United States Department of Agriculture
Food and Consumer Service
Mountain Plains Region
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MAY 25 2001

Reply to Attn of: SP-01-10
CACFP-648
SFSP-428

Subject: Questions and Answers on Alternate Protein Products

To: STATE AGENCY DIRECTORS - (Child Nutrition Programs)
Colorado ED, Colorado DPHE, Iowa, Kansas, Missouri ED, Missouri DH, Montana OPI, Montana DPHHS, Nebraska, North Dakota, South Dakota, Utah and Wyoming

Attached are a set of questions and answers on the alternate protein products (APP). These answers were developed in response to the various questions asked by Child Nutrition Program staff as well as those posed by the food industry.

Please read the attachment and if you have any questions, please contact our office at (303)844-0355.

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for MARY C. NIELSEN
Acting Regional Director
Child Nutrition Programs

Attachment

QUESTIONS AND ANSWERS ON ALTERNATE PROTEIN PRODUCTS (APP)

A. GENERAL

1. What is an APP? Please provide some examples of APPs.

APP is the acronym for "Alternate Protein Product". The term "Alternate Protein Product" is the name used by FNS to identify products meeting requirements set forth in Appendix A of the NSLP, SBP, SFSP, and the CACFP within the section entitled Alternate Protein Products. An APP is required 1) to be processed so that some portion of the non-protein constituents of the food is removed, 2) to have a biological quality at least 80% that of casein using the PDCAAS method, and 3) to contain at least 18% protein by weight when fully hydrated or formulated. These requirements are found in Appendix A to 7 CFR 210, 220, 225, and 226. Some examples of APPs include soy flours, soy concentrates, soy isolates, whey protein concentrate, whey protein isolate and casein. Processed food items, such as a vegetarian burger or patty, may contain APPs but the entire item cannot be considered an APP as the food item contains other ingredients such as seasonings or breading.

2. Can school food authorities (SFAs) and institutions continue to use vegetable protein products (VPP) developed under the previous Appendix A?

Yes. Please keep in mind that the VPP used in the Child Nutrition programs was specially fortified with iron and zinc. Due to concerns about excess fortification, we recommend that this specially fortified VPP continue to be limited to no more than 30% of a meat/meat alternate item.

3. Will the Food Buying Guide (FBG) be revised to include APP?

The revised FBG will not contain yield information for APP because the FBG only provides yield information for whole foods, not ingredients.

4. How does FNS Instruction, 783-14, Variations in Meal Requirements for Religious Reasons: Seventh-Day Adventist Schools, Institutions, and Sponsors, fit in with the current Appendix A? This instruction lists how specific products are credited for the meat/meat alternate component.

FNS Instruction 783-14 permits Seventh-Day Adventist schools and institutions to use certain meat analogues to fulfill the meat/meat alternate component. The instruction identified a number of meat analogues that can be used to meet the nutritional needs of students

within the dietary standards of the Seventh-Day Adventist schools and institutions. While some products listed in FNS Instruction 783-14 contain APP, many of them do not. Therefore, the use of products/serving sizes listed in FNS Instruction 783-14 is limited to Seventh-Day Adventist schools and institutions.

B. SPECIFIC PRODUCTS

1. Does tofu meet the criteria for APP in Appendix A?

   We researched tofu in the standard reference guide (U.S. Department of Agriculture, Agricultural Research Service, 1999; USDA Nutrient Database for Standard Reference, Release 13. Nutrient Data Laboratory Home Page, at http://www.nal.usda.gov/fnic/foodcomp). The information for tofu in this publication indicates that tofu does not meet the requirement in Appendix A that APP contain at least 18% protein by weight when fully hydrated or formulated.

2. Is soy milk an APP?

   No. It does not meet the requirements of an APP. In addition, a beverage is not considered a meat/meat alternate.

3. Can a food, such as dried beans, be considered an APP?

   No. Dried beans cannot be considered an APP; they are a whole food listed in the FBG and are already credited as such in the food-based menu planning approaches.

4. Is soy "yogurt" creditable as a meat alternate (either as yogurt or as an APP)?

   Soy "yogurt" cannot be credited as yogurt because it does not meet the FNS definition of yogurt which is based on FDA's standard of identity. To be credited as an APP, soy "yogurt" would need to meet the requirements of Appendix A.

C. CREDITING

1. How will APP (specifically soy) be credited when no meat, poultry, or fish is used in combination in a processed product?

   Fully hydrated APP meeting the requirements in Appendix A is credited at a one to one ratio, except that the total meat/meat alternate credit cannot exceed the portion weight of the food item as served to the

child. Use of the portion weight as served to the child is required under §210.10(k)(3).

2. How is APP credited when blended or combined with meat, etc.?

If a blended product is used, the amount of the APP and the amount of meat, poultry or fish are credited separately. For the meat, poultry or fish, crediting is based on the yields in the FBG while fully hydrated APP is credited at a one to one ratio. The credit of each of the components is then added together and may be counted up to the portion weight of the product. In other words, the total meat/meat alternate credit may not exceed the portion weight of the product as served.

3. Can a food be fortified to meet the APP requirements?

No, fortification cannot be used to meet the requirements for APP in Appendix A.

4. Can a processed product, such as a vegetarian patty, be evaluated as an APP or is each APP contained in the product evaluated separately?

As mentioned in answer A.1., a processed food item is not considered as an APP; the ingredients in that food item that meet the Appendix A requirements are credited as APPs. These ingredients may include combinations of proteins that, when combined, meet the requirements of Appendix A.

5. Can an APP in a component other than the meat/meat alternate, such as soy protein in a grain/bread item, be credited as part of the meat alternate?

Yes, but only if an APP is in the entree; for example soy protein in ravioli dough or pizza crust. The school must identify the APP and show through documentation from the manufacturer (1) that the APP meets the requirements in Appendix A and (2) the amount of APP that is credited toward meeting the meal pattern requirements of the food-based menu planning approaches of the Child Nutrition programs. .

6. If a product (for example a pizza crust) contains both enriched flour and APP, how is its contribution to the meat/meat alternate component and the grain/bread component determined?

If a crust contains APP that is credited towards the meat/meat alternate component, the entire weight of the crust cannot be counted towards the grains/bread component. The exact amount of the APP

must be documented by the manufacturer in order to determine the credit for the meat/meat alternate component.

In order to provide credit towards the grain/bread component, the manufacturer must document the amount (weight in grams) of the enriched or whole grain flour or meal, bran or wheat germ in the crust of one serving of the product to determine the contribution to meal pattern.

D. IDENTIFICATION OF BLENDED PRODUCTS

1. Can a manufacturer request a Child Nutrition (CN) label for processed products containing APP?

   Yes.

2. The March 9, 2000 final regulation applied to all CN programs; the June 8, 2000 interim regulation on identification of products with more than 30% fully hydrated APP only applies to school programs. Why was this done?

   In the school programs regulations, there is already a reference to nutrition disclosure in 7 CFR 210.10(h) and 220.8(m). The agency felt it was appropriate to add a requirement to those sections regarding identification of blended APP products. Also, SFAs are more likely to publish menus or have other methods for communicating available foods in the school cafeteria.

3. How can SFAs and institutions identify APPs that are ingredients in processed products?

   Manufacturers, who wish to have the APP in their product creditable as a meat alternate, must provide documentation that the APP meets the criteria set forth in the answer to question A.1. SFAs and institutions also need documentation from manufacturers regarding crediting; i.e., the amount of meat/meat alternate contributed by one serving of the product to the meal pattern requirements of the food-based menu planning approaches. Further, regulations issued by the Food Safety Inspection Service (FSIS) of USDA and by the Food and Drug Administration (FDA) of the Department of Health and Human Services require food manufacturers to list, by common name, the ingredients used in the formulation of processed food products on the label for that product. Information about the source or type of protein should be clearly indicated in the ingredient listing, such as whey protein concentrate or soy protein.

4. Should a manufacturer call an ingredient "APP" in a product?

   No, the regulations for the Child Nutrition programs do not require that the product label say "Alternate Protein Product" or "APP."

5. What documentation is required for a CN label for products containing APP?

   A CN label should have APP documentation attached with the application that shows how the APP meets the regulation. This includes:

   a) Providing a statement that the APP meets the requirements found in Appendix A of 7 CFR 210, 220, 225, and 226.

   b) Showing that the product has been processed so that some portion of the non-protein constituents has been removed.

   c) Providing the Protein Digestibility Corrected Amino Acid Score (PDCAAS). The PDCAAS is required to be greater than 80% of casein and indicating how the PDCAAS was determined.

   d) Showing that the protein level is at least 18% by weight when fully hydrated or formulated.

   e) Providing the protein level of an APP on an "as-is" basis for the as-purchased product. Protein is often provided on a moisture free basis (mfb) which is not the information FNS requires.

   Manufacturers should note that for products that were VPP before the regulation was changed that FNS will accept the VPP label stating the product name, hydration ratio, and as-is protein level until December 31, 2001. After December 31, 2001, all the above information required for APP must be presented for approval.