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E-111

RE: Docket ID No. 0584-AD77, "WIC Food Packages Rule"

The Juice Products Association (JPA) appreciates the opportunity to provide comments regarding the US Department of Agriculture's (USDA) Proposed Rule on Revisions in the WIC Food Packages, as requested in the August 7, 2006 *Federal Register (FR)* notice (71 *FR* 44784).

JPA is a trade association whose membership consists of major packers and distributors of a wide variety of fruit and vegetable juices, juice beverages, and other fruit products. Our members represent a significant majority of the juice and juice beverage processors in the United States, and some of the largest suppliers of WIC-approved 100% juices. The member companies of the Juice Products Association are shown in Attachment 1.

JPA supports changes to the WIC Food Packages in order to align the food packages with the revised *2005 Dietary Guidelines for Americans* and *MyPyramid*. JPA generally supports the proposed revisions that align the monthly juice allotments for infants and children with the American Academy of Pediatrics (AAP) guidelines, and we applaud the Department's recommendation to add fruits and vegetables to certain Food Packages per Section III(V)(E)(3) of the rule. While we have concerns about client access and ability to use and store some of these items, we strongly believe that this proposal is a step in the right direction and will help WIC clients achieve a healthier total diet. However, we are concerned about the drastic reductions in juice in all food packages that threaten to decrease an important source of key nutrients for WIC participants.

The majority of Americans do not consume the recommended amounts of fruits and vegetables in their diets. While fruit and vegetable vouchers will assist in increasing availability of fruit and vegetables for WIC participants, 100% juices will continue to play a vital role in WIC participants' diets. The 2005 Dietary Guidelines Advisory Committee recognized that the mix of fruits, vegetables, and the appropriate amount of juice helps to achieve an optimal intake of nutrients in the diets of Americans. Additionally, 100%

fruit and vegetable juices are a readily available option for participants who may have limited transportation, storage and cooking facilities.

The addition of whole fruits and vegetables to the food packages will increase fiber content, a nutrient of concern identified in the recent food package analysis. Addition of fruits and vegetables, along with the appropriate amount of 100% fruit juice, will also maintain the vitamin C content of the food packages, a nutrient of concern when the original WIC food packages were defined.

Fruit juice consumption in moderation can be an important part of a healthful diet. One hundred percent fruit juice provides nutritional benefits as defined in *the Dietary Guidelines Advisory Committee Report, Appendix G-2*, which states, "Fruit juices provide substantial contributions of several vitamins and minerals in higher amounts than do whole fruits. These include vitamin C, folate, and potassium."

However, by recommending only 4.3 fluid ounces/day (128 fluid ounces/month), for children ages 1 to 4.9 years, USDA's proposed rule reflects the lower end of the acceptable range for juice intake from the AAP. In addition, the AAP states that the introduction of fruit juice into the diet should only be done after the age of 6 months and not until a child can drink from a cup; it should not be served to infants from a bottle or covered cup. In contrast, the WIC proposed rule would eliminate fruit juice until one year of age. The Dietary Guidelines and AAP both suggest that a broader range of fruit juice consumption than the WIC proposed rule would allow is acceptable for a healthy diet.

Also, from an economic standpoint, a significant reduction in fruit juice is inconsistent with the stated goals of improved nutritional delivery with cost neutrality. Fruit juice provides a fruit serving at a lower cost than fresh fruit or processed fruit alternatives.

Maximum juice allowances must allow for container flexibility.

Juice allowances must consider appropriate amounts for daily consumption as part of a supplemental food package, and then should consider the package sizes available in the marketplace. WIC juices most often provide 46 and/or 48 ounces of juice in either a

ready-to-drink or concentrated form, with only two states currently authorizing the 64-ounce size.

The proposed regulation for Food Package IV, the package for children ages 1 to 4.9 years, prescribes a monthly maximum of 128 ounces of juice. This amount will lead to significant under-redemption of the juice allotment, allowing only two 46 or 48-ounce containers/month, or 92-96 ounces, since the purchase of three 46 or 48-ounce containers, or 138-144 ounces, would exceed the maximum. Currently, 7 CFR 266.10 stipulates 276 ounces of single strength juice and 288 ounces of reconstituted juice, which are multiples of 46 and 48, respectively.

Further, the IOM report recommended the inclusion of 4 ounces of 100% juice daily for Food Package IV to complement the $8 fruit and vegetable voucher. Not only would the proposed 128-ounce allowance be under-redeemed due to package sizes, but the IOM fruit and vegetable voucher amount has been reduced to $6 in the proposed rule.

JPA would prefer to recommend that the WIC rules permit the maximum level of 100% juice in the AAP guidelines, at 180 ounces per month (or approximately 6 ounces daily) of 100% juice for children ages 1 to 4.9 years (Food Package IV). However, this amount does not translate easily into the marketplace, given current package sizes available in the WIC program. In order to meet a 180-ounce per month allowance, either four 46-ounce, three 64-ounce, or four 12-ounce concentrates (reconstituted to 48 ounces each) would need to be purchased. Each of these would put allowed consumption at 184-192 ounces per month, which would exceed the AAP guidance.

Therefore, JPA recommends that Food Package IV be revised to 144 ounces per month. This allowance could be satisfied by the purchase of three 12-ounce concentrates (reconstituted to make 144 ounces), three 46-ounce containers (138 ounces total), or two 64-ounce containers (128 ounces). This amount is 50% of the current allowance of 288 ounces. Also, 144 ounces would have less of a budget impact on the program than an increase from 128 to 180 ounces. Finally, an increase from the proposed 128 ounces to 144 ounces could partially offset the reduction in nutrition from the $8 fresh fruit and vegetable voucher recommended by IOM to the $6 per month voucher proposed by USDA for children.

We strongly encourage USDA to consider maximum juice allowances that are even multiples of 46, 48 and 64 ounces if delineated between single strength and reconstituted.

An increase in juice allocations for women WIC recipients would help provide them with the recommended intake of nutrients.

Supplementary nutritional needs of pregnant and postpartum women are covered in revised Food Packages V, VI, and VII.

According to the *2005 Dietary Guidelines Advisory Committee Report*, "Fruit juices provide substantial contributions of several vitamins and minerals in higher amounts than do whole fruit. These include vitamin C, folate and potassium" (pp. 28-32).

A 6-ounce serving of vitamin C-rich 100% juice would provide women with their recommended vitamin C intake.

Additionally, fortified juices can provide important sources of nutrients of concern for the WIC population. Calcium and potassium are identified as priority nutrients for women in the proposed WIC rule (page 44788). Calcium-fortified juices can provide another excellent source of calcium in the diet, and these fortified juices should be required as a part of the food packages. USDA's proposed rule "would clarify that juices that are fortified with other nutrients may be allowed at the State agency's option." **JPA urges USDA to require States to provide calcium-fortified juices as an option in the WIC food packages.**

The proposed monthly allowance of juice for pregnant or partially breastfeeding (Package V) and postpartum breastfeeding mothers up to 12 months (Package VII) is 144 ounces (up to 4.8 ounces per day); the current monthly allowance is 288 ounces. **For women receiving Food Packages V or VII, JPA recommends an allowance of 192 ounces per month, or approximately 6 ounces per day.** This allowance also provides maximum package size flexibility.

The proposed monthly allowance of juice for postpartum non-breastfeeding women (Package VI) is 96 ounces (3.2 ounces /day); the current monthly allowance is 192 ounces. **For women covered by Food Package VI, JPA recommends maintaining an allowance of 144 ounces per month to maintain the incentive for breastfeeding and still provide enhanced supplementation of priority nutrients.**

Reducing 100% juice sacrifices an opportunity for WIC recipient education.

Ample research evidence exists that appropriate consumption of 100% juice has NOT been linked to increased risk of overweight or obesity (see Attachment 2). To drastically change the amount of juice in the WIC food packages inappropriately suggests that juice is "bad" and wrongly implies that eliminating juice from the diet is the way to lose weight and/or reduce the risk for obesity or diabetes. This represents a missed opportunity to educate consumers in an area fraught with confusion.

Specifically, there may be unintended consequences of not allocating juices to infants ages 6 months to 11.9 months (as proposed in Food Package II), and not educating parents about the proper amounts for that age. It may send the message that juice is bad for infants. In addition, 100% juice is an important dietary source of vitamin C for this age group, and vitamin C can help absorb iron from non-meat sources such as from infant cereals. Iron was identified as a nutrient of concern in the recent WIC food package analysis for infants older than 6 months.

There is an opportunity to counsel against early introduction of juice to infants. Nutrition education conducted through WIC can help participants understand:

- 100% juices are important sources of nutrients and phytonutrients;
- 100% juices (consumed in moderation) are an excellent way to complement, not replace, whole fruit and vegetable intake;
- 100% juices are an excellent way to add a variety of nutrients to the diet;
- 100% juices have a longer shelf life than whole fruits to serve participants daily for the full duration of the monthly food package.

It is also important that children be taught at an early age that dietary variety is important and that all food choices (including beverages such as milk and 100% fruit juice) should

contribute to their overall health. The food packages should encourage participants to consider the health and nutritional benefits of foods in addition to taste and calories.

Finally, it is critical for the WIC program to educate participants that "more matters" when it comes to fruit and vegetable consumption, and that fresh, frozen, canned, dried, **and 100% juices** all count toward overall daily fruit and vegetable consumption. *The Dietary Guidelines for Americans* suggests that about 1/3 of the fruit intake can be consumed as 100% fruit juice.

The WIC program reaches nearly 50% of infants in America, as well as millions of young children—the population with the highest incidence of obesity. Because children in the WIC program develop eating habits that will last a lifetime, this captive audience is the USDA's best opportunity to educate and feed the next generation properly. USDA and State agencies should use this as an opportunity to teach proper nutrition to WIC mothers to help reduce the incidence of overweight in young children, the largest and most at-risk age category for obesity and its negative health effects.

The safety of juices is a positive feature to be exploited.

The recent *e coli* outbreak in 26 states, which has been traced to fresh spinach, and another recent *salmonella* outbreak that may be related to produce, are reminders that packaged greens and other vegetables can suffer from contamination – and the consumer is at risk. When juice is pasteurized, generally 99.999% of contaminants are killed, whereas cleaning of fresh fruits and vegetables cannot be as thorough or guarantee the same level of cleanliness. Giving consumers the ability to buy juice in those times when their customary fresh fruits and vegetables are unavailable could provide a "backup" solution for sound nutrition.

JPA recommends amending the voucher for fruits and vegetables to include juice. JPA recommends USDA consider amending the voucher concept for fruits and vegetables to include juice in one of two ways:

1. *Providing a voucher for specific 100% fruit juices could help avoid disproportionate program costs.* Domestic fresh fruit and vegetables purchased

"in-season" are a reasonable economic value, but fruits and vegetables that are not "in-season" or imported will be at a significant price premium. Cost neutrality of the program could further be threatened when a natural disaster affects the price of popular fresh fruit or vegetable crops.

2. *As an alternative, WIC clients could be allowed to substitute one serving of fruits and vegetables a day with 4 ounces of fruit or vegetable* juice. Such a substitution is fully consistent with the recommendations of the *Dietary Guidelines for Americans 2005* and *MyPyramid*. Further, the WIC Program could achieve an additional cost savings from allowing such a substitution.

In closing, JPA would like to emphasize that 100% juices make positive contributions to the diet beyond being an allowable substitute for whole fruits and vegetables. An appropriate amount of juice in the diet helps to fill important nutrient gaps that are best met with a mix of fruit, vegetables, and juice, including nutrient gaps identified in the WIC population cited in the USDA proposed rule. In addition, there is ample scientific evidence that moderate amounts of 100% juices can be part of a healthy diet.

We appreciate USDA's consideration of these comments. If we can be of further assistance, please advise.

Sincerely yours,

Carol Freysinger

Carol Freysinger
Executive Director

Juice Products
ASSOCIATION

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A. Lassonde, Inc.
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The J.M. Smucker Company
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Tree Top, Inc.
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Vinas Argentinas S.A.
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Juice Products
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Juice Consumption: Potential Impact on Body Weight

The research highlights below are excerpted from current scientific studies that examined possible connections between consumption of 100 percent juices and bodyweight in children. The preponderance of this research demonstrates that there is no connection between consumption of 100 percent fruit juices and overweight status in children.

Alexy U, Sichert-Hellert W, Kersting M, Manz F, Schoch G. Fruit juice consumption and the prevalence of obesity and short stature in German preschool children: results of the DONALD Study. Dortmund Nutritional and Anthropometrical Longitudinally Designed. ***J Pediatr Gastroenterol. Nutr.*** **1999:29:343–349.**

This is a longitudinal study designed to look at a possible association between excessive consumption of 100 percent fruit juice (more than 12 ounces per day) and short stature and obesity Data were collected and evaluated on 205 German children examined at each of 3, 4 and 5 years of age from the DONALD study Dietary intake data were collected the years of 1990 – 1997 from 3-day weighted diet records Neither BMI, Height Standard Deviation Score [HSDS = deviation of a child's body height from the median of the reference as a multiple of the standard deviation] nor growth velocity correlated positively with the consumption of fruit juice In all age groups, consumption of 100 percent fruit juice was inversely correlated with the consumption of all other beverages and the total consumption of all other food The researchers concluded, **"In the study sample, even repeatedly excessive fruit juice consumption had no influence on anthropometric indices."**

Dennison BA, Rockwell H, Baker S. Excess Fruit Juice Consumption by Preschool-aged Children is Associated with Short Stature and Obesity. ***Pediatrics.*** **January 1997. 99:15-22.**

In this cross-sectional study of 168 children, 100 percent fruit juice consumption among children (two year to five year olds) was evaluated over seven days with mean consumption being 5 9 ounces (2 year olds) and 5 0 ounces (5 year olds) Intake data reflect the years 1992 to 1993 The researchers stated that 10 of the 19 children who drank 12 ounces or more daily had BMIs greater than the 75th percentile [considered obese in this study]. They similarly found that 47 out of 149 children who drank less than 12 ounces per day had similarly high BMIs The researchers concluded "consumption of 12 ounces or more per day of fruit juice by young children was associated with short stature and obesity " **The researchers state that until more definitive research is done, it seems prudent for parents and caregivers to limit fruit juice consumption to less than 12 ounces daily. [Note: BMI > 75th percentile is no longer used as an index for obesity; newer CDC guidelines define overweight as BMI > 95th percentile and at risk of overweight BMI > 85th to 95th percentile.]**

Dennison BA, Faith M., Edmunds L, Stratton, H. Fruit Juice Intake Predicts Increased Adiposity Among Low-Income Children. NAASO:The Obesity Society. Abstract. October 17, 2005. (unpublished study)

In this recent abstract, the researchers tested whether intake of specific foods, including 100 percent fruit juice, was prospectively associated with change in adiposity and to evaluate the effects of nutritional counseling on adiposity change Dietary intake data reflect the years 1999 – 2000 and methods to assess intake were not specified The 2,081 individuals interviewed were participating in the Special Supplemental Nutrition Program for Women, Infants and Children **Fruit juice consumption data were not detailed.** The researchers state that increased fruit juice intake was prospectively associated with increased adiposity change, especially for children who were already overweight [BMI > 95th percentile] or at risk for overweight [BMI > 85th to 95th percentile] Parental reports of offering more fruit servings were associated with a decreased risk of adiposity The researchers state that "excess fruit juice intake may promote increases in adiposity, especially among children who are already overweight or at risk of overweight "

Fulgoni V, Taylor S. Consumption of 100 Percent Juices is Not Associated With Being Overweight or Risk of Being Overweight in Children. Experimental Biology. Abstract. April 2, 2006. (unpublished study)

The objective of this research was to examine the impact of 100 percent juice in children's diets on bodyweight and BMI among more than 7,500 children ages 2-18 This analysis of NHANES data (1999-2002) was combined with growth chart data from the Centers for Disease Control and Promotion (CDC) **While there were no differences specifically in BMI between the juice consumers and non-juice consumers for children ages 2-11, there were differences in children ages 12-18 years; these older juice consumers had significantly lower BMIs than those who drank no juice at all. Children who drank 100 percent juice also had healthier overall diets than non-juice consumers and consumed more total fruits, fiber and key nutrients such as vitamin C, potassium, magnesium and folate.**

Kloeben-Tarver AS. Fruit juice consumption not related to growth among preschool-aged children enrolled in the WIC program. ***J Am Diet Assoc.*** **September 2001. 101:9:996.**

This letter-to-the-editor provides details of a study that evaluated 100 percent fruit juice consumption and growth indicators using 77 subjects in an Atlanta (GA) Women, Infants and Children's (WIC) program All of the study participants were low-income and predominantly minority children ages 1 to 5 years Method of dietary intake collection was not specified for the years represented by the study. Obesity was defined as BMI > 75th percentile. Mean juice intake was 24 ounces per day; 30 percent (23/77) were of short stature and 34 percent (26/77) were obese, 79 percent (61/77) reportedly consumed > 12 ounces fruit juice per day **No statistically significant relationships were found between excessive fruit juice intake and obesity or short stature.**

Newby PK, Peterson KE, Berkey CS, Leppert J, Willett WC, Colditz GA. Beverage consumption is not associated with changes in weight and body mass index among low-income preschool children in North Dakota. ***J Am Diet Assoc.*** **July 2004. 104:7:1086-1094.**

This study analyzed beverage consumption and obesity parameters from 1995 to 1998 Data on dietary and growth parameters for 1,345 children was provided by the North Dakota Women, Infants and Children's (WIC) Program from 1995 to 1998 The key outcome variables were changes in weight and height between visits no more than 6 to 12 months apart A Food Frequency Questionnaire was used to assess intake Overweight was defined as BMI > 95th percentile and risk of overweight BMI 85th to 95th percentile. In this population, mean consumption of 100 percent fruit juice (10.8 ounces per day for girls and 10 6 ounces per day for boys) was more than double that reported for children age 2 to 18 years from the 1994-96 and 1998 Continuing Survey of Food Intakes by Individuals [4 6 oz/day]. In this WIC population, about 50 percent of the children consumed 12 ounces or more fruit juice per day Results of the regression analysis found no association between 100 percent fruit juice intake and weight changes. The researchers were not able to control for other major risk factors for obesity, such as parental BMI, physical activity, and television viewing Researchers concluded, **"Our results are consistent with other prospective studies that have found that fruit juice is not related to childhood obesity but are inconsistent with some reports that have found that sweetened beverages such as soda and fruit drinks are related to obesity among older children."**

O'Connor M, Yang S, and Nicklas T. Beverage Intake Among Preschool Children and Its Effect on Weight Status. *Pediatrics.* October 2006. 11:4:1010-1018.

Baylor College of Medicine researchers evaluated dietary patterns of beverage intakes by children aged 2-5 from the NHANES 1999-2002 database Included in the analysis was consumption of total calories and 100 percent juices consumed using 24-hour recall obtained by trainer interviewers, other data was collected, including results from a physical examination Statistical relationships between total calories consumed, amounts of juice consumed and body mass index were then analyzed Of the 1160 children who had complete data appropriate for the analysis, the researchers determined that only 48 percent of the children were even consuming 100 percent juice Mean consumption of 100 percent juice was 4 7 ounces daily which the authors state is in keeping with recommended juice intake from the American Academy of Pediatrics (95th percentile confidence interval 4 04-5.36 ounces). **The researchers then determined there was no relationship between increased total calorie intake, increased juice consumption and body mass index among those who consumed 100 percent juice. The researchers stated that although more prospective research is needed to evaluate all beverage consumption as children age, "the findings of this research support previous studies by Skinner et al and Newby et al that 100 percent fruit juice consumption is not associated with overweight status in preschool-aged children."**

Rampersaud GC, Bailey LB, Kauwell GP. National survey beverage consumption data for children and adolescents indicate the need to encourage a shift toward more nutritive beverages. *J Am Diet Assoc.* January 2003. 103:97-100.

The researchers used national survey data (1994-96, 1998 Continuing Survey of Food Intakes by Individuals) in this cross-sectional survey to evaluate 100 percent fruit juice intakes to compare with the American Academy of Pediatrics' (AAP) recommendations on fruit juice consumption. Children were < 6 months, 6 months to 6 years and 7 to 18 years of age A 24-hour dietary recall was used for 1 or 2 non-consecutive days A total of 5,559 children were included in the analysis The researchers reported the majority of children fell within the AAP guidelines < 6 months 78%, 6 months to 6 years 73%; and 7 to 18 years 94% were compliant with guidelines The researchers stated, **"There is no conclusive evidence to suggest that in most cases, intake of 100% fruit juice should be restricted in children and adolescents; however, practitioners should discourage consumption of beverages other than breast milk, infant formula and water in children less than 6 months old."**

Skinner JD, Carruth BR. A longitudinal study of children's juice intake and growth: the juice controversy revisited. *J Am Diet Assoc.* April 2001. 101:432–437.

This longitudinal study of 72 children evaluated beverage intake (including 100 percent juice) and growth parameters from ages 2 to 6 years Data were collected between 1992 and 1999 Data from 3–day intakes (24-hour recall and 2 food records) were averaged to be a representative day and the mean of 7 representative days determined the longitudinal mean Overweight was defined as BMI > 95th percentile and risk of overweight 85th to <95th percentile Analysis of the data consistently showed no statistically significant associations between 100 percent juice intake and children's height, weight or body mass index The researchers concluded, "Children's longitudinal juice intake was not associated with either short stature or overweight As juice consumption decreased, intakes of less nutritious beverages increased **Consumption of 100 percent juices should be encouraged by health professionals and parents/caregivers."**

Skinner JD, Carruth BR, Moran J, Houck K, and Coletta F. Fruit Juice Intake Is Not Related to Children's Growth. *Pediatrics.* January 1999. 103:1:58-64.

Data for this research was derived in part from an ongoing longitudinal study of 62 children and an additional 43 that were added in year 3 [total of 105 children] ages 2 to 6 years Intake data reflection consumption between 1994 and 1995 and were derived from 3 days of intake data (1-24 hour recall and a 2-day food record) The purpose of the data analysis was to evaluate if excess 100 percent fruit juice intake (12 ounces or greater) was associated with short stature and obesity in preschool children The parameters used to determine obesity were > 75th percentile The researchers assessed growth parameters and 100 percent fruit juice intake in children between 24 to 36 months Growth parameters of children consuming >12 ounces or more per day of fruit juice were compared with those consuming < 12 ounces per day **The researchers found, "Results consistently indicated no statistically significant differences in children's height, body mass index or ponderal index related to fruit juice intake."** They added, "The consistent lack of relationship between children's fruit juice intake and growth parameters in our study does not support previous recommendations to limit the intake of 100% fruit juice to less than 12 ounces/day "

USDA. Is Fruit Juice Dangerous for Children? Nutrition Insights. USDA Center for Nutrition Policy and Promotion. March 1997.

Using statistics from the 1994-96, 1998 Continuing Survey of Food Intakes by Individuals, USDA staff evaluated the appropriate data sets and found that there was no relationship between 100 percent fruit juice consumption and body mass index (BMI). This analysis of the diets of 830 children (2-5 years) was done in response to a study by Dennison et al that suggested excessive juice consumption was linked with obesity and short stature. **This USDA analysis found that children who drank the most 100 percent juice (12 ounces or more) were actually taller, with lower BMIs than those who drank less juice.** This USDA document concluded, "Fruit juice consumption in quantities recommended in the *Dietary Guidelines for Americans* is advantageous for healthy children "

Welsh JA, Cogswell ME, Rogers S, Rockett H, Mei Z, Grummer-Strawn LM. Overweight among low-income preschool children associated with the consumption of sweet drinks: Missouri, 1999-2002. *Pediatrics.* 2005:115(2):e223-9.

This retrospective study was designed to examine the association between sweet drink consumption and overweight among preschool children using dietary records from 10,904 children who were 2-3 years of age, reflecting intakes between 1999 and 2001 The source of the data was the Missouri Pediatric Nutrition Surveillance System and Missouri Demonstration Project Dietary intake data were collected by Food Frequency Questionnaires Researchers recorded only the number of occasions the children consumed sweet beverages [including 100 percent juice, juice drinks, lemonade and soda] Overweight was defined as BMI > 95th percentile and risk of overweight as BMI >85th to 95th percentile Children who were at risk for overweight at baseline and consumed 1 to > 3 sweet drinks daily were significantly more likely to become overweight **For 100 percent fruit juice consumption, there were no significant associations for overweight or at risk for overweight in normal and underweight children. For children who were overweight at baseline, the association of juice intake with overweight was of borderline significance.**

U.S. APPLE ASSOCIATION

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I-112

November 3, 2006

Patricia Daniels
Director, Supplemental Food Programs Division
Food and Nutrition Service, U. S. Department of Agriculture
3101 Park Center Drive, Room 528
Alexandria, VA 22302

RE: Docket ID Number 0584-AD77, WIC Food Packages Proposed Rule

Dear Ms. Daniels:

The U.S. Apple Association (USApple) is pleased to submit comments on behalf of our members regarding the United States Department of Agriculture's (USDA) proposed rule for updating the food packages in the Special Supplemental Feeding Program for Women, Infants and Children (WIC).

USApple is the national trade association representing all segments of the apple industry. Members include 36 state and regional apple associations representing the 7,500 apple growers throughout the country, as well as more than 300 individual firms involved in the apple business. USApple's mission is to provide the means for all segments of the U.S. apple industry to profitably produce and market apples and apple products.

USApple strongly supports the inclusion of fruits and vegetables in the WIC program. Given that most Americans consume less than half of the fruits and vegetables recommended in the *2005 Dietary Guidelines for Americans* (*DGA's*), the WIC program can play a critical role in reversing this trend. We applaud USDA for taking this important step to update the program and make it consistent with the *DGA's*.

We strongly urge you to incorporate the following recommendations into the final rule:

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fax 703 790-0845
Web site www.usapple org
8233 Old Courthouse Road, Suite 200 ★ Vienna, VA 22182-3816 USA

1. Follow the Institute of Medicine's (IOM) Recommendations for monthly individual $10 and $8 Fruit and Vegetable Cash Vouchers

We strongly encourage USDA to provide women and children with $10/month and $8/month, respectively, cash-value vouchers for fruits and vegetables as recommended by the IOM. The IOM's recommendation was based on the goal of providing one additional fruit or vegetable serving per participant per day. The long term public health benefits of these additional fruits and vegetables to WIC mom's and their children will outweigh the short term costs.

Research clearly demonstrates that a diet rich in fruits and vegetables decreases the risk of high blood pressure, heart disease, certain cancers and obesity. Healthy eating habits are often formed in childhood and the benefits last a lifetime.

2. Maximize Choice for WIC Participants

USDA should not give state WIC agencies the authority to further restrict or limit participants' choices of fruits and vegetables. States should be required to offer participants a wide variety of fruit and vegetable choices and even small vendors should be required to stock more than just the minimum of "two varieties of fruits and vegetables" outlined in Section V, Subsection R of the proposal. Given individual preferences as well as cultural and regional norms, a wide variety of fresh, frozen, dried and canned fruits and vegetables should qualify under the voucher program.

USApple opposes the proposed elimination of juice for infants 6 to 12 months of age. As one size does not always fit all, WIC providers should have the flexibility to decide on an individual basis whether fruit juice or infant fruit is most appropriate for the individual client. Sugar-free or natural applesauce in 4-oz single serve packages should be allowed in place of applesauce packaged specifically for infant food.

USApple strongly supports the inclusion of farmers markets in the fruit and vegetable voucher program. The availability of fresh produce through farmers markets is important, including in urban areas where many consumers, particularly those without a car, have limited access to fresh produce. Farmers markets also help to promote nutrition education, teach food

preparation techniques and expose customers to a wide variety of produce that they might otherwise not have an opportunity to try.

Within the fresh category all fruits and vegetables, including white potatoes, should qualify. White potatoes are high in nutrients, low in calories and their inclusion would offer the opportunity to educate WIC participants on the benefits of choosing fresh produce over processed products such as french fries and potato chips.

3. Include a Cost of Living Adjustment (COLA) for Fruit and Vegetable Vouchers

The value of the fruit and vegetable voucher must keep pace with inflation. Without this requirement the vouchers would be worth less and buy smaller amounts of fruits and vegetables each year as inflation increases. As currently proposed in Section V. Subsection E (3) "Maximum Monthly Allowances," USDA would have the option to make COLA adjustments. In order to keep pace with inflation and maintain the purchasing value of the voucher, the rule should require that the value of the fruit and vegetable vouchers reflect a cost of living adjustment annually. The value of the fruit and vegetable voucher should be increased at the same rate as the Bureau of Labor Statistics' Consumer Price Index (CPI) for Fresh Fruits and Vegetables increases. The final rule should require USDA to make COLA adjustments in the cash-value fruit and vegetable voucher just as it adjusts the value of all other food items in the WIC food packages.

In closing, the addition of fresh fruits and vegetables to WIC Food Packages will improve the health and nutrient component of WIC programs and thus, the overall health of its participants.

I commend USDA for this proposed rule that will help WIC participants increase their fruit and vegetable consumption and urge USDA to issue the final rule as soon as possible.

Sincerely,

Nancy E. Foster
President
U.S. Apple Association

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November 7, 2006

Via Electronic Transmission and Overnight Delivery

Patricia N. Daniels, Director
Supplemental Food Programs Division
Food and Nutrition Service, USDA
3101 Park Center Drive, Room 528
Alexandria, VA 22302

Re: USDA Docket ID Number 0584-AD77, Proposed Rule: Revisions in the WIC Food Packages

Dear Ms. Daniels:

Gerber Products Company ("Gerber") has long supported the WIC Program and its positive impact on the health of vulnerable populations. We particularly commend the Food and Nutrition Service (FNS) on its efforts to revise WIC food packages to better reflect current nutrition science and dietary recommendations. For over 75 years, Gerber has been committed to helping parents raise happy, healthy babies. Gerber is dedicated to understanding, listening, and responding to the needs of parents and babies and is constantly looking for ways to improve infant nutrition.

Gerber shares a similar goal with the WIC program, which is to improve the nutrition of infants and young children. In 2002, we launched our Start Healthy, Stay Healthy program which continues today. Start Healthy, Stay Healthy is a science-based Gerber initiative to deliver appropriate products and consumer education to help parents establish healthy eating habits with their children, and promote a lifetime of good health. As part of this program, we sponsored the largest dietary intake survey of American infants and toddlers called FITS, "The Feeding Infants and Toddlers Study." Twenty-one peer reviewed scientific papers have been published from this study. This groundbreaking research was cited extensively in the National Academy of Sciences' Institute of Medicine ("IOM") report, "WIC Food Packages: Time for a Change" (hereinafter the "IOM Report") which was, in turn, relied upon by the FNS in developing its

proposed rule.[1] We are extremely proud to have contributed to the scientific evidence that supports the changes being proposed by the WIC program.

Gerber has extensive expertise developing and manufacturing nutritious, developmentally appropriate foods for infants and toddlers. From Gerber® 1st FOODS® to Graduates®, the company's product lines cover each phase of child development with diverse flavors and textures. In addition, Gerber's Parents' Resource Center, our 24 hour information line, makes professional lactation consultants available to all consumers free of charge.

Gerber appreciates the opportunity to provide comments on the following aspects of the proposed rule: the addition of fruits and vegetables in Food Package II, the introduction to complementary foods, and the infant meat definition. We believe the issuance of a final rule that accommodates the concerns expressed below will result in a WIC program that is better able to achieve the goal of improving the nutrition of infants and young children.

Executive Summary

Gerber applauds the addition of fruits and vegetables to Food Package II for infants ages 6-11 months and agrees with the FNS proposal that sets a monthly allowance based on feeding method. However, we recommend that the monthly allowance be calculated on a container basis rather than an ounce basis. We believe a container-based monthly allowance would allow WIC to be more responsive to infants' nutritional and developmental needs and better reflect the goals of the WIC program and the realities of the current marketplace.

Gerber recommends that the FNS reconsider the proposal to remove complementary foods from the food package for infants under 6 months. We are concerned that such an approach may place at risk individual infants who have unique dietary or developmental needs prior to 6 months of age. For this reason, we urge the FNS to allow the WIC nutritionist to have discretion to determine the appropriate age for the introduction of complementary food, consistent with the recommendations of the World Health Organization and the American Academy of Pediatrics.

Finally, Gerber supports the addition of infant meats to Food Package II, but recommends clarification of the definition of "single ingredient" and the adoption of a requirement that is nutrient rather than ingredient based.

A full discussion of these recommendations follows.

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[1] 71 Fed. Reg. at 44784 (Aug. 7, 2006) (to be codified at 7 C.F.R. Part 246).

I. The Addition of Fruits and Vegetables in Food Package II for Infants

Gerber commends the FNS for proposing the addition of fruits and vegetables to the infant food package for ages 6 -11 months (i.e., Food Package II). Gerber is proud of the role it played in sponsoring the Feeding Infants and Toddlers Study ("FITS") which helped provide a snapshot of what American infants and toddlers are eating. This groundbreaking research found that after 7 months of age, 25-33% of infants and toddlers do not eat discreet servings of fruits or vegetables in a day.[2] The WIC population appears to be even more vulnerable with as many as 35% of older infants and 41% of toddlers not consuming any fruits in a day.[3] Since eating habits and food preferences are learned early in childhood, these statistics are particularly disturbing.

Based on these findings, the IOM recommended, and the FNS incorporated, the addition of fruit and vegetables to WIC Food Package II. This addition is also consistent with a major recommendation of the *Dietary Guidelines for Americans 2005*-- namely to increase daily intake of fruits and vegetables.[4] Increased consumption of fruits and vegetables has been shown to help promote nutritional adequacy and may displace less nutritious items in the diet.[5] Food consumption data show that fruits contribute more vitamin C than any other food group in the American diet, while vegetables contribute the greatest amount of vitamin A and potassium.[6] Fruits provide more than 10% of total intake for 8 nutrients and vegetables for 15 nutrients. Additionally, five of the identified "priority" nutrients, i.e., potassium, fiber, vitamin A, vitamin C, and folate, are high in commonly consumed fruits and vegetables.[7]

In quantifying the amount of infant fruits and vegetables to add to the WIC program, the FNS used the 4 oz container size to calculate a specific maximum monthly allowance, i.e., 256 oz/month for breastfeeding infants and 128 oz/month for partially breastfed infants and fully

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[2] M.K. Fox et al., *Feeding Infants and Toddlers Study: What Foods are Infants and Toddlers Eating?* 104 J. Am. Dietetic Ass'n S22-30 (2004).

[3] M. Ponza et al., *Nutrient Intakes and Food Choices of Infants and Toddlers Participating in WIC*, 104 J. Am. Dietetic Ass'n S71-79 (2004).

[4] DHHS/USDA, 2005.

[5] IOM Report at 102.

[6] Id.

[7] Id.

formula fed infants.[8] While Gerber supports a monthly allowance based on feeding method, we strongly urge the FNS to quantify the monthly allowance by containers rather than ounces. The reasons for this recommendation are threefold: (1) the calculation of the proposed rule using 4 ounce fruit and vegetable containers is not valid because it does not reflect the current marketplace, (2) the proposed monthly allowance based on ounces would not meet the stated goals of the WIC program in terms of cost neutrality, efficient nationwide distribution, and administrative ease, and (3) dietary intake data show that infants from 6 to 11 months have variable food needs which depends largely upon developmental stage. By moving to a container-based system, the WIC program would be responsive to market and consumer realities and provide the necessary flexibility to allow the WIC nutritionist to respond to the dietary needs of infants as they progress through the different developmental milestones between 6 and 11 months.

If these recommendations are followed, the maximum monthly allowance of infant fruits and vegetables would be 1 or 2 containers per day. This would result in an amount approximately equal to the proposed 64 containers for fully breastfed infants, 32 containers for partially breastfed infants, and 32 containers for fully formula fed infants. Gerber recommends that these proposed numbers of containers be provided with discretion left to the WIC nutritionist to decide the assortment of developmentally appropriate food, i.e., stage 1, 2, or 3.[9]

At the present time, all first stage foods are 2.5 ounces. Second stage foods come in 3.5 and 4 ounce sizes, and the nutrition provided in both sizes is comparable. For example, all fruits provide 45% daily value for vitamin C in both the 3.5 and 4 ounce size. More nutrient differences exist between variety of fruit or vegetables than between the different sizes of the same variety. A mixed diet of either size container should be nutritionally comparable. The chart

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[8] 71 Fed. Reg. 44784, 44793-4, Ex. D (proposed 7 C.F.R. § 246.10, Table 1).

[9] Reference to three stages of baby food is not meant to be specific to Gerber. All US baby food manufacturers market baby food in three categories that correlate with the three developmental feeding stages. See e.g., www.Gerber.com, www.Beechnut.com, and www.naturesgoodness.com. The first category or stage is single ingredient fruits and vegetable purees. These foods are sold in small 2.5 oz portions designed for introducing infants to different types of solid foods and allow parents and caregivers to observe any food sensitivities or allergic reactions. The second category or stage is 3.5 to 4 oz purees that are slightly thicker than the first category. These foods offer larger portions and more variety with combinations of fruits and vegetables. The third category or stage is generally 6 oz containers which include a variety of combinations and may have more textures and pieces. There is significantly less variety of 100% fruits or vegetables in this stage as these are designed to provide more complex flavors and textures (e.g., peas with rice).

below compares the nutrition facts label information of popular infant fruits and vegetables available to consumers today. As can be seen, the most significant difference between the two second stage package sizes is calories; otherwise, the nutritional values are very similar. Third stage foods come in 5.5 and 6.0 sizes. As with second stage foods, the nutritional profiles of the two sizes are generally comparable.

Select infant foods	Nutrition per 3.5 ounces		Nutrition per 4 ounces	
Applesauce	Calories	50	Calories	60
	Total fat	0g	Total fat	0g
	Sodium	10mg	Sodium	0mg
	Potassium	80mg	Potassium	100mg
	Total carbohydrate	12g	Total carbohydrate	14g
	Fiber	1g	Fiber	1g
	Sugar	11g	Sugar	11g
	Protein	0g	Protein	0g
	Vitamin A	0%	Vitamin A	0% DV
	Vitamin C	45%	Vitamin C	45% DV
	Calcium	0%	Calcium	0% DV
	Iron	0%	Iron	0% DV
Bananas	Calories	90	Calories	110
	Total fat	0g	Total fat	0g
	Sodium	15mg	Sodium	10g
	Potassium	300mg	Potassium	330mg
	Total carbohydrate	21g	Total carbohydrate	25g
	Fiber	1g	Fiber	1g
	Sugar	17g	Sugar	22g
	Protein	1g	Protein	1g
	Vitamin A	2%	Vitamin A	0%
	Vitamin C	45%	Vitamin C	45%
	Calcium	0%	Calcium	0%
	Iron	0%	Iron	4%
Sweet Potatoes	Calories	70	Calories	70
	Total fat	0g	Total fat	0g
	Sodium	30mg	Sodium	10mg
	Potassium	200mg	Potassium	280mg
	Total carbohydrate	16g	Total carbohydrate	17g
	Fiber	1g	Fiber	1g
	Sugar	9g	Sugar	10g
	Protein	1g	Protein	0g
	Vitamin A	300%	Vitamin A	540%
	Vitamin C	0%	Vitamin C	0%
	Calcium	2%	Calcium	2%
	Iron	0%	Iron	2%

A. Proposed Ounce-Based Allowances Do Not Reflect Current Marketplace

The FNS proposed rule establishes the maximum monthly allowance of fruits and vegetables for fully breastfed infants as 256 ounces or "64 4-ounce jars."[10] Partially breastfed infants and fully formula fed infants are allowed 128 ounces/month or "32 4-ounce jars."[11]

As noted above, the calculation of the maximum monthly allowances was based on a 4 ounce jar of baby food as a serving. According to the Regulatory Impact Statement in the proposed rule, the 4 ounce serving was used due to IOM assumptions which relied on a 2002 survey using Gerber container sizes weighted over a 6 month period.[12] No further discussion or assessment appeared to be involved in making this calculation.

Gerber is pleased that the IOM decided to use its containers as representative of the choices available to consumers in 2002. At that time, most infant foods sold by Gerber and other manufacturers were in similarly sized 4 ounce glass jars and containers. However, between 2002 and 2006, infant food packaging and package sizing became more variable. In fact, during that period, in response to consumer surveys and packaging innovation, Gerber launched its 2nd FOODS plastic 2 packs containing 3.5 ounces per serving. The 3.5 ounce container size is now the size most widely available to consumers. Because the original dataset used by the IOM and the FNS to establish the proposed monthly allowance no longer reflects the realities of the marketplace, and did not reflect the marketplace in 2005 when the IOM issued its report, Gerber believes it would be arbitrary and capricious to finalize the rule using 4 ounce packages as the serving size denominator.

Furthermore, we believe there is flexibility within the program to allow the calculation to be based on a container system. First, the addition of infant fruits and vegetables is new to the WIC program. As a result, the FNS is not bound to follow a particular formula in determining an appropriate monthly allowance. Second, neither the IOM Report nor the FNS, in either its advance notice of proposed rulemaking or its proposed rule, discussed the potential impact of the proposed approach on industry or alternative ways to set the maximum monthly allowance. Finally, as discussed in greater detail below, we believe a container based system would be consistent with the goals of the WIC program and simplify administration of the program for vendors, industry, and WIC participants.

For these reasons, we can see no rational basis for using the 4 ounce container as the basis to calculate the maximum monthly allowance for infant fruits and vegetables.

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[10] 71 Fed. Reg. at 44793.

[11] Id.

[12] Id. at 44841.

B. By Using an Ounce-Based Monthly Allowance, the Stated Goals of the WIC Program Would Not Be Met

In proposing the revisions to the WIC program and charging the IOM with recommending changes, the FNS stated unequivocally that recommendations are to be "cost neutral, efficient for nationwide distribution and vendor checkout, nonburdensome to administration, and culturally suitable."[13] Another goal of the program is to minimize the economic impact on regulated industry and participants in the program. We believe these goals will not be achieved if the proposed rule regarding the addition of infant foods is finalized as written with a maximum monthly allowance described in terms of ounces.

From a cost and distribution perspective, the proposed monthly allowance in terms of ounces would have severe repercussions. As can be seen in the table below, Gerber would need to provide a substantially higher number of containers to meet the 256 oz and 128 oz monthly allotment established in the proposed rule:

	Breastfed infants	Partially breastfed/formula fed
4.0 oz jars (as proposed):	64 containers/mo	32 containers/mo
3.5 oz containers:	74 containers/mo	37 containers/mo

As a result, Gerber would need to deliver 10 more containers for breastfed infants and 5 more containers for partially breastfed and fully formula fed infants. This would have the effect of bidding up the price of Gerber's participation in the program which could ultimately result in the exclusion of Gerber from participation in the WIC program. Even in cost savings programs where a bundled bid may be required, Gerber could win the cereal and meat portions of a bundled bid, but fail on the infant food portion due to the need to provide extra containers to achieve the requisite ounces.

While just a single company, Gerber is a major contributor to the WIC program and is the largest seller of stage 1, 2, and 3 foods in the U.S.[14] This table shows the current states using contracts for cereal or juice and the infant food manufacturer holding the contract.

Contract State	Cereal	Juice
Mississippi	Gerber	Gerber

[13] 71 Fed. Reg. at 44785-86.

[14] IRI InfoScan, 52 weeks ending 10/01/2006 FDMX

New York	BeechNut	-
Texas	Gerber	-
California and Nevada	Gerber	-
Consortium (MD, DC, WV, DE, PA, Puerto Rico)	Gerber	Gerber
Connecticut	Gerber	-

If Gerber were excluded from the WIC program due to its infant fruit and vegetable package size, the unfortunate result would be that many WIC programs would not be able to provide their participants with "readily acceptable, widely available, and commonly consumed" infant food.[15]

Even if one were to put aside the important goals of variety and accessibility, there would be a significant regulatory impact on the WIC program because no other baby food manufacturer currently has the capability to provide adequate nationwide coverage.[16] Even if one were to assume that another company had the capacity, the logistical hurdles of ingredient sourcing and distribution would make it time and cost prohibitive for another company to make these products available to WIC participants for a number of years, if at all.

Finally, we believe the proposed monthly allowances would be confusing to consumers and difficult to administer. Just a quick glance at the baby food products available to consumers shows that there is a wide variety of container sizes for infant fruits and vegetables: 2.5 oz, 3.5 oz, 4 oz, 5.5 oz, and 6 oz. And this is just a snapshot of the current marketplace. These realities may shift and expand as packaging capabilities and consumer preferences change. To tie the allowance to a set monthly amount of 256 oz or 128 oz is both difficult to calculate for the WIC participant and difficult to administer for the WIC vendor. A container-based system would be more comprehensible for both groups and enhance compliance among WIC clients.

It is notable that the FNS anticipated some hardship with the proposed ounce-based calculation. In the preamble to the proposed rule, the FNS states, "[t]his proposed rule would allow State agencies to round up and disperse whole containers of infant foods ... over the timeframe of the food package category and infant feeding option ... [r]ounding up infant foods provides administrative flexibility ... since container sizes of infant foods vary and rounding ensures that infants would receive the full nutritional benefit recommended by the IOM."[17] Based on the

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[15] IOM Report at 40.

[16] IRI InfoScan, 12 weeks ending 10/01/2006 FDMX ACV weighted distribution

[17] 71 Fed. Reg. at 44795; Ex. H.

same concerns, Gerber encourages the FNS to shift from the proposed ounce-based system to a container-based one.[18]

C. Infants from 6 to 11 Months of Age have Variable Food Needs

Gerber believes that moving to a container-based system would more accurately reflect the realities of the marketplace and be in line with the stated goals of the FNS in revising the WIC food packages. Additionally, and perhaps most significantly, moving to a container-based system would provide the necessary flexibility to respond to the dietary needs of infants as they progress through the different developmental milestones between 6 and 11 months. One significant example of this variability is in energy needs. The estimated energy requirement for a 6 month old infant at the 50th percentile for weight is 628 kcal/day compared to 776 kcal/day for an 11 month old infant at the 50th percentile for weight. The same number of ounces for this wide range of energy needs does not make sense.

The Start Healthy Feeding Guidelines for infants and toddlers show that infants between 6 and 11 months old have variable food needs which depend largely upon their developmental stage.[19] After 6 months, most breastfed infants need complementary foods to meet energy requirements and provide at least 50% or more of the Dietary Reference Intakes ("DRIs") for manganese, iron, fluoride, vitamin D, vitamin B6, niacin, zinc, vitamin E, magnesium, phosphorus, biotin, and thiamin.[20] Amounts of energy and nutrients needed from complementary food will vary depending upon the intake of human milk or formula, however, all infants need complementary foods at this stage for exposure to flavors and textures as well as to master eating skills.[21] The Start Healthy Guidelines summarize the physical milestones during the first 2 years of life and

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[18] The FNS specifically solicited comments on the proposed methodology to round up and disperse infant foods. 71 Fed. Reg. at 44795. As noted in the Regulatory Impact Statement, there could be a significant cost impact if the current ounce-based system is kept and States decide to round up to the whole container to meet the maximum monthly allowance. 71 Fed. Reg. at 44841. Gerber's recommendation would make it unnecessary to have a rounding rule and would result in lowering the cost to the program.

[19] N. Butte et al, *The Start Healthy Feeding Guidelines for Infants and Toddlers*, 104 J. Am. Dietetic Ass'n 442 (2004).

[20] Id. at 443.

[21] Id.

states that, "[p]rofessionals are encouraged to use this guide to help parents and caregivers understand the developmental progression of feeding skills during the first 2 years of life."[22]

Because of the variability in all these factors, we believe it would be inappropriate to set a specific number of ounces to cover all infants in the WIC program from 6 to 11 months, regardless of developmental ability, during this critical and nutritionally vulnerable 6 month period. Gerber encourages the FNS to modify the proposed rule to shift to a container-based monthly allowance system. This would allow flexibility to respond to individual needs as the infant moves through the various developmental feeding stages. To discourage the inappropriate purchase of the later stage foods until infants are developmentally ready, Gerber also recommends that the WIC nutritionist be allowed discretion to prescribe the appropriate mix of 1st, 2nd, or 3rd stage foods, depending upon the specific needs and developmental stage of the individual infant.

II. Timing for the Introduction of Complementary Foods to the Infant Diet

As proposed, the new WIC rule would not allow complementary foods for infants until 6 months of age. This would be a significant change from the current WIC rule which provides for infant cereal at 4 months of age. We encourage the FNS to reconsider its position and to acknowledge in the final rule that in some cases introduction of complementary foods prior to 6 months is appropriate. A small percentage of exclusively breastfeeding infants may need complementary foods in order to meet their requirements for important nutrients such as iron and zinc. Simply providing this group with infant formula may be detrimental to their breastfeeding. Other infants will be developmentally ready for complementary foods and their caregivers need to have access to nutritious and developmentally appropriate foods.

We understand that one of the reasons for delaying the introduction of complementary foods until 6 months of age was to encourage breastfeeding. Gerber supports exclusive breastfeeding for the first 6 months of an infant's life as a population goal and applauds the efforts WIC is making to increase breastfeeding initiation and duration. However, Gerber agrees with the major authoritative groups in this area—the World Health Organization ("WHO"), the American Academy of Pediatrics ("AAP") Committee on Nutrition, and the AAP Section on Breastfeeding, that some children may need complementary foods earlier than 6 months.

According to the WHO, "exclusive breastfeeding to 6 months can lead to iron deficiency in susceptible infants. In addition, the available data are insufficient to exclude several other

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[22] Id. at 451.

potential risks with exclusive breastfeeding for 6 months, including growth faltering and other micronutrient deficiencies, in some infants. In all circumstances, these risks must be weighted against the benefits provided."[23] Similarly, the AAP Section on Breastfeeding states that the "[u]nique needs or feeding behaviors of individual infants may indicate a need for introduction of complementary foods as early as 4 months of age, whereas other infants may not be ready to accept other foods until approximately 8 months of age."[24]

The proposed rule alludes to potential differential needs when it states, "infants do not need complementary foods for nutritional reasons at younger ages – either breast milk or iron-fortified formula would entirely meet the nutritional needs of most infants."[25] (Emphasis added.) However, we are concerned that this does not provide sufficient provisions for those infants that may require complementary food before 6 months of age to meet their individual needs. Particularly because the WIC population is nutritionally at risk, we recommend that the FNS allow, at the discretion of the WIC nutritionist, the use of complementary food for infants from 4 to 6 months. Because there is no inherent benefit to exclusive formula use for the first 6 months, we support this individualized approach for both breastfed and formula fed infants.

A. Developmental Readiness

After 6 months of age, most breastfed infants need additional nutrients from foods, and some infants need additional nutrients earlier. Choosing the appropriate age for introduction of complementary foods "requires balancing the physiologic and developmental readiness of the infant, nutrient requirements for growth and development, and other health considerations."[26]

In most babies, the developmental skills needed to begin complementary foods are present between 4 and 6 months of age, but developmental readiness varies considerably among infants.[27] The IOM Report, upon which the WIC proposed rule is based, recognizes this variability when it states that other food should be excluded until "around 6 months of age."[28]

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[23] WHO Expert Consultation on the Optimal Period of Exclusive Breastfeeding (2002).

[24] AAP Policy Statement on Breastfeeding and the Use of Human Milk (2005).

[25] 71 Fed. Reg. at 44791.

[26] *Infra* n. 17 at 442.

[27] Id.

[28] IOM Report at 169.

While ultimately recommending that complementary foods not be included in WIC packages until the infant is 6 months of age, the IOM Report recognized the controversial nature of this recommendation. It states:

> Currently, about 70 percent of infants consume complementary foods between the ages of 4 and 6 months ... suggesting that parents consider them developmentally ready. In addition, if the omission of appropriate complementary foods (e.g., iron-fortified infant cereals) from the WIC program leads to the introduction of inappropriate foods, the diets of infants 4 to 6 months of age could worsen. ... To understand the impacts of delaying the offering of complementary foods in WIC food packages for infants, however, the committee recommends that pilot studies and randomized, controlled trials examine the impact of this proposal on infant-feeding practices, food choices, and nutrient intakes.[29]

B. Unique Nutritional Needs

The IOM Report states that, "although semisolid foods are not included in the food packages until 6 mo of age, this does not prevent the parents or caregivers from introducing semisolid foods to infants before 6 mo of age."[30]

Given the WIC population, we are concerned that the practical effect of not providing complementary foods in the WIC package will be that this population will not have access to appropriate complementary food when their infants may be developmentally ready or needy. A more balanced approach would be to allow the WIC nutritionist to have discretion on an individualized basis to determine the appropriate age for the introduction of complementary food.

As noted above, some infants have unique dietary needs related to iron, calorie intake, and zinc.

1. *Iron*

Average iron stores in an "appropriate-for-gestational-age" full term baby are adequate until 4-6 months of age.[31] At about 6 months, full term breastfed babies need an additional iron source (preferably from complementary foods such as iron fortified cereal or infant meats). The AAP

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[29] Id.

[30] Id. at 161.

[31] P.R. Dallman et al., *Iron Deficiency in Infancy and Childhood*, 33 Am J Clin Nutr. 86-118 (1980).

Committee on Nutrition recommends that breastfed infants be introduced to iron-fortified infant cereal or meat between the ages of 4 and 6 months.[32]

Iron deficiency has negative effects on motor and mental development in infants and children. Toddlers are among the most vulnerable population for iron deficiency in the US. Adequate iron intake during infancy is critical to help prevent iron deficiency in second year of life.[33] The WHO, while recommending exclusive breastfeeding for 6 months for the population, acknowledges that exclusive breastfeeding to 6 months can lead to iron deficiency in susceptible infants.[34]

2. *Calories*

If breast-fed babies do not consume adequate amounts of breast milk between 4-6 months they may need an additional source of energy and other nutrients.[35]

3. *Zinc*

The level of zinc in breast milk decreases in first few months. Therefore, complementary foods (such as infant meats or infant cereal fortified with zinc) are necessary between 4 and 6 months to prevent a deficiency which could affect the growth of the baby.[36] Based on this research and expert recommendations, there is a need for flexibility in the infant food package to provide complementary foods at the right time to meet both nutritional and developmental needs.

C. The Addition of Solid Foods Does not Negatively Impact Breastfeeding

Research shows that complementary food between 4 and 6 months of age may help promote and extend breastfeeding.[37] A recent study in Sweden conducted with 506 mother-infant pairs found

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[32] American Academy of Pediatrics, Committee on Nutrition, Pediatric Nutrition Handbook (R. Kleinman, ed.) (2004 5th ed.).

[33] Morbidity and Mortality Weekly Report, *Iron Deficiency – United States – 1999-2000*, 51(40); 897-899 (Oct. 11, 2002).

[34] WHO Expert Consultation on the Optimal Period of Exclusive Breastfeeding (2002).

[35] *Infra* n. 30.

[36] Id.; WHO Expert Consultation on the Optimal Period of Exclusive Breastfeeding (2002).

[37] A. Hornell et al., *Solids and Formula: Association with Pattern and Duration of Breastfeeding*, 107 Pediatrics 38-44 (2001).

that when breastfed babies were given formula feedings, the frequency of breastfeeding and the duration of suckling declined sharply whereas the introduction of solid food resulted in minor or no changes in frequency or duration of suckling.[38] Thus, there is reason to question the assumption that the addition of solids between 4 and 6 months of age may negatively impact breastfeeding.

Between 4-6 months of age, both the partially breastfeeding and fully formula feeding packages provide an increased amount of infant formula, when there is no scientific benefit associated with increased formula intake during this time. Particularly for the partially breastfed infant, when additional formula may have a negative impact on breastfeeding,[39] why more formula is provided instead of appropriate complementary foods is not clear. There is no recommendation to exclusively formula feed for the first 6 months, nor any documented health, nutritional or developmental benefit to doing so. Moreover, evidence suggests that additional infant formula in WIC packages for infants from 4-6 months of age may have more of a negative impact on breastfeeding than the introduction of complementary foods.

D. Complementary Foods Would Benefit Both Breastfed and Formula Fed Infants

Gerber believes it is critical for infants to be assessed individually, particularly for the WIC population which is at nutritional risk. We recommend that the proposed rule be modified to allow the nutritionist to determine when complementary food should be provided after 4 months of age.

Gerber recommends this change apply to WIC packages for both breastfed and formula fed infants. Complementary foods that meet the nutrient needs of breastfed infants are adequate for formula fed infants as well. While formula may provide all nutrients needed for the first year of life, it does not provide flavors, textures, and the opportunity to learn eating skills which are important for formula fed as well as breastfed infants.

In addition, the IOM Report identified a potential risk for formula fed infants less than one year of age which directly relates to the increased formula provided between 4-6 months. The revised package increases formula to provide energy, but in doing so, increases the percentage of infants 4-5 months with intakes greater than the upper level for preformed vitamin A.[40] If complementary foods were offered instead, this risk could be eliminated while providing the

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[38] Id.

[39] 71 Fed. Reg. at 44790.

[40] IOM Report, Appendix D at 298-99.

needed energy and other nutrients. There is no nutrition or developmental reason to increase formula during this time instead of offering the infant complementary foods.

Finally, in keeping with the stated goal of cost neutrality, the addition of complementary foods between 4-6 months would be cost neutral to the program if the amount of formula was reduced to the level provided after 6 months.

III. Single Ingredient Infant Meat

Gerber believes that the definition of the term "infant meat" as specified in Table 4 of the proposed Section 246.10 (e)(12) needs both clarification and modification.

Specifically, the "infant meat" is defined as "any variety of single ingredient commercial infant food meat without added sugars, starches, vegetables, or salt (i.e., sodium). Broth (unsalted, i.e., without added sodium) may be an ingredient. Texture may range from pureed through diced." Through an accompanying footnote, the definition goes on to specify that no infant food combinations or dinners are allowed within this category.[41]

The overall intent of the definition seems to be to distinguish infant meat and poultry products from dinners which may include additional components such as spaghetti or vegetables. The proposed definition also excludes certain specified ingredients such as added sugar and sodium while allowing the inclusion of broth and, presumably other, non-excluded ingredients. If this is the intent, its realization is complicated by the definition's use of the term "single ingredient." Literally read, this would mean that an infant meat product could only contain the meat component itself, i.e., chicken or beef, without any additional ingredients whatsoever. This is the meaning which has been consistently attached to the term "single ingredient" by USDA's Food Safety and Inspection Service (FSIS) in the context of its own supervision of the production, labeling, and marketing of meat and poultry products under the Federal Meat Inspection Act (21 U.S.C. § 601 et seq.) and the Poultry Products Inspection Act (21 U.S.C. § 451 et seq.).

Strict adherence to such a narrow definition of "single ingredient" would be a practical impossibility given that single ingredient beef and meats are not presently available in the marketplace without at least some additional broth, water, lemon juice and/or starch. Gerber is the only nationally available brand of infant meat and our formulations contain very small amounts of all natural starches and lemon juice. The starch is part of the gravy and the gravy is required to process the product to a texture that is developmentally appropriate for infants. Lemon juice is used in some varieties to help control the pH and minimize any product discoloration a consumer would see upon opening the container. This enhances the appeal of the

[41] 71 Fed. Reg. at 44821 and n. 12.

product for consumers. An appropriate texture for infants is critical for these products. Because of differences in manufacturing equipment and processes, it is not possible at this time for all manufacturers to produce appropriately textured infant meats using only meat and broth. Furthermore, if the regulation is not modified to include infant meats currently available, many WIC participants would not have access to qualifying meat products due to the availability in the marketplace.[41]

Given the current product availabilities, manufacturing capabilities and nutritional goals of WIC, Gerber recommends that WIC adopt an "infant meat" requirement that is nutrient rather than ingredient based. This would allow for appropriate flexibility in the formulation of such products while ensuring that the principal reason for inclusion of meat and poultry items in the infant diet –provision of high quality protein and other key nutrients – is met. In this regard, we would recommend that the final definition specify that such infant meats contribute a minimum amount of 6 grams of protein from meat or poultry, per serving, to the diet. This would be consistent with the protein content of such product as presently found in the marketplace (see Table). The Table below shows the protein, iron and zinc content of products currently available. They are very similar in nutritional composition, most likely because the same amount of meat or poultry (the amount specified in the USDA guidelines) is provided. The differences that do appear are most likely due to the natural nutritional variability of meat/poultry; use of different cuts of meat; and food labeling rounding rules.

Brand	**Varieties**	**Protein per 2.5oz**	**Iron per 2.5 oz (% Daily Value for Infants)**	**Zinc per 2.5 oz (%Daily Value for Infants)**
Beechnut	Beef & Beef Broth	8g	6%	25%
	Chicken & Chicken Broth	8g	6%	15%
	Lamb & Broth	9g	4%	30%
	Turkey & Turkey Broth	8g	6%	20%
	Veal & Veal Broth	9g	4%	25%
Nature's Goodness	Beef & Beef Gravy	7g	10%	Not labeled
	Chicken & Chicken Gravy	6g	15%	
	Turkey & Turkey Gravy	7g	8%	
Gerber	Beef & Beef Gravy	8g	6%	40%
	Chicken & Chicken Gravy	8g	4%	15%
	Ham & Ham Gravy	8g	2%	25%
	Lamb & Lamb Gravy	8g	4%	35%
	Turkey & Turkey Gravy	7g	4%	30%
	Veal & Veal Gravy	8g	2%	25%

Additionally, infant meats, regardless of formulation, follow USDA guidelines for minimum meat content. Products labeled as "Meat and Broth" and "Poultry and Broth" are specifically recognized, along with minimum meat content requirements, in the listing for Baby Food in the

[41] InfoScan, 12 weeks ending 10/01/2006 FDMX ACV weighted distribution

FSIS Labeling Policy Book.[42] Products labeled as "Meat and Meat Gravy" produced by Gerber also follow these guidelines.

We therefore believe that WIC should clarify the proposed definition of "infant meat" by removing the phrase "single ingredient" and making it clear that eligible "infant meats" encompass multi-ingredient meat and poultry products which do not contain any of the ingredients specifically excluded. Given the longstanding practice of incorporating low levels (< 5%) of lemon juice and appropriate starches in the formulation of these products, we would further recommend that the categorical exclusion of starches from this definition be eliminated.

If these recommendations are followed, a final definition of "infant meat" would read as follows:

> Any variety of commercial infant food, meat food, or poultry product without added sugars, vegetable or salt (i.e., sodium). Such products shall contain at a minimum, 6 grams of protein from meat or poultry per serving. (The clarifying footnote would continue to be attached, which states "No infant food combinations (e.g. meat and vegetables) or dinners (e.g. spaghetti and meatballs) are allowed.)

* * *

Gerber appreciates the opportunity to provide these comments on Food Package II, the introduction of complementary foods, and the infant meat definition. We strongly believe that an adjustment of the final rule to respond to the concerns and recommendations provided would better serve the WIC program, its participants, and most importantly, the nutritional needs of infants and young children.

We would welcome any questions the FNS may have.

Sincerely,

Kathleen Reidy

Kathleen Reidy, Dr.P.H., RD
Vice President of Global Nutrition & Regulatory Affairs
Gerber Products Company

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[42] The Policy Book articulates labeling policies applicable to all federally inspected meat and poultry products. While the requirements in question are not formally codified regulation, they do articulate policies as applied in the FSIS prior approval program for the labels of all such inspected product. See 9 C.F.R. §§ 317.4, 381.132. As a result, such informal standards accurately reflect the composition of product available in the current marketplace.

I-127

SUDIA

Affiliated with
American Dairy Association
National Dairy Council

SOUTHEAST UNITED DAIRY INDUSTRY ASSOCIATION, INC.

October 24, 2006

Ms. Patricia N. Daniels, Director
Supplemental Food Programs Division
Food and Nutrition Service, USDA
2101 Park Center Drive, Room 528
Alexandria, Virginia 22302

Dear Ms. Daniels:

The Southeast United Dairy Industry Association, Inc. (SUDIA) is concerned about the United States Department of Agriculture's (USDA) Proposed Rule on Revisions to the Women, Infants and Children's (WIC) supplemental food packages. The proposed rule limits the options for milk substitution within the dairy group, which is not consistent with the 2005 Dietary Guidelines for Americans' (DGA) recommendations for dairy foods, and may make it difficult for women and children to meet their nutrient needs.

A 2005 Dietary Guidelines Advisory Committee Report stated the milk group is a major contributor of dietary calcium, and a substantial contributor of vitamin A, potassium and magnesium. The Dietary Guidelines state that milk alternatives within the milk food group, such as yogurt and lactose-free milk, are the easiest and most reliable way for those sensitive to lactose to derive the health benefits associated with milk and milk products.

In contrast, the proposed rule does not allow yogurt as a milk substitution, although a 2004 Institute of Medicine report, "WIC Food Packages: Time for a Change," recommends allowing yogurt.

Yogurt is an excellent source of calcium and protein, and a good source of potassium; some yogurt contains vitamin D. As recommended by the IOM, permitting women to partially substitute yogurt for milk would provide access to a nutrient-rich diary food that is well-tolerated by those who are sensitive to lactose and fits into a variety of food patterns.

Making lactose-free and –reduced milk, rather than soy products, the preferred substitutes for regular milk would be consistent with the DGA and other established dietary advice.

The proposed rule also decreases the amount of cheese allowed for substitution of milk. At the same time, the proposed rule allows women and some children to substitute tofu or fortified soy-based beverages for milk; however, only soy beverages fortified to resemble the nutrient package in milk would be allowed.

Allowing more cheese substitution would give participants more flexibility in food choices, provide more access to an excellent source of calcium and a good source o high-quality protein, and respond to cultural and dietary needs.

USDA proposes across-the-board reductions in the amount of milk provided to WIC recipients, down to age-appropriate DGA servings for children and most women, which is 3 cups milk for most women and 2 cups for children 1 through 4 years old.

Allowing all women, including non-breastfeeding women, to receive 3 servings of milk would enhance WIC participants' nutrition.

SUDIA is a non-profit dairy product promotion organization, coordinating the programs of the National Dairy Council and American Dairy Association.

Thank you for this opportunity to comment. SUDIA relies on well-established nutrition science for the basis of its comments, which supports increasing the availability of dairy options to help WIC participants better meet their dietary needs.

Sincerely,

Cheryl Hayn, MS, RD, LD
Chief Executive Officer

email from
Sharon Dunaway

Administrative Assistant
Southeast United Dairy Industry Association Inc.
5340 West Fayetteville Road
Atlanta GA 30349

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I-129

From: michelle_ott-dalton@deanfoods.com
Sent: Friday, October 13, 2006 1:14 PM
To: WICHQ-SFPD
Subject: Docket ID#0584-AD77 Wic Food Packages Rule

As a Quality Control Manager for a Dairy Processing Plant I personally can say that our industry is dedicated to food safety and product quality. We run our plants using strict regulatory guidelines and company policies. We strive to make a great tasting product that the customer expects.

Soy does have nutritional advantages for some diet needs. It does have a highly digestible protein level, however, the protein quality is inferior due to its amino acid profile. Calcium is soy is naturally low, but can be fortified, however, the mineral absorption is limited.

As a dietician, I also can personally say that dairy foods do have a definite standing in common diets. It is unclear of how reliability of soy based foods in place of milk will affect health in future years. There are numerous studies still being conducted - which only proves that the evidence of benefits are not strong enough to sway pediatricians and doctors.

The WIC program is designed for woman, infants and children. I feel that dairy is a needed part of the diet for those consumers. I can only disagree with sending the message to this consumer base that soy is an equal replacement for soy based foods.

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Campbell Soup Company
1 Campbell Place
Camden, NJ 08103

November 6, 2006

Patricia N. Daniels
Director, Supplemental Food Programs Division
Food and Nutrition Service
USDA
3101 Park Center Drive
Room 528
Alexandria, VA 22302

Re: Federal Register Notice: Vol. 71, Number 151, August 7, 2006 Revisions to the WIC Food Package

Dear Director Daniels:

Campbell Soup Company is pleased to have the opportunity to supply USDA with its recommendations and comments on the WIC food package.

Campbell Soup Company is a global manufacturer and marketer of high quality simple meals, soup, baked snacks, vegetable-based beverages, and premium chocolate products, with annual revenues in excess of $7.3 billion. Founded in 1869, the company has a portfolio of more than 20 market-leading brands, including *Campbell's®*, *Pepperidge Farm®*, *Arnott's®*, *V8®*, and *Godiva®*. The company is ably supported by 23,000 employees worldwide.

Campbell Soup Company is proud of its long-time participation in the WIC program, providing *V8®* 100% vegetable juice and *Campbell's®* tomato juice to WIC clients for over 15 years. Campbell Soup Company is a strong supporter of WIC because of its mission to improve the nutritional health of women and children. We applaud USDA's effort to reform the food package for the WIC program, to be more clearly aligned with the 2005 Dietary Guidelines and to encourage increased vegetable, fruit, and whole grain intake.

While the proposed food package has made improvements for WIC participants, Campbell has identified options that will provide greater participant flexibility, acceptability, and ultimately better compliance for nutritional improvement. These include:

I. Expanding vegetable options by including vegetable soup;
II. Addressing calorie and sugar concerns of juice by establishing a portion of the juice category as vegetable juice;
III. Further expanding of flexibility and convenience of the canned bean category and encouraging consumption by adding canned beans in sauce;
IV. Providing additional protein options by adding culturally relevant canned chicken; and
V. Supporting increasing the vegetable and fruit voucher by $2, as originally proposed by IOM.

I. Expanding vegetable options by including vegetable soup

We recommend including canned vegetable soups that contain at least ½ cup of vegetables as another option for the fruit and vegetable voucher. Expanding this option can encourage better compliance and nutrition among WIC participants. Canned vegetable soups provide a variety of key nutrients, and are moderate calorie options. Vegetable soups are familiar and widely accepted across age groups and cultures. In addition, *Campbell's*® soups are manufactured with the highest standards of quality and food safety.

There are many compelling reasons why canned vegetable soups should be included in the WIC program:

- **Nutrition** - Canned vegetable soups provide a variety of convenient and appealing choices for WIC participants. Canned vegetable soups are moderate calorie options, are usually low in fat, and are available in a variety of sodium content options. They also often provide a good source of vitamin A, vitamin C or potassium, and a significant source of fiber. Both fiber and potassium have been identified as priority nutrients for WIC children and mothers, and vitamins A and C are nutrients of inadequacy for WIC mothers.[1] See Table 1 (Appendix) for canned vegetable soup nutrition information.
- **Convenience** - Offering processed options is important to many WIC participants. Although USDA has taken a large step forward by allowing canned and frozen vegetables and fruit in addition to fresh, canned vegetable consumption has declined over 15% in America over the past five years.[2] Allowing ready to consume foods like soup, will make it easier and more desirable for WIC participants to include vegetables in their and their families' diets. WIC mothers are busy like other mothers; they need convenient foods to quickly prepare foods for themselves and their families.
- **Variety** – Many canned vegetable soups provide a mixture of vegetables, consistent with dietary guidance. Additionally, as many pregnant women experience nausea during some part of their pregnancy, it is important to offer a wide selection of diverse foods to insure they find foods they feel comfortable eating.
- **Price** - As shown in Table 2 (Appendix), the price per ½ cup of vegetables between Campbell's canned vegetable soups and canned vegetables is similar, with Campbell's soups only costing a few cents more per ½ cup of vegetables.
- **Cultural acceptability**- Thirty-nine percent of WIC participants are Hispanic.[3] Hispanic families consume soup frequently.[4] In 2004, Hispanic families consumed an average of 64 servings of soup per year per person – an index of 166% vs. non-Hispanics.[4] In fact, soup and chicken are the most popular main courses for Hispanics.[4]
- **Child acceptance** - Soup is also a favorite food with children; in fact, for children ages 2-5, soup is the 2nd most commonly consumed food for lunch, following PB&J.[5] It is also the 6th most commonly consumed food for children ages 2-5 at dinner.[5]

- **Research** – Research has shown that intake of soup is associated with lower calorie intake and better nutrient density, and thus is consistent with key messages of the Dietary Guidelines. In addition to be associated with improved diet quality, soup has been shown to be an effective way to help reduce calories and lose weight, or as part of a weight control plan.

Details on research are shown below:

Research shows that diet quality of people who consume soup is better than those who don't consume soup:

- An analysis of NHANES III 1988-94 and CSFII 1994-96 data showed diets of individuals, ages 18+ who included soup (soup users - S) are associated with reduced caloric and fat intakes as well as improved nutrient density when compared to diets of individuals who did not include soup (non soup users - NS). Soup users (those defined as having 0.5 to 3 cups of soup per day) had statistically significantly higher intakes of vitamin A, vitamin C, vitamin B12 and folate than those who did not consume soup. Soup users had significantly lower intakes of total fat (S 67.24g vs. NS 77.6g, $p \leq 0.01$), saturated fat (S 22.2g vs. NS 26.07g, $p \leq 0.01$) and cholesterol (S 262.5 mg vs. NS 287.7mg, $p \leq 0.01$). Also, female soup users consumed more fiber than female non-soup users (S62.5g vs. NS 55.9g, $p \leq 0.01$). In addition, soup users consumed significantly fewer calories than non-soup users both for total population (S 1900.5 calories vs. NS 2063.6 calories, $p \leq 0.01$) and when broken out by gender.[6]
- In an analysis of CSFII 1994-96, 1998 survey data, the diets of soup users contained more fruit, legumes, whole grains, green and yellow vegetables, and fish; significantly less discretionary fat (50.7g vs. 59.18g, $p \leq 0.01$); and fewer teaspoons of added sugar (16 tsp. vs. 20.11 tsp., $p \leq 0.01$). These findings suggest that soup users consume a diet more consistent with the Dietary Guidelines.[7]
- A recent study completed in the UK found that supplementation with carotenoid-rich soups and beverages increased dietary carotenoids, vitamin C, alpha-tocopherol, potassium and folate, and the plasma concentrations of alpha-carotene.[8]
- A French study found that heavy consumers of soup had higher dietary intakes of folate, beta-carotene, and vitamin C, and lower fat intakes.[9]

Research shows that soup can be a useful tool to help with weight management:
The prevalence of obesity and overweight has been increasing within the US population at large, and among the WIC population. Data from NHANES 2003-2004 for population categories that include WIC participants, found that for women ages 20-39, 52% are overweight or obese, with 29% being obese. For Hispanics, 69% of women ages 20-39 are overweight or obese and 36% are obese. The prevalence of children overweight/at risk of overweight is continuing to increase; for male children ages 2-5, 27% are at risk of overweight/overweight with 15% being overweight, and for female children ages 2-5, 25% are at risk of overweight/overweight with 13% being overweight.[10] A New York City study found 38% of the WIC-participating children were overweight or at risk of being overweight.[11]

In addition to being associated with improved diet quality, soup has been shown to be an effective way to help reduce calories and lose weight, or as part of a weight control plan:

- One study found that people who had soup as their first course in a meal consumed an average of 100 fewer calories in that meal compared with those who did not eat soup.[12]
- In another study, people who followed a low calorie diet that included soup lost weight.[13]
- Another study by Dr. Barbara Rolls found that eating soup (e.g. Chicken and Rice soup) reduced calorie intake of subsequent meals more effectively than eating the ingredients (chicken, rice) separately followed by a glass of water.[14]
- In a recent 1-year weight loss study at Penn State, all groups lost weight; however, a greater proportion of subjects who consumed soup during the study (as opposed to snacks at the same calorie level or the comparison group) answered "very full" or "extremely full" when asked "How full do you feel after your meals while on this food plan?" [15]

These results show that soup can be a useful tool in managing calories. This information is especially important for women who are post-partum and who need to return to their pre-pregnancy weight.

Soup was excluded as a processed vegetable option for the fruit and vegetable voucher by the Institute of Medicine in their WIC Food Package report because of the concern that vegetable soups could include cream-based vegetable soups that didn't provide a certain amount of vegetables. Campbell is proposing only those soups that deliver the ½ cup per 8-oz serving of soup standard. Additionally, sodium is commonly raised as a concern with canned soup. Campbell offers soups in a wide variety of sodium levels, including 25% Less Sodium (sodium ≤650mg), *Healthy Request*® (sodium ≤480mg, meeting the healthy criteria for labeling and the American Heart Association's Heart Check Mark) and Low Sodium (sodium ≤140mg) options.

For the reasons stated, we urge USDA to include canned vegetable soups providing at least ½ cup of vegetables per serving in the WIC food package.

II. Addressing calorie and sugar concerns of juice by establishing a portion of the juice category as vegetable juice

Campbell recommends maintaining the juice category at its original level, and that half of the juice offered should be specified as vegetable juice. The proposed WIC food package has lowered the amount of juices allowed, to be in alignment with AAP recommendations for consumption of juice by children. According to the AAP guidance document, "The Use and Misuse of Fruit Juice in Pediatrics" it is clear that they are only discussing limiting fruit juice to children, due to its calorie and sugar content.[16] As vegetable juice has half the calories, carbohydrates and sugar content of fruit juice, it should not be treated the same as fruit juice.

In Table 3 (See Appendix), the nutrition of vegetable juice, such as *V8*® 100% vegetable juice, is shown to be very different from fruit juice. Calories, carbohydrates and sugar

are all naturally much lower in vegetable juice than in fruit juice. In light of increasing obesity, highlighting the lower calorie juice option will provide the WIC population lower calorie choices. Additionally, beyond providing vitamin C, vegetable juice, such as *V8* vegetable juice, provides a good source of vitamin A, magnesium, and potassium, and has 2 grams of fiber. Separating vegetable juice from fruit juice (by specifying half of the juice as vegetable juice) will help WIC participants obtain a balance of fruits and vegetables, and help them obtain the wide variety of nutrients they need in their day. Regular *V8*, Low Sodium *V8*, Calcium Enriched *V8*, and Essential Antioxidants *V8* vegetable juices meet FDA's criteria for healthy, and carry the American Heart Association heart check. Campbell's vegetable juices are available in a variety of lower sodium options.

If a reduction in total juice is still seen as a necessary approach, then we still recommend specifying half of the juice be vegetable juice for the reasons outlined above.

III. Further expanding of flexibility and convenience of the canned bean category and encouraging consumption by adding canned beans in sauce

Campbell applauds the inclusion of canned beans as an option for WIC participants. However, the proposed food package excludes canned beans with sauce. For many, the flavor and convenience of canned beans with sauce provides incentive to incorporating beans into their diet. *Campbell's*® canned beans in sauce provide an excellent source of fiber, are low in fat and saturated fat, and meet labeling criteria to be considered healthy. See Table 4 for nutrition and pricing information, comparing *Campbell's* canned beans in sauce with other canned beans.

As outlined earlier, WIC participants need convenient and nutritious options that will allow them to quickly prepare and consume foods. Canned beans are often used in cooking or as a side dish with other ingredients; therefore canned beans in sauce are ready to be eaten as is without any additions. We recommend the inclusion of canned beans in sauce to the canned bean category.

IV. Providing additional protein options by adding culturally relevant canned chicken

The proposed food package adds different types of canned fish beyond tuna to vary the protein options for WIC participants. We propose that canned chicken should also be included. Canned chicken is an excellent source of protein and price value; see Table 5 (Appendix) for a price and nutrition comparison of canned tuna, salmon, sardines, and *Swanson*® canned chicken in water.

The NWA WIC Culturally Sensitive Food Prescription Recommendations included recommendations for additional foods that could increase the cultural acceptance of the WIC food package. In their recommendations for Hispanic, African American, Native American, and Alaskan cultures, they recommend canned chicken as a culturally appropriate option to substitute for peanut butter/beans/eggs.[17] The addition of another option for this category of the revised package would allow for increased variety and

choices – two important factors for the new packages. In addition, canned chicken is an economical choice, costing on average $1.58-$1.97 for 4.5 ounces of canned chicken, with a price per ounce similar to branded canned salmon or tuna in foil pouches.

V. Increase the vegetable and fruit voucher to reflect IOM's original proposed level.

We support the IOM's recommendations for the vegetable and fruit vouchers, and believe the voucher amounts should be maintained at the IOM's proposed $10 and $8 dollar levels. IOM's proposal was based on the low intakes of fruit and vegetables by WIC participants and maintaining their recommendations will provide WIC participants greater nutrition benefits.

Conclusion:

To summarize, Campbell recommends further enhancements to the WIC food package from the initial USDA proposal to offer participants more convenient and culturally relevant options in order to improve overall nutrition. We recommend:

- Including processed vegetable options like canned vegetable soups that provide at least ½ cup of vegetables per 8-ounce serving of soup;
- Maintaining the original amount of juice in the juice category, but separating vegetable juice from fruit juice because of the more favorable nutritional profile of vegetable juice and having half of the juice category be specified as vegetable juice;
- Adding canned beans in sauce as a healthy option for WIC participants to incorporate more protein into their diets;
- Adding canned chicken as a choice within protein options to meet cultural needs; and
- Maintaining the fruit and vegetable voucher amounts at the levels set by IOM in their proposal for the WIC food package, at $10 for women and $8 for children.

Respectfully submitted,

Chor San Khoo, Ph.D.
Vice President Global Nutrition and Health
Campbell Soup Company

References:

1. Special Supplemental Nutrition Program for Women, Infants, and Children (WIC): Revisions in the WIC Food Package; Proposed Rule, Vol 71, RIN 0584-AD77, August 7, 2006.

2. Information Resources Incorporated, Analysis of Volume Sales of Canned Vegetables -Yearly Data 2001-2005.

3. U.S. Department of Agriculture, Food and Nutrition Service, Office of Analysis, Nutrition and Evaluation, *WIC Participant and Program Characteristics 2004, WIC-04-PC,* by Susan Bartlett, et al. Project Officer, Fred Lesnett. Alexandria, VA: 2006.

4. The NPD Group, National Eating Trends Hispanic Panel and Database, 2004.

5. The NPD Group, *Kids, Tweens and Teens*, National Eating Trends, 2005. June 2006.

6. Khoo CS, et al. *Comparison of Nutrient Intakes of Adults Consuming and Not Consuming Soup,* Poster Presentation Experimental Biology 2003: 185.6.

7. Hartell B, et al. *Comparison of Food Guide Pyramid Servings in Diets of Adult Soup Users and Non Soup Users.* Poster Presentation Experimental Biology 2003: 185.5.

8. Paterson E, et al. *Supplementation with Fruit and Vegetable Soups and Beverages Increases Plasma Carotenoid Concentrations, but Does Not Alter Markers of Oxidative Stress or Cardiovascular Risk Factors*, The Journal of Nutrition. 2006, 136: 2849-2855.

9. Galan P, et al. *Relationship between Soup Consumption, Folate, Beta-carotene, and Vitamin C Status in a French Adult Population*, International Journal of Vitamin Nutrition Research. 2003, Oct;73(5):315-21.

10. Ogden CL, et al. *Prevalence of Overweight and Obesity in the United States, 1999-2004*, Journal of the American Medical Association. 2006, 295: 1549-1555.

11. Nelson JA, et al. *Diet, Activity and Overweight Among Preschool-Age Children Enrolled in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)*, Preventing Chronic Disease. April 2006. Available at: https://www.cdc.gov/ped/issues/2006/apr05_0135.htm.

12. Rolls BJ, et al. *Foods with Different Satiating Effects in Humans*, Appetite. 1990, 15: 115-126.

13. Jordan HA, et al. *Role of Food Characteristics in Behavioral Change and Weight Loss*, The Journal of the American Dietetic Association. July 1981, Vol 79: 24-29.

14. Rolls BJ, et al. *Water Incorporated into a Food but Not Served with a Food Decreases Energy Intake in Lean Women*, American Journal of Clinical Nutrition. 1999, Vol. 70: 448-455.

15. Rolls BJ, et al. *Provision of Foods Differing in Energy Density Affects Long-Term Weight Loss, Obesity Research.* 2005, 13: 1052-1060.

16. Committee on Nutrition. *The Use and Misuse of Fruit Juice in Pediatrics*, American Academy of Pediatrics. May 2001, Vol 107, No 5: 1210-1213.

17. National WIC Association. Culturally Sensitive Food Prescription Recommendations. 2003.

Appendix:

Table 1: The nutrition profiles of several *Campbell's*® condensed soups that provide at least ½ cup of vegetables per 8-oz prepared serving are reproduced below. (Note - Low Sodium soups are not condensed – they are ready-to-serve and their serving size is one can.)

Campbell's® Soup	Serving Size	Calories	Total Fat (g)	Saturated Fat (g)	Trans Fat (g)	Cholesterol (mg)	Sodium (mg)	Potassium (mg)	Total Carbohydrate	Dietary Fiber (g)	Sugars (g)	Protein (g)	Vitamin A % DV	Vitamin C % DV	Calcium % DV	Iron % DV	Magnesium % DV	Vegetable (cups)
Low Sodium Varieties																		
Low Sodium Chunky Vegetable Beef Soup	1 Can	170	4.5	1.5	0	30	50	450	18	6	7	14	80	0	4	4	-	3/4
Low Sodium Split Pea Soup	1 Can	240	4	1.5	0	5	30	520	38	6	6	12	25	0	4	10	-	5/8
Low Sodium Tomato with Tomato Pieces Soup	1 Can	150	4	1 5	0	10	90	540	25	4	16	4	10	10	4	6	-	1 3/8
Reduced Sodium Varieties																		
25% Less Sodium Tomato Soup	1 cup prep	90	0	0	0	0	530	260	20	1	12	2	10	10	0	2	8	7/8
Healthy Request® Tomato Soup	1 cup prep.	90	1.5	0.5	0	0	470	280	17	1	10	2	8	10	0	0	6	5/8
Healthy Request® Vegetable Soup	1 cup prep.	100	1	0	0	0	480	500	19	3	5	4	50	0	2	4	6	1/2
Regular Varieties																		
Goldfish® Pasta in Tomato Soup	1 cup prep.	130	0.5	0	0	0	540	45	28	3	15	3	10	4	0	4	6	5/8
Tomato Noodle Soup	1 cup prep.	120	0.5	0	0	5	660	200	25	2	13	3	10	10	0	0	-	5/8
Tomato Soup	1 cup prep.	90	0	0	0	0	710	260	20	1	12	2	10	10	0	4	-	7/8
Vegetarian Vegetable Soup	1 cup prep.	90	0.5	0	0	0	790	210	18	2	6	3	50	0	2	4	-	1/2

Table 2: Price comparison, comparing the retail price per ½ cup serving of vegetables and nutrition of several common canned/frozen canned vegetables, and *Campbell's* canned vegetable soups.

Product	Price	Size of Package	# of 1/2 cup servings of vegetables	Price per 1/2 cup of vegetables	Serving Size
Canned Vegetables					
DelMonte Fresh Cut Green Beans	$0.96	14.5 oz	3.5	$0.27	1/2 cup
Private Label Cut Green Beans	$0.42	14 oz	3.5	$0.12	1/2 cup
Green Giant 50% Less Sodium Corn	$1.00	15.25 oz	3.5	$0.29	1/2 cup
Private Label No Salt Added Corn	$0.68	15.25 oz	3.5	$0.19	1/2 cup
Del Monte Fresh Cut Sliced Carrots	$1.00	14.5 oz	3.5	$0.29	1/2 cup
Private Label Cut Carrots	$0.78	14.5 oz	3.5	$0.22	1/2 cup
Frozen					
Birds Eye Frozen Spinach	$1.34	10 oz	3.5	$0.38	1/2 cup
Private Label Frozen Spinach	$1.09	10 oz	3.5	$0.31	1/2 cup
Canned Soup					
Campbell's Tomato Soup	$0.80	10.75 oz	2.5	$0.32	1 cup prep.
Campbell's 25% Less Sodium Tomato Soup	$1.15	10.75 oz	2.5	$0.46	1 cup prep.
Campbell's Healthy Request Tomato Soup	$1.16	10.75 oz	2.5	$0.46	1 cup prep.
Campbell's Vegetarian Vegetable Soup	$1.09	10.75 oz	2.5	$0.44	1 cup prep.
Campbell's Low Sodium Tomato with Tomato Pieces Soup	$1.38	10.75 oz	2	$0.69	1 can

Pricing data from Information Resources Incorporated (IRI) – 52 weeks ending October 15, 2006. Price reflected is base price per unit not on promotion.

Table 3: Comparison of the nutrition of fruit and vegetable juices.

Juice	Old Orchard Apple Juice	Welch's Grape Juice	ShopRite Orange Juice	V8 100% Vegetable Juice	Calcium Enriched V8	Essential Antioxidants V8	Lemon Twist V8	Low Sodium V8	Picante V8	Campbell's Tomato Juice	Campbell's Healthy Request Tomato Juice	Campbell's Low Sodium Tomato Juice
Serving Size	8 oz	8 oz.	8 oz.	8 oz	8 oz.	8 oz.	8 oz	8 oz.	8 oz.	8 oz.	8 oz	8 oz
Calories	120	170	120	50	50	50	50	50	50	50	50	50
Total Fat (g)	0	0	0	0	0	0	0	0	0	0	0	0
Saturated Fat (g)	0	0	0	0	0	0	0	0	0	0	0	0
Cholesterol (mg)	0	0	0	0	0	0	0	0	0	0	0	0
Sodium (mg)	25	20	0	480	460	460	590	140	590	680	480	140
Potassium (mg)	280	-	450	470	680	700	470	820	470	430	500	920
Total Carbohydrates (g)	29	42	29	10	11	11	10	10	10	10	10	10
Fiber (g)	0	0	0	2	2	2	2	2	2	2	2	2
Sugar (g)	27	40	28	8	8	8	8	8	8	8	8	8
Protein (g)	0	0	1	2	2	2	2	2	2	2	2	2
Vitamin A (%DV)	0	0	0	40	40	100	40	40	40	10	100	10
Vitamin C (%DV)	130	100	120	120	120	120	120	120	120	120	120	120
Calcium (%DV)	10	0	2	4	30	4	4	2	4	2	2	2
Iron (%DV)	2	0	0	4	4	4	4	2	2	2	0	2
Vitamin E (%DV)	-	-	-	0	0	100	0	0	0	0	100	0
Magnesium (%DV)	-	-	-	NYA	10	10	NYA	10	4	NYA	4	NYA
Thiamin (%DV)	-	-	15									
Folate (%DV)	-	-	10									

NYA = Not yet available

Table 4: Nutrition of *Campbell's* Canned Beans in Sauce Options.

Beans	Price per container	# of 1/2 cup servings	Serving Size	Price per 1/2 cup serving	Calories	Total Fat (g)	Saturated Fat (g)	Cholesterol (mg)	Sodium (mg)	Total Carbohydrate	Dietary Fiber (g)	Sugars (g)	Protein (g)	Vitamin A %DV	Vitamin C %DV	Calcium %DV	Iron %DV
Campbell's Baked Beans Brown Sugar and Bacon Flavored Beans	$0.52	2.5	1/2 cup	$0.21	160	2.5	0.5	<5	470	30	8	13	5	0	0	4	8
Campbell's Pork and Beans	$0.49	2.5	1/2 cup	$0.20	140	1.5	0.5	<5	440	25	7	8	6	0	0	4	8
Goya Red Kidney Beans	$1.03	3.5	1/2 cup	$0.29	90	1	0	0	350	19	8	<1	7	0	0	4	10
Private Label Garbanzo Beans	$0.84	3.5	1/2 cup	$0.24	143	1.5	0	0	309	27	5	NA	6	0	0	3	8

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**Nutrition for PL Garbanzo beans is from USDA Standard Reference 19, accessed Nov. 3, 2006.*

Table 5: Price and nutrition comparison between canned tuna, salmon, sardines and *Swanson*® canned chicken in water.

Product	Price	Size of Package	# of ounces	Price per ounce	Per 2 oz serving	Calories	Total Fat (g)	Saturated Fat (g)	Cholesterol (mg)	Sodium (mg)	Total Carbohydrate (g)	Dietary Fiber (g)	Sugars (g)	Protein (g)	Vitamin A %DV	Vitamin C %DV	Calcium %DV	Iron %DV
Starkist Chunk Tuna in Water - Canned	$1.12	6 oz	6	$0.19	2 oz	60	1	0	30	250	0	0	0	13	-	-	-	-
Starkist Chunk Tuna in Water in Foil Pouch	$1.26	3 oz	3	$0.42	2 oz	60	1	0	20	207	0	1	0	13	0	0	0	3
Private Label Chunk Tuna in Water	$0.63	6 oz	6	$0.11	2 oz	56	0	0	22	118	0	0	0	13	0	0	0	2
Starkist Chunk Pink Salmon	$1.96	6 oz	6	$0.33	2 oz	50	1	0	20	250	0	0	0	11	0	0	0	0
Private Label Pink Salmon	$1.36	7.5 oz	7.5	$0.18	2 oz	80	4	0.9	36	240	0	0	0	11	0	0	9	2
Starkist Sardines	$0.93	3.5 oz	3.5	$0.27	2 oz	69	4	1.1	20	194	0	0	0	7	0	0	6	1
Swanson Premium White and Dark Chicken in Water	$1.58	4.5 oz	4.5	$0.35	2 oz	50	1	0 5	20	270	1	0	1	10	0	0	0	0
Swanson Premium White Chicken in Water	$1.97	4.5 oz	4 5	$0.44	2 oz	60	2	0 5	30	250	1	0	0	10	0	0	0	0

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