Evaluation of Alternatives to Commodity Donation in the National School Lunch Program:

Executive Summary

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submitted to:
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Food and Nutrition Service
U.S. Department of Agriculture

1986

The research reported herein was performed pursuant to Contract No. 53-3198-1-112 with the U.S. Department of Agriculture, Food and Nutrition Service, Office of Analysis and Evaluation. Contractors undertaking such projects under government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not necessarily represent official U.S. Department of Agriculture position or policy.
EXECUTIVE SUMMARY

STUDY BACKGROUND

Schools participating in the National School Lunch Program receive two forms of Federal support from the U.S. Department of Agriculture: (1) cash subsidies and (2) donated agricultural commodities purchased under price support and surplus removal legislation. During Fiscal Year 1985, schools in the National School Lunch Program served 3.9 billion meals, received Federal cash support of $2.2 billion, and received donated commodities valued at $796 million.

What would happen if the Federal system of distributing agricultural commodities to schools participating in the National School Lunch Program was replaced by a different system which provided schools more control over which foods are purchased? How would national agricultural markets be affected? How would the quantity and types of food used in school lunches be affected? What would happen to the cost of operating the school lunch program? How would other Federal programs that receive donated commodities be affected? These and other related questions were posed by Congress when it mandated a demonstration project as part of the 1981 Appropriations Bill for Agriculture, Rural Development, and Related Agencies (Public Law 96-528) to test two alternatives to commodity donation.

ALTERNATIVES TO COMMODITY DONATION

The first alternative consisted of replacing donated commodities with a cash subsidy equivalent to the Department of Agriculture's outlay for donated commodities. In School Year 1984-85 this outlay was 12¢ for each reimbursable lunch served in the National School Lunch Program. As long as the cash was used for allowable food service expenses, schools were allowed to spend the funds as they desired. This system gave schools complete control over the food they acquired.

The second alternative system involved replacing donated commodities with "commodity letters of credit" equivalent to the Department of Agriculture's outlay for donated commodities. Again, this outlay was 12¢ for each reimbursable lunch served in the National School Lunch Program. Letters of credit were issued for the same commodities that the Department of Agriculture was buying for donation. Schools then used the letters of credit to purchase the targeted commodity, in whatever form they desired, from local vendors within a fixed time period. This system was intended to allow the Department of Agriculture to retain control over the types of commodities removed from the market, while giving schools discretion over the location of purchase, form of the food, packaging, and timing of delivery.
RESEARCH APPROACH

To evaluate the three systems—cash, letters of credit, and the commodity program—96 school districts from 29 states across the nation participated in a four-year demonstration project. Two-thirds of the school districts were assigned to either the cash or letter-of-credit systems while one-third of the districts continued to receive donated commodities, serving as a comparison group. Over 1,400 schools are in the participating school districts, and during School Year 1984-85 they served some 75 million school lunches to more than 825,000 children—one out of every 50 children in the country.

The first year of the study (School Year 1981-82) was a baseline period during which all participating school districts received donated commodities. Data from the baseline year provide a "starting point" for each school district. The second year of the study (School Year 1982-83) was a start-up year, a time when school districts learned to implement the cash and letter-of-credit procedures and to comply with the data needs of the evaluation. During the third year of the study (School Year 1983-84) cash and letters of credit were supplied in place of entitlement commodities but not in place of bonus commodities. Therefore, the cash and letter-of-credit systems operated in a "mixed" mode, with the entitlement portion of the commodity subsidy being provided in the form of cash and letters of credit, and the bonus portion of the commodity subsidy being provided in the form of donated commodities. Finally, during the fourth year of the study (School Year 1984-85) cash and letters of credit were provided in lieu of both entitlement and bonus commodities. The level of bonus commodity subsidy provided was determined by the value of such commodities used by each school district during the study's baseline year (School Year 1981-82).

DATA COLLECTION

To provide information on the effectiveness of the cash and letter-of-credit systems, data were collected from the participating school districts during School Years 1981-82 through 1984-85. The data needed for the evaluation included information in the following areas.

- The types, quantities, and cost of each school district's food purchases and commodities received during each month of the study, and of each school district's food inventory at the beginning and ending of each school year.

- The costs of operating the school feeding programs in each school district, including information on the costs of food, labor, storage and transportation of food, and miscellaneous costs; as well as information on all staff contributing to school feeding operations, their wages, amount of time worked and estimates of how their time was spent.
• The operations of each school district's food service program including numbers of meals served and students enrolled, types of food service, use of commodities, and a host of related questions.

• School district food service managers' perceptions of the effectiveness of the cash, letter-of-credit, and commodity donation systems.

DATA ANALYSIS

This study compared school districts receiving cash or letters of credit with school districts receiving donated commodities. Comparisons were made on measures such as the types and quantities of food acquired for use in the National School Lunch Program, and the cost of operating the school feeding programs. Measures from the study's baseline year (School Year 1981-82) for each of the three groups of school districts were compared with measures averaged across two subsequent years (School Years 1983-84 and 1984-85). Data from School Year 1982-83 were not included in the analysis since that year was a start-up period. A statistical technique known as "multiple regression analysis" was used to "hold constant" extraneous factors such as school district size so that the best possible estimate of the effect of the cash and letter-of-credit systems could be obtained.

FINDINGS

The highlights of the major study findings are grouped into seven areas of inquiry: food acquisition, nutritional implications, agricultural markets, program operating costs, student participation, administrative feasibility, and consequences for other recipients of donated commodities.

EFFECTS ON FOOD ACQUISITIONS

Before presenting the findings in this area, it is important to understand that the three alternatives being compared consist of two parts: (1) the "system" under which school districts receive their commodity entitlement (commodity program, commodity letters of credit, and cash-in-lieu of commodities), and (2) the "value" of the commodity entitlement received by the schools.

Under the cash and letter of credit systems, school districts received a subsidy worth 12¢ per school lunch—an amount equivalent to the cost to the Federal government of acquiring surplus commodities and transporting them to designated state locations (e.g., warehouses). On the other hand, school districts under the commodity system received quantities of surplus food such as canned peaches, frozen ground beef, etc. The "value" of the subsidy under the commodity system is not what it cost the Department of
Agriculture to buy and ship the food, but what it would cost the school districts to replace the food with similar products purchased locally. Because the donation of food frees up resources that can be used by the school district for other purposes, the value of the subsidy in the commodity system is the market value of the donated commodities, i.e., the value of the freed-up resources.

This difference in the value of the subsidy occurs because school districts participating in the letter-of-credit and cash systems use their cash and letters of credit to purchase food through local commercial vendors. These purchases embody several costs (e.g., intra-state storage and transportation) that are not included in the Department's outlay of 12¢ per lunch. Comparable costs exist for donated commodities, but instead of being paid out of the Department's commodity expenditure, they are borne elsewhere (other Federal budgets, state agencies, school districts). Consequently, by design, the demonstration included not only a difference in the system of handling commodity donation, but also a difference in the value or benefit of the commodity entitlement received by school districts participating in the three systems.

Do Donated Commodities Supplement Local Food Purchases?

A central objective of the commodity donation program is to stabilize agricultural markets and improve farm incomes.Attainment of this objective is dependent on the extent to which school districts supplement or replace their own purchases with donated commodities and the extent to which the Department of Agriculture and schools acquire processed or prepared foods rather than basic agricultural commodities.

For the most part, the Department's commodity subsidy supplements local food purchases, achieving the desired effect regardless of the system under which school districts receive the subsidy. Given existing levels of commodity donations and local food purchases, the addition of $1.00 of entitlement commodities, letters of credit, or cash in lieu of commodities would add $.81 to the value of food acquired by school districts. Similarly, the addition of $1.00 of bonus commodities would add $.73 to the value of food acquired by school districts. It should be understood that this level of supplementation occurs "at the margin." That is, an additional dollar of commodity entitlement would add $.81 to the value of food acquired by school districts.

For bonus commodities, each dollar adds about 73¢ when the subsidy is provided as either donated commodities or letters of credit. Receiving the bonus portion of the commodity subsidy as cash lowered the supplementation rate from 73¢ per dollar of bonus received to 39¢ per dollar of bonus received. This occurred because under the cash system, school districts were able to draw down existing commodity inventories (largely butter and cheese). In the long run, school districts under the cash system would deplete these inventories and would likely purchase more food per lunch than they did during School Year 1984-85.
What Was the Market Value of the Commodity Subsidy Provided to School Districts Operating Under the Three Systems?

Under the commodity donation program, schools acquire about 71¢ worth of food per lunch. Of this amount the Department of Agriculture provides about 21¢ (30 percent) through commodity subsidies: approximately 13¢ in entitlement commodities and 8¢ in bonus commodities (Exhibit 1). The market value of the Federal entitlement subsidy provided to participating school districts was lower under the cash and letter-of-credit systems than under the commodity system.

The market value of the entitlement subsidy received under the cash and letter-of-credit systems was determined to be about 3¢ per lunch lower than the market value of the entitlement commodities received under the commodity system. To the cash and letter-of-credit school districts, the 3¢ reduction in the market value of their entitlement represents a real loss, a loss that is attributable to the fact that the full value of donated commodities is not represented by the Department's outlay for commodity purchases. It is not attributable to any differences among the cash, letter-of-credit, and commodity systems per se.

Exhibit 1

Market Value of Food Acquisitions

1 Schools provide several types of meal service in addition to lunches --breakfasts, a la carte items, and others. This study has used a statistical procedure to translate all types of meals into the common metric of "lunch equivalents." For the sake of simplicity these are referred to as "lunches" in this summary.
The market value of the bonus subsidy received under the cash and letter-of-credit systems was about the same as under the commodity system. This was the case because during School Year 1983-84, cash and letter-of-credit school districts received bonus commodities. During School Year 1984-85, when cash and letter-of-credit school districts received bonus cash and bonus letters-of-credit, they were able to augment their bonus receipts by participation in the National Commodity Processing System.

**What Effect Did the Reduced Value of the Commodity Subsidy Have on the Market Value of Food Acquired?**

Given the 3¢ per lunch reduction in the market value of the commodity subsidy noted above, the study found that the system by which school districts received their entitlement--commodity, letters of credit, or cash--had no effect on the total market value of food acquired per lunch. If the market value of the entitlement had been the same for all three groups, there would have been no difference among the three systems in the market value of food acquired. However, because the market value of the entitlement received by the cash and letter-of-credit school districts was about 3¢ per lunch less than that of the commodity school districts, the cash and letter-of-credit schools augmented purchases out of their own funds by about 1¢ per lunch, leaving a net reduction of about 2¢ per lunch in the market value of food acquired per lunch.

While the cash and letter-of-credit school districts clearly experienced a reduction in the value of the subsidy received from the Department of Agriculture, there was no commensurate saving for the Department. The reduction in food acquisitions came not from school outlays for food, which actually increased by 1¢ per lunch under the cash and letter-of-credit systems. Nor did it come from reduced commodity outlays, which were set equal to the Department's per-lunch reimbursement for each year of the study. Rather, the reduction occurred because the market value of the entitlement commodities given to commodity schools in the demonstration was greater than the market value of the entitlement subsidies given to cash and letter-of-credit schools. The potential savings arising from the reduction in per-lunch food acquisitions under the cash and letter-of-credit systems are spread across those cost elements of the commodity system that are not accounted for by the Department's commodity outlay, e.g., Federal administrative expenditures associated with the acquisition of commodities, state expenses associated with administration of the commodity program and with warehousing of commodities, and state and local expenditures for the transportation of commodities.

**Do the Cash and Letter-of-Credit Alternatives Provide a More Equitable Distribution of Commodity Subsidies?**

Contrary to expectation, there was substantial variation in the market value of the entitlement commodity subsidy received by school districts under the commodity donation program. The market value of the average entitlement subsidy (entitlement commodities delivered to schools, excluding any refused commodities) was about 13¢ per lunch. However, several school districts received over 17¢ per lunch in entitlement while several others received less than 9¢ per lunch. Some of this variation could have occurred because the entitlement subsidy as measured in this study is the market value of the commodities actually delivered to school districts, not of the commodities offered to school districts. However, there is no way of estimating the extent to which the observed variation is attributable to school district refusals of commodities. During the
modity subsidy to certain classes of food, but allows school districts the flexibility to specify the type of targeted food, the packaging, and the delivery date. The commodity system is the least flexible from the school districts' perspective. Decisions on purchasing, packaging, and delivery are all made centrally, by the Department of Agriculture. An additional constraint imposed under the commodity system stems from the fact that receipt of donated commodities affects the type of foods that school districts purchase with their own funds.

The flexibility of the cash and letter-of-credit systems allowed school districts to make changes in the mix of foods within commodity categories (e.g., within beef, within chicken, etc.). Under these systems, school districts purchased foods which were in a more ready-to-use state (more processed or prepared) than school districts operating under the commodity donation program. This was especially the case for chicken, turkey, and vegetable products. On average, commodity school districts expended about 52¢ of every food dollar for "value added costs" (i.e., the difference between the cost of the farm-level ingredients and the wholesale prices paid by the schools). The cash and letter-of-credit systems increased the portion of the food dollar spent on processing and distribution by about 3¢--a relative increase of almost 6 percent.

Several changes in food acquisition patterns were observed during the demonstration. Some of these hold across all three groups of school districts, indicating general trends in school food purchasing. These include a shift away from red meat and poultry along with a demand for more processed kitchen-ready items; increased acquisitions of prepared items, especially pizzas, Mexican entrees, and bakery goods; overall decreases in acquisitions of fruits but increases in the demand for fruit juices; and decreased acquisitions of dairy products, especially fluid milk.

Where there were such general trends in school demand, school districts operating under the commodity program were less able to adjust their food buying than school districts under the cash and letter-of-credit systems. Donations of beef, whole and cut-up chicken, flour, etc., limited the ability of school districts to tailor their food purchasing in response to external factors such as changing prices and competition from lunch alternatives (e.g., fast food establishments or changing dietary preferences).

There were many other changes in food acquisitions stemming from implementation of the cash and letter-of-credit systems. Relative to school districts under the commodity program, cash and letter-of-credit school districts acquired more prepared pizza, Mexican entrees, bread and rolls, sweet rolls, margarine, retail cuts of beef, breaded beef products, hams, cooked and breaded chicken products, fresh apples and bananas, non-citrus juices, and french fried and formed potatoes. The cash and letter-of-credit school districts also acquired less rice, flour, pizza shells, soybean oil, ground beef, whole and cut-up chicken, turkey roasts, prunes, raisins, applesauce, sugar and honey. It also appears that under the cash system, school districts began to alter their food acquisitions in ways that seem to be an attempt to increase a la carte revenues. This included increased acquisitions of cookies, pies, chips and pretzels.

Finally, in School Year 1984-85 cash and letters-of-credit were substituted for bonus commodities. School districts under the letter-of-credit system were required to expend their bonus dairy letters of credit on dairy products. In doing so, they reduced acquisitions of donated-type products such as processed and cheddar cheese, non-fat dry milk and butter, and increased acquisitions of different types of dairy products--cottage cheese, swiss cheese, yogurt, and especially ice cream. School districts under the cash
system had no constraints on the use of their bonus cash, and so they reduced their acquisitions of dairy products across the board by relying on previously acquired inventories of butter and cheese.

**NUTRITIONAL IMPLICATIONS OF CHANGES IN FOOD ACQUISITIONS**

In addition to encouraging consumption of agricultural commodities, the National School Lunch Program is mandated to "safeguard the health of the nation's school children." Because the cash and letter-of-credit systems led to changes in the types of food acquired for use in the school lunch program, it is important to consider the nutritional implications of these altered purchasing patterns.

What are the Nutritional Implications of the Changes in Food Acquisitions Under the Cash and Letter-of-Credit Systems?

The clearest nutritional implication of a switch from the commodity donation program to a cash or letter-of-credit system is an increase in the level of sodium contained in the foods acquired for use in the National School Lunch Program. This is attributable to relatively greater acquisitions of prepared foods (e.g., breaded chicken and beef products, bakery items, formed potatoes) by school districts under the cash and letter-of-credit systems.

There was also a decrease in the availability of fat from the foods acquired under the cash and letter-of-credit systems, attributable principally to decreased butter acquisitions.

It is possible that there was a decrease in the iron contained in the foods acquired under the cash and letter-of-credit systems, but the evidence is mixed. Finally, it is likely that the observed changes in food acquisitions would have no net nutritional implications for Vitamin A, Vitamin C, calcium, sugar, or fiber.

**EFFECTS ON AGRICULTURAL MARKETS**

Three issues have been raised by those who are concerned that a cash or letter-of-credit system would impair the Department of Agriculture's ability to support farm prices and incomes. The first is that national implementation of a cash or letter-of-credit system would eliminate a major outlet for the distribution of some surplus commodities, principally dairy products, which the Department of Agriculture accumulates in the operation of its price support programs. While a reduced demand for these manufactured dairy products would not affect market prices, it would result in the government incurring additional procurement, processing, storage, and handling costs. The second issue is that alternatives to commodity donation might lead to reduced market purchases of certain commodities and, as a result, to lower farm prices. The third issue, not addressed in this study, is the extent to which the commodity program and the cash or letter-of-credit alternatives can provide time-sensitive relief to specific commodity markets. Commodity program supporters claim that a strength of the current program is its ability to make spot removals of certain crops, e.g., peaches, on short notice. The
demonstration, such variation did not occur under the cash and letter-of-credit systems where, by definition, the market value of the entitlement subsidy was set at a fixed amount per lunch.

As a consequence, even though the cash and letter-of-credit school districts experienced an average $3 per lunch loss in the market value of their entitlement subsidy, the finding that there is large variation in the market value of the entitlement received under the commodity donation program means that under a national cash or letter-of-credit system, some school districts would experience more than a $3 per lunch loss in market value while others would actually receive a higher market value than they did under the commodity program.

Did the Cash and Letter-of-Credit Systems Allow School Districts to Reduce the Size of Their Inventories?

Food in school district inventories is available for use in food service programs during the school year. At the start of the demonstration, participating school districts held a substantial amount of food in inventory—an average of $13 per meal, or 18 percent of the market value of all food acquired during the year. Over 80 percent of the foods in inventory were donated commodities; less than 20 percent were commercially purchased foods.

Proponents of cash and letters of credit had argued that these systems would allow school districts to greatly reduce and eventually eliminate their inventories of donated commodities. Evaluation findings support this contention, in that cash and letter-of-credit schools made a 50 percent reduction in inventories during the start-up year of the demonstration (i.e., School Year 1982-83). During School Year 1983-84, the rate of inventory use was the same for all three demonstration groups. However, in School Year 1984-85 the receipt of cash and letters of credit for bonus commodities enabled school districts to further draw down their inventories of bonus commodities (Exhibit 2). While the letter-of-credit schools partially replaced commodity inventories with commercially purchased dairy products, the cash schools did not, leading to a substantial net reduction in inventories and a decrease in the amount of food acquired as inventories were used to supplement food purchases.

All three groups of school districts reduced their inventories of donated commodities during the course of the demonstration project, but the reductions were much greater under the cash and letter-of-credit systems. From the start of School Year 1981-82 to the end of School Year 1984-85, donated commodity inventories dropped by 34 percent under the commodity system, 85 percent under the letter-of-credit system, and 78 percent under the cash system.

What Changes Did Cash and Letter-of-Credit School Districts Make in the Type and Quantity of Food Purchased for Use in School Feeding Programs?

The three systems examined in this study offer school districts different degrees of flexibility in determining the types of food to be acquired for the National School Lunch Program. Under the cash system, school districts have complete control over their food purchases. The letter-of-credit system targets the school districts' com-
Exhibit 2

Market Value of Foods Held in Inventory

Commodity

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KEY

Locally Purchased Foods

Donated Commodities
present evaluation provides no evidence to support or refute this claim, however, it is clear that the ability of a letter-of-credit or cash system to respond in such time-sensitive situations would be limited.

Finally, there is an important consideration which the reader must keep in mind when reviewing the findings presented below: the results are dependent on both the types and quantities of commodities that were donated and the underlying market conditions that existed during the period of this study. If the Department's donations or market prices were to change significantly in the future, different effects might be found. This is particularly true for those commodities that are not a regular part of commodity donations and that are not typically purchased by schools for use in the National School Lunch Program (e.g., blueberries).

How Much Does the National School Lunch Program Contribute to the Agricultural Economy?

The National School Lunch Program can affect the agricultural economy in two ways: through market purchases of food, and by providing an outlet for surplus commodities acquired by the Department of Agriculture. Under the commodity donation program, approximately 71 percent of the value of food acquired for use in school feeding programs is purchased by schools from commercial vendors. These purchases are estimated to be approximately $2.4 billion or 2.8 percent of total annual household expenditures for food away from home. In addition, the National School Lunch Program has supported the domestic agricultural economy by serving as a major outlet for food acquired through price-support and surplus removal programs. In School Year 1981-82, the market value of such donations (i.e., valued at the price a school would have to pay for the same item) is estimated to be $991 million. In total, the value of food acquired for use in schools is equal to approximately $3.4 billion or about 4 percent of national expenditures for food away from home. It should be understood that for most agricultural commodities total school demand is small relative to total production, on average less than 1 percent.

What Would be the Effect on Agricultural Commodity Markets of a National Cash or Letter-of-Credit System?

Implementing a national letter-of-credit program would reduce the demand for beef by 107.7 million pounds (this represents about 0.3 percent of total domestic production), chicken by 30.8 million pounds (0.2 percent of total production), pears by 18.4 million pounds (2.4 percent), and sweet potatoes by 15.1 million pounds (1.2 percent). At the same time, a letter-of-credit system would increase the demand for field corn by 58 million pounds (0.1 percent), palm by 16 million pounds, cottonseed by 5.5 million pounds, and cassava by 0.15 million pounds.

Implementing a national cash program would reduce the demand for beef by 96.5 million pounds (0.3 percent), chicken by 49.9 million pounds (0.3 percent), milk by 634.0 million pounds (0.5 percent), peanuts by 24.2 million pounds (1.1 percent), pears by 18.4 million pounds (2.4 percent), blueberries by 2.7 million pounds (9.0 percent), spinach by 8.1 million pounds (2.8 percent), sweet potatoes by 11.2 million pounds (0.9 percent), tomatoes by 148.7 million pounds (1.0 percent), and dry peas by 4.8 million pounds (0.1 percent).
percent. But a cash system would increase the demand for palm by 17.3 million pounds and cottonseed by 7 million pounds.

For most of these commodities, the aggregate effect on prices and farm receipts is expected to be small in relation to the size of the overall market. This is the case for beef in general, chicken, vegetable oils, peanuts, sweet potatoes, tomatoes, and dry peas. This is not to say that there would be no consequences of a move to a cash or letter-of-credit system. The estimated decline in beef demand would be concentrated in a comparatively small segment of the beef industry (cow beef) where there could be more serious dislocations.

For milk, the consequences of the reduced demand under a cash system would not be lowered production or producer prices. The current surplus situation (which is expected to remain in the near future) guarantees producers an outlet for their milk at fixed prices. Where the effect would be seen is the cost of the Federal dairy price support program. Commodity Credit Corporation takeovers would increase by an amount equal to the drop in demand, adding $95 million to existing expenditures (an increase of 4.3 percent). It should be noted that this analysis does not take into account the changes mandated by the Food Security Act of 1985.

Although no overall change in milk demand was noted under the letter-of-credit system, there were marked shifts in the mix of dairy products used—more fresh products (e.g., yogurt and ice cream) and less Commodity Credit Corporation storable products (e.g., cheddar cheese, butter, dry milk). This difference would have significant regional implications. Demand would decrease in Minnesota and Wisconsin and increase in the producing areas nearest to the source of the demand (i.e., school districts).

For pears and blueberries, the estimated decline in demand under a cash system is large relative to the total supply, especially that portion used for processing purposes (the primary form of school acquisitions). For donated commodities such as blueberries, a cash system would almost certainly entail an associated impact on the agricultural market. Schools simply do not buy blueberries in any significant quantity. Therefore, blueberry donations provide almost complete supplementation to existing school purchases and, if provided in large enough quantities, are bound to produce a substantially different level of market support than a cash system.

EFFECTS ON OPERATING COSTS

Total annual operating costs of the National School Lunch Program (inclusive of Federal, state and local costs) were approximately $6.9 billion in Fiscal Year 1984. This includes the cost of food purchases, the market value of donated commodities, local labor for food preparation and service, transportation and storage, and Federal and state administrative overhead. Almost half of these costs are financed by Federal cash subsidies and donated commodities. States and school districts also provide subsidies of varying sizes. Finally, the school lunch program is financed by revenues stemming from sales of lunches, a la carte items, and other food sales to children and teachers.
What was the Effect of the Cash and Letter-of-Credit Systems on School District Food Costs?

At the start of the demonstration, in School Year 1981-82, the average cost of producing a lunch across all school districts was $1.37, with food costs accounting for 52 percent of the total (71¢ per lunch, Exhibit 3). As discussed above, the market value of the donated commodities given to school districts participating in the commodity donation program during the demonstration (School Years 1983-84 and 1984-85) was about 3¢ per lunch higher than the per-lunch subsidy given under the cash and letter-of-credit systems. To partly offset this difference in the value of the subsidy, cash and letter-of-credit school districts increased their own outlays for food during the demonstration by about 1¢ per lunch, leading to about a 2¢ per lunch net reduction in the value of food acquired under the cash and letter-of-credit systems.

What was the Effect of the Cash and Letter-of-Credit Systems on School District Labor Costs?

Labor costs account for 39 percent of total costs (54¢ per lunch in School Year 1981-82) and were unaffected by the cash and letter-of-credit systems, despite a shift in those school districts to the use of more highly prepared foods. Because cash and letter-of-credit school districts purchased more highly prepared and processed foods than schools under the commodity donation program, labor costs for food preparation were expected to decrease. However, labor costs were not reduced, in part because cash and letter-of-credit schools knew that they were participating in a demonstration that would...
end after a few years. Although the possibility exists that the cash or letter-of-credit systems will become national policy, school food service managers reported that they were not willing to make major changes in kitchen staff or equipment that would have to be reversed in the event of a return to donated commodities. Therefore, although labor savings were not seen during the demonstration, the move to more ready-to-use foods indicates that such savings may be realized under permanent implementation of either the cash or letter-of-credit systems. It is likely that school districts did, indeed, reduce labor costs associated with the storage and transportation of donated commodities. However, in this study such a savings was classified as a savings in storage and transportation costs rather than in labor costs.

**What was the Effect of the Cash and Letter-of-Credit Systems on Storage and Transportation Costs and on Miscellaneous Costs?**

Storage and transportation costs averaged slightly more than 3¢ per lunch during School Year 1981-82, about 2 percent of total costs. The letter-of-credit and cash systems led to reductions in these costs, because fewer commodities had to be delivered or picked up (less transportation) and because commodity inventories were reduced (reduced storage). Savings were 1.5¢ per lunch under the letter-of-credit system and 1.7¢ per lunch under the cash system. Although small in absolute magnitude, these are large decreases relative to storage and transportation costs at the beginning of the study--about 50 percent.

Miscellaneous costs, accounting for 7 percent of the total (9¢ per lunch in School Year 1981-82) were unaffected by the cash and letter-of-credit systems. However, the savings observed in storage and transportation might lead to long-run declines in related equipment purchases, rental, and repairs, and hence, to possible long-run savings in these miscellaneous costs.

**EFFECTS ON STUDENT PARTICIPATION IN THE NATIONAL SCHOOL LUNCH PROGRAM**

Proponents of the cash and letter-of-credit systems hypothesized two ways in which these systems were expected to lead to increased participation in the school lunch program. The first way is that school districts would be able to exert substantially more control over the foods used in meals than they could under the commodity program. This would presumably lead to more appealing meals, and hence to higher participation. The second argument was that these systems would allow school districts to reduce their operating costs which would eventually result in lower meal prices, leading to increased participation in the long run.

**What was the Effect of the Cash and Letter-of-Credit Systems on Student Participation in the National School Lunch Program?**

At the start of the demonstration (School Year 1981-82) school lunch participation rates across all three groups of school districts were 88 percent for children approved to receive free lunches, 72 percent for children approved to receive reduced-price lunches, 49 percent for children who paid for their lunches, and 59 percent in
aggregate. When participation rates were examined by income-eligibility category (free, reduced-price, paid) the cash system was found to have no effect on any of these participation rates. The letter-of-credit system had no effect on participation rates for children qualifying for full-price or reduced-price meals, but increased the participation rate for children approved to receive free lunches. However, the interpretation of this increase is speculative. Several hypotheses were examined statistically to account for this change in participation but none had any real explanatory power. Overall, the cash and letter-of-credit systems had no impact on total student-level participation in the National School Lunch Program.

ADMINISTRATIVE FEASIBILITY OF THE ALTERNATIVE SYSTEMS

Several questions have been raised about potential problems that might arise in implementing and administering cash or letter-of-credit systems on a national basis. The ability of some 30 school districts to operate a cash system and 30 others to operate a letter-of-credit system for three years during the demonstration with very few problems makes it clear that either system (as implemented in this demonstration) is administratively feasible from the school districts' perspective. However, some changes in the procedures used in this demonstration would be likely for any national cash or letter-of-credit system, and it would be easy to make either a cash or letter-of-credit system infeasible or extraordinarily expensive simply by imposing requirements that are difficult to meet. For example, a minimal level of monitoring has been assumed for a letter-of-credit system. If it was deemed essential to impose very strict monitoring requirements, such as ensuring that purchases are of domestic origin, a letter-of-credit system may be infeasible (it should be noted that it has not proved feasible to monitor such a requirement for regular school lunch program purchases).

What is the Most Feasible Way to Administer National Cash and Commodity Letter-of-Credit Systems?

Replacing donated entitlement commodities with cash would simply involve an increase in the existing National School Lunch Program meal subsidies by an amount equivalent to the Department's per-lunch outlay for entitlement commodities. For example, the reimbursement rate for free meals would be increased by 12¢ per lunch, from $1.255 to $1.375. The combined funds would be disbursed and monitored through the existing school lunch payments system.

A national commodity letter-of-credit system would be more complex. First, the Department of Agriculture would be required to determine, in advance of the school year (1) the specific commodities to be acquired and the allocation of appropriated funds to each commodity, (2) the timing of the issuance and redemption of letters-of-credit for each commodity, (3) a list of "full credit" items that could be purchased for each letter-of-credit, and (4) if allowed, a list of permitted "partial credit" food items with their associated standard formulations. Next, the amounts budgeted for each commodity would have to be allocated to individual states, probably proportional to their relative share of all National School Lunch Program meals. States would then issue letters-of-credit to eligible recipient agencies. On a monthly basis, school districts would be required to submit a report on their expenditures against each issued letter-of-credit. To support these claims for reimbursement, school districts would be required to maintain
appropriate documentation that would be subject to audit under the existing Assessment, Information and Monitoring System.

Bonus commodities would, in all likelihood, continue to be distributed to school districts which received their entitlement subsidy under a cash or letter-of-credit system. This responsibility would remain with the states either through direct shipment or through a market system such as the current National Commodity Processing System.

What Steps Would be Required to Make the Change from the Existing Commodity Donation Program to a National Cash or Letter-of-Credit System?

Congressional action would first be required to revise the necessary sections of the National School Lunch Act, the Child Nutrition Act of 1966 and Section 32 of PL74-320. Following passage of this legislation, the Department of Agriculture would have to promulgate new regulations, specifically revisions to Parts 210, 240 and 250 of Title 7, Chapter II of the Code of Federal Regulations. Given the time required to prepare the necessary docket, obtain internal review, clear the regulations through the Office of Management and Budget, obtain public comment, etc., it would take about nine months before implementation of either alternative could begin.

After regulations are issued, the two alternatives would entail significantly different periods of transition from the existing commodity program. National implementation of a cash system would entail the partial elimination of functional responsibilities at the Federal, state, and local levels as cash subsidies replace the acquisition and distribution of entitlement commodities, and to staff reductions at the Federal and state level as well as the reduction of state and local agency storage and transportation facilities with concomitant cost savings. However, maintenance of a distribution system for bonus commodities would minimize any such changes.

National implementation of a letter-of-credit system would require both the elimination of some existing and creation of some new administrative functions. As with the cash system, existing functions directly related to the distribution of entitlement commodities would be eliminated (a distribution system would still be required for bonus commodities). Unlike the cash system, the administration of a letter-of-credit system would require the initiation of new functions to develop, distribute, use and monitor this new form of Federal subsidy. Such a changeover would require approximately 18-24 months to develop new procedures and train Federal, state and school district staff.

In either case, the replacement of the entitlement commodity program with cash or letters-of-credit would require a transition period. Existing organizations would undergo a restructuring. School districts would trade the certainty of donated commodities for a system that requires careful fiscal management and a change in existing cash flow.
CONSEQUENCES FOR OTHER RECIPIENTS OF DONATED COMMODITIES

This evaluation focused on the effects of alternatives to commodity donation in the National School Lunch Program. However, many other programs receive donated commodities (e.g., the Child Care Food Program, the Commodity Supplemental Food Program, and the Summer Food Service Program), and such programs received a much larger share of all donated commodities during Fiscal Year 1985 (about 60 percent) than they did at the beginning of this evaluation (about 10 percent). Most of this increase is attributable to the implementation of the Temporary Emergency Food Assistance Program.

What Would be the Consequences for Other Recipients of Donated Commodities if the National School Lunch Program Moved to a Cash or Letter-of-Credit System in Lieu of Entitlement Commodities?

Even if the National School Lunch Program moved to a cash or letter-of-credit system in lieu of receiving entitlement commodities, the current level of bonus commodities in inventory make it likely that a system for the distribution of bonus commodities will remain. As long as such a distribution system is in place, the consequences of the school lunch program moving to a cash or letter-of-credit system for entitlement commodities should be minimal for other recipients of donated commodities.

As the stocks of bonus commodities become depleted the efficiency of a separate distribution system will lessen, and a change to either a cash or commodity letter-of-credit system for the National School Lunch Program combined with the elimination of a system for distributing bonus commodities would have important consequences for other recipients of donated food. As a result, Federal costs would probably be increased for some programs (e.g., the Commodity Supplemental Food Program and the Needy Family Program), some recipients could suffer a loss of benefits (e.g., charitable institutions) and the Department of Agriculture could lose its ability to distribute bonus commodities should the need arise in the future (e.g., the Temporary Emergency Food Assistance Program). To a large extent, the severity of these effects is dependent upon state-level decisions to maintain a commodity distribution program if schools were eliminated. The resulting decrease in the volume of donated commodities could substantially lower the efficiency of the remaining system.