



4

Grains

Food Buying Guide for Child Nutrition Programs

4 | Grains

Grains Component for the Child Nutrition Programs

All reimbursable meals offered in the National School Lunch Program (NSLP), School Breakfast Program (SBP), Child and Adult Care Food Program (CACFP), and Summer Food Service Program (SFSP) must include a grains food product. A reimbursable snack in the CACFP, SFSP, or the NSLP Afterschool Snack Service must include a creditable grain.

FNS meal pattern regulations establish the minimum serving size(s) of grains required for breakfasts, lunches, suppers, and snacks. Meal pattern charts for each of the Child Nutrition Programs are on pages I-7 through I-13. This section pertains to grains requirements in the NSLP, SBP, and CACFP. Please refer to Appendix E for grains requirements for the SFSP and NSLP Afterschool Snack Service.



Definitions

Bran¹	Bran is the seed husk or outer coating of cereal grains such as wheat, rye, and oats. The bran can be mechanically removed from the flour or meal by sifting or bolting. Please note that bran does not contribute toward the grains component in the NSLP and SBP.
Creditable grains	Creditable grains represents all of the grain ingredients in a product that are creditable towards the grains component; they include whole grains or enriched meal and/or enriched flour.
Enriched	Enriched means that the product conforms to the U.S. Food and Drug Administration’s (FDA) Standard of Identity for enrichment (21 CFR Section 137). The terms “enriched,” “fortified,” or similar terms indicate the addition of one or more vitamins or minerals or protein to a food.
Flour	Flour is the product derived by finely grinding and bolting (sifting) wheat or other grains. Flour may be made from all grains (wheat, rye, corn, etc.).
Germ¹	Germ is the vitamin-rich embryo of the grain kernel. The germ can be separated before milling for use as a cereal or food supplement. Please note that germ does not contribute toward the grains component in the NSLP and SBP.
Ounce equivalents	Ounce equivalents designates the contribution a given serving size makes toward the grains component. One ounce equivalent provides sixteen grams of credible grains.
Primary grain ingredient	Primary grain ingredient is the first grain ingredient listed in the ingredient statement.
Whole grain	Whole grain contains all parts of the grain kernel which includes the bran, germ and endosperm.
Whole grain-rich (WGR)²	Whole grain-rich (WGR) is the term designated by FNS to indicate that the grain components in a product are at least 50 percent whole grain, with the remaining grains being enriched. This term only refers to FNS criteria for meeting the grain requirements for the NSLP, SBP, and CACFP. The term is not permitted for use on product labels, as it is an implied health claim about the fiber content regulated by the FDA and would be in violation for the standards for “rich in fiber.”

¹ Please note this ingredient is only creditable in the CACFP, SFSP, and NSLP Afterschool Snack Service.

² Please refer to Appendix E for Grains/Breads requirements in the SFSP and NSLP Afterschool Snack Service.

4 | Grains

Examples of Foods That Are Creditable Toward the Grains Component

The following types of ingredients are considered creditable grains in Child Nutrition Programs:

- whole grains (i.e. whole wheat, whole wheat meal/flour, brown rice, rolled oats)
- enriched grains (i.e. enriched wheat meal/flour, enriched rice)
- bran or germ (creditable in the CACFP, SFSP and NSLP Afterschool Snack Service only).

Foods that contribute to the grains requirement in all Child Nutrition Programs include the following items when made from above specified ingredients but are not limited to:



Breads, biscuits, bagels, rolls, tortillas, crackers, cereal grains (cooked) such as rice, bulgur, oatmeal, corn grits, wheat berries or couscous

- Must be made from grains that are enriched, whole grain (and/or bran or germ for the CACFP, SFSP, and NSLP Afterschool Snack Service), or meet the whole grain-rich criteria: a blend of whole grain meal and/or flour and enriched meal and/or flour of which at least 50 percent is whole grain with remaining grains, if any, being enriched.

Ready-to-eat (RTE) breakfast cereals

- If the product includes enriched ingredients, or the product itself is labeled as “Enriched,” it must meet the Food and Drug Administration’s standards of identity for enrichment (12 CFR Section 137).
- In the NSLP/SBP, RTE cereals must list a whole grain as the first ingredient and be fortified. If the cereal is 100 percent whole grain, fortification is not required.
- All breakfast cereals served in the CACFP must contain no more than 6 grams of sugar per dry ounce.

Cereals or bread products that are used as an ingredient in another menu item such as crispy rice treats, cereal bars, oatmeal cookies, or breading on fish or poultry

- Must be made from grains that are enriched, whole grain, or meet the whole grain-rich criteria: a blend of whole grain meal and/or enriched flour and enriched meal and/or enriched flour of which at least 50 percent is whole grain with remaining grains, if any, being enriched.

See above requirements for RTE cereals in the NSLP, SBP, and CACFP.

- No more than 2.0 oz eq grains served per week in the NSLP may be in the form of a grain-based dessert.
- Grain-based desserts do not count towards the grains component in the CACFP meal pattern requirements.

Macaroni, pasta, noodle products (cooked)

- Must be made from grains that are enriched, whole grain, or that meet the whole grain-rich criteria: made from a blend of whole grain meal and/or enriched flour and enriched meal and/or enriched flour of which at least 50 percent is whole grain with remaining grains, if any, being enriched.

- The NSLP and SFSP regulations allow enriched macaroni products that have been fortified with protein to be counted toward either the grains or meats/meat alternates requirements, but not toward both meal components simultaneously.
 - In the NSLP, these products may be counted toward meeting part of the meats/meat alternates requirement only, unless the school program operator has obtained appropriate State agency approval (approved flexibility for whole grain-rich products). However, enriched macaroni products that have been fortified with protein cannot count toward the grains or meats/meat alternates meal components simultaneously.
 - The CACFP regulations allow enriched macaroni products that have been fortified with protein to be counted toward the grains requirement only.
 - Pasta products made with bean flours do not count toward the grain requirements. Please see Appendix C for more information on products made with bean flour and how they may contribute to Child Nutrition Program meal pattern requirements.

Sweet food products such as toaster pastries, coffee cake, doughnuts, sweet rolls, pie crusts, cookies, cakes, etc.

- Must be made from grains that are enriched, whole grain or meet the whole grain-rich criteria: a blend of whole grain meal and/or enriched flour and enriched meal and/or enriched flour of which at least 50 percent is whole grain with remaining grains, if any, being enriched.
- No more than 2.0 oz eq grains served per week in the NSLP may be in the form of a grain-based dessert.
- Grain-based desserts do not count towards the grains component in the CACFP meal pattern requirements.

Non-sweet snack food products such as hard pretzels, hard bread sticks, and tortilla chips

- Non-sweet snack food products such as hard pretzels, hard bread sticks, and tortilla chips must be made from grains that are enriched, whole grain or meet the whole grain-rich criteria: a blend of whole grain meal and/or enriched flour and enriched meal and/or enriched flour of which at least 50 percent is whole grain with remaining grains, if any, being enriched.

See pages 4-6 for more information on grain requirements in each CN program.

- *For the NSLP and SBP, all grains offered must meet the whole grain-rich criteria. See pages 4-7 through 4-8 for more information on the criteria. (For guidance related to flexibilities in the meal patterns, please contact your State agency (See page I-6)).*
- *Bran and germ are creditable in CACFP, SFSP, and NSLP Afterschool Snack Service only.*

4 | Grains

Criteria for Determining Acceptable Grain Items

The following criteria are to be used as a basis for crediting items to meet the grains requirement in the Child Nutrition Programs.

- Creditable grain items are made from grains that are enriched or whole grain (and/or bran or germ for the CACFP, SFSP, and NSLP Afterschool Snack Service only)
- Some enriched grain products that are being blended with whole grain ingredients must meet the Food and Drug Administration's Standards of Identity (21 CFR Part 136, Part 137, Part 139) for enriched bread, macaroni and noodle products, rice, or cornmeal.

School Meal Programs

- Ounce equivalents (oz eq) are used to determine the amount of creditable grains.
- One-quarter ounce equivalent (0.25 oz eq) is the smallest amount allowable to be credited toward the grains requirement as specified in program regulations.
- All grains must meet the whole grain-rich criteria: a blend of whole grain meal and/or whole grain flour and enriched meal and/or enriched flour of which at least 50 percent is whole grain, with the remaining grains, if any, being enriched. For guidance related to flexibilities in the meal patterns, please contact your State agency (see page I-6).
- Bran and germ do not contribute toward the grains component in the NSLP and SBP (except for the NSLP Afterschool Snack Service). Please refer to Appendix E for Grains requirements in the SFSP and NSLP Afterschool Snack Service.
- Up to 2.0 oz eq grains per week may be credited in the form of a grain-based dessert.

CACFP and Preschool

- Ounce equivalents (oz eq) are used to determine the amount of creditable grains (starting October 1, 2019). Prior to October 1, 2019, the current criteria for grains/breads servings may be used. See Appendix E for more information.
- One-quarter ounce equivalent (0.25 oz eq) is the smallest amount allowable to be credited toward the grains requirement as specified in program regulations.
- Grain items must be made from grains that are enriched or whole grain, or made from whole grain or enriched meal and/or flour, bran, or germ.
- At least one serving of grains per day must be whole grain-rich.
- Grain-based desserts cannot be credited towards the grains component.
- Breakfast cereals must contain no more than 6 grams of sugar per dry ounce.

SFSP and NSLP Afterschool Snack Service (except Preschool)

- Grain items are credited in servings. See program guidance and Appendix E for further information.
- One-quarter serving is the smallest amount allowable to be credited toward the grains requirement as specified in program regulations.
- Grain items must be made from grains that are enriched or whole grain, or made from whole grain or enriched meal, and/or flour, bran, or germ.

Please note that while the SFSP and NSLP Afterschool Snack Service are not required to serve grain items that meet the whole grain-rich criteria; however, regularly offering items that meet these standards will help children develop healthy eating habits.

Also, the SFSP and NSLP Afterschool Snack Service are not required to credit grains using ounce equivalents. However, ounce equivalents contain a slightly higher amount of creditable grains than grain servings. Therefore, ounce equivalents may be used to calculate grain servings in the SFSP and NSLP Afterschool Snack Service if the Child Nutrition program operator wishes to do so. See Appendix E for more information.

What Foods Meet the Whole Grain-Rich Criteria?

The NSLP, SBP and CACFP meal patterns require specific amounts of grain foods that meet the whole grain-rich criteria to be served over the course of the week.

These foods must contain 100 percent whole grain or have a blend of whole grain meal and/or enriched flour and enriched meal and/or enriched flour of which at least 50 percent is whole grain. The remaining grains, if any, must be enriched.

Child Nutrition Program operators can ensure at least one of the following items is met to evaluate if a grain product meets the whole grain-rich criteria:

- A.** The product ingredient declaration lists whole grain first, specifically:
 - Non-mixed dishes (e.g., breads, cereals): Whole grains are the primary ingredient by weight (a whole grain is first on the ingredient list with an exception for water). Products in which whole grain content comes from multiple ingredients can meet the whole grain-rich criteria when all whole grains combined are the primary ingredient by weight. Proper documentation from the manufacturer or a standardized recipe is required.
 - Mixed dishes (e.g., pizza, corn dogs): Whole grains are the primary grain ingredient by weight (a whole grain is the first grain ingredient in the list of grains). For recipes, the weights of grain ingredients are used to determine whether the total weight of whole grains is greater than or equal to the total weight of grains that are not whole grain. Proper documentation from the manufacturer or a standardized recipe is required.
- B.** At least half of the grains in the product are whole grain. This means there are at least 8.0 grams or more of whole grains per oz eq for food items located in Groups A – G of Exhibit A (listed in the ounce equivalency column).
- C.** The product includes one of the following Food and Drug Administration (FDA) approved whole grain health claims on its packaging:

“Diets rich in whole grain foods and other plant foods and low in total fat, saturated fat, and cholesterol, may reduce the risk of heart disease and certain cancers.” or “Diets rich in whole grain foods and other plant foods, and low in saturated fat and cholesterol, may help reduce the risk of heart disease.”

For the NSLP and SBP, any refined grains included in the product must be enriched, in addition to having a FDA whole grain health claim. To demonstrate compliance with the whole grain-rich criteria in the CACFP, the FDA whole grain health claim is sufficient documentation.

Flour Blends

Some products include flour blends listed in the ingredient declaration, for example, ingredients: flour blend (whole-wheat flour, enriched flour), sugar, cinnamon, etc. When trying to determine if whole grains are the primary ingredient by weight for these products, Child Nutrition Program operators will need to know either that the whole grain content is at least 8.0 grams per oz eq or that the weight of the whole grain is greater than the first ingredient listed after the flour blend such as sugar in the example. Bran and germ ingredients are not creditable in School Meal Programs except for the NSLP snack service. Non-creditable grain ingredients in products at very low levels used as processing aids are allowable at levels less than 2-percent in the NSLP and SBP.

4 | Grains

Manufacturers producing qualifying products (meat/meat alternate entrées containing grains) may apply for a Child Nutrition (CN) Label to indicate the number of oz eq grains that meet the whole grain-rich criteria. The term “oz eq grains” on the CN Label indicates that the product meets the whole grain-rich criteria.

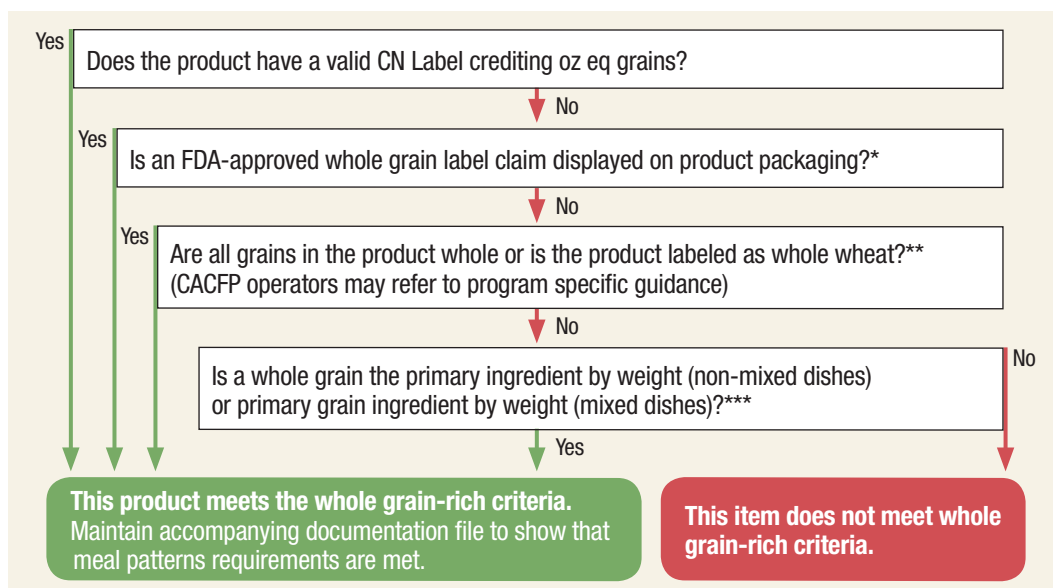
While ounce equivalents will not be used to determine the quantity of creditable grains in the CACFP until October 1, 2019, grain foods with a CN Label indicating the number of ounce equivalents that meet the whole grain-rich criteria do contribute to the CACFP meal pattern requirements as declared on the CN Label. This is because an ounce equivalent is slightly heavier (16 grams of grains) than a serving size in the CACFP (14.75 grams of grains). Therefore, the ounce equivalent meets the minimum quantity for the grain component in the CACFP, SFSP, and NSLP Afterschool Snack Service. For more information on the CN Labeling Program, see Appendix C.

Does My Product Meet the Whole Grain-Rich Criteria?

By using the following flow chart, you can evaluate a product to determine if it meets the whole grain-rich criteria.

Once you determine that a grain product is creditable, it is important to read through Section III “Criteria for Determining Serving Sizes.” This section explains when to use Exhibit A (see pages 4-13 through 4-14), or calculate grams of creditable grains (see pages 4-11 through 4-12) to determine the grain contribution.

The following criteria are to be used as a basis for crediting items to meet the grains requirement in the Child Nutrition Programs. Please note, products must include at least 0.25 oz eq grains.



* For the NSLP and SBP, any refined grains included in the product must be enriched, in addition to having a FDA whole grain health claim. To demonstrate compliance with the whole grain-rich criteria in the CACFP, the FDA whole grain health claim is sufficient documentation.

** In School Meal Programs, non-creditable ingredients should be limited to no more than 0.24 oz eq (3.99 grams for Groups A-G or 6.99 grams for Groups H or I of the Exhibit A). All other refined grains must be enriched. The CACFP operators may refer to appropriate regulatory guidance for additional information.

*** At least half of the grains in the product must be whole grains, with any remaining grains being enriched. When determining this in grams, at least 8 grams per oz should be whole grain for items located in Groups A-G of Exhibit A.

Criteria for Determining Ounce Equivalents

All grain products served in the NSLP/SBP must be credited based on ounce equivalent (oz eq) standards. Beginning October 1, 2019, the CACFP centers and day care homes must credit grains based on ounce equivalent (oz eq) standards. This applies to various products as follows:

- Baked goods (breads, biscuits, bagels, etc.): 16 grams of creditable grain ingredients provide 1 oz eq credit.
- Cereal grains (oatmeal, pasta, brown rice, etc.): 28 grams (approximately 1.0 ounce by weight) of dry product OR 1/2 cup cooked cereal, pasta, rice, etc. provides 1 oz eq credit.
- Ready-to-eat (RTE) breakfast cereal: 28 grams or 1.0 ounce of product provides 1 oz eq credit. Ounce equivalent volumes are 1 cup flakes or rounds, 1.25 cups puffed cereal, and 1/4 cup granola.

There are two different ways to determine the amount required to provide one oz eq grains: by using the weights listed in Exhibit A: Grain Requirement For Child Nutrition Programs or by calculating the grams of creditable grains.

A. Determining Contribution Based on Exhibit A

The weight needed to provide 1.0 oz eq grains for commonly available food products can be determined using Exhibit A (see pages 4-13 through 4-14). The wide variety of prepared grain products listed in Exhibit A are grouped based on their average grain content. Food types having similar concentrations of creditable grains are grouped together. Each group in Exhibit A provides the minimum weight required to supply one oz eq grains.

Exhibit A, Groups A-G

- For the types of food products listed in Groups A-G, one oz eq grains provide at least 16.0 grams of creditable meal and/or flour. The weights given in Exhibit A, Groups A-G, may be used for grain products that are either commercially purchased or prepared on-site.
- Grain products listed in Groups A-G should provide the minimum of 16.0 grams of creditable grains for 1.0 oz eq. Obtain manufacturer's documentation if it is unclear that the item is creditable towards program requirements. Once documentation is obtained, calculate the serving size based on the grams of creditable grains as shown below in section B.
- Exhibit A, Groups A-G also provides the weight needed for 1/4, 1/2, and 3/4 of an oz eq in addition to the weight needed for one oz eq grains.

Exhibit A, Groups H & I

- When items in Groups H and I are served as cooked or cold breakfast cereals (such as cooked oatmeal, cooked millet, cooked rice or cold cereal) or cooked pasta, the weights OR volumes listed in Exhibit A, groups H or I must be used. For example, the serving size required for 1.0 oz eq of cooked oatmeal made from dry oats is 1/2 cup cooked or 28 grams dry oats.
- Some of the food products in Group H, such as dry oatmeal or cornmeal, may be used as a grain ingredient in a recipe as well as a cooked cereal. When the cereal grain items listed in Group H are used as an ingredient in a recipe such as oatmeal bread or in a cereal bar (in contrast to being used as a breakfast cereal) do not use the amounts listed in Group H. In this case, the grain contribution should be determined using the weights given in Groups A-G of Exhibit A corresponding to the appropriate food group,

4 | Grains

or calculated using the grams of creditable grain per portion (16 grams of the creditable grains provide 1.0 oz eq grains).

- For example, oatmeal bread may be credited in one of two ways: 1) using the finished serving weight in Group B of Exhibit A, or 2) using the grain contribution based on the standard 16 grams of creditable grains per oz eq.

B. Determining Serving Sizes Based on Creditable Grain Content

There are several situations where creditable grains would be used to calculate the serving size instead of using the serving weights given in Exhibit A. Some of these situations are:

1) a manufacturer's formula demonstrates that a product provides a higher amount of creditable grains than the standard grams per oz eq (>16g for items in groups A-G or >28g for groups H and I) of Exhibit A; or 2) you are using a recipe and you choose to calculate the serving size based on grams of creditable grains instead of using Exhibit A.

In these cases, the Child Nutrition Program operator will need to obtain or maintain documentation (such as documentation from manufacturer or recipe) showing the weight of creditable grain(s) per portion of the grain item. This will be easy for grain items prepared on-site, since the exact weight of the creditable grain ingredients can be documented using the recipe. For purchased products, the manufacturer will need to provide the required documentation showing the weight of creditable grain(s) per portion. Manufacturers may wish to provide this information using a product formulation statement (PFS) to protect their proprietary information. Sample PFS templates are located on the CN Labeling website at <https://www.fns.usda.gov/cnlabeling/food-manufacturersindustry>. If you have a situation where documentation is required, but the manufacturer cannot supply the documentation, that product is not creditable toward the reimbursable meal.

When the exact or minimum amount of creditable grains can be documented, the grain contribution for items listed in Groups A-G of Exhibit A may be calculated using 16.0 grams of creditable grains as 1.0 oz eq.

There are three steps to determine how many oz eq grains a recipe yields when calculating based on the grams of creditable grain:

1. Divide the total grams of creditable grains in the recipe by the number of portions the recipe yields: (Note: 1 lb = 453.6 grams). One "portion" is the amount of the food product you plan to serve to each program participant to meet the daily and/or weekly grains requirements. One "portion" is not necessarily equivalent to 1.0 oz eq grains.

Total grams of creditable grains ÷ number of portions the recipe yields

This calculation gives you the total grams of creditable grains contained in one portion of your recipe.

2. Divide the total grams of creditable grains in one portion (the answer from the calculation in step 1) by 16.0 grams: (note: 16.0 grams of creditable grains = one full oz eq)

$$\frac{\text{Total grams of creditable grains in ONE portion}}{16.0 \text{ grams}}$$

= the number of oz eq grains per portion

3. Round down to the nearest 0.25 oz eq. To count as one full oz eq, the product must contain no less than 16.0 grams of creditable meal and/or flour.

Worksheet for Calculating Grains Contribution Using Grams of Creditable Grains

Instructions:

1. On the worksheet (see page 4-12), list each creditable grain ingredient in the recipe. Creditable grains include, enriched or whole grain meal and/or flour (bran and germ for the CACFP and SFSP only).
2. Fill in the quantity (for example: cups, pounds, kilograms, ounces, grams, etc.) of each creditable ingredient in the recipe.
3. Convert the amount of each creditable ingredient in the recipe to grams. Use the chart below for commonly used conversions.

Conversions

Number of pounds of ingredient	x 453.6 grams
Number of ounces of ingredient	x 28.35 grams
Number of cups of enriched white flour	x 125 grams
Number of cups of regular rolled oats	x 81 grams
Number of cups of quick-cooking oats	x 81 grams
Number of cups of degermed, enriched cornmeal	x 138 grams
Number of cups of wheat bran	x 58 grams
Number of cups of wheat germ	x 115 grams
Number of cups of whole wheat flour	x 120 grams

4. Add the grams for each creditable grain ingredient to determine the total grams of creditable grains in the recipe.
5. Divide the total grams of creditable grains in the recipe by the number of portions in the recipe to determine the number of grams of creditable grains per portion of food product.
6. Divide the number of grams of creditable grains per portion by 16.0 grams (reference amount of enriched or whole grain meal and/or flour, in one oz eq grains).
7. Round down to the nearest 0.25 oz eq grains.

Please note, bran and germ do not contribute toward the grains component in the NSLP and SBP.

4 | Grains

Worksheet

1. Creditable Grain Ingredient	2. Quantity (pounds, ounces, cups)	3. Convert to Grams (reference conversion chart)	Grams
		X	=
		X	=
		X	=
		X	=
4. Total Grams			=

5. Total grams divided by number of portions in recipe.

$$\frac{\text{Total grams creditable grains from Step 4}}{\text{Number of portions per recipe}} = \boxed{} \text{ Number of grams creditable grains per portion}$$

6. Divide the number of grams per portion by 16.0.

$$\frac{\text{Number of grams credible grains per portion from Step 5}}{16.0} = \boxed{} \text{ oz eq grains}$$

7. Round down to the nearest 0.25 oz eq grains.

$$\text{oz eq from Step 6} \boxed{} = \boxed{} \text{ oz eq grains}$$

Exhibit A: Grain Requirements for Child Nutrition Programs

The following Chart titled “Exhibit A: Grain Requirements for Child Nutrition Programs” provides a general guideline for crediting prepared grain items. Once you have determined that a food product meets the whole grain-rich criteria (see page 4-8), find the Group on the chart containing the name of the food product. Read the minimum serving size required for that group on the right-hand side of the chart.

Grain Requirements For Child Nutrition Programs^{1,2}

Food Products per Group	Ounce Equivalent (oz eq)	Minimum Serving Size
Group A		
Bread type coating	1 oz eq = 22 gm or 0.8 oz	1 serving = 20 gm or 0.7 oz
Bread sticks (hard)	3/4 oz eq = 17 gm or 0.6 oz	3/4 serving = 15 gm or 0.5 oz
Chow Mein noodles	1/2 oz eq = 11 gm or 0.4 oz	1/2 serving = 10 gm or 0.4 oz
Savory Crackers (saltines and snack crackers)	1/4 oz eq = 6 gm or 0.2 oz	1/4 serving = 5 gm or 0.2 oz
Croutons		
Pretzels (hard)		
Stuffing (dry) <i>Note: weights apply to bread in stuffing</i>		
Group B		
Bagels	1 oz eq = 28 gm or 1.0 oz	1 serving = 25 gm or 0.9 oz
Batter type coating	3/4 oz eq = 21 gm or 0.75 oz	3/4 serving = 19 gm or 0.7 oz
Biscuits	1/2 oz eq = 14 gm or 0.5 oz	1/2 serving = 13 gm or 0.5 oz
Breads - all (for example sliced, French, Italian)	1/4 oz eq = 7 gm or 0.25	1/4 serving = 6 gm or 0.2 oz
Buns (hamburger and hot dog)		
Sweet Crackers ⁵ (graham crackers - all shapes, animal crackers)		
Egg roll skins		
English muffins		
Pita bread		
Pizza crust		
Pretzels (soft)		
Rolls		
Tortillas		
Tortilla chips		
Taco shells		
Group C		
Cookies ³ (plain - includes vanilla wafers)	1 oz eq = 34 gm or 1.2 oz	1 serving = 31 gm or 1.1 oz
Cornbread	3/4 oz eq = 26 gm or 0.9 oz	3/4 serving = 23 gm or 0.8 oz
Corn muffins	1/2 oz eq = 17 gm or 0.6 oz	1/2 serving = 16 gm or 0.6 oz
Croissants	1/4 oz eq = 9 gm or 0.3 oz	1/4 serving = 8 gm or 0.3 oz
Pancakes		
Pie crust (dessert pies ³ , cobbler ³ , fruit turnovers ⁴ , and meats/meat alternate pies)		
Waffles		
Group D		
Doughnuts ⁴ (cake and yeast raised, unfrosted)	1 oz eq = 55 gm or 2.0 oz	1 serving = 50 gm or 1.8 oz
Cereal bars, breakfast bars, granola bars ⁴ (plain)	3/4 oz eq = 42 gm or 1.5 oz	3/4 serving = 38 gm or 1.3 oz
Muffins (all, except corn)	1/2 oz eq = 28 gm or 1.0 oz	1/2 serving = 25 gm or 0.9 oz
Sweet roll ⁴ (unfrosted)	1/4 oz eq = 14 gm or 0.5 oz	1/4 serving = 13 gm or 0.5 oz
Toaster pastry ⁴ (unfrosted)		

Chart continues on next page

4 Grains

Food Products per Group	Ounce Equivalent (oz eq)	Minimum Serving Size
Group E		
Cereal bars, breakfast bars, granola bars ⁴ (with nuts, dried fruit, and/or chocolate pieces) Cookies ³ (with nuts, raisins, chocolate pieces and/or fruit purees) Doughnuts ⁴ (cake and yeast raised, frosted or glazed) French toast Sweet rolls ⁴ (frosted) Toaster pastry ⁴ (frosted)	1 oz eq = 69 gm or 2.4 oz 3/4 oz eq = 52 gm or 1.8 oz 1/2 oz eq = 35 gm or 1.2 oz 1/4 oz eq = 18 gm or 0.6 oz	1 serving = 63 gm or 2.2 oz 3/4 serving = 47 gm or 1.7 oz 1/2 serving = 31 gm or 1.1 oz 1/4 serving = 16 gm or 0.6 oz
Group F		
Cake ³ (plain, unfrosted) Coffee cake ⁴	1 oz eq = 82 gm or 2.9 oz 3/4 oz eq = 62 gm or 2.2 oz 1/2 oz eq = 41 gm or 1.5 oz 1/4 oz eq = 21 gm or 0.7 oz	1 serving = 75 gm or 2.7 oz 3/4 serving = 56 gm or 2 oz 1/2 serving = 38 gm or 1.3 oz 1/4 serving = 19 gm or 0.7 oz
Group G		
Brownies ³ (plain) Cake ³ (all varieties, frosted)	1 oz eq = 125 gm or 4.4 oz 3/4 oz eq = 94 gm or 3.3 oz 1/2 oz eq = 63 gm or 2.2 oz 1/4 oz eq = 32 gm or 1.1 oz	1 serving = 115 gm or 4 oz 3/4 serving = 86 gm or 3 oz 1/2 serving = 58 gm or 2 oz 1/4 serving = 29 gm or 1 oz
Group H		
Cereal Grains (barley, quinoa, etc.) Breakfast cereals (cooked) ^{6,7} Bulgur or cracked wheat Macaroni (all shapes) Noodles (all varieties) Pasta (all shapes) Ravioli (noodle only) Rice	1 oz eq = 1/2 cup cooked or 1 ounce (28 gm) dry	1 serving = 1/2 cup cooked or 25 gm dry
Group I		
Ready to eat breakfast cereal (cold, dry) ^{6,7}	1 oz eq = 1 cup or 1 ounce for flakes and rounds 1 oz eq = 1.25 cups or 1 ounce for puffed cereal 1 oz eq = 1/4 cup or 1 ounce for granola	1 serving = 3/4 cup or 1 oz, whichever is less

3 In the NSLP and SBP (grades K-12), all grains served must meet whole grain-rich criteria. For information on flexibilities, please contact your State agency. For all other Child Nutrition Programs, grains are whole grain or enriched or made with enriched or whole grain meal and/or flour, bran, and/or germ. Under the CACFP child and adult meal patterns, and in the NSLP/SBP preschool meals, at least one grain serving per day must meet whole grain-rich criteria.

4 For the NSLP and SBP (grades K-12), grain quantities are determined using ounce equivalents (oz eq). All other Child Nutrition Programs determine grain quantities using grains/bread servings. Beginning Oct. 1, 2019, grain quantities in the CACFP and NSLP/SBP infant and preschool meals will be determined using oz eq. Some of the following grains may contain more sugar, salt, and/or fat than others. This should be a consideration when deciding how often to serve them.

5 Allowed in the NSLP (up to 2.0 oz eq grain-based dessert per week in grades K-12) as specified in §210.10 and at snack service in the SFSP. Not allowable in the SBP. Considered a grain-based dessert and cannot count towards the grain component in the CACFP or NSLP/SBP infant and preschool meals beginning October 1, 2017, as specified in §§226.20(a)(4) and 210.10.

6 Allowable in the NSLP (up to 2.0 oz eq grain-based dessert per week for grades K-12) as specified in §210.10. May count towards the grain component in the SBP (grades K-12) and at snack and breakfast meals in the SFSP. Considered a grain-based dessert and cannot count towards the grain component in the CACFP and NSLP/SBP infant and preschool meals beginning October 1, 2017, as specified in §§226.20(a)(4) and 210.10.

7 Allowed in the NSLP (up to 2.0 oz eq grain-based dessert per week in grades K-12) as specified in §210.10. May count towards the grain component in the SBP (grades K-12), CACFP, NSLP/SBP infant and preschool meals, and SFSP.

8 Refer to program regulations for the appropriate serving size for supplements served to children aged 1 through 5 in the NSLP; breakfast served in the SBP, and meals served to children ages 1 through 5 and adult participants in the CACFP. Breakfast cereals are traditionally served as a breakfast menu item but may be served in meals other than breakfast.

9 In the NSLP and SBP, cereals must list a whole grain as the first ingredient and be fortified, or if the cereal is 100 percent whole grain, fortification is not required. For the CACFP and SFSP, cereals must be whole grain, whole grain-rich, enriched, or fortified; cereals served in the CACFP and NSLP/SBP infant and preschool meals must contain no more than 6 grams of sugar per dry ounce.

Instructions for Using Yield Data

The data for grains in the yield table includes yield information on common types and customary portion sizes of products that you can buy on the market. All grains served must meet program requirements.

Explanation of Columns

The approximate weight of an oz eq of grains is given in the table.

Column 1: Food as Purchased, AP

In general, foods are arranged in alphabetical order. The Group number is listed for each product. For additional information on these groups, see Exhibit A (pages 4-13 through 4-14).

Column 2: Purchase Unit

The purchase unit for grain items is generally by the pound or, for cold dry cereals, a package. You can use data for one purchase unit to determine how much of the item you need for the number of people you serve.

Column 3: Servings per Purchase Unit, EP

This column shows the number of oz eq obtained from each purchase unit. Numbers in this column are often rounded down in order to help ensure enough food for the number of servings.

Column 4: Serving Size per Meal Contribution

The size of an oz eq is expressed in weight and/or volume.

Column 5: Purchase Units for 100 Servings

This column shows the number of purchase units needed for 100 servings. Numbers in this column are generally rounded up in order to help ensure enough food for the number of servings.

Column 6: Additional Yield Information

This column gives other information to help you calculate the amount of food you need to prepare meals. For example, the number of cups you will get from one pound of food as purchased is shown for many grains items.