

GAO

United States General Accounting Office
Report to Congressional Requesters

May 1991

FOOD DISTRIBUTION
PROGRAM

USDA's Canned Beef
and Pork Can Be
Improved



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United States
General Accounting Office
Washington, D.C. 20548

Resources, Community, and
Economic Development Division

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May 13, 1991

The Honorable Tony P. Hall, Chairman
The Honorable Bill Emerson, Vice Chairman
Select Committee on Hunger
House of Representatives

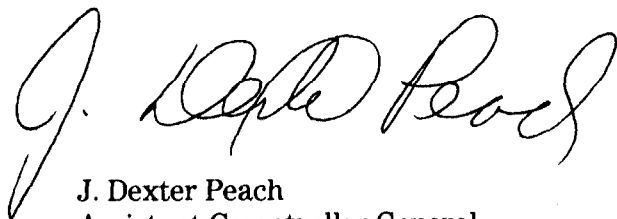
The Honorable Byron L. Dorgan
House of Representatives

The Honorable Eni F. H. Faleomavaega
House of Representatives

In response to your March 20, 1990, letter and subsequent meetings with your offices, we agreed to assess the quality of canned beef and pork distributed by USDA through its food distribution programs. This report provides information on the following aspects of USDA's canned beef and pork: (1) product acceptability, (2) comparability to other similar federal and commercial products, (3) quality assurance procedures, (4) procurement standards and specifications, and (5) alternatives for aesthetic or other product improvements. We have made recommendations to the Secretary of Agriculture in chapters 5 and 6 of this report.

As arranged with your offices, unless you publicly announce its contents earlier, we plan no further distribution of this report until 10 days from the date of this letter. At that time, we will send copies to the Secretary of Agriculture; the Director, Office of Management and Budget; and other interested parties.

This work was done under the direction of John W. Harman, Director, Food and Agriculture Issues, (202) 275-5138. Other major contributors are listed in appendix II.



J. Dexter Peach
Assistant Comptroller General

Executive Summary

Purpose

In February 1990, the House Select Committee on Hunger conducted a field hearing at the Standing Rock Indian Reservation in North Dakota. During this visit, Committee members viewed commodities provided by the U.S. Department of Agriculture's (USDA) food distribution program, including canned beef and pork, that they felt were unappealing because of a layer of fat covering the meat, and visible veins and connective tissue. As a result, in a March 20, 1990, letter, the Chairman, Vice Chairman, and two members of the Committee requested that GAO evaluate the quality of USDA's canned meat. During subsequent meetings with their offices, GAO agreed to assess USDA's canned beef and pork with respect to (1) product acceptability by recipients, (2) their comparability to other federal or commercial canned meats, (3) quality assurance procedures, (4) procurement specifications, and (5) alternative processing methods that could improve their appearance.

Background

USDA's food distribution programs provide a variety of surplus commodities to eligible recipients in need of food assistance. USDA also purchases certain specified foods for these programs, including canned beef and pork. The Department is responsible for purchasing, processing, packaging, and transporting these food items to state distributing agencies. State agencies are then responsible for storing the food, transporting it throughout the state, and distributing it through the various food distribution programs to the ultimate recipients.

In fiscal year 1989, USDA distributed canned beef valued at about \$8.3 million and canned pork valued at about \$66 million to state distributing agencies. The USDA programs distributing the largest amounts of canned beef and pork include the Commodity Supplemental Food Program, the Food Distribution Program on Indian Reservations, the Soup Kitchen/Food Bank Program, and The Emergency Food Assistance Program.

Results in Brief

Although state distributing agencies have reported that both canned beef and pork are generally acceptable items, they have also indicated some dissatisfaction with the presence of objectionable material such as blood vessels, connective tissue, and tendons in both products. In addition, USDA has received some complaints about other unappealing characteristics of canned beef and pork, such as their fat cap and salty taste.

Both canned beef and pork contain 99 percent meat, of which no more than 18 percent can be fat, and up to 1 percent added salt. The allowable fat content of USDA's canned beef and pork is less than that of retail

fresh lean ground beef, and the salt levels in other products were both lower and higher than they were in USDA's canned beef and pork.

USDA inspects its canned beef and pork for wholesomeness under the same procedures used for all meats intended for interstate trade. A number of alternative product specifications and processing methods can be employed to improve the appearance of both products.

Principal Findings

Commodity Acceptability

Commodity acceptability data collected by USDA from state distributing agencies indicate that canned beef and pork are generally acceptable items. A sample of commodity acceptability reports submitted by state agencies for the last 2 years showed that 70 and 96 percent of the ratings, respectively, found USDA's canned beef and pork to be highly acceptable/acceptable items. However, these same reports also contained comments about the high levels of perceived fat, salt, and objectionable material in both products. Likewise, during recently completed GAO work at four Indian reservations, food distribution program recipients noted their dissatisfaction with objectionable material contained in USDA's canned beef and pork.

Comparability to Other Products

GAO found no federal or commercial product that is directly comparable to USDA's canned beef and pork. Canned meat products procured by the Departments of Defense and Veterans Affairs or available commercially have various product formulation and processing differences that prohibit a direct comparison with USDA's canned beef and pork. For example, USDA's canned products contain only meat and up to 1 percent added salt, whereas other federal and commercial canned meat products may contain from 25 to 65 percent meat or contain additional ingredients such as water, gravy, and broth.

Quality Assurance Procedures

USDA's canned beef and pork are produced in accordance with the same federal quality assurance procedures applicable to all commercial meats intended for interstate trade. USDA's Food Safety and Inspection Service examines the canned beef and pork for wholesomeness, unadulterated condition, and labeling.

In addition, USDA's Agricultural Marketing Service examines the canned beef and pork during production for conformance with product specifications, such as allowable fat content. This additional examination is not required for commercial products.

Product Specification Changes

As part of a USDA effort to eliminate the duplication of its meat inspection procedures, canned beef and pork product specifications were modified in 1984 and 1985, respectively. Earlier specifications required a boning and trimming inspection of the raw material that restricted objectionable material such as bones and tendons in the meat. The 1984 and 1985 modifications eliminated this boning and trimming inspection and the objectionable material restrictions. Although the boning and trimming inspection and some of the objectionable material restrictions were restored to the canned beef specification in 1986, the current specification is not as restrictive as the pre-1984 specification. The boning and trimming inspection eliminated in 1985 from the canned pork specification was restored in October 1990 with additional raw material criteria and restrictions. Similar modification of the canned beef specification can reduce the objectionable material in the canned beef.

As part of USDA's commodity improvement initiatives to make the food distribution program more responsive to recipients' needs, the fat content of USDA's canned pork was lowered in February 1990 from 21 percent to 18 percent—the same level as canned beef. According to USDA officials, the 18-percent maximum fat content level of both products makes them considerably leaner than low-fat retail fresh-meat products, such as lean ground beef, which may contain up to 23 percent fat.

Alternative Processing and Packaging Methods

Alternative processing and packaging methods could improve some of the aesthetic characteristics and recipients' acceptance of both products. For example, tumbling/agitating cans during the canning process, using shallow cans, precooking meat before canning, and reducing or eliminating added salt can remedy some of the unappealing characteristics of the products, such as the accumulation of fat at the top of the can, their overcooked condition, and the salty taste reported by recipients. The use of more descriptive labels including the addition of nutrition information may improve recipients' acceptance of these products.

Recommendations

To address the issues of the objectionable material in USDA's canned beef and pork and the unappealing physical characteristics of these items,

GAO recommends that the Secretary of Agriculture explore (1) the cost effectiveness of revising the product specifications for beef to require a boning and trimming inspection with adequate defect criteria, such as those contained in the pre-1984 specifications, and (2) the use of alternative processing and packaging alternatives, including the addition of descriptive and nutritional information.

Agency Comments

In commenting on a draft of this report, USDA generally agreed with GAO's findings and conclusions. USDA stated that its canned beef and pork are high-quality products on the basis of highly acceptable ratings provided by program recipients. Nevertheless, USDA will explore some alternative methods of processing and packaging as GAO recommended. USDA has taken some corrective actions to reduce the objectionable material in both canned beef and pork, and plans other actions, such as incorporating boning and trimming requirements for canned beef, improving the information contained on product labels, and studying the feasibility of reducing the salt content in both products. USDA emphasized, however, that the adoption of alternative processing and packaging methods are subject to cost constraints. (See app. I.)

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Abbreviations

AMS	Agricultural Marketing Service
ASCS	Agriculture Stabilization and Conservation Service
CSFP	Commodity Supplemental Food Program
DOD	Department of Defense
FDPIR	Food Distribution Program on Indian Reservations
FNS	Food and Nutrition Service
FSIS	Food Safety and Inspection Service
GAO	General Accounting Office
NAFDPIR	National Association of Food Distribution Program on Indian Reservations
TEFAP	The Emergency Food Assistance Program
USDA	U.S. Department of Agriculture
VA	Department of Veterans Affairs

Introduction

The U.S. Department of Agriculture (USDA) provides a wide variety of domestic commodities to eligible recipients in need of food assistance. Some of these commodities are acquired from agricultural surpluses. Other domestically produced commodities, such as canned beef and pork, are purchased by USDA to meet statutorily required assistance levels. USDA provides these commodities to state distributing agencies that administer a variety of commodity programs. USDA arranges and pays for the initial processing and packaging of the food and transporting it to designated points within each state. The state distributing agencies are then responsible for storing the food, transporting it throughout the state, and allocating it to local eligible recipient agencies,¹ which then provide the food to the ultimate recipients.

USDA's canned beef and pork products are heat-processed meat² chunks that do not contain water or any other additive except 1 percent of salt. The total maximum allowable fat content for both products is 18 percent. Product labels on both of the products state that they are ready to eat. In fiscal year 1989, USDA distributed about \$8.3 million and \$66 million worth of canned beef and pork, respectively, to recipient agencies nationwide.

Responsible USDA Agencies

The USDA agencies that are responsible for procuring, inspecting, and distributing canned beef and pork are the Food and Nutrition Service (FNS), the Agricultural Marketing Service (AMS), the Agricultural Stabilization and Conservation Service (ASCS), and the Food Safety and Inspection Service (FSIS).

FNS administers and has overall responsibility for the food distribution program. This includes determining various program eligibility criteria and the nutritional needs of recipients. Working jointly with AMS and ASCS, FNS is responsible for coordinating recipient agency preferences for and the acquisition and distribution of commodities. FNS also monitors and evaluates program operations at the federal, state, and local levels.

AMS administers commodity support functions, such as grading and inspection programs. AMS is responsible for purchasing commodity items, such as canned beef and pork, for the food distribution program.

¹Recipient agencies are those nonprofit agencies that receive foods from the state distributing agency for their own use or for distribution to eligible recipients.

²Meat is defined by USDA regulations as the skeletal muscle with or without the accompanying and overlying fat, bone, skin, sinew, nerve, and blood vessels that normally accompany the muscle tissue.

AMS also provides on-site certifiers to ensure that purchased commodities conform to product specifications. In addition, FSIS inspects canned beef and pork for safety, wholesomeness, and proper labeling and packaging. FSIS provides in-plant inspection of domestic animals before slaughter and meat after slaughter as well as during the further processing of meat products, for example, during the canning process for beef and pork.

ASCS is responsible for arranging shipments of all commodities distributed by FNS through the food distribution programs.

Food Distribution Programs

The principal USDA food distribution programs that supply the largest amounts of canned beef and pork to recipients include the Commodity Supplemental Food Program (CSFP), the Food Distribution Program on Indian Reservations (FDPIR), the Soup Kitchen/Food Bank Program, and The Emergency Food Assistance Program (TEFAP). According to agency officials, in fiscal year 1989 these four programs, as a group, received about 4.3 million and 58 million pounds, respectively, of canned beef and pork, or about 90 percent of USDA's total nationwide distribution.

CSFP was authorized under sections 4(a) and 5 of the Agriculture and Consumer Protection Act of 1973, as amended. CSFP provides a food package to supplement the diets of low-income women, infants, children, and elderly persons. In fiscal year 1989, CSFP received about 2 million pounds of canned beef valued at \$2.9 million, and about 2.1 million pounds of canned pork valued at \$2.4 million.

FDPIR was created by sections 4(a) of the Agriculture and Consumer Protection Act of 1973 (P.L. 93-86), as amended, and 4(b) of the Food Stamp Act of 1977 (P.L. 95-113), as amended, as a replacement for the Needy Family Program on Indian Reservations. The program is designed to provide food packages in lieu of food stamps to eligible Indian and non-Indian households living on or near reservations. In fiscal year 1989, FDPIR received about 2.3 million pounds of canned beef valued at \$3.4 million, and about 1.1 million pounds of canned pork valued at \$1.3 million.

Public and charitable institutions that provide commodities to food pantries, soup kitchens, hunger relief centers, or other feeding centers that, in turn, provide meals or food to needy persons on a regular basis also receive USDA commodity donations. Section 110 of the Hunger Prevention Act of 1988 (P.L. 100-435) specifically required USDA to spend \$40

million in fiscal years 1989 and 1990 each, and \$32 million in fiscal year 1991 to purchase, process, and distribute commodities, in addition to commodities otherwise made available to states for these programs. This has been extended by section 1774 of the Food, Agriculture, Conservation, and Trade Act of 1990 (P.L. 101-624), which authorizes \$40 million for each of the fiscal years from 1992 through 1995. The Soup Kitchen/Food Bank Program received about 13 million pounds of canned pork valued at \$14.9 million in fiscal year 1989, according to agency officials.

TEFAP was authorized by the Temporary Emergency Food Assistance Act of 1983 (P.L. 98-8), now entitled The Emergency Food Assistance Act of 1983, to reduce federal dairy surpluses and to provide hunger relief to low-income households. Since 1983, the Congress has extended the program and expanded the program's funding to include the purchase of commodities. In fiscal years 1989 and 1990, to compensate for the decreased availability of surplus commodities, the Congress appropriated \$120 million per fiscal year to purchase, process, and distribute additional commodities for household use. In fiscal year 1989, TEFAP received about 41 million pounds of canned pork valued at \$47 million. Through section 1772 of the Food, Agriculture, Conservation, and Trade Act of 1990 (P.L. 101-624), the Congress, in 1990 modified the TEFAP legislation and extended TEFAP through fiscal year 1995 and appropriated \$175 million for fiscal year 1991, \$190 million for fiscal year 1992, and \$220 million for each of the fiscal years from 1993 through 1995.

Objectives, Scope, and Methodology

In a March 20, 1990, letter, the Chairman, Vice Chairman, and two members of the House Select Committee on Hunger asked us to evaluate the quality of meat distributed by USDA through its food distribution programs. Committee members became concerned about the quality of these items when they viewed USDA commodities during a February 1990 field hearing at the Standing Rock Indian Reservation in North Dakota. They noted that canned beef and pork were unappetizing products that had a layer of fat at the top of the cans, and that the meat itself contained veins and connective tissue.

During subsequent meetings with their offices, we agreed to address the following issues regarding the quality of USDA's canned beef and pork:

- Product acceptability by recipients.
- Comparability of the items to other federal or commercial products.
- USDA's quality assurance procedures.

- USDA's product specifications.
- Alternatives available for aesthetic or other product improvements.

We collected information from FNS headquarters' officials, in Alexandria, Virginia, on the methods they used to determine the level of recipients' acceptability for USDA's canned beef and pork. We obtained recipient acceptability information from a selected sample of state distributing and local recipient agencies in 15 states. We contacted the president of the National Association of Food Distribution Programs on Indian Reservations to solicit his opinion regarding the acceptability of canned beef and pork. We also visited the food distribution program and the Tribal Health Service office at the Standing Rock Indian Reservation because of reported allegations made by its food distribution program director concerning the poor quality of USDA's canned meats during the February 1990 congressional hearings at the reservation.

We also used recipients' views gathered at four Indian reservations (Fort Berthold, N. Dak.; Pine Ridge, S. Dak.; White Earth, Minn.; and Navajo, Ariz., N. Mex., and Utah) regarding USDA's canned beef and pork that we provided in our report entitled Food Assistance Programs: Recipient and Expert Views on Food Assistance at Four Indian Reservations (GAO/RCED-90-152, June 18, 1990).

In addition, we reviewed a sample of 48 commodity acceptability reports—16 submitted in 1989 and 32 submitted in 1990—provided to USDA by 31 state distributing agencies, including 19 Indian tribal organizations. Each of these state distributing agencies administered one or more of USDA's four principal food distribution programs.

The 48 acceptability reports were selected from state distributing agencies located in 15 states, including Arizona, California, Colorado, Florida, Illinois, Louisiana, Michigan, Minnesota, Nebraska, New Mexico, New York, Oklahoma, South Dakota, Tennessee, and Texas. Each of these states was chosen because it was among the five largest recipients of USDA's canned beef and/or pork in one or more of the four principal food distribution programs during fiscal year 1989. As a group, these 15 states received about 3.5 million and 28 million pounds, or about 83 percent and 51 percent, respectively, of USDA's canned beef and pork distributed that year by the above four programs.

We contacted officials at the Departments of Defense and Veterans Affairs to determine if these federal agencies procure comparable items to USDA's canned beef and pork. We also contacted several national

associations, some of the leading commercial producers of canned meat items, and commercial can manufacturers to obtain information on comparable commercial products as well as alternative processing and packaging technologies available that could improve the physical characteristics and other product features of USDA's canned beef and pork.

To determine the adequacy of USDA's quality assurance procedures, procurement standards, and product specifications for canned beef and pork, we interviewed AMS, ASCS, and FSIS officials at USDA's headquarters in Washington D.C.; on-site AMS graders at a USDA supplier's plant in Plainview, Minnesota; ASCS officials in Kansas City, Kansas; and program and warehouse officials in Bismark and Fort Yates, North Dakota; Chicago, Illinois; and Minneapolis, Minnesota.

To determine the applicable USDA procurement standards and specifications, we identified, collected, and analyzed past and current USDA canned beef and pork specification requirements and procurement standards. In addition, we collected information on the evolution of the standards from responsible USDA officials.

To determine what alternatives may be available to remedy the aesthetic or other objectionable product characteristics, we collected information on meat canning techniques from USDA officials and private industry, trade publications, and other literature. The processes that we selected for discussion are the alternatives most often identified by these sources.

We could not quantify the cost consequences of modifying product specifications or adopting any one or a combination of available alternative meat processing and packaging methods, because the costs of USDA's canned beef and pork are determined at the time of purchase by prevailing market conditions and production cost factors.

We performed our review between May and November 1990, in accordance with generally accepted government auditing standards.

Acceptability Responses Are Generally Favorable, but Some Dissatisfaction Is Apparent

A review of a selected sample of 1989 and 1990 commodity acceptability reports submitted by food-distributing agencies from 15 states showed a high degree of acceptability for USDA's canned beef and pork. Several report comments, however, as well as comments obtained during our visit to the Standing Rock Indian Reservation and discussions with food distribution recipients conducted during our previous work at four Indian reservations, indicate some recipient dissatisfaction with USDA's canned beef and pork. This dissatisfaction is partly due to the presence of objectionable material in both items, such as veins and connective tissues, their perceived high levels of salt and fat, and their unappealing appearance.

Acceptability report information should be viewed with caution because of inconsistent data-gathering methods, inaccuracies and omissions in the reports, previous report format disparities, and the possible reluctance of some recipients to provide candid responses regarding their perceptions of these products.

Annual Acceptability Reports Are Required

State distributing agencies are required to obtain commodity acceptability information from local recipient agencies and report the information annually to FNS. Previously, acceptability information was required to be reported semiannually, but was changed to annual reporting by section 1773(d) of the Food, Agriculture, Conservation, and Trade Act of 1990. These reports give recipient agencies an opportunity to provide program feedback to USDA and, according to a February 1990 FNS memorandum, help identify priorities for future commodity program improvements.

In addition to providing recipients' acceptability responses, acceptability reports are required to reflect (1) the types and forms of commodities that are most useful to recipients, (2) commodity specification recommendations, and (3) requests for options regarding the package sizes and forms of commodities. To obtain these data, the state distributing agency is required by USDA to sample at least 10 percent, or 100, of the local recipient agencies, whichever is less, participating in each food distribution program.

Product Acceptability Reports Are Generally Favorable

Our review of selected commodity acceptability reports indicates that recipient agencies generally consider USDA's canned beef and pork to be highly acceptable products.¹ Table 2.1 provides a listing of state distributing agencies' acceptability report responses. These sample responses were collected from a total of 48 acceptability reports submitted to USDA in 1989 and 1990 by 31 state distributing agencies, including 19 Indian tribal organizations, located in 15 states.

Table 2.1: Listing of Canned Beef and Pork Acceptability Report Responses Submitted to USDA From 31 State Agencies in Fiscal Years 1989 and 1990

Program	1989				1990			
	Number of ratings	Rating			Number of ratings	Rating		
Highly accept.		Accept.	Unaccept.	Highly accept.		Accept.	Unaccept.	
CSFP								
Beef	1		1.0		6	4.5	1.5	
Pork	1			1	6	2.0	4.0	
FDPIR								
Beef	7	6.0		1	17	13.0	4.0	
Pork	7	2.5	4.5		17	7.5	7.5	2
Soup kitchens								
Beef	3	3.0			0			
Pork	1	1.0			3	3.0		
TEFAP								
Beef	a				a			
Pork	3	2.0	1.0		4	2.0	2.0	
Total	23^b	14.5	6.5	2	53^b	32.0	19.0	2

^aCommodity not offered by program.

^bEach of the state distributing agencies administers one or more of the four principal food distribution programs.

As indicated in table 2.1, not all state distributing agencies submitted an acceptability report/rating for each program or product. However, of the acceptability reports/ratings provided for both canned beef and pork in fiscal year 1989, 70 percent were in the acceptable or highly acceptable category. The majority of these—63 percent—were highly acceptable. Only 9 percent of the responses were unacceptable. Likewise, of the fiscal year 1990 canned beef and pork responses, 96 percent

¹According to FNS' instructions, state distributing agency acceptability report responses should indicate the majority of the recipient agencies' feelings concerning the product's acceptability. Comments should also reflect those of the majority and include, but not be limited to, popularity, quality, packaging, and/or specification changes.

were in the acceptable or highly acceptable category, and the majority of the responses—60 percent—were highly acceptable. Only 4 percent were in the unacceptable category.

Some Dissatisfaction Has Been Indicated

Although the favorable acceptability responses in table 2.1 indicate that local recipient agencies are generally satisfied with both canned beef and pork, additional narrative comments in their reports and discussions we had with some state and local agency officials indicate some dissatisfaction with USDA's canned beef and pork. Similar comments were made by program officials and recipients, Indian Health Service officials, the President of the National Association of Food Distribution Programs on Indian Reservations (NAFDPIR),² and state distributing agency officials for the National School Lunch Program.

Narrative Comments Contained in the Acceptability Reports Indicate Some Dissatisfaction

The 1989-90 acceptability reports that we reviewed included a variety of narrative comments about the perceived high levels of salt and fat in both items. A listing of all narrative comments contained on these reports about canned beef and pork is provided in table 2.2.

²NAFDPIR was organized to unify all of the Indian tribes that administer commodity programs throughout the nation. The association provides all tribes an opportunity to have input into issues that directly affect their programs and participants.

**Chapter 2
Acceptability Responses Are Generally
Favorable, but Some Dissatisfaction
Is Apparent**

Table 2.2: Listing of Narrative Comments About Canned Beef and Pork From Acceptability Reports Submitted to USDA From 15 States in Fiscal Years 1989 and 1990

Program	1989		1990	
	Beef	Pork	Beef	Pork
CSFP	No comments	No comments	Buy more; increase amount Smaller containers, offer two	Too oily Seals on cans could be tighter; clients are tired of pork
FDPIR	Too much fat Too much fat & salt Too salty	Contains high fat content Too fatty Too much fat Too salty Salty	Most popular meat item Packaged with less fat Sometimes too salty Many concerned about salt & fat; need better grade of beef Needs to contain less fat Salty, too much fat, less fat Too fatty Too salty and fatty	Packaged with less fat Salty Good Unpopular, but food item still moves Needs to contain less fat Wanted larger cans of all meat items Taste is old, too fatty Too salty, fatty, and some bones are found
Soup kitchens	No comments	No comments	No comments	Too salty, greasy
TEFAP	^a	No comments	^a	Send more

^aCommodity not offered by program.

Of the 30 total narrative comments listed in table 2.2, 24 indicate some dissatisfaction with either canned beef or pork, principally with their fat and salt levels. The remaining six comments indicated the popularity of the items.³

Some FDPIR Officials, Recipients, and Others Have Expressed Dissatisfaction With Canned Beef and Pork

Dissatisfaction with the perceived high salt and fat levels and objectionable material contained in both canned beef and pork was expressed to us by FDPIR administrators, recipients, and others. For example, Standing Rock Indian Health Service officials were concerned about the perceived high levels of salt and fat in the items, particularly for recipients with diet-related health problems such as diabetes. The FDPIR director at the Standing Rock Reservation said that he had noticed

³According to an FNS official, FNS records indicate that less than 25 percent of all commodity acceptability reports contain narrative comments regarding the quality of USDA meats.

higher amounts of objectionable veins, skin, and tendons in USDA's canned beef and pork during the last couple of years.

In June 1990, we reported on recipients' views of USDA's food distribution program at four Indian reservations,⁴ including Fort Berthold, North Dakota; Pine Ridge, South Dakota; White Earth, Minnesota; and Navajo, Arizona, New Mexico, and Utah.⁵ They noted that some foods provided by the food distribution program may not meet the needs of households with special diet-related health problems because of their perceived high fat and/or salt levels. Recipients also noted the presence of veins in the canned meats.

The President of NAFDPIR told us that he and other NAFDPIR representatives were very pleased overall with the quality of foods provided by FDPIR. However, he said that FDPIR representatives were very critical of the amount of veins, cartilage, and connective tissue in the canned beef. They did not have this criticism for the canned pork. They also criticized the perceived high levels of salt in both products, which could adversely affect elderly recipients and those with diet-related health problems.

National School Lunch Program Criticisms

Although not offered in 1990, state distributing agencies for the National School Lunch Program were offered both canned beef and pork during 1988-89. School lunch program acceptability reports were submitted to USDA by 39 and 53 state distributing agencies by November 1988 and April 1989, respectively. FNS stated in its analysis that data were extracted from only 31 and 37 of the respective reports that had usable information. In July 1989, FNS issued its compilation analysis of the 1988 National School Lunch Program commodity acceptability reports. The compilation showed that 10 of the 31 state distributing agency reports used by FNS specifically requested that the fat, sodium, and tissue content of canned beef and pork be decreased. In April 1990, FNS issued a report on the highlights of the compilation of the 1989 National School Lunch Programs' commodity acceptability reports. This compilation indicated that only 4 of the 37 state agency reports used by FNS contained comments about canned beef and pork. These four state agency reports criticized canned beef for containing too much gristle and

⁴Food Assistance Programs: Recipient and Expert Views on Food Assistance at Four Indian Reservations (GAO/RCED-90-152, June 18, 1990).

⁵To obtain FDPIR recipients' views, we conducted five focus group (small homogeneous groups assembled to candidly discuss a selected topic under the controlled guidance of a moderator) interviews—two at the Navajo Reservation and one each on the other three reservations.

fat, and too many blood vessels, and three of the four said that the fat and blood vessels contained in canned pork should be reduced.

Acceptability Information Should Be Viewed With Caution

Acceptability information should be viewed with caution because recipients may be reluctant to express their candid responses to USDA regarding their satisfaction with canned beef and pork. In addition, FNS officials have been concerned about and are planning corrective actions to improve the quality of information submitted to them because of inconsistent data-gathering methods, inaccuracies, and omissions contained in acceptability reports.

Dissatisfaction Not Always Candidly Reported

Several state distributing agency officials told us that recipients' acceptability of USDA's canned beef and pork is not always candidly reported. The food distribution director at the Standing Rock Indian Reservation believes that many reservation recipients are not satisfied with the aesthetic quality of both items. For example, he told us that some recipients have complained to him about the overcooked condition of both items. However, he said they are reluctant to express their dissatisfaction for fear that the program would be terminated. Similar concerns were indicated by the local food distribution directors at the Three Affiliated Tribes and the Sioux Tribe of North Dakota, who told us that it is very hard to get recipients to criticize free food.

Various other state and local program officials agreed with the concerns expressed by FDPIR officials. For example, the state coordinator of California's Department of Social Services' Food Distribution Bureau, which administers TEFAP, told us that her office does not criticize free food because they are so grateful to get the food and are not willing to risk the chance of losing it by marking the FNS acceptability reports with an unacceptable rating. The chief of New York State's Bureau of Donated Foods, which administers TEFAP and the Food Bank Program, also told us that most recipients, whether institutional or individuals, are so grateful to receive commodities that they report their preference as "highly acceptable" even if they are unhappy with the items. She said that in the school lunch program, items like prunes were reported as highly acceptable even though most schools do not use them.

Questionable Data-Gathering Methods

According to FNS regulations, states must sample 100, or 10 percent, of the local recipient agencies, whichever is less, to collect commodity acceptability report information. However, FNS regulations do not

require the use of any specific data-gathering method by the state or local offices in collecting the data.

Several state distributing agency officials told us that they depend on local program administrators to gather and report acceptability information in a manner that ensures its accuracy and completeness. However, the local program administrators we contacted told us that they have no formal data-gathering methods and rely primarily on their own perceptions and informal feedback from recipients to collect and develop the information provided in the acceptability reports. According to a May 1990 FNS headquarters memorandum to its regional offices, the quality of commodity acceptability data submitted by some state agencies and commodity programs appears questionable. The memorandum emphasized that the data should reflect the concerns of the majority of commodity recipients.

In addition, the organizational characteristics of programs such as TEFAP and CSFP can create data-gathering obstacles, according to an FNS official. For example, the executive director of New York City's food distribution program told us that many of the city's food-distributing organizations are voluntary and are struggling to find help and resources. He added that it may be difficult for them to complete questionnaires or other data collection forms. Similarly, the Food Assistance Division director of Colorado's Food Distribution Program told us that it is difficult to systematically request information from TEFAP and CSFP recipients about commodities that they may only infrequently receive. An FNS official noted that the absence of available state resources has had an adverse affect on the quality of the information contained in many state agency reports.

Reporting Inaccuracies and Omissions

An FNS review of state distributing agencies' 1989 acceptability reports revealed some reporting inaccuracies and omissions that may have affected the quality of the information provided. For example, some state distributing agencies reported the total number of local recipient agencies operating in their state, rather than the actual number of recipient agencies that provided report responses. FNS also noted that a majority of the state distributing agency reports were not signed and dated. In addition, some state distributing agencies did not submit their commodity acceptability reports to FNS, limiting FNS' ability to pinpoint the concerns of each commodity program.

Previous Format Disparities Have Been Addressed by USDA

Prior to 1990, the usefulness of the information collected by USDA was also diminished by the various reporting formats used by state agencies. These format differences created problems in comparing and analyzing the data. To address this problem, FNS developed a standardized Commodity Acceptability Report form (FNS-663) in 1990, which state agencies are required to complete for each commodity program that they administer.

The new report solicits information about product acceptance (“highly acceptable,” “acceptable,” or “unacceptable”) by food groups including comments on popularity, quality, packaging, and specific changes, as well as recommendations and requests for new foods.

Although the development and use of FNS-663 addresses the problems associated with using assorted report formats, the results of commodity acceptability information must still be viewed with caution because of data-gathering problems and other reporting problems that affect the quality of commodity acceptability information. An FNS official noted that addressing these problems and developing a specific data-collection methodology will be a future FNS priority.

Conclusions

State distributing agency acceptability ratings indicated widespread acceptability of canned beef and pork, but there are some indications of recipients’ dissatisfaction with both products. Although USDA’s new acceptability report format should provide more uniform data, the information provided by the acceptability reports should be treated with caution because of (1) the absence of a specific data-gathering method and (2) data inaccuracies and omissions that may adversely affect their reliability. FNS recognizes the need for objective feedback and will endeavor to improve the consistency of the methods used by state distributing agencies for data collection for the various food distribution programs. However, the possible reluctance of recipients to provide their candid responses about the products may continue to affect the accuracy of acceptability report information.

Agency Comments and Our Evaluation

USDA concurred with our findings that commodity acceptability information collected from state distributing agencies in 1988 and 1989 was not uniform by program and that the format differences created difficulties in analyzing the data reported. USDA states that its new commodity acceptability report (Form-663), which solicits information about product acceptance by food group—including comments on popularity,

Chapter 2
Acceptability Responses Are Generally
Favorable, but Some Dissatisfaction
Is Apparent

quality, packaging, and recommendations for product changes or new foods—adequately documents the opinions and preferences of program recipients.

USDA states that while the methods of data collection are not uniform, the feedback received on the programs is quite extensive and generally represents the opinions of program recipients. In addition, USDA states that the number of negative comments entered on the acceptability reports and the variation in the overall approval ratings of commodity items belies the report's contention that some recipients may be reluctant to criticize free food.

We do not believe that the number and variation of recipient comments received by USDA from state distributing agencies are necessarily indicative of the reliability, accuracy, and completeness of the acceptability information. We also do not agree with USDA's premise that the number and variation of recipients' comments is an appropriate basis for dismissing the possible reluctance, as reported to us independently by some state and local program officials, of individual and institutional recipients to provide their candid opinions about free food. USDA, however, stated that it recognizes the need to accumulate accurate and objective commodity feedback. It stated that it will endeavor to improve the consistency of the methods used by state distributing agencies for data collection for the various food distribution programs.

USDA's complete comments on this report are contained in appendix I.

Directly Comparable Products Not Found

We did not identify any federally procured or commercial canned beef or pork product that is identical to that provided by USDA. Federally purchased and commercial canned meat items are not directly comparable to USDA's canned beef and pork because of formulation or other product differences such as the total meat content, inclusion of additives, and cooking process.

Differences Between USDA and Other Federally Procured Canned Beef and Pork

The Departments of Defense (DOD) and Veterans Affairs (VA) are the only federal agencies we identified other than USDA that procure canned beef and pork type items. However, a direct comparison between DOD, VA, and USDA canned meat products could not be made because of various product formulation and processing differences.

DOD's Canned Meats

DOD procures a canned beef chunk and ham chunk product for troop-feeding programs. According to DOD and USDA specifications, these products differ from USDA's canned beef and pork in several significant aspects. Specifically, (1) DOD requires the use of primal beef cuts and high-commercial-quality ham,¹ whereas USDA requires no specific cuts of beef or pork; (2) DOD meat is cut or diced into chunks, whereas USDA's meat is ground²; (3) DOD's beef and ham chunks are heated in water prior to canning (ham chunks are also agitated during heating, which allows for more-even cooking), whereas USDA's are neither preheated nor agitated before canning; and (4) the water used in preheating DOD's beef and ham chunks is added to the cans, whereas no water is added to USDA's canned meats.

VA's Canned Meats

VA procures pureed and canned beef with beef broth and pork with pork broth for patients in VA hospitals. According to VA and USDA product specifications, these products differ from USDA's canned beef and pork in several significant aspects. Specifically, (1) VA's canned beef and pork are pureed items, whereas USDA's products are ground into chunks; (2) VA's canned beef and pork are dietetic products that are produced with no salt added, whereas USDA requires up to 1 percent of added salt for

¹DOD requires the use of standard primal cuts of beef such as chuck, rib, loin, and round for its canned beef chunks. DOD's canned ham chunks are made from cured and smoked hams, whereas USDA's canned pork is made from uncured pork.

²Meat for USDA's canned beef and pork is ground into chunks by forcing the meat through a grinding plate with holes measuring 0.5 inch in diameter for beef and 1.5 to 2 inches in diameter for pork.

flavor; and (3) VA's canned beef and pork need only contain 65 percent meat, whereas USDA's products contain 99 percent meat.

Differences Between Canned Commercial Meat Products and USDA's Beef and Pork

We contacted officials of several national food and meat associations as well as some of the leading commercial producers of canned meat items and reviewed meat industry literature to obtain information on comparable commercial canned meat products. None of these sources were able to identify a commercial canned beef or pork item identical to USDA's. Commercially available canned meat products have significant product formulation differences that prevent an objective comparison with USDA's canned beef and pork.

Commercially canned meat products generally contain various additives such as water, gravies, and vegetables. According to FSIS' regulations and Standard and Labeling Policy Book,³ meat stews need only contain 25 percent meat, beef and gravy must contain a minimum of 50 percent beef, and beef or pork with barbecue sauce must contain a minimum of 72 percent meat. In contrast, the total meat content in USDA's canned beef and pork is 99 percent.

Many commercial canned meat items also contain chemical additives, such as emulsifiers and binders. These additives perform a variety of functions, for example, they reduce or eliminate the coagulation of fat in the can, which is one of the major complaints regarding USDA's products. In contrast, USDA's canned beef and pork do not contain any chemical additives.

Agency Comments

USDA concurs that its canned beef and pork are not comparable to any commercial products. It stated that most commercially canned meat products contain considerably lower percentages of meat than USDA's canned beef and pork and contain gravies or barbecue sauce because they are designed to be eaten without additional preparation. USDA states that its canned beef and pork products are designed to be used in recipes prepared according to a household's food preferences and provide recipients with maximum diversity in meal preparation.

USDA's complete comments on this report are contained in appendix I.

³The Standards and Labeling Policy Book provides label reviewers, manufacturers, and consumers with guidance and information regarding USDA's latest meat and poultry inspection standards and labeling policy decisions.

USDA Inspects Canned Beef and Pork for Wholesomeness

Through several meat inspection procedures, USDA examines its canned beef and pork for wholesomeness. USDA's canned beef and pork are produced in accordance with the same federal quality assurance procedures applicable to all commercial meats intended for interstate trade. USDA's Food Safety and Inspection Service is responsible for ensuring that the nation's supply of meat products, including the food distribution program's canned beef and pork, are unadulterated, wholesome, and correctly labeled and packaged.

In addition, USDA's Agricultural Marketing Service examines USDA's canned beef and pork during production and certifies conformance with product specifications. This additional certification is not required for commercial products.

FSIS Inspects All Interstate Meats

USDA's canned beef and pork are produced in accordance with the same mandatory federal quality assurance standards applied to commercial meat products. The Federal Meat Inspection Act (21 U.S.C. 601 et seq.) requires USDA to inspect the slaughter of livestock and the processing of meat products intended for interstate trade. The objectives of the legislation are to ensure that meat products distributed to consumers are wholesome; unadulterated; and properly marked, labeled, and packaged. FSIS enforces the Federal Meat Inspection Act through its various meat inspection procedures.

USDA requires that the meat used in its canned beef and pork originate from slaughtered animals inspected and passed by FSIS. Before meat can pass inspection, FSIS must perform an antemortem, postmortem, and sanitation inspection at slaughter and processing plants to ensure the wholesomeness of the raw meat products. The antemortem inspection is an examination of live animals, for health and fitness, prior to slaughter. The postmortem inspection is an examination of the carcass and internal organs to assess wholesomeness for human consumption after slaughter. FSIS also monitors and inspects slaughter and processing plants for sanitary conditions. Only if the condition of the animals, carcasses, and plant satisfy FSIS meat inspection requirements will the meat be marked as "USDA inspected and passed."

In addition, USDA requires that its canned beef and pork be produced in an establishment regularly operated under FSIS product-processing inspection regulations. Product-processing inspection involves the examination of any activity conducted to further process carcasses or parts into meat products. It also involves an examination of the environment

in which the products are produced and the materials added to the product during processing.

AMS Inspects Canned Beef and Pork for Conformance With Product Specifications

In addition to FSIS' mandatory inspections, USDA requires the examination and certification of its canned beef and pork for conformance with product specifications by AMS graders during production. Although AMS certification of commercial products is not required by law and is generally not used by commercial buyers, DOD and USDA require the certification of federal food purchases for conformance to product specifications.

USDA's canned beef and pork specifications include requirements for raw material condition, and product formulation and processing. Canned beef specifications also include a boning and trimming examination. To certify conformance with these requirements, AMS graders observe the entire production process. During a visit to a USDA suppliers' plant in Plainview, Minnesota, we observed two AMS graders monitoring the canned pork production process.

AMS graders examine the raw material for both canned beef and pork primarily to determine if it conforms to the excellent condition criteria of USDA's product specifications. USDA's product specifications define raw material in excellent condition as that meat in which the exposed lean and fat surfaces are of a color and bloom typical of meat that has been properly stored and handled. According to AMS officials and product specifications that we reviewed, a grader will reject an entire lot or subplot of raw material if even one sample does not meet USDA's excellent condition criteria.

USDA also requires AMS graders to examine the raw material used in its canned beef for boning and trimming to ensure that the meat has been deboned according to criteria provided in the product specifications. AMS graders are required to reject a lot/sublot of beef if it contains more defects than allowed by USDA's product specifications. Although USDA requires the use of boneless meat in its canned pork, the product specifications for canned pork do not require a boneless meat examination by AMS graders. (See ch. 5 for a more detailed discussion of the boneless meat examination and defect criteria).

In addition, we observed AMS graders collecting a number of final product samples. We were told that some of these product samples are

selected for examination of the physical appearance and net weight content, and others are sent to a USDA laboratory in Chicago, Illinois, for a fat content analysis. An AMS regional supervisor told us that no production lot is accepted for shipment unless the laboratory results indicate that the fat content is within specified acceptable ranges.¹

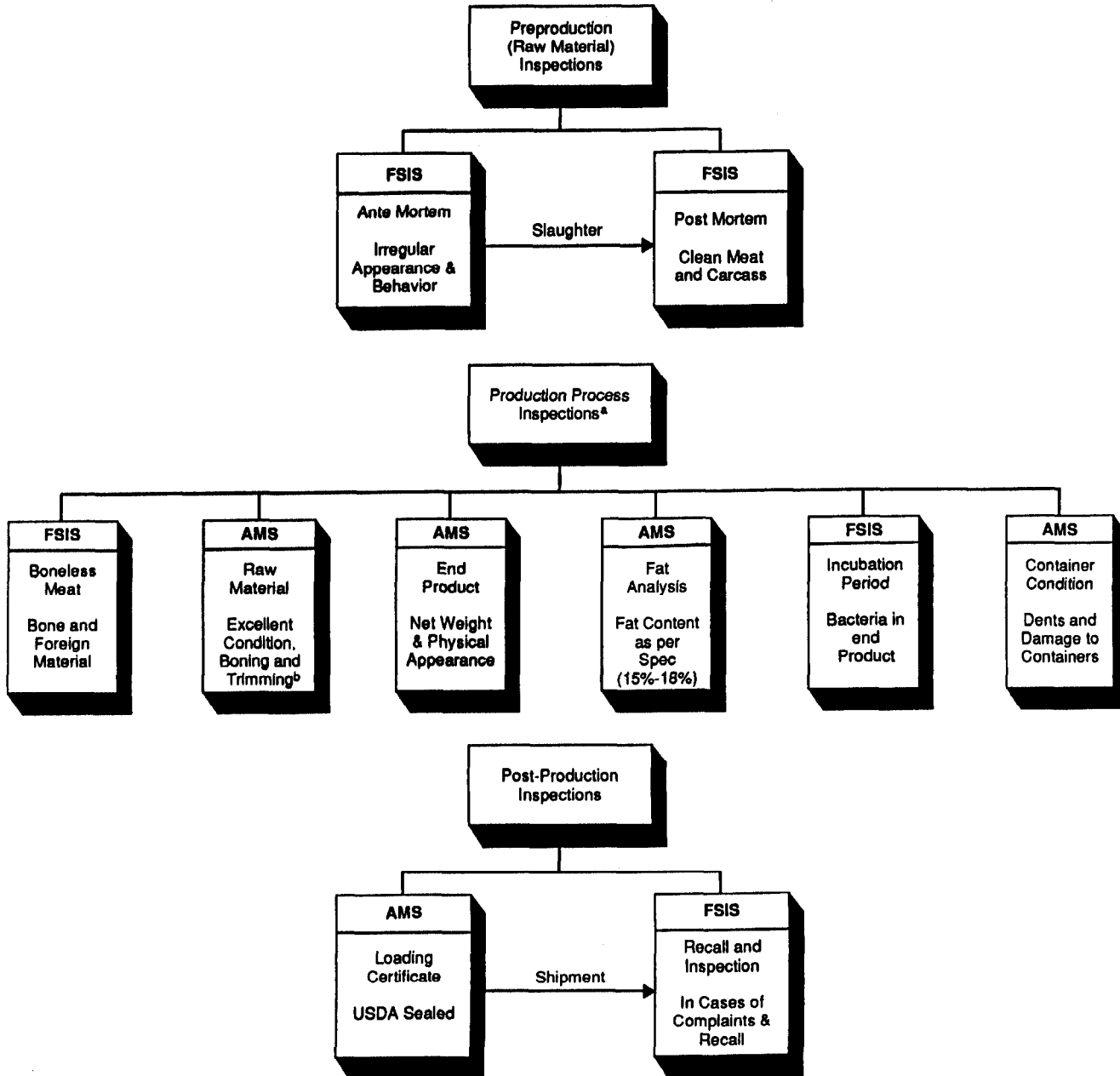
AMS graders also examine the condition of product containers for dents and other damage before certifying the lot for shipment. Once the graders are satisfied that the canned beef or pork conform to USDA's product specifications, they will accept and certify the loading of the shipment and seal the trucks carrying the products to storage.

Figure 4.1 shows the various raw material and product-processing activities that USDA's canned beef and pork are required to pass through during production, and the examinations performed by FSIS and AMS at each stage to ensure the wholesomeness and safety as well as conformance with product specifications of these items.

¹A lot of canned beef or pork is acceptable if the fat content is at or below 18 percent.

**Chapter 4
 USDA Inspects Canned Beef and Pork
 for Wholesomeness**

Figure 4.1: Inspection Roles and Responsibilities of USDA Agencies for Canned Beef and Pork



^aFSIS has overall responsibility, throughout the production process, to ensure that the meat products are being produced in a manner that will ensure their safety for human consumption.

^bThe boning and trimming inspection is only applicable to the canned beef.

Specification Changes Have Had Mixed Effects on Product Characteristics

USDA has made several changes over the last 6 years to its canned beef and pork product specifications that have had mixed effects on their aesthetic characteristics. Some USDA officials and others perceive that these changes have adversely affected the quality of canned beef and pork. For example, USDA's current product specifications for canned beef allow greater amounts of objectionable materials such as blood vessels, connective tissues, and tendons than previous product specifications. This was also true of USDA's canned pork until October 1990. The canned pork specification was changed to lower the fat content of canned pork to the level of canned beef, which has been considered an improvement by many USDA officials.

Modifications to Quality Assurance Procedures Have Had Adverse Impacts

USDA's canned beef and pork specifications include quality assurance procedures to ensure that the products conform to minimum USDA standards. The quality assurance procedures include both an excellent condition examination (see ch. 4) and a boning and trimming examination of the raw material. Changes were made to the quality assurance procedures in 1984 and 1985 that eliminated the boning and trimming examination and also eliminated the objectionable material defect criteria from the specifications. The impact of this modification has been to allow more objectionable material in the products and thereby lessen the quality of canned beef and pork, according to some USDA officials and others.

Pre-1984/85 Quality Assurance Procedures

Prior to 1984 and 1985, the quality assurance procedures for canned beef and pork, respectively, required AMS to perform a boning and trimming inspection of the raw material used in the products. During the boning and trimming inspection, AMS graders examined the raw material for specific objectionable materials that were not allowed in the products. These defects included the presence of bone, cartilage, tendons, skin, bruises, blood clots, lymph glands, membranes, and connective tissue. If the total number of defects in the raw material exceeded the amounts allowed by the objectionable material criteria, it was rejected.

Elimination of Objectionable Material Defect Criteria

The changes made to the quality assurance procedures for canned beef in 1984 and canned pork in 1985 eliminated AMS' boning and trimming inspection from the quality assurance procedures for both products and also eliminated the objectionable material defect criteria. According to

mixed. Eliminating the boning and trimming inspection and the objectionable material defect criteria for both canned beef and pork was not a positive change. These changes resulted in the elimination of a critical quality control procedure and an unappealing product. However, the partial reinstatement of AMS' boning and trimming inspection and objectionable material defect criteria for canned beef in 1986, and the reinstatement of the inspection and lowering the fat content for canned pork in 1990 were positive changes. The current canned beef boning and trimming inspection and the lack of a boning and trimming inspection for canned pork until October 1990, we believe, is a principal reason why some persons found these products unappealing.

Recommendation

We recommend that the Secretary of Agriculture explore the cost and benefits of revising the product specifications for USDA's canned beef to require a boning and trimming inspection with adequate defect criteria, such as that contained in the pre-1984 specifications, that will reduce the amounts of objectionable materials contained in this product.

Agency Comments

USDA agreed that the quality of canned beef and pork would improve with the reinstatement of the pre-1984 boning and trimming inspection. USDA stated that it tightened material requirements for canned beef in August 1990 and modified material requirements and incorporated an examination for excluded materials for canned pork in October 1990. USDA plans to incorporate, as we recommended, additional objectionable material exclusion requirements for canned beef such as those contained in the pre-1984 specifications.

USDA's complete comments on this report are contained in appendix I.

More Restrictive Objectionable Material Defect Criteria Suggested

According to the President of the National Association of FDPIR, there was much discussion among the attendees at the association's 1990 conference regarding the quality of USDA's canned beef and pork. He said that attendees were very critical of the amount of veins, cartilage, connective tissue, and blood vessels in the canned beef. They did not have this criticism of the canned pork. The president said that in his opinion, the main reason for the presence of high levels of objectionable material in the canned beef is because it is allowed by USDA's product specification. He believes that tightening the specification could eliminate the problem.

Fat Level of Canned Pork Has Been Lowered to Address Dietary-Health Concerns

In February 1990, as part of its commodity improvement initiatives, USDA lowered the maximum allowable fat content of canned pork from 21 to 18 percent, the same level as that for canned beef. Lowering the fat content of canned pork to 18 percent is an example of USDA's commodity initiatives to make the food distribution program more responsive to recipients' needs. According to USDA officials, the 18-percent fat content of both their canned pork and canned beef makes these products leaner than low-fat retail fresh meat products.³

However, in our report entitled Food Assistance Programs: Nutritional Adequacy of Primary Food Programs on Four Indian Reservations (GAO/RCED-89-177, Sept. 29, 1989), we noted that many recipients of USDA commodities, especially Indians on reservations, suffer from a number of dietary-health conditions such as diabetes, hypertension, obesity, and heart disease. A diet that contains ordinary levels of fat or salt may aggravate these health conditions. While the food distribution program is not designed to specifically address the special dietary needs of Indian recipients, our report noted that more can be done to accommodate these needs, provided that recipients receive and apply adequate nutritional education. We noted, for example, that people with hypertension or other salt-sensitive health conditions may be able to use commodities that contain salt by rinsing the item to eliminate the external salt residue from the packing process, thereby reducing the overall salt content of the item.

Conclusions

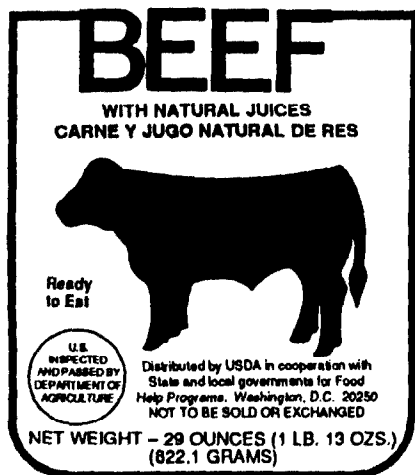
The overall impact of the various modifications made by USDA to its canned beef and pork specifications since 1984 and 1985 has been

³In comparison, commercial lean uncooked ground beef may contain up to 23 percent fat, and uncooked extra lean ground beef may contain up to 18 percent fat.

Figure 6.1: Examples of Label Markings for 29-Ounce Cans of USDA Beef and Pork

Canned Beef

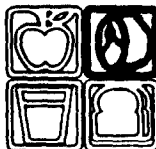
29-OUNCE CANS:



Ingredients: Beef - not less than 99%; Salt - not more than 1% (flavor).

This Beef is fully cooked in its own juices and is ready to use. Use cut-up Beef for salads, sandwiches, soups, stews, barbecue or spaghetti sauce, meat pies, casseroles, or creamed beef. Use juices and fat from canned Beef to flavor cooked vegetables, soups or gravy.

A DAILY FOOD GUIDE



Everyday eat foods from each Group. BEEF WITH NATURAL JUICES is in the Meat Group which also includes other meat, fish, poultry, eggs, dry beans, split peas, lentils, and peanut butter.



Store unopened can in a cool, dry place. After opening store unused Beef in this can; cover and refrigerate.

BARBECUE BEEF

- | | |
|-----------------------------------|---|
| 1/2 large onion | 1/2 teaspoon salt |
| 1 tablespoon fat from canned beef | 1 teaspoon prepared mustard |
| 1 tablespoon vinegar | 1/3 cup juices from canned beef |
| 3/4 cup catsup | 1 can cut-up canned beef (29-ounce can) |
| 1 teaspoon brown sugar | |

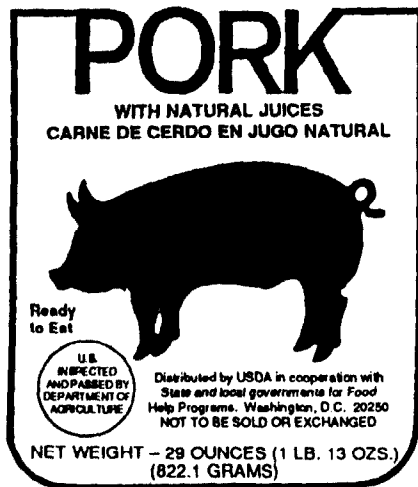
Chop onion and cook in fat in a fry pan until tender. Add vinegar, catsup, brown sugar, salt, and mustard. Mix well. Drain juices from beef. If needed, add water to make 1/3 cup.

Add juices and meat to catsup mixture and heat to boiling. Serve on toast, buns, rice, or hot cook bulgur. Makes 6 servings, about 2/3 cup sauce each.

NOTE: Save the rest of the fat (and any juices) to use in cooking or to flavor cooked vegetables.

Canned Pork

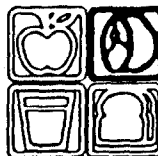
29-OUNCE CANS:



Ingredients: Pork - not less than 99%; Salt - not more than 1% (flavor).

This Pork is fully cooked in its own juices and is ready to use. Use cut-up Pork for salads, sandwiches, soups, stews, barbecue or spaghetti sauce, meat pies, casseroles, or creamed pork. Use juices and fat from canned Pork to flavor cooked vegetables, soups or gravy.

A DAILY FOOD GUIDE



Everyday eat foods from each Group. PORK WITH NATURAL JUICES is in the Meat Group which also includes other meat, fish, poultry, eggs, dry beans, split peas, lentils, and peanut butter.



Store unopened can in a cool, dry place. After opening store unused Pork in this can; cover and refrigerate.

MEAT SAUCE

- 1 medium-size onion
- 1 tablespoon fat from pork
- 1-1/2 cups pork juices and water
- Salt, as you like
- 4 cups finely cut-up canned pork (29-oz. can)

Chop onion. Cook onion in fat in a fry pan until tender. Drain the juices from the canned pork and add water to make 1 1/2 cups.

Stir in rest of ingredients. Cook over low heat about 30 minutes until thickened. Do not cover.

Serve over hot, cooked macaroni, noodles, rice or spaghetti. Makes 6 servings, about 2/3 cup sauce each.

Source: USDA.

Alternative Processing and Labeling Methods Can Remedy Some Reported Problems

Many of the adverse comments discussed in chapter 2 regarding the quality of USDA's canned beef and pork such as the products' fat-cap, overcooked condition, and salty taste appear to be in reaction to the products' physical characteristics. We found that some of these characteristics are, in part, the result of the canning and packaging methods used during production. Information obtained from suppliers of USDA's canned beef and pork, industry representatives, and program and agency officials indicates that alternative processing and packaging methods can remedy some of the unappealing product characteristics discussed in this report.

Current Processing and Labeling Methods

USDA's canned beef and pork are both produced using a nonagitating, cold pack, retort canning process. This means that metal cans are filled with cold, raw meat and then cooked in a static retort container.¹ Retorting serves two purposes: (1) products are subjected to high temperatures for a sufficient duration to destroy all organisms that might adversely affect consumer health, as well as other more resistant organisms that could cause spoilage under normal storage conditions and (2) products are cooked in the can, and they can be eaten directly from the can.² USDA specifications for canned beef and pork require the use of commercially acceptable, 24- or 29-ounce, open-top, cylindrical-style cans coated with enamel (or other suitable material) inside and outside. USDA specifications also require that suppliers add up to 1 percent salt to each can of beef and pork for flavoring.

The appropriate USDA markings are lithographed or paper labeled (labels must be of white durable stock that fully wraps around the can) on the side of the can. Lithographing or printing must be black, according to USDA's product specifications. Figure 6.1 shows the only markings permitted on USDA's canned beef and pork (label markings are similar for both 24- and 29-ounce cans).

¹A retort is a steel tank in which metal crates or baskets containing the cans are placed for pressure-cooking and subsequent cooling.

²USDA officials told us that although canned beef or pork can be eaten directly from the can, recipients are encouraged to use the contents in recipes provided by the program.

Figure 6.2: The Inch-Thick Layer of Fat in Both Canned Beef and Pork is a Result of the Retort Cooking Process



According to industry literature, agitating or tumbling cans during retorting is a possible alternative that can remedy these two problems created by the static retorting process. The literature states that this alternative shortens the retort processing schedule by allowing faster penetration of heat into the meat. Consequently, the amount of fat emitted from the meat is reduced, which minimizes the fat cap. Agitating/tumbling also results in uniform heat distribution throughout the can, thereby reducing the overcooked condition of the meat. The technical services director of a company which has supplied USDA with canned meat products told us that agitating/tumbling the cans while retorting would significantly improve the quality of the final product by

Alternative Processing Methods Can Improve Some Product Characteristics

Many of the unappealing characteristics of both canned beef and pork are the result of the cooking (retorting) and packaging processes. According to USDA and industry officials, a variety of modifications to the retort process are available that can remedy some of the unappealing characteristics of both products. These alternatives include (1) tumbling/agitating the cans, (2) using shallow cans, (3) precooking meat before canning, and (4) reducing or eliminating added salt.

These alternative processing methods are not intended to be inclusive of all possible alternatives, but are a sample of those alternatives cited by industry representatives and USDA officials that we contacted. Because the cost of USDA's canned beef and pork is determined by various market and production cost factors, the specific cost consequences of adopting any one or combination of these alternatives were generally not available.

Agitating/Tumbling Can Overcome Some Adverse Effects of the Retort Process

Although retorting is one of the most widely accepted methods of safely preserving food for long periods of time,³ the thermal process required to ensure sterility is so severe—a temperature of 250 degrees Fahrenheit must be maintained for a scheduled period⁴ at the geometric center of the can—that some product characteristics such as color, odor, and texture are adversely affected. Also, two unappealing physical characteristics, namely, (1) the accumulation of a fat-cap and (2) overcooked meat are a result of the nonagitating retort process used to manufacture USDA's canned beef and pork.

During retorting, the fat separates from the meat and rises to the top of the stationary can, where it coagulates during cooling. (See fig. 6.2.) According to AMS' Livestock and Seed Division director, the layer of fat at the top of an opened can of beef or pork causes a deception among recipients that the product contains more fat than it actually does.

Industry and USDA officials told us that the meat nearest the exterior of the can is overcooked because it takes longer for the heat to penetrate to the center of the can.

³The shelf-life of retorted canned meats is determined, in part, by its storage environment. Sterile canned meat products, according to industry literature, should be kept in a cool, dry place with temperatures not exceeding 70 degrees Fahrenheit. In general, meat products stored at that temperature should retain acceptable palatability characteristics for 4 to 5 years. If held at 40 degrees Fahrenheit or below, even longer shelf-life will result, according to industry literature.

⁴The retorting time and temperature necessary to produce sterile products depend both on the nature of the product and the size of the container.

Reducing or Eliminating Added Salt

During our previous work on four Indian reservations, Indian Health Service officials told us that salt levels in USDA's canned beef and pork, as well as in other commodity food items, should be reduced because many Indians have diet-related health problems that require restricted salt intake. In addition, several other program recipient agencies complained about the salty taste of both products in their annual acceptability reports. (See ch. 2.)

USDA's canned beef and pork specifications require suppliers to add up to 1 percent salt to both products for flavoring, not preservation. According to AMS officials, the sterility and shelf stability of USDA's canned beef and pork are dependent on the proper application of the retort process and not the 1-percent added salt. They told us that they doubted that reducing or eliminating the added salt would affect the shelf life of either product. Salt contained in other federal and commercial products is both higher and lower than in USDA's canned beef and pork. USDA's comments on this report stated that eliminating the added salt to canned beef and pork may have negative effects on the flavor and odor characteristics of the products, but that they plan to experiment with lowering the salt levels in both products. (See app. I.)

Recipients' Acceptability and Few Complaints Are Cited as Reasons Why Changes Are Not Needed

FNS officials emphasized that their objective is to procure and provide the highest quality canned meats, given various program and storage considerations. They said that they rely on the state distributing agency acceptability reports, as well as specific commodity complaints, to identify problems with their commodity products. The need to make processing changes to canned beef and pork has not arisen because of favorable acceptability report responses and the receipt of few complaints. They noted that 297 recipient complaints were received nationwide for all commodity items in 1989 and that of the total 297 recipient complaints, 34 and 22 were made specifically about beef and pork, respectively.

Labeling Changes Can Improve Consumer Acceptability

Some program and USDA officials told us that canned beef and pork appear to be low-quality items because of their utilitarian-style packaging. Indian health officials also told us that the absence of any nutritional information on both products was a concern, especially for recipients with diet-related health problems.

eliminating the scorched and burnt meat and reducing the fat that is extracted from the meat during cooking.

USDA's comments on this report noted that the presence of the easily removed fat at the top of the can may in fact be advantageous to recipients who may wish to further reduce the fat content of the product, especially those with diet-related health problems such as the Native American population. (See app. I.)

Using Shallow Cans or Precooking the Meat Can Reduce Overcooking

The retorting process, as discussed above, requires that sufficient heat be applied to the contents of canned beef and pork to sterilize the meat at the center of the can. However, according to the Director of FSIS' Meat and Poultry Processing Operations and several industry officials, the meat nearest the can may sometimes be subjected to 20 times more processing time than required for sterilization. The FSIS official said that although an acceptable product results, the meat looks tough and is overcooked because of the severity of the thermal heat process. By using shallow cans or precooking the meat, this problem could be reduced, he said.

FSIS and industry officials suggested packing the meat in cans that are more shallow or have a lower profile than the current cans. Because less time would be required to sterilize the meat at the center of a shallow can (the distances from the can's heated surface to its center would be reduced), the contents would be heated in a more uniform manner.

USDA officials also suggested that if USDA's beef and pork were heated before being packed in the can, the scheduled retort exposure could be reduced, thereby diminishing the overcooked condition of the meat. For example, the Department of the Army requires the agitated preheating of its ham chunks before they are canned and retorted. DOD states in its canned ham chunk specification (MIL-H-0044159B-GL) that preheating prevents clumping, scorching, and burning of the meat.

USDA's comments on this report noted, in part, that agitating or precooking the meat, or adding water or other ingredients could minimize the fat cap. However, USDA noted that agitation would have no effect on the tightly packed cans of beef and pork, and is extremely costly. (See app. I.)

FNS' Response to Suggested Label Changes

FNS officials, who are responsible for determining the design of commodity labels, told us that they are waiting to see how label standards proposed by the Food and Drug Administration will affect commodity labels before considering revisions.⁵

Conclusions

A variety of unappealing physical characteristics have been cited by a number of persons familiar with USDA's canned beef and pork. Many of these characteristics result from the processing and packaging methods used to produce these items. Several processing and packaging alternatives, a few of which have been briefly identified in this report, could remedy some of the reported problems and provide a more aesthetically acceptable product. We are not advocating the use of any specific processing or packaging changes. However, by exploring the use of alternative processing methods, FNS may be able to take advantage of processes that can eliminate some of the unappealing characteristics of canned beef and pork.

With respect to canned beef and pork labels, FNS expressed a desire to wait until FDA revises its food-labeling requirements over the next 2 years before adding any nutritional information to its present labels. However, FNS can better serve the current needs of recipients by changing the canned beef and pork labels now to include some nutritional information about the products, and if necessary, modify them at a later date to conform with FDA's labeling requirements for other food products.

Recommendations

To improve the physical characteristics of USDA's canned beef and pork, we recommend that the Secretary of Agriculture (1) explore the use of alternative processing and packaging alternatives, and consider adopting those that are most effective and cost-efficient and (2) revise product labels in conjunction with FDA's nutrition labeling initiative to improve the content description and include nutrition information on the cans.

⁵FDA published an advance notice of proposed rulemaking in the August 8, 1989, *Federal Register* that announced a major initiative of the Department of Health and Human Services to review food labeling as a tool for promoting sound nutrition for the nation's consumers. In addition, the Nutrition Labeling and Education Act of 1990 requires detailed information on all food packages. This legislation gives FDA 2 years to develop final food labeling regulations. FDA was still in the process of developing these regulations during the preparation of this report.

Problems Cited With Current Labels

During our trip to the Standing Rock Indian Reservation in North Dakota, the director of the reservation's food distribution program told us that even in contrast to other commodity foods, USDA's canned beef and pork look like low-quality items because of their utilitarian-style labels. (See fig. 6.1.)

In the opinion of an FSIS supervisory label review officer, both canned beef and pork are packaged in an unappealing fashion. He told us that the labels implied to consumers that they are receiving an inferior product. He also noted the lack of nutrition information on the products.

Labeling Changes Suggested

Some USDA, program, and community officials suggested several canned beef and pork label changes. These included the adoption of labels that are more appealing, descriptive, and nutritionally informative.

The Standing Rock distribution program director recommended that the labels of both products should include a better description of their contents and nutrition information. In addition, community officials at four reservations suggested that the inclusion of nutrition information on the labels of all USDA commodities would be an effective way of providing nutrition education to recipients.

According to the FSIS label review officer, USDA's canned beef and pork labels could be made more appealing with the addition of color and a vignette depicting the contents in a prepared ready-to-serve form.

An AMS contracting officer told us that in his opinion, the "Ready-to-Eat" caption on the labels of both items is probably misleading to some recipients. He explained that these products are not fully prepared meals in a can, but are intended to be used in casseroles, stews, or other such meals. He said that USDA is considering changing the "Ready-to-Eat" product description on the labels of both products to "Fully Cooked." A meat canning industry representative suggested that the label be changed to read "Fully Cooked With Natural Fat Accumulation." Both believe that these suggested label changes would provide a more accurate description of the products than do the current USDA labels.

Agency Comments and Our Evaluation

USDA stated that alternative processing or packaging methods that are effective in presenting a more appealing product without sacrificing its nutritive value should be considered. For example, USDA stated that it will undertake a testing procedure to determine the optimal salt levels for both products. USDA also agrees with our recommendation to adopt labels that are more descriptive and provide nutritional information. USDA plans to make some labeling changes in the near future and additional changes after the issuance of pending FDA labeling regulations.

USDA stated that it plans to undertake further educational efforts, such as the distribution of recipes and fact sheets, to inform recipients about product preparation practices that would encourage healthy eating habits.

While USDA agrees that additional improvements to canned beef and pork could increase recipients' satisfaction with the products, they noted that changes in product formulation must always be weighed against the cost of effecting the changes, and the impact that the changes would have on the products' acceptability. USDA commented on the merits and effectiveness of the alternative processing and packaging methods discussed in the report. We noted that some of these comments, provided separately by FNS and AMS, were contradictory. For example, FNS and AMS disagreed on the effectiveness of agitation to reduce the products' fat cap.

USDA stated that the allocation of limited resources to improve the acceptability of a product that is already acceptable to a large majority of recipients would not be cost effective. We agree that costs and nutritional considerations are important factors in considering product change and that trade-offs must be made in terms of costs related to the improvements made, degree of improvements, and resulting amounts of food which can be provided for the amounts spent. We have revised the report to emphasize that we are not advocating any specific processing or packaging changes. Nevertheless, we continue to believe that USDA should analyze the costs and benefits of a comprehensive range of alternative processing and packaging methods that could enhance the products' characteristics and acceptability.

USDA's complete comments on this report are contained in appendix I.

U.S. DEPARTMENT OF AGRICULTURE

Response to General Accounting Office Draft Report RCED-91-81,
"FOOD DISTRIBUTION PROGRAM: Appearance of USDA's
Canned Beef and Pork Can be Improved"

EXECUTIVE SUMMARY

FNS Comments

USDA agrees that commodity acceptability must continually be evaluated and improved to ensure that the USDA Food Distribution Programs are supplementing the nutritional needs of program recipients in the most effective way possible. The Department routinely evaluates the issues of commodity quality and acceptability through various means, including annual commodity acceptability reports, a commodity complaint system, and comprehensive studies, such as the one completed last year on the Food Distribution Program on Indian Reservations. The commodity acceptability reports routinely provide the Department with feedback from program recipients and are seen as the most important indicator of the positive and negative aspects of each commodity item. Based on input from these various sources, the Department makes changes in the commodities to suit recipient preferences, and to improve the nutritional content of the food package.

USDA makes every reasonable effort to provide high quality products that are enjoyed by recipients. GAO correctly reports that USDA canned beef and pork contain 99 percent meat, which is a higher percent than canned meat products procured by other government agencies or sold at retail outlets. As also noted in this GAO report, a sample of commodity acceptability reports submitted by State agencies for the last 2 years showed that 89 and 97 percent of the respondents, respectively, found USDA's canned beef and pork to be highly acceptable/acceptable items. Although these ratings indicate a high acceptability for USDA canned meats, the Department agrees that additional improvements to our products could increase recipient satisfaction with the products. Changes in product formulation must always be weighed against the cost of effecting the changes, and the impact that the changes would have on product acceptability. With this in mind, the Department is taking the following steps to improve USDA canned beef and pork.

The labels for both products will be improved to clarify that: (1) the meat is fully cooked in its own juices and is ready to use in a recipe, and (2) individuals with diet-related health problems should remove the fat cap prior to heating the product. Label information about the nutritional content of the product will also be enhanced as soon as nutrition labeling standards are put into place by the Food and Drug Administration.

Comments From the U.S. Department of Agriculture

Note: GAO comments supplementing those in the report text appear at the end of this appendix.



DEPARTMENT OF AGRICULTURE
OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20250

MAR 8 1991

Mr. John W. Harman
Director
Food and Agriculture Issues
Resources, Community and Economic
Development Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Harman:

Thank you for the opportunity to review and comment on your draft report entitled "Food Distribution Program: Appearance of USDA's Canned Beef and Pork Can Be Improved (GAO/RCED-91-81)." This letter transmits the official comments of the Food and Nutrition Service (FNS) and the Agricultural Marketing Service (AMS) on this GAO draft report.

In summary, both agencies believe that USDA canned beef and pork are high-quality products that are well received by our recipients. As indicated in the GAO report, FNS annually collects reports from State distributing agencies that indicate recipient satisfaction with, or criticism of, USDA commodities. GAO examined a sample of these commodity acceptability reports and determined that 97 percent of the respondents rated canned pork as "highly acceptable/acceptable" and 89 percent gave similar ratings to our canned beef. Regardless of these high approval ratings, both FNS and AMS will explore alternative methods of processing and packaging as suggested by GAO. It must be emphasized, however, that all improvements to USDA commodities are subject to cost constraints.

The actions that will be taken by each agency are addressed in the enclosed pages that respond specifically to each chapter of the GAO report. The AMS response emphasizes changes in product inspection and specifications, as well as the technical feasibility of alternative processing and packaging methods. The FNS comments respond to product acceptability, cost effectiveness of prospective changes, and modifications in labeling.

We appreciate the opportunity to respond to your findings.

Sincerely,

Catherine Bertini
Assistant Secretary for
Food and Consumer Services

Enclosure

See comment 1.

Appendix I
Comments From the U.S. Department
of Agriculture

GAO contends that some recipients may be reluctant to criticize free food. However, the significant number of negative comments that are entered on the commodity acceptability reports belies this contention. Further evidence that recipients respond with candor on the reports is demonstrated by the fact that there are great variations in the overall approval ratings of individual commodity items. For example, the 1990 reports for the Food Distribution Program on Indian Reservations indicate that 96 percent of the respondents rate cheese as "highly acceptable," while only 61 percent rated peanut butter that favorably.

FNS believes that the new commodity acceptability reports adequately document the opinions and preferences of program recipients. The need for accurate reports has consistently been explained to State and local agencies. FNS will, however, continue to emphasize the need for objective feedback, and will endeavor to improve the consistency of the methods used by State distributing agencies for data collection for the various food distribution programs.

See comment 2.

CHAPTER 3

FNS Comments

FNS concurs that the canned meat products distributed by USDA are not comparable to any commercial products. Most commercial canned meat products are stews which contain considerably lower percentages of meat than the 99 percent beef or pork contained in USDA products. The commercial products contain gravies or barbecue sauce because they are designed to be eaten without additional preparation other than heating the product. Conversely, USDA products are designed to be used in recipes that are prepared by the recipients according to each household's food preferences. Providing the household with a meat product free of chemicals or flavor enhancements allows the use of the meat in a multiplicity of recipes so as to maximize the diversity in meals a household can prepare.

See comment 3.

AMS Comments

DOD's Canned Meats - DOD does not require "prime" beef cuts for the production of canned beef chunks. They do require the use of primal cuts (rounds, loins, ribs, and square-cut chunks) from any grade of steers, heifers, or cows. The canned ham chunks are made from cured and smoked hams of "high commercial quality." This item is an entirely different product and should not be compared to USDA canned pork which is made from uncured pork.

See Comment 4.

**Appendix I
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of Agriculture**

See comment 1.

The salt content of both canned meat products is currently one percent, and the GAO report indicates that a significant number of recipients perceive this salt level as too high. The Department will explore the possibility of doing taste tests on meat products with a salt content of less than one percent. If the products with lowered salt content are well received, the Department will proceed to revise the product specifications accordingly for nationwide distributions.

AMS Comments

In August 1990, AMS tightened the material requirements for canned beef. AMS will also revise the specification for canned beef to include boning and trimming examination with adequate defect criteria, such as that contained in the pre-1984 specification. In October 1990 AMS incorporated such boning and trimming examination and defect criteria in the specification for canned pork.

See comment 1.

USDA will evaluate processing and packing alternatives and determine if inclusion of such alternatives would materially improve the products.

CHAPTER 2

FNS Comments

The legislative mandate to collect commodity acceptability reports from State distributing agencies was established by Public Law 100-237, the Commodity Distribution Reform Act and WIC Amendments of 1987. FNS concurs with the GAO findings that in 1988 and 1989 the reports collected from States were not uniform by program and the format differences created difficulties in analyzing the data reported.

In 1990, FNS developed a new form for national use by State distributing agencies for all food distribution programs. This new FNS Form-663 contains detailed directions that are designed to ensure the collection of uniform reports from every State distributing agency. As indicated in the GAO report, the FNS Form-663 solicits information about product acceptance by food groups, including comments on popularity, quality, packaging and recommendations for product changes or new foods. Program administrators enter data on the form based on surveys of individual recipients and on a review of commodity complaints received. Distributing agencies are required to submit data from at least 10 percent of recipient agencies each year. Over a period of time, all recipient agencies will have submitted commodity acceptability data. While the methods of data collection employed by State agencies are not uniform, the feedback received on the programs is quite extensive, and is generally representative of opinions of program recipients.

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of Agriculture

See comment 6.

Native American population. The alternative processing methods suggested here, such as agitating the cans in the retort process, the use of shallow cans, or precooking the meat would, in any case, not be effective in preventing the formation of the fat cap as the meat cools.

The Department does believe that further educational efforts should be made to inform recipients of the benefits of removing the fat cap before preparing the meat for consumption, as well as to encourage healthier eating habits generally. Further distribution of commodity recipes and fact sheets, and the encouragement and facilitation of collaborative efforts between other agencies (such as State extension offices) and FNS regional offices, are two of the means by which FNS intends to pursue the goal of improving nutrition education for program recipients. This goal was emphasized in the GAO report of June 1990, entitled "Food Assistance Programs: Recipient and Expert Views on Food Assistance at Four Indian Reservations."

Alternative processing or packaging methods that are effective in presenting a more appealing product, without sacrificing its nutritive value, should be considered. However, the cost involved in the use of other methods of processing or packaging must always be weighed against their actual impact on the use of the product by recipients. The allocation of limited resources to improve the acceptability of a product that is already acceptable to a large majority of recipients would not be cost effective.

The GAO report indicated that overcooking of the canned meat products could be remedied by the use of shallow cans or by precooking the meat. However, a review of the commodity acceptability reports and commodity complaints submitted to FNS in recent years disclosed few comments substantiating that overcooking of the meat products is recognized as a significant problem by recipients. Table 2.2 of this report is also devoid of any indication that anecdotal remarks were made about overcooking of the products. Consequently, in the absence of requests for a change in the methods used to cook the canned meats, FNS will not pursue a change in cooking procedures or can size.

Reduction of the salt content from the 1 percent now added to the canned beef and pork would affect only flavor, and would not result in any increase in processing costs. A significant number of recipients have commented that the meats are too salty. However, the Department believes that a reduction without further testing would be unfair to those many recipients who are apparently satisfied with the salt content. A testing procedure that would offer meats of various salt levels to different groups of recipients to determine an optimal level will be undertaken.

CHAPTER 5

FNS Comments

FNS agrees that the quality of the canned beef and pork would be improved with the reinstating of the boning and trimming inspection that was used prior to 1984. AMS has taken steps this past year to tighten the requirement for the amount of objectionable material in canned beef, to establish defect criteria for canned pork, and to reinstitute the boning and trimming examination for both products. These steps should be sufficient to comply with GAO recommendations.

See comment 5.

AMS Comments

After the 1984 GAO report, AMS decided to apply the GAO recommendation to eliminate objectionable material defect criteria for canned beef and pork as well as ground beef because: (1) the raw component requirements at the time were similar to those for ground beef; (2) both the beef and pork are forced through a grinding plate and ground into chunks prior to canning; and (3) the FSIS boning and trimming examination was also applicable to beef and pork destined for canning.

At the request of FNS, we issued Amendment 3 to Schedule BJ (Beef) in August 1990 to tighten material requirements; and Amendment 3 to Schedule PJ (Pork) in October 1990 to modify the material requirements and incorporate an examination for excluded materials. We are in the process of incorporating additional excluded material requirements into Schedule BJ. These actions should comply with GAO's latest recommendation to require a boning and trimming examination with adequate defect criteria such as that contained in the pre-1984 specifications.

See comment 5.

CHAPTER 6

FNS Comments

The presence of the fat cap, resulting from the process of cooking the meats in the can (retorting), is, according to the great majority of recipients, the most important unappealing characteristic of the canned beef and pork. However, data from the commodity acceptability reports shows that these products have remained acceptable to the vast majority of recipients of the food distribution programs, despite the presence of the fat cap. It is questionable, then, that the dispersal of the fat cap in the course of processing would have a great effect on the use of these commodities by recipients. More importantly, dispersing the fat throughout the product would make it impossible to remove before preparing the meat for consumption. This would have an especially deleterious effect on those recipients with the diet-related health problems, which are relatively common among the

The following are GAO's comments on the U.S. Department of Agriculture's letter dated March 8, 1991.

GAO Comments

1. We have included a summary of this information on page 5 of the report.
2. We have included this information and our response on page 23 of the report.
3. We have included a summary of this information on page 25 of the report.
4. We have modified page 24 of the report.
5. We have included a summary of this information on page 33 of the report.
6. We have included this information on page 38 of the report.
7. We have included a summary of this information and our response on page 42 of the report.
8. We have included a summary of this information on page 38 of the report.
9. We have included this information on page 39 of the report.

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The suggestion to adopt labels that are more descriptive, and nutritionally informative, is a good idea. The Food and Nutrition Service has already begun work on new labels for canned beef and pork that describe the products as "ready to use in a recipe," and explain how to remove the fat before consumption. These new labels will be implemented in the near future. Further efforts to include more nutritional information will also be pursued, but, as this is a much more complex process, implementation will have to follow pending changes in Food and Drug Administration regulations. Modifications in the labels to make them more attractive would be costly, and would require the allocation of funds that are better spent on improvement of the nutritional value of commodities or nutrition education.

See comment 7.

AMS Comments

CURRENT PROCESSING AND LABELING METHODS - As long as the USDA procures canned beef and pork without additives to prevent fat capping or water or other liquid to facilitate heat transfer, agitating or tumbling cans during retorting will have little or no effect on the product compared to the still retort method. The purpose of agitating or tumbling canned products during the retort process is to force product movement within the cans which will reduce the time necessary to achieve proper thermal stabilization temperatures. Fat capping will occur during the cooling of the cans. Fat capping may be minimized by precooking meat prior to canning, adding water and other ingredients to suspend the fat in the juice, and agitating cans during retorting to shorten the retort process. However, agitation would have no effect in a can tightly packed with meat as our current products are made. Also, the retort system that agitates or tumbles canned products is extremely costly and is not commonly used by meat canners.

See comment 8.

The suggestion to use smaller or shallow can sizes would require a substantial increase in cost without significant enhancement of the product. The 29 oz. or 24 oz. can is the largest can size that may be utilized without incidence of product overcooking. We have not received complaints involving flavor associated with product burning or scorching.

We will consider reducing or eliminating salt in canned meats. We will work closely with FNS and rely on their advice regarding this issue. However, we will also alert them to the possible negative effects on flavor and odor characteristics if the salt is eliminated.

See comment 9.

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