



UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

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RESOURCES COMMUNITY
AND ECONOMIC DEVELOPMENT
DIVISION

AUGUST 17, 1984

B-215752

The Honorable E (Kika) de la Garza
Chairman, Committee on Agriculture
House of Representatives



124941

Dear Mr. Chairman:

Subject: Evaluation of the Quality of Corn Stored by the
U.S. Department of Agriculture at a Plainview,
Texas, Grain Warehouse (GAO/RCED-84-175)

Your October 31, 1983, letter referred to reports in the press and other sources indicating that significant quantities of corn owned by the Department of Agriculture's (USDA's) Commodity Credit Corporation (CCC) and stored in Texas, particularly at the PLB Grain Storage Corporation warehouse in Plainview, had seriously deteriorated, thereby losing much of its value. You asked that we review this situation, giving priority to the controversy surrounding the condition of corn stored at the PLB warehouse. You specifically asked us to provide information on

- the grade (quality) of the CCC-owned corn at the PLB warehouse, according to government records;
- the actual quality of the CCC-owned corn stored at the PLB warehouse;
- whether the corn had deteriorated and, if possible, who was responsible for any deterioration; and
- whether the CCC-owned corn being stored at PLB was useful in meeting USDA's payment-in-kind obligations¹ and livestock producers' needs for feed.

In addition, you asked us for similar information on CCC corn stored at other Texas warehouses. However, when we briefed you on

¹Under USDA's payment-in-kind (PIK) program, farmers choosing to take prescribed amounts of land out of production receive as payment a certain percentage of the commodities they would otherwise have grown. USDA uses CCC-owned commodities to make these payments.

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March 8, 1984, on the preliminary results of our work at PLB, you agreed that we would not review other warehouses in Texas.

CCC is a government-owned corporation whose activities are carried out by USDA employees. It was created to stabilize, support, and protect farm income and prices by helping control the supplies of agricultural commodities such as corn, wheat, rice, and cotton. To do this, CCC buys and sells commodities or holds commodities received as collateral against loans provided to farmers. CCC stores the commodities it obtains in commercial warehouses, such as the PLB facilities.

We interviewed officials of the USDA's organizational components having knowledge of the corn storage situation at the PLB warehouse. These were the Agricultural Stabilization and Conservation Service (ASCS), Agricultural Marketing Service (AMS) and the Federal Grain Inspection Service (FGIS). We also spoke with the PLB manager and we solicited an opinion on the grade of the corn at PLB from a private, federally designated grain inspection agency. In addition, we reviewed and discussed with a Texas Tech University professor research studies that the professor had done on the nutritional value of the various grades of corn as livestock feed.

To enable the inspection agency to determine the quality of the corn actually stored at PLB, we needed access to samples of USDA's corn from PLB. From December 1, 1983, until February 6, 1984, however, we were denied access to such samples by USDA's Deputy Assistant Secretary for Marketing and Inspection Services. During the period from December 1 to January 9, our attorneys conducted informal negotiations with the Deputy Assistant Secretary and USDA's attorneys in an effort to obtain access to the samples. Although it seemed on several occasions during these negotiations that USDA would grant access to the samples, ultimately they proved fruitless. Accordingly, on January 9, 1984, the Comptroller General, pursuant to his authority in 31 U.S.C. 716 (b), sent a letter to the Secretary of Agriculture formally requesting access to the samples of corn. Shortly after the 20-day deadline for the letter expired and after continuing negotiations, the requested samples were provided by USDA.

In the interim, at our request, USDA acted to preserve the samples by refrigerating them. It should also be noted that because the samples were taken before our review began, we did not observe the sample selection process, nor were we able to verify that the samples provided were actually taken from PLB.

We reviewed this situation during the period of November 1983 through February 1984 in accordance with generally accepted government auditing standards except as noted above. The following summarizes what we found. The details of our methodology, along with background and further information, are provided in appendix I.

QUALITY OF CCC CORN AT PLB,
ACCORDING TO GOVERNMENT RECORDS

The CCC-owned corn at PLB was originally placed there in 1980. Government records show that as of November 8, 1983, CCC owned about 21.9 million bushels of corn at PLB as follows:

<u>Grade^a</u>	<u>Millions of bushels</u>
U.S. no. 1 (highest quality)	1.1
U.S. no. 2 (standard quality ^b)	6.2
U.S. no. 3	6.9
U.S. no. 4	5.9
U.S. no. 5	1.7
U.S. sample (lowest quality)	<u>c</u>
Total	<u>21.9^d</u>

^aThe grade designations are the official U.S. standard for corn. Appendix II shows USDA's specific grading requirements.

^bThe term "standard quality" is used to denote the grade of corn typically used as the basis for commercial trading in this commodity. It has no meaning as it relates to official U.S. grade designations.

^cThere were 356 bushels in this category.

^dTotal has been rounded.

QUALITY OF CCC CORN AT PLB
ACCORDING TO ANALYSES DONE FOR
USDA AND GAO

Analyses done for USDA in November 1983 and for us in February 1984, each by a different federally designated grain inspection agency, revealed that the quality of the CCC-owned corn stored at PLB had not deteriorated beyond what would normally be expected over a period of almost 4 years. According to discussions with USDA experts, the November 1983 analysis done for USDA showed that although the amounts of corn in the various grade categories were different from the amounts indicated by government records, the corn had not deteriorated to a point beyond what is considered normal for corn stored for almost 4 years. In February 1984, because of the concern you expressed, we requested a second opinion of the grade of the corn stored at PLB from a different inspection agency. The results of this effort confirmed the earlier findings.

REASONS FOR DETERIORATION

As the previous response notes, the CCC-owned corn at PLB had not deteriorated beyond normal expectation after almost 4 years.

Under terms of the CCC-PLB agreement, however, PLB must return to CCC the same quality corn that CCC put into the warehouse or must pay the difference between that quality and the quality actually delivered.

USEFULNESS OF CORN FOR THE
PAYMENT-IN-KIND PROGRAM AND
AS LIVESTOCK FEED

We found no basis for questioning the usefulness of the corn at PLB for making payments under the payment-in-kind program or for feeding livestock. The PIK program permits CCC to use any grade of corn, including sample grade, to meet payment obligations as long as it makes adjustments when less than standard grade corn--grade 2--is delivered. For example, if CCC is required to pay a farmer 1,000 bushels of grade 2 corn and the storing warehouse can only provide grade 3 corn, the warehouse must provide the farmer with that quantity of grade 3 corn that has the same total value as 1,000 bushels of grade 2 corn.

In the case of PLB, CCC records show that it ordered PLB to deliver about 100,000 bushels of grade 2 corn for the PIK program; PLB records show that grade 2 corn was delivered. While we cannot verify what was actually delivered, the PLB warehouse manager and USDA's county agent in Plainview told us that they were not aware of any complaints about the quality of the corn PLB had supplied.

Further, because the CCC-owned corn placed at the PLB warehouse was livestock feed corn and not corn for human consumption, and because it had not unduly deteriorated, we found no reason to suggest that it was not fit for livestock consumption. Nonetheless, we discussed this issue with a professor at Texas Tech University in Lubbock, Texas, who did research on the nutritional value of livestock feed corn as it relates to the quality or grade of corn. The findings were that feed corn having the same kind of damage as that held at the PLB warehouse does not lose its nutritional value.

AGENCY COMMENTS AND OUR EVALUATION

This report was reviewed by officials of USDA's ASCS, AMS, FGIS, Office of Budget and Program Analysis, and by the office of the Deputy Assistant Secretary for Marketing and Inspection Services. Of these organizations, only AMS and the Deputy Assistant Secretary offered comments on the facts contained in the report. Specifically, the Administrator of AMS and the Deputy Assistant Secretary commented that we did not properly present the issue on page 2 of this letter regarding our access to the corn samples taken from PLB.

In their comments they stated that we were not denied access to the corn samples, as the report states, but that the Department

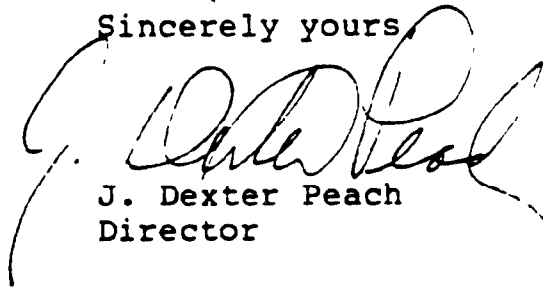
was concerned that the law may not have permitted the samples to be released to us. They also commented that throughout the entire period officials of the Department were in contact with the proper parties in GAO, including our attorneys, to resolve these issues. Accordingly, they stated that the report should be modified.

We have not modified the report based on the Department's comments. While the comments are correct in noting that Department officials were in contact with us throughout the entire 2-month period during which we were denied access to the corn samples, at no time during our discussions with the Department officials, including the Deputy Assistant Secretary for Marketing Services, were specific legal objections given us concerning USDA's failure to provide us access to the corn samples. Consequently, we see no need to modify the report. (See apps. III and IV for the entire text of the comments.)

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As agreed with you, we are sending copies of this report to the Secretary of Agriculture and other interested congressional committees and members. Copies will be made available to others upon request.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "J. Dexter Peach".

J. Dexter Peach
Director

C o n t e n t s

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ABBREVIATIONS

AMS	Agricultural Marketing Service
ASCS	Agricultural Stabilization and Conservation Service
CCC	Commodity Credit Corporation
FGIS	Federal Grain Inspection Service
GAO	General Accounting Office
USDA	U.S. Department of Agriculture

CCC OPERATIONS AND
STORAGE OF CCC-OWNED CORN
AT THE PLB WAREHOUSE

The Department of Agriculture's (USDA's) Commodity Credit Corporation (CCC) routinely acquires, handles, stores and disposes of large amounts of agricultural commodities. Since CCC has no staff of its own, its activities are carried out by the staff of USDA's Agricultural Stabilization and Conservation Service (ASCS) through its commodity office in Kansas City, Missouri. ASCS administers various farm programs, including price stabilization, soil and water conservation, and certain feed programs for livestock. The Kansas City commodity office oversees all ASCS operations for handling and storing commodities as required by CCC's programs and controls and maintains the paperwork on CCC-owned inventories. As of November 10, 1983, the commodity office reported CCC-owned commodity inventories of over 412 million bushels of grain. Of this total, 167 million bushels, or about 41 percent, was corn.

All CCC-owned corn is stored in privately owned, USDA-approved warehouses, such as the PLB warehouse in Plainview, Texas. To receive approval, a warehouse must pass a USDA inspection.¹ The primary purpose of this is to protect those who store their agricultural commodities in these warehouses by assuring that standards for sound warehouse operations are met.

In addition, to be eligible to store CCC-owned commodities, a warehouse must enter into a uniform grain storage agreement with CCC. Under the agreement's terms, a warehouse issues receipts to CCC that document the quantity and quality of the commodities received for storage. Appendix II shows the specific grading criteria used throughout the United States in determining corn's quality.

When warehouses such as PLB receive shipments of a commodity for storage, they typically commingle the commodity with like commodities in their various storage buildings so that the identity of any given shipment is lost. USDA permits this practice as long as a warehouse maintains commodity stocks that are reasonably representative of the quantity and quality that is documented on the warehouse receipts provided to CCC. CCC can suspend or cancel a warehouse's authorization to store CCC-owned commodities if USDA inspections disclose inventory shortages or storage conditions that endanger the commodity's quality.

¹At the time of our review, these inspections were done by USDA's Agricultural Marketing Service (AMS). On May 13, 1984, these responsibilities were transferred to ASCS.

To remove a commodity from storage, CCC issues a document called a loading order, which authorizes the warehouse to release a specific quantity and quality of a commodity. CCC then surrenders the warehouse receipts covering that quantity and quality to the warehouse so that the warehouse can record the inventory reduction. The uniform grain storage agreement specifies that the commodity delivered from a warehouse must meet the quantity and quality specifications on a loading order. If CCC accepts delivery of a commodity that is less than the amount specified on a loading order, the warehouse is required to pay the difference in cash or, at CCC's option, in commodities. CCC can also require a monetary settlement for shipments that do not meet the quality specified on a loading order. Further, if the quality is less than what it should be, CCC can reject deliveries. In such cases the warehouse must replace the delivery with commodities of the required quality, even if additional amounts of a commodity must be purchased on the open market to do so.

The PLB warehouse is on USDA's list of approved warehouses and has a uniform grain storage agreement with CCC. PLB acquired CCC-owned corn during the spring and summer of 1980 after CCC had purchased about 300 million bushels of corn and wheat to ease the impact on farmers of the United States' January 1980 embargo on grain exports to the Soviet Union. As a result of that embargo, some corn and wheat producers did not dispose of their inventories that otherwise would have been exported to the Soviet Union. To prevent existing storage facilities from becoming overburdened, USDA decided to relocate CCC-owned corn and wheat to make storage space available to producers prior to the 1980 harvest. As part of this relocation, about 46 million bushels of corn were moved from Iowa, Nebraska, Minnesota, and Wisconsin to 19 warehouses in West Texas during the summer and fall of 1980. Of that amount, about 22 million bushels went to the PLB warehouse.

PLB is located in Plainview, Hale County, in the Texas Panhandle. In terms of storage capacity, it is the largest grain warehouse in the United States. The storage facilities were constructed in the early 1960's; the PLB Corporation acquired the facilities in early 1980. USDA approved the PLB warehouse for storage of CCC-owned grain on May 1, 1980. Through March 28, 1984, CCC had paid PLB over \$20 million in storage and handling fees.

Since it began operating in 1980, the PLB warehouse has maintained inventories near its capacity. Its inventory at the time of our review consisted solely of corn, most of which was CCC-owned. At that time, CCC's receipts from PLB made up about 50 percent of the CCC-owned corn stored in Texas and about 13 percent of the CCC-owned corn stored nationwide.

OBJECTIVE, SCOPE, AND METHODOLOGY

Our review objective was to obtain the facts necessary to respond to the four questions the Chairman of the House Committee on Agriculture raised in an October 31, 1983, letter concerning CCC-owned corn stored at the PLB warehouse.

To respond to the question about the grade of corn stored, according to government records, we visited ASCS' Kansas City commodity office to obtain the official records on the amount and quality of CCC-owned corn that CCC had placed in the PLB warehouse. The latest information available at the time of our visit was data as of November 8, 1983.

To determine the actual quality of the corn stored at PLB, we reviewed a November 1983 USDA inspection report issued by USDA's Agricultural Marketing Service in response to statements made by a Texas state agricultural official alleging deterioration of the CCC-owned corn at PLB. The inspection included sampling the corn and having the samples graded by a local, privately owned, federally designated grading organization. We discussed the contents of the inspection report with AMS headquarters officials in Washington, D.C., and with AMS officials in Temple, Texas, who had directed and participated in the inspection. Further, we discussed the inspection report and other issues relating to the storage and handling of corn with headquarters officials of ASCS and the Federal Grain Inspection Service (FGIS),² the two other USDA organizations that routinely deal with grain storage, handling, and grading issues. We also conferred on storage, handling, and grading issues with ASCS staff in Kansas City and FGIS field staffs in Plainview and Kansas City. These staffs either were familiar with the alleged problems at PLB or had worked with AMS in its inspection of the PLB warehouse. In addition, we discussed the corn storage situation at PLB with a Texas state agricultural official and with officials at the state ASCS office.

Because we began our review at PLB after AMS had completed its inspection, we were unable to observe the actual sampling of the corn or any of the other techniques and procedures AMS and the private grain grading organization had used during their inspection and grading. After AMS had completed its inspection and grading process, we obtained the corn samples, which AMS officials

²FGIS is responsible for inspecting and weighing U.S. grain, including corn. One way it does this is by designating state and private agencies to provide official inspection services on domestic grain marketed at inland locations. FGIS is also responsible for establishing official U.S. standards for grain and other assigned commodities.

told us were those taken from PLB, and submitted them to a private FGIS-designated grading organization. Our aim was to verify the AMS inspection results by obtaining a second opinion on the quality of the CCC-owned corn stored at PLB.

For about a 2-month period, however, USDA's Deputy Assistant Secretary for Marketing and Inspection Services denied us access to the corn samples. We requested the samples on December 1, 1983, but did not get access to them until February 6, 1984. During the period from December 1 to January 9, our attorneys conducted informal negotiations with the Deputy Assistant Secretary and the Department's attorneys in an effort to obtain access to the samples. Although it seemed on several occasions during these negotiations that USDA would grant access to the samples, ultimately they proved fruitless. Accordingly, on January 9, 1984, the Comptroller General, pursuant to his authority in 31 U.S.C. 716 (b), sent a letter to the Secretary of Agriculture formally requesting access to the samples of corn. Shortly after the 20-day deadline for the letter expired and after continuing negotiations, the requested samples were provided by USDA.

During the interim we were denied access, we asked USDA to take appropriate measures to preserve the samples. Because the useful life of samples such as these is limited, steps had to be taken to assure the samples' continued usefulness so that any subsequent grading would be valid. As a result of our request USDA refrigerated the corn samples until we obtained access to them.

Once we obtained the samples, we took them to the Enid Grain Inspection Service in Enid, Oklahoma, which graded them on February 7 and 8, 1984. We selected this particular organization because it is (1) federally designated, (2) outside the jurisdiction of the FGIS field office that routinely supervises grain inspection work in the Plainview area and that had participated in AMS' November 1983 inspection of PLB, and (3) located outside Texas, where a state official had questioned the quality of the PLB-stored corn.

To respond to the question about deterioration, we discussed the condition of the CCC-owned corn with AMS, ASCS, and FGIS officials and with the PLB warehouse manager. Additionally, we asked these same officials about the usefulness of the CCC-owned corn at PLB in meeting payment-in-kind obligations³ and livestock

³The payment-in-kind program, otherwise known as PIK, is a USDA program aimed at inducing farmers to take prescribed amounts of land out of production. For taking the land out of production, farmers receive a payment from USDA. However, instead of cash, USDA pays participating farmers in commodities they would otherwise have grown. USDA uses CCC-owned commodities to make these payments.

producers' feed assistance needs. On this latter point, we also reviewed research done by a professor at Texas Tech University in Lubbock, Texas, on the nutritional value of various grades of corn for livestock feeding and discussed the results of this work with the professor.

QUALITY OF CCC CORN STORED AT THE
PLB WAREHOUSE, ACCORDING TO
GOVERNMENT RECORDS

CCC's ownership of corn at the PLB warehouse is recorded on the warehouse receipts and unfilled loading orders at the ASCS commodity office in Kansas City. Unfilled loading orders represent corn that CCC has ordered for delivery from the warehouse and for which it has surrendered the warehouse receipts, but which has not yet been delivered. The sum of the warehouse receipts and the unfilled loading orders is the total of PLB's obligations to CCC for corn stored at the warehouse. The following table shows PLB's total obligations to CCC by grade as of November 8, 1983, according to CCC records.

Total PLB Obligation to CCC
as of November 8, 1983

<u>Grade^a</u>	<u>Millions of bushels</u>
U.S. no. 1 (highest quality)	1.1
U.S. no. 2 (standard quality ^b)	6.2
U.S. no. 3	6.9
U.S. no. 4	5.9
U.S. no. 5	1.7
U.S. sample (lowest quality)	<u>c</u>
Total	<u>21.9^d</u>

^aThe grade designations are the official U.S. standards for corn. Appendix II provides the specific grading requirements.

^bThe term "standard quality" denotes the grade of corn typically used as the basis for commercial trading in this commodity. It has no meaning related to official U.S. grade designations.

^c356 bushels.

^dTotal has been rounded.

QUALITY OF CCC CORN AT PLB, ACCORDING
TO ANALYSES DONE FOR USDA AND GAO

On the basis of work done by some Texas state officials, Texas' Commissioner of Agriculture alleged that the quality of

CCC-owned corn stored at PLB had seriously deteriorated since it was originally placed there in 1980. In response to these charges, AMS inspected the corn in November 1983 to determine its quality. The inspection entailed determining the amount of CCC-owned corn being stored, sampling the corn, and having the samples graded.

AMS obtained over 1,800 corn samples from 51 buildings at PLB. The samples were then reduced to 73 representative samples of about 2,600 grams--about 6 pounds--each, and submitted to the Plainview Grain Inspection Service, a local, private, federally designated organization, for grading. The samples represented quantities ranging from 21,398 bushels to 476,119 bushels of corn. The inspection agency divided each of the 73 samples into 2 equal portions. One portion was graded and the other retained for possible future use.

In obtaining the samples, AMS used an instrument called a Cargill probe--a long, tubular device that is used for extracting grain samples from depths beyond 12 feet. The corn at PLB was stored in depths up to 60 feet. Because FGIS is responsible for approving national grain sampling procedures and equipment, we asked its officials if use of the Cargill probe was an approved method of obtaining samples at a facility like PLB. They said that FGIS had not approved any sampling device for obtaining samples beyond 12 feet deep. According to the FGIS officials, however, the sampling device AMS used did provide a general indication of the quality of the corn stored at PLB. An alternative sampling method would have been to separate the corn into 12-foot depths so that FGIS-approved sampling equipment could have been used. To do this, though, would have required moving about 23 million bushels of corn throughout the facility. Under the approach AMS used, the corn was sampled in place and did not have to be moved.

The following table shows the results of the Plainview Grain Inspection Service's grading of the samples. The results are compared with the total amount of corn obligations--23 million bushels--PLB had on its records as of November 8, 1983, rather than with the 21.9 million bushels CCC's records showed. This is because corn from sources other than CCC was commingled with the CCC-owned corn and it was not possible to isolate and sample only that corn belonging to CCC. About 95 percent of the corn stored at PLB as of November 8, 1983, however, was CCC-owned.

Results of Plainview's Grading
of Corn Stored at PLB as of
November 8, 1983

<u>Grade</u>	<u>Total PLB corn obligation from all sources</u>	<u>Results of Plainview's grading</u>	<u>Difference plus or (minus)</u>
	----- (millions of bushels) -----		
U.S. no. 1	1.4	0.3	(1.1)
U.S. no. 2	6.9	4.3	(2.6)
U.S. no. 3	7.3	8.0	0.7
U.S. no. 4	5.7	6.1	0.4
U.S. no. 5	1.7	2.0	0.3
U.S. sample	<u>a</u>	<u>2.1</u>	<u>2.1</u>
Total	<u>23.0</u>	<u>22.8^b</u>	<u>(0.2)</u>

^a356 bushels.

^bThe difference between the PLB obligations and Plainview's grading results were within the 1-percent tolerance allowed by AMS regulations.

According to the deputy director of the ASCS commodity office, the Plainview grading results indicated that the corn was in reasonable condition. He said that the corn placed in PLB by CCC was feed corn to be used for livestock and was never intended for human consumption. Further, he said that because the corn had been placed in PLB almost 4 years before, some damage and deterioration was expected if for no other reason than the movement of the corn within the warehouse.⁴ He said that considering these factors, the corn had not deteriorated beyond what would be normally expected under such circumstances. In addition, the head of the AMS field office that made the inspection at PLB and that routinely examines the contents of warehouses in the area having storage agreements with CCC agreed with this analysis, and said that while some deterioration of the corn would be expected over a period of years, the Plainview grading results showed that the corn at PLB had not deteriorated beyond normal expectation.

⁴Corn in storage is normally mixed or rotated from time to time to prevent heat buildup or is moved between storage facilities to replace corn that has been sold or removed.

Nonetheless, in view of concerns that the CCC-owned corn held at PLB had seriously deteriorated and USDA's finding that it had not, we obtained the retained portions of the 73 AMS samples and submitted them to the Enid Grain Inspection Service in Enid, Oklahoma. As a federally designated grain grading organization, the Enid Grain Inspection Service is authorized to make official grading determinations according to prescribed USDA standards.

The following table compares the results of Enid's grading of the retained samples with Plainview's grading of the original samples, by amounts within each grade. While the Plainview and Enid results differ somewhat on how much corn was in the various grade categories, the overall Enid results, in our opinion, confirm Plainview's findings. The basis for our opinion is discussed following the table.

Comparison of Plainview's and Enid's
Grading Results

<u>Grade</u>	Results of Plainview's <u>grading</u>	Results of <u>Enid's grading</u>
	----- (millions of bushels) -----	
U.S. no. 1	0.3	1.0
U.S. no. 2	4.3	3.2
U.S. no. 3	8.0	7.2
U.S. no. 4	6.1	7.4
U.S. no. 5	2.0	1.4
U.S. sample	<u>2.1</u>	<u>2.6</u>
Total	<u>22.8</u>	<u>22.8</u>

Because the grading process includes some subjective determinations, the disparities between the Plainview and Enid results are not unexpected. While USDA issues standardized grading criteria that are used nationwide, the application and interpretation of the criteria for one factor--damaged kernels--is a subjective process. For example, in the case of the PLB corn grading, each individual kernel in 250 grams--about one-half pound--in each of the 73 samples taken from the warehouse had to be visually examined by a grading expert so that a determination of the amount

of damage⁵ to the corn could be made. Because the percentage of damaged kernels cannot exceed a specific figure for each grade (see app. II), a difference in judgment on the extent of damage to only 4 or 5 kernels of corn--about 1 gram--can change the grade assigned to a sample and result in the kind of differences shown in the preceding table.

AMS and FGIS grading experts told us that the degree of judgment involved in making damage determinations is the most common cause of variations in grading decisions. Other factors that affect grade determinations, such as weight and moisture content, are measured using more precise methods and instrumentation and are more objective than are damage determinations.

Recognizing this, we reviewed the Enid grading results to determine why they differed from Plainview's grade determinations. We found that of the 73 samples that Enid graded, almost two-thirds (64 percent) agreed with Plainview's assessment, while 26 (36 percent) received different grade designations from those Plainview assigned. In each case, the difference was due to different damage determinations. In 15 cases, Plainview assigned a higher grade than did Enid. In the other 11 instances, Enid assigned a higher grade than did Plainview. The following table compares the results of the two gradings and shows the quantity of corn applicable to each category.

⁵A damage determination means making a judgment about the percentage of kernels in the sample that are damaged due to heat, mold, disease, or some other cause.

Comparison of Grading Results
for Each of the 73 Samples

<u>Results</u>	<u>Number of samples</u>	<u>Millions of bushels represented</u>	<u>Percentage of total sample</u>
Enid determined sample to be same grade as Plainview	47	13.2	64
Enid determined sample to be 1 grade lower (e.g., grade 3 vs. grade 2 from Plainview)	13	4.8	18
Enid determined sample to be 1 grade higher (e.g., grade 2 vs. grade 3 from Plainview)	9	3.4	12
Enid determined sample to be 2 grades lower (e.g., grade 4 vs. grade 2 from Plainview)	2	0.7	3
Enid determined sample to be .2 grades higher (e.g., grade 2 vs. grade 4 from Plainview)	<u>2</u>	<u>0.7</u>	<u>3</u>
Total	<u>73</u>	<u>22.8</u>	<u>100</u>

As the table shows, Enid's grading results varied both above and below those of Plainview. Overall, about 1.4 million bushels, or about 6 percent, of the corn stored at PLB would have received a lower grade (e.g., grade 3 versus grade 2) as a result of the Enid grading. Given the fact that all the differences were due to varying damage determinations and recognizing the subjectivity of the damage determination process, we believe the Enid grading results confirm USDA's conclusion that the corn stored at PLB had not deteriorated beyond what would normally be expected.

REASONS FOR DETERIORATION

As noted, ASCS and AMS officials stated that CCC-owned corn stored at PLB had not deteriorated beyond normal expectation. They attributed the differences between PLB's obligations to CCC and the Plainview grading results to the facts that (1) the corn was placed in the facility almost 4 years ago and some deterioration is normal over such a time period and (2) the corn was dry when it was put into the facility from the midwestern Corn Belt states and some breakage occurs as the corn is shifted within the warehouse buildings. Because the deterioration is considered normal, it was not necessary for us to determine who was responsible for it.

PLB's obligations to CCC are based on what the warehouse receipts show was put into the warehouse. Because PLB operates under a uniform grain storage agreement with CCC, it is responsible for meeting its corn obligations to CCC or paying the difference between the value of the corn it is obligated to return to CCC and the quality it actually delivers.

USEFULNESS OF CORN AT THE PLB
WAREHOUSE FOR PAYMENT-IN-KIND
PROGRAM AND LIVESTOCK FEEDING

We have no basis for questioning the usefulness of the corn at PLB for meeting CCC's payment-in-kind obligations to corn farmers or to livestock producers' needs for feed assistance. The payment-in-kind program allows CCC to use any grade of corn, including sample grade, to meet payment obligations, as long as it makes adjustments when less than U.S. no. 2 (standard) grade corn is delivered. For example, if CCC is required to pay a farmer 1,000 bushels of grade 2 corn and the warehouse can only provide lesser quality grade 3 corn, the warehouse must provide the farmer with that quantity of grade 3 corn that has the same total value as 1,000 bushels of grade 2 corn.

According to CCC records, about 100,000 bushels of corn at PLB had been used to pay farmers under the PIK program. The orders CCC issued to PLB called for U.S. no. 2 grade corn to be provided as payment. There is no way to verify, however, what was actually delivered. The PLB warehouse manager and the ASCS county agent in Plainview told us that they were not aware of any complaints regarding the quality of the corn PLB had provided to the farmers. PLB does not maintain any records unless a discrepancy is identified by a farmer receiving payment.

Further, because the CCC-owned corn placed at the PLB facility was livestock feed corn and not corn meant for human consumption and because it had not deteriorated beyond what would be expected over an almost 4-year period, we found no reason to suggest that the corn was not fit for livestock feed. Nonetheless, we discussed this issue with a Texas Tech University professor who did research on the nutritional value of livestock feed corn as it relates to the corn's quality or grade. The findings were that feed corn having the same kind of damage as that held at the PLB warehouse does not lose its nutritional value.

AGENCY COMMENTS AND OUR EVALUATION

USDA's Administrator of AMS and the Deputy Assistant Secretary for Marketing and Inspection Services commented that we did not properly present the issue regarding our access to the corn samples taken from PLB (see apps. III and IV). They state that we were not denied access to the corn samples as our report

states. According to the Department, the issue facing them was whether or not the samples could legally be released to us and under what conditions. In support of this, they highlighted three particular points that led the Department to question whether the access we needed could be provided. These were (1) not receiving a specific request from Chairman de la Garza, (2) whether or not the Department could grant us actual possession of the samples as contrasted with full access to the results of the grading tests done by the Plainview Inspection Agency for AMS, and (3) the Department's concern that the samples we requested needed to be retained and therefore could not be provided to us. Accordingly, the Department stated that the report should be modified.

Based on these comments we do not see a need to modify the report. While Department officials were in contact with our representatives, including our attorneys, throughout the entire 2-month period during which we were denied access to the corn samples, at no time during our discussions with the Department officials, including the Deputy Assistant Secretary for Marketing and Inspection Services, were specific legal objections given us concerning USDA's failure to provide us access to the corn samples. (See apps. III and IV for the entire text of the comments.)

OFFICIAL USDA GRADING REQUIREMENTS FOR CORN

The Department of Agriculture has established official U.S. standards that denote the quality of corn. Under the standards, corn is assigned a grade ranging from U.S. no. 1 (highest quality) to U.S. sample grade. The grade of a quantity of corn is determined by measuring grading factors, including the weight per bushel, moisture content, the amount of broken corn and foreign material that is present, and the number of damaged kernels, including those damaged by heat. The requirements for each grade are as follows:

<u>Grade</u>	<u>Minimum weight per bushel</u> (lbs.)	<u>Maximum limits</u>			
		<u>Moisture</u>	<u>Broken corn and foreign material</u>	<u>Damaged kernels</u>	
				<u>Total</u>	<u>Heat-damaged kernels</u>
		----- (percent) -----			
U.S. no. 1	56.0	14.0	2.0	3.0	0.1
U.S. no. 2	54.0	15.5	3.0	5.0	0.2
U.S. no. 3	52.0	17.5	4.0	7.0	0.5
U.S. no. 4	49.0	20.0	5.0	10.0	1.0
U.S. no. 5	46.0	23.0	7.0	15.0	3.0

U.S. sample^a

^aU.S. sample grade is corn that does not meet the requirements for any of the grades from U.S. no. 1 to U.S. no. 5, inclusive; or that contains stones; or that is musty, sour, or heat damaged; or that has any commercially objectionable foreign odor; or that is otherwise of distinctly low quality.

Source: 7 C.F.R. 810.353.



DEPARTMENT OF AGRICULTURE
OFFICE OF THE SECRETARY
WASHINGTON D C 20250

JUL 19 1984

Mr. J. Dexter Peach
Director
Resources, Community and Economic Development Division
United States General Accounting Office
Washington, D.C. 20548

Dear Mr. Peach:

Thank you for the opportunity to review and comment on your proposed report entitled, "Evaluation of the Quality of Corn Stored by the U.S. Department of Agriculture at a Plainview, Texas, Grain Warehouse."

The proposed report was reviewed by the Agricultural Stabilization and Conservation Service (ASCS), Agricultural Marketing Service (AMS), Federal Grain Inspection Service (FGIS), Office of Budget and Program Analysis (OPBA), and other Department Officials. The Administrator, FGIS, provided editorial comments directly to your local representatives, and the Administrator, AMS provided the following for your consideration:

"The third paragraph on page 2 of the letter to the Chairman, Committee on Agriculture, indicates that the Deputy Assistant Secretary for Marketing and Inspection Services denied the GAO investigators access for the period December 1, 1983 to February 6, 1984, to USDA corn samples taken from the PLB Grain Storage Corporation. This is inaccurate, because the issues to be resolved were whether or not the law permitted those samples to be released and under what conditions. First, the letter from Chairman de la Garza requesting that the samples be made available was not formally received by USDA. Even though a copy was eventually provided us, we never received the original. In the absence of such a specific request, it was not clear that the samples in question could be released. Secondly, there remained the question of whether or not we could grant GAO actual possession of the samples as contrasted with full access to the results of the grading tests. Finally, we thought it necessary to retain file samples and could not turn over possession of the entire sample, as originally requested. By early February these questions had been resolved, appropriate arrangements were made, and samples of PLB grain which had been refrigerated were made available to GAO. Throughout this entire period of time, we were in contact with the proper parties, including GAO attorneys, to resolve these issues. Accordingly, the report should be modified to more properly reflect the situation as it actually was."

Sincerely,

Richard E. Lyng
Acting Secretary



DEPARTMENT OF AGRICULTURE
OFFICE OF THE SECRETARY
WASHINGTON D C 20250

July 6, 1984

J. Dexter Peach, Director
Resources, Community, and Economic
Development Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Peach:

The GAO Draft Letter Report RCED-84-175, Subject: Evaluation of the Quality of Corn Stored by the U.S. Department of Agriculture at a Plainview, Texas, Grain Warehouse contains an inaccuracy that I wish to clarify. I refer to page 2 of the letter to the Chairman, Committee on Agriculture, included in the report.

Paragraph 3 on this page indicates that I denied the GAO investigators access for the period December 1, 1983 to February 6, 1984, to USDA corn samples taken from the PLB Grain Storage Corporation. This is inaccurate, because the issues to be resolved were whether or not the law permitted those samples to be released and under what conditions. First, the letter from Chairman de la Garza requesting that the samples be made available was not formally received by USDA. Even though a copy was eventually provided us, we never received the original. In the absence of such a specific request, it was not clear that the samples in question could be released. Secondly, there remained the question of whether or not we could grant GAO actual possession of the samples as contrasted with full access to the results of the grading tests. Finally, we thought it necessary to retain file samples and could not turn over possession of the entire sample, as originally requested. By early February these questions had been resolved, appropriate arrangements were made, and samples of PLB grain which had been refrigerated were made available to GAO. Throughout this entire period of time, we were in contact with the proper parties, including GAO attorneys, to resolve these issues.

These comments are also included in the Departmental response to the GAO Draft Letter. Accordingly, I believe the report should be modified to more properly reflect the situation as it actually was.

Sincerely,

A handwritten signature in cursive script, appearing to read "John Ford".

John Ford
Deputy Assistant Secretary
Marketing and Inspection Services