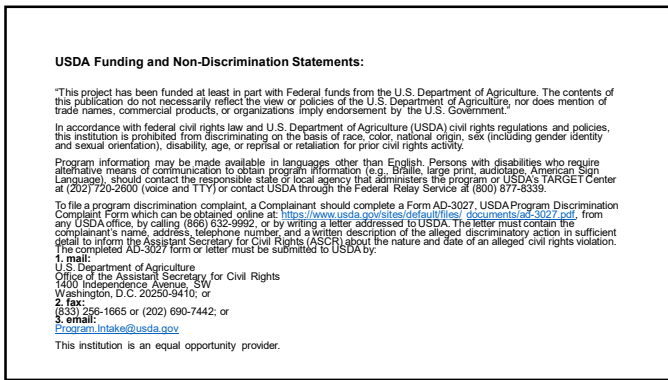


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Objectives

- Explain the health benefits associated with plant-based proteins.
- List different plant-based menu items that can be served in schools.
- Recall student inspired plant-based menu items.
- Summarize culinary techniques for preparing plant-based proteins.



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Professional
 Standards –
 Learning Codes

- Nutrition 1000
 - Menu Planning (1100)
 - General Nutrition (1300)



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Poll


Are you actively working to add more
 plant-based proteins to your menus?



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Protein

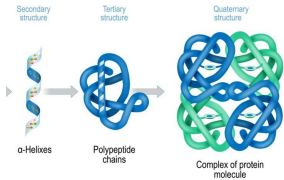


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What is protein?

- Combination of amino acids
 - 9 essential
 - 11 nonessential

Protein structure




Secondary structure Tertiary structure Quaternary structure
α-Helices Polypeptide chains Complex of protein molecule



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Protein Functions

- Hormone production
- Nutrient transport
- Immune support
- Water balance
- pH regulation
- Enzyme creation
- Muscle maintenance
- Healthy hair, skin, and nails
- Energy production




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Types of Protein



Animal





Plant-based

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Animal Sources of Protein



- Complete proteins
- Rich in:
 - Iron
 - Zinc
 - B vitamins
- Approximately 1 oz = 7 grams protein
- Can be high in saturated fat and sodium






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Current Eating Patterns

Meet or Exceed



90% DO NOT Meet



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- Incomplete protein
- Excellent source of:
 - Fiber
 - B vitamins
 - Magnesium
 - Phytonutrients
- Approximately 1/2 cup beans = 7 grams of protein
- Can promote longevity

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Plant-Based Protein in Schools

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Why serve (and eat) more?

- Health/Nutritional benefits
 - Fiber
 - Phytonutrients

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Environmental Benefits

- Plants require less water and resources
- Locally grown are better for environment





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Student Inspired Meals




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Financial Benefits



Most plant-based proteins cost less



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Plant-Based Proteins in Schools

- Beans and lentils
- Soy
 - Tofu and Edamame
- Nuts and seeds
 - Nut and seed butters
 - Nuts and seeds



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How to Serve

- As the only meat/meat alternate
- Mixed with an animal source of meat/meat alternate



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Mixed M/MA Demo!



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Lunch Menu Examples

- Nut/seed butter sandwiches
- Burrito bowls
- Hummus wraps
- Stir-fries
- Veggie or black bean burgers

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Breakfast Menu Examples

- Breakfast burritos with beans
- Nut/seed butter on toast
- Nut/seed butter with yogurt

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Beans

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Bean Varieties

- Black
- Pinto
- Garbanzo
- White



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Student Inspired for Beans

- Indian
 - Chana
 - Dahl
- Mediterranean
 - Hummus
- Latin American
 - Bean burritos, tacos, tostadas



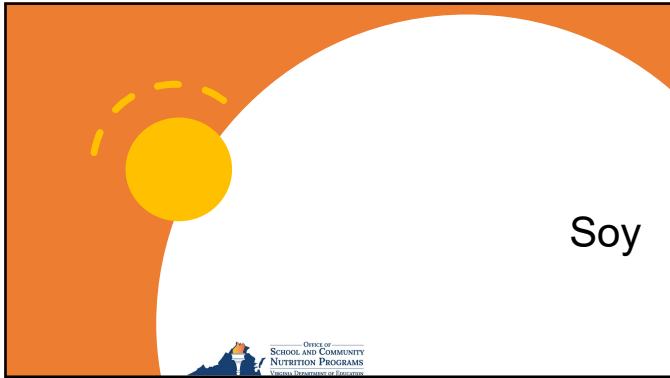
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Culinary Tips for Beans

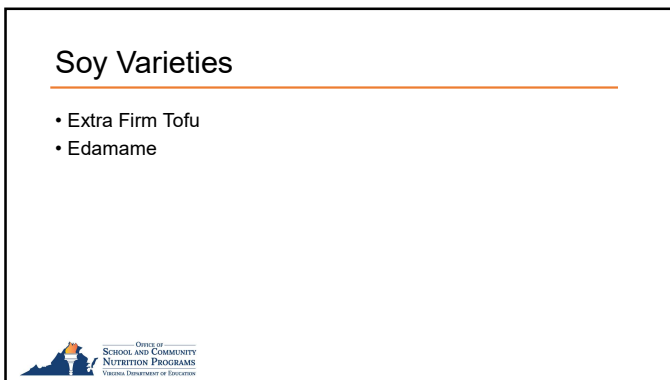
- Don't cook beans in the steamer
- Concentrate the liquid
- Consider dried beans




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Culinary Tips for Tofu

- Marinate or glaze
- Bake
- Toss in cornstarch

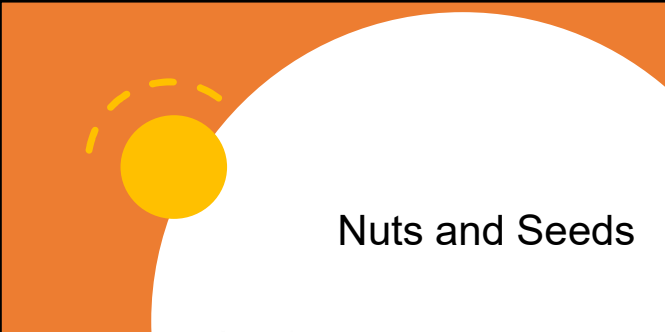


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Tofu Demo!

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Nuts and Seeds



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Nut and Seed Varieties

- Peanut Butter
- Sunbutter
- Soybutter
- Sunflower seeds
- Pumpkin seeds
- Peanuts and treenuts if allowed!




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Student Inspired for Nuts and Seeds

- African
 - Stews
- Asia
 - Sauces and dips
 - Toppings
- Oaxaca and Puebla Mexico
 - Mole sauces



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Local Sources of Nuts

- Virginia farmers harvest enough peanuts annually to make 600 million peanut butter sandwiches



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Culinary Tips for Nuts and Seeds


- Think beyond the sandwich
- Savory dishes




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Let's Chat!


- What plant-based items or recipes would you like to include in your menus?
 - Share any recipes you are currently using!
 - Add to the shared folder in the chat



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Questions?



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