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COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D. C. 20543

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MAR 19 1975



C1 The Honorable Vance Hartke
United States Senate

R Dear Senator Hartke:

On September 5, 1974, you asked us to consider points raised in a constituent's letter, including (1) the rationale for the Department of Defense (DOD) decision to buy U.S. Department of Agriculture (USDA) Choice, instead of Good, beef for troops and (2) the reasons why the Army uses doctors of veterinary medicine as food inspectors and as domestic animal veterinarians on military installations, instead of using less costly personnel. As your office directed in September 1974, we are commenting only on DOD's decision to change beef grades.

Beginning July 1, 1974, DOD switched to Choice beef for troop feeding to give troops the same quality of beef eaten by the majority of the American public, to reduce complaints of poor quality of meat products, and to lessen the probability that DOD would receive low quality beef as a result of its competitive-bid procedures. DOD also said the price difference of only \$0.055 to \$0.0675 a pound between Good and Choice beef was another reason for the switch.

DOD will pay higher prices for Choice beef without assurance that it will receive a commensurate increase in value. The \$0.055 to \$0.0675 price difference applies to carcasses instead of the processed cuts bought for troop feeding. The difference in costs for processed cuts ranges from \$0.25 to \$0.45 a pound. On the basis of these differences and the volume of meat purchases for May 1974, DOD will spend \$14 million more annually to buy Choice rather than Good beef. A DOD official told us that DOD originally estimated that the use of Choice beef would increase food costs by \$9 million annually.

BACKGROUND

The Defense Supply Agency's Defense Personnel Support Center, Philadelphia, Pennsylvania, buys all troop-issue beef. The Center buys four different cuts of beef for troop issue, including (1) grill steaks--rib eye, top sirloin, butt, and loin strip, (2) swiss steak, (3) oven roasts--knuckle, inside round, eye of round, and outside round, and (4) pot roasts--chuck roll (blade end), shoulder clod, and chuck roll (neck end). The Center also buys ground beef patties and bulk ground beef.

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The type of beef purchased by DOD has changed throughout the last 30 years; from the late 1940s until January 1973, it bought either (1) manually precut meat from commercial suppliers or (2) whole carcasses for butchering in the service-operated central meat-processing plants. According to a DOD official, using full carcasses restricted DOD to types and quantities of cuts available from each carcass and did not provide uniformity in portion size. In the early 1970s DOD phased out all but two of these plants due to (1) high plant-operating costs, and (2) the increased availability of processed meat from commercial sources.

In January 1973 DOD switched to a system of separate line-item purchases for its beef items. According to a DOD official, this allowed the services greater flexibility in selecting beef for troop feeding and no longer restricted them to specific quantities of cuts in a carcass. As a result each dining hall can now obtain as much or as little of the four beef cuts and hamburger as it needs. Also in 1973, DOD began requiring that its grill and swiss steaks be machine-fabricated to provide steaks of uniform size and weight.

DOD has bought different grades of beef from time to time. Before 1963 there was no agreement on the grade of beef to be bought, so services bought both Good and Choice beef (carcass and boneless). From 1963 to 1965 user tests and cost studies were made on the two grades. Since the tests showed that the servicemen preferred the flavor, tenderness, and juiciness of Good beef and that Choice beef was more costly, DOD decided to buy only Good beef, beginning in January 1966.

A DOD official told us that these tests were made before June 1965, when the USDA beef-grading standards were downgraded. Considering DOD's contention that it had received beef from the lower segment of the Good beef, we believe that consumer preference tests for Good beef are still valid because that segment of the Good beef was affected very little by the downgrading.

The Deputy Assistant Secretary of Defense (Supply, Maintenance and Services) tried to switch to Choice beef in 1969 but was unsuccessful because the services felt there was little difference between the two grades and objected to the additional costs. In January 1972 the DOD Food Planning Board,¹ comprising representatives from each of the services, wanted to switch to Choice beef. The Deputy Secretary of Defense approved, but the anticipated cost increase delayed the switch until fiscal year 1975.

¹The Food Planning Board develops uniform menus and recipes which are nutritionally sound. It also provides input on food specifications and the food grades to be used within DOD.

CONSUMER SURVEYS

The U.S. Army Natick Laboratories, Natick, Massachusetts, is DOD's research, engineering and development agency for subsistence. Part of its responsibilities is to develop package specifications, test for nutrition and palatability, and provide other technical assistance to the Food Planning Board. In addition, it has made various studies to identify those factors which have the potential for influencing dining hall attendance.

Since 1971 Natick Laboratories has made a series of consumer surveys on many food items, including meats, at various military bases. We reviewed reports on consumer surveys, made in 1973, at Minot Air Force Base, North Dakota, and at Travis Air Force Base, California.

The Minot Air Force Base survey report showed that the servicemen felt that the quality of food in general needed improvement; but they did not go into detail about the quality of meat. Their main concern with regard to meat was insufficient quantity and unacceptable variety. They were also concerned about many nonfood features of military dining halls, such as speed of service and atmosphere. The Travis Air Force Base report also showed that the quality of food in general was one of the major problems. Some other problems concerned the variety of food offered and the appearance of the dining halls. Some of the servicemen's comments on beef were:

- Steaks are served infrequently and they are either burned or too rare.
- Swiss steaks are served only once a week.
- Roast beef is cold and greasy.

The Air Force Service Office¹ has also made consumer surveys. It evaluated steaks and roasts used at various Air Force bases and found that the consuming airman exhibited a preference of Good over Choice beef. The office will complete its evaluation of the effect of the switch to Choice beef about April 1975.

We distributed questionnaires to both food preparers and servicemen at three selected Army and Navy installations to determine the effect

¹ It monitors the Air Force food service program.

of DOD's, change to Choice beef on the quality of military meals. Our sample was not scientifically determined or selected.

About 65 percent of the servicemen we questioned noticed no improvement in the quality of meat served. About 50 percent of the food preparers thought that the Choice beef was better than the Good beef.

Our questionnaires and the other consumer surveys indicate that the difference between Good and Choice beef has little influence on consumer acceptance. Atmosphere, food preparation methods, and quantity served have as much or more influence.

USDA uses marbling--flocks of fat in the lean part of the meat--as one of the primary factors in grading. The higher grade usually has more marbling. However, various scientific studies, including consumer tests, have shown that the degrees of marbling have only a slight effect on palatability. Research has shown that various other factors, including cooking temperature have more influence.

For example, a study entitled, "Consumer Preference for Beef as Associated with Selected Characteristics of the Meat," by Juillerat, Kelly, Harris, Kramer, and Graham, Virginia Polytechnic Institute and State University, Research Division, Bulletin 72, 1972, stated:

"For eating, consumers prefer beef that is tender, juicy, and flavorful. None of these factors was found to be closely related to grade in this study. * * * This is consistent with results obtained by Fielder et al., (1963)."

In this study the researchers used muscles from 176 steer carcasses ranging from average Standard to top Choice and evenly divided by thirds of a grade. All weighed from 450 to 650 pounds. Tests were made by both trained and nontrained evaluation panels.

USDA officials told us that differences in palatability between the two beef grades depend on the discriminating tastes of the consumer. They noted that, by the time beef is consumed, so many variables are involved that a higher grade of meat does not necessarily guarantee a better product. It does, however, increase the probability of a more palatable product.

A DOD official agreed that the difference between beef grades is determined by various factors, especially food preparation methods. He said that food preparation methods at military dining halls vary and that the higher meat grade is therefore needed to compensate for shortcomings in food preparation. He explained that this is especially true for grill steaks, because they are cooked under intense heat and need more fat to prevent them from becoming dry or tough. The official agreed

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that Good meat, if properly prepared, can be as tasty and tender as Choice meat and that DOD should consider switching back to Good beef for oven and pot roasts, especially for pot roasts since they are usually cooked under moist heat conditions, in which case grade makes little difference.

COMPETITIVE BIDDING

One factor that influenced DOD's switch to Choice beef is the competitive-bidding procedures which the Center uses. DOD said it received low-quality beef, because its bid procedures did not permit it to select carcasses. Carcasses are selected by the processor and DOD believes that since there are variations of quality within every grade it is more apt to receive the lower quality beef within the grade. However, DOD did not have documented examples to support this statement.

Moreover, it appears that whatever limitation DOD found with the competitive-bidding procedures for Good beef would also apply to Choice beef. In other words, by changing to Choice beef, DOD might be getting the bottom of that grade but paying a premium price.

We believe DOD's complaint can be resolved, in part, by more descriptive specifications. In our recent reports on DOD's procurement procedures for other subsistence items, we concluded that competitive bidding was feasible and attainable if the product desired were properly described. In addition, USDA officials said that specifications could be revised to allow DOD to obtain whatever quality it desired.

In response to our suggestion that DOD consider revising its specifications, a DOD official said that revision would be very difficult. He agreed to research the possibility of selection based on stricter weight requirement and the use of USDA yield grades. He also indicated that Natick Laboratories should possibly review the meat-processing procedures to insure that beef is properly aged before processing.

DEFENSE PERSONNEL SUPPORT CENTER'S REACTION TO THE SWITCH

Center personnel believe they should be permitted to procure Good beef or better. The Center questioned the decision to purchase Choice grade and suggested that DOD make consumer preference tests before switching, to determine whether enough increased consumer acceptance warrants the additional costs. The Center cited the following considerations.

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- The factors leading to the change to Choice beef may be largely emotional, augmented by a desire to feed military personnel food equivalent in quality to that supplied and advertised by large food chains.
- The purchase of Good beef or better permits substantial cost savings and adequate competition.
- The greater yield of Good beef also provides additional savings.
- Scientific consumer acceptance studies indicated that the differences in quality between Good and Choice are not perceptible to the average consumer.
- Differences caused by processing, storage, and preparation have a far greater effect on consumer acceptability than does any difference in quality between Good and Choice.
- The supply of Good beef is adequate for DOD's needs.

CONCLUSIONS

It appears that DOD's decision to buy Choice rather than Good beef is questionable because an individual's like or dislike for meat has been shown through scientific tests to be more influenced by factors other than grade, such as cooking temperatures, food preparation methods, and dining hall atmosphere. These findings and the \$14 million increase in annual costs to buy Choice beef indicate a need for reevaluation.

RECOMMENDATION

We recommend that the Secretary of Defense reevaluate the decision to purchase Choice, instead of Good, beef.

As your office requested, we discussed this report orally with DOD officials but did not request them to formally comment on it. We believe the contents of this report would be of interest to the Senate and House Armed Services Committees and other Members of Congress. However, we do not plan to distribute this report further unless you agree or publicly announce its contents. In this connection, we want to invite your attention to the fact that this report contains a recommendation to the Secretary of Defense which is set forth on this page. As you know, section 236 of the Legislative Reorganization Act of 1970 requires the head of a Federal agency to submit a written statement on actions taken

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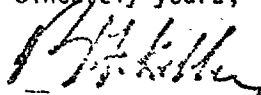
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on our recommendations to the House and Senate Committees on Government Operations not later than 60 days after the date of the report and to the House and Senate Committees on Appropriation with the agency's first request for appropriations made more than 60 days after the date of the report. When you agree to release the report, we will make it available to the Secretary and to the four Committees to set in motion the requirements of section 236.

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[Handwritten signature]

As you requested, we are returning your constituent's letter.

Sincerely yours,



Deputy Comptroller General
of the United States

Enclosure

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