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# BY THE U.S. GENERAL ACCOUNTING OFFICE

## Report To The Honorable Berkley Bedell House Of Representatives

## Department Of Agriculture Is Using Improved Payment Procedures For Its 1984 Farm Programs

Farmers participating in the Department of Agriculture's price support programs receive payments for taking portions of their cropland out of production These programs stabilize farm commodity prices and farm incomes by controlling production In 1983 such payments were over $10 billion

This report responds to questions raised by Congressman Berkley Bedell on the procedures the Department uses in determining the amount of payment an individual farmer receives GAO's review in two states--Nebraska and Texas--shows that the Department could have improved its payment procedures in 1983 For example, in Nebraska, payments to corn farmers would have been from $19 4 million to $43 2 million less if the Department had based payment computations on the expected crop yield of the land actually taken out of production instead of on a farm's previous planting practices However, during GAO's review, the Department revised its procedures so that 1984 farm program payments will be based on expected crop yields of land actually taken out of production

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GAO/RCED-84-159
AUGUST 6, 1984

RESOURCES COMMUNITY
AND ECONOMIC DEVELOPMENT
DIVISION

B-215571

The Honorable Berkley Bedell
House of Representatives

Dear Mr. Bedell:

In your April 6, 1983, letter you raised several questions
about the Department of Agriculture's (USDA's) procedures for
determining crop yields for farmers participating in the 1983 farm
programs.

As you know, USDA uses farm programs to, among other things,
control production of certain crops by paying farmers not to
plant. The Agricultural Stabilization and Conservation Service
(ASCS) administers these programs within USDA. By controlling
production, ASCS attempts to stabilize prices and farm incomes.

Farmers who chose to participate in the 1983 farm programs
received payments from USDA for setting aside prescribed portions
of cropland. The amount of payment each farmer received was based
on three factors, (1) the number of acres set aside, (2) the esti-
mated crop yield for the farm, and (3) a USDA-specified payment
rate which varied by type of crop. Your interest focuses on one
of these factors--crop yields. Specifically, you were concerned
about how the crop yields were established for farmers with a mix
of both irrigated and nonirrigated or dry cropland.

To illustrate the basis for your concern, you cited a hypo-
thetical example of a corn farm with 200 acres of cropland--100
acres each of dry and irrigated cropland. Assuming that the
farmer can produce 100 bushels per acre on the dry cropland and
200 bushels per acre on the irrigated cropland, your understanding
was that any farm payments received by this farmer from USDA would
be based on an average yield per acre or, in this example, 150
bushels. On the basis of this understanding, your letter pointed
out that payments for acreage set aside as a result of this far-
mer's participation in the 1983 farm programs were then based on
the average yield of 150 bushels per acre even though the farmer

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may have set aside only dry land having a yield of 100 bushels per acre. Such a situation could result in a farmer receiving farm payments based on average crop yields that were higher than the crop yield on the land actually set aside.

Accordingly, you asked us to determine three things:

--whether USDA procedures allow a farmer to receive farm program payments based on the average yields of irrigated (high-yield) and nonirrigated (low-yield) land rather than on the yield of the land actually set aside;

--whether individual farmers received payments beyond the production capability of the land actually set aside, and, if so, could we provide some examples of where this has occurred; and,

--if farm payments do not reflect the actual yield capability of the land set aside, are there any cost-effective, administrative remedies available to USDA that would preclude such payments in the future?

## PROCEDURES USED BY USDA IN ESTABLISHING CROP YIELDS

We found that in 1983 USDA procedures allowed farmers to receive program payments based on average yields of irrigated and nonirrigated or dry land for some major crops--corn, wheat, and sorghum. In addition, USDA yield determination procedures for corn, wheat, and sorghum permitted farmers who had yields based only on irrigated land to set aside lower yielding dry land and receive payment on the basis of the higher yielding irrigated land. In both of these situations, payments for corn, wheat, and sorghum could have been made based on a higher crop yield than would have been expected on the land actually set aside. On balance, however, it should also be noted that the reverse could also have occurred. That is, payments could have been made based on a lower yield than would have been expected on the land actually set aside.

Regarding the other major crops, rice and upland cotton,[1] program payments were not computed using blended or average yields but were based on historical yields. Accordingly, we did not include rice and cotton in our detailed review.

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[1] Upland cotton is a particular variety of cotton. It is by far the most common variety grown in the United States.

EFFECTS OF PAYMENT PROCEDURES
ON 1983 PROGRAMS

We sampled farm yield determinations for corn, wheat, and
sorghum in two states having relatively large amounts of irrigated
acres--Nebraska and Texas. We found that, overall, farmers
received payments for corn, wheat, and sorghum based on average
and irrigated crop yields that would have been lower if the pay-
ments were based on the expected yield of the land actually set
aside. In Nebraska, for example, we project, based on a statis-
tically valid sample, that payments to corn farmers would have
been from $19.4 million to $43.2 million less if they had been
based on the expected yield of the land actually set aside. Our
work on wheat and sorghum in Texas confirmed that a similar con-
dition existed there also. However, since we did not take a
statistically valid sample of farms in Texas, we cannot provide
statewide projections. Further, it should be noted that, while
the results of our review show that overall USDA could have
lowered its payment amounts, we did find some instances where
payments to individual farmers would have been larger. This
occurred, for instance, when farmers chose to set aside higher
yielding irrigable land but got paid on the basis of lower
yielding dry land. We included these instances in our overall
figures.

ASCS HAS REVISED ITS PAYMENT
PROCEDURES FOR 1984

We found that there were some administrative remedies avail-
able to USDA and that, in fact, USDA has already taken remedial
action to prevent future payments on the basis of average or
irrigated yields.

In December 1983 USDA published revised procedures that no
longer permit yield determinations on the bases described in the
preceding paragraphs for 1984 farm programs. Under the new pro-
cedures, yield determinations--and consequently program payments
for set-aside land--are to be made based on the potential yield of
the cropland actually taken out of production.

According to state officials responsible for administering
the payment program, the revised procedures will make use of
existing data and procedures already available at the county level
so that no significant amount of additional work or costs are
involved. In view of this and the dollar significance of our
findings in Nebraska alone, we believe USDA's action will be
cost-effective.

Appendix I to this letter provides our detailed responses to
your specific questions, including some examples of payments based
on average and irrigated yields. It also provides more detailed

3

information on the basis for farm program payments, as well as prior studies done on this issue by USDA's Office of Inspector General (OIG).

We made our review at USDA headquarters in Washington, D.C., the ASCS commodity office in Kansas City, Missouri, at 21 county offices in Nebraska for corn, and 38 county offices in Texas for wheat and sorghum. In addition, we visited the state ASCS offices in Nebraska and Texas. At these locations we reviewed pertinent regulations, documents, and individual farm record data as well as applicable reports from the OIG. We also interviewed involved federal, state, and county ASCS officials. We selected Nebraska and Texas for our detailed review work because both are large agricultural states with many irrigated acres.

To assess the magnitude of the effects of ASCS payment procedures for the 1983 farm programs, we used a statistical sampling approach in Nebraska for corn. (App. II contains details of our sampling plan.) This approach permitted us to make a statewide projection of farm payments in Nebraska. In addition, to obtain an indication of whether wheat and sorghum payments were similarly affected, we selected a number of counties in Texas to determine whether procedures similar to those in Nebraska were used in determining the payment amounts.

Our review was done in accordance with generally accepted government auditing standards. Our detailed review work began in May 1983 and ended in January 1984.

AGENCY COMMENTS
AND OUR EVALUATION

In commenting on this report, the Administrator of ASCS noted that our report correctly reflects the recent changes made in computing payments involving dry and irrigated land. The Administrator pointed out, however, that any irrigation water that would otherwise have been used on set-aside land could be diverted to other land. According to the Deputy Director of the ASCS unit responsible for administering the program, the net effect of this would be that the yields on portions of a farm that would not otherwise have been irrigated could be increased and could offset some of the production control advantages gained on the set-aside land. The Deputy Director did not know how often such situations occur or the potential amounts that might be offset.
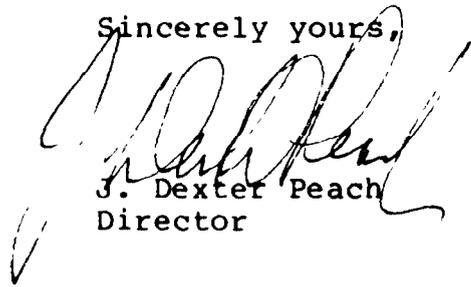
We recognize that the situation described by ASCS could occur under ASCS' 1984 payment procedures as well as under those procedures used in computing 1983 payments. ASCS procedures do not attempt to regulate the management practices used on land not set aside for program purposes, be it the irrigation or even fertilization of that land. Whether such practices are practical or

4

economical depends on the individual farmer's circumstances and the increased yield he or she might expect on that land. (See app. I, p. 22.)

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As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 7 days from its issue date. At that time, we will send copies to interested parties and make copies available to others upon request.

Sincerely yours,

J. Dexter Peach
Director

# Contents

## ABBREVIATIONS

ASCS       Agricultural Stabilization and
             Conservation Service

CCC        Commodity Credit Corporation

OIG        Office of Inspector General

PIK        Payment-in-Kind

USDA       U.S. Department of Agriculture

ANALYSIS OF PROCEDURES USED TO
ESTABLISH YIELDS FOR FARM PAYMENTS

HOW FARM PROGRAMS WORK

Under the Commodity Credit Corporation Charter Act (15 U.S.C. 714), the U.S. Department of Agriculture (USDA) administers various farm price support programs to stabilize agricultural commodity markets and to control agricultural surpluses. These programs, which are administered through the Agricultural Stabilization and Conservation Service (ASCS), provide for commodity loans and purchases as well as price support and production adjustment payments to farmers. Financing of commodity programs is accomplished through the Commodity Credit Corporation (CCC), a government entity for which ASCS provides operating personnel.

Under the authority of the Agricultural Act of 1949 (7 U.S.C. 1421), as amended by the Agriculture and Food Act of 1981 (7 U.S.C. 1444d-1 and 7 U.S.C. 1445b), the Secretary of Agriculture announced acreage reduction and paid land diversion programs for several 1983 crops. The major ones included in the announcement were wheat, corn, sorghum, rice, and the most popular variety of cotton, called upland cotton. Acreage reduction and paid land diversion programs are two aspects of an ASCS farm program aimed at inducing farmers to idle prescribed portions of their cropland. For participating in an acreage reduction program, a farmer does not receive direct compensation from ASCS. For participating in a paid land diversion program, however, a farmer gets a direct cash payment at a rate specified by USDA. But, these programs are designed so that, in order to get land diversion payments, a participating farmer must also set aside acreage under the acreage reduction program.

In order to participate in the 1983 farm program, farmers had to participate in the acreage reduction program. In doing so, farmers had to set aside a portion of their land without receiving any payment from ASCS. The amount of land a farmer had to set aside under this program varied by crop as follows:

1

### Land Set-aside Requirements for
### 1983 Acreage Reduction Program

| Crop | Acreage reduction program requirements (percent of base acres)[a] |
|---|---|
| Corn | 10 |
| Wheat | 15 |
| Sorghum | 10 |
| Rice | 15 |
| Cotton | 20 |

[a]The number of base acres for a specific farm is the number of acres ASCS permits or recognizes for program payment purposes. If a farmer chooses to plant less than the permitted number of acres, the acreage reduction requirement is adjusted to reflect the acreage actually planted.

In addition, a farmer wanting to participate in the 1983 farm program was also required to have set aside additional increments of land under the provision of the paid land diversion program. As stated earlier, this program was in addition to, and not instead of, any land set aside under the acreage reduction program. The amount of land that had to be set aside under the paid land diversion program also varied by crop as follows:

### Land Set-aside Requirements for
### 1983 Paid Land Diversion Program

| Crop | Paid land diversion requirements (percent of base acres) |
|---|---|
| Corn | 10 |
| Wheat | 5 |
| Sorghum | 10 |
| Rice | 5 |
| Cotton | 5 (optional) |

Under the paid land diversion program, a farmer received a cash payment from ASCS for acreage taken out of production up to the required percentage.

Even with the 1983 acreage reduction and paid land diversion programs, USDA recognized in late 1982 that the supply of corn, wheat, sorghum, rice, and cotton in 1983 would greatly exceed demand and have a depressing effect on commodity prices. Record production, coupled with a weak worldwide demand for these commodities, had created undesirable U.S. surpluses. Therefore, the Secretary of Agriculture announced the Payment-in-Kind (PIK) program whereby farmers would receive an amount of the commodity they otherwise would have grown for voluntarily further reducing their

plantings of wheat, corn, sorghum, upland cotton, and rice beyond
the reduced planting levels required in the earlier acreage reduc-
tion and paid land diversion programs. To be eligible to partici-
pate in PIK, farmers must first have participated in these earlier
programs.

Essentially, PIK was the third tier of a three-tiered program
aimed at inducing farmers to take land out of production. The
other two tiers were the acreage reduction and paid land diversion
programs. Like the earlier acreage reduction and paid land diver-
sion programs, farmers who chose to participate in the PIK program
were required to take additional increments of land out of
production.

Farmers who participate in PIK were paid by USDA in
commodities they would otherwise have grown. Under PIK, farmers
had two alternatives for deciding how much land to set aside.
First, a farmer could have chosen to set aside an additional 10 to
30 percent of the base acreage beyond what was already set aside
to meet the acreage reduction and paid land diversion require-
ments. The base acreage for a particular farm is the number of
acres ASCS recognizes for program payment purposes. For instance,
a corn farmer participating in the 1983 farm programs and planting
the maximum number of acres permitted by ASCS had to set aside 10
percent of his/her base acreage to meet the acreage reduction pro-
gram requirements and an additional 10 percent to meet the paid
diversion requirements. If this farmer also chose to participate
in the PIK program, an additional 10 to 30 percent of his/her base
acreage could have been set aside. In total the farmer in this
example could have set aside between 30 (10+10+10) and 50
(10+10+30) percent of his/her base acreage.

A second alternative available to PIK participants was to put
their whole base into the PIK program. Under this alternative,
instead of limiting the amount of acres put into the program to 10
to 30 percent, a farmer could put all of the base acreage into the
program. If a farmer chose to put an entire base into the PIK
program, the earlier acreage reduction program set-aside
requirements--under which a farmer received no payment--were
waived and the farmer received a payment for all of the acreage
put into the program. The sources of the payments were from PIK
and the paid land diversion programs. A brief example will help
to clarify how this worked. For a corn farmer with 100 base acres
who chose to place all of the base acres into the PIK program, the
payments would amount to a PIK payment on 90 acres and a cash
payment on the remaining 10 acres of the land. Even though all of
the acreage is in the PIK program, a cash payment is made because
there is a 10 percent land set-aside requirement for corn as part
of the paid land diversion program.

As a result of the 1983 farm programs, farmers took out of
production about 80 million acres which would normally have been
planted in wheat, corn, sorghum, rice, or upland cotton. These

3

80 million acres consisted of about 32 million acres idled under
acreage reduction and paid land diversion programs and about 48
million acres idled under the PIK program.

In November 3, 1983, testimony before the Subcommittee on
Select Revenue Measures of the House Committee on Ways and Means,
we estimated that the cost of commodities used to fulfill PIK pay-
ment obligations will amount to about $9.4 billion.  As of January
1984, USDA estimates that diversion payments to farmers under the
1983 program will amount to about $1.3 billion.  As previously
stated, no payments are associated with the acreage reduction
program.

## BASIS FOR PROGRAM PAYMENTS

Under USDA's policies and procedures, farmers participating
in the land diversion and PIK programs receive payments on the
basis of a prescribed formula.  The formula multiplies the payment
rate per unit of crop by the established yield per acre and then
by the number of acres taken out of production.  The method for
establishing each of the three components of the formula will be
discussed in more detail in the following paragraphs.

The payment rates for the 1983 crops under the diversion
program, where farmers receive a direct cash payment for taking
land out of production, were set as follows:

| Commodity | Per unit rate |
|-----------|---------------|
| Wheat | $2.70 per bushel |
| Corn | 1.50 per bushel |
| Sorghum | 1.50 per bushel |
| Rice | 0.027 per pound |
| Cotton | 0.25 per pound |

For example, a farmer was paid $2.70 for each bushel of wheat that
would have been grown on the acres set aside under the paid land
diversion program.

The payment rates for PIK, in which farmers received a
payment in commodities instead of cash for taking land out of
production, were set as a percentage of the commodities they
otherwise would have grown on the acres set aside under the
program.  The payment percentages varied by crop.  Specifically,
wheat farmers were paid 95 percent of the wheat they would
otherwise have grown on the acres set aside for the PIK program.
For the other crops--corn, sorghum, rice, and cotton--farmers were
paid 80 percent of what they otherwise would have grown.

Regarding the yield component of the payment formula, the
policies and procedures used by ASCS generally provide that the
yield for wheat, corn, and sorghum is that which was used in the
preceding crop year but adjusted to be "fair and equitable."  ASCS

county committees[1] make a fair and equitable determination after
considering a variety of factors like knowledge of past practices
on a particular farm.  For cotton and rice, the farm program pay-
ment yield is determined on the basis of the actual yields per
harvested acre for the 3 preceding years.  Adjustments in the
yield determinations for cotton and rice are to be made for
abnormal yields caused by natural disaster and other conditions
beyond the producer's control.

The third component of the formula deals with the number of
acres taken out of production or set aside.  For land to be eligi-
ble as set-aside land under the 1983 acreage reduction program,
the land withdrawn must have been planted in certain kinds of
crops called small grain or row crops in 2 of the previous 3
years, except for summer fallow farms.[2]  Small grains and row
crops, as defined by ASCS, include a large number of various types
of grains and grasses, including corn, wheat, sorghum, rice, and
cotton.  Under the summer fallow farm rules, the land set aside
for acreage reduction and land diversion programs had to have been
planted in approved small grains or row crops in one of the pre-
vious 2 years.  The land set aside to meet PIK program require-
ments must have been acreage that would have been planted to small
grains or row crops in 1983 had there been no 1983 programs.  Land
set aside under any of the three set-aside programs was to be
devoted to conservation uses approved by ASCS.

OBJECTIVES, SCOPE, AND METHODOLOGY

Your interest focused on ASCS' methods for determining the
crop yields used in computing the amount of payments farmers
participating in 1983 farm programs received.  Specifically, you
were concerned about how the crop yield figures were established
for farmers having a mix of both irrigated (high-yielding) and
nonirrigated or dry (lower yielding) cropland.

You cited a hypothetical example of a corn farm with 200
acres of cropland to illustrate the basis for your concern.  In
this example, the 200 acres included 100 acres of dry cropland and
100 acres of irrigated cropland.  Assuming that the farmer can
produce 100 bushels per acre on the dry cropland and 200 bushels
per acre on the irrigated cropland, your understanding was that
any farm payments received by this farmer from USDA would be based
on the average yield per acre or, in this example, 150 bushels.

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[1]County committees are responsible for overseeing the administra-
tion of USDA farm programs in their respective counties.  The
members of the committee are three locally elected farmers and
two alternates.  The ASCS representatives in a county work under
the direction of the county committee.

[2]Basically, a summer fallow farm is one where a portion of the
land is planted every other year.

On the basis of this understanding, your letter pointed out that payments for acreage set aside as a result of this farmer's participation in the 1983 farm programs were then based on the average yield of 150 bushels per acre even though the farmer may have set aside only dry land having a yield of 100 bushels per acre. Such a situation would result in a farmer receiving farm payments based on average crop yields that were higher than the crop yield on the land actually set aside.

In accordance with your request and subsequent discussions and agreements with your office, our objectives were to respond to the following questions:

--Do the procedures followed by ASCS include the use of an average yield in determining the yields used to compute diversion and PIK program payments for all major program crops?

--If average yields are included, could such procedures lead to individual farmers receiving program payments beyond the production capability of the (dry land) acres actually set aside? To what extent do such payments occur, and can we provide some examples of where this has occurred?

--If program payments have been or could be made which exceed production capability of the set-aside acreage, are administrative practices available to ASCS to remedy this situation? Would such administrative practices be cost-effective to implement?

We conducted our review at ASCS headquarters in Washington, D.C.; at the ASCS commodity office in Kansas City; and at ASCS state and county offices in Nebraska and Texas. We reviewed regulations, documents, and data pertaining to the paid land diversion and PIK programs. We interviewed various federal, state, and county ASCS officials. We also coordinated our work with the OIG and reviewed its applicable reports. Our detailed audit work began in May 1983, ended in January 1984, and was conducted in accordance with generally accepted government auditing standards.

We selected two states--Nebraska and Texas--for detailed analyses of ASCS' yield determination process. Both states are significant in agricultural terms and have a large number of acres of cropland. The two states combined had about 11.2 million acres, or 18.3 percent, of the total wheat, corn, and sorghum acreage included in the farm programs during 1982. Also, they had about 59.4 percent of the total irrigated acreage for wheat, corn, and sorghum during 1982.

We focused our review on three major crops (corn in Nebraska and wheat and sorghum in Texas) which were covered by both the land diversion and PIK programs. Other major crops under the land

diversion program but not included in our detailed analysis were
rice, cotton, barley, and oats.  Rice and cotton were excluded
because blended or average yields were not used in making the
yield determinations for those crops.  Yield determinations for
these two crops were based on historical data.  Two other crops
covered by farm programs, barley and oats, were not considered in
our review because they were not covered by the PIK program, and,
as shown below, production of these crops was not as significant
when compared to wheat, corn, and sorghum production.

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Comparison of Acres Planted
to Selected Crops on Farms
Participating in ASCS Farm Programs
(based on 1982 data)

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| Crop | Acres planted (in millions) |
|---|---|
| Wheat | 31.9 |
| Corn | 18.0 |
| Sorghum | 6.1 |
| Barley | 2.3 |
| Oats | 1.0 |

To assess the impact of yield determinations on ASCS payment
procedures for the 1983 land diversion and PIK programs for corn,
we used a statistical sampling approach in Nebraska.  Our sample
enabled us to project the statewide impact of the yield determina-
tion process.  This sampling approach required reviewing farm
program payment records for 382 farms in 21 counties and permitted
us to project the results to the entire State of Nebraska with 95
percent confidence.  In addition, to ascertain whether similar
procedures were followed for wheat and sorghum and whether pay-
ments were made based on the expected yields of the land actually
set aside, we reviewed the yield determination process in Texas.
However, our review in Texas did not permit statistical projection
to the entire state.

In designing a sample to estimate the effect of ASCS payment
computations on farmers participating in the 1983 land diversion
and PIK programs for corn in Nebraska, we stratified Nebraska
counties into five groups based on the amount of nonirrigated
corn and sorghum acres[3] planted in 1982.  The five groups
represent a cross-section of farm sizes.  From all of these
groups, we randomly selected 21 counties for detailed review.
Within each county, we selected a random sample of farms that had
(1) participated in USDA 1983 farm programs, (2) planted corn on
irrigated land at least once during the 4-year period 1979-82, and

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[3]Since corn and sorghum acreage was combined for ASCS purposes, we
  used both crops in determining the amount of nonirrigated acres
  planted in 1982.

(3) planted corn or sorghum on dry land at least once during the same 4-year period. We selected 382 farms using this process.

We used a 4-year period because the ASCS county records on individual farms were readily available for this period. ASCS county representatives with whom we spoke also agreed that 4 years was a reasonable period to use in getting an indication of past planting practices. Using the data on the 382 farms in 21 counties, we then estimated the total number of farms in the state which met the selection criteria that would permit us to project the results of our sample to the entire state. Appendix II explains how we projected our sampling results to the state as a whole.

To assess the yield determination procedures for wheat and sorghum, we selected 38 counties in Texas--20 for wheat and 18 for sorghum. Our county selection criteria was judgmental. However, we tried to select a number of counties that had a range of farm sizes, a number of farms that participated in the 1983 farm programs, and both dry and irrigated cropland. But, we did not review enough farms in Texas to give us a basis for making projections for the entire state. In the 38 counties included in our review in Texas, we reviewed the farm records of 77 wheat and 80 sorghum farms.

To determine the amount of payments being made, we used the prescribed payment rates set by USDA for the land diversion program. These are $2.70 per bushel of wheat and $1.50 per bushel of corn and sorghum. However, since the farmers were paid in commodities for the PIK program rather than in cash as for the land diversion program, we valued the PIK payments at the USDA's cost of the commodities used as PIK payments. Specifically, these were $2.84 per bushel for corn, $2.94 per bushel of sorghum, and $3.91 per bushel of wheat.[4]

## PROCEDURES USED IN ESTABLISHING
## YIELDS FOR PROGRAM PAYMENTS

We found that USDA's 1983 procedures for establishing yields and making program payments permitted payments to farmers that were higher than the expected yield on the land actually set aside to meet program requirements. This occurred in one of two ways. First, as your letter suggests, the use of average yields on farms having both irrigated and dry land can result in higher payments. And, secondly, such payments can be made to farmers whose previous yield determinations were based on irrigated land, but who met 1983 program requirements by setting aside lower yielding dry land.

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[4]The values of the PIK commodities are those previously developed by us and used in testimony before the House Subcommittee on Selected Revenue Measures, Committee on Ways and Means, on November 3, 1983. The testimony was given by Mr. Brian Crowley, Senior Associate Director, Resources and Economic Development Division, pp. 28 and 29.

In making farm program payments, USDA uses yield determinations made at about 3,000 ASCS county offices across the country. At the county level, the crop yields for wheat and feed grains--corn and sorghum--are established yearly by a process that uses the personal knowledge of county committee members and yield data provided by the respective ASCS state offices. The objective of the process is to establish yields that are representative of a farm's current production, assuming normal weather and continuation of past production practices.

As this process applies to farms with both irrigated and dry cropland, separate yields are assigned for each type of cropland if (1) yields are substantially increased because of irrigation, (2) irrigation is a normal and continuing practice done in most years, and (3) the number of acres that can be and are irrigated in a given year can be determined. For farm program payment purposes, yields for such farms are computed based on an average yield (referred to by ASCS as a blended yield). For example, if a farm had 100 acres of irrigated corn land producing 100 bushels per acre and 100 acres of dry corn land producing 60 bushels per acre, the farm would be assigned an average yield of 80 bushels per acre as follows:

| Number of acres | Types of cropland | Yield (in bushels/acre) | Total production (in bushels) |
|---|---|---|---|
| 100 | Irrigated | 100 | 10,000 |
| 100 | Dry | 60 | 6,000 |
| 200 | | | 16,000 |

### Average Yield Computation

16,000 bushels divided by 200 acres = an average yield of 80 bushels per acre.

The average yield would then be used to compute the amount of payment a farmer will receive for land taken out of production as shown in the following formula:

Yield per acre x number of acres removed from production x USDA payment rate = amount of payment for land taken out of production.

Payments based on average yields, however, may not reflect the yield on acreage actually set aside for the land diversion or PIK programs because farmers may set aside only dry acres with less yield potential. Therefore, for farms with average yields, a farmer could receive more under the farm payment programs than

9

what he/she would have received if the expected yield on the land actually set aside had been used to determine the yield. For instance, using the data in the previous hypothetical example, a farmer could have set aside 20 percent or 40 acres of dry cropland in order to meet 1983 program requirements and become eligible for program payments. In doing so, however, this farmer could have chosen to set aside acres having a yield of 60 bushels per acre yet receive payments from USDA based on an average yield of 80 bushels per acre. On the other hand, if payment had been based on the dry land yield of 60 bushels per acre instead of the average yield of 80 bushels per acre, the payment amount would have been lower.

Beyond the average yield issue, however, we found another related issue regarding USDA's payment procedures that merits concern. Payments based on higher than expected yields also resulted when farmers whose yields were based on one planting practice set aside land of a different practice. Specifically, this condition occurs where a farmer established only an irrigated yield but meets USDA 1983 program requirements by setting aside nonirrigated land. Under USDA's 1983 yield determination procedures, farmers following this practice would be paid on the basis of their irrigated, higher yielding cropland even though nonirrigated or lower yielding cropland was actually set aside.

For a corn farmer who irrigated 200 acres of corn in 1982, for example, 1983 program payments would have been based on the irrigated yield of 100 bushels per acre, even though the farmer may have set aside dry land with a 60 bushel per acre yield in 1983. The dry land set aside in 1983 would be land that was planted to crops other than corn in 1982. As long as the number of acres placed into the program in 1983 did not exceed 200, USDA's procedures permitted setting aside the dry acres when only irrigated acres had been planted with corn in 1982, even though the actual acres set aside in 1983 were not part of the 200 acres used for growing corn in 1982. Under these circumstances, the only corn crop a farmer could have placed into the 1983 program was that grown on the 200 acres less any acres required for set-aside use in 1983.

## EFFECTS OF ASCS PAYMENT PROCEDURES
## ON 1983 PROGRAMS

ASCS could have reduced its land diversion and PIK payments to farmers having both dry and irrigated land if its 1983 payment determinations were based on the expected yield of the land actually set aside. Using statistically valid sampling techniques, we estimate at a 95 percent confidence level that diversion and PIK corn payments in Nebraska in 1983 would have been reduced by between $19.4 million and $43.2 million if ASCS had used the expected yields of the land actually set aside in computing program payments. Further, in our review of wheat and sorghum payments in Texas, we found that similar conditions existed. Specifically,

farm program payments were not based on the yield potential of the
land actually set aside.  If they had been, payments would have
been reduced by $54,955 on the farms included in our review.
Since we did not use a statistically valid sample in Texas, our
results cannot be projected statewide.  While the results of our
review show that overall the ASCS could have lowered its payment
amounts, we did, however, find some instances where payments to
individual farmers would have been higher.  These instances have
been considered in the overall figures cited above--$19.4 million
to $43.2 million in Nebraska and $54,955 in Texas.

For 1983, ASCS' procedures required program payments to be
computed on the basis of what farmers did the last time they
planted the crop.  For example, if a wheat farmer planted on both
irrigated and dry acres in 1982, an average yield was used in 1983
for farm program purposes.  An alternative method of computing
program payments, however, bases payments on the type of land
actually set aside in 1983--dry or irrigated--regardless of what
was done in previous years.  Under this alternative method, pro-
gram payments in 1983 would have been based on the yield potential
of the land actually set aside.

In pricing the differences found under the two payment deter-
mination methods, we used the following values per bushel:

| Crop | USDA's Land diversion payment rate | Value of PIK payment |
|------|:----------------------------------:|:--------------------:|
| Corn | $1.50 | $2.84 |
| Sorghum | 1.50 | 2.94 |
| Wheat | 2.70 | 3.91 |

USDA established diversion payment rates.  And, as noted
previously in the methodology section of this report, we valued
the PIK payments based on USDA's costs for each commodity.

For each farm included in our sample, we analyzed how the
acres set aside for the 1983 programs were used during the period
1979-82.  We based our analysis on a review of the individual farm
records for each farm in our sample, including specific informa-
tion on the planting history of each farm over the 4-year period.
We determined whether the 1983 set-aside acres had been histori-
cally dry or irrigated.  Using this information, we ascertained
how many of the actual set aside acres for each farm were dry or
irrigated.  We then determined whether using dry yield, an
irrigated yield, or an average yield was most accurate as a basis
for payment in 1983 by comparing the planting practices--irrigated
or nonirrigated--on acres actually set aside in 1983 with histori-
cal use of the acres.  Our method of determining whether the acres

set aside should be classified as irrigated or dry was discussed
with the county ASCS officials during our visits.  Most of these
officials agreed with our methodology; the others did not offer
any comments.

The following examples demonstrate how the payments would
differ if ASCS computations were based on the expected yield of
the land actually set aside instead of on past planting practices.
However, before discussing the specific examples, the concept of
base acres needs to be clarified.  The base acre concept is
essential to understanding the following examples for two rea-
sons.  First, for farm program payment purposes the term base
acres identifies the number of acres ASCS permits a particular
farm to use as a basis for making program payments.  For instance,
any land set-aside requirements for farm programs are stated as a
percentage of a farm's base acres.  If a particular farm has a
base of 200 acres, plants all 200 acres in corn, and is required
to set aside 20 percent of its acreage in order to participate in
a farm program, the set-aside requirement would be 20 percent of
the 200 base acres, or 40 acres.  Secondly, for program payment
purposes, the number of acres set aside plus the number of acres a
farmer actually plants cannot exceed the number of base acres for
a particular crop.

Using the previous example to clarify the base acre concept,
the farmer could plant 160 acres of corn while having to set aside
40 acres.  While this hypothetical farmer could use more than the
200 base acres for farming, any additional acreage used would have
to be planted with a crop other than corn.  Moreover, any addi-
tional acreage that is used beyond the 200 base acres devoted to
corn can be used in meeting corn set-aside requirements in sub-
sequent years.  Consequently, if this hypothetical farmer planted
100 acres of sorghum in 1982 over and above the 200 corn acres,
the additional 100 acres could be used to meet corn set-aside
requirements in 1983, even if the additional 100 acres have lower
yields than any of the 200 acres previously planted to corn.  The
net effect of this process is that, under certain circumstances, a
farmer can use his/her least productive acreage to meet a given
year's set-aside requirements by switching the particular acres
set aside from year to year.

The following examples represent cases included in our review
and demonstrate how the payments would have differed if ASCS had
based its 1983 computations on the expected yield of the land ac-
tually set aside instead of on a farmer's past planting practices.

Example 1:  A Nebraska corn farm had 627.2 base acres of
corn.  The 1983 ASCS-established yields for this farm were 83
bushels of corn per acre for dry land and 127 bushels per
acre for irrigated land.  In 1983, the farm participated in
the PIK program to the fullest possible extent and set aside
627.2 acres since that was the number of acres in this far-
mer's base.  However, in 1982 this farmer planted 650.5 acres
of corn--23.3 acres more than the number of 1983 base acres.

12

On the basis of this farmer's 1982 planting practices, the
ASCS county office computed a yield for use in determining
the amount of farm program payment this farmer would receive
in 1983.  The ASCS established yield for 1983 was 111 bushels
per acre computed as follows:

### ASCS' Computation of Yield
### Based on 1982 Planting Practices

| Number of acres planted in 1982 | Type of acreage planted | Yield/acre (in bushels) | Total production (in bushels) |
|---|---|---|---|
| 243.1 | Dry | 83 | 20,177.3 |
| 407.4 | Irrigated | 127 | 51,739.8 |
| 650.5 | | | 71,917.1 |

### Average Yield Computation

71,917.1 bushels divided by 650.5 acres = 110.56 bushels/acre
(In our analysis we rounded this figure to 111 bushels/acre.)

We reviewed the planting history for the 627.2 acres set
aside in 1983 to determine whether the acres were dry, irrigated,
or a mix of both.  We found that 410.9 acres were historically dry
and 216.3 acres were historically irrigated.  Thus, if the ASCS
county office had based its 1983 yield determination on the land
actually set aside in 1983 instead of what the farmer did in 1982,
the yield used for program payment purposes would have been 98
instead of 111.  This is computed as follows:

### Computation of Yield
### Based on Land Actually Set Aside

| Number of acres set aside in 1983 | Type of acreage set aside | Yield/acre (in bushels) | Total production (in bushels) |
|---|---|---|---|
| 410.9 | Dry | 83 | 34,104.7 |
| 216.3 | Irrigated | 127 | 27,470.1 |
| 627.2 | | | 61,574.8 |

### Average Yield Computation

61,574.8 bushels divided by 627.2 acres = 98.2 bushels/acre
(In our analysis we rounded this figure to 98 bushels/acre.)

Using our calculated yield of 98 bushels/acre, we computed that this farmer's diversion and PIK payments for 1983 would have been lower by $1,222 and $14,381, respectively, as shown below.

| | Payment Program | | | |
|---|---|---|---|---|
| | Land diversion | | PIK | |
| | Using ASCS yield method | Using yield on land actually set aside in 1983 | Using ASCS yield method | Using yield on land actually set aside in 1983 |
| Yield computation: | | | | |
| Set aside acres | 62.7[a] | 62.7[a] | 564.5[b] | 564.5[b] |
| Payment yield (in bushels) | x111 | x98 | x111 | x98 |
| Total bushels | 6,960[e] | 6,145[e] | 62,660[e] | 55,321[e] |
| Payment computation: | | | | |
| Payment rate | $1.50 | $1.50 | .69(%)[c] | .69(%)[c] |
| PIK quantity (in bushels) | | | 43,235[d] | 38,171[d] |
| Value of PIK (per bushel) | | | $  2.84 | $  2.84 |
| Payments | 10,440[e] | $9,218[e] | $122,787[e] | $108,406[e] |
| Difference | $1,222 | | $14,381 | |

[a]This figure is derived by multiplying 627.2 acres by 0.10 (the required land diversion percentage for corn is 10 percent).

[b]Since this farmer placed all of the farm's corn base acres in the PIK program, this figure is obtained by multiplying 627.2 acres by 0.90 (the remainder of the farm's acre base after the required land diversion percentage is deducted). Under these circumstances the farmer is paid for every acre set aside according to the ASCS regulations.

[c]This percentage represents the PIK payment rate this particular farmer received from ASCS. The reason the payment rate is 69 percent and not 80 percent—the prescribed PIK payment rate for corn—is that this farmer placed the entire acreage base into the PIK program. Each farmer who chose this alternative had to submit a bid to ASCS specifying the amount of PIK he/she would be willing to accept for the acreage set aside. If accepted by ASCS, the bid became the payment rate. In this example, the farmer submitted a bid of 69 percent. Corn farmers who only put 10 to 30 percent of their land into the PIK program did not have to submit a bid. They received the prescribed payment rate of 80 percent.

[d]This figure is derived by multiplying the total bushels by the payment rate.

[e]These figures have been rounded to the nearest whole number.

Example 2:   A corn farmer in Nebraska with an acreage base of
130.6 acres participated in the 1983 farm program.  This
farmer set aside 10 percent of the base acres (13.1 acres)
for the paid land diversion program and 30 percent (39.2
acres) for PIK.  The farm had an ASCS-established irrigated
corn yield of 122 bushels per acre for 1983.  The farm had
no established corn yield for dry land because its previous
corn plantings were all on irrigated land.  Accordingly, ASCS
based its 1983 payments on a yield of 122 bushels per acre.

However, our review of the planting history of the farm over
the past 4 years showed that the acres actually set aside in
meeting 1983 farm program requirements were all dry acres.  As
pointed out earlier, this can occur when a farmer participating in
a farm program meets the land set-aside requirements with acreage
used for a crop other than corn in 1982.

Since this farm did not have an ASCS-established corn yield
for dry land, we used the county-wide yield of 71 bushels per acre
in determining the expected yield of the land actually set aside
and, thus, the basis for the 1983 program payment.  Using this
yield, we computed this farmer's land diversion and PIK payments
would have been lower by $1,002 and $4,545, respectively, as shown
below:

| | Payment Program | | | |
| | Land diversion | | PIK | |
| | Using ASCS yield method | Using yield on land actually set aside in 1983 | Using ASCS yield method | Using yield on land actually set aside in 1983 |
|---|---|---|---|---|
| **Yield computation:** | | | | |
| Set aside acres | 13.1[a] | 13.1[a] | 39.2[b] | 39.2[b] |
| Payment yield (in bushels) | x122 | x71 | x122 | x71 |
| Total bushels | 1,598[e] | 930[e] | 4,782[e] | 2,783[e] |
| **Payment computation:** | | | | |
| Payment rate | $1.50 | $1.50 | .80(%)[c] | .80(%)[c] |
| PIK quantity (in bushels) | | | 3,826[d] | 2,226[d] |
| Value of PIK (per bushel) | | | $ 2.84 | $ 2.84 |
| Payments | $2,397[e] | $1,395[e] | $10,866[e] | $6,321[e] |
| Difference | $1,002 | | $4,545 | |

[a]This figure is derived by multiplying the 130.6 base acres by 0.10 (the required land diversion percentage for corn).

[b]Since the farm set aside 30 percent of its base acreage for PIK, this figure is derived by multiplying 130.6 acres by 0.30.

[c]This percentage is the USDA prescribed payment rate for the PIK program for farmers who placed less than their total base acres into the program.

[d]This figure is derived by multiplying the total bushels times the payment rate.

[e]These figures are rounded to the nearest whole number.

Using statistical sampling techniques, we selected 382 corn farms in Nebraska for review. Of the 382 farms, 308 farms participated in the land diversion and/or PIK programs. On these farms, we found that, if the corn farmers were paid on the basis of the expected production capability of their idled land, the 1983 farm program payments would have been $602,267 lower. On the basis of the results of our sample, we project that 1983 land diversion and PIK payments made to corn farmers throughout Nebraska would have been about $31.3 million lower. The following table shows the projected effect for both land diversion and PIK

program payments and the standard error rate (plus or minus $11.9 million) at the 95 percent confidence level. Our projection of the total payment difference of $31.3 million can range from a low of $19.4 million ($31.3 million minus $11.9 million) to a high of $43.2 million ($31.3 million plus $11.9 million).

### Effect of ASCS Computation
### On Amount of Payments Made

| Program component | Payment difference between ASCS yields and expected yields | Standard error |
|---|---|---|
| | --------------(millions)--------------- | |
| Diversion | $ 6.7 | $± 2.2 |
| PIK | 24.6 | ± 9.8 |
| Combined | $31.3 | $±11.9 |

In our review of wheat and sorghum farms in Texas, our objective was to confirm whether conditions existed similar to those found in Nebraska. To meet this objective, we selected 157 farms in 38 counties that participated in the 1983 land diversion and/or PIK programs. Specifically, we selected 77 wheat farms and 80 sorghum farms for detailed review. The results of our analysis confirmed that conditions similar to those in Nebraska occurred in Texas as well. We found that the 1983 farm program payments ASCS made to our Texas sample of wheat and sorghum farmers would have been $54,955 lower if the payments had been based on the expected yield of the land actually set aside.

It should be noted, however, that while our review demonstrates that overall 1983 payments to corn, wheat, and sorghum farmers would have been lower, we did find some instances where payments to individual farmers would have been higher. In Nebraska, of the 308 farms in our sample that received program payments in 1983, 31 received payments that were less than they would have received if ASCS had used the expected yield of the land actually set aside. The payments to these 31 farmers amounted to $43,630 less than they would have received had the payments been based on the yields of acreage actually set aside. In Texas, 30 of the 157 farms in our sample received a total of $62,026 less than they would have based on the yields of acreage actually set aside. The totals discussed on the previous page already reflect these figures. The following example illustrates how these lower payments can occur.

Example 3:  A wheat farm in Texas had 115.8 base acres. The 1983 yields for this farm were 20 bushels per acre on dry land and 57 bushels per acre on irrigated land. This farmer

participated in both the paid diversion and PIK programs in 1983--30 percent of the base acres was set aside for the PIK program and 5 percent for the land diversion program. In 1982, this farmer only planted 93.1 acres of wheat, all of which were on dry land. Consequently, since 1983 payment computations were based on 1982 planting practices, the ASCS county office used the dry yield of 20 bushels per acre.

We reviewed the history of the acres actually set aside to fulfill the 1983 program requirements. Our review showed that the land set aside in 1983 had been planted with irrigated wheat or sorghum in each year from 1979 through 1981. In 1982, the land was predominatly planted with irrigated sorghum, although a small amount of dry wheat was also planted. So, on the basis of the acres actually set aside, we determined that an irrigated yield of 57 bushels per acre would have more accurately reflected the yield on the land actually set aside.

Using the irrigated yield, we computed that this farmer's 1983 diversion and PIK payments would have been $581 and $4,770 higher, respectively, as shown below.

| | Payment Program | | | |
|---|---|---|---|---|
| | Land diversion | | PIK | |
| | Using ASCS yield method | Using yield on land actually set aside in 1983 | Using ASCS yield method | Using yield on land actually set aside in 1983 |
| Yield computation: | | | | |
| Set aside acres | 5.8[a] | 5.8[a] | 34.7[b] | 34.7[b] |
| Payment yield (in bushels) | x20 | x57 | x20 | x57 |
| Total bushels | 116[e] | 331[e] | 694[e] | 1,978[e] |
| Payment computation | | | | |
| Payment rate | $2.70 | $2.70 | .95(%)[c] | .95(%)[c] |
| PIK quantity (in bushels) | | | 659[d] | 1,879[d] |
| Value of PIK (per bushel) | ---- | ---- | $ 3.91 | $ 3.91 |
| Payments | $ 313[e] | $ 894[e] | $2,577[e] | $7,347[e] |
| Difference | $581 | | $4,770 | |

[a]This figure is derived by multiplying the base acres, 115.8 by 0.05 (the required land diversion percentage for wheat).

[b]Since this farm set aside 30 percent of its base acreage for PIK, this figure is derived by multiplying 115.8 base acres by 0.30.

[c]This percentage is the USDA prescribed payment rate for the PIK wheat program.

[d]This figure is derived by multiplying the total bushels by the payment rate.

[e]These figures are rounded to the nearest whole number.


ASCS HAS REVISED ITS PAYMENT
PROCEDURES FOR 1984

On December 29, 1983, ASCS issued a revision to its state and county office operating procedures regarding payment computation provisions for the 1984 farm payment programs. The revision provides that the payments for 1984 will be based on the yield established for the land actually set aside to meet program requirements. For example, if a farmer with an established irrigated yield sets aside irrigable acres (as determined by the county), the payment yield would be the irrigated yield. If the same farmer, however, elects to set aside only dry cropland, the

payment yield will be based on the yield established for the dry
cropland. Where both irrigated and dry acres are set aside, the
payment will be based on a weighted average yield.

The following examples illustrate these revised payment pro-
cedures. In these examples we will use a wheat farm since there
are no paid land diversion or PIK programs for other crops in
1984. Accordingly, we assume that a farm with a 100-acre wheat
base participates in the 1984 paid land diversion and PIK
program. To be eligible to participate in the 1984 PIK wheat
program a farmer must set aside 20 percent of the farm's wheat
acreage base in the acreage reduction program without payment
before participation in the paid land diversion and PIK programs
is permitted. The 1984 set-aside requirement for the paid land
diversion program is 10 percent of the base acres and 10 to 20
percent for PIK. Therefore, the farmer participating to the
maximum extent in these examples would be required to set aside 50
acres to participate in the 1984 program--20 acres for the acreage
reduction component of the program, 10 acres for the paid land
diversion component, and 20 acres for the PIK component. Further,
it is assumed that this farmer's yield on irrigated land is 65
bushels per acre and on dry land is 19 bushels per acre.

> Example 1: If all 50 acres set aside are irrigated acres,
> the yield of 65 bushels would be used to compute the paid
> land diversion and PIK payments on the 30 acres that
> would be set aside for those programs.

> Example 2: If all 50 acres set aside are dry land acres,
> the yield of 19 bushels would be used to compute the paid
> land diversion and PIK payments on the 30 acres that
> would be set aside for those programs.

> Example 3: If the 50 acres set aside consist of 10 acres of
> irrigated and 40 acres of dry cropland, then the yield for
> the paid land diversion and PIK payments would be 34
> bushels. The 34 bushels would be computed by using the 10
> irrigated acres and 20 dry acres as land diversion and PIK
> acres ((10 x 65) + (20 x 19) = 1,030 ÷ 30 = 34).

In applying the revised procedures, the county offices
determine whether the land set aside under the land diversion or
PIK programs has had a history of irrigation, the land is still
irrigable, and the land would normally have been irrigated in 1983
without the programs. According to ASCS officials in Texas, the
counties generally already know which farms have a history of
irrigated yields because under ASCS procedures, a farmer certifies
each year to the county which fields are irrigated or dry. Be-
cause of this requirement, the Texas ASCS officials told us that
they did not believe the revised procedures for 1984 will require
any significant amount of additional work. Verification of the
acres designated as PIK will be monitored through their compliance

spot check procedures. Under the compliance program, the county offices generally select 15 percent of all farms in the county to check compliance with all program requirements including whether the acreage planted is dry, irrigated, or both as previously certified by the farmer. The Texas official responsible for this aspect of the program stated that this additional compliance check will not increase program costs. Since there are paid diversion and PIK programs only for wheat in 1984, we did not discuss this matter with Nebraska officials, because we only reviewed corn in that state.

Because the yield to be used for computing diversion and PIK payments under the 1984 farm program will, in effect, be based on the potential yield of land actually set aside, the situation we found with respect to the 1983 farm program payments should be eliminated. Moreover, in view of our findings in Nebraska and the comments made by ASCS officials we talked to in Texas, we believe the revised procedures will not require any significant amount of additional work and will be cost-effective.

We want to point out, however, that the revised procedures apply to the 1984 program only. They may or may not apply to programs beyond 1984 since the specific administrative provisions of a farm program, including how the amount of farm payments are computed, can vary from year to year.

## PREVIOUS STUDIES ON
## ESTABLISHING YIELDS

OIG conducted a special audit of yield determinations for corn and sorghum for the USDA's land diversion program in 1978. OIG concluded that diversion programs like the one carried out in 1978 are not always cost-effective in reducing production because the established yields are often excessive on farms with both irrigated and nonirrigated (dry) cropland. OIG's conclusion was based on its finding that farmers usually set aside the dry cropland that has less yield potential yet received farm program payments based on established yields reflecting an average of both higher yielding irrigated land and lower yielding nonirrigated land. OIG recommended that ASCS require payment yields to be based on the actual productivity of the land set aside in future diversion programs.

In response to the OIG report, ASCS agreed to address the issues of yields established for land to be set aside under any future production adjustment program for 1982 and subsequent crop years. However, as it turned out, there was no paid diversion program in 1982, and ASCS did not change its method of yield computations for the 1983 programs.

In November 1982, OIG issued another report to ASCS on establishing yields in determining program payments. The report

again questioned whether payment procedures for the 1983 land diversion program would effectively reduce the production of program crops. OIG's primary concern was that the yield used for payment purposes was not directly related to the acreage actually set aside or idled during the 1983 crop year. Payments were based either on the prior year yield or whenever separate irrigated and dry yields were applicable for a crop, on a blended or average yield derived from 1982 plantings. In both cases, the program payment was based on a yield from prior year plantings and not the potential yield of the actual acreage diverted.

As a result, ASCS did make some revisions to its procedures for determining which acres a farmer could use in meeting set-aside requirements in 1983 to help ensure that more productive acres would be set aside. However, as our report demonstrates, these revisions did not accomplish what they set out to do.

## AGENCY COMMENTS AND
## OUR EVALUATION

In commenting on this report, the Administrator of ASCS noted that it correctly reflects the recent changes made in computing payments involving dry and irrigated land. The Administrator pointed out, however, that any irrigation water that would otherwise have been used on set-aside land could be diverted to other land. According to the Deputy Director of the ASCS unit responsible for administering the program, the net effect of this would be that the yields on portions of a farm that would not otherwise have been irrigated could be increased and could offset some of the production control advantages gained on the set-aside land. The Deputy Director did not know the extent to which such situations occur or the potential amounts that might be offset.

We recognize that the situation described by ASCS could occur under ASCS's 1984 payment procedures as well as under those procedures used in computing 1983 payments. ASCS procedures do not attempt to regulate the management practices used on land not set aside for program purposes, be it the irrigation or even fertilization of that land. Whether such practices are practical or economical depends on the individual farmer's circumstances and the increased yield he/she might expect on that land.

## SAMPLING PLAN AND ESTIMATE
## OF UNIVERSE FOR NEBRASKA

Our sampling plan in Nebraska was designed to provide us with a statistically valid basis for projecting the impact of our findings to the entire state. To provide us with our desired 95 percent confidence level, it was necessary to select a sample of 382 farms in 21 counties. We then used the results of our review in those cases as a basis for our projections to the entire state.

To make a projection statewide, we estimated the number of farms in the state that met our sample selection criteria of having (1) participated in USDA 1983 farm programs, (2) planted corn on irrigated land at least once during the 4-year period 1979-82, and (3) planted corn or sorghum on dry land at least once during the same 4-year period. We did this by determining the total number of farms in each of our 21 sample counties that met our selection criteria. (See column 4 in table 1.) We then computed the average number of farms per county (column 6 in table 1) for each farm grouping or stratum. Using these averages, we then multiplied the total universe of counties in each stratum (column 2) by the average number of farmers in each stratum (column 6). The product provided an estimate of the total number of farms in Nebraska for each stratum. (See column 7.) We then used the number in column 7 as a basis for making our projections to the entire state.

### Table I

| | 1 | 2 | Sample 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| Crop | Strata (Dry acres) | Universe of counties | Counties | Number of farms in counties | Farms reviewed | Average number of farms per county | Estimate of farms in state |
| Corn | 0-999 | 16 | 4 | 20 | 20 | 5 | 80 |
| | 1,000-9,999 | 11 | 3 | 153 | 34 | 51 | 561 |
| | 10,000-29,999 | 13 | 4 | 980 | 86 | 245 | 3,185 |
| | 30,000-59,999 | 16 | 4 | 1,538 | 91 | 384.5 | 6,152 |
| | 60,000-over | 37 | 6 | 1,844 | 151 | 307.3 | 11,371 |
| Total | | 93 | 21 | 4,535 | 382 | | 21,349 |

United States          Agricultural           P O Box 2415
Department of          Stabilization and      Washington, D C
Agriculture            Conservation Service   20013                    JUN ( _ ___

SUBJECT:   GAO Draft Report Entitled, "The Department of Agriculture is
           Using Improved Payment Procedures for Its 1984 Farm Programs"
           Dated May 24, 1984  RCTD-84-159

TO      :  J. Dexter Peach
           Director, GAO

The subject draft report has been reviewed.  While the report correctly
points out that the 1984 changes have been made in computing payments
involving dryland vs. irrigated acreages, it should be noted that there
are some minor technical errors.  These errors have been discussed with
members of your staff.

We believe that the difficulties in determining which land is irrigable
are not fully understood.  For example, the 1984 rule requires that land
designated as irrigated ACR be land that was irrigated or considered as
irrigated in recent years.  When a particular field that has been
irrigated is designated as irrigated ACR, the farmer could divert the
water that could have been used on that field to other areas on the farm
for use on crops other than the crops being diverted.

Everett T(ank
Administrator

GAO NOTE 1:   As used in these comments "ACR" is an acronym used
              to represent the phrase "acreage conservation
              requirement."  Basically "ACR" means the land a far-
              mer takes out of production to meet USDA land set-
              aside requirements.

GAO NOTE 2:   In a subsequent conversation with the Deputy Director
              of the unit in ASCS responsible for administering the
              payment program discussed in this report, we were
              told that the comment made in the second paragraph of
              the letter was provided for balance.  In elaborating
              on this, the Deputy Director said that in making the
              comment, ASCS wanted to point out that some of the
              production control gains achieved by getting a par-
              ticular farmer to set aside cropland could poten-
              tially be offset if the water is diverted from the
              set-aside acreage to other cropland on a farm.  The
              net effect of such an occurrence would be to in-
              crease the yield on the land receiving the diverted
              irrigation water.

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