities. SRS's appropriations for fiscal year 1978 are estimated at $37 million. SRS also has cooperative agreements with State departments of agriculture, State agencies, and universities. The States also contribute funds to support statistical collection activities.

1/ A board which convenes in Washington to analyze, interpret, and review data submitted by State offices in preparing the official estimates for each report.

The 1976 Federal and State expenditures for the States reviewed follow.

	Federal	State
Arkansas	$ 455,761	$ 26,000
Iowa	794,571	116,000
Minnesota	559,366	101,000
Oklahoma	459,971	16,000
Texas	1,065,008	337,000
Total	$3,334,677	$596,000

SRS crop reports provide estimates of acres farmers intend to plant; acres planted and harvested; and quantities produced, used, sold, and in storage. During the growing season, monthly yield and production forecasts are issued based on mail and telephone surveys of farmers and on measurements and observations conducted by SRS enumerators in sample fields.

BUREAU OF THE CENSUS

The Bureau of the Census' Agriculture Division, like SRS, collects agriculture statistics and publishes the results. However, with the exception of cotton ginning statistics, Census collects historical agriculture data from the Census of Agriculture, conducted every 5 years. Cotton ginning data is collected monthly from cotton ginners and published semi-monthly between August and March. Once a month the data is provided to SRS for making cotton production estimates and forecasts.

The Census of Agriculture provides the only comprehensive national agriculture data. This census, dating from the early 19th century, is a valuable series which can be used to describe the historical changes in the structure of agriculture. While the Census of Agriculture is useful for long-range evaluation, its frequency and publication schedule makes it of limited use for current decisionmaking.

SCOPE OF REVIEW

For the purposes of this review we concentrated primarily on SRS crop reports. We also reviewed certain activities at the Bureau of the Census, including the development of Census' farm operators mailing list as it compares to SRS's mailing list.

In carrying out the objectives of our review, we performed work at SRS and Census headquarters and conducted fieldwork at SRS State offices in Arkansas, Iowa, Minnesota, Oklahoma, and Texas. We contacted farmers in these States to determine their opinions of the usefulness of SRS data. We also contacted farm organizations, universities, various farm journals, and agriculture businesses to obtain their impressions of SRS reports.

CHAPTER 2

FARMERS NOT RECEIVING THE FULL BENEFIT OF SRS STATISTICS

SRS is responsible for preparing national and State forecasts and estimates pertaining to current and near-future supplies of agricultural products. The purpose of publishing such data is to help farmers make production and marketing decisions. With the decline of Government price supports for farm products, farmers now generally market their products on the open market with no guaranteed price. Consequently, the role of SRS in supplying farmers with information to assist their production and marketing decisions is becoming much more important.

We found that farmers were not using SRS reports because they (1) were not aware of the reports' availability or (2) believed the reports were inaccurate, untimely, or irrelevant. In our opinion this problem is the result of poor communication between SRS and the farmers. In addition, SRS's internal evaluation system, as implemented through its Program Planning Committee, does not ask for farmers' views on their information needs or on proposed SRS program modifications. The system also lacks formal procedures, which have limited its effectiveness.

SRS SHOULD IMPROVE ITS COMMUNICATIONS WITH FARMERS

We interviewed 148 randomly selected farmers in Kossuth County, Iowa; Polk County, Minnesota; Wachita County, Oklahoma; Lonoke County, Arkansas; and Deaf Smith County, Texas. Of these 148 farmers, 66, or 45 percent, receive or have received SRS reports. The majority of farmers interviewed, 77, or 52 percent, have never received SRS reports. The remaining five farmers did not respond to the question. Since SRS's primary target group is the farmer, a concerted effort should be made to see that farmers are aware of and have access to its reports.

Fifty-two percent of the farmers interviewed did not receive SRS reports because, for the most part, they were not aware that the reports were available. Further, several farmers were interested in receiving SRS reports, which are

available to anyone on request. SRS does not contact all farmers, however, to inform them of a report's availability. Instead SRS relies primarily on farm organizations, farm journals, and the news media to disseminate its information to farmers. We believe all farmers should know that they can directly obtain SRS reports because SRS data reported by the media or any other source could be incomplete and, therefore, of limited usefulness to farmers' decisionmaking.

The limited distribution of SRS reports to farmers is illustrated by comparing the number of farmers to the number of major crop reports mailed out in the five States included in our review.

	Number of farmers (note a)	Total reports mailed				
		January prospective plantings	April prospective plantings	June grain stocks	June acreage	August crop report
Minnesota	117,000	6,197	3,594	1,719	7,065	2,412
Iowa	133,000	4,561	7,326	5,674	11,674	7,369
Arkansas	68,000	895	1,186	483	2,540	1,262
Oklahoma	86,000	2,152	4,659	976	5,904	3,274
Texas	199,000	1,676	2,962	1,680	7,057	4,621

a/ SRS estimates.

As the table shows, the SRS reports did not reach a large portion of farmers in the States reviewed. The recipients of the reports mailed included not only farmers but nonfarmers, such as the news media, universities, and agribusinesses. SRS was not aware of, and we were unable to determine, the exact number of farmers on its mailing lists receiving reports. SRS is aware of this problem and has recently taken steps to insure that farmers receive its releases directly by:

--Allowing survey respondents to indicate on questionnaires if they wish to receive copies of the resulting report.

--Disseminating informational material, current reports, and lists of available reports at State fairs.

--Speaking before various agriculture groups.

--Publicizing the availability of a toll-free information service called "Farmers' Newsline," a recorded summary of daily national agricultural information.

Although SRS has taken some steps to get releases directly to the farmer, more could be done. SRS could, for example, experiment with preparation of a synopsis of available reports and post it in high visibility locations, such as the county Agricultural Stabilization and Conservation Service and Extension Service offices. Such a synopsis could increase farmers' awareness of available information. We believe directly providing farmers with reports is a more effective way of assuring SRS information is distributed where it would have the greatest benefit.

SOME FARMERS DO NOT FIND SRS DATA USEFUL TO THEIR NEEDS

Although SRS acknowledges the farmer as the primary target group for its crop and livestock reports, only 45 percent of the farmers interviewed receive or have received SRS reports. Some of these farmers found SRS reports useful; however, most believed SRS data to be inaccurate, untimely, and irrelevant. As a result many farmers have gone to other sources for information on which to base their production and marketing decisions, some of which may consist of or incorporate SRS data.

Seventy-one percent of all farmers interviewed who received or were shown SRS reports believed that the reports were of little use in their production and marketing decisions. Forty-four percent of the farmers reported that SRS reports were inaccurate and were, therefore, not useful.

Farmers questioned the accuracy of SRS reports because they

--suspect that, to their detriment, crop forecasts are manipulated to control agricultural product prices, while grain and commodity dealers benefit and

--believe farmers provide inaccurate data on SRS questionnaires.

Farmers noted that SRS information was not relevant to their needs because it reflected conditions at the State and national level and did not report on local crop conditions. Most farmers also noted that the data was released too late to benefit their production and marketing decisions.

Farm organization officials said that the information is useful to farmers but that the poor relationship between farmers and SRS prevents farmers from recognizing this use. Magazine editors did not concur with the farmers' opinions of the SRS releases, explaining that the farmers generally lack the necessary academic background to properly use the releases for planning their marketing strategy. The farmers interviewed, however, stated that they do use statistical information published by farm magazines and the news media. We believe the statistics prepared by SRS, for the crops reviewed, are the best available.

FARMERS ARE NOT RESPONDING TO SRS MAIL QUESTIONNAIRES

In gathering data for developing forecasts and estimates, SRS contacts farmers by means of enumerative surveys and mail surveys. The enumerative surveys are personal interviews with farmers to which SRS has been receiving good responses. However, SRS gathers the majority of its information through mail questionnaires to which farmers have not been responding satisfactorily. The following chart shows the response rate compared to SRS mail questionnaires for the States reviewed and the national average.

Table of Questionnaire Response Rates for Five Review States and Nationwide (FY 1974 to FY 1976)

States	January intentions	April intentions	Monthly farm report						
			May	June	July	Aug.	Sept.	Oct.	Nov.
	(percent)								
Arkansas:									
FY 76	29	30	40	44	41	N/A	43	38	39
FY 75	25	24	39	37	36	22	45	35	31
FY 74	12	20	30	30	38	35	30	29	31
Iowa:									
FY 76	29	32	47	56	60	N/A	57	54	54
FY 75	22	21	41	47	48	45	53	48	47
FY 74	16	10	38	42	43	54	50	48	49
Minnesota:									
FY 76	28	31	22	24	24	23	26	27	27
FY 75	38	38	20	23	21	21	29	27	31
FY 74	38	44	16	24	17	29	31	20	21
Oklahoma:									
FY 76	41	45	54	69	57	37	40	58	57
FY 75	29	28	28	32	30	34	32	29	33
FY 74	24	26	39	37	34	37	31	37	33
Texas:									
FY 76	32	34	35	42	35	44	43	41	41
FY 75	35	35	43	54	41	57	51	38	47
FY 74	N/A	40	36	31	40	40	38	38	44
All States:									
FY 76	32	35	33	35	35	34	34	35	35
FY 75	29	31	31	34	33	34	37	31	32
FY 74	25	27	37	31	31	33	34	34	33

Response rates noted on the chart are very low. We believe that the low response rate to SRS questionnaires results from lack of communication between SRS and the farmers.

Response rates for mail surveys are so low that SRS is concerned about the effect of such rates on the quality of the published data. Farmers are often not responding to the questionnaires because they see no benefit from the SRS releases. Therefore, we believe that SRS should institute a nationwide public relations campaign so farmers can understand the value of the releases in making their planning and marketing decisions.

INADEQUATE REVIEW SYSTEM FOR EVALUATING DATA

SRS's evaluation system is carried out by its Program Planning Committee. Committee objectives are to (1) revise statistical programs when the need arises, (2) develop and implement improved statistical and operating procedures, (3) deal with problems arising from statistical standards and policies, (4) find improved methods for transmitting data between Washington and field offices, and (5) find ways to improve operational efficiency. An additional objective should be the evaluation of the potential usefulness of the published data to its primary target group, the farmers. The committee has no formal operating procedures, so the effectiveness of SRS's internal evaluation system is limited.

Farmers' views not obtained regarding information needs or program modification proposals

Farmers have no direct input into SRS's internal evaluation system as implemented by the Program Planning Committee. The committee does not determine the usefulness of SRS reports to the farmers.

SRS discussion topics for the committee meetings were solicited primarily from SRS's division directors, branch chiefs, and statisticians in charge of field offices. Although SRS has occasionally gone to farm organizations to solicit topics, it has never gone directly to the farmers to solicit topics for discussion. Further, when the committee recommends proposed program modifications, such as adding and eliminating reports, SRS solicits views from SRS State offices, farm organizations, and the affected industry, but not the farmer. We believe that this procedure is inadequate because farmers' views are not solicited.

An SRS official stated that although farmers' reactions are not obtained directly, the committee is in constant contact with producer organizations to get their views on recommended program modifications. Another SRS official explained that SRS State offices are also contacted to obtain their reactions to proposed modifications. He stated that, in effect, these views are the farmers' views because the State offices are in constant contact with the farmers.

We contacted several of the major producer organizations to determine if SRS had solicited their views on proposed program modifications. They reported that SRS had contacted them. Views of these organizations, however, were generally those of Boards of Directors, thus once removed from the farmer. The producer organizations seldom, if ever, surveyed their memberships on proposed SRS modifications or their data needs. Further, we found no evidence that the SRS State offices we reviewed ever contacted farmers to obtain their data needs or their opinions on modifications.

Since SRS's primary target group is the farmer, we believe that the farmer should have direct input into topics to be discussed and proposed program modifications made by the Program Planning Committee. SRS could get farmer participation through its numerous surveys. Questions could be added to survey forms asking farmers what their data needs are and obtaining reactions to any recommendations that, in the committee's opinion, would have a significant impact on the type of information the farmer would be receiving. The committee chairman told us SRS does not seek farmers' input directly because the response rate to such questions would probably be low.

However, a December 1976 survey performed by SRS on a reimbursable basis for the Commodity Futures Trading Commission disputes the theory that farmers would not respond to questions relating to their data needs or their reactions to proposed program modifications. Questions relating to the futures market were added to SRS's 1976 December enumerative survey. These questions centered on buying, selling, and trading futures contracts; keeping informed of future prices; and reasons for not buying or selling futures contracts. Also included were questions on current contracts requiring future performance, which related to problems, knowledge, and use of such contracts. This question concerned the committee because members believed that adding such questions would increase the farmers' response burden and, as a

result, increase the likelihood that farmers would refuse to complete the survey. Committee members also believed that most farmers thought the futures market hurt, rather than helped, farm prices.

An SRS official stated that the results of the December enumerative survey, which was based on personal interviews, were very satisfactory. This view was especially true regarding the questions on the futures market survey. In fact, 94 percent of all farmers surveyed answered the futures market questions. This response was as good as other enumerative surveys conducted by SRS. Since this effort was successful, SRS should survey farmers' opinions on the usefulness of the data it reports.

SRS has contracted for a survey in North and South Dakota to identify what the farmers' data needs are in those States. The Dakota survey is a beginning; however, we believe that farmers nationwide should be surveyed.

SRS needs to formalize procedures for its internal evaluation system

The Program Planning Committee has no formal procedures under which to operate. This lack of formal procedures has led to (1) fewer meetings than required by the committee's charter, (2) inadequate files, and (3) late notification to State offices of meetings held to solicit their views.

The committee consists of nine members. Six permanent members and the chairman are from Washington, and three statisticians in charge of State field offices serve terms of 3 years. The chairman, however, has the authority to increase or decrease terms of the State statisticians.

Examples of what has occurred because of the committee's lack of formal operating procedures follow.

1. The committee's charter calls for quarterly meetings; however, it has been meeting only twice a year.

2. Before February 1977, committee files were practically nonexistent.

3. Notifications of upcoming committee meetings were not always sent, and suggestions were not always solicited.

Field offices were not notified of two of the last six committee meetings. Of the notifications sent, only one office was asked for suggested topics not tied to a specific area. Further, in our opinion, the notices sent were not mailed in a timely manner. The notification times ranged from 1 1/2 to 7 weeks before the meeting dates. We believe that State offices should be given at least 4 weeks to adequately respond to a notification.

The function of the Program Planning Committee, as an internal evaluator, is very important to the effective operation of SRS. Adoption of formalized procedures would increase the committee's effectiveness.

CONCLUSIONS

Although farmers are the primary target group for SRS reports, over half of the farmers interviewed were not using SRS reports primarily because they were unaware of their availability or because they believed the reports to be inaccurate, untimely, or irrelevant. Seventy-one percent of the farmers interviewed believed the reports were of little use.

We believe the statistics prepared by SRS, for the crops reviewed, are the best available. Also, based on the fact that the majority of farmers interviewed used statistics to assist them in their production and marketing decisions, we believe the reports would help farmers make more informed decisions.

Many of SRS's problems stem from its poor public image with farmers due, to a large extent, to its failure to communicate with farmers. For example, SRS's Program Planning Committee, responsible for implementing SRS's evaluation system, has not determined the usefulness of the reports to farmers. Farmers are never contacted to identify their data needs nor are their opinions solicited on proposed SRS program modifications. A part of the problem is that the Program Planning Committee lacks formal operating procedures, which limit the internal evaluation system's effectiveness.

SRS has attempted to improve its program, but more could be done. SRS needs to (1) contact farmers nationwide to identify their data needs, (2) make farmers aware of information available to them and how such data can aid

them, (3) provide its reports directly to farmers, and (4) formalize the Program Planning Committee's operating procedures to improve the internal evaluation system's effectiveness.

RECOMMENDATIONS TO THE SECRETARY OF AGRICULTURE

We recommend that the Secretary direct SRS to:

--Conduct a national campaign aimed at (1) identifying farmers' data needs and reactions to SRS program modifications and (2) making farmers aware of the information available to them and the usefulness of such information, stressing its utility for making production and marketing decisions.

--Insure that farmers receive SRS information directly, by improving the mechanism by which SRS distributes its reports.

--Formalize the procedures for its internal evaluation system.

AGENCY COMMENTS AND OUR EVALUATION

SRS generally agrees with the conclusions and recommendations in this chapter of the report. However, the Department of Commerce's Office of Federal Statistical Policy and Standards does not agree. This office believes we used incorrect logic on how farmers can and should benefit from agricultural statistics. It believes that SRS reports focus on supply information (production and stocks), which provides only part of the economic picture farmers need for making their production and marketing decisions. Further, it believes a more complete economic picture is not the function of SRS but of the Department of Agriculture's Economic Research Service in its situation and outlook forecasting. It also said that farmers should not be expected to find production and stock data useful. Finally, this office believes we should have addressed the various ways farmers benefit from having agricultural statistics available to agribusinesses and Government policymakers.

Our report does not say that farmers should only use SRS reports to make production and marketing decisions. However, SRS's primary mission is to supply farmers with data to assist them in making their production and marketing decisions. It accomplishes this goal through its monthly production reports in addition to other reports it issues. The purpose of these reports is to supply farmers with the information necessary to close the information gap between the farmer and agribusinesses so that farmers are not at a disadvantage when marketing their products. Therefore if farmers are not aware of or not receiving SRS reports, and if those who receive them believe they are inaccurate, untimely, and irrelevant, the agency is not effectively accomplishing its purposes. Whether farmers benefitted from having agricultural statistics which are available to agribusinesses and Government policymakers was not an objective of this study. However, farmers believe they do not benefit by having data of this nature available to these other organizations or individuals.

CHAPTER 3

SRS STATISTICAL PROCEDURES NEED STRENGTHENING

In evaluating the adequacy of SRS's statistical procedures, we reviewed its overall methods for developing crop statistics. We specifically reviewed procedures for its prospective plantings and crop yield reports. These reports were statistically sound. But SRS's statistical practices could be improved by (1) eliminating some of the subjective judgment presently used in developing estimates and forecasts and (2) using weather information in arriving at forecasts and estimates.

NEED TO ELIMINATE SOME OF THE SUBJECTIVE JUDGMENT USED BY SRS IN DEVELOPING ESTIMATES AND FORECASTS

Where possible, SRS should eliminate some of the subjective judgment in its forecasts and estimates. At the Minnesota and Oklahoma State Crop and Livestock Reporting Service offices, we reviewed procedures for deriving State recommendations for the prospective plantings report, the crop yield forecasts, and the monthly crop production report.

Prospective plantings reports

The prospective plantings reports are issued in January and April. The forecasts they contain are based on data from mail surveys of approximately 300,000 farmers nationwide.

State survey indications are computed from summaries of mail survey data obtained from farmers for each crop. Forecasts for estimates are then determined based on interpretations of survey indications for each State, utilizing regression charts which exhibit past relationships between survey data and the Crop Reporting Board's final estimates from previous years. State statisticians prepare the estimates by determining the best fit location on the chart corresponding to the current survey indication. The chart interpretation is done visually, even though the regression line is computed and plotted to assist interpretation. Points on the chart are identified by year so the recent years can be given more weight. SRS procedures note that this process minimizes the bias resulting from farmers' responses.

After subjective weights are applied to survey indications, a single acreage figure is derived in each State. SRS does not specify the weights to be given the various indications. As a result the various indications are not weighted uniformly throughout SRS. The State's figure is then submitted to the SRS headquarters in Washington.

Crop yield forecasts and monthly production reports

We also reviewed SRS procedures for determining crop yield forecasts. The crop yield forecast is incorporated into SRS's monthly production reports. SRS is required by law to issue a crop production report by the 12th day of each month. The forecast is based on summaries of data from farmers' responses to mail questionnaires and personal interviews.

The farm report mail questionnaire is sent monthly to approximately 75,000 farmers nationwide. The questionnaire asks farmers to report probable yield and crop conditions compared to normal growth. After the questionnaires are tabulated, survey indications are plotted on regression charts for a series of years.

Survey enumerators interview farm operators, making objective yield counts in a nationwide sample of approximately 3,200 corn fields, 2,500 cotton fields, 1,700 soybean fields, and 2,500 wheat fields. State statisticians summarize the data and derive and plot the indications on regression charts.

After subjective weights are applied to survey indications, a forecast of yield is derived by the statisticians in each State office. These forecasts, along with the indicators used to develop them, are forwarded to SRS headquarters in Washington.

The Crop Reporting Board

In Washington, the Crop Reporting Board, consisting of five or six commodity specialists, a chairman, vice chairman, secretary, and Chief, Data Services Branch, (1) reviews all State submissions, (2) analyzes regression charts, and (3) develops official State forecasts. The Board first sets the national figures, then the regional figures. If the Board's figures do not agree with State figures, the State figures are adjusted.

Once the Board has made final determinations of national, regional, and State forecasts for that period, reports are released to the public.

Where possible subjective judgment should be removed from estimates

Subjective judgment can greatly influence the final crop estimates. For example, where several indications were used as the basis for an estimate, subjective chart readings and arbitrary weights were assigned to each indication by State statisticians, resulting in the composite estimates. Each State statistician used his or her own logic for selecting the chart readings and assigning weights. In the same way, Board members used subjective judgment in deriving the final estimates.

We believe that, where possible, subjective judgment should be removed from the estimating process, and a more objective system for deriving composite estimates should be developed. The system should incorporate predetermined weights and adjustment factors objectively derived from previous years' experience.

WEATHER SHOULD BE A MORE SIGNIFICANT FACTOR IN DEVELOPING ESTIMATES AND FORECASTS

As mentioned previously, SRS yield forecasts are based on personal interviews, actual counts, measurements of plant characteristics in sample fields, and mail questionnaires. The yield forecast is satisfactory in the latter part of the growing season but is not accurate in the early portion of the season.

We believe SRS should experiment with (1) methods to improve the accuracy of early season yield forecasts and (2) procedures for reducing the subjective judgment used in forecast predictions. To determine whether such experimentation might be fruitful, we developed a simplified model which predicts yield by computing a composite yield forecast from SRS's objective yield survey and from a weather trend model.

SRS does not use a weather model in forecasting yield, but it does incorporate a weather variable into a regression model. This variable is cumulative rainfall data for specific months preceding the forecasts. Studies indicate, however, that weather data for shorter time periods and for a number of factors, such as precipitation and temperature, may be more effective than cumulative rainfall data in forecasting crop yield. Consequently, we developed simplified models which use monthly deviations from normal precipitation and temperature, as well as a trend variable, to predict crop yield. We developed models for winter wheat using data from 1949 through 1971 for Oklahoma and Texas. We also developed models for soybeans on the basis of data for the same period for Indiana and Illinois.

We then made an early season forecast using the trend weather model for each of the 5 years, 1972 through 1976. We also made a forecast for each of those years, using a regression equation similar to SRS's objective yield model. Next, we computed a composite forecast for each year from the forecasts generated by the two models just mentioned by using a weighting factor based on the explanatory power, referred to as the coefficient of determination, of the respective models. The results of our forecasts are compared with the SRS forecasts in the following tables.

Comparison of SRS's and Our Winter Wheat Forecasts for May Measured in Bushels Per Acre

Oklahoma

Year	Our May forecast	Deviation from Board's final estimate	Board's May forecast	Deviation from Board's final estimate	Board's final estimate of actual harvest	Our estimate as accurate
1972	22.05	-0.9[illegible]	20	-3	23	yes
1973	25.22	-4.78	28	-2	30	no
1974	22.46	+1.46	28	+7	21	yes
1975	25.51	+1.51	25	+1	24	no
1976	21.21	-2.79	21	-3	24	yes

Texas

1972	19.51	-2.49	21	-1	22	no
1973	25.12	-3.88	26	-3	29	no
1974	20.93	+4.93	21	+5	16	yes
1975	22.02	0.98	25	+2	23	yes
1976	21.73	-0.28	18	-4	22	yes

Comparison of SRS's and Our Soybean Forecasts for August Measured in Bushels per Acre

Illinois

Year	Our August forecast	Deviation from Board's final estimate	Board's August forecast	Deviation from Board's final estimate	Board's final estimate of actual harvest	Our estimate as accurate
1972	33.09	-1.41	33	-1.5	34.5	yes
1973	32.95	+1.45	32	+0.5	31.5	no
1974	28.91	+4.91	29	+5.0	24.0	yes
1975	35.09	-0.91	35	-1.0	36.0	yes
1976	35.25	+3.25	33	+1.0	32.0	no

Indiana

1972	29.86	+0.36	32	+2.5	29.5	yes
1973	31.64	+0.14	31	-0.5	31.5	yes
1974	31.46	+6.46	27	+2.0	25.0	no
1975	31.56	-1.94	32	-1.5	33.5	no
1976	33.35	+0.35	34	+1.0	33.0	yes

As the charts show, by using a relatively unsophisticated model, we were able to make forecasts at least as accurate as SRS forecasts.

CONCLUSIONS

Because each State statistician and Crop Reporting Board member has his or her own weighting pattern, there is the possibility of some inconsistency or variation in the SRS estimating process. Consequently, we believe that there is too much subjective judgment in this process.

We also believe the results obtained using a relatively unsophisticated trend/weather model to forecast crop yields were sufficiently encouraging to indicate that SRS should experiment with similar models to make crop yield forecasts.

Such experiments could potentially increase the accuracy of early season forecasts and reduce the subjective judgment now used in their development. We do not believe that all subjectivity can or should be eliminated from the process. A model can rarely be expected to produce a perfect forecast. However, we believe that once a model has been proven successful and is placed into operation, any results which deviate from the model's forecasts should be fully explained and documented.

RECOMMENDATION TO THE SECRETARY OF AGRICULTURE

We recommend that the Secretary of Agriculture direct SRS's research division to experiment with models using variables such as precipitation and temperature, to increase the accuracy of early season forecasts and reduce the amount of subjective judgment used in forecast predictions.

AGENCY COMMENTS AND OUR EVALUATION

SRS found our simplified model to be statistically sound. Also SRS agreed with the above recommendation. The only exception SRS has taken with our model is that if we round our results to whole numbers, our forecasts would be only as accurate as its forecasts. The purpose for developing our model was to demonstrate that there are more scientific forecasting methods than the one presently used. We believe that further research on similar methods will provide SRS with scientific tools for making more accurate early season forecasts. SRS agrees that it should conduct such research.

CHAPTER 4

NEED TO CONSOLIDATE CENSUS AND SRS LIST-BUILDING EFFORTS

The Bureau of the Census' Agriculture Division and the Statistical Reporting Service develop and maintain separate mailing lists of farm operators. Census rebuilds its list every 5 years when it conducts the Census of Agriculture. SRS is presently developing a comprehensive list of farm operators which it intends to maintain on a continuing basis. The cost of building and maintaining both lists results in unnecessary Government expenditures. Since SRS is developing a comprehensive list of farm operators, Census should use SRS's list when it is completed.

BOTH SRS AND CENSUS NEED ACCURATE LISTS OF FARMERS

The Census Agriculture Division and SRS have long been aware of the need for a comprehensive and accurate list of farm operators. The Agriculture Division needs such a list to survey the entire universe of farm operators. SRS also requires a comprehensive list to properly sample farm operators for its surveys. Recognizing this mutual need, both agencies have made several attempts over the years to jointly develop a comprehensive farm operators list. However, because of current legislation dealing with the confidentiality of information, their attempts have been unsuccessful. As a result, each agency has been developing and maintaining its own list of farm operators. These lists have been neither accurate nor comprehensive. Such a comprehensive list is important for SRS and the Agriculture Division to perform their functions effectively and efficiently.

PREVIOUS JOINT SRS/CENSUS LIST-BUILDING ATTEMPTS HAVE FAILED

Since 1969 SRS and Census have made several attempts to jointly develop a comprehensive list of farm operators. The major stumbling blocks to this effort have been (1) the nonaccessibility of Internal Revenue Service (IRS) information to SRS and (2) the confidentiality provisions in 13 U.S.C. sections 8 and 9 which prohibit the sharing of Census information with anyone outside Census.

Although Census has access to IRS information on farmers, it cannot share the information with SRS without IRS permission. In a 1969 joint farm directory agreement, both Census and SRS recognized that sharing IRS information could not take place without first obtaining IRS's permission. Executive Order 11697, issued in January 1973, permitted SRS to inspect IRS tax returns for statistical purposes only. This order became the subject of vigorous criticism because it was written so generally that it had the potential of allowing SRS to obtain information from farmers' tax returns. In response to mounting pressure from outside sources, this Executive order was rescinded and superseded by Executive Order 11709, issued in March 1973. There was still opposition to Executive Order 11709 because it did not specify what information SRS could or could not obtain from farmers' tax returns. In March 1974 this order was finally rescinded, and no further attempts have been made to give SRS authority to obtain information from farmers' tax returns.

The Tax Reform Act of 1976, effective January 1, 1977, revised section 6103(j) of the IRS code. The revision placed more stringent conditions on tax return accessibility and the disclosure of return information. However, section 6103 provides access for specific agencies to IRS information for statistical purposes only, with a provision that this information cannot be disclosed in any form directly or indirectly identifying the taxpayer.

From growing concern for personal privacy, the Congress passed the Privacy Act of 1974. The purpose of this legislation, simply stated, is to give the individual some control over the ways in which Federal executive branch agencies handle his or her personal information at every stage of the information process.

Another major stumbling block to the development of a joint farm directory has been 13 U.S.C. sections 8 and 9, which prohibit Census from sharing data with SRS. A solution to this problem would be the passage of the proposed industrial directory legislation. The legislation calls for a Standard Statistical Establishment List, maintained by Census, which would include data on various businesses and farm operators. The legislation also contains a provision giving all Government agencies access to the directory for statistical purposes only. The proposed legislation, however, has been in the drafting stage since 1970, and it has yet to be introduced.

As a result of SRS and Census inability to develop a joint farm directory, SRS took the initiative in 1976 to build its own comprehensive farm directory from information sources other than IRS and Census.

DEVELOPMENT AND MAINTENANCE OF TWO MAILING LISTS IS COSTLY

At present both SRS and Census are developing and maintaining separate mailing lists of farm operators. SRS estimates that it will spend $7.4 million through fiscal year 1978 to develop its farm directory. In addition to this initial cost, SRS estimates that it will cost $2.5 million annually to maintain the directory. The SRS Administrator estimates that its list, when completed, will include 95 percent of all farm operators. Census, on the other hand, estimates it will spend $1.8 million for the 1978 census to update its mailing list of farm operators. Experience has shown that the Census list of farm operators has not been as comprehensive as will the SRS list being developed. For the 1969 and 1974 Census of Agriculture, Census missed 18 and 16 percent, respectively, of all farm operators in the country. Because the SRS list is planned to be more comprehensive than any list Census has been able to develop to date, we believe Census should use the SRS list when developed and discontinue its list-building efforts. Using the SRS list would eliminate the duplication that presently exists between both agencies. Federal expenditures would also be reduced by eliminating the cost presently incurred by Census for list development.

Another factor that should be considered regarding mailing list costs is the additional mailing costs incurred from inaccurate mailing lists. An example of what can happen by not having an accurate list of farm operators is apparent from the 1974 Census of Agriculture. For this census, 4.3 million questionnaires were sent out, yet there were only an estimated 2.8 million farmers in the United States. After counting all the "thank you" letters and followup notes associated with the mailing, a total of 17 million pieces of mail were sent. We estimated that 5.8 million of these mailings were unnecessary. The unnecessary mailing cost Census an estimated $1 million in printing and mailing costs. Even with the massive mailing, Census estimates it missed 16 percent of all farm operators for the 1974 Census of Agriculture.

This example shows there is a real need for a comprehensive list of farm operators. Further, we believe there is no need for both agencies to maintain separate lists, especially when neither list has been comprehensive or accurate and when both resulted in unnecessary Federal expenditures. Since SRS is developing a comprehensive list of farm operators with a goal of covering 95 percent of all farm operators, we believe that when this list is complete and its coverage demonstrated, there will be no need for Census to continue its maintenance of an identical list.

Maintenance of the SRS farm directory will be costly and difficult without the use of certain IRS and Census information

SRS officials estimate that every year information on 20 to 25 percent of all farm operators changes, thus requiring updating its farm directory. The Chief of the Sample Survey and Research Branch stated that it was originally estimated that the directory would cost approximately $2.5 million a year to update. This estimate may be low, however, because it was based on the premise that SRS would have access to certain information from farmers' tax returns. Attempts by SRS to obtain this tax information have failed so the cost of farm directory maintenance will more than likely increase. To illustrate how important the access to IRS information is for maintenance purposes, in the 1969 Census of Agriculture, 89 percent of all farm operators on the Census mailing list were derived from IRS files.

Further, when the Census of Agriculture is conducted every 5 years, a great deal of statistical information is gathered but cannot be shared with SRS because of confidentiality restrictions in 13 U.S.C., sections 8 and 9. Certain information on individual farms would give SRS the ability to

--further refine its population for special surveys and

--update its farm directory covering those changes missed in the regular maintenance process.

We believe that providing SRS access to certain information from both IRS and Census files would not only reduce the cost associated with farm directory maintenance but would also contribute to its accuracy.

CONCLUSION

Census and SRS are attempting to maintain two separate mailing lists of the same farm population. Such duplication is costly to the Government. Most of the obstacles to consolidation stem from restrictions placed on IRS and Census information. While we recognize the Congress' intent in revising section 6103 of the IRS code and the need to keep individual tax return information confidential, in this case duplication and unnecessary Government spending have resulted. SRS has legitimate statistical needs for certain information from both these files. Appropriate legislation should be enacted to provide this information to SRS. Without access to these files, SRS's massive $7.4 million list-building effort may fall far short of its expectations.

Further, SRS has strict confidentiality regulations regarding the release of information collected through its survey and is presently in the process of having legislation introduced to strengthen the present regulations. Passage of this legislation and the existing disclosure provision of section 6103(j) pertaining to tax return information would protect an individual's privacy. Also, unlike previous Executive orders which gave SRS broad authority to inspect farmers' tax returns, we believe that if legislation is passed authorizing IRS to provide information to SRS, it should specifically list the information to be provided and limit its use to statistical purposes only.

We believe the SRS approach is the most impressive to date, but without proper access to Census and IRS files for annual updating, this effort may fall short of its intended goal. Also, SRS's goal of obtaining 95-percent coverage of all farm operators surpasses any list-building achievements of Census to date. Consequently, we see no need for two agencies to develop and maintain identical farm operator lists. We believe that when SRS has demonstrated its list includes 95 percent of all farm operators, Census should use the SRS list. Using the SRS list would eliminate unnecessary duplication between both agencies and reduce Federal spending by eliminating the cost presently incurred by Census in developing its list.

AGENCY COMMENTS AND OUR EVALUATION

The Department of Agriculture's Statistical Reporting Service and the Department of Commerce's Office of Federal Statistical Policy and Standards generally agree with the conclusions and recommendations in this chapter. However, the Department of Commerce's Bureau of the Census, although endorsing the concept of joint use of a list of farm-related addresses for statistical purposes, disagrees with our recommendation and contends that:

1) The purposes for which SRS and Census maintain a list of farm operators are only partially compatible.

2) The development of a farm directory by SRS is not consistent with the intent of establishing the Standard Statistical Establishment List.

3) Although the present maintenance of two separate mailing lists by Census and SRS causes some inefficiencies, there is no major duplication of effort.

Census states that the purposes for which SRS and Census maintain a list of farm operators are only partially compatible because the definition of a farm operator differs for both agencies. Census states that the SRS farm definition excludes farms with limited value of products needed for the Census of Agriculture. Census believes therefore that the SRS list would have to be supplemented for the Census of Agriculture, which would not be justified, on an annual basis, for SRS purposes.

To an extent this argument is valid. However, if SRS can attain its goal of 95-percent coverage of farm operators, we see no reason why Census needs to duplicate SRS's efforts. Further, because the SRS list may not cover farms of limited value, we believe that Census should supplement this list to meet its purposes. In addition, duplication exists because SRS does not have access to Census and IRS data; thus we recommend that the Congress amend the necessary laws to provide SRS access to this data. If the Congress acts on this recommendation, SRS can incorporate into its list data which Census feels is necessary for a proper Census of Agriculture, thus satisfying the needs of both agencies. According to SRS its farm directory can include any data Census feels it needs.

Census also argues that the development of a farm directory by SRS is not consistent with the intent of establishing the Standard Statistical Establishment List. Census states that in 1968 the Bureau of the Budget intended for Census to be the focal agency for the development, establishment, and operation of an industrial directory on behalf of Federal statistical agencies. We do not believe that our recommendation is inconsistent with the Bureau of the Budget's intent. The farm directory, as developed by SRS, is compatible and can be incorporated into the overall Standard Statistical Establishment List. SRS will be the most frequent user of the farm directory and is further along in its development than Census. Therefore we believe that with appropriate legislative changes, SRS should take the lead in the development of the farm directory and work with Census as the focal agency for the inclusion of the farm directory into the Standard Statistical Establishment List.

Census' last argument is that although maintaining two mailing lists causes some inefficiencies, there is no major duplication of effort. This argument is based on the premise that Census uses SRS's list as a source for maintaining its list. It is true that Census uses the SRS list for maintenance purposes, but in addition Census uses other sources which SRS also uses to develop its list. The only data Census uses that SRS does not use is IRS data and data Census collects while conducting the Census of Agriculture. Consequently, with the exception of the above two major sources, Census uses the same data sources as SRS, resulting in duplication and unnecessary Government expenditures.

In addition, if the Congress acts on our recommendations to provide SRS access to IRS and Census data, the sources used by both SRS and Census would be exactly the same.

RECOMMENDATIONS TO THE CONGRESS

We recommend that the Congress:

--Amend 26 U.S.C. 6103 to allow IRS to provide SRS the following information for statistical purposes only: name and address of farmer, social security number, gross sales, gross profits, business location, number of farm laborers, and labor cost.

--Amend Section 8(b) of Title 13 to allow Census to provide the following information to SRS from the Census of Agriculture for statistical purposes only: name and address of farmer, social security number, gross sales, gross profits, business location, number of farm laborers, labor cost, type of livestock, type of crop grown, and size of farm.

Suggested language for both amendments is included in appendix II.

RECOMMENDATIONS TO THE SECRETARY OF COMMERCE

We recommend that the Secretary of Commerce direct the Bureau of the Census to discontinue maintaining its own mailing list of farm operators and use the list presently being developed by SRS when it is shown to cover 95 percent of all farm operators.

APPENDIX I

United States Senate
COMMITTEE ON
AGRICULTURE AND FORESTRY
WASHINGTON, D.C. 20510

November 19, 1976

Dear Mr. Staats:

The diminished role of the Commodity Credit Corporation together with the dramatic effect of exports on the marketing of U. S. agricultural commodities, particularly grains and soybeans, has resulted in increased responsibilities being placed on agricultural producers and their organizations in marketing their production. This highlights the crucial importance of crop as well as livestock production and marketing data from the U. S. Department of Agriculture and other agencies in the Executive Branch.

Many of my constituents, and I think that I speak for the agricultural community generally, often raise questions regarding the reliability, the accuracy and the timeliness of these reports. Ideally, they should form the basis for farmer oriented plantings, animal population, and marketing procedures. Perhaps this is true but I have a growing suspicion that the reverse is a more accurate reflection. Recently one of the major farm publications did a substantial survey on this question and concluded that SRS data had little influence on the production and marketing procedures. I am aware of certain studies that the Office of Technology Assessment has made in this area at least with a global outlook, but I believe that an in-depth evaluation and possible recommendations for improvement of these services is warranted. My concern should in no way be construed as a criticism of the agencies or sub-agencies or of personnel at USDA currently engaged in these operations. My chief concern is the acceptability of this information by those who produce the food and fiber for the nation's consumption.

I am thus suggesting that the General Accounting Office initiate an evaluation should its officials feel that the suggestions I have made have merit.

Your cooperation will be greatly appreciated.

Sincerely,

George McGovern

Honorable Elmer B. Staats
Comptroller General of the United States
General Accounting Office
Washington, D. C. 20548

Suggested Revisions to 26 U.S.C., Section 6103 and 13 U.S.C., Section 8 (b)

We suggest 26 U.S.C. 6103 be amended to read as follows:

"Sec. 6103. CONFIDENTIALITY AND DISCLOSURE OF RETURNS AND RETURN INFORMATION

"(j) STATISTICAL USE

"(4) DEPARTMENT OF AGRICULTURE --

Upon request in writing by the Secretary of Agriculture, the Secretary shall furnish -- such returns, or return information reflected thereon, to officers and employees of the Statistical Reporting Service of the Department of Agriculture as the Secretary may prescribe by regulation for the purpose of, but only to the extent necessary in providing the Statistical Reporting Service with information for statistical purposes only. Such information would consist of: name and address of farmer, social security number, gross sales, gross profits, business location, number of farm laborers, and labor cost.

Subparagraph (4) of subsection (j) is changed to subparagraph (5)

We suggest 13 U.S.C. 8 (b) be amended to read as follows:

(b) Subject to the limitations contained in sections 6(c) and 9 of this title, the Secretary may furnish copies of tabulations and other statistical materials which do not disclose the information reported by, or on behalf of, any particular respondent, and may make special statistical compilations and surveys, for departments, agencies, and establishments of the Federal Government, the government of the District of Columbia, the government of any possession or area (including political subdivisions thereof) referred to in section 191 (a) of this title, State or local

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agencies, or other public and private persons and agencies, upon payment of the actual or estimated cost of such work. The Secretary may also provide the Statistical Reporting Service of the Department of Agriculture with farm information collected from the Census of Agriculture which may be used by the Statistical Reporting Service of the Department of Agriculture for statistical purposes only. Such information would consist of name and address of farmer, social security number, gross sales, gross profits, business location, number of farm laborers, labor cost, size of farm, type of crop grown, and type of livestock. In the case of nonprofit agencies or organizations, the Secretary may engage in joint statistical projects, the purposes of which are otherwise authorized by law, but only if the cost of such projects are shared equitably, as determined by the Secretary.

APPENDIX III

UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, D.C. 20233

OFFICE OF THE DIRECTOR

JAN 2 6 1978

Mr. Henry Eschwege
Director, Community and Economic
Development Division
United States General Accounting Office
Washington, D. C. 20548

Dear Mr. Eschwege:

The Bureau of the Census endorses the concept of joint use of lists of farm-related addresses for statistical purposes and concurs generally with proposals to amend title 13 for this and related needs. Draft legislation to accomplish these objectives is currently in the final stages of development, and is based on the interagency coordination of the needs of various agencies. Under the current restrictions of title 13, the most the Census Bureau can provide to the Statistical Reporting Service (SRS) is the 4-digit Standard Industrial Classification (SIC) code for any name the SRS provides that can be matched to our census records.

Amendments to the census code to permit SRS access to census lists and classification codes for the individual addresses may also require changes in other statutes to facilitate information sharing, and to ensure that agencies, including SRS, have adequate statutory safeguards to protect the confidentiality of identifiable data.

We endorse the concept of an industrial directory maintained by the Census Bureau, as indicated on page 32 of your draft report, and would welcome input to the directory resulting from annual maintenance work on farm-related lists by the SRS.

The Census Bureau does not concur with the statement in the draft report that the Statistical Reporting Service of the Department of Agriculture be solely responsible for developing and maintaining a Farm Directory and that Census discontinue its directory of farm operators.

The purposes for which the SRS and the Census Bureau maintain address lists are only partially compatible. Statistical Reporting Service requires for its own program support a list that includes all individuals who have activities related to agricultural production, coded by relationship. They intend to maintain in their list nonfarmers, such as ex-farmers and landlords, as well as farmers by type of product and various kinds of size-of-operation codes.

The Census Bureau's list of farm operators is an integral part of the Industrial Directory and is necessary to ensure that all statistical activities are included. On October 1, 1968, the Bureau of the Budget

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designated the Bureau of the Census as the focal agency for the development, establishment, and operation of an Industrial Directory on behalf of Federal statistical agencies (currently referred to as the Standard Statistical Establishment List--SSEL). Since that time, a viable list has been developed from the business-related return records of Internal Revenue Service (IRS), Social Security Administration (SSA), and ongoing Census Bureau programs.

The farm segment of the SSEL was assembled from existing Census records, the records of IRS and SSA, and records of other agencies in preparation for the 1974 Census of Agriculture. Since that time, the employer segment of the farm list has been updated continuously utilizing the company organization survey for multiunit activities and administrative records for the single-unit employer segment. Names, addresses, and the Employer Identification (EI) numbers of new businesses and farms are received monthly from IRS with classification of these EI numbers received from SSA usually within 6 months. The Census Bureau must continue to maintain the employer segment of the farm list in order to compile complete statistical profiles of county and State economies in its publication programs which bring together data for the business, industrial, and agricultural sectors. Only then can the essential characteristics of input and output in the national and local economy be truly understood.

The nonemployer segment of the farm list is updated in conjunction with each quinquennial census of agriculture. However, this segment of the universe of farm operators is substantially underrepresented in both the IRS farm returns and past SRS lists, and is the primary source of undercoverage in the census of agriculture. It is in large part for this reason that the Bureau of the Census has requested funds for an area sample in the 1978 Census of Agriculture to supplement the coverage of farm operators on the census mailing lists. Obviously, the better the coverage of the lists the smaller the area sample supplementation required. Because the SRS is concerned primarily with estimates of aggregate acreage and production for major crop and livestock items, at National and (limited) State levels, the coverage SRS achieves may be sufficient for its purposes. Moreover, the current situation is that the SRS farm universe excludes farms with limited value of product which are included in the census of agriculture. However, the census of agriculture is intended to provide data for all crops and livestock by county, and the importance of the nonemployer segment varies from county to county. Thus, it is doubtful if the completeness of the SRS lists would be satisfactory without additional supplementation for the quinquennial census of agriculture which would not be justified on an annual basis for the purposes of SRS. It should be noted that SRS similarly uses an area sample to supplement its mailing lists for its surveys which are on a probability sampling basis. Such supplementation for purposes of the census would necessarily be more extensive, and the present judgment is that expanding the completeness of the lists once in five years for the census is a cost-effective approach.

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The smallest farms, as measured by total value of product, do not contribute significantly to the nation's total agricultural activity. They are not of interest to SRS, although they are of concern to the Congress. As an illustration of the difference between the definition of a farm used in recent censuses of agriculture and that proposed by the Department of Agriculture, we have made estimates of the net undercount in the number of farms in the 1974 Census of Agriculture and of the underenumeration of total value of product due to missed farms, corresponding to both definitions. These are as follows:

Table A. Number of Farms
Estimated Percent Net Undercount in Number of Farms, 1974 Census of Agriculture*

	Census farm definition	Department of Agriculture Proposed farm definition
All farms	14.2	10.7
Farms by Total Value of Product:		
$2500 or more	4.7	4.7
Under $2500	32.8	25.9

* Estimates subject to sampling error.

Table B. Total Value of Product
Estimated Percent Underenumeration of Total Value of Product Due to Missed Farms, 1974 Census of Agriculture *

	Census farm definition	Department of Agriculture Proposed farm definition
All farms	2.9	2.9
Farms by Total Value of Product:		
$2500 or more	2.7	2.7
Under $2500	21.4	19.7

*Estimates subject to sampling error.

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As is apparent, the major problems in improving the coverage of the census of agriculture lie in the segment of the universe comprised of the smallest farms. These problems cannot feasibly be solved by the SRS approach or access to IRS data. For the 1982 Census of Agriculture we plan to integrate the census with the 1982 economic censuses through the SSEL and the data collected, to provide an improved data base for economic analysis of agriculture and its relations to other sectors of economic activity; and to improve the data base for the smallest farm operations by relating the farm data to the Bureau's demographic/economic censuses and surveys. These approaches are not feasible for SRS, and could not even be attempted without massive breaches in the confidentiality of the Bureau's demographic and economic censuses and surveys. To arbitrarily assign the list building for one segment of the universe to SRS, which has different data objectives than the Bureau and which does not serve the needs of the range of users of census data, will create very serious problems of integration with the Bureau's required activities for the entire universe of farm operations. These will inevitably result in a less useful census of agriculture.

The increasing emphasis on enterprise data and linkage of agriculture data with other economic data will require close coordination of lists between agriculture and other economic areas. The units identified for agriculture should be consistent with units for manufacturing, wholesaling, retailing, and services if valid information is to be provided concerning the production, processing, and distribution of agricultural products to consumers.

The development of a farm list by SRS is not consistent with the intent of establishing the SSEL, and came about, understandably, because of restrictions in both the Internal Revenue Code and in title 13. The main objective for establishing the SSEL is to improve significantly the comparability among important economic data series published by the various statistical agencies for ostensibly identical industries, sizes of operations, and geographic areas. The development of independent mailing lists results in duplication of efforts and misclassification of the same establishments because of independently assigned classification codes.

Until the statutory issues are resolved, it is essential for Census and SRS to proceed somewhat independently. Although we agree that this causes some inefficiencies, there is not a major duplication of efforts. For example, in the 1969 and 1974 censuses, without comprehensive lists, Census constructed its agriculture census mailing register from lists provided by a variety of government and private sources, including SRS.

For the 1978 census, we will use the SRS list for any States for which they have developed usable lists, supplemented by addresses from sources not used by them in their compilation. It should be noted that the

quality of the SRS mailing list is unknown at this time. SRS expects to achieve 95-percent coverage but has not yet completed for any State a list which can be evaluated. (The list for the first State was scheduled to be completed by late spring 1977.) The 95-percent figure may not be attainable, especially without Census and IRS records, as indicated by your draft report. The frame for a sample census or survey must be just as complete as for a 100-percent census to meet a specified mean square error criterion. Our proposal to use an area sample supplement in the 1978 Census is intended to yield a more complete frame for the census statistics than the census itself, thus trading off sampling error for a reduction in coverage bias.

SRS recognizes its interest in having each agriculture census be as complete as possible, and from the beginning of our consultation with them early in 1977, SRS spokespersons have indicated their desire for the census to include the SRS lists in the developing of a census master file. Their concern has been with the one-way nature of list transfers. Because of their need to conduct surveys of specialized agricultural products, their lists are being constructed to include a variety of codes descriptive of the agricultural operations conducted by each farmer. The census of agriculture not only includes major commodities, such as wheat, soybeans, cattle, and hogs, but also includes all the minor crops and livestock which are less amenable to being estimated by the use of sampling. In addition, the SIC's for agriculture (01, 02) cover several specialty operations which are usually not available on general farm lists and are not necessary to the SRS program in all States. It is doubtful that the SRS should be expected to expend the effort necessary to identify and maintain a directory of such operations.

There are two areas in the draft report that could be reworded to more accurately describe Census Bureau practices: (1) On page 3 of your draft report, the sentence, "The cotton ginning data is collected monthly between August and March from cotton ginners and is then provided to SRS for the purpose of making cotton production estimates and forecasts." should read, "The cotton ginning data are collected from cotton ginners and published semi-monthly between August and March. Once a month the data are provided to SRS for the purpose of making cotton production estimates and forecasts." (2) Although there is no question as to the necessity for using the IRS annual list in maintaining a list of agriculture-related addresses, the sentence on page 35 of the draft containing the phrase "89 percent" conveys a false impression of the importance of the IRS lists for maintenance purposes. The 1969 Census of Agriculture list was the first attempt at a comprehensive agriculture-related list constructed by any agency of the Government. The high rate of IRS addresses used was not because they were the only source of the addresses but because we chose to keep their addresses and discard the other sources of duplicates. For the 1974 Census of Agriculture, IRS lists supplied only 22 percent of the farm operator addresses, even if

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matching 1969 census addresses were ignored. Virtually all additional farm operator addresses that were on IRS lists were duplicated on one or more other source lists.

We appreciate the opportunity of commenting on the draft report. If you have any questions regarding our comments, it is suggested that you contact Orvin L. Wilhite, Chief, Agriculture Division, telephone 763-5230.

Sincerely,

MANUEL D. PLOTKIN
Director
Bureau of the Census

APPENDIX IV

UNITED STATES DEPARTMENT OF COMMERCE
Office of Federal Statistical Policy and Standards
Washington, D.C. 20230

February 17, 1978

Mr. Henry Eschwege
Director, Community and Economic
Development Division
General Accounting Office
Washington, D. C. 20548

Dear Mr. Eschwege:

We have reviewed the draft report "The Statistical Reporting Service's Crop Reports Are Not Used by Farmers." Our substantive comments are listed below for each of the three major chapters.

We did not get a copy when this draft report was originally distributed in early January. We requested a copy for review as soon as we became aware of its existence. We hope these comments are still timely enough to be considered in the final report.

Farmers Not Receiving the Full Benefit of SRS Statistics

The premise for this chapter is that farmers are the target group for SRS reports so farmers should have more input to what SRS publishes and should receive the reports on a widespread basis. In our opinion this is incorrect logic on how farmers can and should benefit from agricultural statistics.

Farmers are, and should be, the major group to benefit from the statistics. This is different than saying they should receive the reports because they are the target group for the reports. The SRS reports focus on supply information (production and stocks) which provides only part of the economic situation picture farmers need for making their production and marketing decisions. Constructing this more complete picture is the function of the Economic Research Service (ERS) in their situation and outlook (forecasting) work. Few farmers should be expected to find tables of production or stocks data or historical price data very useful as an independent set of economic data.

The second problem is that farmers told you they use other sources of information, including statistics from magazines and news media, but the draft report contains no information on where those other statistics originate. We believe you

would find statistical information and analysis published by farm magazines and news media starts with the commodity supply and use figures provided by SRS crop reports and other USDA commodity reports. Not closing this loop leaves a big void in the draft report and probably a significant under evaluation of SRS data. Whether or not this linkage exists should be carefully investigated as should the nature of "other sources" that farmers reported they use.

Finally, the report does not address the other ways farmers benefit from the data. Having such data available to managers in input and product markets so these markets can be reasonably stable and orderly is of benefit to farmers. The same is true of payoff from better informed government policy decision makers. The flow of agricultural statistics to these decision makers is of significant benefit to farmers without the farmer getting the report himself.

We do agree there should be more effort to get farmer's views on what information they need. However, that is a broader responsibility than just SRS and falls more on the shoulders of ERS and the Extension Service.

SRS Statistical Procedures Need Strengthening

We agree that progress should continue to be made in reducing reliance on subjective judgment. But you don't identify or discuss one of the major ways to reduce this problem. That is increased use of probability survey techniques including both careful construction and follow through on samples. This is the major justification for the cost of the list frame.

Need to Consolidate Census and SRS List Building Efforts

We generally agree with the recommendations in this chapter including giving SRS access to IRS and Census information. However, we suggest that the recommendation to the Secretary of Commerce should not exclude Census from all list maintenance work. The Bureau of the Census has a capability to identify the structural linkage of farmers that are part of multi-establishment firms. This important information should be collected and maintained by Census and shared with SRS.

Sincerely,

Gaylord Worden

Gaylord Worden
Deputy Director

APPENDIX V

U.S. DEPARTMENT OF AGRICULTURE
ECONOMICS, STATISTICS, and COOPERATIVES SERVICE
WASHINGTON, D.C. 20250

FEB 21 1978

SUBJECT: Draft GAO Report, "The Statistical Reporting Service's Crop Reports Are Not Used by Farmers"

TO: Henry Eschwege, Director
Community and Economic Development Division
GAO

We appreciate the opportunity to comment upon the GAO report pertaining to crop reports issued by the former SRS. The report contains several recommendations which have the potential for aiding us in better serving farmers and the agricultural public. However, we are concerned that some parts of the report may be misunderstood and thereby further erode our already tenuous relationships with voluntary crop reporters and others in farming.

First, we suggest the title of the report be amended to delete the pejorative, negative tone. Farmers do use our estimates, directly and indirectly. In 1977, we provided producers and others with 10.9 million copies of releases. Frequently, our data are picked up by the media, Extension Service, university, government and commodity analysts and included in publications, media reports and special articles for use by farmers with no credit to the Crop Reporting Board. Our data are the backbone of a very extensive, complex agricultural information system. We suggest the report be retitled as "Farmers Use of Crop Reports Issued by the Statistical Reporting Service".

We agree that farmers need timely, reliable information for production and marketing decisions. We have taken steps to provide more such information to them, directly and indirectly. In late 1977 we initiated a series of commodity newsletters to communicate crop and livestock data and economic interpretation of those data in a format and style for use in decisionmaking by farmers (examples attached). By the end of fiscal year 1978 we plan to have distributed 20-25 such newsletters directly to farmers each with a mailing list of 100,000 or more. In addition, we established the Farmers Newsline in 1977 enabling anyone within the 48 states to call toll-free for a summary of the latest crop, livestock and economic information (announcement attached). In January 1978 we received more than 38,000 calls from farmers and broadcasters with an estimated daily audience of over 2 million. We also use the USDA radio system to get information to local radio stations: many of our field people have direct access to rural broadcast outlets and make personal

deliveries of state reports to those outlets on the day of release (selected examples attached). Commodity supply/demand information is provided via computer hookup to State Extension personnel within minutes after its release in our Washington offices.

The commodity newsletters and Farmers Newsline are new programs. As we evaluate results of the programs we will modify them to achieve the greatest possible effectiveness in content and distribution. As part of the evaluation we will be seeking feedback from farmers on their information needs which might be supplied through these programs.

Your report contains several recommendations to make farmers more fully aware of the availability and value of our information for their decisionmaking. We believe our recently established programs cited above in addition to long established practices in the agency will assist in that respect. As you suggest, we will explore with the ASCS and ES means to make such information more widely available. However, if we were to greatly increase direct distribution of our information to farmers additional funds will be required for postage, supplies, processing and equipment.

We find no technical problems with the suggested weather model for forecasting winter wheat and soybean yields. However, the contention that the model results were more accurate than those of the Service three out of the five years is not correct statistically. The comparison used takes the most favorable stance possible in drawing this conclusion and therefore can't be considered objective. Our assertion is based on two points. It is standard procedure to round early season forecasts to the nearest whole bushel. Therefore, rounding could account for up to .5 of a bushel difference in the forecasts since GAO did no rounding. Most of the improvements cited for the GAO forecasts are smaller than this rounding error. If the GAO forecasts followed this rounding policy and used standard statistical rounding rules, the results for the 4 forecasts analyzed would be as follows:

	ESCS Series Forecast Compared to GAO Forecast Rounded		
	Better	Same	Not as Good
Oklahoma Wheat	2	1	2
Texas Wheat	2	1	2
Illinois Soybeans	2	3	0
Indiana Soybeans	1	2	2
Total	7	7	6

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We feel that more objective and reliable statistical measure of performance would be the calculation of Root Mean Square Error for the four forecasts compared with the final estimate. It considers the absolute deviations in forecasts for the five year period. This analysis would show the Service forecast for Illinois and Indiana soybeans superior to GAO, Texas wheat forecast equivalent and Oklahoma wheat inferior, results quite different from that stated in the report. We agree with the recommendation that more research should be directed to models of this type and have requested funds from the Congress to do so.

The recommendation made by GAO asking Congress to revise statutes permitting IRS and Census Bureau to release control of data to ESCS is definitely a step in the right direction. This fits well with our present list frame development efforts. The Department has already sent to Congress legislation that would give its statistical reports confidentiality protection similar to the Census Title 13 law. It provides the flexibility for the Department to share its statistical data with Census.

W. E. KIBLER
Acting Deputy Administrator
for Statistics

APPENDIX VI

PRINCIPAL OFFICIALS RESPONSIBLE FOR ADMINISTERING ACTIVITIES DISCUSSED IN THIS REPORT

	Tenure of office	
	From	To
DEPARTMENT OF AGRICULTURE		
SECRETARY OF AGRICULTURE:		
Bob Bergland	1977	Present
DIRECTOR OF ECONOMICS, POLICY ANALYSIS, AND BUDGET:		
Howard Hjort	1977	Present
ADMINISTRATOR STATISTICAL REPORTING SERVICE:		
William E. Kibler	1975	Present
DEPARTMENT OF COMMERCE		
SECRETARY OF COMMERCE:		
Juanita M. Kreps	1977	Present
CHIEF ECONOMIST:		
Courtenay M. Slater	1977	Present
DIRECTOR, BUREAU OF THE CENSUS:		
Manuel D. Plotkin	1977	Present