

The Pulse Playbook: Best Practices for Utilizing Beans, Peas, and Lentils in School Meals

Toolkit for K-12 Nutrition Service Directors

Introduction

This toolkit aims to help K-12 school nutrition directors serve nutritious, affordable, and climate-friendly beans, peas, and lentils in school meals. With updated meal pattern flexibilities from the U.S. Department of Agriculture (USDA), it is easier than ever to utilize beans, peas, and lentils to boost menu variety, accommodate students' diets, and reduce costs—all while benefiting students' health and the planet. This toolkit highlights the key opportunities, benefits, and strategies to make beans, peas, and lentils a tasty and student-approved school meal component.



What is a Pulse?

Pulses are the dried, edible seed of plants from the legume family, which include beans, dry peas, and lentils. “Legume” is the scientific term for the plant that produces pods, and “pulse” refers specifically to the edible seeds inside the pods. It is estimated that pulses have been eaten for at least 10,000 years and are among the most extensively used foods in cultures around the world!

In USDA's latest updates to child nutrition meal patterns, the agency changed the terminology for these foods from “legumes (beans and peas)” to “beans, peas, and lentils,” but the foods included in this subgroup remain the same, and they can still be utilized as a vegetable OR as a meat/meat alternate.

Foods in this subgroup include

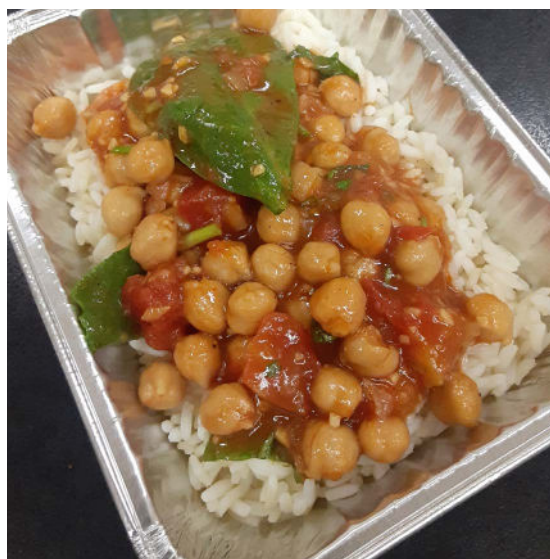
- **Beans:** kidney beans, pinto beans, white beans, black beans, lima beans, fava beans, and soybeans
- **Dried peas:** chickpeas (aka garbanzo beans), black-eyed peas, pigeon peas, and split peas
- **Lentils:** various varieties including brown, green, black, and red
- **Edamame:** Edamame (young soybeans still in the pod) is considered to be part of the beans, peas, and lentils subgroup by USDA, even though it is technically a legume and not a pulse.¹

New Opportunities to Serve Beans, Peas, and Lentils in Schools

In April 2024, USDA released its updated child nutrition meal patterns, including patterns for school lunch and breakfast. The final rule introduces three key changes that open up exciting and cost-effective opportunities for schools to serve beans, peas, and lentils in schools.

Opportunity #1: Provides greater flexibility for school districts to serve beans, peas, and lentils in lunch entrees. This can help diversify center-of-the-plate protein sources.

- **Our summary:** The final rule allows beans, peas, and lentils that are offered as the meat/meat alternate meal component to also count toward the weekly beans, peas, and lentils vegetable subgroup requirement. This should make it easier to serve beans, peas, and lentils as an entree (M/MA) instead of a side, which often means that kids are more likely to eat these under-consumed, nutritious, and affordable foods. This will also help accommodate students following vegetarian or vegan diets and students looking for healthier and more sustainable options. Plus, including more of these beans, peas, and lentils can reduce the cost and carbon footprint of menus by displacing some animal proteins. Note that beans, peas, and lentils can still be offered as meats/meat alternates *or* vegetables.
- **The fine print from USDA:** “Under the rule, schools may count beans, peas, and lentils offered as meats/meat alternates at lunch toward the weekly beans, peas, and lentils vegetable subgroup requirement. When offering beans, peas, and lentils as meats/meat alternates, schools may only count those items toward one meal component daily: either the meats/meats alternates component or the vegetables component. When schools offer beans, peas, and lentils as meat alternates, they are still required to offer additional vegetables to meet the daily and weekly vegetable meal component requirements.”



Under the old rules, the black beans in these fajitas would not have credited toward the weekly pulse vegetable requirement because they are offered as a M/MA alongside a different vegetable. However, under the new rules, the black beans in the fajitas now can count toward the weekly beans, peas, and lentils vegetable requirement, even if they fulfill the M/MA requirement.

Opportunity #2: Allows bean dips like hummus to be served as a Smart Snack.

- **Our summary:** The new rules add “bean dip” to the list of foods that qualify as Smart Snacks. The term “bean dip” includes hummus, as well as other dips made with beans, peas, or lentils.
- **The fine print from USDA:** “The final rule adds bean dip to the list of foods exempt from the total fat standard in the Smart Snacks regulations. This exemption applies to products marketed as hummus as well as bean dips made from any variety of beans, peas, or lentils. Bean dip will continue to be subject to the saturated fat standard for Smart Snacks, as well as all other Smart Snacks requirements. This change provides schools the option to sell bean dip, including hummus, as a Smart Snack.”

Opportunity #3: Makes it easier to feature plant-based proteins at breakfast.

- **Our summary:** The final rule provides more flexibility at breakfast by allowing schools to offer meats and meat alternates (including beans, peas, and lentils) alongside or instead of grains.
- **The fine print from USDA:** “The final rule establishes a combined grains and meats/meat alternates meal component in the [School Breakfast Program] and removes the requirement for schools to offer 1.0 ounce equivalent of grains each day at breakfast. Schools may offer grains, meats/meat alternates, or a combination of both to meet the minimum ounce equivalent in this combined meal component requirement.”



Benefits of Serving Beans, Peas and Lentils in Schools

Beans, peas, and lentils are convenient and versatile proteins that benefit students' health, the planet, and school budgets.

- **THEY ARE NUTRITIOUS:** Beans, peas, and lentils are nutrient-dense and provide one of the best natural sources of dietary fiber—an essential nutrient often underconsumed by National School Lunch Program participants, relative to the recommendations in the *Dietary Guidelines for Americans*.² These foods are also rich in protein, complex carbohydrates, low in saturated fat, and contain no cholesterol.³ Additionally, they provide important vitamins and minerals like potassium, iron, and B vitamins (such as folate), which promote gut health.⁴
- **THEY ARE DELICIOUS and SATISFYING:** Beans, peas, and lentils absorb flavors of seasonings and other ingredients, deepening the flavor and texture of a wide array of dishes, from savory soups and stews to rich and creamy bean dips. They also make dishes heartier and more filling, boosting student satisfaction.
- **THEY ARE CULTURALLY INCLUSIVE and VERSATILE:** Beans, peas, and lentils have been staples in cuisines around the world for thousands of years, making them culturally responsive to a wide range of culinary traditions. Their versatility allows for endless possibilities in meal planning—from main dishes to snacks, desserts, sauces, and spreads. This diversity gives school food programs the chance to innovate and offer exciting, student-approved meals.
- **THEY ARE AFFORDABLE:** Beans, peas, and lentils are cost-effective, making them a great option for improving food and nutrition security in school meal programs. Many types of beans and peas are available through the USDA Foods Program (see p.8 for a list), offering even more budget-friendly opportunities.
- **THEY ARE GOOD FOR THE PLANET:** Growing beans, peas, and lentils can improve soil health, support biodiversity, and reduce the need for synthetic fertilizers.⁵ As a sustainable protein source, beans, peas, and lentils produce significantly lower greenhouse gas emissions compared to meat and dairy, and require less water.⁶ They are also shelf-stable, lasting for long periods when stored dry, jarred, frozen, or in flour form—helping to reduce food waste.



Best Practices for Encouraging Consumption of Beans, Peas, and Lentils in Schools

- **Spotlight culture and flavor:** When serving bean-based main dishes—such as stews, curries, burgers, or burritos—highlight their cultural significance and roots in global and regional cuisines. Emphasize their delicious qualities, including rich flavor, savoriness, and indulgence. For bean toppings like chickpeas on the salad bar, showcase their “superpowers”: they’re packed with protein and loaded with nutrients.
- **Serve beans in familiar, fun formats:** Consider dishes like black bean burgers, refried bean dip, and three-bean chili that young eaters can get excited about. For students who are new to beans, the unfamiliar options like red bean congee or navy bean soup may be a harder sell.
- **Where possible, use captivating photos:** Young eaters in particular are more likely to choose climate-smart foods when descriptions are paired with mouth-watering photos.
- **Prioritize fun and simple descriptions:** Grab young eaters’ attention with exciting, fun, and short descriptions. Focus less on educating them about ingredients and more on setting an expectation for a delicious experience.
- **Partner with teachers to utilize classroom educational resources:** Celebrate beans as a versatile, eco-conscious food option while teaching about their positive impact on personal health and the planet. Check out a list of free classroom resources on p.8.

Flavor is Everything: Marketing Beans, Peas, and Lentils

Beans, peas, and lentils can shine with the right flavors. Use bold, crave-worthy ingredients to elevate these meals and excite taste buds! Capture attention with mouth-watering words like *savory*, *spicy*, *crunchy*, and *rich*.

- **Spices & Herbs:** Think cumin, paprika, garlic, and cilantro for a savory kick.
- **Zesty Sauces:** Top with tangy tahini, spicy sriracha, or smoky chipotle mayo.
- **Textures Matter:** Combine creamy (lentil curry) with crunchy (roasted chickpeas or beans) for a satisfying bite.

Example Flavor Descriptions:

- *Tangy lemon-tahini dressing*
- *Spicy chipotle black beans*
- *Crunchy roasted chickpeas*
- *Rich and creamy coconut curry*

Power-Packed Fuel: Marketing Beans, Peas, and Lentils

Beans, peas, and lentils are the ultimate plant-based powerhouses—protein-packed, energizing, and perfect for fueling active bodies.

Example Marketing Ideas:

- *Plant-based protein for muscle building*
- *Energizing and long-lasting fuel*
- *Quick power-ups and time-saving meals*
- *Nutrient-dense and healthy snacks*
- *Great fuel for staying active*
- *From quick snacks to protein-packed meals.*
- *When you're hungry for something super hearty*

Kid-Tested Recipes

Lunch Entrees

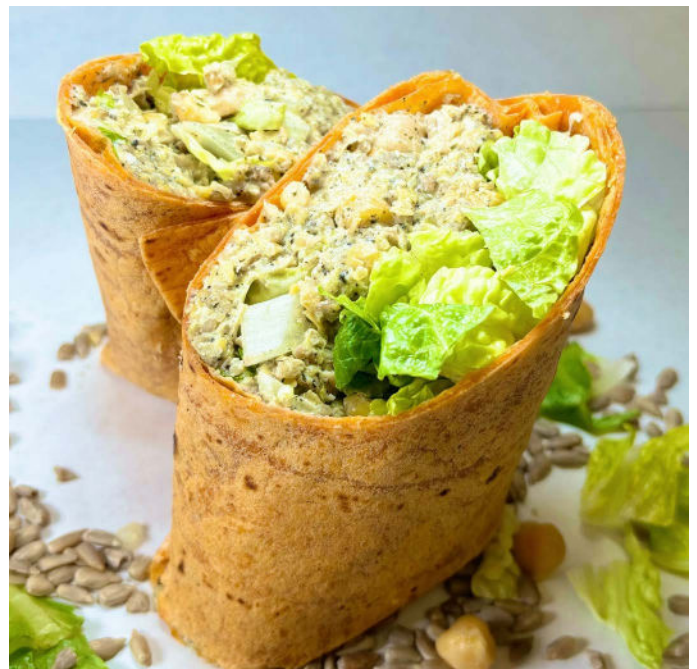
- [Baja Bean Fajitas](#)
- [BBQ Chopped Salad Bowl](#)
- [Bean Burrito Bowl](#)
- [Buffalo Chickpea Wrap](#)
- [Chicken White Bean Chili](#)
- [Crazy Curry Bowl with Tempeh](#)
- [Enchilada Chili](#)
- [Edamame Noodle Bowl](#)
- [Fiesta Rice and Bean Bowl](#)
- [Gallo Pinto \(Costa Rican Beans and Rice\)](#)
- [Hoppin' John \(Black-Eyed Peas and Rice\)](#)
- [Kick'n Bean Tacos](#)
- [Korean Bibimbap](#)
- [Marinated Black Bean Salad](#)
- [Ms. Patel's Rajma](#)
- [North African Red Lentils](#)
- [Pasta Fagioli](#)
- [Protein-Packed Two-Bean Chili](#)
- [Rockstar Lentil Burger](#)
- [Rainbow Hummus Wraps](#)
- [Rainbow Hummus Bowl](#)
- [Roasted Chickpea Pasta](#)
- [Sweet Sloppy Joes](#)
- [Tepary Bean and Chicken Bowl](#)
- [Tuscan Tomato Pie](#)
- [Vegetable Quesadilla](#)

Breakfast

- [Baja Breakfast Bowl](#)
- [Chipotle Huevos Rancheros](#)
- [Easy Better Beans Breakfast Hash](#)
- [Protein Superfood Breakfast Muffins](#)
- [Southwest Breakfast Skillet](#)

Hummus and Bean Dips

- [Best Beet Hummus](#)
- [Chocolate Chip Cookie Dough Hummus](#)
- [Hummus](#)
- [Refried Bean Dip](#)
- [Sweet Potato Hummus](#)
- [Sunshine Hummus](#)



School Success Stories

- **Thai Basil Lentil Burger:** San Luis Coastal USD in San Luis Obispo, California, led by Director of Food Service Erin Primer, created a flavorful, protein-packed Thai Basil Lentil Burger that has become a student favorite. It's a perfect balance of sweet, savory, and tangy flavors—combined with just the right mix of crunch and moisture—makes it a standout on the menu. [Click here](#) to learn more about how this rockstar burger became a huge hit!
- **Homemade Hummus Options:** Banta USD in Tracy, California, led by Food Service Supervisor Jamie Anderson, set an ambitious goal to increase plant-based meal participation from 20% to 40%. Their secret ingredient? Fresh, house-made hummus! By investing in a food processor, the district took control of their menu, creating flavorful hummus for wraps, flatbreads, and sandwiches. The result? More delicious, nutritious, and climate-friendly meals that students love!
- **High Protein Plant-Based Burgers:** When Nancy Brown, the Food Service Director at Williamsfield Williamsfield Community Unit School District (CUSD) 210, in Williamsfield Illinois, introduced plant-based burgers in the school cafeteria, she wasn't sure how the students would react. But everything changed when the middle school boys who played sports discovered the black bean burger actually packed more protein than the traditional meat option. Word spread fast, and soon, they were all lining up at lunch, proudly choosing the plant-based burger—proof that good food and good nutrition can win over the hungriest athletes.
- **Plant-Based Hot Dogs and Chili:** Verna Morecraft, the Food Service Director at Gardner Grade School in Gardner, Illinois, served up a new twist on lunch: plant-based hot dogs topped with hearty three-bean chili. The chili, packed with protein to qualify as a meat/meat alternate, was such a hit that some students even skipped the hot dog altogether, happily diving into just the chili as a satisfying, protein-rich meal.
- **Lentil Meatloaf:** Williamsfield Community Unit School District (CUSD) 210 Food Service Director Nancy Brown eased students into plant-based meals by starting with familiar favorites. Once they were on board, she introduced lentil meatloaf—and it worked. To her surprise and delight, the students not only tried it, but loved it, giving the new dish an enthusiastic thumbs-up across the board.



Resources

EDUCATION & MARKETING MATERIALS

[Beans is How](#)

- [The Brilliance of Beans](#) – Learn about the health, climate, and affordability benefits of beans

[Food for Climate League](#)

- [Serving Up Plants by Default](#)
- [Menu Language Workbook](#): A Step-by-Step Guide to Optimizing Plant-Forward Dish Descriptions

[Friends of the Earth](#)

- [Pulses Posters](#)

[Healthy Kids Happy Planet](#)

- [Cool Beans from Around the World](#) – K-12 Lesson Plans
- [Educational Materials](#) – Cafeteria PSA videos and Posters

[Meatless Monday](#)

- [Beans and Health](#) – Messaging + Social Media
- [Beans and the Environment](#) – Messaging + Social Media
- [Beans](#) – Free Materials + Fact Sheets

VERTICAL Educational Program

- [Multi-sensory bean-based curriculum](#) – science-based, teacher-led, educational resource and curriculum for 8-12 year olds

TECHNICAL GUIDANCE FOR K-12 FOOD SERVICE PROFESSIONALS

Balanced

- [K-12 Food Service Quick Start Guide to Balanced Meals](#)
- [Crafting Well Balanced Menus in Educational Settings](#)
- [Balanced's Plant-Based Product and Vendor Directory](#)

USA Pulses

- [Pulse Industry Toolkit for School Foodservice](#)
- [Handouts & Tips for K-12 Foodservice - Directors](#)

SCHOOL PULSE PRODUCTS LIST (A-Z)

- [American Bean](#) – falafel nuggets, tots, sticks
- [Banza](#) – chickpea pasta
- [Basic American Foods](#) – refried beans, lentil penne, taco crumble,
- [Better Bean](#) – cuban black beans, refried black beans, refried red beans, chipotle bean dip, Southwest pinto beans, cannellini beans, better baked beans, hummus
- [Bush's Beans](#) – various canned flavored and unflavored beans, chili, and baked beans
- [Don Lee Farms](#) – burgers, bowls, tacos
- [Dr. Praeger's Sensible Foods](#) – edamame
- [Franklin Farms](#) – chickpea tofu, edamame
- [Ground Pro Crumbles](#) – made from lentils
- [International Food Solutions](#) – veggie tamales, falafel, edamame
- [J. R. Simplot](#) – shelled edamame
- [KayFoods](#) – chickpea chana masala, crispy tofu, falafel balls, vegetarian chili, and some meal options
- [Kellanova](#) – Morningstar Farms Chipotle Black Bean Burger
- [The Amazing Chickpea](#) – chickpea creamy spreads, “chickpea butter” and jelly sandwiches
- [Beanstory](#) – various dry heirloom beans
- [The Only Bean](#) – pulse pastas (e.g., edamame, bean)

SCHOOL PULSE PRODUCTS AVAILABLE THROUGH USDA FOODS DIRECT DELIVERY

- Beans, Baby Lima, Low-sodium, Canned
- Beans, Black, Low-sodium, Canned
- Beans, Black-eyed Pea, Low-sodium, Canned
- Beans, Garbanzo, Low-sodium, Canned
- Beans, Great Northern, Low-sodium, Canned
- Beans, Kidney, Dark Red, Low-sodium, Canned
- Beans, Pink, Low-sodium, Canned
- Beans, Pinto, Dry (may be used for the USDA Processing Program)
- Beans, Pinto, Low-sodium, Canned
- Beans, Refried, Low-sodium, Canned
- Beans, Small Red, Low-sodium, Canned
- Beans, Vegetarian, Low-sodium, Canned
- *NEW this school year* Black Bean Burger, Patties, Cooked, 2.0 MMA, Frozen

Please note that this list is for the 2025-2026 school year and may change in the future.

Acknowledgements

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Citations

¹ Harvard School of Public Health. 2019. “Legumes and Pulses.” The Nutrition Source. October 28, 2019. <https://nutritionsource.hsph.harvard.edu/legumes-pulses/>.

² Fox, M. K., & Gearan, E. (2019). School Nutrition and Meal Cost Study. 52. <https://www.fns.usda.gov/research/school-meals/nutrition-meal-cost-study>

³ Harvard School of Public Health. 2019. “Legumes and Pulses.” The Nutrition Source. October 28, 2019. <https://nutritionsource.hsph.harvard.edu/legumes-pulses/>.

⁴ Medline Plus. 2024. “Healthy Food Trends - Beans and Legumes: MedlinePlus Medical Encyclopedia.” Medlineplus.gov. 2024. <https://medlineplus.gov/ency/patientinstructions/000726.htm>.

⁵ United Nations. 2024. “Pulses and Soils: A Dynamic Duo | Global Soil Partnership | Food and Agriculture Organization of the United Nations.” Fao.org. 2024. <https://www.fao.org/global-soil-partnership/resources/highlights/detail/en/c/1676758/>.

⁶ Poore, J. & T. Nemecek. (2018). Reducing food’s environmental impacts through producers and consumers. Science. <https://www.science.org/doi/abs/10.1126/science.aag0216>

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