

# Protein Challenge 2040

**Request for  
Proposals:**

**Plant-based  
solutions for US  
School Lunch  
program**

**Forum for the Future, working with a group of leading businesses, NGOs, and school districts, are working to increase the consumption of plant-based proteins in school lunches by improving the quality and quantity of plant-based options available to school district food programs.**

**Issue Date:** July 9<sup>th</sup>, 2018

**Contact Person:** Mary McCarthy

**E-mail:** [m.mccarthy@forumforthefuture.org](mailto:m.mccarthy@forumforthefuture.org)

**Proposal due no later than:** August 31<sup>st</sup> at 5:00 PM EST

**Return Proposal to:** [m.mccarthy@forumforthefuture.org](mailto:m.mccarthy@forumforthefuture.org)

(only electronic responses will be reviewed)

# 1. Introduction & Background

**The Protein Challenge 2040 is a pre-competitive, global collaboration exploring how we meet the protein needs of a growing population in a way that is affordable, healthy and good for the environment. As part of a set of global pilots seeking to find innovative solutions to this challenge, we aim to increase the number and quality of plant-based meal options in the US school lunch program.**

Forum for the Future, working with a group of leading businesses, NGOs, and ten school districts from around the United States, is seeking new and innovative plant-based products and menu items with the goal of increasing the accessibility and desirability of plant-based food in K-12 schools. Over the last six months, the participating school districts including – Arlington Public Schools, Austin Independent School District, Boulder Valley School District, Burke County School District, Minneapolis Public Schools, Oakland Unified School District, Omaha Public Schools, Portland Public Schools, Roseville Area Schools, and Windham Raymond Public Schools - have identified the requirements for **four plant-based product platforms** that would support their ability to offer more high-quality plant-based options to their students.

The Protein Challenge Group is in seeking to identify products and ingredients within the plant-based platforms outlined in this document and is accepting proposals of products and ingredients “with the intent to pilot” in partnership with school districts in the spring of 2019. The aim of the pilot is to trial new plant-based protein options in schools with the ultimate goal that these products would be viable for large scale distribution in 2020.

The timing and volume of the pilot will be decided after the testing phase, but we project the scale to be 1-5 school districts and range from 500 - 5,000 servings per school district on 2-5 menu occasions. After evaluating the submitted proposals using the criteria outlined below, the group will contact successful submitters to discuss and begin the initial testing phase. Successful proposals will have a unique opportunity to do focus group testing, gather data and further refine their product to develop the best plant-based products in school lunches.

**Price expectations:** \$0.30 to \$0.90 per ounce equivalents of meat/meat alternative (M/MA) as per USDA standards - this is largely dependent upon how the product/ingredient credits to the school meal patterns (i.e. if an entrée includes only MA it would fall in the lower range; if it includes (M/MA) and grain it would fall higher on the range, and products supplying a full serving of (M/MA), grain, and vegetable would be at the highest of the range).

**Distribution:** preference for products and ingredients that ultimately would be available for distribution to all schools across the United States.

**Volume of the pilot:** to be determined between the piloting school district and business after a product/ingredients are selected for the testing phase. The estimated range for the pilot: 500 - 5,000 servings per school district on 2 - 5 meal occasions.

**The 4 plant-based product platforms** – a product or ingredient that offers a set of plant-based solutions. Products or ingredients that are flexible and versatile and can replace a variety of meat platforms are preferred. The full description of desired attributes for all four plant-based product platforms are detailed in Section 4:

**Pulse paste/puree textured food**– a plant-based protein ingredient (and relevant products)

**Protein-rich flour replacement** – to increase the overall protein in a plant-based menu option

**Flexible and moldable plant-based protein** – a plant-based protein ingredient (and relevant products) intended to replace ground meat but not directly replicate the sensory experience.

**Functional equivalents** – a plant-based meat alternative that replicates the sensory (taste and texture) experience of meat - beef, chicken, or other animal based protein product.

## 2. Submission Guidelines & Requirements

The following submission guidelines & requirements apply to this Request for Proposal:

1. Those intent on submitting a proposal should so notify the representative identified on the cover page no later than **August 15<sup>th</sup>, 2018**.
2. Proposals must be submitted by a licensed and insured food manufacturer.
3. A technical proposal must be provided that provides an overview of the proposed solution as well as the nutrition profile of the product, an ingredient statement, statement of meal pattern contributions including calculations authenticating the contributions, an allergen notice if applicable, volume available to support a pilot and price expectations.
4. An inclusion of storage instructions, suggested cooking instructions, information about applicability to menu items and recipe suggestions would also be desirable.
5. If you have a standard set of terms and conditions, please submit them with your proposal. All terms and conditions will be subject to negotiation.
6. Proposals must remain valid for a period of 90 days.
7. Proposal submission indicates intent and ability to pilot the proposed product in a school in the spring of 2019.

The Protein Challenge group anticipates selecting **at least five organizations** to have more in-depth discussions with and establish opportunities to pilot from the initial selection group.

## 3. Submission Timeline

The Request for Proposal timeline is as follows:

<b>Request for Proposal Issuance</b>	<b>July 9<sup>th</sup>, 2018</b>
<b>Deadline for Proposal Submission</b>	<b>August 31<sup>st</sup>, 2018</b>
<b>Section of top proposals / notification to unsuccessful proposals</b>	<b>August 31<sup>st</sup> - September 7<sup>th</sup>, 2018</b>
<b>Co-creation and product/ingredient refinement</b> - product/ingredient testing and consumer focus groups	<b>September 10<sup>th</sup> – December 31<sup>st</sup>, 2018</b>
<b>In-school pilot</b> - volume and exact timing to be finalized during co-creation process	<b>Spring 2019</b>

## 4. Product Platform Attributes

The following are criteria for all four plant-based product platforms:

Products or ingredients that are approved as meat alternatives (MA) on the [USDA Food Buying Guide](#).

Approved Meat/Meat Alternates:

- Beans (dry or canned): Black, Black-eyed (or peas), Garbanzo or Chickpeas, Great Northern, Kidney, Lima, Mung (dry), Navy, Pink, Pinto, Red, Soy (also fresh edemame)
- Bean Products: Baked Beans in vegetarian sauce, refried, soup, bean puree

- Lentils (dry)
- Nuts: Almonds, Brazil nuts, Cashew nuts, Hazelnuts, Macadamia nuts, Pecans, Pine nuts, Pistachio nuts, Walnuts, Peanuts (granules), Soy nuts\*
- Nut butter: Almond, Cashew, Peanut, Sesame, Soynut, Sunflower Seed
- Split peas (dry and soup)
- Seeds: pumpkin and squash, sesame, sunflower\*
- Tofu

\*nuts and seeds cannot credit for more than half of the M/MA component in a meal; they must be combined with another M/MA to meet the full requirement for each age group.

**According to the USDA, alternative protein products (APP) must:**

- Be processed so that some portion of the non-protein constituents of the food is removed,
- Have a biological quality of at least 80% that of casein using the protein digestibility-corrected amino acid score (PDCAAS) method, and
- Contain at least 18% protein by weight when fully hydrated or formulated.
- Some examples of APPs include soy flours, soy concentrates, soy isolates, whey protein concentrate, whey protein isolate, and casein. Since plant-based meats contain flavorings and other ingredients in addition to plant-based proteins, plant-based meat products themselves cannot be considered APP.
- The “Buy American Provision” requires that to the maximum extent practicable, domestic commodities or products (for all foods, not just APP) are purchased as part of the Child Nutrition Program. USDA interprets this to mean that all products procured for use in Child Nutrition Programs must contain over 51% of the product’s food component, by weight or volume, from US origin.

For additional information on alternative protein products please see the USDA guidelines for [Child Nutrition Labeling for Nonmeat Products](#) and the Q&A on [alternate protein products](#). If you have any further questions regarding your product or ingredients qualifications please reach out to [m.mccarthy@forumforthefuture.org](mailto:m.mccarthy@forumforthefuture.org).

**Preferred nutrient ranges**

	<b>2oz M/MA</b>	<b>1oz M/MA</b>
<b>Calories</b>	150-400	50-200
<b>Sodium</b>	<500 mg (preference for below 300 mg)	<300 mg (preference for below 150 mg)

**Products/Ingredients are clean label based on the [Ingredient Guide for Better School Food Purchasing](#).**

**Unwanted Ingredients** – According to the Ingredient Guide for Better School Food Purchasing, “Unwanted ingredients shall not be included in any amount in newly developed products, and should be eliminated over time from existing products.”

- Artificial Colors - specifically Caramel Color III, IV, Synthetic Food Dyes (Blue 1, Blue 2, Citrus Red 2, Green 3, Red 3, Red 40, Yellow 5 and Yellow 6)
- Artificial Flavors & Unspecified Natural Flavors
- Artificial Preservatives - specifically Butylated Hydroxyanisole, Butylated Hydroxytoluene, Propyl Gallate, and Tert-Butylhydroquinone
- Artificial Sweeteners & Other Sugar-Free Sweeteners
- Flavor Enhancers - specifically Monosodium Glutamate
- Flour Conditioners - specifically Azodicarbonamide, Bromated Flours-Potassium
- Bromate
- High Fructose Corn Syrup
- Nitrates and Nitrites

- Partially Hydrogenated Oil

**Watch List** – According to the Ingredient Guide for Better School Food Purchasing, “These ingredients can be a red flag as they are frequently overused, common in foods of lower nutritional quality, and tend to indicate a highly processed food. As a result, we encourage school districts and food manufacturers to Watch Out for ingredients like these and demand transparency and accountability in their use. Items in the Watch List will be scrutinized by buyers, and their function must be understood and justified through dialogue between Focus, districts and food manufacturers.”

- Added Sodium
- Added Sugar
- Artificial Preservatives - specifically Benzoates, Benzoic Acid, Sulfites
- Bleached Flours
- Specified Natural Flavors
- Thickening Agents - specifically Carrageenan
- Vegetable Proteins - specifically Isolated Vegetable Protein, Hydrolyzed Vegetable Protein, Texturized Vegetable Protein

## 4.1 Pulse paste/puree textured food

**Product Purpose:** To serve as a creditable (MMA) protein base which is versatile and can be used for multiple products (comparable to hummus or refried beans).

**Product Objective:** To provide more flexibility in plant-based protein uses across multiple recipes/products/and school capabilities.

**Customer Needs:** Product platform should be able to leverage [commodity processing](#) and must have long storage life for different school set-ups - ideally shelf stable but frozen options would be considered as well.

Additional information on commodity processing can be found on the USDA [website](#).

**Consumer (student) Needs:** Good sensory experience (texture, taste, smell), makes students full and satiated, and is familiar and/or acceptable (“I recognize this and/or I am willing to try it”). Preference is for products/ingredients that are neutral or adaptable and provide options to season across k-12 palate (mild to bold). Products/ingredients can either be pre-seasoned or flavorless with the intention of seasoning during preparation.

### Example formats:

Bulk puree (used as a spread for sandwiches, salad topping, soup or sauce base/thickener), bean dips (white bean puree in macaroni). Preference for shelf stable but would also consider frozen, portion control hummus cups in a variety of flavors

## 4.2 Protein-rich flour-replacement

**Product Purpose:** To provide additional protein in the grain/carb portion of a meal that could contribute to the overall protein content of the meal.

**Product Objective:** To contribute to a meal that makes a student feel like they are in a quick-service and fast casual restaurant (QSR). The product needs to deliver taste and experience for what you would pay for in a restaurant.

**Customer Needs:** Functional with taste, offers the flexibility of preparation methods – contributes to a menu item that is high quality, with fast and easy preparation. It has to meet USDA guidelines for the protein component of the meal ([Appendix A to Part 210 - Alternate Foods for Meals](#)). Plant-based protein should not be hidden; instead it should showcase the plant-based proteins.

**Consumer Needs:** QSR experience and taste (ex. Chipotle and Panera). The product is exciting and combats the school food stigma. The focus is on providing fun whole foods that provide choices.

### Example formats:

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Bulk dehydrated flakes, flours/mixes (muffins, biscuits, pancakes) dough analogs, bulk pre-baked substitutes for pizza dough, tortillas/wraps, buns, bread loaves, bulk pasta, and individually wrapped muffins.

For additional information please reference [Appendix A to Part 210](#) of USDA regulations.

## 4.3 Flexible and moldable plant-based protein

**Product Purpose:** To serve as a creditable (MMA) protein base which is versatile and can be used for multiple products (to replace ground meat).

**Product Objective:** To provide more flexibility in plant-based protein uses across multiple recipes/products/and school capabilities. Replacing usage occasion of meat but not replicating meat flavor—highlighting/celebrating plant-based foods.

**Customer Needs:** Product/ingredient should be able to leverage commodity (see appendix 2) processing and must have long storage life for different school set-ups - ideally shelf stable but frozen options would be considered as well. Not highly processed, using simple, recognizable ingredients and a preference to avoid soy. The product should have a quick and easy cooking process that allows for oven and stovetop preparation.

**Consumer (student) needs:** Good sensory experience (texture, taste, smell), makes students full and satiated, and is familiar (I recognize this, or I am willing to try it). Preference is for products/ingredients that are neutral or adaptable and provide options to season across k-12 palate (mild to bold). Products/ingredients can either be pre-seasoned or flavorless with the intention of seasoning during preparation.

**Ideal Product Description:** Offer a flavor-neutral base that can be adapted to a variety of menu options (layer in lasagna, meatball, dip, falafel, crumble, logs for slices). Preference for a product that is legume based and contributes to the center of the plate entrée.

### Example formats:

Bulk fresh or frozen – unflavoured crumble, patty, “meatball”, flavoured crumble (for tacos/nachos, pizza topping, lasagna), loaf, logs (for sandwich slices)

## 4.4 Functional equivalents

**Product Purpose:** To replace animal-derived equivalent with a plant-based meat alternative that replicates the sensory (taste and texture) and nutrition experience of meat.

**Product (Platform) Objective:** To ease the transition to plant-based protein options by replacing complexity in messaging, training, cooking etc.

**Customer Needs:** Product platform would ideally leverage commodity processing, and have long storage life for different school set-ups (ideally shelf stable). Relieves food safety concerns and is easy to prepare.

**Consumer Needs:** The product offers a good sensory experience (texture, taste, smell), makes students full and satiated, and is familiar (I recognize this, or I am willing to try it).

### Example Formats:

Crumble, patty, “meat” ball, loaf, logs (for sandwich slices), any way that traditional meat would be served

# 5. Evaluation factors

The Protein Challenge Advisory Group members and participating school districts will rate proposals based on the following factors:

Attribute
Consumer (student) needs – taste and experience
Customer (school district) needs – format, packaging & preparation
USDA school meal pattern contributions
leverages USDA commodities available for bulk processing
Preferred nutrient ranges
Clean-label: Ingredient Guide for Better School Food Purchasing
Price
Volume capabilities

# 6. Enquiries

For further information or enquiries please get in touch with Mary McCarthy at [m.mccarthy@forumforthefuture.org](mailto:m.mccarthy@forumforthefuture.org).

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