

Calculation Methods for Grains/Breads Servings for the Summer Food Service Meal Patterns

This guidance applies to meals and snacks served in the U.S. Department of Agriculture's (USDA) Summer Food Service Program (SFSP). For information on the SFSP meal patterns and the grains/breads component, visit the "[Meal Patterns](#)" section of the Connecticut State Department of Education's (CSDE) SFSP webpage and refer to the CSDE's resource, [Requirements for the Grains/Breads Component of the Summer Food Service Program Meal Patterns](#). For information on the crediting requirements, visit the CSDE's [Crediting Foods in the Summer Food Service Program](#) webpage and [Crediting Documentation for the Child Nutrition Programs](#) webpage.



Contents

Overview of Crediting Requirements for Grains/Breads	2
Overview of Grains/Breads Servings.....	2
Method 1: Weights or Volumes (USDA's Exhibit A Chart)	3
Using method 1 for commercial products	4
Using method 1 for foods made from scratch	5
Method 2: Creditable Grains	5
Using method 2 for foods made from scratch	6
When Method 2 is Required for Commercial Products	6
Storing crediting documentation	7
Choosing a Calculation Method	8
Sample Calculations for Commercial Products in Group A-G.....	9
Example 1: Using method 1 for commercial grain products in groups A-G	10
Example 2: Using method 2 for commercial grain products in groups A-G	11
Sample Calculations for Commercial Products in Group H	12
Example 3: Using method 1 for commercial grain products in group H.....	13
Example 4: Using method 2 for commercial grain products in group H.....	14
Sample Calculations for Foods Made from Scratch.....	15
Method 2 calculation for recipes listing the weight of grain ingredients	16
Example 5: Using method 2 for recipes listing the weight of grain ingredients	17
Method 2 calculation for recipes listing the volume of grain ingredients	19
Table 1. Weights of 1 cup of commonly used grain ingredients	20
Example 6: Using method 2 for recipes listing the volume of grain ingredients	23
Resources.....	25

Calculation Methods for Grains/Breads Servings for the Summer Food Service Meal Patterns

Overview of Crediting Requirements for Grains/Breads

To credit as the grains/breads component, commercial grain products and foods made from scratch must be made with creditable grains. Creditable grains include whole grains, enriched grains, bran (such as oat bran, wheat bran, corn bran, rice bran, and rye bran), and germ (such as wheat germ). Bran and germ credit the same as enriched grains.

Creditable grain foods include commercial grain products and foods made from scratch that are whole grain-rich (WGR) or enriched. Creditable cooked and ready-to-eat (RTE) breakfast cereals include products that are WGR, enriched, or fortified.

For guidance on identifying creditable grains, refer to the Connecticut State Department of Education's (CSDE) resources, [Crediting Whole Grains in the Summer Food Service Program](#), [Crediting Enriched Grains in the Summer Food Service Program](#), and [Crediting Breakfast Cereals in the Summer Food Service Program](#). Training on the crediting requirements for the grains/breads component is available in the CSDE's Summer Meals annual training module, [Crediting Foods in the Summer Food Service Program Meal Patterns Part 4: Grains/Breads Component](#).

Overview of Grains/Breads Servings

The required quantities for the grains/breads component are in servings. The minimum creditable amount is $\frac{1}{4}$ serving.

The USDA allows two methods for determining the grains/breads servings of creditable commercial grain products and recipes for food made from scratch. Before determining the serving, SFSP sponsors should check that the commercial grain product or recipe is WGR or enriched.

- Method 1 (weight or volume) is used for commercial grain products and may also be used for recipes that indicate the weight of the prepared (cooked) serving.
- Method 2 (creditable grains) is used for recipes and may also be used for commercial grain products that have a product formulation statement (PFS) indicating the weight of creditable grains per serving.

SFSP sponsors may use either method but must document how the crediting information is determined for each grain product and recipe. Method 2 must be used for certain commercial grain products. For more information, refer to [“Choosing a Calculation Method”](#) and [“When Method 2 is Required for Commercial Products”](#) in this document.

Calculation Methods for Grains/Breads Servings for the Summer Food Service Meal Patterns

These methods are not required for commercial products with a Child Nutrition (CN) label. CN-labeled products credit toward the grains/breads component based on the stated crediting information for grain ounce equivalents (oz eq).

Grain oz eq are required in the meal patterns for the other USDA Child Nutrition Programs and are slightly larger than grains/breads servings.

For more information on CN labels, refer to the CSDE's resource, [Using Child Nutrition \(CN\) Labels in the Summer Food Service Program](#), and visit the "[Child Nutrition Labels](#)" section of the CSDE's Crediting Documentation for the Child Nutrition Programs webpage

Method 1: Weights or Volumes (USDA's Exhibit A Chart)

Method 1 uses the USDA's [Exhibit A: Grain Requirements for Child Nutrition Programs](#) chart to determine the required weight (groups A-G) or volume (groups H-I) for the grain group where the product or recipe belongs. The CSDE's resource, [Servings for Grains/Breads in the Summer Food Service Program](#), indicates the applicable Exhibit A quantities that apply to the SFSP meal patterns.

This method is used for commercial grain products and may also be used for recipes if the menu planner knows the weight (grams or ounces) of the prepared (cooked) serving. Some commercial grain products require method 2 and the SFSP SPONSOR must obtain a PFS (refer to "[When Method 2 is Required for Commercial Products](#)" in this document).

The amount of a creditable grain food that provides 1 serving varies because different types of foods contain different amounts of creditable grains. For example, to credit as one serving of the grains/breads component, a roll (group B) must weigh 25 grams or 0.9 ounce, a corn muffin (group C) must weigh 31 grams or 1.1 ounces, and a blueberry muffin (Group D) must weigh 50 grams or 1.8 ounces.

- **Groups A-G (baked goods)** include foods like crackers, breads, rolls, taco shells, muffins, waffles, pancakes, and grain-based desserts, e.g., cookies, cake, granola bars, and pastries. The amount of a food that provides one serving of the grains/breads component ranges from 20 grams or 0.7 ounce for foods in group A to 115 grams or 4 ounces for foods in group G.

Calculation Methods for Grains/Breads Servings for the Summer Food Service Meal Patterns

- **Group H (cereal grains)** includes foods like pasta, cooked breakfast cereals, and other cereal grains, e.g., amaranth, barley, buckwheat, cornmeal, corn grits, farina, kasha, millet, oats, quinoa, wheat berries, and rolled wheat. These foods require $\frac{1}{2}$ cup cooked or 25 grams dry to credit as one serving of the grains/breads component. Cereal grains typically credit based on the cooked serving, but menu planners may choose to credit cereal grains using the dry uncooked weight. Dry cereal grains used as an ingredient in a recipe (such as rolled oats in bread) require 14.75 grams of creditable grains to credit as 1 serving of the grains/breads component. For guidance on crediting cooked breakfast cereals, refer to the CSDE's resource, [Crediting Breakfast Cereals in the Summer Food Service Program](#).
- **Group I (RTE breakfast cereals)** includes cold breakfast cereals such as puffed cereals, round or flaked cereals, and granola. These foods require 1 ounce (28 grams) to credit as 1 serving of the grains/breads component. A 1-ounce serving equals 1 cup of flaked or round cereal, $1\frac{1}{4}$ cups of puffed cereal, and $\frac{1}{4}$ cup of granola. For guidance on crediting RTE breakfast cereals, refer to the CSDE's resource, [Crediting Breakfast Cereals in the Summer Food Service Program](#).

Using method 1 for commercial products

The product's Nutrition Facts label or PFS must indicate the weight (ounces or grams) of the manufacturer's serving. The tools below help menu planners determine the grains/breads servings of creditable commercial grain products.

- **USDA's [Exhibit A Grains Tool](#):** This online tool of the USDA's [Food Buying Guide for Child Nutrition Programs](#) (FBG) determines the grains/breads servings of commercial grain products. For more information, refer to the USDA's webinar, [How to Maximize the Exhibit A Grains Tool](#).
- **CSDE's resource for using the Exhibit A Grain Chart:** The CSDE's resource, [How to Use the Grains/Breads Servings Chart for the Summer Food Service Program](#), reviews the steps for using the Exhibit A quantities to determine the meal pattern contribution of three types of commercial products and recipes. These include grain menu items in groups A-G that contain multiple small pieces per serving (e.g., crackers, hard pretzels, and animal crackers), multiple large pieces per serving (e.g., pancakes, slices of bread, and waffles), and one piece per serving (e.g., muffins, bagels, and rolls).

Calculation Methods for Grains/Breads Servings for the Summer Food Service Meal Patterns

Using method 1 for foods made from scratch

SFSP sponsors must have a recipe on file that indicates the weight of the prepared (cooked) serving. If the recipe does not provide this information, SFSP sponsors could determine the average weight per serving by weighing several servings of the recipe. For more information, refer to the CSDE's [Yield Study Data Form for the Child Nutrition Programs](#).

The USDA recommends using standardized recipes because they ensure accurate meal component contributions and document that menus meet the meal pattern requirements.

The USDA defines a standardized recipe as one that has been tried, adapted, and retried at least three times and has been found to produce the same good results and yield every time when the exact procedures are used with the same type of equipment and the same quantity and quality of ingredients.

For information on standardized recipes, visit the "[Standardized Recipes](#)" section of the CSDE's [Crediting Documentation for the Child Nutrition Programs](#) webpage.

Method 2: Creditable Grains

Method 2 determines the grains/breads servings for creditable grain products and recipes by calculating the total weight (grams) of creditable grains per serving. The grams of creditable grains are obtained from the commercial product's PFS or calculated from the grain quantities in the SFSP sponsor's recipe.

To credit as one serving of the grains/breads component, foods in groups A-G must contain 14.75 grams of creditable grains and foods in groups H-I must contain 25 grams of creditable grains.

There are some situations when SFSP sponsors must use method 2 to determine if a commercial product meets the crediting or WGR criteria for grain menu items. For more information, refer to "[When Method 2 is Required for Commercial Products](#)" in this document.

SFSP sponsors must obtain a PFS from the manufacturer that documents the weight of the creditable grains per serving.

Calculation Methods for Grains/Breads Servings for the Summer Food Service Meal Patterns

Using method 2 for foods made from scratch

The grams of creditable grains per serving are determined from the weight of each grain ingredient listed in the recipe. For assistance with recipe calculations, such as converting fractions to decimals, refer to the Institute of Child Nutrition's (ICN) [Basics at a Glance Portion Control Poster](#) and the decimal equivalents of fractions in the “[Introduction](#)” section of the USDA's FBG.

If the recipe lists grain ingredients by volume (e.g., cups and quarts) instead of weight (pound and ounces), each measurement must be converted to grams (refer to “[Method 2 calculation for standardized recipes listing the volume of grain ingredients](#)” in this document).

Menu planners may use the FBG's online [Recipe Analysis Workbook](#) to search for ingredients, develop a standardized recipe, and determine the recipe's meal pattern contribution per serving. To access this tool, users must create a free account on the USDA's FBG website.

When Method 2 is Required for Commercial Products

SFSP sponsors must use method 2 and obtain a PFS from the manufacturer if the ingredients statement and packaging do not provide sufficient information to determine if the product meets the crediting requirements for the SFSP meal patterns. A PFS is required for commercial products when any of the situations below apply.

If the manufacturer will not supply a PFS or the PFS does not provide the appropriate documentation, the product cannot credit as the grains/breads component in SFSP meals and snacks.

Note: When reviewing the first ingredient on the product's label, water is ignored. For combination foods such as pizza or breaded chicken nuggets, these requirements apply only to the grain portion.

1. The first ingredient is not a creditable grain, but the product contains more than one creditable grain. The PFS must indicate that the combined weight of all creditable grains is the greatest ingredient by weight.
2. A combination food that contains a grain portion does not have a CN label. The PFS must indicate that creditable grains are the greatest ingredient by weight in the grain portion.

Calculation Methods for Grains/Breads Servings for the Summer Food Service Meal Patterns

3. The manufacturer claims that the product's serving size is less than the required weight or volume in the USDA's Exhibit A chart. The PFS must indicate the grams of each creditable grain per serving and how the product provides that amount according to the FBG or USDA's regulations, guidance, or policies.
4. The product is not listed in the USDA's Exhibit A chart. The PFS must indicate the grams of each creditable grain per serving and how the product provides that amount according to the FBG or USDA's regulations, guidance, or policies.

The USDA requires that SFSP sponsors must verify PFS forms for accuracy prior to purchasing, serving, and claiming the grain product in reimbursable meals and snacks. For specific guidance and examples of each situation that requires a PFS and an example of how to evaluate a grain PFS, refer to the CSDE's resource, [When Commercial Grain Products Require a Product Formulation Statement to Credit in the Summer Food Service Program](#).

Guidance for PFS forms

For more information on the requirements for PFS forms, refer to the CSDE's resources, [Using Product Formulation Statements in the Summer Food Service Program](#) and [Accepting Processed Product Documentation in the Summer Food Service Program](#), and [USDA Memo SP 05-2025, CACFP 04-2025, SFSP 02-2025: Guidance for Accepting Processed Product Documentation for Meal Pattern Requirements](#). Additional guidance is available on the CSDE's [Crediting Documentation for the Child Nutrition Programs](#) webpage.

For guidance on reviewing PFS forms, visit the USDA's [Child Nutrition Programs: Tips for Evaluating a Manufacturer's Product Formulation Statement](#) webpage. Guidance on how to review a grain PFS is available in the CSDE's resource, [When Commercial Grain Products Require a Product Formulation Statement to Credit in the Summer Food Service Program](#).

Training on the requirements for PFS forms is available in [Module 8: Meal Pattern Documentation for Crediting Commercial Processed Products](#) of the CSDE's training program, [What's in a Meal: Meal Patterns for Grades K-12 in the School Nutrition Programs](#).

Storing crediting documentation

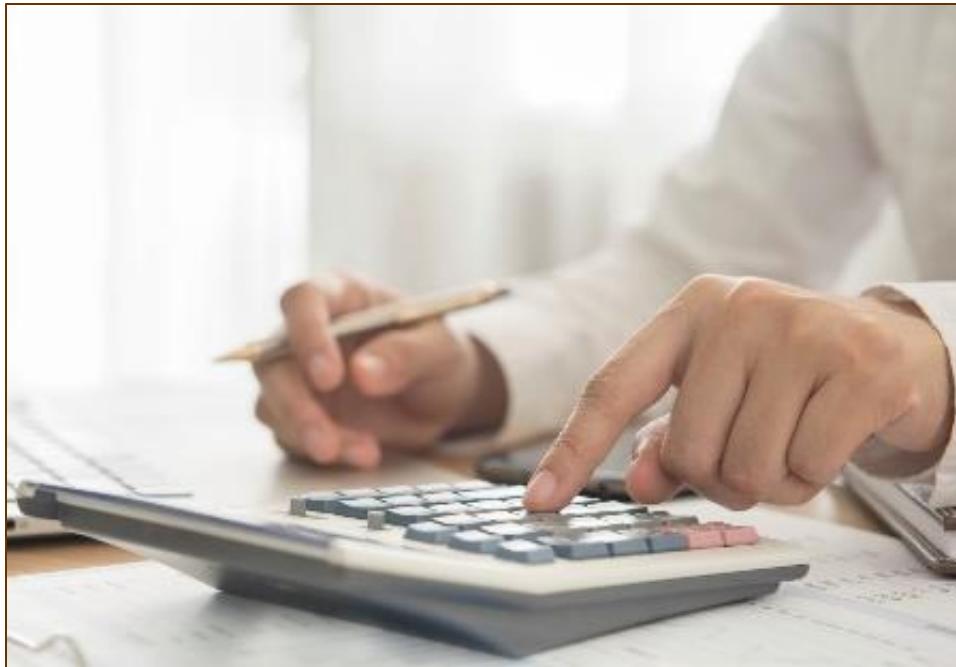
SFSP sponsors must maintain all crediting documentation on file in accordance with the records retention requirements for the SFSP (refer to the CSDE's resource, [Records Retention Requirements for the Summer Food Service Program](#)). This documentation must be current and will be reviewed by the CSDE during the Administrative Review of the SFSP.

Calculation Methods for Grains/Breads Servings for the Summer Food Service Meal Patterns

Choosing a Calculation Method

SFSP sponsors may use either method to determine the grains/breads servings of a grain menu item but must document which method is used for each grain menu item. For some commercial grain products, each method results in a different crediting contribution. For example, a 1-ounce whole-grain bagel might credit as 1 serving of the grains/breads component using method 1 (USDA's Exhibit A chart) but might credit as 1½ servings using method 2 (creditable grains).

SFSP sponsors should use the same calculation method each time the same product is on the menu. For example, if the menu planner uses method 2 (creditable grains) to determine the crediting of a whole-grain bagel, that same bagel should always be credited using method 2. The CSDE strongly recommends choosing one calculation method for consistent crediting. This simplifies menu planning and assists SFSP sponsors with documenting compliance for the grains/breads component.



Calculation Methods for Grains/Breads Servings for the Summer Food Service Meal Patterns

Sample Calculations for Commercial Products in Group A-G

This section demonstrates how to calculate the grains/breads servings of commercial grain products using the appropriate weight for groups A-G in the USDA's Exhibit A chart (method 1) or the weight of creditable grains per serving (method 2). SFSP sponsors may also use the USDA's [Exhibit A Grains Tool](#) to calculate this information automatically (refer to "[Using Method 1 for commercial products](#)" in this document).

- Example 1 shows how to use method 1 to calculate the grains/breads servings of commercial grain products in groups A-G. To credit a commercial product using method 1, SFSP sponsors must know the weight of the serving. This example is for whole-wheat pancakes, a commercial product in group C.
- Example 2 shows a sample calculation for this same product using method 2. To credit a commercial product using method 2, SFSP sponsors must obtain a manufacturer's PFS stating the total weight (grams) of all creditable grains in the serving.

These examples show how each method can result in a different crediting contribution for the same product. For some products, each method results in the same crediting contribution.

SFSP sponsors may use either method but must document how the crediting information was determined (refer to "[Choosing a Calculation Method](#)" in this document).

To determine the meal pattern contribution of a commercial grain product using method 1, menu planners must use the weight (ounces or grams) of one serving from the product's Nutrition Facts label or PFS. If the product lists the serving size in ounces and grams, menu planners may choose to use either one. To convert ounces to grams, multiply ounces by 28.35.

For additional guidance on determining the grains/breads servings of a grain menu item in groups A-G, refer to the CSDE's resource, [How to Use the Grains/Breads Servings Chart for the Summer Food Service Program..](#)



Calculation Methods for Grains/Breads Servings for the Summer Food Service Meal Patterns

Example 1: Using method 1 for commercial grain products in groups A-G

Whole-wheat Mini Pancakes

Manufacturer's serving size:

5 pancakes: 1.75 ounces (49.6 grams)

Group C (USDA's Exhibit A chart)

1 serving = 31 grams or 1.1 ounces

Ingredients: Water, whole-wheat flour, enriched flour (wheat flour, niacin, ferrous sulfate, thiamin mononitrate, riboflavin, folic acid), sugar, canola oil. Contains 2% or less of: leavening (baking soda, sodium aluminum phosphate, monocalcium phosphate), eggs, salt, buttermilk.

Steps to determine grains/breads servings using method 1

1. **List the weight of the manufacturer's serving:** Refer to the product's Nutrition Facts label or PFS (1 ounce = 28.35 grams).
 - 1.75 ounces
2. **List the required weight for 1 serving of the applicable grain group in the USDA's Exhibit A chart:** Refer to the CSDE's resource, [Servings for Grains/Breads in the Summer Food Service Program](#). Pancakes are in group C.
 - 1.1 ounces
3. **Determine the grains/breads servings in one serving of the product:** Divide the weight of the manufacturer's serving (step 1) by the required weight for 1 serving (step 2).
 - 1.75 ounces divided by 1.1 ounces = 1.59 grains/breads servings per manufacturer's serving (5 mini pancakes)
4. **Meal pattern contribution (grains/breads servings):** Round down the grains/breads servings in step 3 to the nearest $\frac{1}{4}$ serving. For example, 1.49 and 1.27 round down to 1.25 and 1.24 rounds down to 1.
 - 1.59 grains/breads servings rounds down to 1.5 grains/breads servings per manufacturer's serving (5 pancakes)

Calculation Methods for Grains/Breads Servings for the Summer Food Service Meal Patterns

Example 2: Using method 2 for commercial grain products in groups A-G

Whole-wheat Mini Pancakes

Manufacturer's serving size:

5 pancakes: 1.75 ounces (49.6 grams)

Creditable grains per serving (from product's PFS)

Whole-wheat flour: 16 grams

Enriched flour: 14 grams

Ingredients: Water, whole-wheat flour, enriched flour (wheat flour, niacin, ferrous sulfate, thiamin mononitrate, riboflavin, folic acid), sugar, canola oil. Contains 2% or less of: leavening (baking soda, sodium aluminum phosphate, monocalcium phosphate), eggs, salt, buttermilk.

Steps to determine grains/breads servings using method 2

1. **List the total weight (grams) of all creditable grains (whole, enriched, bran, and germ) in one serving:** Refer to the product's PFS.
 - 16 grams whole wheat flour plus 14 grams enriched flour = 30 grams of creditable grains
2. **Determine the grains/breads servings one serving of the product:** For group C, 14.75 grams of creditable grains equal 1 serving. Divide the total weight (grams) of all creditable grains (step 1) by 16.
 - 30 grams divided by 14.75 = 2.03 grains/breads servings per manufacturer's serving (5 mini pancakes)
3. **Meal pattern contribution (grains/breads servings):** Round down the grains/breads servings in step 3 to the nearest $\frac{1}{4}$ serving. For example, 1.49 and 1.27 round down to 1.25 and 1.24 rounds down to 1.
 - 2.03 grains/breads servings rounds down to 2.0 grains/breads servings per manufacturer's serving (5 mini pancakes)

Calculation Methods for Grains/Breads Servings for the Summer Food Service Meal Patterns

Sample Calculations for Commercial Products in Group H

This section demonstrates how to calculate the grains/breads servings of commercial grain products using the appropriate weight or volume for groups H in the USDA's Exhibit A chart (method 1) or the weight of creditable grains per serving (method 2). SFSP sponsors may also use the USDA's [Exhibit A Grains Tool](#) to calculate this information automatically (refer to "[Using Method 1 for commercial products](#)" in this document).

- Example 3 shows how to use method 1 to calculate the grains/breads servings for a commercial whole-grain pasta product in group H. To credit a commercial product using method 1, SFSP sponsors must know the weight of the dry serving or the volume of the cooked serving.
- Example 4 shows a sample calculation for this same product using method 2. To credit a commercial product using method 2, SFSP sponsors must obtain a manufacturer's PFS stating the total weight (grams) of all creditable grains in the serving.

These examples show how each method can result in the same crediting contribution for a commercial grain product. For some products, each method results in a different crediting contribution. SFSP sponsors may use either method but must document how the crediting information was determined (refer to "[Choosing a Calculation Method](#)" in this document).

Cereal grains in group H typically credit based on the cooked serving, i.e., $\frac{1}{2}$ cup of cooked cereal credits as 1 serving of the grains/breads component. However, the menu planner may choose to calculate the product's grains/breads servings based on the dry uncooked weight, i.e., 1 ounce (28 grams) of dry cereal grains credits as 1 serving of the grains/breads component. The weight (ounces or grams) of one serving must be determined from the commercial product's Nutrition Facts label or the manufacturer's PFS. If the product lists the serving size in ounces and grams, the menu planner may choose to use either one.



Calculation Methods for Grains/Breads Servings for the Summer Food Service Meal Patterns

Example 3: Using method 1 for commercial grain products in group H

Whole-grain Pasta

Manufacturer's serving size:

32 grams dry (1/2 cup cooked)

Group H (USDA's Exhibit A chart)

1 serving = 1/2 cup cooked or 25 grams dry

Ingredients: Whole-grain durum wheat flour, enriched wheat flour.

Steps to determine grains/breads servings using method 1

1. **List the weight of the manufacturer's serving from the product's Nutrition Facts label or PFS:** To convert ounces to gram or grams to ounces, use the conversion factor of 1 ounce equals 28.35 grams.
 - 32 grams
2. **List the required weight for 1 serving of the applicable grain group in the USDA's Exhibit A chart:** Refer to the CSDE's resource, [Servings for Grains/Breads in the Summer Food Service Program](#). Pasta is in group H.
 - 25 grams
3. **Determine the grains/breads servings in one serving of the product:** Divide the weight of the manufacturer's serving (step 1) by the required uncooked (dry) weight for 1 serving (step 2).
 - 32 grams divided by 25 = 1.28 grains/breads servings per manufacturer's serving (1/2 cup cooked pasta)
4. **Meal pattern contribution (grains/breads servings)** Round down the grains/breads servings in step 3 to the nearest 1/4 serving. For example, 1.49 and 1.27 round down to 1.25 and 1.24 rounds down to 1.
 - 1.28 grains/breads servings rounds down to 1.25 grains/breads servings per manufacturer's serving (1/2 cup cooked pasta)

Calculation Methods for Grains/Breads Servings for the Summer Food Service Meal Patterns

Example 4: Using method 2 for commercial grain products in group H

Whole-grain Pasta

Manufacturer's serving size:
32 grams dry (1/2 cup cooked)

Creditable grains per serving (from product's PFS)

Whole-wheat flour: 15 grams
Enriched flour: 14 grams

Ingredients: Water, whole-wheat flour, enriched flour (wheat flour, niacin, ferrous sulfate, thiamin mononitrate, riboflavin, folic acid), sugar, canola oil. Contains 2% or less of: leavening (baking soda, sodium aluminum phosphate, monocalcium phosphate), eggs, salt, buttermilk.

Steps to determine grains/breads servings using method 2

1. **List the total weight (grams) of all creditable grains (whole, enriched, bran, and germ) in one serving:** Refer to the product's PFS.
 - 15 grams whole wheat flour plus 14 grams enriched flour = 29 grams of creditable grains
2. **Determine the grains/breads servings in one serving of the product:** For group H, 25 grams of creditable grains equal 1 serving. Divide the total weight (grams) of all creditable grains (from step 1) by 25.
 - 29 grams divided by 25 = 1.16 grains/breads servings per manufacturer's serving (1/2 cup cooked pasta)
3. **Meal pattern contribution (grains/breads servings):** Round down the grains/breads servings in step 3 to the nearest 1/4 serving. For example, 1.49 and 1.27 round down to 1.25 and 1.24 rounds down to 1.
 - 1.16 grains/breads servings rounds down to 1.0 grains/breads serving per manufacturer's serving (1/2 cup cooked pasta)

Calculation Methods for Grains/Breads Servings for the Summer Food Service Meal Patterns

Sample Calculations for Foods Made from Scratch

SFSP sponsors must have recipes on file to document the meal pattern contribution of grain foods made from scratch, such as breads, rolls, muffins, pizza dough, and pancakes. This section demonstrates how to calculate the grains/breads servings of recipes using the weight of creditable grains per serving (method 2).

SFSP sponsors may also use the USDA's [Recipe Analysis Workbook](#) to calculate this information automatically (refer to "[Using method 2 for foods made from scratch](#)" in this document).

Method 1 cannot be used for foods made from scratch in groups A-G unless the SFSP SPONSOR knows the serving weight. If the recipe does not provide this information, SFSP sponsors could determine the average serving weight by weighing several portions (refer to the CSDE's [Yield Study Data Form for the Child Nutrition Programs](#)). If the serving weight cannot be determined, the creditable grains method must be used to determine the recipe's grains/breads servings.

SFSP sponsors do not need to calculate grains/breads servings for grain foods prepared from the USDA's standardized recipes for Child Nutrition Programs. These standardized recipes specify the meal pattern crediting information per serving. For links to the USDA's recipes, visit the Institute of Child Nutrition's (ICN) [Child Nutrition Recipe Box](#) and the "[Recipes for Child Nutrition Programs](#)" section of the CSDE's Menu Planning for Child Nutrition Programs webpage.

Calculation Methods for Grains/Breads Servings for the Summer Food Service Meal Patterns

Method 2 calculation for recipes listing the weight of grain ingredients

Example 5 shows how to use method 2 to calculate the grains/breads servings for a standardized multi-grain bread recipe that lists the weight of the grain ingredients. Bread is in group B of the USDA's Exhibit A chart and requires 14.75 grams of creditable grains to credit as one serving of the grains/breads component.

Note: Dry cereal grains (such as rolled oats and cornmeal) used as an ingredient in a recipe credit the same as groups A-G; 14.75 grams credit as one serving of the grains/breads component.



Calculation Methods for Grains/Breads Servings for the Summer Food Service Meal Patterns

Example 5: Using method 2 for recipes listing the weight of grain ingredients

Multi-grain bread recipe

Yield: 100 servings

Serving size: 1 piece

Grain ingredients

Whole-wheat flour: 8 ounces (0.5 pound)

Rolled oats: 1 pound 2 ounces (1.125 pounds)

Enriched flour: 1 pound

Enriched cornmeal: 8 ounces (0.5 pound)

Steps to determine grains/breads servings using method 2

1. **Determine the total weight (pounds) of all creditable grains in the recipe:** Convert ounces to pounds (16 ounces = 1 pound). Convert fractions to decimals, e.g., $1\frac{3}{4}$ pounds = 1.75 pounds.
 - **Whole grains:** 0.5 pound whole-wheat flour plus 1.125 pounds rolled oats = 1.625 pounds
 - **Enriched grains:** 1 pound enriched flour plus 0.5 pound enriched cornmeal = 1.5 pounds
 - **Total creditable grains** = 3.125 pounds
2. **Determine the total grams of creditable grains in the recipe:** One pound equals 453.6 grams. Multiply the total pounds of creditable grains (step 1) by 453.6.
 - 3.125 pounds multiplied by 453.6 = 1417.5 grams of creditable grains
3. **List the number of servings in the recipe (yield):**
 - 100 servings
4. **Determine the grams of creditable grains per recipe serving:** Divide the total grams of creditable grains (step 2) by the number of servings (step 3).
 - 1417.5 grams divided by 100 servings = 14.174 grams per recipe serving (1 piece)

Calculation Methods for Grains/Breads Servings for the Summer Food Service Meal Patterns

5. **Determine the grains/breads servings per recipe serving:** For creditable grains in recipes, 14.75 grams = 1 serving. Divide the grams of creditable grains per serving (step 4) by 16.
 - 14.174 grams divided by 14.75 = 0. 96 grains/breads serving per recipe serving (1 piece)
6. **Meal pattern contribution (grains/breads servings):** Round down the grains/breads servings in step 5 to the nearest $\frac{1}{4}$ serving. For example, 1.49 and 1.27 round down to 1.25 and 1.24 rounds down to 1.
 - 0. 96 grains/breads serving rounds down to 0.75 grains/breads serving per recipe serving (1 piece)

Calculation Methods for Grains/Breads Servings for the Summer Food Service Meal Patterns

Method 2 calculation for recipes listing the volume of grain ingredients

Standardized recipes list ingredients by volume (e.g., cups and quarts) and weight (e.g., pounds and ounces). Weight is the most accurate measure. Recipes that are not standardized (such as recipes used at home) typically list ingredients only by volume. SFSP sponsors may use any of the methods below to convert the volume of a recipe's grain ingredients to weight (grams).

1. **Nutrition Facts label:** Use the manufacturer's serving size information on the Nutrition Facts label for the grain ingredient, e.g., whole-wheat flour, enriched flour, or whole-grain cornmeal. Multiply the grams per cup (indicated on the Nutrition Facts label) by the number of cups used in the recipe. The example below shows how to use the Nutrition Facts label to determine the weight of the grain ingredients in a recipe that contains 2 cups of whole-wheat flour and 2 cups of enriched flour.
 - **Whole wheat flour:** The Nutrition Facts label for the whole-wheat flour states that $\frac{1}{4}$ cup weighs 32 grams, which equals 128 grams per cup. Multiply the grams per cup (128 grams) by the number of cups used in the recipe (2 cups) to determine the total weight of the grain ingredient in the recipe (256 grams).
 - **Enriched flour:** The Nutrition Facts label for the enriched flour states that $\frac{1}{4}$ cup weighs 30 grams, which equals 120 grams per cup. Multiply the weight per cup (120 grams) by the amount of enriched flour used in the recipe (2 cups) to determine the weight of the enriched flour used in the recipe (240 grams).
2. **Nutrient database:** Search the USDA's [FoodData Central](#) nutrient database for grain ingredients, such as whole-wheat flour or yellow cornmeal. Enter "1" in the data field for the cup measurement, and the database will provide the weight of 1 cup of that ingredient.
3. **Volume equivalent chart:** Use volume equivalent charts that list the weight of 1 cup of grain ingredients. Table 1 shows the weight per cup for some commonly used grain ingredients.
4. **Yield study:** Determine the average weight of 1 cup of the grain ingredient by measuring and weighing several samples. For more information, refer to the CSDE's [Yield Study Data Form for the Child Nutrition Programs](#).

Calculation Methods for Grains/Breads Servings for the Summer Food Service Meal Patterns

Table 1. Weights of 1 cup of commonly used grain ingredients

The use of brand-name products is solely for clarification regarding serving sizes and does not constitute approval or endorsement by the USDA or CSDE. The actual weight of 1 cup may be more or less than the weights in this chart, depending on the measuring method used, e.g., stirred or unstirred, sifted or unsifted, spooned or dipped, and coarsely or finely crushed. For the most accurate conversion of volume to weight, calculate the average weight of 1 cup of the ingredient by measuring and weighing several samples. For more information, refer to the CSDE's [Yield Study Data Form for the Child Nutrition Programs](#).

Food item	Weight (grams) per cup
Barley, flour or meal ¹	148
Barley, hulled ¹	184
Barley, pearled, uncooked ¹	200
Barley, pearled, cooked ¹	157
Breadcrumbs, dry, grated, plain ¹	108
Breadcrumbs, plain, dry, grated, seasoned ¹	120
Breadcrumbs, plain soft, white ¹	45
Bulgur, uncooked ¹	140
Bulgur, cooked ¹	182
Cereal, General Mills Cheerios ²	28
Cereal, General Mills Corn Chex ²	31
Cereal, General Mills Rice Chex ²	27
Cereal, General Mills Wheat Chex ²	47
Cereal, General Mills Wheatus ²	36
Cereal, Kellogg's All-Bran Bran Buds ³	90

Calculation Methods for Grains/Breads Servings for the Summer Food Service Meal Patterns

Food item	Weight (grams) per cup
Cereal, Kellogg's All-Bran Original ³	62
Cereal, Kellogg's Corn Flakes crumbs ³	88
Cereal, Kellogg's Corn Flakes, whole ³	28
Cereal, Kellogg's Rice Krispies ⁴	26
Cereal, Quaker Puffed Rice ⁴	14
Cereal, Quaker Puffed Wheat ⁴	28
Cornmeal, enriched, uncooked, yellow, degerminated ¹	157
Cornmeal, enriched, uncooked, yellow, whole grain ¹	122
Cracker crumbs, graham, crushed ¹	84
Cracker crumbs, snack, standard snack-type, regular, crushed ¹	52
Flour, buckwheat, whole groats ¹	120
Flour, corn, whole grain, yellow ¹	117
Flour, rice, brown ¹	158
Flour, rice, white ¹	158
Flour, rye, dark ¹	128
Flour, rye, light ¹	102
Flour, wheat, white, all-purpose enriched, bleached ¹	125
Flour, wheat, white, all-purpose enriched, unbleached ¹	125
Flour, wheat, white, bread, enriched ¹	137
Flour, wheat, white, cake, enriched, unsifted, dipped ¹	137

Calculation Methods for Grains/Breads Servings for the Summer Food Service Meal Patterns

Food item	Weight (grams) per cup
Flour, wheat, white, self-rising, enriched ¹	125
Flour, wheat, whole grain ¹	120
Wheat germ, uncooked, plain ¹	88
Wheat germ, toasted, plain ¹	115
Oat bran, raw ¹	94
Oat bran, cooked ¹	219
Oats, rolled, quick, uncooked ¹	81
Oats, rolled, regular, uncooked ¹	81

¹ USDA's FoodData Central database (Standard Reference (SR) Legacy Data):

<https://fdc.nal.usda.gov/>

² General Mills Cereals: <https://www.generalmills.com/food-we-make/brands>

³ Kellogg's Cereals: <https://www.wkkellogg.com/en-us/our-foods/our-brands.html>

⁴ Quaker Cereals: <https://www.quakeroats.com/products>

Example 6 shows how to use method 2 to calculate the grains/breads servings for a recipe that lists the grain ingredients in cups, using the weights from table 1.

Calculation Methods for Grains/Breads Servings for the Summer Food Service Meal Patterns

Example 6: Using method 2 for recipes listing the volume of grain ingredients

Multi-grain bread recipe

Yield: 25 servings

Serving size: 1 piece

Whole-wheat flour, 2 cups

Grain Ingredients

Rolled oats, $\frac{3}{4}$ cup

All-purpose enriched flour, 2 cups

Enriched cornmeal, $\frac{1}{4}$ cup

Steps to determine grains/breads servings using method 2

1. **Determine the total weight (grams) of all creditable grains in the recipe:** Use any of the following: Nutrition Facts label; nutrient database; volume equivalent chart; or yield study (refer to "[Method 2 calculation for recipes listing the volume of grain ingredients](#)" in this document). Convert fractions to decimals if needed, e.g., $1\frac{3}{4}$ pounds = 1.75 pounds. The chart below uses a volume equivalent chart ([table 1](#)) to determine the grams per cup for each ingredient.

Grain ingredient	Measure	Grams per cup (table 1)	Weight (grams)
Whole-wheat flour	2 cups	X 120 =	240.00
Rolled oats	$\frac{3}{4}$ cup	X 81 =	60.75
Enriched flour	2 cups	X 125 =	250.00
Enriched cornmeal	$\frac{1}{4}$ cup	X 122 =	30.5

Total weight (grams): 581.25

Calculation Methods for Grains/Breads Servings for the Summer Food Service Meal Patterns

3. **List the number of servings in the recipe (yield):**
 - 25 servings
4. **Determine the grams of creditable grains per serving:** Divide the total grams of creditable grains (step 1) by the number of servings (step 2).
 - 581.25 grams divided by 25 servings = 23.25 grams of creditable grains per recipe serving (1 piece)
5. **Determine the grains/breads serving per recipe serving:** For creditable grains in recipes, 14.75 grams equal 1 grains/breads serving. Divide the grams of creditable grains per serving (step 3) by 14.75.
 - 23.25 grams divided by 14.75 = 1.58 grains/breads servings per recipe serving (1 piece)
6. **Meal pattern contribution (grains/breads serving):** Round down the grains/breads servings in step 4 to the nearest $\frac{1}{4}$ serving. For example, 1.49 and 1.27 round down to 1.25 and 1.24 rounds down to 1.
 - 1.58 grains/breads servings round down to 1.5 grains/breads servings per recipe serving (1 piece).

Calculation Methods for Grains/Breads Servings for the Summer Food Service Meal Patterns

Resources

[Accepting Processed Product Documentation in the Summer Food Service Program](#) (CSDE):

https://portal.ct.gov/-/media/sde/nutrition/sfsp/creditingsfspaccepting_processed_product_documentation_sfsp.pdf

[Basics at a Glance Portion Control Poster](#) (Institute of Child Nutrition):

<https://theicn.org/icn-resources-a-z/basics-at-a-glance/>

[Child Nutrition Programs: Tips for Evaluating a Manufacturer's Product Formulation Statement](#)

(USDA webpage):

<https://www.fns.usda.gov/cn/labeling/tips-evaluating-pfs>

[Crediting Breakfast Cereals in the Summer Food Service Program](#) (CSDE):

https://portal.ct.gov/-/media/sde/nutrition/sfsp/creditingsfsp/credit_cereals_sfsp.pdf

[Crediting Documentation for the Child Nutrition Programs](#) (CSDE webpage):

<https://portal.ct.gov/sde/nutrition/crediting-documentation-for-the-child-nutrition-programs>

[Crediting Enriched Grains in the Summer Food Service Program](#) (CSDE):

https://portal.ct.gov/-/media/sde/nutrition/sfsp/creditingsfsp/credit_enriched_grains_sfsp.pdf

[Crediting Whole Grains in the Summer Food Service Program](#) (CSDE):

https://portal.ct.gov/-/media/sde/nutrition/sfsp/creditingsfsp/credit_whole_grains_sfsp.pdf

[Exhibit A Grains Tool of the Food Buying Guide](#) (USDA):

<https://foodbuyingguide.fns.usda.gov/ExhibitATool/Index>

[Exhibit A: Grain Requirements for Child Nutrition Programs](#) (USDA):

<https://foodbuyingguide.fns.usda.gov/Content/TablesFBG/ExhibitA.pdf>

[Food Buying Guide for Child Nutrition Programs](#) (USDA):

<https://www.fns.usda.gov/tn/food-buying-guide-for-child-nutrition-programs>

[FoodData Central](#) (USDA):

<https://fdc.nal.usda.gov/>

[Grains and Breads Component](#) (CSDE's Crediting Foods in the Summer Food Service Program webpage):

<https://portal.ct.gov/sde/nutrition/crediting-foods-in-the-summer-food-service-program/grains-and-breads>

Calculation Methods for Grains/Breads Servings for the Summer Food Service Meal Patterns

How to Use the Grains/Breads Servings Chart for the Summer Food Service Program

(CSDE):

https://portal.ct.gov/sde/nutrition/-/media/sde/nutrition/sfsp/mealpattern/credit-how_to_use_grains_breads_servings_chart_sfsp.pdf

Product Formulation Statements (CSDE's Crediting Documentation for the Child Nutrition Programs webpage):

<https://portal.ct.gov/sde/nutrition/crediting-documentation-for-the-child-nutrition-programs/product-formulation-statements>

Recipe Analysis Workbook (RAW) for Standardized Recipes (USDA):

<https://www.fns.usda.gov/tn/food-buying-guide-interactive-web-based-tool>

Records Retention Requirements for the Summer Food Service Program (CSDE):

https://portal.ct.gov/-/media/sde/nutrition/nsfp/records_retention_snp.pdf

Servings for Grains/Breads in the Summer Food Service Program (CSDE):

https://portal.ct.gov/-/media/sde/nutrition/sfsp/creditingsfsp/servings_grains_breads_sfsp.pdf

Standardized Recipes (CSDE's Crediting Documentation for the Child Nutrition Program webpage):

<https://portal.ct.gov/sde/nutrition/crediting-documentation-for-the-child-nutrition-programs/standardized-recipes>

Summer Meals Annual Training Module: Crediting Foods in the SFSP Meal Patterns Part 4: Grains/Breads Component ("Annual Training" section of CSDE's SFSP webpage)

[#CreditingFoods](https://portal.ct.gov/sde/nutrition/summer-food-service-program/annual-training)

USDA Memo SP 05-2025, CACFP 04-2025, and SFSP 02-2025: Guidance for Accepting Processed Product Documentation for Meal Pattern Requirements:

<https://www.fns.usda.gov/cn/labeling/guidance-accepting-processed-product-documentation>

Using Child Nutrition (CN) Labels in the Summer Food Service Program (CDSE):

https://portal.ct.gov/-/media/sde/nutrition/sfsp/creditingsfsp/cn_labels_sfsp.pdf

Using Product Formulation Statements in the Summer Food Service Program (CSDE):

https://portal.ct.gov/-/media/sde/nutrition/sfsp/creditingsfsp/product_formulation_statements_sfsp.pdf

Calculation Methods for Grains/Breads Servings for the Summer Food Service Meal Patterns

[What's in a Meal Module 8: Meal Pattern Documentation for Crediting Commercial Processed Products](#) (CSDE's Training Program, What's in a Meal: Meal Patterns for Grades K-12 in the School Nutrition Programs):
<https://portal.ct.gov/sde/nutrition/meal-pattern-training-materials#module8>

[When Commercial Grain Products Require a Product Formulation Statement to Credit in the Summer Food Service Program](#) (CSDE):
https://portal.ct.gov/sde/nutrition/-/media/sde/nutrition/sfsp/mealpattern/when_commercial_grain_products_require_pfs_sfsp.pdf

[Yield Study Data Form for the Child Nutrition Programs](#) (CSDE):
https://portal.ct.gov/-/media/sde/nutrition/nsip/crediting/yield_study_form.pdf

For more information, visit the CSDE's [Crediting Foods in the Summer Food Service Program](#) webpage or contact the [Summer Meals staff](#) at the Connecticut State Department of Education, Bureau of Child Nutrition Programs, 450 Columbus Boulevard, Suite 504, Hartford, CT 06103-1841. This document is available at https://portal.ct.gov/-/media/sde/nutrition/sfspcreditingsfsp/grain_calculation_sfsp.pdf.



Calculation Methods for Grains/Breads Servings for the Summer Food Service Meal Patterns

In accordance with federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, this institution is prohibited from discriminating on the basis of race, color, national origin, sex (including gender identity and sexual orientation), disability, age, or reprisal or retaliation for prior civil rights activity.

Program information may be made available in languages other than English. Persons with disabilities who require alternative means of communication to obtain program information (e.g., Braille, large print, audiotape, American Sign Language), should contact the responsible state or local agency that administers the program or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339.

To file a program discrimination complaint, a Complainant should complete a Form AD-3027, USDA Program Discrimination Complaint Form which can be obtained online at: <https://www.usda.gov/sites/default/files/documents/ad-3027.pdf> from any USDA office, by calling (866) 632-9992, or by writing a letter addressed to USDA. The letter must contain the complainant's name, address, telephone number, and a written description of the alleged discriminatory action in sufficient detail to inform the Assistant Secretary for Civil Rights (ASCR) about the nature and date of an alleged civil rights violation. The completed AD-3027 form or letter must be submitted to USDA by:

1. mail: U.S. Department of Agriculture
Office of the Assistant Secretary for Civil Rights
1400 Independence Avenue, SW
Washington, D.C. 20250-9410; or
2. fax: (833) 256-1665 or (202) 690-7442; or
3. email: program.intake@usda.gov

This institution is an equal opportunity provider.

The Connecticut State Department of Education is committed to a policy of equal opportunity/affirmative action for all qualified persons. The Connecticut Department of Education does not discriminate in any employment practice, education program, or educational activity on the basis of race; color; religious creed; age; sex; pregnancy; sexual orientation; workplace hazards to reproductive systems, gender identity or expression; marital status; national origin; ancestry; retaliation for previously opposed discrimination or coercion, intellectual disability; genetic information; learning disability; physical disability (including, but not limited to, blindness); mental disability (past/present history thereof); military or veteran status; status as a victim of domestic violence; or criminal record in state employment, unless there is a bona fide occupational qualification excluding persons in any of the aforementioned protected classes. Inquiries regarding the Connecticut State Department of Education's nondiscrimination policies should be directed to: Attorney Louis Todisco, Connecticut State Department of Education, by mail 450 Columbus Boulevard, Hartford, CT 06103-1841; or by telephone 860-713-6594; or by email louis.todisco@ct.gov.