ABSTRACT

Commodity foods are an integral part of Child Nutrition Programs (CNP). United States Department of Agriculture (USDA) purchased over 1.1 billion pounds of commodity food valued at over $800 million for CNP in school year 2005 (USDA, 2006a). Commodity programs serve a dual purpose to support agricultural producers and to provide food to schoolchildren (USDA, 2006a). Today’s commodity distribution program was established during the 1930s as a part of federal work and food assistance programs. Declining use of commodity programs by CNP led USDA to conduct a Business Process Reengineering (BPR) to renovate the program to increase utilization. This BPR resulted in commodity program improvements for schools, manufacturers, distributors, federal, and state government (USDA, 2000). These changes have been well received but are not used in all states.

The purpose of this paper is to provide a historical review of the commodity program. Based on this review, a need for research and future changes to the program will be identified. There is a need to remove non-value costs associated with commodity distribution and increase nationwide use of streamlined commodity distribution systems. A need also exists to educate state distribution agencies, CNP directors, and manufacturers on cost effective commodity practices. Since limited commodity program research currently exists, further study is needed to increase use of cost effective systems that allow purchase of nutritious products that are available through commercial distribution.

INTRODUCTION

The National School Lunch Program (NSLP) is a federally assisted meal program that provides nutritionally balanced, low cost lunches to school children (USDA, n.d.a). Commodity foods are provided at different reimbursement rates each year. In SY 2005-06, CNP received $0.175 in commodity food value for each qualifying lunch served that met nutrient guidelines established by USDA (USDA, 2006a). Schools participating in the NSLP must offer free or reduced-price lunches to eligible children and meals served must meet federal requirements to qualify for funding (USDA, 2003a). During SY 2005-06, schools received maximum cash reimbursement rates of $2.49 for each qualifying free lunch served, $2.09 for each reduced price lunch, and $.30 for each full price lunch served (USDA, n.d.b). These funds are used for administration of the NSLP.

According to the School Nutrition Association ([SNA], 2006), school foodservice operators purchased $7.2 billion in food products nationally, which accounted for 15% of the $47.1 billion non-commercial foodservice market for SY 2005. The school segment ranked as the third largest...
food purchaser in non-commercial foodservice (SNA, 2006). SNA reported USDA commodity foods account for 20% of the food dollars used by CNP.

**History of the Commodity Food Program**

The commodity distribution program began during the 1930s economic depression that brought widespread unemployment for many American families. With no means to support their families, many sought help through public assistance programs (Gunderson, 1971). The earliest federal aid provided labor for school lunch programs.

**Federal Agriculture Programs**

During the depression, farm production created surplus food supplies without adequate markets. Limited family income left schoolchildren hungry and the danger of childhood malnourishment became a national concern. The Federal Surplus Commodities Corporation was created to procure and distribute surplus foods to schools and needy families. In 1936, Congress allocated 30% of customs receipts each year to encourage domestic consumption of agricultural commodities, with schools a major distribution channel (Gunderson, 1971). This became the primary source of funds for commodity foods for CNP.

**State Administration of Federal Programs**

During the early 1940s, state commodity directors were hired by the federal government to expand CNPs in each state (Gunderson, 1971). The state commodity director worked with state and local school authorities, ordered food, arranged proper warehousing throughout the state, and set up and maintained adequate records to account for receipt and distribution of all commodity foods shipped into the state. Gunderson noted the director reported to the federal government from time to time. In 1943, state agencies assumed full administrative and financial responsibilities of the commodity food program and officially became known as distributing agencies.

**National School Lunch Program**

During the draft of World War II, many young men who reported for military duty were unable to serve due to lack of proper nutrition. President Truman believed that providing a healthy lunch at school could prevent malnutrition and poor eating habits. In 1946, to provide for expansion of school lunch programs, the National School Lunch Act was passed. Throughout the next 40 years commodity programs continued to expand through the NSLP.

**School Commodity Programs Decline Throughout 1980s and 1990s**

The *School Food Purchase Study: Final Report* (USDA, 1998) showed that donated commodities declined from 30% of the food dollars spent in NSLP in school year (SY) 1984-85 to 13% in SY 1996-97. This study indicated there was a shift away from donated commodities toward purchasing more commercially produced foods. The study also reported that of foods purchased for CNP only 13% were donated commodities, 4% were processed food containing donated commodities, and 83% were purchased commercially (USDA, 1998). The school environment had changed during the 1990s. Superintendents placed emphasis on financial performance, at the same time CNP directors faced increased labor costs and decreased supply of workers. In addition, student taste preferences changed and the popularity of heat-and-serve
foods and the availability of processed items increased (USDA, 2000). These changes affected meal planning and cooking practices of school meal programs. These factors affected CNP directors’ attitudes toward commodities and expectations of the commodity program (USDA, 2000).

Food preferences and foodservice had changed (Enns, Mickle, & Goldman, 2003). This Trends in Food and Nutrition Intake by Adolescents in the U.S. study indicated food consumption among teens 12 to 19 years of age had shifted. Teen food intake included more soda, crackers, popcorn, pretzels, corn chips, and fried white potatoes, whereas consumption of milk, green beans, corn, peas, bread, and rolls decreased.

The Institutes of Medicine (IOM) cited cultural and environmental changes among reasons for a shift in eating trends over the past three decades (IOM, 2005). Although changes were made in USDA’s commodity program, changes in food trends, foodservice staffing, space, and equipment resulted in schools receiving commodity foods in forms difficult to use, and products students would not eat (USDA, 1999). CNP directors faced added challenges of a commodity program that included unpredictable deliveries or deliveries made when school was not in session, limited number of manufacturers participating, and excessive paperwork. These barriers led to the decreased use of donated commodities (USDA, 2000).

USDA’s Commodity Improvement Council (CIC) discovered CNP directors changed procurement practices toward economical commercial food choices. The indirect cost of using commodity foods became more expensive than similar commercially available products that students preferred over commodity foods offered (USDA, 2000). The constituent groups convened by the CIC identified 12 barriers to using commodity foods. These barriers led to targeted issues for the reinvention effort (USDA, 2000), and included:

- Unpredictable delivery--resulted in long inventory storage, extra cost, and product quality deterioration.
- Unusable forms--commodities in forms difficult for some schools to use, such as less-processed foods, unpopular items, too large quantity, or heavy boxes.
- Uneven flow or bunching of commodities--seldom the right quantity of product was available at the right time or delivered when needed.
- Increased cost of final product--states levy per-case or per-pound storage and delivery fees.
- Lack of industry processors--shrinking competition due to cumbersome contracting methods, outdated or difficult specifications, and low-volume deliveries to schools.

**Process Improvement**

USDA’s CIC ordered a Business Process Reengineering (BPR), which was the largest ever departmental transformation undertaken by a government agency. In this process, program changes were designed to be dramatic, quick, and fundamental (Hammer & Champy, 1993). Changes involved federal and state government staff, manufacturers, CNP directors, suppliers, American School Food Service Association (now known as School Nutrition Association), and American Commodity Distribution Association (ACDA) representatives.
The BPR resulted in dramatic changes and improvements in the commodity program that were outlined in *Food Distribution 2000: Transforming Food Distribution for the Next Millennium; A Proposal for Change* (USDA, 2000). The BPR created a USDA environment that was open to explore alternative methods for schools to receive commodity foods, remove non-value costs, provide foods desired by students, and meet nutrition guidelines. The BPR recognized the need to maximize commodity assets. The report stated each dollar spent on unnecessary storage or other non-value added costs and each dollar spent on food that children would not eat was a dollar wasted (USDA, 2000). Maximized use of commodity entitlement funds allowed CNP directors to invest in other areas such as equipment, merchandising, or purchasing higher quality foods (USDA, 2000). A U.S. Government Accounting Office report (GAO, 1996) showed offering brand-name items led to increased student participation, school lunch and a la carte sales, and decreased plate waste.

**State Administration and Value Pass Through Systems**

USDA offers bulk or a limited number of further processed commodities to state distribution agencies. Once commodity food is made available to states, administration and distribution becomes the responsibility of the state agency. The State Processing Program allows states and CNP directors to contract with commercial food manufacturers to convert bulk or raw commodities into more convenient ready-to-use end products (USDA, 2006b). Some state agencies manage a commodity warehouse and distribution system.

The goal of the State Processing Program is to keep commodity food costs minimal while offering well-accepted meal items (USDA, 2006b). USDA reported State Processing Program benefits included cost savings when bulk products were ordered and diverted to manufacturers. Reduced labor costs due to less time required for food preparation and reduced storage costs were reported as benefits of participation (USDA, 2006b).

Processors entering into state or master processing agreements must ensure that full value of the donated food contained in finished products is returned to CNP directors. Commodity value is returned through one of several value pass through (VPT) systems established by USDA and agreed upon by the state distribution agency, manufacturers, and distributors. The most widely used VPT systems are Indirect Sales Discount that takes a net price off the invoice, fee for service (FFS), and rebate (USDA, 2006c). Not all VPT systems are used by all manufacturers and distributors and not all are approved and available in every state. State commodity directors determine the VPT systems that will be used for each commodity category in their state. Since 2003 when Indirect Sales Discount using net off invoice was approved, 21 states have implemented that system (K12 Services, 2006).

Electronic Commodity Ordering System (ECOS) is another system that was implemented as a result of the commodity reengineering process. ECOS allows CNP directors to place and track commodity orders through USDA’s Internet website. In some states, ECOS is used by the state agency staff only. Some states allow CNP directors to use ECOS to place orders to the state agency; others only allow access to ECOS to view commodity information. Use of ECOS, like Indirect Sales Discount, is determined by the state commodity director’s office. Currently nine states have permitted CNP directors to place commodity orders on ECOS, and 25 states allow CNP directors access to view commodity activity on ECOS.
Indirect Sales Discount and ECOS are examples of two systems that have been implemented to remove non-value costs. Indirect Sales Discount allows just-in-time delivery for CNP directors, eliminating the need to store excess commodity foods. ECOS eliminates administrative time spent on paperwork. Although these programs eliminate non-value costs, participation is voluntary and is the decision of the state agency.

**Nutrition and Commodity Foods**

Limited research exists on nutrient content of commodity foods. Gregoire and Sneed (1993) and Conklin (1995) identified barriers to meeting dietary guidelines related to food procurement. These studies reported CNP directors found it difficult to meet the dietary guidelines using commodity foods. Now with value pass through options like Indirect Sales Discount, CNP directors have greater flexibility to order commercial foods, select foods that meet their menu and nutrition guidelines, and receive commodity credit.

**CONCLUSIONS AND RECOMMENDATIONS**

Historically the commodity distribution program was successful in meeting its goals to provide support for agriculture producers and food for schoolchildren. Studies indicate that commodity use declined and children were not being served as the program became inefficient for schools and manufacturers. Since commodities account for about 20% of a school district’s food costs, one of the goals of the commodity reengineering process was to make commodity processing and distribution match as closely as possible the processes used by school districts for the other 80% of commercial food purchases. USDA predicted efficiencies would result for manufacturers and school districts when all food products could be procured from either the same channel, or a compatible channel (USDA, 1999). The multi-agency review resulted in new processing and distribution systems that have potential to improve commodity programs (USDA, 2003b).

Federal regulations provide various new processing systems and on-going demonstration projects to increase program efficiency. State distribution agencies determine their system, which provides latitude to accommodate local needs. Although many new efficient systems are available, some states choose to continue with traditional, and often inefficient, systems. ECOS and Indirect Sales Discount are examples of new efficient systems that save time and money, however these systems are not used by all states. Implementation of Indirect Sales Discount and ECOS may provide great benefits at the school district level.

USDA is to be commended for implementing program efficiencies, and a willingness to explore new processing and distribution systems and make aggressive changes to improve commodity programs. Research is needed to determine cost savings and efficiencies between states using newly created value pass through systems and states not using these new systems. Research in these areas may encourage changes to improve commodity distribution.

To meet goals of the commodity food program, emphasis must remain on the nutrition and food preferences of today’s students. As manufacturers continue to develop nutrient dense, on-trend products, those products should be offered through commodity processing. The USDA’s
commodity program has decreased sodium, total fat, and trans fatty acids from some commodity foods while increasing whole grain offerings (USDA, n.d.c). This is a positive direction, although balance between nutrition guidelines and student satisfaction and participation should be the goal.

Equal emphasis placed on children and producers will strengthen USDA’s commodity distribution program. It appears USDA is willing to work with all involved constituents of the commodity program to ensure a dynamic program to support producers, program operators, and children. It may be the beginning of a new era of commodity foods in CNP.

The following recommendations are suggested to improve commodity programs:

- Reinstate the Commodity Improvement Council to meet biannually to evaluate progress on commodity program improvements and recommend research. Include constituents from all aspects of commodity procurement, ordering, processing, delivery, end user, government, school district, and industry.
- Develop a nationwide five-year plan to implement Indirect Sales Discount as a value pass through system in all states. This value pass through system allows schools just-in-time delivery of commodity foods in forms students prefer.

The following recommendations provide direction for further commodity program research:

- Research is needed to quantify the cost of using commodity foods and cost savings based on use of various value pass through systems.
- Research is needed on nutrition content of commodity foods that are provided by USDA and those further processed and distributed through commercial channels.

REFERENCES


**BIOGRAPHY**

**Jirka** is a Marketing Manager at Tyson Foods, Inc. in Fayetteville, AR. **Sneed** is an independent consultant in Stillwater, OK. At the time the research was conducted Jirka was a doctoral student and Sneed was professor in foodservice and lodging management at Iowa State University.