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UNITED STATES GENERAL ACCOUNTING OFFICE

WASHINGTON, D.C. 20548

RESOURCES AND ECONOMIC
DEVELOPMENT DIVISION



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B-114824

MAY 24 1973

The Honorable
The Secretary of Agriculture 12

Dear Mr. Secretary:

The Kansas City Commodity Office of the Agricultural Stabilization and Conservation Service is responsible for managing Commodity Credit Corporation-owned inventories of bulk grain and for carrying out the Corporation's programs involving acquisition, storage, transportation, and disposition of such grain. During the past 3 fiscal years, the Commodity Office shipped about 12 million tons of grain a year.

Our review of shipment records for unprocessed commodities showed that the Commodity Office had used rail transportation predominately even though less costly barge service would have reduced transportation costs. We noted also that the Commodity Office's system for managing transit credits was inadequate. Transit credits allow shipments to be stopped at intermediate points en route and still receive the benefit of the lower through rate.

SAVINGS FROM USE OF BARGE SERVICE

The Commodity Office had not aggressively pursued a policy of shipping grain by barge. Only the Minneapolis branch office, which has jurisdiction in five northern States, had made effective use of barges. It had shipped about 800,000 tons of grain by barge to various intermediate storage and port facilities during calendar years 1969 through 1971. The Commodity Office and its Chicago branch both had shipped substantial amounts of grain from areas near navigable rivers but had shipped only 11,000 tons by barge during the same period.

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Despite the fact that about \$4.5 million in transportation costs was saved during calendar years 1969 through 1971 by using barge service--principally on the Upper Mississippi River--in lieu of more costly rail service, the use of barges had not been expanded to other navigable rivers, such as the Ohio, Illinois, Tennessee, Lower Mississippi, and Missouri.

We compared the rail rates with combination truck/barge rates from 16 typical points of origin outside the Minneapolis branch office area to typical destinations. The truck/barge rates were favorable in 13 of the 16 comparisons, ranging from 7 to 33 percent less than the rail rates.

Because the shipping records necessary to trace shipments from origin to ultimate destination were not readily available, we were unable to estimate the overall savings that could have been realized by making greater use of barges. Most shipments went into bulk storage and lost their identity. It would have been extremely costly and time consuming for us to follow a particular shipment to its destination and to determine the actual transportation cost paid for any given lot of a commodity. For this reason, we used typical and usual origins and destinations in our comparisons.

To determine the availability of barges, we contacted four barge lines which provided service to the geographical areas involved. Officials of three barge lines informed us that they could provide barges on a seasonal basis if Commodity Office officials would discuss tentative requirements at least 60 days prior to the opening of a barge season. They also said that they could usually provide their regular customers with additional barges if unanticipated needs arose.

Two of the barge firms that we contacted operated barges on the Lower Mississippi, Illinois, Ohio, Tennessee, and Missouri Rivers. The other two firms did not operate barges on all these rivers but indicated they could supply barges or connecting service to the rivers on which they did not operate.

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We recognize that, because of logistical coordination, or other problems, the Commodity Office may not be able to use barges for all shipments where it appears there is potential. We believe, however, that barge transportation should be considered when it appears that savings in transportation costs may be possible.

SYSTEM FOR MANAGING AND SELECTING
TRANSIT CREDITS INADEQUATE

Transit privileges--a special service offered by railroads--provide significant dollar savings to the shipper of commodities that are moved into and out of intermediate storage or processing plants (transit points). Wheat, corn, barley, and the other unprocessed commodities managed by the Commodity Office customarily are shipped from facilities within the harvesting area to transit points--large elevators or storage terminals--and are later reshipped to ocean ports or final destinations.

A transit privilege allows the shipper to stop his shipment at one or more transit points between the origin and final destination, for storage, assembly, or other processing, and to re-ship to final destination at the through rate. Although there may be two or more separate moves, the transportation from origin to destination is considered as if it were an uninterrupted movement. Instead of applying the sum of the local rates to and from the intermediate point at which the stop is made, the through rate from origin to destination, which is usually lower, is charged.

The procedure for controlling the application of transit privileges is relatively simple. The rail carriers, upon the request of the shipper, establish a transit credit account for each transit point. When inbound shipments are received at the transit point, a transit credit is recorded. When the shipment is outbound, the transit credit is applied and only a balance rate is charged--the balance rate being the difference between the amount already paid for the inbound shipment and the amount which would have been charged for the shipment direct from the harvesting area to the final destination.

We found that the Commodity Office's system of managing and selecting transit credits for application was inadequate, and not all factors required to select the optimum credits were being considered. Further, records on transit credits applied in past transactions were generally destroyed which prevented testing to determine whether the best transit credit had been used.

When selecting which transit credit to apply to a particular outbound shipment, several factors should be considered if the agency is to receive the maximum benefits from the transit privilege. The Commodity Office's procedural manual stipulates that the age, origin, route of movement, and amount already paid are the considerations that must be evaluated.

Age is important because transit credits expire if not used within a stipulated time. Origin of the inbound shipment must be considered because the rates from all harvesting areas to any given destination are not the same. Substantial savings could be achieved from the selection of the most advantageous origins. Route of movement is also important. Different carriers and combinations of carriers offer varying rates, and the analytical selection of carriers can produce further economies. Finally, for several reasons, including sale of commodities at the transit point, transit credits may not be used; therefore an attempt should be made to insure that those credits with the highest paid-in values are used.

The Commodity Office's Traffic Management Division is responsible for managing the Commodity Credit Corporation's transit inventory and for selecting the transit credits to be applied on its shipments. Commodity Office officials told us that transit selections were generally made by three freight rate specialists, who did not record the factors considered, the analysis made, or the basis for the selection. We were told also that reports showing the value of transit credits at a particular warehouse, based on shipment to probable destinations, were occasionally furnished to management for decision-making purposes but that there were no reports which would provide a basis for evaluating transit selection operations.

Consequently, controls over transit selections were, for the most part, limited to supervisory review at the time of selection.

As of July 16, 1971, transit data from freight bills was recorded in 645 warehouse summaries and about 10.6 billion pounds of grain was recorded for transit, which represents an asset of significant potential value. The warehouse summaries, which were used in selecting transit credits for application on outbound shipments, were marked or annotated to show the transit applied on loading orders previously issued. However, we found that the older summaries and other related reports were generally destroyed after the summaries and reports were updated to reflect current inventory data. As a result, we could not use statistical-sampling techniques to analyze and evaluate transit applied on past shipments.

We selected six current loading orders and related warehouse summaries for detailed analysis to determine whether the Commodity Office had selected the most favorable transit balances and effectively reduced transportation costs. A warehouse summary for one order showed that transit yielding the lowest balance had been selected. We reviewed the application of transit credits on the other five loading orders and found that the total transportation cost of \$112,000 could have been reduced about \$17,000 by applying other available transit credits. The Commodity Office saved significant transportation costs on these shipments by using transit privileges rather than by using separate rates for each segment of the transportation; but our review indicated that greater savings could have been attained on these shipments if the most advantageous transit credits had been used.

We recognize that the additional savings we identified had not necessarily been lost. They could be regarded as deferred--to be realized, in whole or in part, at some later date by application to other shipments. If transit credits which provided the lowest rates were subsequently used on shipments to the same destination, the value of the transit in such cases would remain the same with the exception of possible extension charges and the additional savings would generally be realized at the later

date. But there would be a premature demand on the agency's cash and possibly increased interest costs to the Government in the borrowing of funds. Also, the value of the most advantageous transit credits could change, and the savings could be reduced or lost if the transit was subsequently used on shipments to other destinations or was canceled.

We selected 63 warehouse summaries--current listings and older listings which had not been destroyed--and briefly reviewed the transit credits that were selected on 116 loading orders issued during fiscal years 1969 through 1972. Consideration of all factors--age, origin, route, and paid-in value--was evident on only 14 percent of the shipments reviewed. Instead, age appeared to be the primary consideration on 69 percent of these orders. The older transit credits were consistently selected for application.

The Commodity Office issued about 18,900 loading orders for about 305,200 carlots of grain during fiscal year 1970. Transportation costs amounted to \$55 million, and transit credits were surrendered on about 185,600 carlots, or 61 percent of the total. We believe, therefore, that the selection and application of the best transit credits could have a significant impact on transportation costs and the system needs to be improved.

AGENCY COMMENTS

When we brought our findings regarding the use of barges to the attention of Commodity Office officials, they said that it was their policy to use the least-cost mode when shipping commodities and that barge transportation had been considered in overall planning rather than on an individual-shipment basis. However, there was no documentation to this effect. When we asked whether there had been any contact with barge lines or grain firms on obtaining barges, they said there had been no contact during the past 4 years.

The Director of the Commodity Office informed us that there would be opportunities to ship more grain by barge in the future and that the Commodity Office would attempt to accomplish potential barge movements through grain firms or barge lines.

We also discussed our findings on transit with the Director. He said his staff had done a good job of selecting transit credits for application, particularly in view of personnel ceilings and funding and time restraints. He agreed that, under the current practices, it was impossible to evaluate the transit selection process and there was no control, other than reliance upon the technical expertise of his staff, to insure that the transit selected was effective in reducing transportation costs. He stated that the only practical way to insure that optimum value is obtained through transit selection is through automation and the use of linear programming. He said that the recommendation of an Agriculture Stabilization and Conservation Service Transportation Task Force study completed in February 1972 paralleled our conclusions that the manual system of analyzing and selecting transit needed to be improved.

CONCLUSIONS

We believe there is potential for greater use of barge transportation at substantial savings if, during advance planning, the Commodity Office places more emphasis on moving grain by barge when grain is located reasonably close to a navigable river. The Minneapolis branch office has demonstrated that the use of barges is both feasible and economical.

We recognize that, because of logistical coordination, or other problems, the Commodity Office may not be able to use barges for all shipments where it appears there is potential. We believe, however, that barge transportation should be used to realize potential savings in transportation costs.

We believe the current system of managing and applying transit credits is inadequate. Because internal control over transit selections is limited primarily to supervisory review, there is no assurance that the application of transit credit is effective in reducing transportation costs to a minimum.

We recognize that the most advantageous transit credits cannot always be manually determined in a timely manner with current staffing. Accordingly, we believe that, in view of the size and complexity of the transit inventory and rail

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tariffs and the workload and computations required, automation of the transit function and use of linear programming may be the only practical method of optimizing transit selection.

RECOMMENDATIONS

We recommend that the Commodity Office use barge transportation to the fullest extent possible where economically feasible and consistent with program needs. We recommend also that consideration be given to automating the transit management function as recommended in a study by the Agriculture Stabilization and Conservation Service Transportation Task Force. In the interim, we recommend that all applicable factors be considered in transit selection and that controls be implemented to permit management evaluation of the effectiveness of this selection process.

Sincerely yours,

Henry Eschwege

Henry Eschwege
Director