

Healthful meals help maintain energy and focus during work. Busy seasons for farmers can often be unpredictable. Try planning your meals in advance to make things easier, save on time and give you one less thing to think about while you're in the field. This handout provides nutrition and food safety tips, meal-planning ideas and several recipes.

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Nutrition Basics

Planning a nutritious meal can be challenging, especially during busy seasons when most meals aren't being eaten at the dinner table. Here are some tips to make planning a healthy meal simple.

Protein

Animal sources: dairy, meat, poultry, fish and seafood.
Plant sources: beans, lentils, nuts, tofu and seeds.

Fat

Animal sources: dairy, meat, poultry, fish and seafood.
Plant sources: nuts, seeds, avocados and plant-based oils such as canola, olive, avocado, etc. These oils are considered "heart healthy" because they contain unsaturated fats.

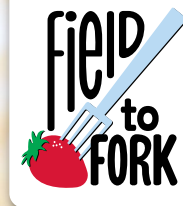
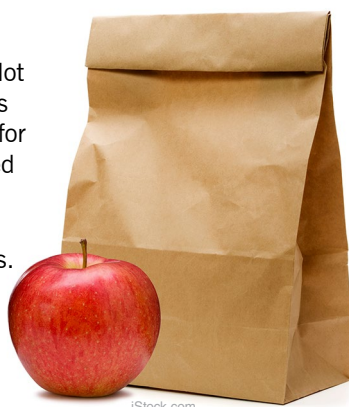
Fiber

Can be found in all plant foods. Vegetables, fruits, nuts, seeds, beans, lentils and whole-grain products provide fiber. Combining items such as protein, fat and fiber will help keep you full for longer in between meals.

Go easy on:

Sodium: Choose recipes without a lot of added salt. Check nutrition labels on canned and packaged products for sodium content and look for reduced or low sodium versions.

Added sugar: Limit items that contain excessive added sweeteners. For example, instead of pop as a beverage, provide water infused with lemon, cucumbers or strawberries.



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A Pocket Guide to Meals in the Field

NDSU EXTENSION



Handwashing

Regardless of where the meals take place, handwashing is important.

- Wet hands, apply soap and scrub for 20 seconds. Then rinse and dry with a paper towel.

How to Make a Homemade Handwashing Station

- Use a 5- to 10-gallon plastic water container with a continuous flow valve.
- Fill with drinkable water.
- Keep a large bucket under valve to catch the dirty water.
- Keep soap and single use paper towels on top or next to water.
- Place a garbage can or bag nearby for paper towel disposal.

Other Ways to Keep Your Hands Clean

- Carry a water bottle with clean water in it, soap and clean paper towels.
- Use moist towelettes to clean your hands of any dirt or grime and follow with an alcohol-based hand sanitizer (60% alcohol minimum).

How much food should I prepare?

These are estimated portion sizes per person. Make adjustments to portion sizes as necessary for your crew's needs.

Meat/protein: 4 to 5 ounces is a standard serving size for beef, poultry, pork or fish. Average-sized palm of the hand = 3 to 4 ounces of meat.

Bread: For a sandwich, use two slices of bread. As a side for pasta or a casserole, plan for one slice.

Potatoes: 5 ounces or an average medium-sized whole potato. Average-sized fist = 1 medium sized whole potato.

Pasta: 2-3 ounces. Average-sized handful = 1/2 cup of pasta.

Rice: 1/2 cup. Average-sized handful = 1/2 cup of rice.

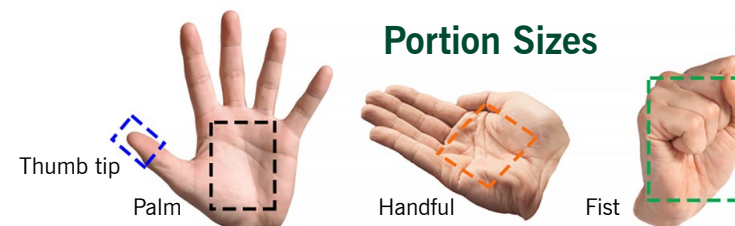
Vegetables: 4 ounces or 1/2 cup. Average-sized fist = 1 cup sliced/diced veggie; 2 fists = 2 cups leafy greens.

Fruit: 4 ounces or 1/2 cup; 1 whole fruit. Average sized fist = 1 cup sliced/diced fruit.

Beans: 2-3 ounces.

Nut/Seeds: 1 ounce or 1/4 cup. Average sized thumb = 1 tablespoon of nut butter or oil.

Dessert: 1 medium-sized cookie, brownie, bar, cake or 1/2 cup pudding, Jell-O, mousse.



Transporting Food

When transporting food, the key is to keep hot food hot and cold food cold. Keep hot foods at or above 140 degrees Fahrenheit and cold foods at or below 40 degrees Fahrenheit.



Hot food

After food is thoroughly cooked, remove from heat and pack into coolers or insulated containers with clean, heavy towels. Hot foods can be held for two hours without a heat source, and then they must be either served immediately or discarded.

- Preheat a thermos by filling with boiling water, emptying and then adding the hot food.

Cold food

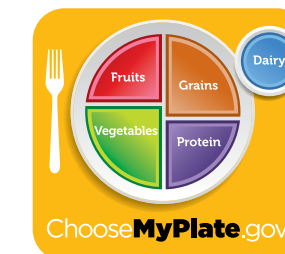
Cold foods must be held at or below 40 degrees Fahrenheit. Once packed and ready, place cold foods into coolers or insulated containers with ice or ice packs. Cold food can be held for two hours at room temperature.

- Large ice packs will stay cold longer than small ice packs.
- If the outside temperature is above 90 degrees Fahrenheit, perishable foods that are not held hot or cold are only safe for one hour.

Reheating Food

When reheating food, it must first have been prepared to the correct cooking temperature and held properly at or below 40 degrees Fahrenheit. When reheated, the internal temperature must reach 165 degrees or greater.

Add Variety for a Nutritious Meal



- Include at least three different food groups at each meal (fruits, vegetables, grains, protein and dairy).
- Try to vary the foods you eat during the week.
- Eat your colors! Enjoy a variety of fruits and vegetables.

Allergens/Food Sensitivities/Dietary Restrictions

Check in advance to see if any of your crew has any dietary limitations, restrictions, food allergies or sensitivities. Reactions to allergens can vary from mild to severe and in some cases can be life threatening. Precautions may need to be taken during preparation, transport and service. NDSU Extension has several food allergen publications to help you navigate food allergies.

Stay Hydrated

Drinking water is easy to forget, but staying hydrated will keep you healthy, focused and awake. Bring water jugs/ bottles or healthy beverage options along with meals. Make sure to avoid overdoing it on coffee or caffeine and alternate with water. If plain water isn't appealing, you can add fruit, a splash of juice, or powdered/ liquid water flavorings.



Serving Styles

Single serving:

- Pre-portion meals into to-go boxes.
- Individually package wraps, sandwiches, burritos, etc.
- Cook in individual mugs for easy handheld meals.
- Use thermos containers for soups/chilis on the go.
- Use muffin tins or mini loaf pans for single-size servings.

Buffet service: Items are set on a buffet line. Everyone serves themselves. If a table is not available, a tailgate can be covered with clean towels/blankets as a substitute.

Family style: Meal items are placed in bowls or pans on a table. Everyone serves themselves.

Cafeteria style: Meal items are placed on a serving line and a server dishes food onto a plate or tray.

Equipment

These equipment items can help get meals ready fast.

- Roasters
- Slow cookers
- Grill
- Different serving utensils for each item
- Appropriate eating utensils
- Single-use disposable gloves
- Plates and/or bowls
- Food thermometers
- Power source (outlet, generator, light pole, power inverter)
- Tables
- Mugs or thermos containers
- Mini loaf pans or muffin tins

Other items to consider:

- Garbage bags/trash cans
- Disinfectant wipes
- Clean towels/blankets/tablecloths to set food items on
- Pot holders
- Coolers/insulated containers for transport
- Extension cords if power supply is available

Here are several recipes to get you started. See the Now You're Cookin! series at NDSU Extension for meal planning and preparation tips and recipes. See Pinchin' Pennie\$ for ways to use what is already in your pantry to make soups, casseroles, stir-fry and much more. See Field to Fork (www.ag.ndsu.edu/food) for many healthful recipes and ways to incorporate more fruits and vegetables into your meals.

Side item suggestions:

Cold pasta salad, broccoli and cauliflower florets, baby carrots and/or celery sticks, baked potato chips or corn chips, apples or pears.



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Rosemary Pecan Chicken Salad Sandwiches

Sandwich filling ingredients

1-pound boneless, skinless chicken breast, cooked, cooled and diced
 1¼ cups apples, chopped
 ⅓ cup pecans, chopped
 ⅓ cup dried cranberries

Dressing ingredients

1 (5.3-ounce) container fat-free plain Greek yogurt
 2 tablespoons mayonnaise
 1 tablespoon red wine vinegar
 2½ teaspoons fresh rosemary, finely chopped
 1 teaspoon Dijon mustard
 ½ teaspoon honey
 ½ teaspoon onion powder
 Salt and fresh ground black pepper (to taste)

Combine cooked chicken, apples, pecans and cranberries in a large mixing bowl. In a separate, small mixing bowl, stir together dressing ingredients. Season with salt and pepper. Pour dressing over chicken mixture and toss to coat evenly. Serve on whole grain bread with lettuce.

Makes 4 servings. Each serving has 310 calories, 15 grams (g) fat, 28 g protein, 18 g carbohydrate, 2 g fiber and 125 milligrams sodium.

Pulled Pork Sandwiches



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Side item suggestions:

Salad (coleslaw, potato salad, or cold pasta salad with vegetables), baked chips or corn chips, green and red grapes.

1 small pork tenderloin (2 to 3 pounds)
 1 packet dry onion soup mix
 ¾ cup water
 Wheat buns and assorted toppings

Cut thawed tenderloin into three or more chunks. Add all ingredients in the slow cooker. Turn slow cooker on high for six hours. Pull apart meat with a fork after four to five hours. This recipe is good on a wheat bun or wrap with barbeque sauce, tomato slices, zucchini slices or cucumber slices.

Makes 8 servings. Each serving has 150 calories, 4.5 grams (g) fat, 24 g protein, 2 g carbohydrate, 0 g fiber, and 210 milligrams sodium.

Create Your Own Tortilla Wraps

Wrap ideas:

- Turkey with cheddar jack cheese, hummus, tomatoes and spring mix lettuce
- Ham with Swiss cheese, mustard, tomatoes and spinach
- Taco inspired — taco meat, pico de gallo, cheese, leafy greens, guacamole
- Pesto, artichokes, tomatoes and mozzarella cheese
- Strawberries, peanut butter and apples
- Banana, peanut butter, jelly

1 low-sodium tortilla ¼ cup leafy greens
 2 slices deli meat 1 slice cheese
 1 tablespoon spread ¼ cup vegetables, sliced

Slice tortilla from center to one edge. Add each ingredient to a separate quadrant. Starting with the section to the right of the cut line, fold over onto the adjacent section. Repeat until all are folded. Wrap in plastic wrap then foil for an easy “grab and go” meal/snack.

Makes 1 serving. 1 serving has 220 calories, 10 grams (g) fat, 21 g protein, 20 g carbohydrate, 1 g fiber and 480 milligrams sodium.



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Side item suggestions:

Baby carrots and broccoli florets with ranch dip, whole-grain tortilla chips, mixed fruit cup (pineapple, peaches).

Beef and Bean Burritos

½ pound ground beef
 2 (15 to 16 oz.) cans kidney, pinto or red beans
 1 onion, chopped
 1 tablespoon chili powder or 1 package taco seasoning
 8 large flour tortillas
 Salsa of choice

Chop onion. Brown ground beef and onion in a frying pan. Drain fat. Mix in kidney beans and chili powder. Put a spoonful of meat mixture in the center of the tortilla. Fold opposite edges of the tortilla over the meat. Then fold both ends to the center to form a pocket. Set burrito in baking dish. Heat burritos in a covered dish for 10 to 15 minutes at 350 F. Serve with salsa. Wrap in plastic wrap then foil for an easy grab and go meal/snack.

Makes 8 servings. Each serving has 400 calories, 8 grams (g) fat, 21 g protein, 61 g carbohydrate, 7 g fiber and 790 milligrams sodium.

Side item suggestions:

Whole-grain tortilla chips, corn and black bean salsa, watermelon chunks.



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Side item suggestions:

Refried beans or black beans, Spanish rice, strawberries and yogurt.



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One-pan Chicken Fajitas

1½ pounds chicken breasts cut into ½-inch strips
 2 red bell peppers, sliced into strips
 1 green bell pepper, sliced into strips
 1 onion, sliced
 3 tablespoons olive or canola oil
 1 packet taco seasoning, reduced sodium
 1 lime
 10 whole-wheat tortillas

Optional toppings: shredded cheese, salsa, sour cream, avocado slices

Preheat oven to 425 F. Sprinkle taco seasoning and drizzle olive oil into bowl with chicken, bell peppers and onion. Toss to coat. Spread contents on greased sheet pan; bake 20 to 25 minutes or until chicken is fully cooked. Squeeze lime juice over pan and serve with whole-wheat tortillas. Wrap in plastic wrap then foil for an easy grab and go meal/snack.

Makes 10 servings (one fajita per serving). Without added toppings, each fajita has 280 calories, 9 grams (g) fat, 20 g protein, 27 g carbohydrate, 3 g fiber and 380 milligrams sodium.



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Side item suggestions (snack):

Cheddar cheese cubes, apple or pear.

Cranberry Granola Bars

½ cup honey
 2 tablespoons + 2 teaspoons brown sugar, packed
 1 tablespoon + 1 teaspoon vegetable oil (soybean oil)
 1½ cups oatmeal oats, quick (uncooked)
 1¼ cups toasted rice cereal
 1¼ cups dried cranberries

Preheat oven to 350 F. Combine honey, brown sugar and oil in a small saucepan. Heat over low heat until well mixed. Mix oats, rice cereal and cranberries. Add honey mixture and stir until thoroughly combined. Pat firmly into an 8-by-8-inch baking pan. Bake for 15 minutes; press firmly into the bottom of the pan once more. Bake for five more minutes. Cool completely. Refrigerate at least one hour for easier cutting. For easy serving, wrap each piece in plastic wrap.

Makes 16 servings. Each serving has 120 calories, 2 grams (g) fat, 1 g protein, 25 g carbohydrate, 1 g fiber and 15 milligrams sodium.



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Side item suggestions (snack):

Hard-cooked egg, mozzarella stick, orange slices.

Better Than Basic Muffins

Muffin ideas:

- Fruit - apples, blueberries, blackberries, peaches, pears, raspberries, strawberries
- Dried Fruit - blueberries, cranberries, coconut, cherries, strawberries
- Nuts - sliced almonds, macadamia nuts, pecans, pistachios, walnuts
- Sweets - chocolate chips, butterscotch chips, white chocolate chips, cinnamon chips
- Flavor extracts - almond, lemon, lime or vanilla

2 cups all-purpose flour 2 eggs
 1 cup whole wheat flour 1 cup milk
 1 cup sugar 2 teaspoons flavor extract (or as desired)
 1 tablespoon baking powder
 ½ teaspoon salt Up to 2 cups of mix-ins (fruit, nuts, vegetables, baking chips)
 ½ cup (1 stick) unsalted butter, softened (not melted)

Preheat oven to 400 F. In a large bowl, whisk together the flour, sugar, baking powder and salt. Cut in the butter with a fork or pastry cutter. Stir in the eggs, milk and flavor extract until all ingredients are incorporated. Stir in desired mix-ins, but do not over mix. Evenly divide the batter between the prepared muffin cups. Bake for 15 to 20 minutes or until a toothpick inserted in the center comes out clean.

Makes 24 servings. Each muffin has 130 calories, 4.5 grams (g) fat, 3 g protein, 21 g carbohydrate, 1 g fiber and 250 milligrams sodium.



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Energy Bites

1 cup oats
 ½ cup nut butter
 ¼ cup honey or maple syrup
 ¼ cup dried fruit
 ¼ cup nuts
 2 tablespoons flaxseed
 2 tablespoons chocolate chips

Combine all ingredients in a bowl and stir to combine. Chill for 30 minutes to firm up. Roll into tablespoon-size bites. For easy serving, place portions in small plastic snack bags.

Makes 24 Servings. Each serving has 75 calories, 3.5 grams (g) fat, 2 g protein, 9 g carbohydrate, 1 g fiber and 35 milligrams sodium.

Side item suggestions (snack): Yogurt with fruit.