Whole Grain-rich Criteria for Grades K-12 in the National School Lunch Program and School Breakfast Program

This guidance applies to the meal patterns for grades K-12 in the U.S. Department of Agriculture's (USDA) National School Lunch Program (NSLP), School Breakfast Program (SBP), and Seamless Summer Option (SSO) of the NSLP. The whole grain-rich (WGR) requirement does not apply to grades K-12 in the Afterschool Snack Program (ASP). For additional guidance on the grains component for grades K-12, see the Connecticut State Department of Education's (CSDE) guide, *Menu Planning Guide for School Meals for Grades K-12*.

For guidance on the WGR requirement for the meal patterns for preschoolers (ages 1-4) in the NSLP, SBP, SSO, and ASP, see the CSDE's handout, Whole Grain-rich Criteria for Preschoolers in the NSLP, SBP, and ASP. For a comparison of the USDA's requirements for the grains component in the meal patterns for grades K-12 and preschoolers in the NSLP, SBP, SSO, and ASP, see the CSDE's handout, Comparison of Meal Pattern Requirements for the Grains Component in the School Nutrition Programs.



Note: The WGR criteria for competitive foods under the Connecticut Nutrition Standards (CNS) are the same as the WGR criteria for school meals. The CNS applies to all foods sold separately from reimbursable meals in public schools that choose the healthy food option of Healthy Food Certification (HFC) under Section 10-215f of the Connecticut General Statutes. Grain foods sold separately from school meals in HFC public schools must be WGR and meet the CNS limits for calories, fat, saturated fat, trans fat, sodium, and sugars. Snack products that meet these criteria are listed on the CSDE's List of Acceptable Foods and Beverages webpage. For more information, visit the CSDE's HFC and CNS webpages.



The NSLP and SBP meal patterns for grades K-12 require that all grains must be WGR or enriched. Ready-to-eat (RTE) breakfast cereals must be WGR, enriched, or fortified.

Effective July 1, 2019, the USDA's final rule, *Child Nutrition Programs: Flexibilities for Milk, Whole Grains, and Sodium Requirements*, requires that at least half of the weekly grains offered at lunch and breakfast must be WGR. Previously, the NSLP and SBP meal patterns for grades K-12 required that all grains were WGR. The CSDE strongly encourages SFAs to continue to serve only WGR grains, and offer 100 percent whole grains most often. This provides the best nutrition for children.

SFAs may calculate the menu's percentage of WGR grains using the CSDE's Excel worksheet, Calculating Weekly Percentage of Whole Grain-rich Menu Items in the NSLP and SBP. For more information,

see CSDE Operational Memorandum No. 11-19: Weekly Whole Grain-rich (WGR) Requirement for the NSLP and SBP Meal Patterns for Grades K-12.

WGR Criteria for Commercial Foods

The WGR criteria are different for commercial grain products (such as bread, rice, pasta, and breakfast cereals) and commercial combination foods that contain a grain portion (such as pizza crust in pizza, noodles in lasagna, tortilla shells in burritos, and breading on chicken nuggets).

- Commercial grain foods (groups A-H): Grain products in groups A-G (such as breads, muffins, pancakes, and crackers) and group H (such as rice, pasta, quinoa, and cooked breakfast cereals, e.g., oatmeal) are WGR if they meet three criteria: 1) a whole grain is the first ingredient (excluding water); 2) any other grains are enriched; and 3) the combined weight of any noncreditable grains complies with the specified limit. Table 1 summarizes the WGR criteria for commercial grain products in groups A-H.
- RTE breakfast cereals (group I): RTE breakfast cereals are defined by the Food and Drug Administration (FDA) regulations (21 CFR 170.3(n)(4)). They are a type of breakfast cereal that can be eaten as sold, and are typically fortified with vitamins and minerals. RTE breakfast cereals are WGR if a whole grain is the first ingredient and the cereal is fortified. The limit for noncreditable grains does not apply to fortified WGR RTE breakfast cereals. Fortification is not required for 100 whole grain cereals. Table 2 summarizes the WGR criteria for RTE breakfast cereals.
- Commercial combination foods: Combination foods that contain a grain portion from groups A-I (such as pizza crust in pizza, noodles in lasagna, and breading on chicken nuggets) are WGR if they meet three criteria: 1) a whole grain is the first grain ingredient (or the first ingredient in the grain portion if it is listed separately); 2) any other grains in the grain portion are enriched; and 3) the combined weight of any noncreditable grains in the grain portion complies with the specified limit. Table 3 summarizes the WGR criteria for commercial combination foods that contain a grain portion from groups A-I.

Menu planners must determine if commercial foods meet the WGR criteria by reviewing the product's ingredients statement and packaging, and if necessary, obtaining a product formulation statement (PFS) from the manufacturer. A PFS is not required if the grain is part of a meat/meat alternate product that has a Child Nutrition (CN) label. CN-labeled products credit based on the stated crediting information for WGR ounce equivalents. The USDA's Authorized Labels and Manufacturers webpage lists approved CN-labeled products and manufacturers.

Grain products (such as breads, muffins, pancakes, crackers, and breakfast cereals) are not eligible for CN labels, which are available only for main dish entrees that contribute to the meat/meat alternates component. However, CN-labeled products usually include the crediting information for grains, vegetables, and fruits that are part of the product. For more information on CN labels and

PFS forms, see section 2 of the CSDE's guide, *Menu Planning Guide for School Meals for Grades K-12*, and the CSDE's handouts, *Product Formulation Statements* and *Child Nutrition (CN) Labeling Program*.

Table 1. WGR criteria for commercial grain products in groups A-H

These criteria apply to commercial grain products in groups A-G (such as breads, muffins, pancakes, and crackers) and group H (such as rice, pasta, quinoa, and cooked breakfast cereals, e.g., oatmeal). A product must meet all three criteria to be WGR.

WGR criterion 1

The product must contain at least 50 percent whole grains by weight. SFAs may use any one of three methods below to determine if a product meets this criterion.

- Method 1: The ingredients statement lists a whole grain as the first ingredient (or water is the first ingredient and a whole grain is the second ingredient), or the product's PFS indicates that the combined weight of all whole grains is the greatest ingredient by weight. Note: Products that list a whole grain first in a flour blend of whole and enriched flour, such as "flour blend (whole-wheat flour, enriched flour)," require a PFS to determine if the whole grain weighs more than the first ingredient listed after the flour blend. For more information, see "Products with flour blends" on page 8.
- Method 2: The product packaging or manufacturer's PFS indicates that the product contains the minimum grain content for 1 ounce equivalent. Groups A-G (baked goods) must contain at least 8 grams of whole grains per ounce equivalent. Group H (cereal grains) must contain at least ½ cup cooked or 14 grams dry of whole grains per ounce equivalent (½ cup).
- **Method 3:** The product packaging includes one of the FDA's approved whole grain health claims. For more information, see "Method 3: Whole Grain Health Claim" on page 9.

For more information, see "WGR Criterion 1 – At Least 50 Percent Whole Grains" on page 6.

WGR criterion 2

Any remaining grain ingredients in the product must be enriched. For more information, see "WGR Criterion 2 – All Other Grains are Enriched" on page 9.

WGR criterion 3

Any noncreditable grains must be less than 2 percent (1/4 ounce equivalent) of the product formula. To comply with this limit, the combined total of all noncreditable grains cannot exceed 3.99 grams per ounce equivalent for groups A-G or 6.99 grams per ounce equivalent for group H. If noncreditable grains exceed these amounts, the product is noncreditable, even if it meets WGR criteria 1 and 2. For more information, see "WGR Criterion 3 – Noncreditable Grains Meet Limit" on page 9.

Table 2. WGR criteria for RTE breakfast cereals in group I

These criteria apply to RTE breakfast cereals in group I, such as puffed cereals, flaked or round cereals, and granola. A product must meet both criteria to be WGR. **Note:** The limit for noncreditable grains does not apply to fortified RTE breakfast cereals that contain a whole grain as the first ingredient.



WGR criterion 1

The product must contain at least 50 percent whole grains by weight. SFAs may use any one of three methods below to determine if a product meets this criterion.

- Method 1: The ingredients statement lists a whole grain as the first ingredient, or the
 product's PFS indicates that the combined weight of all whole grains is the greatest
 ingredient by weight.
- **Method 2:** The product packaging or manufacturer's documentation indicates that the product contains the required weight (1 ounce) or volume (1 cup of flaked or round cereal, 1 ½ cups of puffed cereal, and ½ cup of granola) for 1 ounce equivalent, and a whole grain is the greatest ingredient by weight.
- **Method 3:** The product packaging includes one of the FDA's approved whole grain health claims. For more information, see "Method 3: Whole Grain Health Claim" on page 9.

For more information, see "WGR Criterion 1 – At Least 50 Percent Whole Grains" on page 6.

WGR criterion 2

The product must be fortified, unless it is 100 percent whole grain. A breakfast cereal is fortified if the food is labeled as "fortified" or the ingredients statement lists the vitamins and minerals that have been added to the product. Fortified breakfast cereals typically contain the five enrichment nutrients (iron, thiamin, riboflavin, niacin, and folic acid) plus other vitamins and minerals that do not exist naturally in grains. For example, the RTE cereal below is fortified with 11 vitamins and minerals, listed after "Vitamins and Minerals."

Ingredients: Whole-grain wheat, raisins, wheat bran, sugar, brown sugar syrup, contains 2% or less of salt, malt flavor. Vitamins and Minerals: Potassium chloride, niacinamide, reduced iron, vitamin B6 (pyridoxine hydrochloride), zinc oxide, vitamin B2 (riboflavin), vitamin B1 (thiamin hydrochloride), vitamin A palmitate, folic acid, vitamin D, vitamin B12.

For more information, see the CSDE's handout, *Crediting Breakfast Cereals for Grades K-12 in the NSLP and SBP*.

Table 3. WGR criteria for commercial combination foods

These criteria apply to commercial combination foods that contain a grain portion from groups A-I. Examples include pizza crust in pizza, noodles in lasagna, and breading on chicken nuggets. A product must meet all three criteria to be WGR. **Note:** These criteria do not apply to CN-labeled meat/meat alternate products that contain a WGR grain portion. These products are WGR if the label states the WGR ounce equivalents.

WGR criterion 1

The grain portion of the product must contain at least 50 percent whole grains by weight. SFAs may use any one of three methods below to determine if a product meets this criterion.

- **Method 1:** The product's ingredients statement indicates that a whole grain is the greatest ingredient by weight in the **grain portion**, or the PFS indicates that the combined weight of all whole grains is the greatest ingredient by weight in the **grain portion**. If the product lists the grain ingredients as a *separate* grain portion, a whole grain must be the first ingredient in the grain portion (or water is the first ingredient and a whole grain is the second ingredient). If the product lists the grain ingredients *together* with all other ingredients, a whole grain must be the first grain ingredient.
- Method 2: The product packaging or PFS indicates that the grain portion of the product contains the minimum grain content for 1 ounce equivalent. Groups A-G (baked goods) must contain at least 8 grams of whole grains per ounce equivalent. Group H (cereal grains) must contain at least ½ cup cooked or 14 grams dry of whole grains per ounce equivalent (½ cup). Group I (RTE breakfast cereals) must contain the required weight or volume for 1 ounce equivalent, and must list a whole grain as the first ingredient and be fortified. Fortification is not required for 100 whole-grain cereals.
- **Method 3:** The product packaging includes one of the FDA's approved whole grain health claims. For more information, see "Method 3: Whole Grain Health Claim" on page 9.

For more information, see "WGR Criterion 1 – At Least 50 Percent Whole Grains" on page 6.

WGR criterion 2

Any remaining grain ingredients in the grain portion of the product must be enriched. For more information, see "WGR Criterion 2 – All Other Grains are Enriched" on page 9.

WGR criterion 3

Any noncreditable grains in the **grain portion** must be less than 2 percent (1/4 ounce equivalent) of the product formula. To comply with this limit, the combined total of all noncreditable grains cannot exceed 3.99 grams per ounce equivalent for groups A-G or 6.99 grams per ounce equivalent for groups H-I. If noncreditable grains exceed these amounts, the product is noncreditable, even if it meets WGR criteria 1 and 2. For more information, see "WGR Criterion 3 – Noncreditable Grains Meet Limit" on page 9.

WGR Criterion 1 — At Least 50 Percent Whole Grains

The USDA defines three methods to determine if a commercial grain product contains at least 50 percent whole grains by weight. SFAs may use any one of these methods to determine if a product meets this criterion.

- **Method 1:** A whole grain is the first ingredient, with an exception for water (i.e., water is the first ingredient and a whole grain is the second ingredient); or the product's PFS indicates that the combined weight of all whole grains is the greatest ingredient by weight.
- **Method 2:** The product contains the minimum grain content for 1 ounce equivalent, as required for the appropriate grain group (A-I) in the USDA's ounce equivalent chart. Groups A-G must contain at least 8 grams of whole grains per ounce equivalent. Group H must contain at least ½ cup cooked or 14 grams dry of whole grains per ounce equivalent (½ cup). Group I must list a whole grain as the first ingredient and be fortified. Fortification is not required for 100 whole grain cereals.
- **Method 3:** The product's packaging contains the FDA's whole grain health claim.

If a product meets WGR criterion 1, SFAs must also determine if it meets WGR criteria 2 and 3. For more information, see "WGR Criterion 2 – All Other Grains are Enriched" and "WGR Criterion 3 – Noncreditable Grains Meet Limit" on page 9.

Method 1: Whole grain is first ingredient

Ingredients on product labels are listed by weight, from most to least. The closer an ingredient is to the beginning of the ingredients statement, the more of it the food contains. A commercial grain product contains at least 50 percent whole grains if a whole grain is the first ingredient, excluding, water. The method for determining if a whole grain is the first ingredient is different for commercial grain products (such as breads, rice, and pasta) and commercial combination foods that contain a grain portion with other food components such as meat/meat alternates, vegetables, and fruits.

• Grain products (groups A-H): A commercial grain product in A-G (such as breads, muffins, pancakes, and crackers) and group H (such as rice, pasta, quinoa, and cooked breakfast cereals, e.g., oatmeal) contains at least 50 percent whole grains if a whole grain is the first ingredient (or water is the first ingredient and a whole grain is the second ingredient). For example, the first product below contains a whole grain (whole-wheat flour) as the first and only grain ingredient. The second product below contains a whole grain (whole-wheat flour) as the first ingredient after water.

Ingredients: Whole-wheat flour, sugar, wheat gluten. Contains 2% or less of each of the following: honey, salt, yellow corn flour, yeast, molasses, diacetyl tartaric acid esters of mono-diglycerides (datem), ascorbic acid, mono-and diglycerides, l-cysteine, enzymes.

Ingredients: Water, *whole-wheat flour*, enriched flour (wheat flour, niacin, reduced iron, thiamine mononitrate, riboflavin, folic acid), yeast, wheat gluten, contains less than 2% of each of the following: soybean oil, sugar, salt, calcium propionate (preservative), fumaric acid, baking soda, monocalcium phosphate, calcium sulfate, ammonium sulfate.

- Combination foods (groups A-H): The WGR criteria apply only to the grain portion of combination foods, such as pizza crust in pizza, noodles in lasagna, and breading on chicken nuggets. The WGR criteria depend on whether the ingredients statement lists the grain ingredients as a separate grain portion or together with all other nongrain ingredients.
 - o **Grain portion listed separately:** If the ingredients statement lists the grain ingredients as a separate grain portion, the combination food contains at least 50 percent whole grains if a whole grain is the first ingredient in the **grain portion**. For example, the chicken nuggets product below contains white whole wheat-flour as the first ingredient in the grain portion (highlighted in yellow).

Ingredients: Chicken, water, salt, and natural flavor. **Breaded with:** white whole-wheat flour, water, wheat starch, enriched flour (wheat flour, niacin, reduced iron, thiamine mononitrate, riboflavin, folic acid), salt, contains 2% or less of the following: yellow corn flour, corn starch, dried onion, dried garlic, dried yeast, brown sugar, extractives of paprika, and spices. Breading set in vegetable oil.

• Grain ingredients listed with nongrain ingredients: If the ingredients statement lists the grain ingredients together with all other ingredients, the combination food contains at least 50 percent whole grains if a whole grain is the first grain ingredient. For example, the chicken nuggets product below contains whole wheat-flour as the first and only grain ingredient.

Ingredients: Boneless, skinless chicken breast with rib meat, water, *whole-wheat flour*, contains 2% or less of the following: dried garlic, dried onion, salt, sea salt, soybean oil, spice, sugar, torula yeast, turmeric, yeast, yeast extract. Breading set in vegetable oil.

• **Products with multiple whole grains:** If a whole grain is not the first ingredient, but the ingredients statement lists more than one whole grain, the product could contain at least 50 percent whole grains if the **combined weight** of all whole grains is more than the weight of the first ingredient (excluding water). The SFA must obtain a PFS from the manufacturer to document this information. For example, the product below could contain at least 50 percent whole grains if the manufacturer's PFS indicates that the combined weight of the two whole grains (whole-wheat flour and whole oats) is more than the weight of the enriched wheat flour.

Ingredients: Water, enriched wheat flour [flour, malted barley flour, reduced iron, niacin, thiamin mononitrate (vitamin B1), riboflavin (vitamin B2), folic acid], water, whole-wheat flour, whole

oats, sugar, wheat gluten, yeast, soybean oil, salt, calcium propionate (preservative), monoglycerides, datem and/or sodium stearoyl lactylate, calcium sulfate, citric acid, calcium carbonate, soy lecithin, whey, nonfat milk.

- Products with flour blends: An ingredients statement with a flour blend of whole and enriched flour, such as "flour blend (whole-wheat flour, enriched flour)," does not indicate if the whole grain is the greatest ingredient by weight. For example, if the flour blend is 40 percent of the product's weight (25 percent whole-wheat flour and 15 percent enriched flour) and the first ingredient after the flour blend is sugar (30 percent of the product's weight), the sugar weighs more than the whole-wheat flour. If the product's first ingredient is a flour blend of whole and enriched flour (or water is the first ingredient and a flour blend of whole and enriched flour is the second ingredient), the SFA must obtain a PFS from the manufacturer to document that either:
 - o the whole grain content is at least 8 grams per ounce equivalent (groups A-G); or
 - o the weight of the whole grain in the flour blend is more than the first ingredient listed after the flour blend.

For example, the PFS for the product below must document that the whole-wheat flour in the flour blend (highlighted in yellow) weighs more than the brown sugar (first ingredient after the flour blend).

Ingredients: Water, **flour blend** [whole-wheat flour, enriched flour (wheat flour, niacin, reduced iron, thiamine mononitrate, riboflavin, enzyme, folic acid)], **brown sugar**, corn oil, nonfat dry milk, yeast, cinnamon, dough conditioner (soybean oil, vegetable glycerides, soy flakes), salt, wheat gluten and 2% or less of each of the following: sodium benzoate (to protect flavor), corn syrup solids, potassium sorbate, icing stabilizer (calcium carbonate, sugar, agar, salt, mono and diglycerides, sorbitan monostearate), vanilla flavor [propylene glycol, water, sodium benzoate (as a preservative)].

A PFS is not required for flour blends that contain only whole grains, such as "flour blend (whole-wheat flour, whole-grain oats)." Products that contain 100 percent whole grains are WGR.

Method 2: Minimum grain content

A commercial grain product contains at least 50 percent whole grains if the product's packaging or manufacturer's documentation indicates that the product contains the minimum grain content for 1 ounce equivalent for the appropriate grain group (A-I) in the USDA's ounce equivalent chart. Groups A-G (baked goods) must contain at least 8 grams of whole grains per ounce equivalent. Group H (cereal grains) must contain at least ½ cup cooked or 14 grams dry of whole grains per ounce equivalent (½ cup). Group I (RTE breakfast cereals) must contain the required weight (1 ounce) or volume (1 cup of flaked or round cereal, 1½ cups of puffed cereal, and ¼ cup of granola) for 1 ounce equivalent, and must list a whole grain as the first ingredient and be fortified. Fortification is not required for 100 whole grain cereals.

Method 3: Whole grain health claim

A commercial grain product contains at least 50 percent whole grains if the product packaging includes one of the FDA's two approved whole grain health claims. These claims are not commonly found on most grain products.

- Low-fat claim: "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."
- Moderate-fat claim: "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."

The health claim on the package label must be identical to one of these statements. For consistency with the *Dietary Guidelines for Americans*, the USDA recommends choosing grain products with the FDA's low-fat health claim.

WGR Criterion 2 – All Other Grains Are Enriched

A commercial grain product meets WGR criterion 2 if all grains (other than whole grains) are enriched. A grain is enriched if it contains the term "enriched" e.g., "enriched flour," or lists the five enrichment nutrients after the grain ingredient. For example, the bread product below contains an enriched grain as the second ingredient.

Ingredients: Whole-wheat flour, unbleached enriched wheat flour (niacin, iron, thiamin mononitrate, riboflavin, folic acid), water, canola oil, all natural molasses, salt, baking soda.

For guidance on identifying enriched grains, see the CSDE's handout, *Crediting Enriched Grains in the NSLP and SBP*. For guidance on identifying enriched RTE and cooked breakfast cereals, see the CSDE's handout, *Crediting Breakfast Cereals for Grades K-12 in the NSLP and SBP*.

WGR Criterion 3 — Noncreditable Grains Meet Limit

A commercial grain product meets WGR criterion 3 if the combined weight of all noncreditable grains is less than 2 percent (1/4 ounce equivalent) of the product formula. A commercial combination food meets WGR criterion 3 if the **grain portion** of the product meets this limit. The combined weight of all noncreditable grains cannot exceed 3.99 grams per ounce equivalent for groups A-G or 6.99 grams per ounce equivalent for groups H-I. If noncreditable grains exceed the limit, the product is not WGR and cannot credit as the grains component.

Table 4 lists examples of noncreditable grain ingredients commonly found in commercial products. The ingredients in column A must be included when determining the total weight of a product's noncreditable grain ingredients. The ingredients in column B do not count toward the limit for noncreditable grains, and can be ignored.

Column A Counted toward limit ²	Column B Not counted toward limit ³	
Barley grits	Cellulose fiber	
Bran	Chicory extract	
Corn bran	Chicory root	
Corn fiber	Citrus fiber	
Corn flour (not whole grain, enriched, or nixtamalized) ⁴	Corn dextrin	
Corn grits (not whole grain, enriched, or nixtamalized) ⁴	Fibersol	
Cornmeal (not whole grain, enriched, or nixtamalized) ⁴	Inulin	
Corn starch	Malt	
Cultured wheat starch	Malt powder	
Degermed corn	Maltodextrin	
Durum flour (not whole grain or enriched)	Pea fiber	
Durum grits	Powdered cellulose	
Fava bean flour	Short chain fructan (fiber)	
Fermented wheat	Vital wheat gluten	
Germ	Wheat gluten	
Grits		
Hydrolyzed starch		
Legume flours, e.g., chick pea flour, pea flour		
Malted barley flour (not whole grain or enriched)		
Modified food starch (including potato, legume, and other vegetable flours)		
Modified corn starch		
Modified rice starch		
Modified tapioca starch		
Modified wheat starch		
Oat fiber		
Oat hull fiber		
Potato flour		
Potato starch		
Rice (not brown rice or enriched rice)		
Rice flour (not whole grain or enriched)		
Rice starch		
Soluble corn fiber		
Soy fiber		
Soy flakes		

Table 4. Examples of noncreditable grain ingredients ¹ , continued	
Column A Counted toward limit ²	Column B Not counted toward limit ³
Soy grits	
Soy flour	
Stone-ground corn	
Tapioca starch	
Vegetable flours, e.g., potato and legume	
Wheat bran	
Wheat flakes	
Wheat flour (not whole grain or enriched)	
Wheat germ	
Wheat starch	
White flour (not whole grain or enriched)	
Yellow corn flour (not whole grain, enriched, or nixtamalized) ⁴	

- ¹ This list is not all-inclusive.
- These ingredients must be included in the weight of a product's noncreditable grain ingredients. Noncreditable grains cannot exceed 3.99 grams per ounce equivalent for groups A-G or 6.99 grams per ounce equivalent for groups H-I. The limit for noncreditable grains does not to apply to WGR fortified RTE breakfast cereals.
- ³ These ingredients do not count toward the limit for noncreditable grains.
- ⁴ Corn flour, corn grits, and cornmeal are noncreditable grains unless they are whole grain, enriched, or nixtamalized. Nixtamalization is a process in which dried corn is soaked and cooked in an alkaline solution. SFAs may need to obtain a PFS from the manufacturer to determine if a corn ingredient is nixtamalized. Nixtamalized corn ingredients credit as whole grains. For more information, see the CSDE's handout, *Crediting Whole Grains in the NSLP and SBP*.



"Contains 2% or less"

Sometimes an ingredients statement will list noncreditable grains after the statement, "contains 2% or less." SFAs must obtain a PFS from the manufacturer to document the combined weight (grams) of a commercial product's noncreditable grains if any of the three situations below apply.

1. The ingredients statement lists one or more noncreditable grains **before** the statement, "contains 2% or less." For example, the product below lists one noncreditable grain (soy flakes) before this statement.

Ingredients: Water, whole-wheat flour, enriched flour (wheat flour, niacin, reduced iron, thiamine mononitrate, riboflavin, enzyme, folic acid), brown sugar, corn oil, nonfat dry milk, yeast, cinnamon, *soy flakes*, salt, wheat gluten and 2% or less of each of the following: sodium benzoate (to protect flavor), corn syrup solids, potassium sorbate, icing stabilizer (calcium carbonate, sugar, agar, salt, mono and diglycerides, sorbitan monostearate), vanilla flavor [propylene glycol, water, sodium benzoate (as a preservative)].

2. The ingredients statement lists more than one noncreditable grain after the statement, "contains 2% or less." For example, the product below lists three noncreditable grains (oat fiber, modified food starch, and wheat starch) after this statement.

Ingredients: Whole-wheat flour, sugar, eggs, water, blueberries, enriched flour (flour, malted barley flour, niacin, reduced iron, thiamin mononitrate, riboflavin, folic acid), invert sugar, soybean oil, contains 2% or less of: palm oil, canola oil, propylene glycol mono- and diesters of fats and fatty acids, oat fiber, leavening (baking soda, sodium aluminum phosphate, monocalcium phosphate), mono- and diglycerides, modified food starch, potassium sorbate (preservative), sodium alginate, salt, soy lecithin, natural and artificial flavor, sodium stearoyl lactylate, wheat starch, blackberry juice concentrate, blueberry juice concentrate, malic acid, enzymes.

3. The ingredients statement lists one or more noncreditable grains without the statement, "contains 2% or less." For example, the product below lists four noncreditable grains (yellow corn flour, modified corn starch, yellow corn flour, and soy flour).

Ingredients: Whole-wheat bread (whole-wheat flour, water, enriched wheat flour [flour, malted barley flour, niacin, reduced iron, thiamine mononitrate, riboflavin, folic acid], sugar, wheat gluten, yeast, salt, soybean oil, mono and diglycerides, calcium propionate (preservative), datem, calcium sulfate, citric acid, soy lecithin, grain vinegar, potassium iodate), water, whole-wheat batter (whole-wheat flour, sugar, enriched bleached wheat flour [enriched with niacin, reduced iron, thiamine mononitrate, riboflavin, folic acid], dextrose, eggs, *yellow corn flour*, corn syrup solids, natural flavor, *modified corn starch*, salt, leavening (sodium aluminum phosphate, sodium bicarbonate), nonfat milk, spice, artificial flavor, modified cellulose gum, spice extractive), coating (bleached enriched

wheat flour [wheat flour, niacin, iron, thiamine mononitrate, riboflavin, folic acid], *yellow corn flour*, sugar, *soy flour*, salt, dextrose, leavening [sodium bicarbonate, monocalcium phosphate], yeast), soybean oil, cinnamon sugar (sugar, spices, natural flavor, silicon dioxide [added to prevent caking]).

When to ignore noncreditable grains

In some situations, noncreditable grains do not count toward the limit for noncreditable grains. Noncreditable grains can be ignored if any of the five situations below apply.

1. The ingredients statement lists only **one** noncreditable grain after the statement, "contains 2% or less." For example, the ingredients statement below lists one noncreditable grain (yellow corn flour) after this statement.

Ingredients: Whole-wheat flour, sugar, wheat gluten. Contains 2% or less of each of the following: honey, salt, *yellow corn flour*, yeast, molasses, diacetyl tartaric acid esters of mono-diglycerides (datem), ascorbic acid, mono-and diglycerides, l-cysteine, enzymes.

Note: The yellow corn flour in this product is a noncreditable grain because it is not whole grain, enriched, or nixtamalized. If the product's PFS indicates that the yellow corn flour is nixtamalized, it is a whole grain. For more information, see the CSDE's handout, *Crediting Whole Grains in the NSLP and SBP*.

2. The noncreditable grains are part of a **nongrain** ingredient. The limit for noncreditable grains does not apply to nongrain ingredients in commercial grain products. Examples include cereal bars that contain marshmallows made with modified corn starch; muffins that contain jam filling made with modified food starch; bagels that contain molasses powder made with wheat starch; or bread that contains a dough conditioner made with soy flakes.

SFAs can determine if noncreditable grains are part of the nongrain ingredients by reviewing the product's ingredients statement. When a product contains an ingredient that contains two or more ingredients itself (such as marshmallows or jam filling), these subingredients are listed after the name of the ingredient, or in parentheses or brackets after the name of the ingredient. The ingredients statements below show some examples of subingredients that contain noncreditable grains.

- Filling: Invert sugar, corn syrup, blueberry puree concentrate, glycerin, sugar, *modified food starch*, sodium alginate, citric acid, methylcellulose, dicalcium phosphate, malic acid, blueberry juice concentrate, natural and artificial flavor, red 40, blue 1.
- Marshmallows (sugar, dextrose, *modified corn starch*, corn syrup, cocoa, gelatin, natural and artificial flavor).
- Molasses powder (molasses, *wheat starch*).
- Dough conditioner (soybean oil, vegetable glycerides, soy flakes).

- 3. The noncreditable grains are part of a **WGR** fortified **RTE** breakfast cereal. The limit for noncreditable grains does not apply to fortified RTE breakfast cereals that contain a whole grain as the first ingredient. For more information, see the CSDE's handout, *Crediting Breakfast Cereals for Grades K-12 in the NSLP and SBP*.
- 4. The noncreditable grains are part of a WGR fortified RTE breakfast cereal that is an ingredient in a cereal bar. The limit for noncreditable grains does not apply to WGR fortified RTE breakfast cereals. However, the limit still applies to the combined weight of any other noncreditable grains in the noncereal grain portion of the cereal bar.



For example, the cereal bar product below contains a WGR fortified RTE breakfast cereal (highlighted in yellow) as the second ingredient. The cornmeal (noncreditable grain) in the RTE cereal is ignored because the RTE cereal contains a whole grain as the first ingredient and is fortified. However, the noncereal grain portion of the cereal bar contains two noncreditable grains (wheat starch and modified wheat starch) listed **outside** of the cereal ingredients, after the statement, "contains 2% or less." The SFA must obtain a PFS from the manufacturer to document that the combined weight of the two noncreditable grains in the grain portion does not exceed 3.99 grams per ounce equivalent.

Ingredients: Whole-grain oats, **cereal** (whole-grain wheat, sugar, *cornmeal*, brown sugar syrup, canola and/or rice bran oil, dextrose, baking soda, salt, calcium carbonate, trisodium phosphate, zinc and iron [mineral nutrients], vitamin C [sodium ascorbate], a B vitamin [niacinamide], artificial flavor, vitamin B6 [pyridoxine hydrochloride], vitamin B2 [riboflavin], vitamin B1 [thiamin mononitrate], vitamin A [palmitate], a B vitamin [folic acid], vitamin B12, vitamin D, BHT added to retain freshness), corn syrup, sugar, rice bran and/or canola oil, fructose, brown rice flour. Contains 2% or less of: whole-corn flour, glycerin, calcium carbonate, whole-grain oat flour, *wheat starch, modified wheat starch*, cocoa processed with alkali, salt, gelatin, color added, natural and artificial flavor, BHT added to retain freshness.

Note: Cereal bars are grain-based desserts. The weekly total of all grain-based desserts at lunch cannot exceed 2 ounce equivalents.

5. The noncreditable grains are part of the **nongrain portion** of a combination food, such as meat/meat alternates, vegetables, or fruits. The limit for noncreditable grains does not apply to the nongrain portion. Examples include modified food starch in the chicken portion of breaded chicken; wheat flour in the cheese filling of ravioli; soy flour and corn starch in the vegetable filling of an egg roll; and modified food starch in the fruit filling of a breakfast bun.

SFAs can determine if a noncreditable grain is part of the nongrain portion of a commercial product by reviewing the product's ingredients statement. When a product contains an ingredient that contains two or more ingredients itself (such as seasoning on chicken, apple filling in a breakfast bun, and cheese filling in ravioli), these subingredients are listed after the name of the ingredient, or in parentheses or brackets after the name of the ingredient. The ingredients statements below show some examples of subingredients that contain noncreditable grains.

- Seasoning [sugar, salt, sea salt, dextrose, spices, yeast extract, natural flavor, maltodextrin, canola oil (as a processing aid), *modified corn starch*].
- Apple filling (corn syrup, *modified food starch*, evaporated apples, cinnamon, lemon juice, locust bean gum, erythorbic acid and potassium sorbate [used as preservatives]).

The examples below show combination foods that contain noncreditable grains in the nongrain portion.

Example 1: Cheese ravioli

A ravioli product contains two noncreditable grains (bleached wheat flour and modified corn starch) in the meat/meat alternates portion (cheese filling), which is highlighted in yellow below. These noncreditable grains do not count toward the limit because they are part of the **nongrain portion**. The pasta (grain portion) does not contain any noncreditable grains.



Ingredients: **Filling:** Fat-free ricotta cheese (whey, skim milk [made from nonfat dry milk powder], vinegar, xanthan gum, carrageenan), egg, low moisture part skim mozzarella cheese (cultured part skim milk, salt, enzymes), whey protein isolate, sodium caseinate, romano cheese made from cow's milk (cultured milk, salt, enzymes), *bleached wheat flour*, garlic salt (salt, dehydrated garlic), salt, *modified corn starch*, sugar, dehydrated garlic. **Pasta:** whole-wheat flour, enriched durum wheat flour (wheat flour, niacin, ferrous sulfate, thiamin mononitrate, riboflavin, folic acid), water, egg.

Example 2: Fruit-filled breakfast bun

A fruit-filled breakfast bun contains one noncreditable grain (modified food starch) in the fruit portion (apple filling) and another noncreditable grain (whole soy flour) in the egg replacer (nongrain ingredient), which are highlighted in yellow below. These noncreditable grains do not count toward the limit because they are part of the nongrain portion. However, the **grain portion** contains three noncreditable grains (rye flour, malted barley flour, and wheat flour) listed after the statement, "contains

2% or less." These must be included when determining if the combined weight of all noncreditable grains meets the required limit. The SFA must obtain a PFS from the manufacturer to document that the combined weight of the three noncreditable grains does not exceed 3.99 grams per ounce equivalent.

Ingredients: Whole-grain white wheat flour, apple filling (corn syrup, modified food starch, evaporated apples, cinnamon, lemon juice, locust bean gum, erythorbic acid and potassium sorbate [used as preservatives]), water, margarine (palm oil, soybean oil, whey [milk], mono and diglycerides, soybean lecithin [soy], natural butter flavor, colored with beta carotene, vitamin A palmitate added), sugar, contains 2% or less of rye flour, malted barley flour, wheat flour, nonfat dry milk (nonfat dry milk, whey [milk]), salt, eggs, egg replacer (whole soy flour, wheat gluten, corn syrup solids, algin), yeast (leavening).

Note: Fruit-filled breakfast buns are grain-based desserts. The weekly total of all grain-based desserts at lunch cannot exceed 2 ounce equivalents.

Evaluating PFS Forms for Grain Products

A PFS does not provide any warranty against audit claims for reimbursable school meals. SFAs must check the manufacturer's crediting information for accuracy prior to including the product in reimbursable meals. The PFS must include the same information listed on the USDA's *Product Formulation Statement for Grains*. It must be on company letterhead, and signed and dated by an official company representative. If the PFS does not meet these requirements, the SFA cannot accept it, and the product cannot credit in school meals.

The CSDE has observed several common compliance issues with manufacturer's PFS forms for grain products. The guidance below helps SFAs avoid these issues.

- If the manufacturer uses a different format from the USDA's *Product Formulation Statement for Grains*, check to be sure that the manufacturer's PFS includes the same information listed on the USDA's form.
- Check that the PFS is on company letterhead, and is signed and dated by an official company representative.
- Read the product's ingredients statement to determine if it contains any noncreditable grains (see table 4). Compare this information with the manufacturer's PFS. If the product's ingredients statement lists any noncreditable grains, the PFS must indicate the combined weight (grams) of all noncreditable grains per ounce equivalent. Sometimes a product's ingredients statement contains noncreditable grains but the PFS incorrectly states that the product does not contain any noncreditable grains.

• If the product's ingredients statement contains more than one noncreditable grain, confirm with the manufacturer that the amount of noncreditable grains indicated on the PFS includes the combined weight (grams) of all noncreditable grains listed in the product's ingredients statement. For example, if the PFS indicates that a product contains 0.89 grams of noncreditable grains and the product's ingredients statement includes oat bran, modified corn starch, wheat flour, and rice starch, verify that 0.89 grams includes the weight of all four noncreditable grains. For information on determining if noncreditable grains comply with the limit, see "WGR Criterion 3 – Noncreditable Grains Meet Limit" on page 9.

SFAs must maintain PFS forms and supporting information on file to document meal pattern compliance for auditing purposes. The CSDE will review this information during the Administrative Review of school nutrition programs. For more information on PFS forms, see the CSDE's handout, *Product Formulation Statements* and *Accepting Processed Product Documentation*, and the USDA's handouts, *Product Formulation Statement for Grains*, *Sample Completed Product Formulation Statement for Grains*, and *Tips for Evaluating a Manufacturer's Product Formulation Statement*.

Examples of Evaluating Commercial Foods for WGR Compliance

The examples on pages 19-24 show how to evaluate commercial grain products for compliance with the WGR criteria for grades K-12. The following guidance applies to the ingredients for these products.

- Creditable grains (whole and enriched) in the product's ingredients statement are listed in bold text and whole grains are in bold UPPERCASE text. For examples of whole and enriched grains, see the CSDE's handouts, Crediting Whole Grains in the NSLP and SBP and Crediting Enriched Grains in the NSLP and SBP.
- Noncreditable grains (such as wheat flour, yellow corn flour, and modified food starch) are listed in *bold italicized* text. Noncreditable grains must be included in the weight of a product's noncreditable grain ingredients unless they meet one of the five situations when noncreditable grains can be ignored. For more information, see "When to ignore noncreditable grains" on page 13. For examples of noncreditable grains, see column A in table 4.
- Grain derivatives (by-products of grains) and other ingredients that do not count toward the limit for noncreditable grains (such as wheat gluten and maltodextrin), are listed in *italicized text*. For examples of grain derivatives, see column B in table 4.

Table 5 includes definitions for some common grain ingredients found in commercial products.

Table 5. Definitions of common ingredients in commercial grain products

Azodicarbonamide (ADA) is a chemical substance approved by the FDA for use as a whitening agent in cereal flour and as a dough conditioner in bread baking.

Bleached flour contains a food additive that accelerates the aging process, improves texture, stiffens soft flour, and makes the flour appear whiter. Unbleached flour does not contain this food additive. Bleached and unbleached flours are creditable grains if they are enriched. For more information, see the CSDE's handout, *Crediting Enriched Grains in the NSLP and SBP*.

Bromated flour has been enriched with potassium bromate, which promotes gluten development in dough to improve its baking qualities. Unbromated flour does not contain this ingredient. Bromated flour and unbromated flours are creditable grains if they are enriched. For more information, see the CSDE's handout, *Crediting Enriched Grains in the NSLP and SBP*.

DATEM or **datem** (diacetyl tartaric acid ester of mono- and diglycerides) is an emulsifier used in baking. It strengthens the gluten network in dough to improve the bread's texture and shape.

L-cysteine is an amino acid used in baking to help soften the dough and reduce processing time.

Maltodextrin is a carbohydrate produced from starch. It is used as a food additive to enhance texture and flavor. Maltodextrin is a grain derivative that does not count toward the limit for noncreditable grains. ¹

Modified food starch is made from starch and is used as a thickening agent, stabilizer, or emulsifier. The most common types of modified food starch are made from corn, wheat, potato, and tapioca. Modified food starch is a grain derivative that does not count toward the limit for noncreditable grains. ¹

Vital wheat gluten is a powdered form of wheat gluten that is used in baking to add elasticity to flours that are low in gluten, such as whole wheat or rye. It is a grain derivative that does not count toward the limit for noncreditable grains. ¹

Wheat gluten is the protein component of the wheat grain that helps baked goods hold their shape. It is a grain derivative that does not count toward the limit for noncreditable grains. ¹

Whey is a milk protein that is used to emulsify, thicken, and brown baked goods.

¹ For examples of grain derivatives, see column B in table 4.

Product 1: Whole-grain bagel (commercial grain product)

Ingredients: WHOLE-WHEAT FLOUR, enriched bromated wheat flour (niacin [a-B vitamin], thiamine mono nitrate [vitamin B-1], ferrous sulfate [iron], potassium bromate, riboflavin [vitamin B-2], and folic acid), water, brown sugar granulated sugar. Contains 2% or less of the following ingredients: salt, vital wheat gluten, mono & diglycerides, honey, *cornmeal*, calcium propionate, *malted barley flour*, molasses powder (molasses, *wheat starch*), ammonium chloride, ascorbic acid (vitamin C), l-cysteine hydrochloride, azodicarbonamide (ADA), calcium sulfate, enzymes.



WGR criteria for commercial grain products	Complies?	
Criterion 1 (whole grain): A whole grain is the first ingredient; or water is the first ingredient and a whole grain is the second ingredient; or a whole grain is not the first ingredient but the product's PFS indicates that the combined weight of all whole grains is the greatest ingredient by weight. Whole-wheat flour is the first ingredient.	☑ Yes □ No □ Need PFS	
Criterion 2 (enriched grains): All grains other than whole grains are enriched; or the product contains only whole grains (i.e., product is 100 percent whole grain). Enriched bromated wheat flour is the only other creditable grain ingredient.	✓ Yes ☐ No ☐ Need PFS	
Criterion 3 (noncreditable grains): The product does not contain any noncreditable grains (see table 4); or only one noncreditable grain is listed after the statement, "contains 2% or less;" or the PFS indicates that the combined weight of all noncreditable grains is no more than 3.99 grams for groups A-G and no more than 6.99 grams for groups H-I.		
The product contains two noncreditable grains (cornmeal and malted barley flour) listed after the statement, "contains 2% or less." The SFA must obtain a PFS from the manufacturer to determine if their combined weight is 3.99 grams or less. For more information, see "Contains 2% or less" on page 12. Note: The wheat starch (noncreditable grain) in the molasses powder is ignored because molasses powder is a nongrain ingredient. For more information, see "When to ignore noncreditable grains" on page 13.		
Is product WGR? \square Yes 1 \square No \square Need PFS		
¹ The SFA must determine if the product's serving size provides the required ounce equivalent minimum creditable grains. For more information, see the CSDE's handouts, <i>Grain Ounce Grades K-12 in the NSLP and SBP</i> and <i>Calculation Methods for Crediting Grains for Grades K-12 in and SBP</i> .	Equivalents for	

Product 2: Oat bread (commercial grain product)

Ingredients: Unbleached enriched wheat flour [flour, malted barley flour, reduced iron, niacin, thiamin mononitrate (vitamin B1), riboflavin (vitamin B2), folic acid], water, WHOLE-WHEAT FLOUR, WHOLE OATS, sugar, wheat gluten, yeast, soybean oil, salt, calcium propionate (preservative), monoglycerides, datem and/or sodium stearoyl lactylate, calcium sulfate, citric acid, calcium carbonate, soy lecithin, whey, nonfat milk.



WGR criteria for commercial grain products	Complies?
Criterion 1 (whole grain): A whole grain is the first ingredient; or water is the first ingredient and a whole grain is the second ingredient; or a whole grain is not the first ingredient but the product's PFS indicates that the combined weight of all whole grains is the greatest ingredient by weight.	
Enriched flour is the first ingredient but the product also contains two whole grains (whole-wheat flour and whole oats). The SFA must obtain a PFS from the manufacturer to determine if the combined weight of the whole grains is more than the weight of the enriched flour. For more information, see "Products with multiple whole grains" on page 7.	
Criterion 2 (enriched grains): All grains other than whole grains are enriched; or the product contains only whole grains (i.e., product is 100 percent whole grain). Unbleached enriched flour is the only other creditable grain ingredient.	☑ Yes □ No □ Need PFS
Criterion 3 (noncreditable grains): The product does not contain any noncreditable grains (see table 4); or only one noncreditable grain is listed after the statement, "contains 2% or less;" or the PFS indicates that the combined weight of all noncreditable grains is no more than 3.99 grams for groups A-G and no more than 6.99 grams for groups H-I. The product does not contain any noncreditable grains.	
Is product WGR? \square Yes 1 \square No \square Need PFS	•
¹ The SFA must determine if the product's serving size provides the required ounce equival minimum creditable grains. For more information, see the CSDE's handouts, <i>Grain Ounce Grades K-12 in the NSLP and SBP</i> and <i>Calculation Methods for Crediting Grains for Grades K-12 and SBP</i> .	Equivalents for

Product 3: Cinnamon roll (commercial grain product)

Ingredients: Water, flour blend [WHOLE-WHEAT FLOUR, enriched flour (wheat flour, niacin, reduced iron, thiamine mononitrate, riboflavin, enzyme, folic acid)], brown sugar, corn oil, nonfat dry milk, yeast, cinnamon, dough conditioner (soybean oil, vegetable glycerides, *soy flakes*), salt, *wheat gluten* and 2% or less of each of the following: sodium benzoate (to protect flavor), corn syrup solids, potassium sorbate, icing stabilizer (calcium carbonate, sugar, agar, salt, mono and diglycerides, sorbitan monostearate), vanilla flavor [propylene glycol, water, sodium benzoate (as a preservative)].

WGR criteria for commercial grain products	Complies?	
Criterion 1 (whole grain): A whole grain is the first ingredient; or water is the first ingredient and a whole grain is the second ingredient; or a whole grain is not the first ingredient but the product's PFS indicates that the combined weight of all whole grains is the greatest ingredient by weight.		
Water is the first ingredients and a flour blend (whole-wheat flour and enriched flour) is the second ingredient. The SFA must obtain a PFS from the manufacturer to determine if the weight of the whole-wheat flour in the flour blend is more than the weight of the first ingredient after the flour blend (brown sugar). For more information, see "Products with flour blends" on page 8.		
Criterion 2 (enriched grains): All grains other than whole grains are enriched or the product contains only whole grains (i.e., product is 100 percent whole grain). Enriched flour is the only other creditable grain ingredient.	☑ Yes □ No □ Need PFS	
Criterion 3 (noncreditable grains): The product does not contain any noncreditable grains (see table 4); or only one noncreditable grain is listed after the statement, "contains 2% or less;" or the PFS indicates that the combined weight of all noncreditable grains is no more than 3.99 grams for groups A-G and no more than 6.99 grams for groups H-I.		
Note: The soy flakes (noncreditable grain) in the dough conditioner are ignored because the dough conditioner is a nongrain ingredient. For more information, see "When to ignore noncreditable grains" on page 13.		
Is product WGR? \square Yes ^{1,2} \square No \square Need PFS		
 The SFA must determine if the product's serving size provides the required ounce equivalent minimum creditable grains. For more information, see the CSDE's handouts, <i>Grain Ounce Eq Grades K-12 in the NSLP and SBP</i> and <i>Calculation Methods for Crediting Grains for Grades K-12 in th SBP</i>. The weekly total of all grain-based desserts at lunch cannot exceed 2 ounce equivalents. For a information, see section 3 of the CSDE's guide, <i>Menu Planning Guide for School Meals for Grades</i> 	uivalents for be NSLP and more	

Product 4: Corn muffin (commercial grain product)

Ingredients: Water, sugar, eggs, WHOLE GRAIN CORN FLOUR, WHOLE-WHEAT FLOUR, enriched flour (wheat flour, niacin, iron, thiamin mononitrate, riboflavin, folic acid), soybean/canola oil, *modified corn starch*, milk whey, leavening (sodium acid pyrophosphate, baking soda), vital wheat gluten, sugar, nonfat milk, calcium acetate, xanthan gum, guar gum.



WGR criteria for commercial grain products	Complies?
Criterion 1 (whole grain): A whole grain is the first ingredient; or water is the first ingredient and a whole grain is the second ingredient; or a whole grain is not the first ingredient but the product's PFS indicates that the combined weight of all whole grains is the greatest ingredient by weight.	☐ Yes ☐ No ☑ Need PFS
Sugar is the first ingredient (excluding water) but the product also contains two whole grains (whole-grain corn flour and whole-wheat flour). The SFA must obtain a PFS from the manufacturer to determine if the combined weight of the whole grains is more than the weight of the sugar. For more information, see "Products with multiple whole grains" on page 7.	
Criterion 2 (enriched grains): All grains other than whole grains are enriched or the product contains only whole grains (i.e., product is 100 percent whole grain). Enriched flour is the only other creditable grain ingredient.	☑ Yes □ No □ Need PFS
Criterion 3 (noncreditable grains): The product does not contain any noncreditable grains (see table 4); or only one noncreditable grain is listed after the statement, "contains 2% or less;" or the PFS indicates that the combined weight of all noncreditable grains is no more than 3.99 grams for groups A-G and no more than 6.99 grams for groups H-I. The product contains one noncreditable grain (modified corn starch). The SFA must obtain a PFS from the manufacturer to document that the weight of the noncreditable grain does not exceed 3.99 grams per ounce equivalent. For more information, see "Contains 2% or less" on page 12.	
Is product WGR? \square Yes 1 \square No \square Need PFS	
¹ The SFA must determine if the product's serving size provides the required ounce equivalent minimum creditable grains. For more information, see the CSDE's handouts, <i>Grain Ounce Grades K-12 in the NSLP and SBP</i> and <i>Calculation Methods for Crediting Grains for Grades K-12 is and SBP</i> .	Equivalents for

Product 5: Cheese ravioli (commercial combination food)

Ingredients: Filling: Fat-free ricotta cheese (whey, skim milk [made from nonfat dry milk powder], vinegar, xanthan gum, carrageenan), egg, low moisture part skim mozzarella cheese (cultured part skim milk, salt, enzymes), whey protein isolate, sodium caseinate, romano cheese made from cow's milk (cultured milk, salt, enzymes), bleached wheat flour, garlic salt (salt, dehydrated garlic), salt, modified corn starch, sugar, dehydrated garlic. Pasta: WHOLE-WHEAT FLOUR, enriched durum wheat flour (wheat flour, niacin, ferrous sulfate, thiamin mononitrate, riboflavin, folic acid), water, egg.

WGR criteria for commercial combination foods (grain portion listed separately)	Complies?
Criterion 1 (whole grain): A whole grain is the first ingredient in the grain portion; or water is the first ingredient in the grain portion and a whole grain is the second ingredient; or a whole grain is not the first ingredient in the grain portion but the product's PFS indicates that the combined weight of all whole grains is the greatest ingredient by weight. White whole-wheat flour is the first ingredient in the grain portion (pasta).	☑ Yes □ No □ Need PFS
Criterion 2 (enriched grains): All grains in the grain portion (other than whole grains) are enriched or the grain portion contains only whole grains (i.e., the grain portion of the product is 100 percent whole grain). Enriched durum wheat flour is the only other creditable grain ingredient in the grain portion.	☑ Yes □ No □ Need PFS
Criterion 3 (noncreditable grains): The grain portion does not contain any noncreditable grains (see table 4); or only one noncreditable grain is listed after the statement, "contains 2% or less" in the grain portion; or the PFS indicates that the combined weight of all noncreditable grains in the grain portion is no more than 3.99 grams for groups A-G and no more than 6.99 grams for groups H-I. The pasta (grain portion) does not contain any noncreditable grains. The noncreditable grains (bleached wheat flour and modified corn starch) in the filling (nongrain portion highlighted in yellow) do not count toward the limit for noncreditable grains because they are not part of the grain portion. For more information, see "When to ignore noncreditable grains" on page 13.	
Is product WGR? \square Yes 1 \square No \square Need PFS	
¹ The SFA must determine if the product's serving size provides the required ounce equivaled minimum creditable grains. For more information, see the CSDE's handouts, <i>Grain Ounce Grades K-12 in the NSLP and SBP</i> and <i>Calculation Methods for Crediting Grains for Grades K-12 is and SBP</i> .	Equivalents for

Note: To credit the ricotta and mozzarella cheese as the meat/meat alternates component, the manufacturer's PFS must document the amount of cheese per serving.

Product 6: Breaded chicken nuggets (commercial combination food)

Ingredients: Chicken, water, salt, and natural flavor. Breaded with: WHITE WHOLE-WHEAT FLOUR, water, wheat starch, enriched flour (wheat flour, niacin, reduced iron, thiamine mononitrate, riboflavin, folic acid), salt, contains 2% or less of the following: yellow corn flour, corn starch, dried onion, dried garlic, dried yeast, brown sugar, extractives of paprika, and spices. Breading set in vegetable oil.



WGR criteria for commercial combination foods (grain portion listed separately)	Complies?	
Criterion 1 (whole grain): A whole grain is the first ingredient in the grain portion; or water is the first ingredient in the grain portion and a whole grain is the second ingredient; or a whole grain is not the first ingredient in the grain portion but the product's PFS indicates that the combined weight of all whole grains is the greatest ingredient by weight. White whole-wheat flour is the first ingredient in the breading (grain portion).	☑ Yes □ No □ Need PFS	
Criterion 2 (enriched grains): All grains in the grain portion (other than whole grains) are enriched; or the grain portion contains only whole grains (i.e., the grain portion of the product is 100 percent whole grain). Enriched flour is the only other creditable grain ingredient in the grain portion.	☑ Yes □ No □ Need □ PFS	
Criterion 3 (noncreditable grains): The grain portion does not contain any noncreditable grains (see table 4); or only one noncreditable grain is listed after the statement, "contains 2% or less" in the grain portion; or the PFS indicates that the combined weight of all noncreditable grains in the grain portion is no more than 3.99 grams for groups A-G and no more than 6.99 grams for groups H-I.	☐ Yes ☐ No ☑ Need PFS	
The grain portion contains three noncreditable grains. Wheat starch is listed before the statement, "contains 2% or less," and yellow corn starch and corn starch are listed after this statement. The SFA must obtain a PFS from the manufacturer to document that the combined weight of the three noncreditable grains does not exceed 3.99 grams per ounce equivalent. For more information, see "Contains 2% or less" on page 12.		
Is product WGR? \square Yes 1 \square No \square Need PFS		
¹ The SFA must determine if the product's serving size provides the required ounce equivalents or minimum creditable grains. For more information, see the CSDE's handouts, <i>Grain Ounce Equivalents for Grades K-12 in the NSLP and SBP</i> and <i>Calculation Methods for Crediting Grains for Grades K-12 in the NSLP and SBP</i> .		

Note: To credit the chicken as the meat/meat alternates component, the product's CN label or PFS must document the amount of cooked chicken per serving.

WGR Criteria for Foods Made On Site

Grain foods prepared on site by the SFA must have a standardized recipe that documents the weight of creditable grains (whole and enriched) in one serving. Grain foods made on site are WGR if they meet the following three criteria:

- the recipe contains at least 50 percent whole grains by weight;
- all grains other than whole grains are enriched; and
- the combined weight of any noncreditable grains (such as bran, germ, and corn starch) complies with the limit for the appropriate grain group in the USDA's ounce equivalent chart.



For example, a pizza dough recipe that contains 6 pounds of whole-wheat flour, 5 pounds of enriched flour, and no noncreditable grains is WGR because the whole-wheat flour weighs more than the enriched flour. Table 6 summarizes the WGR criteria for foods made on site by the SFA.

Table 6. WGR criteria for foods made on site by the SFA

These WGR criteria apply to all foods made on site. A food must meet all three criteria to be WGR.

WGR criterion 1

The recipe must contain at least 50 percent whole grains by weight. A recipe meets this criterion if the combined weight of all whole grains is equal to or greater than the combined weight of all enriched grains; or the recipe contains only whole grains. For more information, see the CSDE's handout, *Crediting Whole Grains in the NSLP and SBP*. For combination foods made on site that contain a grain portion (such as pizza crust in pizza and breading on chicken), the WGR criteria apply only to the **grain portion** of the recipe.

WGR criterion 2

All grains in the recipe other than whole grains must be enriched. For more information, see the CSDE's handout, *Crediting Enriched Grains in the NSLP and SBP*.

WGR criterion 3

Any noncreditable grains (such as bran, germ, and corn starch) must be less than 2 percent (1/4 ounce equivalent) per ounce equivalent of the recipe. To comply with this limit, the combined total of all noncreditable grains cannot exceed 3.99 grams per ounce equivalent for groups A-G or 6.99 grams per ounce equivalent for groups H-I. If noncreditable grains exceed these amounts, the recipe is noncreditable, even if it meets WGR criteria 1 and 2. For examples of noncreditable grains, see table 4.

Examples of Evaluating Recipes for WGR Compliance

To credit foods made on site as WGR foods, SFAs must review the grain ingredients in the standardized recipe. Standardized recipes list measurements for grain ingredients in weight (pounds and ounces) and volume (e.g., cups and quarts). SFAs must use the recipe's **weight** measurements to determine if the recipe is WGR and the WGR ounce equivalents per serving. For assistance with recipe calculations, such as converting fractions to decimals, SFAs may use the ICN's *Basics at a Glance Portion Control Poster* and the decimal equivalents of fractions in the "Introduction" section of the USDA's *Food Buying Guide for Child Nutrition Programs*.



Recipes that are not standardized (such as recipes used at home) typically list grain ingredients in volume. To determine the ounce equivalents of these recipes, SFAs must first convert the volume of all grain ingredients to weight (grams). SFAs may use any of the methods below for this calculation.

- Use the manufacturer's serving size information on the Nutrition Facts label for the grain ingredient. For example, a recipe contains 2 cups of enriched flour and the product's Nutrition Facts label states that ½ cup of enriched flour weighs 30 grams. Multiply the weight of the manufacturer's serving (30 grams) by the amount of the ingredient used in the recipe (2 cups) to determine the weight of the ingredient used in the recipe (240 grams).
- Search the USDA's National Nutrient Database for Standard Reference 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.
- Use volume equivalent charts that list the weight of 1 cup of grain ingredients. The CSDE's
 handout, Calculation Methods for Grain Ounce Equivalents for Grades K-12 in the NSLP and SBP,
 contains a volume equivalents chart.
- Determine the average weight of 1 cup of the grain ingredient by measuring and weighing several samples. For more information, see the CSDE's *Yield Study Form*.

Note: Depending on the weight of the grain ingredients, a recipe that contains an equal volume (e.g., cups) of whole-grain and enriched flour might not comply with the WGR criteria. For example, using the grams per cup from the USDA's National Nutrient Database for Standard Reference, a recipe that contains 2 cups of whole-wheat flour (240 grams) and 2 cups of enriched flour (250 grams) does not contain at least 50 percent whole grains because the whole-wheat flour weighs less than the enriched flour.

Table 7 shows an example of how to evaluate a standardized recipe for compliance with the WGR criteria for grades K-12. This recipe is WGR because all of the grain ingredients are whole grains. Tables 8 and 9 shows examples of how to evaluate nonstandardized recipes for compliance with the WGR criteria for grades K-12.

Table 7. Evaluating WGR compliance of a standardized recipe

Corn Muffin (25 servings)		
Ingredients	Weight	Measure
Whole-wheat flour	8 oz	1½ cups
White whole-grain cornmeal	8 oz	11/4 cups
Sugar	3 oz	⅓ cup 2 Tbsp
Baking powder		³ / ₄ tsp
Salt		3 qt ½ cup
Frozen whole eggs, thawed	3 oz	1∕3 cup
Nonfat milk		1 ³ / ₄ cups
Canola oil		¹∕₄ cup

WGR criteria for foods made on site	Compl	ies?
Criterion 1 (whole grain): The combined weight of all whole grains is equal to or greater than the combined weight of all enriched grains, or all grains are whole grains (i.e., recipe is 100 percent whole grain).	☑ Yes	□No
All grains (whole-wheat flour and whole-grain cornmeal) are whole grains. The recipe is 100 percent whole grain.		
Criterion 2 (enriched grains): All grains other than whole grains are enriched or all grains are whole grains (i.e., recipe is 100 percent whole grain). The recipe is 100 percent whole grain.	☑ Yes	□No
Criterion 3 (noncreditable grains): The recipe does not contain any noncreditable grains (see table 4); or the combined weight of all noncreditable grains meets the limit of no more than 3.99 grams per ounce equivalent for groups A-G and no more than 6.99 grams per ounce equivalent for groups H-I. The recipe does not contain any noncreditable grains.		□ No
Is recipe WGR? ☑ Yes¹ ☐ No		
¹ The SFA must determine if the recipe's serving provides the required ounce equivalents or minimum creditable grains. For more information, see the CSDE's handouts, <i>Grain Ounce Equivalents for Grades K-12 in the NSLP and SBP</i> and <i>Calculation Methods for Crediting Grains for Grades K-12 in the NSLP and SBP</i> .		

Table 8 shows an example of grain ingredients in a nonstandardized recipe that is WGR because the whole-wheat flour weighs more than the enriched flour.

Crain in anodianta	Magazza	Convert cups to grams	
Grain ingredients	Measure	Grams per cup 1	Weight (grams)
Whole-wheat flour	1 ½ cups	x 120 =	180.00 grams
Enriched flour	1 ½ cups	x 125 =	156.25 grams

WGR criteria for foods made on site	Compl	ies?			
Criterion 1 (whole grain): The combined weight of all whole grains is equal to or greater than the combined weight of all enriched grains, or all grains are whole grains (i.e., recipe is 100 percent whole grain).	☑ Yes	□No			
The whole-wheat flour (180 grams) weighs more than the enriched flour (156.25 grams).					
Criterion 2 (enriched grains): All grains other than whole grains are enriched or all grains are whole grains (i.e., recipe is 100 percent whole grain). The other creditable grain is enriched flour.	☑ Yes	□ No			
Criterion 3 (noncreditable grains): The recipe does not contain any noncreditable grains (see table 4); or the combined weight of all noncreditable grains meets the limit of no more than 3.99 grams per ounce equivalent for groups A-G and no more than 6.99 grams per ounce equivalent for groups H-I. The recipe does not contain any noncreditable grains.	☑ Yes	□No			
Is recipe WGR? \square Yes 2 \square No					

¹ The grams per cup are from the USDA's National Nutrient Database for Standard Reference.

The SFA must determine if the recipe's serving provides the required ounce equivalents or minimum creditable grains. For more information, see the CSDE's handouts, *Grain Ounce Equivalents for Grades K-12 in the NSLP and SBP* and *Calculation Methods for Crediting Grains for Grades K-12 in the NSLP and SBP*.

Table 9 shows an example of grain ingredients in a nonstandardized recipe that is not WGR because the enriched flour weighs more than the whole-wheat flour. To make this recipe WGR, the SFA would need to increase the amount of whole-wheat flour so that it weighs the same or more than the enriched flour.

Table 9. Evaluating WGR compliance of a nonstandardized recipe with equal amounts (cups) of whole-grain and enriched flour

Crain in anadianta	Мология	Convert cups to grams		
Grain ingredients	Measure	Grams per cup 1	Weight (grams)	
Whole-wheat flour	2 cups	x 120 =	240 grams	
Enriched flour	2 cups	x 125 =	250 grams	

WGR criteria for foods made on site	Complies?
Criterion 1 (whole grain): The combined weight of all whole grains is equal to or greater than the combined weight of all enriched grains, or all grains are whole grains (i.e., recipe is 100 percent whole grain). Since the enriched flour (250 grams) weighs more than the	☐ Yes ☑ No
whole-wheat flour (240 grams), the recipe does not contain at least 50 percent whole grains.	
Criterion 2 (enriched grains): All grains other than whole grains are enriched, or all grains are whole grains (i.e., recipe is 100 percent whole grain).	☑ Yes □ No
The other creditable grain is enriched flour.	
Criterion 3 (noncreditable grains): The recipe does not contain any noncreditable grains (see table 4); or the combined weight of all noncreditable grains meets the limit of no more than 3.99 grams per ounce equivalent for groups A-G and no more than 6.99 grams per ounce equivalent for groups H-I. The recipe does not contain any noncreditable grains.	☑ Yes □ No
Is recipe WGR? \square Yes 2 \square No	
 The grams per cup are from the USDA's National Nutrient Database for Stan The SFA must determine if the recipe's serving provides the required ounce exminimum creditable grains. For more information, see the CSDE's handouts, 	quivalents or

Equivalents for Grades K-12 in the NSLP and SBP and Calculation Methods for Crediting Grains for Grades

K-12 in the NSLP and SBP.

Resources

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Basics at a Glance Portion Control Poster (Institute of Child Nutrition):
   https://theicn.org/icn-resources-a-z/basics-at-a-glance/
Calculating Weekly Percentage of Whole Grain-rich Menu Items in the NSLP and SBP (CSDE):
   https://portal.ct.gov/-
   /media/SDE/Nutrition/NSLP/Crediting/PercentageWGRCalculation.xlsx
Calculation Methods for Grain Ounce Equivalents for Grades K-12 in the NSLP and SBP (CSDE):
   https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/GrainCalc.pdf
Child Nutrition (CN) Labeling Food Manufacturers/Industry (USDA webpage):
   https://www.fns.usda.gov/cnlabeling/food-manufacturersindustry
Child Nutrition (CN) Labeling Program (CSDE):
   https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/CNlabel.pdf
Comparison of Meal Pattern Requirements for the Grains Component in the School Nutrition
   Programs (CSDE):
   https://portal.ct.gov/-
   /media/SDE/Nutrition/NSLP/Crediting/ComparisonGrainCrediting.pdf
Crediting Enriched Grains in the NSLP and SBP (CSDE):
   https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/CreditEnrichedGrains.pdf
Crediting Whole Grains in the NSLP and SBP (CSDE):
   https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/CreditWholeGrains.pdf
CSDE Operational Memorandum No. 11-19: Weekly Whole Grain-rich (WGR) Requirement for
   the NSLP and SBP Meal Patterns for Grades K-12
   https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Memos/OM2019/OM11-19.pdf
Food Buying Guide for Child Nutrition Programs (USDA):
   https://www.fns.usda.gov/tn/food-buying-guide-for-child-nutrition-programs
FoodData Central Nutrient Database (USDA):
   https://fdc.nal.usda.gov/
Grain Ounce Equivalents for Grades K-12 in the NSLP and SBP (CSDE):
   https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/Grainsozeq.pdf
Menu Planning Guide for School Meals for Grades K-12 (CSDE):
   https://portal.ct.gov/SDE/Nutrition/Menu-Planning-Guide-for-School-Meals
Product Formulation Statement for Grains: Ounce Equivalents (USDA):
   https://fns-prod.azureedge.net/sites/default/files/resource-
   files/PFS_Documenting_Grains_oz_eq.pdf
Product Formulation Statements (CSDE):
   https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/PFS.pdf
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- Sample Completed Product Formulation Statement for Grains: Ounce Equivalents (USDA): https://fns-prod.azureedge.net/sites/default/files/resource-files/PFS_Sample_oz_eq.pdf
- Tips for Evaluating a Manufacturer's Product Formulation Statement (USDA): https://fns-prod.azureedge.net/sites/default/files/cn/manufacturerPFStipsheet.pdf
- USDA Final Rule (83 FR 63775): Child Nutrition Programs: Flexibilities for Milk, Whole Grains, and Sodium Requirements:
 - https://www.govinfo.gov/content/pkg/FR-2018-12-12/pdf/2018-26762.pdf
- USDA Memo SP 30-2012: Grain Requirements for the National School Lunch Program and School Breakfast Program:
 - https://www.fns.usda.gov/school-meals/grain-requirements-national-school-lunch-program-and-school-breakfast-program
- USDA Memo SP 34-2019, CACFP 15-2019 and SFSP 15-2019: Crediting Coconut, Hominy, Corn Masa, and Masa Harina in the Child Nutrition Programs: https://www.fns.usda.gov/cn/crediting-coconut-hominy-corn-masa-and-masa-harina-child-nutrition-programs
- Whole Grain Resource for the National School Lunch and School Breakfast Programs (USDA): https://www.fns.usda.gov/tn/whole-grain-resource-national-school-lunch-and-school-breakfast-programs-0
- Yield Study Form (CSDE):
 - https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/YieldStudy.pdf.



For more information, review the CSDE's Menu Planning Guide for School Meals for Grades K-12 and visit the CSDE's Meal Patterns for Grades K-12 in School Nutrition Programs and Crediting Foods in School Nutrition Programs webpages, or contact the school nutrition programs staff in the CSDE's Bureau of Health/Nutrition, Family Services and Adult Education, 450 Columbus Boulevard, Suite 504, Hartford, CT 06103-1841.

This document is available at https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/WGRCriteria.pdf.

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

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