



2

Vegetables

Food Buying Guide for Child Nutrition Programs

2 | Vegetables

Vegetables Component for the Child Nutrition Programs (CNP)

Vegetables are required as a meal component in the National School Lunch Program (NSLP) and Child and Adult Care Food Program (CACFP) lunch and supper meal pattern requirements. Vegetables may be served to meet the fruits/vegetables required meal component in the Summer Food Service Program (SFSP) lunch and supper meal pattern requirements. Vegetables may be served as part of a reimbursable breakfast for all Child Nutrition Programs (CNP). Program operators may serve a vegetable as one of the two meal components of a snack served as part of the NSLP afterschool snack service (NSLP afterschool snacks), CACFP, and SFSP. The meal pattern requirements are described in the charts located on pages I-7 through I-17.



Specific requirements:

- Fresh, frozen, or canned vegetables and full-strength vegetable juice may contribute toward the vegetables requirement.
- Any liquid or frozen product labeled “juice,” “full-strength juice,” “single-strength juice,” “100 percent juice” or “reconstituted juice” is considered full-strength juice. To meet the vegetables requirement, the product must be 100% full-strength vegetable juice or a juice blend with a mixture of fruits and vegetables where vegetables contribute the greatest volume.
 - In school meal programs, no more than ½ of the total weekly vegetable requirements may be met with full-strength vegetable juice.
 - In the CACFP, full-strength juice may be used to meet the vegetables component no more than once per day.
 - In the SFSP, full-strength vegetable or fruit juice may be counted to meet not more than one-half of the daily requirement.
- Juice products that are less than full strength or that contain concentrates that are not fully reconstituted may not be served as part of a reimbursable meal or snack.
- Full-strength vegetable juice may be used as one component of a snack when the other component is not fluid milk. Only one of the two components served at snack may be a beverage.
- Juice cannot be credited when used as an ingredient in another food or beverage product with the exception of smoothies.
- Snack-type vegetable products, such as potato chips, do not contribute toward meal pattern requirements. Please refer to the section titled “Products That Do Not Meet Requirements” on page 2-7 for more information.
- Over the course of the week in the NSLP, schools must offer vegetables from specific subgroups established by the *Dietary Guidelines for Americans*: dark green, red/orange, beans, peas, and lentils, starchy, and “other” vegetables. The “additional” vegetables requirement may be met with vegetables from any subgroup. Serving a variety of vegetables each week helps to ensure that program participants have access to a greater variety of nutrients.
- Program operators are not required to offer vegetables in the SBP, but may choose to offer vegetables in addition to, or in place of, fruits. Schools choosing to offer vegetables at breakfast in place of fruits one day per week can offer vegetables from any vegetable

subgroup. Schools choosing to offer vegetables at breakfast in place of fruits two or more days per week must offer vegetables from at least two different vegetable subgroups. Vegetable subgroups may be offered on any day of the week and may be repeated or combined with multiple vegetable subgroups.

- The minimum creditable serving size for any vegetable offering is $\frac{1}{8}$ cup. The importance of adequate and recognizable amounts of vegetables must be considered in menu planning in order to ensure a well-balanced meal, to illustrate healthy choices from the MyPlate food guidance system and to meet meal pattern requirements.
- Hominy in its whole form may credit as a starchy vegetable. If served milled, hominy credits toward the grains component.
- Beans, peas, and lentils may be counted toward the meats/meat alternates or vegetables components, but not as both simultaneously. This includes roasted beans, such as roasted chickpeas (garbanzo beans). In the NSLP, beans, peas, and lentils offered as a meat alternate may also count toward the weekly beans, peas, and lentils vegetable subgroup requirement.
- Noodles made from bean or legume flours may credit toward the vegetables or meats/meat alternates component. Program operators may serve vegetable noodles without serving additional recognizable vegetables and credit toward the vegetable component. This guidance is limited to vegetable noodles only and does not apply to other food items. This crediting flexibility aims to increase options for local program operators to meet vegetable requirements; therefore, this crediting flexibility does not remove the visual recognition requirement for legume pasta crediting toward the meats/meat alternates component.
- In school meal programs and the CACFP, menu items that are mixtures of fruits and vegetables, for example, carrot-raisin salad, must be credited separately for the fruits and vegetables component. To credit toward the vegetables component, a serving of the salad must contain at least $\frac{1}{8}$ cup vegetables.
- CACFP operators may choose to serve two different vegetables at lunch and supper, rather than a serving of vegetables and a serving of fruits. The substituted vegetable must be at least the same serving size as the fruits component it replaced.

Program requirements for vegetables are based on nutritional standards and the *Dietary Guidelines for Americans*, which identify vegetables as important sources of many key nutrients, including potassium, dietary fiber, folate (folic acid), Vitamin A, and Vitamin C. The following tips can help you to increase the variety of nutrients offered to program participants:

- Include a variety of vegetables each week (for school meal programs, this includes vegetables from each of the vegetable subgroups). The *Dietary Guidelines for Americans* recommend including a variety of vegetables from all the subgroups—dark green; red/orange; beans, peas, and lentils; starchy; and other vegetables.
- Whenever possible, serve vegetables in place of foods high in calories, saturated fats, or sodium. Make sure to keep added fats, sodium, and sugars low when preparing vegetable dishes.
- Increase the vegetables content of mixed dishes, such as offering tacos with black beans, corn, or bell peppers.
- Offer green salads when possible and incorporate vegetables into most meals and snacks.
- In the CACFP and NSLP afterschool snacks, make at least one of the two required components of snack a vegetable or a fruit.
- Incorporate seasonal and locally produced foods into meals.

2 | Vegetables

During menu development, you will decide whether or not to take advantage of flexibility in crediting vegetables and meats/meat alternates toward the required breakfast components. If you include vegetables or meats/meat alternates at breakfast, remember the following:

- Vegetables can be served as an extra food if not being offered as a component of a reimbursable meal, or
- In the SBP and the CACFP, vegetables may credit for some or all of the required fruits component when these guidelines are followed:
 - Equal volume measures of vegetables can be substituted for equal volume measures of fruits.
 - Vegetable juices must be pasteurized, full-strength 100% juice and count toward the limit on juice offered daily or weekly.
- In the SBP, schools may substitute vegetables for fruits.
 - Schools choosing to substitute vegetables for fruits at breakfast one day per school week may offer any vegetable, including a starchy vegetable.
 - If substituting vegetables for fruits at breakfast on two or more days per school week, schools are required to offer vegetables from at least two different subgroups.
 - The vegetable subgroups that schools may choose from include dark green; red/orange; beans, peas, and lentils; starchy; and other vegetables.
 - Vegetable subgroups may be offered on any day of the week and may be repeated or combined with multiple vegetable subgroups.
- In the CACFP, vegetables and fruits are one combined component at breakfast meals. CACFP operators may serve vegetables, fruits, or a combination of both at breakfast.
- Refer to the appropriate program regulatory guidance for further information related to the vegetables requirement.

Substituting Vegetables for Grains in American Samoa, Guam, Hawaii, Puerto Rico, the U.S. Virgin Islands, and Tribal Communities

- All schools, sponsors, institutions, and facilities in American Samoa, Puerto Rico, the Virgin Islands and Tribal Communities can offer any vegetable such as breadfruit, prairie turnips, yams, plantains, or sweet potatoes to meet the grains or breads requirements in the NSLP, SBP, SFSP, and CACFP to address cultural food preferences, product availability, and cost concerns.
- The vegetables served must meet the daily minimum grain quantity required and can be used to meet the whole grain-rich requirement. One-half cup vegetables substitutes for one ounce equivalent grains.
- There is no limit on the amount of times vegetables may be substituted for the grains requirement.
- The vegetables substituting for grains may not also credit as the required vegetable component in the applicable meal pattern.

Crediting of Vegetables

- A serving of cooked vegetable is considered to be drained. If it is a canned, heated vegetable, use listing in Column 4 (Serving Size Per Meal Contribution), that reads “¼ cup heated, drained vegetable.” If it is served unheated, the appropriate listing is “¼ cup drained vegetable.”
- A serving of raw vegetable used in salads containing dressing is shown as “¼ cup raw, (pieces, shredded, chopped) vegetable with dressing.”
- **School meal programs and the CACFP:** raw, leafy greens credit as half the volume served, which is consistent with the *Dietary Guidelines for Americans*. For example, a ½ cup of romaine lettuce contributes ¼ cup toward the dark green vegetable subgroup. Cooked leafy greens such as sautéed spinach are credited by volume served; for example, ½ cup of cooked spinach credits as ½ cup of dark green vegetables.
- **SFSP:** raw leafy greens credit as volume served.



Crediting of Vegetable Concentrates (Tomato Paste and Tomato Puree)

Tomato paste and tomato puree can be credited using the whole food equivalency (volume of tomatoes prior to pureeing) rather than on the actual volume served. All other vegetables and vegetable purees credit based on the finished volume served.

The following examples demonstrate how to credit tomato paste and tomato puree:

How to Use Information on Tomato Paste and Tomato Puree Concentrates

Example Using Pounds of Concentrate

Multiply the number of pounds of concentrate by the creditable ¼ cup servings per pound of concentrate as listed in the FBG.

EXAMPLE: A recipe calls for 4 lb 12 oz (4.75 lb) of tomato paste. The vegetables yield table shows that each pound of tomato paste provides 27.6 creditable servings of vegetable. Thus, $4.75 \times 27.6 = 131.1$ servings. Therefore, the tomato paste in the recipe provides 131.1 creditable ¼ cup servings of vegetable (red/orange vegetable subgroup in school meal programs).

Example Using Cans of Concentrate

Multiply the number of No. 10 cans of concentrate in the recipe by the number of creditable ¼ cup servings provided by one No. 10 can of the concentrate.

EXAMPLE: Two No. 10 cans of tomato puree are used in a recipe. The vegetable yield table shows that one No. 10 can of tomato puree provides 96 creditable ¼ cup servings of vegetable. Thus, $2 \times 96 = 192$. Therefore, two No. 10 cans of tomato puree provide 192 creditable ¼ cup servings of vegetable (red/orange vegetable subgroup in school meal programs).

2 | Vegetables

Yield figures for vegetables are for on-site preparation. They do not allow for losses that may occur in prepared products (both pre-portioned and bulk) during freezing, storage, heating, and serving. Other factors may affect your yields: quality and condition of the food, storage conditions and handling, equipment used in preparation, cooking and holding times, serving utensils, and portion control.



Factors Affecting Yields

Yields of vegetables vary according to the form of the food when purchased. For example:

- ▶ Frozen vegetables usually yield more servings per pound than fresh vegetables since the frozen ones are cleaned, blanched, and ready-to-cook.
- ▶ Reconstituted dehydrated vegetables yield more servings per pound than fresh, frozen, or canned because they gain weight and volume as they absorb water during soaking and cooking. Some dehydrated products continue to expand while cooling.
- ▶ The weight of canned vegetables varies due to different densities of the food. A No. 10 can yields an average of 12 to 13 $\frac{2}{3}$ cups and 96 oz (6 lb) to 117 oz (7 lb 5 oz).

Definitions

Count	The number of whole vegetables contained or packed in a specific container. The higher the count the smaller the size of each vegetable.
Pared	When the outer covering (skin or peel) of a vegetable is removed.
Size	The number of pieces of whole vegetables in 10 pounds of product.
Tempered	Frozen vegetables brought to room temperature; thawed but not heated.
Unpared	When the outer covering (skin or peel) of a vegetable is not removed.

Products That Do Not Meet Requirements

The following products do not contribute to the vegetables component in any meal served under the CNP:

- Snack-type foods made from vegetables, such as potato chips;
- Pickle relish, jam, or jelly;
- Tomato catsup (ketchup) and chili sauce (tomato paste in chili is creditable);
- Home canned products (for food safety reasons); or
- Dehydrated vegetables used for seasoning.

Information Included In This Section

Vegetables entries—fresh, canned, frozen, and dehydrated—are listed alphabetically. Data for canned juices and canned soups are also included in this section.

Vegetables information includes:

- Yield information on common institutional packs, smaller packs, and 1-pound units of many fresh, canned, and frozen vegetables.
- Net weight of contents of the can (including liquid) under the can size in Column 2, except where noted.
- Minimum weight and volume of drained vegetables in Column 6.
- Yields in terms of $\frac{1}{4}$ cup servings, unless noted.
- Contribution to the meal patterns.
- Yield information on juice concentrates, tomato paste, and tomato puree as if reconstituted to full strength.
- Yield information on canned soups that contain at least $\frac{1}{4}$ cup of vegetable per cup of soup.
- Yield information for all vegetables based on volume, not weight. This includes dried or dehydrated vegetables.

2 | Vegetables

Explanation of the Columns

The data on vegetables in the yield tables includes yield information on common types and customary serving sizes of products that you can buy on the market, as well as some USDA Foods products.

Column 1: Food As Purchased, AP

The individual foods are arranged in alphabetical order.

Column 2: Purchase Unit

The purchase unit is specified, for example, 1 can (generally No. 10, No. 2½, or No. 300), 1 pound, or 1 package. You can use data for one purchase unit to determine how much product you need for a specific number of servings.

Column 3: Servings per Purchase Unit, EP (Edible Portion)

This column shows the number of servings of a given size (found in Column 4) from each purchase unit (found in Column 2). Numbers in this column have sometimes been rounded down in order to help ensure enough food for the number of servings.

Column 4: Serving Size per Meal Contribution

The size of a serving is given as a measure and/or weight or number of pieces. In most cases the serving size and contribution to the meal pattern are the same. When they differ, the contribution is stated along with the serving size.

Column 5: Purchase Units for 100 Servings

This column shows the number of purchase units (found in Column 2) you need for 100 servings. Numbers in this column are generally rounded up in order to help ensure enough food is purchased for the required number of servings.

Column 6: Additional Information

This column gives other information to help you calculate the amount of food you need to prepare meals. Column 6 information is not available for every food item.