

Meeting the Whole Grain-rich Requirement for the National School Lunch Program and School Breakfast Program

Meal Patterns for Grades K-12

School Year 2023-24



Revised February 2024

Connecticut State Department of Education
Bureau of Child Nutrition Programs
450 Columbus Boulevard, Suite 504
Hartford, CT 06103-1841

Meeting the Whole Grain-rich Requirement for the NSLP and SBP Meal Patterns for Grades K-12

[https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/
Crediting/WGR_Requirement_SNP_grades_K-12.pdf](https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/WGR_Requirement_SNP_grades_K-12.pdf)

Project Director

Susan S. Fiore, M.S., R.D., Nutrition Education Coordinator

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.

Contents

About this Guide.....	iv
WGR Criteria for Connecticut Nutrition Standards.....	v
CSDE Contact Information.....	vi
Abbreviations and Acronyms	vii
1 — Overview of Grains Component.....	1
Required Daily and Weekly Servings.....	2
Table 1-1. Required daily and weekly oz eq of the grains component.....	2
Determining the Oz Eq Contribution.....	3
Method 1: USDA’s Exhibit A chart	3
Method 2: creditable grains	4
Grain crediting tools	4
Whole Grain-rich (WGR) Requirement.....	5
Methods to evaluate foods for WGR compliance.....	5
Whole Grain versus WGR.....	6
Reviewing the Ingredients Statement.....	6
Documentation for Weekly WGR Requirement	7
CSDE worksheet for calculating the weekly WGR percentage.....	7
Steps for Calculating the Weekly Percentage of WGR Menu Items	7
Step 1: Determine the total oz eq of all offered grain items (WGR and enriched)	7
Step 2: Determine the total oz eq of all offered WGR items.....	8
Step 3: Determine the percentage of WGR grains offered during the week.....	8
Table 1-2. Steps for calculating the weekly percentage of WGR menu items	8
Percentage of Weekly WGR Menu Items versus Weekly Grains Requirement.....	9
Table 1-3. How to calculate total weekly grains versus percentage of WGR menu items	9
Table 1-4. Sample calculation of total weekly grain oz eq and weekly WGR percentage for grades 6-8.....	10

2 — Creditable Grains	11
Whole Grains	11
Grain name states “whole”	11
Table 2-1. Common whole-grain products and ingredients.....	12
Other names for whole grains	13
Food and Drug Administration (FDA) standard of identity	14
Table 2-2. Grain products with an FDA standard of identity.....	14
WIC-approved whole grain foods list	14
Nixtamalized corn ingredients	14
Reconstituted grains	16
Enriched Grains	17
Bran and Germ	17
Table 2-3. Examples of grain ingredients that are enriched or not enriched	18
3 — WGR Criteria for Commercial Products	19
WGR Criterion 1: At Least 50 Percent Whole Grains	20
Method 1: minimum whole grains per oz eq.....	21
Method 2: primary grain ingredient by weight	22
Commercial products with flour blends.....	24
Method 3: FDA whole-grain health claim:	25
Method 4: WIC whole-grain food list	25
WGR Criterion 2: Noncreditable Grains Meet Limit	26
Table 3-1. Examples of noncreditable grain ingredients	27
When to ignore noncreditable grains.....	28
Table 3-2. Examples of when a PFS is required for products with the statement “contains 2% or less”	29
4 — WGR Documentation	33
Documentation for Commercial WGR Products	33
Child Nutrition (CN) labels	33
PFS forms	33
When a PFS is Required for Commercial WGR Products	34
Documentation for Grain Foods Made from Scratch.....	36

5 — How to Evaluate Commercial Products	37
Color-coding of Ingredients for Crediting Examples	37
Table 5-1. Definitions for common ingredients in commercial grain products.....	38
Product 3: Oat bread (group B).....	41
Product 4: Iced cinnamon roll (group E).....	42
Product 5: Apple breakfast bun (group E)	43
Product 6: Corn muffin (group C)	44
Product 7: Blueberry muffin (group D)	45
Product 8: Cereal bar (group E)	46
Product 9: French toast (group E).....	47
Product 10: Tortilla chips (group B).....	48
Product 11: Cheese ravioli (combination food with pasta from group H)	49
Product 12: Breaded chicken nuggets (combination food with breading from group A)	50
Product 13: Chicken vegetable egg roll (combination food with egg roll from group B)	51
6 — How to Evaluate a Grain Product’s PFS	53
USDA’s PFS Form for Grains	53
Parts of the USDA’s PFS Form for Grains.....	54
Table 6-1. Sample PFS for grams of creditable grains	55
Steps for Reviewing a PFS for Creditable Grains	56
Common Compliance Issues for PFS Forms for Grain Products.....	60
7 — WGR Criteria for Foods Made from Scratch	61
How to Evaluate Recipes for WGR Compliance.....	62
Recipes with equal amounts of whole and enriched grains.....	62
Examples of evaluating a standardized recipe.....	62
Table 7-1. Evaluating WGR compliance of a standardized recipe: corn muffins.....	63
Table 7-2. Evaluating WGR compliance of a standardized recipe: banana bread	64
Recipes that are not standardized.....	65
Table 7-3. Example 1: Evaluating a recipe with grain ingredients in cups.....	66
8 — Resources	67
Crediting Documentation for Grains	67
Crediting Requirements for Grains	69
Ounce Equivalents	70
Meal Patterns.....	71
WGR Requirement.....	72
Glossary	73

About this Guide

The Connecticut State Department of Education's (SDE) *Meeting the Whole Grain-rich Requirement for the NSLP and SBP Meal Patterns for Grades K-12* contains comprehensive information on meeting the U.S. Department of Agriculture's (USDA) whole grain-rich (WGR) requirement and crediting criteria for the school nutrition programs for grades K-12 and the WGR criteria of the Connecticut Nutrition Standards (CNS). Topics include:

- the crediting and serving size requirements for the grains component;
- the WGR criteria for commercial grain products and grain foods made from scratch;
- the required crediting documentation for WGR foods;
- examples of how to evaluate commercial grain products and standardized recipes for WGR compliance; and
- how to evaluate the accuracy of a manufacturer's product formulation statement (PFS) for commercial grain products.

The information in this guide reflects the USDA's regulations and policies for the WGR requirement of the National School Lunch Program (NSLP) and School Breakfast Program (SBP) meal patterns for grades K-12. The NSLP and SBP meal patterns also apply to the Seamless Summer Option (SSO) of the NSLP. The WGR requirement does not apply to the Afterschool Snack Program (ASP) meal pattern for grades K-12. For information on the NSLP and SBP meal patterns, visit the CSDE's [Meal Patterns for Grades K-12 in School Nutrition Programs](#) webpage.

Each section of this guide contains links to other sections when appropriate, and to websites with relevant information and resources. These can be accessed by clicking on the blue text throughout the guide.

The mention of trade names, commercial products, or organizations does not imply approval or endorsement by the CSDE or the USDA.

The contents of this guide are subject to change. The CSDE will update this guide as the USDA issues additional policies and guidance regarding the school meal patterns. Please check the "[Whole Grain-rich Requirement](#)" section of the CSDE's [Crediting Foods in School Nutrition Programs](#) webpage for the most current version. For more information, contact Susan S. Fiore, M.S., R.D., Nutrition Education Coordinator, at susan.fiore@ct.gov or 860-807-2075.

WGR Criteria for Connecticut Nutrition Standards

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 to students separately from school meals in HFC public schools must be WGR, and cannot exceed the CNS limits for calories, fat, saturated fat, trans fat, sodium, and sugars. Commercial 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.

CSDE Contact Information

For questions regarding the NSLP, SBP, and SSO, please contact the school nutrition programs staff in the CSDE’s Bureau of Child Nutrition Programs.

School Nutrition Programs Staff	
County	Consultant
Fairfield County (includes Region 9) Litchfield County (includes Regions 1, 6, 7, 12, and 14)	Fionnuala Brown 860-807-2129 fionnuala.brown@ct.gov
Hartford County (includes Region 10) Middlesex County (includes Regions 4, 13, and 17)	Teri Dandeneau 860-807-2079 teri.dandeneau@ct.gov
New Haven County (includes Regions 5, 15, and 16)	Greg King 860-713-6804 greg.king@ct.gov
New London County Tolland County (includes Regions 8 and 19) Windham County (includes Region 11)	Susan Alston 860-807-2081 susan.alston@ct.gov
Connecticut State Department of Education Bureau of Child Nutrition Programs 450 Columbus Boulevard, Suite 504 Hartford, CT 06103-1841	

For information on the school nutrition programs, visit the CSDE’s [School Nutrition Programs](#) webpage and [Program Guidance for School Nutrition Programs](#) webpage.

Abbreviations and Acronyms

ASP	Afterschool Snack Program of the NSLP
CFR	Code of Federal Regulations
C.G.S.	Connecticut General Statutes
CN	Child Nutrition
CNP	Child Nutrition Programs
CSDE	Connecticut State Department of Education
FBG	<i>Food Buying Guide for Child Nutrition Programs</i> (USDA)
FDA	Food and Drug Administration
FNS	Food and Nutrition Service, U.S. Department of Agriculture
ICN	Institute of Child Nutrition
NSLP	National School Lunch Program
oz eq	ounce equivalents
PFS	product formulation statement
RCCI	residential child care institution
RTE	ready to eat
SBP	School Breakfast Program
SFA	school food authority
SSO	Seamless Summer Option of the NSLP
USDA	U.S. Department of Agriculture
WGR	whole grain-rich



1 — Overview of Grains Component

The grains component of the NSLP and SBP meal patterns for grades K-12 includes a wide variety of commercial grain products and grain foods made from scratch, such as:

- breads, biscuits, bagels, rolls, tortillas, and muffins;
- snack products, such as crackers (including animal crackers and graham crackers), hard pretzels, hard bread sticks, tortilla chips, and popcorn;
- certain grain-based desserts, such as cookies, granola bars, cereal bars, cake, and pastries (subject to crediting restrictions, refer to the CSDE's [Crediting Grain-based Desserts for Grades K-12 in the School Nutrition Programs](#));
- cereal grains, such as buckwheat, brown rice, bulgur, and quinoa;
- ready-to-eat (RTE) breakfast cereals;
- cooked breakfast cereals (instant and regular), such as oatmeal;
- bread products used as an ingredient in another menu item, such as combination foods, e.g., breading on fish or poultry and pizza crust in pizza; and
- pasta products, such as macaroni, spaghetti, noodles, orzo, and couscous.

To credit as the grains component, foods 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.

Grain foods must be whole-grain rich (WGR) or enriched and cannot exceed the limit for noncreditable grains. Cooked and ready-to-eat (RTE) breakfast cereals must be WGR, enriched, or fortified, and cannot exceed the limit for noncreditable grains. For detailed guidance on the crediting requirements for the grains component, refer to section 3 of the CSDE's [Menu Planning Guide for School Meals for Grades K-12](#).



At least 80 percent of the grains offered in weekly lunch and breakfast menus must be WGR. Products that are 100 percent whole grain, such as whole-wheat bread and brown rice, provide the best nutrition and should be served most often.

1 | Overview of Grains Component

The NSLP and SBP crediting and WGR requirements apply to all grain foods served in school meals, including commercial grain products, grain foods made from scratch by the school food authority (SFA), and grain foods prepared by vendors. SFAs must maintain the appropriate documentation to demonstrate that commercial grain products and standardized recipes meet the crediting and WGR requirements of the NSLP and SBP. The CSDE will review this information during the Administrative Review of the school nutrition programs.

Required Daily and Weekly Servings

The NSLP and SBP meal patterns for grades K-12 require daily and weekly servings of the grains component. The required quantities for the grains component are in ounce equivalents (oz eq). The minimum amount that credits toward the grains component is ¼ oz eq.

Table 1-1 summarizes the meal pattern requirements for lunch and breakfast.

Grades	Lunch ¹				Breakfast ¹			
	Five-day week		Seven-day week		Five-day week		Seven-day week	
	Daily	Weekly ²	Daily	Weekly ²	Daily	Weekly ²	Daily	Weekly ²
K-5	1	8-9	1	11-12.5	1	7-10	1	10-14
6-8	1	8-10	1	11-14	1	8-10	1	11-14
9-12	2	10-12	2	14-17	1	9-10	1	12.5-14

¹ At least 80 percent of the weekly grains offered at lunch and breakfast must be whole-grain rich (WGR). Grains that are not WGR must be enriched.

² School food authorities (SFAs) cannot offer less than the minimum weekly serving. The maximum weekly serving is not required but provides a guide for planning age-appropriate meals that meet the weekly dietary specifications (limits for calories, saturated fats, and sodium). For information on planning school meals to meet the dietary specifications, refer to section 6 of the CSDE's *Menu Planning Guide for School Meals for Grades K-12*.



Determining the Oz Eq Contribution

The amount of a creditable grain food that provides 1 ounce equivalent varies because different types of foods contain different amounts of creditable grains. For example, to credit as 1 ounce equivalent of the grains component, a roll (group B) must weigh 28 grams or 1 ounce, a corn muffin (group C) must weigh 34 grams or 1.2 ounces, and a blueberry muffin (Group D) must weigh 55 grams or 2 ounces.

The USDA allows two methods for determining the oz eq of a creditable grain product or standardized recipe. SFAs may use either method but must document how the crediting information was obtained. These methods are summarized below.

For detailed guidance on both methods, refer to the CSDE’s resource, *Calculation Methods for Grain Ounce Equivalents for Grades K-12 in the National School Lunch Program and School Breakfast Program*. For more information on oz eq, visit the “[Ounce Equivalents \(Serving Size for Grains\)](#)” section of the CSDE’s Crediting Foods in School Nutrition Programs webpage.

Method 1: USDA’s Exhibit A chart

Method 1 uses the USDA’s chart, *Exhibit A: Grain Requirements for Child Nutrition Programs*, to determine the required weight (groups A-G) or volume (groups H-I) for the grain group where the product or recipe belongs. 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.



For some commercial grain products, SFAs must use method 2 to determine the oz eq and a PFS is required (refer to “[When a PFS is Required for Commercial WGR Products](#)” in section 4).

The required amounts for the grains component listed in Exhibit A are not the same for all Child Nutrition Programs because the meal patterns are different. The CSDE’s resource, *Grain Ounce Equivalents for Grades K-12 in the National School Lunch Program and School Breakfast Program*, indicates the Exhibit A oz eq that apply to the NSLP and SBP meal patterns for grades K-12.

Method 2: creditable grains

Method 2 determines oz eq from the weight (grams) of creditable grains per serving. This method is used for standardized recipes and may also be used for commercial grain products with a PFS stating the weight of creditable grains per serving (refer to “[When a PFS Is Required for Commercial WGR Products](#)” in section 4). To credit as 1 oz eq of a WGR food:

- foods in groups A-E of the USDA’s Exhibit A chart must contain 16 grams of creditable grains (including at least 8 grams of whole grains); and
- foods in groups H-I must contain 28 grams of creditable grains (including at least 14 grams of whole grains).



The grams of whole grains must be listed in the commercial product’s PFS or calculated from the grain quantities in the SFA’s standardized recipe.

Grain crediting tools

The resources below help menu planners determine the oz eq contribution of creditable grain products and standardized recipes.

- **USDA’s Exhibit A Grains Tool for commercial grain products:** This [online tool](#) of the USDA’s *Food Buying Guide for Child Nutrition Programs* (FBG) determines the oz eq of commercial grain products. For more information, watch the USDA’s webinars, [Exhibit A Grains Tool to the Rescue](#) and [How to Maximize the Exhibit A Grains Tool](#).
- **USDA’s Recipe Analysis Workbook:** 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.
- **How to Use the Grain Oz eq Chart for the NSLP and SBP:** The CSDE’s resources, [How to Use the Grain Ounce Equivalents Chart for the National School Lunch Program and School Breakfast Program](#), reviews the steps for using the Exhibit A quantities to determine the meal pattern contribution of three types of commercial products and standardized 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).

Whole Grain-rich (WGR) Requirement

Effective July 1, 2022, the USDA’s final rule, *Transitional Standards for Milk, Whole Grains, and Sodium* (87 FR 6984), requires that at least 80 percent of the weekly grains offered at lunch and breakfast must be WGR. Grains that are not WGR must be enriched and cannot exceed 20 percent of the offered grains.

Methods to evaluate foods for WGR compliance

SFAs may use any of the methods below to determine if a commercial food meets the WGR criteria. Refer to section 3 for detailed guidance on each method.

1. **Minimum whole grains per oz eq:** Grain items in groups A-G of Exhibit A are WGR if they contain at least 8 grams of whole grain per oz eq and noncreditable grains do not exceed the required limit. Grain items in groups H and I are WGR if whole grains are at least half of the volume or weight listed in the Exhibit A chart and noncreditable grains do not exceed the required limit. The grams of whole grain per oz eq may be determined from the product packaging (if provided) or from the manufacturer’s PFS.
2. **Whole grains are the primary grain ingredient by weight:** The method to determine if whole grains are the primary grain ingredient by weight is different for commercial grain products (such as bread, rice, pasta, and breakfast cereals), 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), and recipes for foods made from scratch. These methods are summarized below.
 - **Grain products** such as breads and cereals are WGR if a whole grain is the first ingredient listed in the ingredient statement (except water) or multiple whole grains are the primary ingredient by weight; and noncreditable grains do not exceed the required limit.
 - **Commercial combination foods** that contain a grain portion (such as pizza, lasagna, and breaded chicken) are WGR if a whole grain is the first ingredient listed in the ingredient statement (except water) for the *grain portion* or multiple whole grains are the primary ingredient by weight in the *grain portion*; and noncreditable grains do not exceed the required limit.
 - **Foods made from scratch** are WGR weight if the total weight of the whole-grain ingredients in the standardized recipe is equal to more than the total weight of the other creditable grain ingredients (enriched grains, bran, and germ) and noncreditable grains do not exceed the required limit. For combination foods made from scratch that contain a grain portion (such as pizza crust in pizza and breading on chicken), these criteria apply only to the *grain portion* of the standardized recipe.

3. **Food and Drug Administration (FDA) approved whole-grain health claims:** The product includes one of the FDA-approved whole-grain health claims below on its packaging and noncreditable grains do not exceed the required limit.
 - “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.”
 - “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.”
4. **Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)-approved whole-grain food list:** Grain products like bread, tortillas, pasta, and rice meet the WGR criteria if they are listed on any state’s WIC-approved whole grain food list and noncreditable grains do not exceed the required limit. WIC-listed breakfast cereals are whole grain if they are specifically marked as whole grain and noncreditable grains do not exceed the required limit. Not all WIC-listed breakfast cereals are whole grain. The Connecticut WIC food guides are available on the Connecticut State Department of Public Health’s [Approved Food Guide](#) webpage.

Whole Grain versus WGR

A food is 100 percent whole grain if all grain ingredients are whole grains. WGR foods include foods that are 100 percent whole grain, and foods that contain a blend of whole (at least 50 percent) and enriched grains. All foods that are 100 percent grain are WGR, but not all WGR foods are 100 percent grain. To credit in school meals, WGR foods cannot exceed the limit for noncreditable grains (refer to “[WGR Criterion 2: Noncreditable Grains Meet Limit](#)” in section 3).

Reviewing the Ingredients Statement

The ingredients for commercial products are listed in descending order of predominance by weight. The ingredient that weighs the most is listed first and the ingredient that weighs the least is listed last. When reviewing the first ingredient on the product’s label, water is ignored.

When a whole grain is not listed first in the ingredients statement, whole grains might still be the primary ingredient by weight if the product contains multiple whole-grain ingredients and their combined weight is more than the weight of the other ingredients. These products could meet the WGR criteria with proper manufacturer documentation (refer to “[Documentation for Commercial WGR Products](#)” in section 4).

Documentation for Weekly WGR Requirement

SFAs must document that at least 80 percent of the weekly grains offered at lunch and breakfast are WGR. This documentation must be maintained on file for the Administrative Review of the school nutrition programs.

CSDE worksheet for calculating the weekly WGR percentage

SFAs may calculate the weekly menu's percentage of WGR grains using the CSDE's Excel worksheet, *Worksheet to Calculate the Weekly Percentage of Whole Grain-rich Menu Items in School Lunch and Breakfast Menus for Grades K-12*. SFAs that do not use this worksheet must maintain alternate documentation.

Steps for Calculating the Weekly Percentage of WGR Menu Items

The determination of whether a weekly lunch or breakfast menu offers at least 80 percent WGR grains is based on the total oz eq of all grain items offered with all menu choices during the week. The steps to calculate the weekly WGR percentage of school menus are indicated below.

SFAs must calculate the weekly percentage of WGR menu items **separately** for lunch and breakfast.

Step 1: Determine the total oz eq of all offered grain items (WGR and enriched)

Add the oz eq for each creditable grain menu item (WGR and enriched) for all daily meal choices during the week. For example, Monday's lunch menu offers three daily grain choices: 1½ oz eq of a whole-wheat roll (WGR); 2 oz eq of brown rice (WGR); and 1 oz eq of enriched crackers. This daily menu provides a total of 4½ oz eq of grains.

The USDA allows two methods for determining the oz eq of a creditable grain product or standardized recipe (refer to "[Ounce Equivalents](#)" in this section). SFAs may use either method but must document how the crediting information was obtained.

SFAs must maintain documentation to demonstrate each grain menu item's oz eq contribution and if it is WGR. For commercial grain products, this includes the Nutrition Facts label and ingredients statement. It may also require a Child Nutrition (CN) label (if the grain is part of a meat/meat alternate product) or PFS. For foods made from scratch, a standardized recipe is required. For more information, refer to [section 4](#).

1 | Overview of Grains Component

Step 2: Determine the total oz eq of all offered WGR items

Add the oz eq for each WGR grain menu item for all daily meal choices during the week. For example, Monday's lunch menu offers three daily grain choices: 1½ oz eq of a whole-wheat roll (WGR); 2 oz eq of brown rice (WGR); and 1 oz eq of enriched crackers. This daily menu provides a total of 3½ oz eq of WGR grains.

Step 3: Determine the percentage of WGR grains offered during the week

Divide the total oz eq of all WGR grain menu items (from step 2) by the total oz eq of all grain menu items (from step 1); then multiply by 100.

Table 1-2 shows a sample calculation of the weekly percentage of WGR menu items. This weekly menu provides 37 oz eq of WGR menu items and 3 oz eq of enriched menu items, for a total of 40 oz eq from all grain menu items. This menu meets the weekly WGR requirement because 92.5 percent of all offered weekly grains are WGR.

Table 1-2. Steps for calculating the weekly percentage of WGR menu items	
1. List the total oz eq of all WGR menu items offered during the week.	
<ul style="list-style-type: none">Add the oz eq for each WGR grain menu item for all daily meal choices	A 37 WGR grains (oz eq)
2. List the total oz eq of all creditable grain menu items (WGR and enriched) offered during the week.	
<ul style="list-style-type: none">Add the oz eq for each grain menu item (WGR and enriched) for all daily meal choices.	B 40 Total grains (oz eq)
3. Calculate the percentage of WGR grain items for the weekly menu.	
<ul style="list-style-type: none">Divide A (step 1) by B (step 2).	C 0.925
<ul style="list-style-type: none">Multiply C by 100.	D 92.5 percent WGR
4. Is D at least 80 percent?	<input checked="" type="checkbox"/> Yes: meets the weekly WGR requirement <input type="checkbox"/> No: add more WGR items to the menu

Percentage of Weekly WGR Menu Items versus Weekly Grains Requirement

It is important to note that calculating the percentage of weekly WGR menu items is different from calculating the minimum weekly meal pattern requirements for the grains component for each grade group. If the menu offers multiple daily grain choices, the menu planner must use the daily grain choice with the **smallest** oz eq to determine if the menu meets the weekly meal pattern requirement. However, to determine the percentage of weekly WGR menu items, the menu planner must add the oz eq for **all** daily grain choices.

Table 1-3 shows how these requirements apply to a lunch menu for grades 6-8.

Table 1-3. How to calculate total weekly grains versus percentage of WGR menu items	
<p>The lunch meal pattern for grades 6-8 requires at least 1 oz eq of the grains component per day and at least 8 oz eq per week. The school lunch menu offers a daily choice of two different grain menu items:</p> <ul style="list-style-type: none"> • 1½ oz eq (enriched) • 2 oz eq (WGR) 	
Weekly meal pattern requirement	Weekly WGR requirement
<p>The menu planner must count the smaller menu item (1½ oz eq) toward the weekly meal pattern requirement for the grains component.</p>	<p>The menu planner must add both menu items together to get the total oz eq of all grain items (WGR and enriched) offered for the day (3½ oz eq).</p>

Table 1-4 shows an example of how to calculate the total weekly oz eq of grains and the weekly percentage of WGR menu items for a lunch menu for grades 6-8.



1 | Overview of Grains Component

Table 1-4. Sample calculation of total weekly grain oz eq and weekly WGR percentage for grades 6-8

The lunch meal pattern for grades 6-8 requires at least 1 oz eq of the grains component per day and at least 8 oz eq per week. This menu meets the meal pattern requirements because each daily grain choice provides at least 1 oz eq and the menu provides 9 oz eq over the week based on the smallest grain choice offered each day (2 oz eq on days 1, 2, 4, and 5, and 1 oz eq on day 3).

This menu also meets the weekly WGR requirement. The menu offers 20 oz eq of grain items during the week and 17.5 oz eq (87.5 percent) are WGR.

Grain items (all menu choices)	Serving size	Grain group ¹	Oz eq		
			WGR	Enriched	
Day 1: Whole-wheat bread	2 slices	B	2	0	
Day 1: WGR pasta	1 cup	H	2	0	
Day 2: Whole-wheat dinner roll	2 ounces	B	2	0	
Day 2: Brown rice	1 cup	H	2	0	
Day 3: WGR breading on chicken nuggets	0.8 ounce	A	1	0	
Day 3: WGR crackers	4 crackers (1.2 ounces)	A	1.5	0	
Day 4: Enriched cornbread, school recipe	3 ounces	C	0	2.5	
Day 4: Enriched croutons	1.6 ounces	A	2	0	
Day 5: WGR pizza crust	3 ounces	B	3	0	
Day 5: WGR hamburger bun	2 ounces	B	2	0	
Total oz eq per week			17.5	2.5	20
Percentage			87.5%	12.5%	100%

¹ Refer to the CSDE's resource, *Grain Ounce Equivalents for Grades K-12 in the National School Lunch Program and School Breakfast Program*.

This guidance on meeting the weekly WGR requirement is provided in the CSDE's resource, *Calculating the Weekly Percentage of Whole Grain-rich Menu Items in the National School Lunch Program and School Breakfast Program*.

2 — Creditable Grains

Creditable grains are the ingredients in a grain product or recipe that contribute toward the grains component. They include whole grains, enriched grains, bran, and germ. This section contains guidance on how to identify each creditable grain.

Whole Grains

Whole grains consist of the entire cereal grain seed or kernel, after removing the inedible outer husk or hull. The kernel includes the starchy endosperm, the fiber-rich bran, and the nutrient-rich germ.

Usually the grain kernel is cracked, crushed, flaked, or ground during the milling process. A finished grain product is considered whole grain if it contains the same relative amounts of bran, germ, and endosperm as the original grain.

A grain is 100 percent whole grain if any of the following apply:

- the word “whole” is listed before the type of grain ingredient;
- the grain ingredient is another name for whole grains;
- the grain product has a Food and Drug Administration (FDA) standard of identity;
- the grain product is listed on any state’s Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)-approved whole grain foods list;
- the grain ingredient is nixtamalized corn; or
- the grain ingredient is a reconstituted whole grain.

To meet the WGR criteria, a food that meets one of these criteria must also meet the limit for noncreditable grains (refer to “[WGR Criterion 2 – Noncreditable Grains Meet Limit](#)” in section 3). A summary of each type of whole grain is below.

Grain name states “whole”

A grain is whole grain if the word “whole” is listed before the grain ingredient. For example, “whole wheat flour” and “whole-grain corn” are whole grains, but “wheat flour” and “yellow corn” are not. Table 2-1 shows examples of common whole-grain products and ingredients.

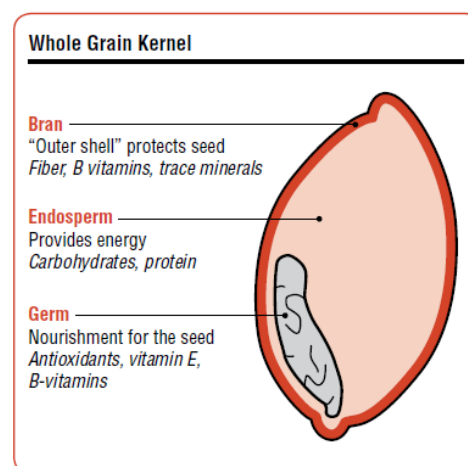


Table 2-1. Common whole-grain products and ingredients ¹

<p>Barley</p> <ul style="list-style-type: none"> Dehulled barley Dehulled-barley flour Whole barley Whole-barley flakes Whole-barley flour Whole-grain barley Whole-grain barley flour <p>Brown rice</p> <ul style="list-style-type: none"> Brown rice Brown rice flour Sprouted brown rice <p>Corn</p> <ul style="list-style-type: none"> Nixtamalized corn, e.g., hominy, corn masa (dough from masa harina), and masa harina (corn flour) ² Popcorn Whole corn Whole cornmeal Whole-corn flour Whole-grain corn Whole-grain corn flour Whole-grain cornmeal Whole-grain grits <p>Oats</p> <ul style="list-style-type: none"> Instant oatmeal Oat groats ³ Oatmeal Old-fashioned oats Quick-cooking oats Rolled oats Steel cut oats Whole oats Whole-grain oat flour Whole-oat flour 	<p>Rye</p> <ul style="list-style-type: none"> Flaked rye Rye berries ³ Rye groats ³ Sprouted whole rye Whole rye Whole-rye flakes Whole-rye flour <p>Wheat</p> <ul style="list-style-type: none"> Bromated whole-wheat flour Bulgur (cracked wheat) Cracked wheat or crushed wheat Entire wheat flour Flaked wheat Graham flour Sprouted wheat Sprouted wheat berries ³ Sprouted whole wheat Stone-ground whole-wheat flour ⁴ Toasted crushed whole wheat Wheat berries ³ Wheat groats ³ White whole-wheat flour ⁵ Whole bulgur Whole-durum flour Whole-durum wheat flour Whole-grain bulgur Whole-grain wheat Whole-grain wheat flakes Whole-grain wheat flour Whole-wheat flakes Whole-wheat flour Whole-wheat pastry flour Whole-white wheat ⁵ <p>Wild rice</p> <ul style="list-style-type: none"> Wild rice Wild rice flour
--	--

Table 2-1, continued

Other grains	Teff flour
Amaranth	Triticale
Amaranth flour	Triticale flour
Buckwheat	Whole einkorn
Buckwheat flour	Whole einkorn berries ³
Buckwheat groats	Whole emmer (farro)
Millet	Whole kamut (khorasan wheat)
Millet flour	Whole spelt
Quinoa	Whole-grain einkorn flour
Sorghum (milo)	Whole-grain spelt flour
Sorghum flour	
Spelt berries ³	
Sprouted buckwheat	
Sprouted einkorn	
Sprouted spelt	
Teff	

Other names for whole grains

Some whole grains do not contain the word “whole” in the grain name. Examples include berries (the whole kernels of grain) such as wheat berries and rye berries, groats (the hulled whole kernels of grain) such as oat groats, rolled oats and oatmeal (including old-fashioned, quick-cooking, and instant oatmeal), brown rice and wild rice, graham flour (a coarsely ground whole-wheat flour), and many other grains such as quinoa, millet, triticale, teff, amaranth, buckwheat, and sorghum.

For additional guidance on identifying and crediting whole grains, refer to the CSDE’s resource, *Crediting Whole Grains in the National School Lunch Program and School Breakfast Program*.

Food and Drug Administration (FDA) standard of identity

Some whole-wheat products have an FDA standard of identity that indicates they are whole grain. A standard of identity is a set of rules for what a certain product, such as whole-wheat bread, must contain or may contain to be legally labeled with that product name. The FDA provides standards of identity only for certain whole-wheat products, including whole-wheat bread, rolls, and buns (21 CFR 136.180) and whole-wheat macaroni products (21 CFR 139.138). These products are indicated in table 2-2.

Table 2-2. Grain products with an FDA standard of identity	
Breads, rolls, buns	Pasta
Whole-wheat bread, rolls, buns Entire wheat bread, rolls, buns Graham bread, rolls, buns	Whole-wheat spaghetti Whole-wheat vermicelli Whole-wheat macaroni Whole-wheat macaroni products

Other grain products that are labeled as “whole wheat” without an FDA standard of identity (such as crackers, tortillas, bagels, and biscuits) may or may not be 100 percent whole grain and may or may not be WGR.

WIC-approved whole grain foods list

Grain products like bread, tortillas, pasta, and rice contain are whole grain if they are listed on any state’s WIC-approved whole grain food list. WIC-listed breakfast cereals must be specifically marked as whole grain because not all breakfast cereals on a WIC-list are whole grain. The Connecticut WIC food guides are available on the Connecticut State Department of Public Health’s [Approved Food Guide](#) webpage.

Nixtamalized corn ingredients

Commercial corn products such as tortilla chips, taco shells, and tamales credit as whole grains if the product is labeled “whole grain,” or the corn ingredient is nixtamalized (treated with lime). Nixtamalization is the process of soaking and cooked dried corn in an alkaline (slaked lime) solution. This process results in a product with a similar nutrition content to whole-grain corn.



Nixtamalized corn is used to make hominy, masa harina (corn flour), corn masa (dough from masa harina), and certain types of cornmeal. Masa is used for making tortilla chips, taco shells, tamales,

pupusas, and other popular corn products. Hominy, corn masa, and masa harina credit as whole grains.

SFAs may use either method below to determine if commercial grain products are made with nixtamalized corn.

To meet the WGR criteria, a food that meets one of the criteria below must also meet the limit for noncreditable grains (refer to [“WGR Criterion 2 – Noncreditable Grains Meet Limit”](#) in section 3).

1. **The corn is treated with lime:** A corn ingredient is nixtamalized if the ingredients statement indicates that the corn is treated with lime, e.g., “ground corn with trace of lime” and “ground corn treated with lime.” The ingredients statements below show some examples of commercial nixtamalized corn products that credit as 100 percent whole grains.
 - Ingredients: *Corn masa flour*, water, contains 2% or less of: cellulose gum, guar gum, amylase, propionic acid, benzoic acid, and phosphoric acid (to maintain freshness).
 - Ingredients: *Whole-white corn*, vegetable oil (contains soybean, corn, cottonseed, and/or sunflower oil), salt, *lime/calcium hydroxide* (processing aid).
 - Ingredients: *Limed whole-grain white corn*, palm oil, salt, TBHQ (preservative).
 - Ingredients: *Whole-grain yellow corn*, canola oil, water, *corn flour*, salt, *hydrated lime*.

If the ingredients statement does not provide sufficient information to determine if the corn ingredient is a creditable grain (such as “cornmeal” and “yellow corn flour”), a PFS is required. The PFS must indicate that the corn ingredient is whole grain, enriched, or nixtamalized. For information on PFS forms, refer to [“Documentation for Commercial WGR Products”](#) in section 4.

2. **The product includes the FDA-approved whole grain health claim:** A commercial product made with corn is at least 50 percent whole grain if it includes one of the two FDA-approved whole grain health claims on its packaging. 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 some 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.”

If the ingredients statement does not provide sufficient information to determine if the corn is a creditable grain, SFSP sponsors must obtain a PFS from the manufacturer stating that the ingredients are whole grain, enriched, or nixtamalized. An example is a product that contains “cornmeal” and “yellow corn flour.” For information on PFS forms, refer to “[Crediting Documentation for Commercial Grain Products](#)” in this document.

Crediting information for corn masa, masa harina, corn flour, and cornmeal is summarized in [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](#).

Reconstituted grains

Reconstituted grains (such as “reconstituted whole-wheat flour”) are made by blending the crushed and separated products of milling (bran, germ, and endosperm) from the same type of grain in the same proportions originally present in the intact grain kernel. A reconstituted grain is considered whole grain when the reconstitution is done by the original milling facility to ensure the same batch of whole grain is returned to its natural proportions. To credit a reconstituted grain as the grains component, SFAs must request documentation stating that the milling company recombined the grain components to the natural proportions of bran, germ, and endosperm.



Enriched Grains

Enriched grains are refined grains (such as wheat, rice, and corn) and grain products (such as cereal, pasta, and bread) that have certain vitamins and minerals added to replace some of the nutrients lost during processing. The five enrichment nutrients are defined by the Food and Drug Administration (FDA) and include:

- thiamin (vitamin B₁, thiamin mononitrate, or thiamin hydrochloride);
- riboflavin (vitamin B₂); niacin (vitamin B₃ or niacinamide);
- folic acid (folate); and
- iron (reduced iron, ferrous sulfate, or ferric orthophosphate).

Table 2-3 shows examples of grain ingredients that are enriched or not enriched.

If a commercial grain product includes enriched ingredients or the product itself is enriched, the ingredients or product must meet the applicable FDA standard of identity for enrichment.

Bran and Germ

Bran (such as oat bran, wheat bran, corn bran, rice bran, and rye bran) is the seed husk or outer coating of cereal grains such as wheat, rye, and oats. Germ (such as wheat germ) is the vitamin-rich embryo of the grain kernel. Bran and germ credit the same as enriched grains. Grain products that contain bran or germ as the primary grain ingredient count toward the weekly limit for enriched grains. For more information, refer to “[Whole Grain-rich Requirement](#)” in this section.

For guidance on identifying and crediting enriched grains, refer to the CSDE’s resource, *Crediting Enriched Grains in the National School Lunch Program and School Breakfast Program*.



Table 2-3. Examples of grain ingredients that are enriched or not enriched ¹

Enriched	Not enriched ²
Bleached enriched flour	Bleached flour
Enriched bromated flour	Bromated flour
Enriched corn flour	Corn flour ³
Enriched corn grits	Corn grits ³
Enriched cornmeal	Cornmeal ³
Enriched degerminated cornmeal	Degerminated cornmeal
Enriched durum flour	Durum flour
Enriched durum wheat flour	Durum wheat flour
Enriched farina	Farina
Enriched flour	Flour
Enriched rice	Rice
Enriched rice flour	Rice flour
Enriched rye flour	Rye flour
Enriched self-rising flour	Self-rising flour
Enriched semolina flour	Semolina flour
Enriched wheat flour	Wheat flour
Enriched white flour	White flour
Enriched white cornmeal	White cornmeal ³
Enriched yellow cornmeal	Yellow cornmeal ³
Milled corn enriched with.... <i>(lists the five enrichment nutrients)</i>	Milled corn ³
Puffed wheat enriched with.... <i>(lists the five enrichment nutrients)</i>	Puffed wheat
Puffed rice enriched with.... <i>(lists the five enrichment nutrients)</i>	Puffed rice
Unbleached enriched wheat flour	Unbleached wheat flour
Unbleached enriched white flour	Unbleached white flour

¹ This list is not all-inclusive.

² These ingredients are not enriched unless the label states “enriched,” or the ingredients statement lists the five enrichment nutrients.

³ Some cornmeal products may require a PFS to determine if they are enriched or nixtamalized. Nixtamalized corn ingredients credit as whole grains (refer to “[Nixtamalized corn ingredients](#)” in this section).

3 — WGR Criteria for Commercial Products

The WGR criteria are different for commercial grain products in groups A-H (such as bread, rice, pasta, and breakfast cereals), RTE breakfast cereals in group I, and commercial combination foods that contain a grain portion from groups A-I (such as pizza crust in pizza, noodles in lasagna, tortilla shells in burritos, and breading on chicken nuggets). Groups A-I refer to the grain groups in the USDA’s Exhibit A chart (refer to “[Ounce Equivalents](#)” in section 1).

- Commercial grain products (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) must meet two criteria to be WGR: 1) the product is 100 percent whole grain or contains a blend of whole and enriched grains that is at least 50 percent whole grain; and 2) noncreditable grains cannot exceed 3.99 grams per portion for groups A-G or 6.99 grams per portion for group H.
- RTE breakfast cereals (group I):** RTE breakfast cereals must meet two criteria to be WGR: 1) the first ingredient is a whole grain and the cereal is fortified or the cereal is 100 percent whole grain; and 2) noncreditable grains cannot exceed 6.99 grams per portion. Fortification is not required for RTE breakfast cereals that are 100 percent whole grain. For more information, refer to the CSDE’s resource, *Crediting Breakfast Cereals for Grades K-12 in the National School Lunch Program and School Breakfast Program*.
- Commercial combination foods containing a grain portion from groups A-I:** The grain portion (such as pizza crust in pizza, noodles in lasagna, and breading on chicken nuggets) must meet two criteria to be WGR: 1) the grain portion is 100 percent whole grain or contains a blend of whole and enriched grains that is at least 50 percent whole grain; and 2) noncreditable grains in the grain portion cannot exceed 3.99 grams per portion for groups A-G or 6.99 grams per portion for groups H-I.

Menu planners must determine if commercial foods meet the applicable WGR criteria by reviewing the product’s ingredients statement and packaging. For some products, it may be necessary to obtain a PFS to determine WGR compliance. For more information on the required WGR documentation, refer to [section 4](#).

If the product meets the WGR criteria, the menu planner must determine the meal pattern contribution (oz eq) based on the appropriate grain group in the USDA’s Exhibit A chart or the creditable grains per serving (refer to “[Ounce Equivalents](#)” in section 1).

WGR Criterion 1: At Least 50 Percent Whole Grains

There are four methods to determine if a commercial grain product contains at least 50 percent whole grains by weight and meets WGR criterion 1. SFAs may use any of these methods.

- **Method 1 – minimum whole grains per oz eq:** The product contains the minimum grain content for 1 oz eq, as required for the appropriate grain group (A-I) in the USDA’s Exhibit A chart.
- **Method 2 – primary grain ingredient by weight:** A whole grain is the first ingredient (or water is the first ingredient and a whole grain is the next ingredient) or the product’s PFS indicates that the combined weight of all whole grains is the greatest ingredient by weight.
- **Method 3 – FDA whole-grain health claim:** The product’s packaging contains one of the FDA’s whole grain health claims.
- **Method 4 – WIC whole-grain food list:** The product is listed on any state’s WIC-approved whole grain food list.

This section provides detailed guidance on each method.

If a product meets WGR criterion 1, the SFA must also determine if it meets WGR criterion 2. For more information, refer to [WGR Criterion 2 – Noncreditable Grains Meet Limit](#)” in this section.



Method 1: minimum whole grains per oz eq

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 oz eq of the appropriate grain group (A-I) in the USDA's Exhibit A chart (refer to "[Ounce Equivalents](#)" in section 1). The required amounts per oz eq are summarized below.

- **Groups A-G (baked goods)** must contain at least 8 grams of whole grains per oz eq.
- **Group H (cereal grains)** must contain at least $\frac{1}{4}$ cup cooked or 14 grams dry of whole grains per oz eq ($\frac{1}{2}$ cup).
- **Group I (RTE breakfast cereals)** must contain the required weight (1 ounce) or volume (1 cup of flaked or round cereal, $1\frac{1}{4}$ cups of puffed cereal, and $\frac{1}{4}$ cup of granola) for 1 oz eq and must list a whole grain as the first ingredient and be fortified. Fortification is not required for 100 whole grain cereals.

This information is not commonly listed on product packaging. SFAs may need to obtain a PFS to document that a commercial product contains at least 50 percent whole grains. For more information on the required WGR documentation, refer to [section 4](#).



Method 2: primary grain ingredient by weight

A commercial grain product 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 next ingredient). For guidance on identifying whole grains, refer to “[Whole Grains](#)” in section 2.

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 crediting information. For more information, refer to “[Commercial products with flour blends](#)” in this section.

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. These methods are summarized below.

- **Commercial grain products in 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 next ingredient). The ingredients statements below show some examples of products that meet this criterion.

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.

This product contains a whole grain (whole-wheat flour) as the first and only grain ingredient.

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.

This product contains water as the first ingredient and a whole grain (whole-wheat flour) is the next ingredient.

- **Commercial combination foods containing a grain portion from 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 non-grain ingredients.

- **Grain ingredients listed with non-grain 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. The ingredients statement for the commercial breaded chicken nuggets below shows an example.



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 extract. Breeding set in vegetable oil.

This product contains whole-wheat flour as the first and only grain ingredient.

- **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*. The ingredients statement for the commercial breaded chicken nuggets below shows an example.

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

This product contains white whole-wheat flour as the first ingredient in the grain portion (breading).

Commercial products with flour blends

When the first ingredient is a blend of whole-grain and enriched flour, such as “flour blend (whole-wheat flour, enriched flour),” additional documentation is required to determine if the whole grain is the primary grain ingredient by weight. SFAs must obtain a PFS that documents one of the following:

- the whole grain content is at least 8 grams per portion (groups A-G); or
- the weight of the whole grain in the flour blend is more than the first ingredient (excluding water) listed *after* the flour blend.

Flour blends do not indicate if the whole grain is the greatest grain 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.

The ingredients statement below shows an example of a commercial grain product with a flour blend.

Ingredients: Water, **flour blend** [*whole-wheat flour, enriched flour (wheat flour, niacin, reduced iron, thiamine mononitrate, riboflavin, enzyme, folic acid)*], water, **brown sugar**, corn oil, dough conditioner (soybean oil, vegetable glycerides, soy flakes), yeast, salt, wheat gluten, enzyme.

The PFS for this product must indicate that the whole-wheat flour in the flour blend weighs more than the brown sugar, which is the first ingredient after flour blend.

A PFS is not required for flour blends that contain only whole grains, such as “flour blend (whole-wheat flour, whole-grain oats).” Commercial grain products that are 100 percent whole grain are WGR, if noncreditable grains meet the limit.

Method 3: FDA 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.

- **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 some 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. These claims are not commonly found on most grain products.

Method 4: WIC whole-grain food list

Grain products like bread, tortillas, pasta, and rice contain at least 50 percent whole grains if they are listed on any state’s WIC-approved whole grain food list. WIC-listed breakfast cereals contain at least 50 percent whole grains if they are specifically marked as whole grain. Not all WIC-listed breakfast cereals are whole grain. The Connecticut WIC food guides are available on the Connecticut State Department of Public Health’s [Approved Food Guide](#) webpage.



WGR Criterion 2: Noncreditable Grains Meet Limit

A commercial grain product meets WGR criterion 2 if the combined weight of all noncreditable grains is less than 2 percent ($\frac{1}{4}$ oz eq) of the product formula. A commercial combination food meets WGR criterion 2 if the *grain portion* of the product complies with this limit. The combined weight of all noncreditable grains in a grain product cannot exceed:

- 3.99 grams per portion for grain foods in groups A-G of the USDA’s Exhibit A chart; or
- 6.99 grams per portion for grain foods in groups H-I of the USDA’s Exhibit A chart.

If the combined weight of noncreditable grains exceeds the limit for the applicable Exhibit A grain group, the product cannot credit as the grains component, even if it meets WGR criterion 1.

Depending on where the noncreditable grains are listed in the ingredients statement, the SFA may need to obtain a PFS to document that the grain product does not exceed the noncreditable grains limit for the applicable grain group. For more information, refer to “[When to ignore noncreditable grains](#)” in this section.

Table 3-1 lists examples of noncreditable grain ingredients commonly found in commercial products. The ingredients in column 1 must be included when determining the total weight of a product’s noncreditable grain ingredients. The ingredients in column 2 do not count toward the limit for noncreditable grains and can be ignored.



Table 3-1. Examples of noncreditable grain ingredients ¹

Column 1: Count toward limit ²	Column 2: Do not count toward limit ³
<p>Corn (not whole grain, enriched, or nixtamalized ⁴), e.g., cornmeal, corn flour, degermed corn, stone-ground corn, and yellow corn flour</p> <p>Fiber, e.g., corn fiber, soluble corn fiber, oat fiber, oat hull fiber, and soy fiber</p> <p>Flour (not whole grain or enriched), e.g., durum flour, malted barley flour, fermented wheat flour, rice flour, semolina flour, stone-ground corn flour, white flour, and wheat flour</p> <p>Grits (not whole grain, enriched, or nixtamalized ⁴), e.g., corn grits, durum grits, and barley grits</p> <p>Modified food starch, e.g., modified cornstarch, modified rice starch, modified tapioca starch, and modified wheat starch</p> <p>Rice, white (not enriched)</p> <p>Soy products, e.g., soy flakes, soy fiber, and soy grits</p> <p>Starch, e.g., cornstarch, cultured wheat starch, hydrolyzed starch, potato starch, rice starch, and tapioca starch</p> <p>Vegetable and legume flours, e.g., chickpea flour, fava bean flour, pea flour, and potato flour</p>	<p>Cellulose fiber</p> <p>Chicory extract</p> <p>Chicory root</p> <p>Citrus fiber</p> <p>Corn dextrin</p> <p>Fibersol</p> <p>Inulin</p> <p>Malt</p> <p>Malt powder</p> <p>Maltodextrin</p> <p>Pea fiber</p> <p>Powdered cellulose</p> <p>Short chain fructan (fiber)</p> <p>Soy flours, soy concentrates, and soy isolates</p> <p>Vital wheat gluten</p> <p>Wheat gluten</p>

¹ This list is not all-inclusive.

² These ingredients must be included in the total weight of noncreditable grain ingredients. Noncreditable grains in WGR or enriched grain products and recipes cannot exceed 3.99 grams per portion for groups A-G or 6.99 grams per portion for groups H-I.

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. Nixtamalized corn ingredients credit as whole grains. Nixtamalization is the process of soaking and cooked dried corn in an alkaline (slaked lime) solution. A PFS may be required to determine if a corn ingredient is nixtamalized (refer to “[Nixtamalized corn ingredients](#)” in section 2).

When to ignore noncreditable grains

Whether a noncreditable grain counts toward the limit depends on where it is listed in the ingredients statement. The limit for noncreditable grains does not apply to noncreditable grains listed in any of the following ways:

- after the statement, “contains 2% or less;”
- as part of a non-grain ingredient, such as a bagel that contains molasses powder made with wheat starch or a fruit pastry that contains jam filling made with modified food starch; and
- as part of the non-grain portion of a commercial combination food, such as modified food starch in the chicken portion of breaded chicken or wheat flour in the cheese filling of ravioli.

The requirements for when noncreditable grains do not count toward the limit are summarized below.

1. **The noncreditable grain is listed after the statement, “contains 2% or less.”**

The location of noncreditable grains in relation to the statement “contains 2% or less” determines whether they count toward the limit and if a PFS is required. Any noncreditable grains listed after the statement, “contains 2% or less,” do not count toward the limit for noncreditable grains.

A PFS is required if any noncreditable grains are listed before or without the statement, “contains 2% or less.” The PFS must indicate the weight (grams) of noncreditable grains per serving.

Table 3-2 shows some examples of when a PFS is required for an ingredients statement that indicates “contains 2% or less.” For more information on PFS forms, refer to [section 4](#).



Table 3-2. Examples of when a PFS is required for products with the statement “contains 2% or less”

Example 1: One noncreditable grain listed before “contains 2% or less”

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)].

Is a PFS required? Yes No

The noncreditable grain, soy flakes, is listed *before* the statement, “contains 2% or less.” The manufacturer’s PFS must indicate that the soy flakes do not exceed the required limit.

Example 2: One noncreditable grain listed after “contains 2% or less”

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.

Is a PFS required? Yes No

The noncreditable grain (yellow corn flour) does not count toward the limit for noncreditable grains because it is listed *after* the statement, “contains 2% or less.”

Example 3: One noncreditable grain listed before “contains 2% or less” and two noncreditable grains listed after

Ingredients: *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*, *cornstarch*, dried onion, dried garlic, dried yeast, brown sugar, extractives of paprika, and spices.

Is a PFS required? Yes No

The noncreditable grain (wheat starch) is listed *before* the statement, “contains 2% or less.” The manufacturer’s PFS must indicate that the wheat starch does not exceed the required limit. The two noncreditable grains (yellow corn flour and cornstarch) listed *after* this statement do not count toward the limit for noncreditable grains.

Table 3-2, *continued***Example 4: Three noncreditable grains listed after “contains 2% or less”**

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 stearyl lactylate, *wheat starch*, blueberry juice concentrate, malic acid, enzymes.

Is a PFS required? Yes No

The three noncreditable grains (oat fiber, modified food starch, and wheat starch) do not count toward the limit for noncreditable grains because they are listed *after* the statement, “contains 2% or less.”

Example 5: Three noncreditable grains listed without statement “contains 2% or less”

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 cornstarch*, 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]).

Is a PFS required? Yes No

This ingredients list does not include the statement, “contains 2% or less.” The manufacturer’s PFS must indicate that the combined weight of the three noncreditable grains (yellow corn flour and modified cornstarch in the whole-wheat batter and yellow corn flour in the coating) do not exceed the required limit.

2. **The noncreditable grain is listed as part of a non-grain ingredient.**

The limit for noncreditable grains does not apply to non-grain ingredients in commercial grain products. Some examples include:

- pastries that contain jam filling made with modified food starch;
- bagels that contain molasses powder made with wheat starch; and
- bread that contains a dough conditioner made with soy flakes.

The menu planner can determine if noncreditable grains are part of a non-grain ingredient by reviewing the product's ingredients statement. When a product contains an ingredient that contains two or more ingredients itself (such as apple filling in a breakfast bun), these sub ingredients are listed after the name of the ingredient, or in parentheses or brackets after the name of the ingredient.

The examples below show some sub ingredients that contain noncreditable grains. These noncreditable grains do not count toward the limit because they are part of non-grain ingredients.

- **Filling** (apples, sugar, water, *modified corn starch*, cinnamon, salt, nutmeg).
- **Marshmallows** (sugar, dextrose, *modified cornstarch*, corn syrup, cocoa, gelatin, natural and artificial flavor).
- **Molasses powder** (molasses, *wheat starch*).
- **Dough conditioner** (soybean oil, vegetable glycerides, *soy flakes*).
- **Seasoning** [sugar, salt, sea salt, dextrose, spices, yeast extract, natural flavor, maltodextrin, canola oil (as a processing aid), *modified cornstarch*].

The ingredients statement for a fruit-filled pastry below shows an example.

Ingredients: *whole-grain white wheat flour*, **apple filling** (corn syrup, *modified food starch*, evaporated apples, cinnamon, lemon juice), water, margarine (palm oil, soybean oil, whey [milk], soybean lecithin [soy], vitamin A palmitate added), sugar, **dough conditioner** (*rye flour*, *malted barley flour*, ascorbic acid, enzymes, guar gum, *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).

The noncreditable grain in the apple filling (modified cornstarch) and the three noncreditable grains in the dough conditioner (rye flour, malted barley flour, and wheat flour) do not count toward the noncreditable grains limit because they are listed as part of non-grain ingredients.

3. **The noncreditable grain is listed as part of the non-grain portion of a commercial combination food.**

The limit for noncreditable grains does not apply to the non-grain portion of a combination food, such as the portion of meat/meat alternates, vegetables, or fruits. Some examples include:

- modified food starch in the chicken portion of breaded chicken;
- wheat flour in the cheese filling of ravioli; and
- cornstarch in the vegetable filling of an egg roll.

The ingredients statement for cheese ravioli below shows an example.

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 cornstarch*, sugar, dehydrated garlic. **Pasta:** *Whole-wheat flour, enriched durum wheat flour (wheat flour, niacin, ferrous sulfate, thiamin mononitrate, riboflavin, folic acid)*, water, egg

The two noncreditable grains (bleached wheat flour and modified cornstarch) in the non-grain portion (cheese filling) do not count toward the noncreditable grains limit. The grain portion (pasta) does not contain any noncreditable grains.



4 — WGR Documentation

SFAs must be able to document the meal pattern contribution of all grains served in reimbursable meals, including commercial products and foods made from scratch. Menu planners should use the USDA’s *Food Buying Guide for Child Nutrition Programs* (FBG) to determine food yields and crediting information for grain menu items.

Documentation for Commercial WGR Products

The two types of allowable documentation for commercial processed foods are CN labels and PFS forms. An overview of each type of documentation is below.

Child Nutrition (CN) labels

CN labels clearly identify the meal pattern contribution of commercial products, based on the USDA’s evaluation of the product’s formulation. Acceptable documentation includes the original CN label from the product carton, or a photocopy or photograph of the CN label shown attached to the original product carton.

CN labels are available only for main dish entrees that provide at least ½ oz eq of the meat/meat alternates component, such as pizza, breaded chicken nuggets, and cheese ravioli. Grain products (such as breads, muffins, pancakes, crackers, and breakfast cereals) are not eligible for CN labels. However, CN-labeled foods usually indicate the meal pattern contribution of grains, vegetables, and fruits that are part of these products. For more information, refer to the CSDE’s resource, *Using Child Nutrition (CN) Labels in the School Nutrition Programs*.

PFS forms

A PFS is a document developed by manufacturers that provides specific information about how a product credits toward the USDA’s meal patterns for the Child Nutrition Programs. The information on PFS forms can vary among manufacturers because these forms are not reviewed or monitored by the USDA. For more information on PFS forms, refer to the CSDE’s resources, *Using Product Formulation Statements in the School Nutrition Programs* and *Accepting Processed Product Documentation in the National School Lunch Program and School Breakfast Program*, and the USDA’s *Product Formulation Statement for Documenting Grains in Child Nutrition Programs*.

When a PFS is Required for Commercial WGR Products

SFAs must obtain a PFS from the manufacturer if the ingredients statement and packaging do not provide sufficient information to determine if the product meets the WGR criteria. A PFS is required for each type of commercial grain product below. **Note:** For combination foods, these requirements apply only to the *grain portion*.

- The first ingredient is not a whole grain, but the product contains more than one whole grain. The PFS must indicate that the combined weight of all whole grains is the greatest ingredient by weight.
- The first ingredient is a whole grain and the product contains two or more enriched grains. The PFS must indicate that the weight of the whole grain is equal to more than the combined weight of the enriched grains.
- The first ingredient is a flour blend of whole and enriched flour. The PFS must indicate either of the following: 1) the whole grain content is at least 8 grams per oz eq (groups A-G); or 2) the weight of the whole grain in the flour blend is more than the first ingredient (excluding water) listed *after* the flour blend.
- The product contains noncreditable grains that are **not** listed in any of the following ways: after the statement, “contains 2% or less;” in a non-grain ingredient; or in the non-grain portion of a combination food. The PFS must indicate that the total weight of noncreditable grains does not exceed 3.99 grams per portion for groups A-G or 6.99 grams per portion for groups H-I.
- A combination food that contains a grain portion is not CN labeled. The PFS must indicate the following: 1) creditable grains are the greatest ingredient by weight in the grain portion; and 2) if applicable, the total weight of any noncreditable grains in the grain portion.
- 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 following: 1) the weight (grams) of each creditable grain per serving; 2) how the product provides that amount according to the FBG or USDA’s regulations, guidance, or policies; and 3) if applicable, the total weight of noncreditable grains.
- The product is not listed in the USDA’s Exhibit A chart. The PFS must indicate the following: 1) the weight (grams) of each creditable grain per serving; 2) how the product provides that amount according to the FBG or USDA’s regulations, guidance, or policies; and 3) if applicable, the total weight of noncreditable grains.

For specific guidance and examples, refer to the CSDE’s resource, *When Commercial Grain Products Require a Product Formulation Statement to Credit in the School Nutrition Programs*.

SFAs must verify the PFS for accuracy before including the commercial grain product in reimbursable meals and must maintain this crediting documentation on file. The CSDE will review this information during the Administrative Review of the school nutrition programs.

If the manufacturer will not supply a PFS or the PFS does not provide the appropriate documentation, the product cannot credit as the grains component in the meal patterns for school nutrition programs.

For guidance and an example of how to evaluate a grain PFS, refer to [section 6](#). Training on the requirements for CN labels and PFS forms is available in “Module 6: Meal Pattern Documentation” of the CSDE’s training program, *What’s in a Meal: National School Lunch Program and School Breakfast Program Meal Patterns for Grades K-12*.



Documentation for Grain Foods Made from Scratch

Grain foods prepared from scratch must have a standardized recipe that documents the weight of creditable grains in one serving. A standardized recipe is WGR if the combined amount of all whole grains is equal to or more than the combined amount of all other creditable grains (enriched grains, bran, and germ), and noncreditable grains do not exceed the required limit (refer to “[WGR Criterion 2: Noncreditable Grains Meet Limit](#)” in section 3). SFAs must have standardized recipes on file to document the WGR and crediting information per serving for all grain foods made from scratch, such as breads, rolls, muffins, pizza dough, and pancakes. This includes foods made by the SFA and foods prepared by vendors for school meals.

The USDA defines a standardized recipe as one that has been tried, adapted, and retried several times for use by a given foodservice operation; 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. Standardized quantity recipes produce 25 or more servings.

SFAs must ensure that the crediting information for standardized recipes is accurate. The CSDE will review this information during the Administrative Review of the school nutrition programs. For more information, refer to “[Evaluating Recipes for WGR Compliance](#)” in section 4.

For more information on standardized recipes, refer to section 2 of the CSDE’s *Menu Planning Guide for School Meals for Grades K-12* and visit the “[Crediting Foods Made from Scratch](#)” section of the CSDE’s [Crediting Foods in School Nutrition Programs](#) webpage. Training on standardized recipes is available in “Module 6: Meal Pattern Documentation” of the CSDE’s training program, *What’s in a Meal: National School Lunch Program and School Breakfast Program Meal Patterns for Grades K-12*.



5 — How to Evaluate Commercial Products

The WGR compliance of commercial products differs between manufacturers, product brands, and varieties. Menu planners must review each commercial grain product used in school menus to determine if it meets the WGR criteria of the NSLP and SBP meal patterns for grades K-12.

This section provides 13 examples of how to evaluate commercial grain products for WGR compliance. If a product meets the WGR criteria, the SFA must determine the oz eq contribution of the serving (refer to “[Ounce Equivalents](#)” in section 1).

Color-coding of Ingredients for Crediting Examples

The information below summarizes the color-coding used to identify the creditable and noncreditable grains in the ingredients statement for each example.

- Creditable grains:** Creditable grains (whole and enriched) are indicated in **bold green**. Whole grains are indicated in **bold green UPPERCASE**. For examples of whole and enriched grains, refer to the CSDE’s resources, *Crediting Whole Grains in the National School Lunch Program and School Breakfast Program* and *Crediting Enriched Grains in the National School Lunch Program and School Breakfast Program*.
- Noncreditable grains:** Noncreditable grains (such as wheat flour, yellow corn flour, and modified food starch) are indicated in *red italics*. For examples of noncreditable grains, refer to column 1 in [table 3-4](#). For more information, to “[WGR Criterion 2 – Noncreditable Grains Meet Limit](#)” in this section and [When to ignore noncreditable grains](#)” in section 3.
- Grain derivatives:** Grain derivatives (by-products of grains such as wheat gluten and maltodextrin) are indicated in *pink highlighted italics*. These ingredients do not count toward the limit for noncreditable grains. For examples of grain derivatives, refer to column 2 in [table 3-4](#).
- Non-grain ingredients:** Non-grain ingredients that contain noncreditable grains are indicated in **yellow highlighting**. Examples include fruit filling made with modified food starch, molasses powder made with wheat starch, and dough conditioner made with soy flakes. For more information, refer to “[When to ignore noncreditable grains](#)” in section 3.

Table 5-1 includes definitions for some common ingredients found in commercial grain products. For additional definitions, refer to the [glossary](#).

Table 5-1. Definitions for common ingredients in commercial grain products

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

bleached flour: Flour treated with chemical agents to speed up the natural aging process and produce a whiter flour with a finer grain and softer texture. Bleached flour is a creditable grain if it is enriched. For information on crediting enriched grains, refer to the CSDE’s resource, *Crediting Enriched Grains in the National School Lunch Program and School Breakfast Program*.

bromated flour: A type of flour with added potassium bromate, which promotes gluten development to improve dough’s baking qualities (such as the rise and elasticity of dough). This flour is more commonly available with ascorbic acid added to provide the elasticity instead of potassium bromate. For information on crediting enriched grains, refer to the CSDE’s resource, *Crediting Enriched Grains in the National School Lunch Program and School Breakfast Program*.

DATEM or datem: An abbreviation for “diacetyl tartaric acid ester of mono- and diglycerides,” which is an emulsifier used in baking. DATEM strengthens the gluten network in dough to improve the bread’s texture and shape.

l-cysteine: An amino acid used in baking to help soften the dough and reduce processing time.


maltodextrin: A carbohydrate derived from starch (typically from corn, potatoes, rice, or wheat) that is used as a food additive to enhance texture and flavor. Maltodextrin is a grain derivative that does not count toward the noncreditable grains limit for WGR foods in the NSLP and SBP meal patterns for grades K-12.


modified food starch: A chemically altered ingredient made from starch that 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 noncreditable grain that counts toward the noncreditable grains limit for WGR foods in the NSLP and SBP meal patterns for grades K-12.


vital wheat gluten: 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. Vital wheat gluten is a grain derivative that does not count toward the noncreditable grains limit for WGR foods in the NSLP and SBP meal patterns for grades K-12.

wheat gluten: The protein component of the wheat grain that helps baked goods hold their shape. Wheat gluten is a grain derivative that does not count toward the noncreditable grains limit for WGR foods in the NSLP and SBP meal patterns for grades K-12.

whey: A milk protein used to emulsify, thicken, and brown baked goods.

Product 1: Whole-grain bagel (group B)	
<p>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, <i>vital wheat gluten</i>, mono & diglycerides, honey, <i>cornmeal</i>, calcium propionate, <i>malted barley flour</i>, molasses powder (molasses, <i>wheat starch</i>), ammonium chloride, ascorbic acid (vitamin C), l-cysteine hydrochloride, azodicarbonamide (ADA), calcium sulfate, enzymes.</p> 	
WGR criteria	Meets criterion?
<p>Criterion 1: contains ≥ 50 percent whole grains</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Requires PFS</p> <p>This product meets criterion 1. The first ingredient is whole-wheat flour. Enriched bromated wheat flour is the only other creditable grain.</p>
<p>Criterion 2: meets limit for noncreditable grains</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Requires PFS</p> <p>This product meets criterion 2. The noncreditable grains (cornmeal and malted barley flour) do not count toward the limit because they are listed after the statement, “contains 2% or less.” The wheat starch (noncreditable grain) in the molasses powder does not count toward the limit because molasses powder is a non-grain ingredient. For more information, refer to “When to ignore noncreditable grains” in section 3.</p>
<p>Is product WGR?</p>	<p><input checked="" type="checkbox"/> Yes ¹ (<i>both “Yes” boxes are checked</i>) <input type="checkbox"/> No (<i>any “No” box is checked</i>) <input type="checkbox"/> Requires PFS (<i>any “Requires PFS” box is checked</i>)</p>
<p>¹ The serving must provide the required weight for group B in the USDA’s Exhibit A chart or contain the minimum creditable grains (refer to “Determining the Oz Eq Contribution” in section 1).</p>	

Product 2: Whole-wheat bagel (group B)	
<p>Ingredients: WHOLE-WHEAT FLOUR, sugar, <i>wheat gluten</i>. Contains 2% or less of each of the following: honey, salt, <i>yellow corn flour</i>, yeast, molasses, diacetyl tartaric acid esters of mono-diglycerides (datem), ascorbic acid, mono- and diglycerides, l-cysteine, enzymes.</p> 	
WGR criteria	Meets criterion?
<p>Criterion 1: contains ≥ 50 percent whole grains</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Requires PFS</p> <p>This product meets criterion 1. The first ingredient and only creditable grain is whole-wheat flour. This product is 100 percent whole grain.</p>
<p>Criterion 2: meets limit for noncreditable grains</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Requires PFS</p> <p>This product meets criterion 2. The noncreditable grain (yellow corn flour) does not count toward the limit because it is listed after “contains 2% or less.” For more information, refer to “When to ignore noncreditable grains” in section 3.</p>
<p>Is product WGR?</p>	<p><input checked="" type="checkbox"/> Yes ¹ (both “Yes” boxes are checked) <input type="checkbox"/> No (any “No” box is checked)</p> <p><input type="checkbox"/> Requires PFS (any “Requires PFS” box is checked)</p>
<p>¹ The serving must provide the required weight for group B in the USDA’s Exhibit A chart or contain the minimum creditable grains (refer to “Determining the Oz Eq Contribution” in section 1).</p>	

Product 3: Oat bread (group B)	
<p>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, <i>wheat gluten</i>, yeast, soybean oil, salt, calcium propionate (preservative), monoglycerides, datem and/or sodium stearyl lactylate, calcium sulfate, citric acid, calcium carbonate, soy lecithin, whey, nonfat milk.</p> 	
WGR criteria	Meets criterion?
<p>Criterion 1: contains ≥ 50 percent whole grains</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Requires PFS</p> <p>This product requires a PFS. The first ingredient is unbleached enriched wheat flour, which is not a whole grain. However, the product contains two whole grains (whole-wheat flour and whole oats). To meet criterion 1, the product’s PFS must indicate that the combined weight of the two whole grains is equal to or more than the weight of the enriched flour.</p>
<p>Criterion 2: meets limit for noncreditable grains</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Requires PFS</p> <p>This product meets criterion 2. It does not contain any noncreditable grains (refer to table 3-4).</p>
<p>Is product WGR? <input type="checkbox"/> Yes ¹ (<i>both “Yes” boxes are checked</i>) <input type="checkbox"/> No (<i>any “No” box is checked</i>) <input checked="" type="checkbox"/> Requires PFS (<i>any “Requires PFS” box is checked</i>)</p>	
<p>¹ The serving must provide the required weight for group B in the USDA’s Exhibit A chart or contain the minimum creditable grains (refer to “Determining the Oz Eq Contribution” in section 1).</p>	

Product 4: Iced cinnamon roll (group E)

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: corn syrup solids, icing stabilizer (calcium carbonate, sugar, agar, salt, mono and diglycerides), vanilla, water..



WGR criteria	Meets criterion?
<p>Criterion 1: contains ≥ 50 percent whole grains</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Requires PFS</p> <p>This product requires a PFS. The first ingredient after water is a flour blend of whole wheat flour and enriched flour. To meet criterion 1, the product’s PFS must indicate that the whole-wheat flour is at least 8 grams per portion (groups A-G) or weighs more than the first ingredient after the flour blend, which is brown sugar. For more information, refer to “Commercial products with flour blends” in section 3.</p>
<p>Criterion 2: meets limit for noncreditable grains</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Requires PFS</p> <p>This product meets criterion 2. The soy flakes (noncreditable grain) in the dough conditioner do not count toward the limit for noncreditable grains because the dough conditioner is a non-grain ingredient. For more information, refer to “When to ignore noncreditable grains” in section 3.</p>
<p>Is product WGR? <input type="checkbox"/> Yes ¹ (both “Yes” boxes are checked) <input type="checkbox"/> No (any “No” box is checked) <input checked="" type="checkbox"/> Requires PFS (any “Requires PFS” box is checked)</p>	

¹ The serving must provide the required weight for group E in the USDA’s Exhibit A chart or contain the minimum creditable grains (refer to “[Determining the Oz Eq Contribution](#)” in section 1).

² Grain-based desserts cannot exceed 2 oz eq per week at lunch.

Product 5: Apple breakfast bun (group E)


Ingredients: **WHOLE-GRAIN WHITE WHEAT FLOUR**, apple filling (corn syrup, *modified food starch*, evaporated apples, cinnamon, lemon juice), water, margarine (palm oil, soybean oil, whey [milk], soybean lecithin [soy], vitamin A palmitate added), sugar, contains 2% or less of: dough conditioner (*rye flour*, *malted barley flour*, ascorbic acid, enzymes, guar gum, *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).



WGR criteria	Meets criterion?
Criterion 1: contains ≥ 50 percent whole grains	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Requires PFS This product meets criterion 1. The first and only grain ingredient is whole-grain white wheat flour. This product is 100 percent whole grain.
Criterion 2: meets limit for noncreditable grains	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Requires PFS This product meets criterion 2. The noncreditable grains do not count toward the limit for noncreditable grains because they are listed in non-grain ingredients. The modified cornstarch is part of the apple filling. The rye flour, malted barley flour, and wheat flour are part of the dough conditioner. For more information, refer to “ When to ignore noncreditable grains ” in section 3.
Is product WGR?	<input checked="" type="checkbox"/> Yes ¹ (<i>both “Yes” boxes are checked</i>) <input type="checkbox"/> No (<i>any “No” box is checked</i>) <input type="checkbox"/> Requires PFS (<i>any “Requires PFS” box is checked</i>)

¹ The serving must provide the required weight for group E in the USDA’s Exhibit A chart or contain the minimum creditable grains (refer to “[Determining the Oz Eq Contribution](#)” in section 1).

² Grain-based desserts cannot exceed 2 oz eq per week at lunch.

Product 6: Corn muffin (group C)	
<p>Ingredients: Water, sugar, WHOLE GRAIN CORN FLOUR, WHOLE-WHEAT FLOUR, enriched flour (wheat flour, niacin, iron, thiamin mononitrate, riboflavin, folic acid), eggs, soybean/canola oil, <i>modified cornstarch</i>, milk whey, leavening (sodium acid pyrophosphate, baking soda), vital wheat gluten, sugar, nonfat milk, xanthan gum, guar gum.</p>	
	
WGR criteria	Meets criterion?
<p>Criterion 1: contains ≥ 50 percent whole grains</p>	<p> <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Requires PFS </p> <p>This product requires a PFS. The first ingredient after water is sugar. However, the product also contains two whole grains (whole-grain corn flour and whole-wheat flour). To meet criterion 1, the product’s PFS must indicate that the combined weight of the two whole grains is more than the weight of the sugar. For more information, refer to “When a PFS is Required for Commercial WGR Products” in section 4.</p>
<p>Criterion 2: meets limit for noncreditable grains</p>	<p> <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Requires PFS </p> <p>This product contains one noncreditable grain (modified cornstarch). To meet criterion 2, the product’s PFS must indicate that the weight of the modified cornstarch does not exceed 3.99 grams (groups A-G).</p>
<p>Is product WGR? <input type="checkbox"/> Yes ¹ (<i>both “Yes” boxes are checked</i>) <input type="checkbox"/> No (<i>any “No” box is checked</i>) <input checked="" type="checkbox"/> Requires PFS (<i>any “Requires PFS” box is checked</i>)</p>	
<p>¹ The serving must provide the required weight for group E in the USDA’s Exhibit A chart or contain the minimum creditable grains (refer to “Determining the Oz Eq Contribution” in section 1). ² Grain-based desserts cannot exceed 2 oz eq per week at lunch.</p>	

Product 7: Blueberry muffin (group D)

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*, blueberry juice concentrate, malic acid, enzymes.



WGR criteria	Meets criterion?
Criterion 1: contains ≥ 50 percent whole grains	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Requires PFS This product meets criterion 1. The first ingredient is whole-wheat flour. Enriched flour is the only other creditable grain ingredient.
Criterion 2: meets limit for noncreditable grains	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Requires PFS This product meets criterion 2. The noncreditable grains (oat fiber, modified food starch, and wheat starch) do not count toward the limit for noncreditable grains because they are listed after the statement, “contains 2% or less.” For more information, refer to “ When to ignore noncreditable grains ” in section 3.

Is product WGR? Yes ¹ (*both “Yes” boxes are checked*) No (*any “No” box is checked*)
 Requires PFS (*any “Requires PFS” box is checked*)

¹ The serving must provide the required weight for group D in the USDA’s Exhibit A chart or contain the minimum creditable grains (refer to “[Determining the Oz Eq Contribution](#)” in section 1).

Product 8: Cereal bar (group E)

Ingredients: **WHOLE-GRAIN OATS**, Cereal (**WHOLE-GRAIN WHEAT**, sugar, *cornmeal*, brown sugar syrup, canola oil, baking soda, salt, calcium carbonate, trisodium phosphate, zinc and iron [mineral nutrients], vitamin C, niacinamide, vitamin B2 [riboflavin], vitamin B1 [thiamin mononitrate], vitamin A [palmitate], folic acid, vitamin B12, vitamin D), sugar, canola oil, **BROWN RICE FLOUR**), marshmallows (sugar, dextrose, *modified cornstarch*, corn syrup, gelatin, artificial flavor), maltodextrin, *wheat starch*, *modified wheat starch*, salt, gelatin, natural flavor.




WGR criteria	Meets criterion?
<p>Criterion 1: contains ≥ 50 percent whole grains</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Requires PFS</p> <p>The first ingredient is whole-grain oats. The next ingredient is a fortified breakfast cereal (highlighted in blue). The grain ingredients in the cereal (whole grain-wheat and brown rice flour) are also whole grain. This product is 100 percent whole grain.</p>
<p>Criterion 2: meets limit for noncreditable grains</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Requires PFS</p> <p>This product contains three noncreditable grains: one noncreditable grain (cornmeal) in the fortified whole-grain breakfast cereal; and two noncreditable grains (wheat starch and modified wheat starch) listed outside of the fortified breakfast cereal ingredients. The PFS must indicate that the combined weight of the three noncreditable grains in the grain ingredients do not exceed 3.99 grams (groups A-G).</p> <p>The modified cornstarch in the marshmallows does not count toward the limit because marshmallows are a non-grain ingredient. For more information, refer to “When to ignore noncreditable grains” in section 3.</p>
<p>Is product WGR? <input type="checkbox"/> Yes ¹ (both “Yes” boxes are checked) <input type="checkbox"/> No (any “No” box is checked) <input checked="" type="checkbox"/> Requires PFS (any “Requires PFS” box is checked)</p>	
<p>¹ The serving must provide the required weight for group E in the USDA’s Exhibit A chart or contain the minimum creditable grains (refer to “Determining the Oz Eq Contribution” in section 1). ² Grain-based desserts cannot exceed 2 oz eq per week at lunch.</p>	


Product 9: French toast (group E)

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, 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, modified cornstarch*, salt, leavening (sodium bicarbonate), nonfat milk, **coating (bleached enriched wheat flour [wheat flour, niacin, iron, thiamine mononitrate, riboflavin, folic acid]**, *yellow corn flour*, sugar, *soy flour*, salt, dextrose, yeast), soybean oil, cinnamon sugar (sugar, spices, natural flavor)



WGR criteria	Meets criterion?
<p>Criterion 1: contains ≥ 50 percent whole grains</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Requires PFS</p> <p>This product requires a PFS. While the first ingredient in the bread and batter is whole-wheat flour, the product contains three sources of enriched grains (enriched wheat flour in the bread, batter, and coating). To meet criterion 1, the product’s PFS must indicate that the combined weight of the two whole grains is equal to or more than the combined weight of the three enriched grain. For more information, refer to “When a PFS is Required for Commercial WGR Products” in section</p>
<p>Criterion 2: meets limit for noncreditable grains</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Requires PFS</p> <p>This product contains two noncreditable grains (yellow corn flour and modified cornstarch) in the batter and one noncreditable grain (yellow corn flour) in the coating. The PFS must indicate that the combined weight of the three noncreditable grains in the grain ingredients do not exceed 3.99 grams (groups A-G).</p>
<p>Is product WGR? <input type="checkbox"/> Yes ¹ (both “Yes” boxes are checked) <input type="checkbox"/> No (any “No” box is checked) <input checked="" type="checkbox"/> Requires PFS (any “Requires PFS” box is checked)</p>	
<p>¹ The serving must provide the required weight for group E in the USDA’s Exhibit A chart or contain the minimum creditable grains (refer to “Determining the Oz Eq Contribution” in section 1).</p>	

Product 10: Tortilla chips (group B)	
Ingredients: Yellow corn (enriched with thiamine, riboflavin, niacin, iron, folic acid) , vegetable oil (contains one or more of the following: canola oil, corn oil, sunflower oil), salt. 	
WGR criteria	Meets criterion?
Criterion 1: contains ≥ 50 percent whole grains	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Requires PFS This product does not meet criterion 1. The first and only grain ingredient is enriched yellow corn, which is not a whole grain.
Criterion 2: meets limit for noncreditable grains	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Requires PFS This product meets criterion 2. It does not contain any noncreditable grains (refer to table 3-4).
Is product WGR?	<input type="checkbox"/> Yes ¹ (both “Yes” boxes are checked) <input checked="" type="checkbox"/> No (any “No” box is checked) <input type="checkbox"/> Requires PFS (any “Requires PFS” box is checked)
¹ The serving must provide the required weight for group E in the USDA’s Exhibit A chart or contain the minimum creditable grains (refer to “ Determining the Oz Eq Contribution ” in section 1).	

Product 11: Cheese ravioli (combination food with pasta from group H)	
<p>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), <i>bleached wheat flour</i>, garlic salt (salt, dehydrated garlic), salt, <i>modified cornstarch</i>, sugar, dehydrated garlic. Pasta: WHOLE-WHEAT FLOUR, enriched durum wheat flour (wheat flour, niacin, ferrous sulfate, thiamin mononitrate, riboflavin, folic acid), water, egg.</p> 	
WGR criteria	Meets criterion?
<p>Criterion 1: contains ≥ 50 percent whole grains</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Requires PFS</p> <p>This product meets criterion 1. Whole-wheat flour is the first ingredient in the grain portion (pasta). Enriched durum wheat flour is the only other creditable grain ingredient in the grain portion.</p>
<p>Criterion 2: meets limit for noncreditable grains</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Requires PFS</p> <p>This product meets criterion 2. The grain portion does not contain any noncreditable grains (refer to table 3-4). The two noncreditable grains (bleached wheat flour and modified cornstarch) in the filling (non-grain portion) do not count toward the limit (refer to “When to ignore noncreditable grains” in section 3).</p>
<p>Is product WGR?</p>	<p><input checked="" type="checkbox"/> Yes ¹ (<i>both “Yes” boxes are checked</i>) <input type="checkbox"/> No (<i>any “No” box is checked</i>) <input type="checkbox"/> Requires PFS (<i>any “Requires PFS” box is checked</i>)</p>
<p>¹ The grain portion must provide the required volume or weight for group H in the USDA’s Exhibit A chart or contain the minimum creditable grains (refer to “Determining the Oz Eq Contribution” in section 1).</p>	

Product 12: Breaded chicken nuggets (combination food with breading from group A)	
<p>Ingredients: Chicken, water, salt, and natural flavor. Breaded with: WHITE WHOLE-WHEAT FLOUR, water, <i>wheat starch</i>, enriched flour (wheat flour, niacin, reduced iron, thiamine mononitrate, riboflavin, folic acid), salt, contains 2% or less of the following: <i>yellow corn flour, cornstarch</i>, dried onion, dried garlic, dried yeast, brown sugar, extractives of paprika, and spices. Breading set in vegetable oil.</p> 	
WGR criteria	Meets criterion?
<p>Criterion 1: contains ≥ 50 percent whole grains</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Requires PFS</p> <p>This product meets criterion 1. White whole-wheat flour is the first ingredient in the grain portion (breading). Enriched flour is the only other creditable grain in the grain portion.</p>
<p>Criterion 2: meets limit for noncreditable grains</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Requires PFS</p> <p>This product requires a PFS. The grain portion contains one noncreditable grain (wheat starch) before the statement, “contains 2% or less.” The PFS must indicate that the wheat starch does not exceed 3.99 grams (groups A-G).</p> <p>The noncreditable grains (yellow corn flour, and cornstarch) listed after the statement, “contains 2% or less” do not count toward the limit (refer to “When to ignore noncreditable grains” in section 3).</p>
<p>Is product WGR?</p>	<p><input type="checkbox"/> Yes ¹ (<i>both “Yes” boxes are checked</i>) <input type="checkbox"/> No (<i>any “No” box is checked</i>) <input checked="" type="checkbox"/> Requires PFS (<i>any “Requires PFS” box is checked</i>)</p>
<p>¹ The grain portion must provide the required weight for group A in the USDA’s Exhibit A chart or contain the minimum creditable grains (refer to “Determining the Oz Eq Contribution” in section 1).</p>	

Product 13: Chicken vegetable egg roll (combination food with egg roll from group B)	
<p>Ingredients: Filling: Chicken, cabbage, carrots, celery, water, onion, contains 2% or less of: dried whole egg, sugar, soy sauce, <i>modified food starch</i>, salt, garlic, spice; Wrapper: WHITE WHOLE-WHEAT FLOUR, water, enriched flour (wheat flour [niacin, reduced iron, thiamine mononitrate, riboflavin, folic acid], malted barley flour), enriched durum flour (wheat flour, niacin, ferrous sulfate, thiamine mononitrate, riboflavin, folic acid), contains 2% or less of: canola oil, <i>cornstarch</i>; water.</p>	
WGR criteria	Meets criterion?
<p>Criterion 1: contains \geq 50 percent whole grains</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Requires PFS</p> <p>This product requires a PFS. White whole-wheat flour is the first ingredient in the grain portion (wrapper). The grain portion also includes two enriched grains (enriched flour and enriched durum flour). To meet criterion 1, the product’s PFS must indicate that the weight of the whole grain is equal to or more than the combined weight of the two enriched grains.</p>
<p>Criterion 2: meets limit for noncreditable grains</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Requires PFS</p> <p>The modified food starch (noncreditable grain) in the grain portion is before the statement, “contains 2% or less,” and counts toward the limit. The PFS must indicate that the modified food starch does not exceed 3.99 grams (groups A-G).</p> <p>The noncreditable grain (cornstarch) listed after “contains 2% or less,” and the wheat and modified food starch (noncreditable grains) in the filling (non-grain portion) do not count toward the limit. For more information, refer to “When to ignore noncreditable grains” in section 3.</p>
<p>Is product WGR?</p>	<p><input type="checkbox"/> Yes ¹ (both “Yes” boxes are checked) <input type="checkbox"/> No (any “No” box is checked) <input checked="" type="checkbox"/> Requires PFS (any “Requires PFS” box is checked)</p>
<p>¹ The grain portion must provide the required weight for group B in the USDA’s Exhibit A chart or contain the minimum creditable grains (refer to “Determining the Oz Eq Contribution” in section 1).</p>	



6 — How to Evaluate a Grain Product's PFS

The manufacturer's PFS provides information about how a processed grain product might contribute to the USDA's meal patterns for Child Nutrition Programs. The information on PFS forms can vary among manufacturers because these forms are not reviewed or monitored by the USDA. Therefore, SFAs are responsible for verifying the accuracy of the PFS and maintaining documentation records on file. This section provides guidance on how to evaluate PFS forms for commercial grain products.

SFAs must check the accuracy of the crediting information on the manufacturer's PFS before including the grain product in reimbursable meals.

USDA's PFS Form for Grains

The USDA's *Product Formulation Statement for Documenting Grains in Child Nutrition Programs* includes two PFS versions for documenting the crediting contribution of a commercial grain product in the in the NSLP and SBP meal patterns for grades K-12.

- Crediting Standards Based on Grams of Creditable Grains (oz eq):** This version provides documentation based on the creditable grains per serving and is the most commonly required version. This PFS is required whenever the product's ingredients statement and packaging do not provide sufficient information to determine if the product meets the crediting or WGR criteria. For more information, refer to "[Method 2: creditable grains](#)" in section 3 and "[When a PFS is Required for Commercial WGR Products](#)" in section 4.
- Crediting Standards Based on Exhibit A Weights per Oz eq:** This version provides documentation based on the minimum weight or volume for the applicable grain group in the USDA's Exhibit A chart. For more information, refer to "[Method 1: USDA's Exhibit A chart](#)" in section 3.

The USDA does not require manufacturers to use these forms. However, manufacturers that develop their own PFS forms must include all required information from the applicable USDA form.

Parts of the USDA's PFS Form for Grains

A PFS is an official certified document of the company. It must be on company letterhead and must be signed by a person of authority in the company, such as the quality control manager or the appropriate staff in nutrition or research and development. All PFS forms must include the five required elements below. The product's label with the ingredients statement must also be attached to the PFS.

1. **Product name:** The product name stated on the PFS must match or have a similar description to the name on the product label.
2. **Product code:** The product code number is a unique identifier assigned by the manufacturer. It may include numbers, letters, or a combination of both.
3. **Serving size:** The serving size stated on the PFS should represent the amount of the product as purchased or ready for serving. It indicates the amount needed to provide the creditable amount stated on the PFS.
4. **Creditable grain ingredients:** The PFS must list each creditable grain ingredient (whole grains, enriched grains, bran, and germ).
5. **Information to demonstrate how the creditable ingredients contribute toward the meal pattern:** The PFS must indicate the information needed to calculate the crediting of each ingredient, including:
 - the Exhibit A grains group (A-I) for the product (refer to [“Method 1: USDA’s Exhibit A chart”](#) in section 3);
 - if the product contains noncreditable grains and if so, how many grams (refer to [table 3-4](#) in section 3 for guidance on noncreditable grains);
 - a description of each creditable grain ingredient (refer to [section 2](#));
 - the grams of each creditable grain ingredient per portion;
 - the appropriate gram standard of creditable grains per serving (16 grams for groups A-G or 28 grams for groups H-I);
 - the creditable amount (oz eq) of each ingredient (divide grams of creditable grain ingredient by the appropriate gram standard);
 - the total weight (per portion) of the product as purchased; and
 - the total contribution (oz eq) of the product per portion.

SFAs should determine if the manufacturer's PFS provides the information required to document that the product meets the crediting or WGR criteria for the grains component. [Table 6-1](#) shows a completed USDA PFS form, “Crediting Standards Based on Grams of Creditable Grains (ounce equivalent),” for a sample commercial grain product, Wheat Smile Pancakes.

Table 6-1. Sample PFS for grams of creditable grains



Product Formulation Statement for Documenting Grains in Child Nutrition Programs

(Crediting Standards Based on Grams of Creditable Grains (ounce equivalent))

Program operators should include a copy of the label from the purchased product package in addition to the following information on letterhead signed by an official company representative. Program operators have the option to choose the crediting method that fits their specific menu planning needs.

A Product Name: Wheat Smile Pancakes Code No.: 14005
 Manufacturer: ABC Bread Company Serving Size: 2 pancakes, 50 grams (1.75 ounces)
 (raw dough weight may be used to calculate creditable grains)

B I. Does the product meet the whole grain-rich criteria? Yes No

C II. Does the product contain non-creditable grains? Yes No How many grams? **D**
(Products with more than 0.24 ounce equivalent (oz eq) or 3.99 grams (g) for Groups A-G or 6.99g for Groups H and I of non-creditable grains do not credit toward the grains requirement for school meals.)

III. Use Exhibit A: Grain Requirements for Child Nutrition Programs in the *Food Buying Guide for Child Nutrition Programs (FBG)* to determine if the product fits into Groups A-G (baked goods), Group H (cereal grains) or Group I (RTE breakfast cereals). *(Different methodologies are applied to calculate the grains contribution based on creditable grains. Groups A-G use the standard of 16g creditable grains per oz eq; Groups H and I use the standard of 28g creditable grains per oz eq or volume.)*

E Indicate which Exhibit A Group (A-I) the product belongs: C

DESCRIPTION OF CREDITABLE GRAIN INGREDIENT*	GRAMS OF CREDITABLE GRAIN INGREDIENT PER PORTION ¹	GRAM STANDARD OF CREDITABLE GRAINS PER OZ EQ (16g or 28g) ²	CREDITABLE AMOUNT
	F G A	H B	I A ÷ B
Whole wheat flour (30%)	15	16	0.9375
Enriched flour (22%)	11	16	0.6875
		J Total	1.625
		K Total Creditable Amount ³	1.5

* Creditable grains vary by Program. See the FBG for specific Program requirements.
¹ (Serving size) X (% of creditable grains in formula); serving sizes other than grams must be converted to grams.
² Standard grams of creditable grains from the corresponding Group in Exhibit A.
³ Total Creditable Amount must be rounded **down** to the nearest quarter (0.25) oz eq. Do **not** round up.

L Total weight (per portion) of product as purchased 50g (1.75 oz)
 Total contribution of product (per portion) 1.5 oz eq

M I certify that the above information is true and correct and that a 1.75 ounce portion of this product (ready for serving) provides 1.5 oz eq grains. I further certify that non-creditable grains **are not** above 0.24 oz eq per portion. Products with more than 0.24 oz eq or 3.99g for Groups A-G or 6.99g for Groups H and I of non-creditable grains do not credit toward the grains requirement for school meals.

N John Smith Signature Title President
John Smith Printed Name 02/01/2023 Date (123) 456-7890 Phone Number

Steps for Reviewing a PFS for Creditable Grains

The guidance below indicates what menu planners should review when determining if a PFS for creditable grains is accurate. The green circles refer to the applicable sections of the sample PFS for ABC Bread Company's Wheat Smile Pancakes in [table 6-1](#).

A

Product information: Check that the product name, code number, manufacturer, and serving size on the PFS match the information on the product packaging.

B

Part I: “Does the product meet the whole grain-rich criteria”

If “Yes” is checked, review the information for noncreditable grains (C) in part II and creditable grain ingredients (F) in part III. To be WGR, the total weight (grams) of the whole-grain ingredients (G) must be equal to or more than the weight of the enriched grain ingredients (G).

- For this example, the 15 grams of whole-wheat flour is more than the 11 grams of enriched flour.

C

Part II: “Does the product contain noncreditable grains”

If “No” is checked, review the product’s ingredients statement to determine if any noncreditable grains are listed. For examples of noncreditable grains, refer to [table 3-4](#).

The most common error on a PFS for creditable grains is incorrectly stating that the product does not contain any noncreditable grains when noncreditable grains are listed on the ingredients statement.

D**Part II: “How many grams”**

If “Yes” is checked (C), the PFS must indicate the total grams of noncreditable grains (D) or include a statement that the product does not exceed the applicable limit for each grain group, e.g., “≤3.99 grams” for groups A-G or “≤6.99 grams” for groups H-I. For information on determining if noncreditable grains meet the limit, refer to “[WGR Criterion 2 – Noncreditable Grains Meet Limit](#)” in section 3.

- For this example, the product does not contain any noncreditable grains.

If the product’s ingredients statement contains more than one noncreditable grain before the statement “contains 2% or less,” confirm with the manufacturer that the grams listed in part II (D) include the combined weight of all noncreditable grains in the product’s ingredients statement.

Example: A PFS indicates that the product contains 1 gram of noncreditable grains. The product’s ingredients statement includes three noncreditable grains (modified cornstarch, wheat flour, and rice starch) before the statement “contains 2% or less.” The SFA should check with the manufacturer to verify that the 1 gram includes the combined weight of the three noncreditable grains.

E**Part III: “Indicate which Exhibit A grain group (A-I) the product belongs”**

Check that the PFS lists the correct Exhibit A grain group for the product (refer to the CSDE’s resource, [Grain Ounce Equivalents for Grades K-12 in the National School Lunch Program and School Breakfast Program](#)). For example, the PFS for bread must list group B and the PFS for pancakes must list group C.

- For this example, group C is the correct group for pancakes.

F**Part III chart, first column: “DESCRIPTION OF CREDITABLE GRAIN INGREDIENT”**

Review the **product’s ingredients statement** to identify all creditable grains (whole grains, enriched grains, bran, and germ). Check that the PFS lists the same creditable grains. For guidance on identifying creditable grains, refer to the CSDE’s resources, [Crediting Whole Grains in the National School Lunch Program and School Breakfast Program](#) and [Crediting Enriched Grains in the National School Lunch Program and School Breakfast Program](#).

G

Part III chart, second column: “GRAMS OF CREDITABLE GRAIN INGREDIENTS PER PORTION”

- For this example, the creditable grains include 15 grams of whole-wheat flour and 11 grams of enriched flour.

H

Part III chart, third column: “GRAM STANDARD OF CREDITABLE GRAIN PER OZ. EQUIVALENT (16g or 28g)”

Check that the PFS uses the correct gram standard for each creditable grain ingredient (F), based on the product’s Exhibit A grain group listed above the chart (E).

- **Groups A-G (baked goods)** require 16 grams of creditable grains to credit as 1 oz eq. To credit as 1 oz eq of a WGR food, the 16 grams of creditable grains must include at least 8 grams of whole grains.
- **Group H (cereal grains)** requires 28 grams of creditable grains to credit as 1 oz eq. To credit as 1 oz eq of a WGR food, the 28 grams of creditable grains must include at least 14 grams of whole grains.
- **Group I (RTE breakfast cereals)** requires 28 grams (1 ounce) or the equivalent volume indicated in Exhibit A (1 cup for flaked and round cereals, 1¼ cups for puffed cereals, and ¼ cup for granola) to credit as 1 oz eq.

I

Part III chart, fourth column: “CREDITABLE AMOUNT”

Check that the calculation for the creditable amount of each creditable grain ingredient is correct. For each ingredient listed in column 1 (F), divide the “GRAMS OF CREDITABLE GRAIN INGREDIENT PER PORTION” in column 2 (G) by the “GRAM STANDARD OF CREDITABLE GRAIN PER OZ. EQUIVALENT” in column 3 (H).

- For this example, the calculations are correct: 15 grams of whole-wheat flour divided by 16 grams equals 0.9375 oz eq and 11 grams of enriched flour divided by 16 grams equals 0.6875 oz eq.

J**Part III chart, bottom of fourth column: “Total”**

Check that the “Total” at the bottom of column 4 equals the sum of all creditable grain ingredients.

- For this example, the calculation is correct: 0.9375 oz eq of whole-wheat flour plus 0.6875 oz eq of enriched flour equals 1.625 oz eq.

K**Part III chart, bottom of fourth column: “Total Creditable Amount”**

Check that the “Total Creditable Amount” at the bottom of column 4 is rounded **down** to the nearest quarter ($\frac{1}{4}$) serving. For example, 1.625 oz eq round down to 1.5 oz eq, 1.49 oz eq and 1.27 oz eq round down to 1.25 oz eq, and 1.24 oz eq round down to 1 oz eq.

- For this example, the rounding is correct: 1.625 oz eq rounds down to 1.5 oz eq.

L**“Total weight (per portion) of product as purchased” and “Total contribution of product (per portion)”**

Check that the total weight per portion as purchased in this section is the same as the serving size listed at the top of the PFS (A). Check that the total contribution per portion (oz eq) in this section is the same as the “Total Creditable Amount” (K) listed at the bottom of column 4 in the chart in part III.

- For this example, the information is correct: The serving weight is listed as 1.75 ounces in both sections and the crediting contribution is listed as 1.5 oz eq in both sections.

M**Certification statement**

Check that the portion size and oz eq contribution in the certification statement is the same as the information listed just above the certification statement (L).

- For this example, the information is correct: The serving weight is listed as 1.75 ounces in both sections and the crediting contribution is listed as 1.5 oz eq in both sections.

N

Signature

Check that the manufacturer's PFS is on company letterhead and is signed and dated by an official company representative. The signature may be handwritten, stamped, or electronic.

- For this example, the information is correct: The PFS is on company letterhead and is signed and dated by a company official.

SFAs must maintain PFS forms and supporting information on file to document meal pattern compliance for auditing purposes. For more information on the required WGR documentation, refer to [section 4](#).

Common Compliance Issues for PFS Forms for Grain Products

The CSDE has observed several compliance issues with PFS forms for commercial grain products. The most common compliance issues include:

- incomplete or missing information; and
- incorrectly stating that the product does not contain noncreditable grains when they are listed on the ingredients statement.

PFS forms that do not provide sufficient information cannot be accepted as crediting documentation for school meals. If the PFS is incomplete or inaccurate, the SFA must request a revised PFS from the manufacturer, with supporting documentation, if needed.

7 — WGR Criteria for Foods Made from Scratch

SFAs must have standardized recipes on file to document the crediting information for all grain foods made from scratch. This includes foods made on site by the SFA and foods prepared by vendors.

Standardized recipes must document the weight (grams) of creditable grains per serving. Standardized recipes for grain foods are WGR if they meet the two criteria below. For combination foods made from scratch that contain a grain portion (such as pizza crust in pizza and breading on chicken), these WGR criteria apply only to the *grain portion* of the standardized recipe.

1. The standardized recipe contains at least 50 percent whole grains. A standardized recipe meets this criterion if 1) the combined weight of all whole grains is equal to or more than the combined weight of all other creditable grains (enriched grains, bran, and germ); or 2) all creditable grains in the recipe are whole grains.
2. The standardized recipe does not contain any noncreditable grains or the combined weight of any noncreditable grains does not exceed the required limit (no more than 3.99 grams per portion for groups A-G or 6.99 grams per portion for group H) (refer to “[WGR Criterion 2 – Noncreditable Grains Meet Limit](#)” in section 3). For examples of noncreditable grains, refer to [table 3-4](#). For guidance on how to calculate the grams of noncreditable grains per portion, refer to the CSDE’s resource, *Calculation Methods for Grain Ounce Equivalents for Grades K-12 in the National School Lunch Program and School Breakfast Program*.

For example, a standardized recipe for pizza dough contains 6 pounds of whole-wheat flour, 5 pounds of enriched flour, and no noncreditable grains. This recipe is WGR because the whole-wheat flour weighs more than the enriched flour.

SFAs must determine the oz eq of WGR standardized recipes. The serving of a WGR recipe must provide the required weight (groups A-E) or volume (groups H-I) for the applicable grain group in the USDA’s Exhibit A chart or contain the minimum creditable grains. For more information, refer to “[Ounce Equivalents](#)” in section 1. For information on how to determine the WGR oz eq contribution of a standardized recipe, refer to the CSDE’s resource, *Calculation Methods for Grain Ounce Equivalents for Grades K-12 in the National School Lunch Program and School Breakfast Program*.

How to Evaluate Recipes for WGR Compliance

Standardized recipes list the measurements for grain ingredients by weight (pounds and ounces) and volume (e.g., cups and quarts). Use the weight measurements to determine if the standardized recipe is WGR and calculate the oz eq contribution per serving.

For assistance with recipe calculations, such as converting fractions to decimals, refer to 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*. Table 7-2 shows an example of how to determine if a standardized recipe is WGR.

Recipes with equal amounts of whole and enriched grains

A recipe is WGR if the combined amount of all whole grains is equal to or more than the combined amount of all other creditable grains (enriched grains, bran, and germ). A standardized recipe that lists equal amounts of whole grain and enriched flours meets the WGR criteria if it does not contain any noncreditable grains. For example, a standardized recipe is WGR if it contains 2 cups of whole-wheat flour, 2 cups of enriched flour, and no noncreditable grains. The menu planner would not need to calculate the weight of each grain ingredient for this standardized recipe because the volume of whole and enriched grains is the same.

Examples of evaluating a standardized recipe

Tables 7-1 and 7-2 show some examples of how to evaluate the WGR compliance of a standardized recipe. The corn muffins (table 7-2) are WGR because they contain equal amounts of whole-wheat flour and white whole-grain cornmeal and the recipe does not contain any noncreditable grains. The whole-wheat banana bread (table 7-3) is not WGR because the all-purpose flour weighs more than the whole-wheat flour.



Table 7-1. Evaluating WGR compliance of a standardized recipe: corn muffins

Corn Muffins (25 servings)		
Ingredients	Weight	Measure
Whole-wheat flour	8 oz	1½ cups
Enriched cornmeal	8 oz	1¼ cups
Sugar, granulated	3 oz	⅓ cup 2 Tbsp
Baking powder		¾ tsp
Frozen whole eggs, thawed	3 oz	⅓ cup
Nonfat milk		1¾ cups
Canola oil		¼ cup

Column 1: WGR criteria for foods made from scratch	Column 2: meets criterion?
Criterion 1: contains ≥ 50 percent whole grains	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No This recipe contains equal amounts of whole-wheat flour (8 ounces) and enriched cornmeal (8 ounces).
Criterion 2: meets limit for noncreditable grains	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No This recipe does not contain any noncreditable grains.
Is the recipe WGR?	<input checked="" type="checkbox"/> Yes ¹ (all “Yes” boxes are checked in column 2) <input type="checkbox"/> No (any “No” box is checked in column 2)
¹ The serving must provide the required weight for the applicable group in the USDA’s Exhibit A chart or contain the minimum creditable grains (refer to “ Determining the Oz Eq Contribution ” in section 1).	

Table 7-2. Evaluating WGR compliance of a standardized recipe: banana bread

Whole Wheat Banana Bread (50 servings)	
Ingredients	Amount
Sugar, granulated	1 lb 9 oz
Shortening	13 oz
Eggs	7 (12 oz)
Vanilla	1 Tbsp
Bananas, mashed	2 lb 11 oz
Flour, whole wheat	10 oz
Flour, all-purpose	1 lb 8 oz
Baking soda	3½ tsp
Salt	1½ tsp

Column 1: WGR criteria for foods made from scratch	Column 2: meets criterion?
Criterion 1: contains ≥ 50 percent whole grains	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No The all-purpose flour (1 pound 8 ounces) weighs more than the whole-wheat flour (10 ounces).
Criterion 2: meets limit for noncreditable grains	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No This recipe does not contain any noncreditable grains.
Is the recipe WGR?	<input type="checkbox"/> Yes ¹ (all “Yes” boxes are checked in column 2) <input checked="" type="checkbox"/> No (any “No” box is checked in column 2)
¹ The serving must provide the required weight for the applicable group in the USDA’s Exhibit A chart or contain the minimum creditable grains (refer to “ Determining the Oz Eq Contribution ” in section 1).	

Recipes that are not standardized

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. SFAs may use any of the methods below to convert the volume of a recipe's grain ingredients to weight (grams).

- **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.

Nutrition Facts	
Serving Size	1/4 cup (32g)
Amount Per Serving	
Calories	110

 - **Whole wheat flour:** The Nutrition Facts label for the whole-wheat flour states that ¼ 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 ¼ 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).
 - **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.
 - **Volume equivalent chart:** Use volume equivalent charts that list the weight of 1 cup of grain ingredients. Table 6 shows the weight per cup for some common grain ingredients.
 - **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 Child Nutrition Programs](#).

Tables 7-3 shows an example of how to evaluate a recipe that is not standardized. The menu planner must determine the weight of each grain ingredient by converting cups (volume) to grams (weight).

Table 7-3. Example 1: Evaluating a recipe with grain ingredients in cups

Grain ingredients	Measure	Convert cups to grams		
		Grams per cup ¹		Weight (grams)
Whole-wheat flour	1½ cups	x 128 =		160 grams
Enriched flour	1¼ cups	x 120 =		150 grams

Column 1: WGR criteria for foods made from scratch	Column 2: meets criterion?
Criterion 1: contains ≥ 50 percent whole grains	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No The whole-wheat flour (160 grams) weighs more than the enriched flour (150 grams).
Criterion 2: meets limit for noncreditable grains	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No This recipe does not contain any noncreditable grains.
Is the recipe WGR?	<input checked="" type="checkbox"/> Yes ¹ (all “Yes” boxes are checked in column 2) <input type="checkbox"/> No (any “No” box is checked in column 2)

¹ Grams per cup from the USDA’s [FoodData Central](#) database (Standard Reference (SR) Legacy Data).

² The serving must provide the required weight for the applicable group in the USDA’s Exhibit A chart or contain the minimum creditable grains (refer to “[Determining the Oz Eq Contribution](#)” in section 1).

8 — Resources

This section includes links to resources and websites that assist SFAs with meeting the requirements for grains component of the NSLP and SBP meal patterns for grades K-12. Topics include crediting requirements and documentation, WGR criteria, oz eq, and meal pattern resources.

More links to information on the federal and state requirements and guidance for school meals are available on the CSDE's [Program Guidance for School Nutrition Programs](#) webpages. For a list of resources on the NSLP and SBP meal patterns and crediting requirements for grades K-12, refer to the CSDE's [Resources for the School Meal Patterns for Grades K-12](#).

Crediting Documentation for Grains

Accepting Processed Product Documentation in the National School Lunch Program and School Breakfast Program (CSDE):

https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/Accepting_Processed_Product_Documentation_SNP.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/CN_Labeling_Program.pdf

Crediting Commercial Processed Products for Grades K-12 in School Nutrition Programs (CSDE's Crediting Foods in School Nutrition Programs webpage):

<https://portal.ct.gov/SDE/Nutrition/Crediting-Foods-in-School-Nutrition-Programs#CommercialProducts>

Crediting Foods Made from Scratch for Grades K-12 in School Nutrition Programs (CSDE's Crediting Foods in School Nutrition Programs webpage):

<https://portal.ct.gov/SDE/Nutrition/Crediting-Foods-in-School-Nutrition-Programs#ScratchFoods>

Food Buying Guide Section 4: Overview of Crediting Requirements for the Grains Component (USDA):

https://foodbuyingguide.fns.usda.gov/Content/TablesFBG/USDA_FBG_Section4_Grains.pdf

Food Buying Guide Section 4: Yield Table for Grains (USDA):

https://foodbuyingguide.fns.usda.gov/files/Reports/USDA_FBG_Section4_GrainsYieldTable.pdf

FoodData Central Nutrient Database (USDA):

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

Product Formulation Statement for Documenting Grains in Child Nutrition Programs (USDA):

https://fns-prod.azureedge.net/sites/default/files/resource-files/PFS_Document_Grains_oz_eq.pdf

Product Formulation Statement for Documenting Grains in Child Nutrition Programs – Completed Sample (USDA):

https://fns-prod.azureedge.net/sites/default/files/resource-files/PFS_Sample_oz_eq.pdf

Standardized Recipe Form for School Nutrition Programs:

https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/Standardized_Recipe_Form_Schools.docx

Standardized Recipes (CSDE's Crediting Foods in School Nutrition Programs webpage):

<https://portal.ct.gov/SDE/Nutrition/Crediting-Foods-in-School-Nutrition-Programs#StandardizedRecipes>

Tips for Evaluating a Manufacturer's Product Formulation Statement (USDA):

<https://www.fns.usda.gov/sites/default/files/resource-files/manufacturerPFStipsheet.pdf>

Using Product Formulation Statements in the School Nutrition Programs (CSDE):

<https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/PFS.pdf>

What's in a Meal Module 6: Meal Pattern Documentation (CSDE's Training Program, What's in a Meal: National School Lunch Program and School Breakfast Program Meal Patterns for Grades K-12):

<https://portal.ct.gov/SDE/Nutrition/Meal-Pattern-Training-Materials>

When Commercial Grain Products Require a Product Formulation Statement to Credit in the School Nutrition Programs (CSDE):

https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/When_Commercial_Grain_Products_Require_PFS_SNP.pdf

Yield Study Form for Child Nutrition Programs (CSDE):

https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/Yield_Study_Form.pdf

Crediting Requirements for Grains

Calculating the Weekly Percentage of Whole Grain-rich Menu Items in the National School Lunch Program and School Breakfast Program (CSDE):

https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/Calculate_WGR_Percentage_SNP.pdf

Comparison of Meal Pattern Requirements for the Grains Component in School Nutrition Programs (CSDE):

https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/Comparison_Grain_Crediting_SNP.pdf

Crediting Breakfast Cereals for Grades K-12 in the National School Lunch Program and School Breakfast Program (CSDE):

https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/Credit_Cereals_SNP_grades_K-12.pdf

Crediting Enriched Grains in the National School Lunch Program and School Breakfast Program (CSDE):

https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/Credit_Enriched_Grains_SNP.pdf

Crediting Grain-based Desserts for Grades K-12 in the School Nutrition Programs (CSDE):

https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/Credit_Grain_Based_Desserts_grades_K-12_SNP.pdf

Crediting Whole Grains in the National School Lunch Program and School Breakfast Program (CSDE):

https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/Credit_Whole_Grains_SNP.pdf

Food Buying Guide for Child Nutrition Programs (USDA):

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

Grains Component for Grades K-12 (Documents/Forms section of CSDE's Crediting Foods in School Nutrition Programs webpage):

<https://portal.ct.gov/SDE/Nutrition/Crediting-Foods-in-School-Nutrition-Programs/Documents#Grains>

USDA Memo SP 05-2022: Meal Requirements Under the National School Lunch Program and School Breakfast Program: Questions and Answers for Program Operators Updated to Support the Transitional Standards for Milk, Whole Grains, and Sodium Effective July 1, 2022:

<https://www.fns.usda.gov/cn/sp052022-questions-answers-program-operators>

USDA Memo SP 23-2019, CACFP 10-2019, and SFSP 09-2019: Crediting Popcorn in the Child Nutrition Programs:

<https://www.fns.usda.gov/cn/crediting-popcorn-child-nutrition-programs>

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>

What's in a Meal Module 11: Grains Component (CSDE's Training Program, What's in a Meal: National School Lunch Program and School Breakfast Program Meal Patterns for Grades K-12):

<https://portal.ct.gov/SDE/Nutrition/Meal-Pattern-Training-Materials>

What's in a Meal Module 12: Whole Grain-rich (WGR) Requirement (CSDE's Training Program, What's in a Meal: National School Lunch Program and School Breakfast Program Meal Patterns for Grades K-12):

<https://portal.ct.gov/SDE/Nutrition/Meal-Pattern-Training-Materials>

Worksheet to Calculate the Weekly Percentage of Whole Grain-rich Menu Items in School Lunch and Breakfast Menus for Grades K-12 (CSDE):

https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/Worksheet_Calculate_WGR_Percentage_SNP_grades_K-12.xlsx

Ounce Equivalents

Calculation Methods for Grain Ounce Equivalents for Grades K-12 in the National School Lunch Program and School Breakfast Program (CSDE):

https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/Grain_Calculation_SNP_grades_K-12.pdf

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

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

Food Buying Guide Exhibit A Grains Tool (USDA):

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

Grain Ounce Equivalents for Grades K-12 in the National School Lunch Program and School Breakfast Program (CSDE):

https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/Grain_Oz_Eq_SNP_grades_K-12.pdf

How to Use the Grain Ounce Equivalents Chart for the National School Lunch Program and School Breakfast Program (CSDE):

https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/How_to_Use_Ounce_Equivalents_Chart.pdf

Ounce Equivalents (Documents/Forms section of the CSDE's Crediting Foods in School Nutrition Programs webpage):

<https://portal.ct.gov/SDE/Nutrition/Crediting-Foods-in-School-Nutrition-Programs/Documents#OunceEquivalents>

USDA Memo SP 05-2022: Meal Requirements Under the National School Lunch Program and School Breakfast Program: Questions and Answers for Program Operators Updated to Support the Transitional Standards for Milk, Whole Grains, and Sodium Effective July 1, 2022:

<https://www.fns.usda.gov/cn/sp052022-questions-answers-program-operators>

Webinar: Exhibit A Grains Tool to the Rescue (USDA):

<https://www.fns.usda.gov/tn/exhibit-grains-tool-rescue>

Webinar: How to Maximize the Exhibit A Grains Tool (USDA):

<https://www.fns.usda.gov/tn/how-maximize-exhibit-grains-tool>

What's in a Meal Module 13: Grains Ounce Equivalents (CSDE's Training Program, What's in a Meal: National School Lunch Program and School Breakfast Program Meal Patterns for Grades K-12):

<https://portal.ct.gov/SDE/Nutrition/Meal-Pattern-Training-Materials>

Meal Patterns

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

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

Meal Patterns for Grades K-12 in School Nutrition Programs (CSDE webpage):

<https://portal.ct.gov/SDE/Nutrition/Meal-Patterns-School-Nutrition-Programs>

Menu Planning for Child Nutrition Programs (CSDE webpage):

<https://portal.ct.gov/SDE/Nutrition/Menu-Planning>

Menu Planning Guide for School Meals for Grades K-12 (CSDE):

<https://portal.ct.gov/SDE/Nutrition/Menu-Planning-Guide-for-School-Meals>

What's in a Meal: National School Lunch Program and School Breakfast Program Meal Patterns for Grades K-12 (CSDE training program):

<https://portal.ct.gov/SDE/Nutrition/Meal-Pattern-Training-Materials>

WGR Requirement

Calculating the Weekly Percentage of Whole Grain-rich Menu Items in the National School Lunch Program and School Breakfast Program (CSDE):

https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/Calculate_WGR_Percentage_SNP.pdf.

USDA Memo SP 05-2022: Meal Requirements Under the National School Lunch Program and School Breakfast Program: Questions and Answers for Program Operators Updated to Support the Transitional Standards for Milk, Whole Grains, and Sodium Effective July 1, 2022:

<https://www.fns.usda.gov/cn/sp052022-questions-answers-program-operators>

What's in a Meal Module 12: Whole Grain-rich Requirement (CSDE's Training Program, What's in a Meal: National School Lunch Program and School Breakfast Program Meal Patterns for Grades K-12):

<https://portal.ct.gov/SDE/Nutrition/Meal-Pattern-Training-Materials>

Whole Grain Resource for the National School Lunch and Breakfast Programs (USDA):

<https://www.fns.usda.gov/tn/whole-grain-resource-national-school-lunch-and-breakfast-programs>

Whole Grain-rich Requirement (Documents/Forms section of the CSDE's Crediting Foods in School Nutrition Programs webpage):

<https://portal.ct.gov/SDE/Nutrition/Crediting-Foods-in-School-Nutrition-Programs/Documents#WGR>

Worksheet to Calculate the Weekly Percentage of Whole Grain-rich Menu Items in School Lunch and Breakfast Menus for Grades K-12 (CSDE):

https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/Worksheet_Calculate_WGR_Percentage_SNP_grades_K-12.xlsx

Glossary

Administrative Review (AR): The state agency’s comprehensive offsite and onsite evaluation of all SFAs participating in the NSLP and SBP. The review cycle is every three years for each SFA and includes a review of both critical and general areas. For more information, visit the CSDE’s [Administrative Review for School Nutrition Programs](#) webpage.

Afterschool Snack Program (ASP): The USDA’s federally assisted snack program implemented through the National School Lunch Program (NSLP). The ASP provides cash reimbursement to help schools serve snacks to children in afterschool activities aimed at promoting the health and well-being of children and youth. Schools must provide children with regularly scheduled activities in an organized, structured, and supervised environment that includes educational or enrichment activities, e.g., mentoring/tutoring programs. Programs must meet state or local licensing requirements and health and safety standards. For more information, visit the CSDE’s [Afterschool Snack Program](#) webpage.

amaranth: A small type of gluten-free pseudo-grain. Amaranth is a whole grain. For more information, refer to “pseudo-grains” in this section.

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

barley: A whole grain that has a very tough hull. Whole barley and hulled barley are whole grains, but pearly barley is not. For more information, refer to “pearled grains” in this section.

berries (such as wheat berries and rye berries): The whole kernel of grain.

bleached flour: Flour treated with chemical agents to speed up the natural aging process and produce a whiter flour with a finer grain and softer texture. Bleached flour is a creditable grain if it is enriched. For information on crediting enriched grains, refer to the CSDE’s resource, [Crediting Enriched Grains in the National School Lunch Program and School Breakfast Program](#).

bran: The seed husk or outer coating of cereal grains such as wheat, rye, and oats. Examples include oat bran, wheat bran, corn bran, rice bran, and rye bran. Bran credits the same as enriched grains in the meal patterns for school nutrition programs.

bleached flour: Flour treated with chemical agents to speed up the natural aging process and produce a whiter flour with a finer grain and softer texture. Bleached flour is a creditable grain if it is enriched. For information on crediting enriched grains, refer to the CSDE’s resource, [Crediting Enriched Grains in the National School Lunch Program and School Breakfast Program](#).

bromated flour: A type of flour with added potassium bromate, which promotes gluten development to improve dough's baking qualities (such as the rise and elasticity of dough). This flour is more commonly available with ascorbic acid added to provide the elasticity instead of potassium bromate. Bromated flour is a creditable grain if it is enriched. For more information, refer to “unbromated flour” in this section. For information on crediting enriched grains, refer to the CSDE’s resource, [Crediting Enriched Grains in the National School Lunch Program and School Breakfast Program](#).

buckwheat: A type of gluten-free pseudo-grain, typically used in foods like pancakes and soba noodles, that is botanically a relative of rhubarb. Buckwheat is a whole grain. For more information, refer to “pseudo-grains” in this section.

bulgur: Precooked parboiled (cracked or steamed) whole-wheat grains.

cereal grains: The seeds that come from grasses. Cereal grains can be whole grain (such as amaranth, barley, buckwheat, corn, millet, oats, quinoa, rice, rolled wheat, rye, sorghum, triticale, wheat, and wheat berries) or enriched (such as enriched cornmeal, corn grits, and farina).

Child Nutrition (CN) label: A statement that clearly identifies the contribution of a food product toward the meal pattern requirements, based on the USDA’s evaluation of the product’s formulation. CN labels are available only for main dish entrees that contain at least ½ oz eq of the meat/meat alternates component. Some examples include beef patties, cheese or meat pizzas, meat or cheese and bean burritos, egg rolls, and breaded fish portions. CN-labeled foods usually indicate the contribution of vegetables, grains, and fruits that are part of these products. For more information, refer to the CSDE’s resource, [Using Child Nutrition \(CN\) Labels in the School Nutrition Programs](#), and visit the USDA’s [Child Nutrition \(CN\) Labeling](#) webpage.

Child Nutrition Programs: The USDA’s federally funded programs that provide nutritious meals and snacks to children, including the National School Lunch Program (NSLP), School Breakfast Program (SBP), Afterschool Snack Program, Special Milk Program (SMP), Summer Food Service Program (SFSP), Seamless Summer Option (SSO) of the NSLP, Fresh Fruit and Vegetable Program (FFVP), and Child and Adult Care Food Program (CACFP). The CACFP also provides nutritious meals and snacks to the frail elderly in adult day care centers. For more information, visit the CSDE’s [Child Nutrition Programs](#) webpage.

combination foods: Foods that contain more than one food component, such as pizza, burritos, and smoothies made with milk and fruit. For example, macaroni and cheese contains pasta (grains) and cheese (meat/meat alternate). Combination foods generally cannot be separated (such as pizza and burritos) or are not intended to be separated (such as a hamburger on a bun or turkey sandwich).

Connecticut Nutrition Standards: State nutrition standards developed by the Connecticut State Department of Education per Section 10-215e of the Connecticut General Statutes. These standards address the nutritional content of all foods sold to students separately from reimbursable meals. They focus on limiting fat, saturated fats, trans fats, sodium, and added sugars, moderating portion sizes, and increasing consumption of nutrient-rich foods such as fruits, vegetables, whole grains, low-fat dairy, lean meats, and legumes. All schools in any district that chooses to comply with the healthy food option of Healthy Food Certification under Section 10-215f of the Connecticut General Statutes must follow the Connecticut Nutrition Standards for all sources of food sales to students, including school cafeterias, vending machines, school stores, fundraisers, and any other sources. The Connecticut Nutrition Standards also apply to all snacks served in the Afterschool Snack Program. For more information, visit the CSDE’s [Connecticut Nutrition Standards](#) webpage.

corn masa: Dough made from masa harina that is used for making corn products such as tortillas, tortilla chips, and tamales. Corn masa is nixtamalized and credits as a whole grain. For more information, refer to “[Whole grains](#)” in section 2 and the CSDE’s resource, *[Crediting Whole Grains in the National School Lunch Program and School Breakfast Program](#)*.

cornmeal: Meal made from ground, dried corn.

couscous: A type of grain product similar to pasta that is made from crushed semolina.

cracked wheat: Whole-wheat grains cut or crushed into smaller pieces.

creditable food: A food or beverage that counts toward meeting the meal pattern requirements for a reimbursable meal or snack in the USDA’s Child Nutrition Programs. For more information, visit the CSDE’s [Crediting Foods in School Nutrition Programs](#) webpage.

creditable grains: The ingredients in a commercial grain product or standardized recipe that credit toward the grains component. Creditable grains include whole grains, enriched grains, bran, and germ.

DATEM or datem: An abbreviation for “diacetyl tartaric acid ester of mono- and diglycerides,” which is an emulsifier used in baking. DATEM strengthens the gluten network in dough to improve the bread’s texture and shape.

degerminated cornmeal: Cornmeal that has the germ removed to increase shelf life. Degerminated cornmeal is not a whole grain.

Dietary Guidelines for Americans: A federal document that provides science-based advice for Americans ages 2 and older to promote health and reduce risk for chronic diseases through diet and physical activity. The U.S. Department of Health and Human Services and the U.S. Department of Agriculture jointly publish the *Dietary Guidelines* every five years. This document forms the basis of federal food, nutrition education, and information programs. For more information, visit the [Dietary Guidelines for Americans](#) webpage.

endosperm: The soft, white inside portion of the whole-grain kernel. The endosperm contains starch, protein, and small amounts of B vitamins.

enriched grains: Refined grains (such as wheat, rice, and corn) and grain products (such as cereal, pasta, and bread) that have some vitamins and minerals added to replace the nutrients lost during processing. The five enrichment nutrients are added within limits specified by the FDA, and include thiamin (B₁), riboflavin (B₂), niacin (B₃), folic acid, and iron. For more information, refer to “[Enriched grains](#)” in section 2 and the CSDE’s resource, [Crediting Enriched Grains in the National School Lunch Program and School Breakfast Program](#).

enrichment: Adding back nutrients (usually vitamins or minerals) originally present in a food that were lost during processing. Enrichment nutrients are added back in approximately the same levels as were originally present in the food. For more information, refer to “[enriched grains](#)” in this section.

Exhibit A chart: The USDA’s chart that indicates the required weight (groups A-G) or volume (groups H-I) for different types of grain foods to provide 1 oz eq of the grains component (CACFP meal patterns and NSLP and SBP meal patterns for grades K-12 and preschoolers) or 1 serving of the grains/breads component (SFSP meal pattern and ASP meal pattern for grades K-12). The required amounts in Exhibit A chart are not the same for all Child Nutrition Programs because these programs have different meal patterns. The CSDE’s resource, [Grain Ounce Equivalents for Grades K-12 in the National School Lunch Program and School Breakfast Program](#), indicates the Exhibit A grain oz eq that apply to grades K-12 in the NSLP and SBP. For more information, refer to the USDA’s [Exhibit A: Grain Requirements for Child Nutrition Programs](#).

flour: Finely ground and sifted wheat or other grains such as rye, corn, rice, or buckwheat.

fortification: Adding nutrients (usually vitamins or minerals) that were not originally present in a food or beverage, or adding nutrients at levels that are higher than originally present. Fortification is used for naturally nutrient-rich products based on scientifically documented health needs (such as fortifying milk with vitamin D to increase the body’s absorption of calcium), or to enhance the perceived nutritional value of products with little or no natural nutritional value, e.g., fortifying “energy” bars made from processed flour with multiple vitamins and minerals. Fortification nutrients are added to products in varying amounts, from small percentages up to amounts greater than recommended intakes.

germ: The vitamin-rich sprouting section of the whole-grain kernel. Germ credits the same as enriched grains in the meal patterns for school nutrition programs.

gluten: The general name for proteins naturally found in certain cereal grains, such as barley, rye, wheat, and triticale (a wheat-rye hybrid). Gluten has elastic properties that help dough to stretch, rise, and maintain moisture when heated. It is frequently used as an additive to improve texture and promote moisture retention in processed foods. Gluten is a grain derivative that does not count toward the noncreditable grains limit for WGR foods in the NSLP and SBP meal patterns for grades K-12. For more information, refer to “grain derivative” in this section and column 2 in [table 3-4](#).

graham flour: A type of coarsely ground whole wheat flour.

grain berries: The unprocessed whole kernel of grain, such as wheat berries and rye berries.

grain derivative: A by-product of grains, such as malt made from barley, wheat gluten made from wheat, and maltodextrin made from corn. Grain derivatives do not count toward the noncreditable grains limit for WGR foods in the NSLP and SBP meal patterns for grades K-12. For examples of grain derivatives, refer to column 2 in [table 3-4](#).

grains: Plants in the grass family, which produce a dry, edible fruit commonly called a kernel, grain, or berry.

grains component: The meal component of the USDA meal patterns that is comprised of cereal grains and products made from their flours. Creditable grain foods include products and recipes 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 additional guidance on the grains component of the NSLP and SBP meal patterns for grades K-12, refer to the CSDE’s [Menu Planning Guide for School Meals for Grades K-12](#) and visit the “[Grains Component for Grades K-12](#)” section of the CSDE’s [Crediting Foods in School Nutrition Programs](#) webpage.

grits: A coarsely ground grain made with hominy or stone-ground corn.

groats: The hulled kernels of various cereal grains, such as oat, wheat, rye, buckwheat, and barley. Groats are whole grains.

Healthy Food Certification: A state statute (Section 10-215f of the Connecticut General Statutes) that requires each board of education or governing authority for all public schools participating in the NSLP to certify annually to the CSDE whether they will follow the Connecticut Nutrition Standards (CNS) for all foods sold to students separately from reimbursable meals. Districts that choose to implement the CNS receive additional funding per lunch, based on the total number of reimbursable lunches (paid, free, and reduced) served in the district in the prior school year. For more information, refer to “Connecticut Nutrition Standards” in this section and visit the CSDE’s [Healthy Food Certification](#) webpage.

hominy grits: A type of grits made from hominy.

hominy: A traditional food in Mexican and Native American cultures that is commonly served as a vegetable or milled grain product, e.g., hominy grits. Hominy is made from whole kernels of maize (dried field corn) that have been soaked in an alkaline solution (nixtamalized). This process removes the hull and germ, causes the corn to puff up to about double its normal size, and increases the bioavailability of certain nutrients, such as calcium and niacin. For more information, refer to “Whole grains” in section 1, and the CSDE’s resource, *Crediting Whole Grains in the National School Lunch Program and School Breakfast Program*.

instant oatmeal: Oatmeal made from whole-grain oats that are thinner and more finely chopped than rolled oats. Instant oatmeal has a soft texture and cooks quickly.

l-cysteine: An amino acid used in baking to help soften the dough and reduce processing time.

maltodextrin: A carbohydrate derived from starch (typically from corn, potatoes, rice, or wheat) that is used as a food additive to enhance texture and flavor. Maltodextrin is a grain derivative that does not count toward the noncreditable grains limit for WGR foods in the NSLP and SBP meal patterns for grades K-12. For more information, refer to “grain derivative” in this section and column 2 in [table 3-4](#).

masa harina: Corn flour used for making corn products such as tortillas, tortilla chips, and tamales. Masa harina is nixtamalized and credits as a whole grain. For more information, refer to “Whole grains” in section 2 and the CSDE’s resource, *Crediting Whole Grains in the National School Lunch Program and School Breakfast Program*.

meal pattern: The required food components and minimum serving sizes that schools and institutions participating in the USDA’s Child Nutrition Programs must provide to receive federal reimbursement for meals and snacks served to children. For information on the NSLP and SBP meal patterns, visit the CSDE’s [Meal Patterns for Grades K-12 in School Nutrition Programs](#) webpage.

meal: A grain made by coarsely grinding corn, oats, wheat, or other grains. Whole grain, enriched, or fortified meal credits toward the grains component of the USDA’s meal patterns.

meals: Refer to “reimbursable meals” in this section.

millet: A group of several small, related grains. Millet is a gluten-free whole grain

modified food starch: A chemically altered ingredient made from starch that 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 noncreditable grain that counts toward

the noncreditable grains limit for WGR foods in the NSLP and SBP meal patterns for grades K-12. For more information, refer to “[WGR Criterion 3 –Noncreditable Grains Meet Limit](#)” in section 3.

National School Lunch Program (NSLP): The USDA’s federally assisted meal program operating in public and nonprofit private schools and residential child care institutions. The NSLP provides nutritionally balanced, low-cost or free lunches to children each school day. It was established under the National School Lunch Act, signed by President Harry Truman in 1946. For more information, visit the CSDE’s [National School Lunch Program](#) webpage.

nixtamalization: A process in which dried corn is soaked and cooked in an alkaline (slaked lime) solution. This process increases the bioavailability of certain nutrients and provides a nutritional profile similar to whole-grain corn. Nixtamalized corn is used to make hominy, masa harina (corn flour), corn masa (dough from masa harina), and certain types of cornmeal. Nixtamalized corn credits as a whole grain. For more information, refer to “[Whole grains](#)” in section 2 and the CSDE’s resource, [Crediting Whole Grains in the National School Lunch Program and School Breakfast Program](#).

noncreditable grains: Grain ingredients that do not contribute to the grains component. Examples of noncreditable grains include oat fiber, corn fiber, wheat starch, corn starch, and modified food starch (including potato, legume, and other vegetable flours). For more information and additional examples, refer to [table 3-4](#) and “[WGR Criterion 3 –Noncreditable Grains Meet Limit](#)” in section 3.

old-fashioned oats (rolled oats): Whole-grain oats that have been steamed and flattened. They have a firm texture and cook faster than steel-cut oats.

ounce equivalent (oz eq): A unit of measure that indicates the contribution of a given serving size toward the grains component of the NSLP and the SBP meal patterns for grades K-12. One oz eq provides 16 grams of credible grains. The amount of a grain food that provides 1 oz eq varies because different types of foods contain different amounts of creditable grains. For example, 1 oz eq of the grains component can be less than a measured ounce (e.g., pretzels, bread sticks, and crackers), equal to a measured ounce (e.g., bagels, biscuits, bread, rolls, cereal grains, and RTE breakfast cereals), or more than a measured ounce (e.g., muffins, pancakes, and grain-based desserts such as cookies, cake, and granola bars). For more information, refer to the CSDE’s resource, [Grain Ounce Equivalents for Grades K-12 in the National School Lunch Program and School Breakfast Program](#).

pearled grains: Removing the bran from the whole grain, such as pearled barley. Pearled grains are not whole grains.

primary grain ingredient: The greatest grain ingredient by weight. For commercial grain foods, this is the first ingredient (excluding water) listed in the product’s ingredients statement. For commercial combination foods that contain a grain portion, this is the first grain ingredient (excluding water) listed in the product’s ingredients statement. For commercial combination foods that contain a grain portion listed separately, this is the first ingredient (excluding water) listed in the grain portion of the product’s ingredients statement.

product fact sheet: Refer to “product specification sheet” in this section.

product formulation statement (PFS): An information statement obtained from the manufacturer that provides specific information about how a product credits toward the USDA’s meal pattern requirements, and documents how this information is obtained citing Child Nutrition Program resources or regulations. All creditable ingredients in this statement must match a description in the USDA’s *Food Buying Guide for Child Nutrition Programs*. The PFS must be prepared on company letterhead with the signature of a company official and the date of issue. Unlike a CN label, a PFS does not provide any warranty against audit claims. SFAs must check the manufacturer’s crediting information for accuracy prior to including the product in reimbursable meals. For more information, refer to “Evaluating PFS Forms for Grain Products” in section 3 and the CSDE’s resources, *Using Product Formulation Statements in the School Nutrition Programs* and *Accepting Processed Product Documentation in the National School Lunch Program and School Breakfast Program*.

product specification sheet: Manufacturer sales literature that provides various information about the company’s products. These materials do not provide the specific crediting information that is required on a product formulation statement and cannot be used to determine a product’s contribution toward the USDA’s meal pattern components.

pseudo-grains: Plants that are not in the same botanical family as cereal grains but have nutritional profiles and uses similar to “true” cereal grains. Examples include amaranth, quinoa, and buckwheat.

quinoa: A small, round type of pseudo-grain that is botanically a relative of Swiss chard and beets. Quinoa is a whole grain. For more information, refer to “pseudo-grains” in this section.

refined grains: Grains that have been processed to remove the bran and germ, making the product less nutritious than whole grains. Refined grains may or may not be enriched. For more information, refer to “enriched grains” in this section.

reimbursable meals: Meals and ASP snacks that meet the meal pattern requirements of the USDA’s regulations for Child Nutrition Programs.

residential child care institution (RCCI): RCCIs include, but are not limited to homes for the mentally, emotionally or physically impaired, and unmarried mothers and their infants; group homes; halfway houses; orphanages; temporary shelters for abused children and for runaway children; long-term care facilities for chronically ill children; and juvenile detention centers. A long-term care facility is a hospital, skilled nursing facility, intermediate care facility, or distinct part thereof, which is intended for the care of children confined for 30 days or more.

School Breakfast Program (SBP): The USDA’s federally assisted meal program operating in public and nonprofit private schools and residential child care institutions. The SBP provides nutritionally balanced, low-cost, or free breakfasts to children each school day. The program was established under the Child Nutrition Act of 1966 to ensure that all children have access to a healthy breakfast at school to promote learning readiness and healthy eating behaviors. For more information, visit the CSDE’s [School Breakfast Program](#) webpage.

school food authority (SFA): The governing body that is responsible for the administration of one or more schools and has the legal authority to operate the USDA’s school nutrition programs.

school nutrition programs: The USDA’s school nutrition programs include the National School Lunch Program (NSLP), School Breakfast Program (SBP), Afterschool Snack Program (ASP) of the NSLP, Seamless Summer Option (SSO) of the NSLP, Special Milk Program (SMP), Fresh Fruit and Vegetable Program (FFVP), and Child and Adult Care Food Program (CACFP) At-risk Supper Program implemented in schools. For more information, visit the CSDE’s [School Nutrition Programs](#) webpage.

Seamless Summer Option (SSO) of the NSLP: The USDA’s federally assisted summer feeding program that combines features of the NSLP, SBP, and SFSP, and serves meals free of charge to children ages 18 and younger from low-income areas. School districts participating in the NSLP or SBP are eligible to apply to the CSDE to participate in the SSO. SSO meals follow the meal patterns of the NSLP and SBP. For more information, visit the [Seamless Summer Option of the NSLP](#) webpage.

semolina: A type of meal made from coarsely ground hard wheat (e.g., durum) used in puddings and pasta. Semolina is not a whole grain.

serving size or portion: The weight, measure, number of pieces, or slices of a food or beverage. For meals to be reimbursable, SFAs must provide the minimum servings specified in the USDA’s meal patterns.

soy lecithin: A substance made from soy oil that is used as an emulsifier or stabilizer in food.

standard of identity: The mandatory government requirements that determine what a food product (like whole-wheat bread) must contain or may contain to be marketed under a certain name in interstate commerce. These standards protect consumers by ensuring that a label accurately reflects what is inside. For example, mayonnaise is not an imitation spread, and ice cream is not a similar, but different, frozen dessert. The USDA develops standards for meat and poultry products. The Food and Drug Administration (FDA) develops standards for other food products.

standardized recipe: A recipe that a given food service operation has tested and adapted for use. This recipe produces 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. Standardized recipes include specific information such as ingredients, weights and measures, preparation directions, serving directions, yield, and portion size. For information on standardized recipes, visit the “[Crediting Foods Made from Scratch](#)” section of the CSDE’s school [Crediting Foods in School Nutrition Programs](#) webpage.

steel-cut oats: Whole-grain oats that are chopped into small pieces. Steel-cut oats have a chewier texture than rolled oats and instant oats, and take the longest to cook.

triticale: A hybrid of durum wheat and rye. Triticale is a whole grain.

unbleached flour: Flour that has aged naturally after being milled. Unbleached flour has an off-white color and a denser grain than bleached flour. It provides more structure in baked goods due to its denser texture. Unbleached flour is a creditable grain if it is enriched. For information on crediting enriched grains, refer to the CSDE’s resource, *Crediting Enriched Grains in the National School Lunch Program and School Breakfast Program*.

unbromated flour: A baking flour that is higher in protein and does not contain potassium bromate. Unbromated flour develops more gluten, which results in a more stable baked product. It is commonly used for baking at high altitudes. Unbromated flour is a creditable grain if it is enriched. For information on crediting enriched grains, refer to the CSDE’s resource, *Crediting Enriched Grains in the National School Lunch Program and School Breakfast Program*.

vital wheat gluten: 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. Vital wheat gluten is a grain derivative that does not count toward the noncreditable grains limit for WGR foods in the NSLP and SBP meal patterns for grades K-12. For more information, refer to “grain derivative” in this section and column 2 in [table 3-4](#).

wheat bread: Bread that often has wheat flour or enriched wheat flour (not whole-wheat flour) as an ingredient. Wheat bread is not whole grain unless it is labeled “whole-wheat bread.” Wheat bread is low in fiber unless the manufacturer has added fiber.

wheat gluten: The protein component of the wheat grain that helps baked goods hold their shape. Wheat gluten is a grain derivative that does not count toward the noncreditable grains limit for WGR foods in the NSLP and SBP meal patterns for grades K-12. For more information, refer to “gluten” and “grain derivative” in this section and column 2 in [table 3-4](#).

whey: A milk protein used to emulsify, thicken, and brown baked goods.

whole grain-rich (WGR): For the NSLP and SBP meal patterns for grades K-12, a food is whole grain-rich if meets two criteria: 1) the food is 100 percent whole grain or contains a blend of whole and enriched grains that is at least 50 percent whole grain; and 2) any noncreditable grains are less than 2 percent of the product formula (or less than ¼ oz eq per portion), i.e., no more than 3.99 grams per portion for groups A-G or 6.99 grams per portion for group H.

whole grains: Grains that consist of the entire kernel, including the starchy endosperm, the fiber-rich bran, and the nutrient-rich germ. All grains start out as whole grains, but many are processed to remove the bran and germ, which also removes many of the nutrients. Whole grains are nutrient rich, containing vitamins, minerals, fiber, antioxidants, and health-enhancing phytonutrients such as lignans and flavonoids. Examples of whole grains include whole wheat, whole oats, oatmeal, whole-grain cornmeal, brown rice, whole rye, whole barley, wild rice, buckwheat, and bulgur (cracked wheat). For more information, refer to “[Whole grains](#)” in section 2 and the CSDE’s resource, *Crediting Whole Grains in the National School Lunch Program and School Breakfast Program*.

whole-grain flour: Flour made by grinding the entire whole-grain kernel, including the fiber-rich bran, nutrient-rich germ, and starchy endosperm. Flour or meal that does not contain all parts of the grain is not whole grain, e.g., degermed corn, milled rice, and wheat flour. For more information, refer to “[Whole grains](#)” in section 2 and the CSDE’s resource, *Crediting Whole Grains in the National School Lunch Program and School Breakfast Program*.

whole-wheat bread: Bread that contains the whole grain, including the starchy endosperm, the fiber-rich bran, and the nutrient-rich germ. Whole-wheat flour will be listed as the first grain ingredient.



CONNECTICUT STATE
DEPARTMENT OF EDUCATION