Chapter 5

Grains

While grain foods are popular in the American diet and contribute a substantial portion of energy intake in many people's diets, some grain foods are more nutritious than others. Whole grains typically contain more vitamins, minerals, fiber, and phytochemicals than refined grains. Learning to select and enjoy a wide variety of nutritious grains may play an important role in achieving a healthy weight and fending off chronic diseases. As a professional who can guide individuals in making healthier lifestyle choices, it is important for you to role model positive behaviors by choosing a variety of healthful grain foods for yourself and encouraging those around you to do the same.

To be effective in encouraging those healthful choices, you will need to be familiar with a variety of available grains, cultural influences on grain choices and disease states influenced by grain intake. You should be knowledgeable about how to choose nutritious grains, as well as, properly store, prepare, serve, and incorporate them into flavorful recipes.

💡 THINK ABOUT IT

◆ Think of and list as many types of grains as you can. Give some details about each grain such as how to prepare it, its nutritional value, or its cultural origins.

◆ List 3 things you would like to learn about grains or 3 questions you have relating to grains.

1.

2.

3.

LAB ASSIGNMENT:

Grains, Cereals, Pasta, and Rice

Grains are a dietary staple for people all over the world. This laboratory experience will focus on some principles of grain science and preparation using various types of rice, cornmeal, grits, quinoa, pasta, bulgur, and couscous.

Overview:

All students will prepare their assigned grain recipes, taste all food products, and complete the evaluations. Students will also complete a recipe costing activity with this lab.

Kitchen 1: Polenta
Long-grain rice: Basic method (Refer to table)

Kitchen 2: Cheese Grits
Wild rice: Basic method (Refer to table)

Kitchen 3: Quinoa and Black Bean Salad
Brown rice: Basic method (Refer to table)

Kitchen 4: Fresh pasta

Kitchen 5: Dry pasta: regular and whole wheat
Short-grain rice: Basic method (Refer to table)
Assist Kitchen 4 with fresh pasta if needed

Kitchen 6: Bulgur Pilaf
Risotto

Kitchen 7: Couscous with Mixed Fruit
Rice pilaf

Kitchen 8: Tabouli Salad
Boiled rice

Evaluation Tools:

- Evaluation of Grain Dishes
- Evaluation of Pastas
- Evaluation of Rice
- Costing Grain Recipe

Directions:

1. Always begin by washing your hands and thoroughly cleaning/sanitizing work surfaces.
2. Gather ingredients needed for assigned grain recipe and rice recipe, if assigned.
3. Complete all assigned recipes.
4. Read "Grain Science" and "Grain Tips for Consumers." Complete the "Grains Questions."
5. When your group is finished, taste a sample of each grain and rice product. Then, complete the evaluation tools.
6. Clean your work station and check out before leaving.

RECIPES:

Grains, Cereals, Pasta & Rice

Basic Method: Long-Grain, Wild, Brown, & Short-Grain Rice

Type of Rice	Ratio of Rice to Water, by Volume	Cooking Time (Simmering)
Long-grain rice	1: 2	20 Minutes
Wild rice	1: 3	45 Minutes
Brown rice	1: 2.5	45 Minutes
Short-grain rice	1: 2.5	20 Minutes

Ingredients:

1 cup rice, type as assigned   Water (see chart)
1/2 teaspoon salt   1/4 teaspoon pepper

Method:

1. Check the chart, listing ratios of rice to water, for the correct amount of water based on 1 cup of your variety of rice. Heat the water to boiling in a medium saucepan.
2. Add the rice, salt, and pepper. Bring water back to a boil.
3. Stir, cover, and simmer over low heat for the specified time as listed in the chart for your variety of rice.
4. Fluff rice with a fork and serve.

Boiled Rice

Ingredients:

4 cups water

1 teaspoon salt

1 cup long-grain rice, rinsed

1/4 teaspoon pepper

Method:

1. Bring the water to a boil.
2. Add the rice, salt, and pepper. Allow to gently boil uncovered for 15 minutes.
3. Drain the rice and serve.

Polenta

Ingredients:

4 cups milk

1 teaspoon salt

1 ounce parmesan cheese

6 ounces cornmeal

Butter, as needed

Method:

1. Bring the milk to a boil in a medium saucepan over medium heat. Stir frequently to prevent scorching.
2. Slowly add the cornmeal and salt, stirring constantly.
3. Simmer over low heat until the mixture is very thick, about 15 minutes. You must stir frequently.
4. Spread the polenta in a greased 9x13-inch baking dish or a baking sheet. Let cool in the refrigerator.
5. Preheat the oven by setting to broil.
6. Grease a baking sheet with butter.
7. Cut the chilled polenta into shapes using a pairing knife or cookie cutter and place on the greased baking sheet.
8. Drizzle with butter and sprinkle with the Parmesan cheese.
9. Toast under the broiler until the cheese is melted and lightly brown, about 5 minutes.

Cheese Grits

Ingredients:

1 1/2 cups grits

1 1/2 pints milk

8 ounces cheddar cheese, grated, divided

4 ounces butter

1 1/2 pints water

1 teaspoon salt

1 teaspoon Tabasco® sauce

6 large eggs, beaten

Method:

1. Preheat the oven to 350° Fahrenheit.
2. Combine the grits, water, milk, and salt in a heavy saucepan.
3. Bring to a simmer and cook, stirring constantly, until thick.
4. Remove from the heat and stir in 6 ounces of the cheddar cheese and the Tabasco® sauce.
5. In a separate bowl, beat the eggs.
6. Remove about a cup of the warm grits mixture. Quickly stir the removed grits into the beaten eggs; this step is called "tempering the eggs" and prevents the eggs from scrambling.
7. Stir the tempered egg/grits mixture into the rest of the grits.
8. Pour the entire mixture into a well-buttered 2-quart baking dish.
9. Top with remaining cheese. Bake for about 30 minutes.

Quinoa and Black Bean Salad

Ingredients:

1 cup water
2 tablespoons lime juice
1 teaspoon cumin
1/4 cup fresh parsley, finely chopped (or cilantro)
15 ounce can black beans, drained and rinsed
1 medium green pepper, chopped
Pepper, to taste

1/2 cup quinoa, pre-rinsed
2 tablespoons olive oil
2 cloves garlic, minced
2 stalks green onions, sliced
1 cup frozen corn, thawed
Salt, to taste

Method:

1. Bring water to a boil. Add quinoa and return to a boil. Cover, reduce heat, and simmer for 12 to 15 minutes or until all the water is absorbed. Remove from heat, fluff with a fork, and let cool.
2. In the meantime, prepare the dressing by mixing the lime juice, olive oil, cumin, garlic, parsley, and green onions in a large bowl.
3. When the quinoa is ready, combine with the dressing. Add the black beans, corn, and green pepper. Add salt and pepper if desired.
4. Chill and serve.

Fresh Pasta

Ingredients:

8 large eggs

1 1/2 teaspoons, salt, divided

8 ounces semolina flour

1/2 ounce olive oil

12 ounces bread flour

25-ounce jar pasta sauce (optional)

Method:

1. Place the eggs, olive oil, and 1/2 teaspoon of salt in a large mixing bowl. Use the mixer's paddle attachment to combine.

2. In a separate bowl, combine the two flours. Add 1/3 of the flour mixture to the egg mixture. Stir with the paddle attachment until a soft-dough begins to form.

3. Remove the paddle and attach the dough hook. Gradually add more flour until the dough is dry and cannot absorb any more flour.

4. Remove the dough and wrap it well with plastic wrap. Let it rest for 20 to 30 minutes.

5. Toward the end of the resting period, fill a large pot about 3/4 full with water and place on the stove. Add a teaspoon of salt to the water and bring the water to a boil.

6. After the dough has rested, roll it into flat sheets using a pasta machine or rolling pin and floured surface. *Note: If using a pasta machine, start with the number 5 or higher setting. Take a small portion of the dough; pat it into an oblong shape. Roll through the pasta machine. Fold the pasta into thirds like a wallet. Turn it 90 degrees and pass through the pasta machine again. Repeat this process 3-4 times. Once completed, move the pasta machine setting to 3 to make a thinner noodle. Pass the folded dough through the machine. Do NOT fold after this point. Pass the dough through again to achieve the desired thickness. Work with small portions at a time to achieve a thin noodle.*

7. Cut the pasta into your desired noodle shape. Let the pasta dry for a short period before adding to the boiling salted water.

8. Cook pasta, stirring occasionally, until it tests tender but not mushy (less than 10 minutes). Drain by carefully pouring into a large colander in the sink. Serve with pasta sauce if desired.

Dry Pasta: Regular & Whole Wheat

Ingredients:

16-ounce box pasta, regular

Salt, as directed

16-ounce box pasta, whole wheat

25-ounce jar Pasta sauce (optional)

Method:

1. Follow the directions on each package to prepare the regular and whole wheat pastas. Serve with pasta sauce if desired.

Bulgur Pilaf

Ingredients:

2 ounces butter

10 ounces bulgur

1 quart chicken stock, hot

1/4 teaspoon pepper

4 ounces onions, finely chopped

1 bay leaf

1 teaspoon salt

Method:

1. Melt the butter in a large, heavy saucepan over moderate heat. Watch carefully because butter burns easily.
2. Add the onions and cook until translucent.
3. Add the bulgur and the bay leaf. Sauté until the bulgur grains are well coated with butter and lightly browned (about 3 minutes).
4. Add the hot chicken stock, salt, and pepper.
5. Cover the pan and simmer over low heat for 18 to 20 minutes or until all the stock is absorbed.
6. Remove bay leaf. Fluff with a fork before serving.

Couscous with Mixed Fruit

Ingredients:

3 cups apple juice

1 cup apple, chopped

2 cups couscous

1 cup dried mixed fruit, chopped

1/2 teaspoon salt

Method:

1. Combine the apple juice, mixed fruit, and apple in a large saucepan.
2. Let the mixture stand for 15 minutes.
3. Add the salt and bring the mixture to a boil over medium heat.
4. Stir in the couscous, cover, and remove from the heat.
5. Let stand 5 to 7 minutes or until the liquid is absorbed.
6. Fluff with a fork.

Tabouli Salad

Ingredients:

2 1/4 cups water

1 medium onion, finely chopped

1 cup fresh parsley, finely chopped

1 medium cucumber, chopped

1/4 cup lemon juice

1/2 teaspoon salt

1 1/4 cups bulgur

3 stalks green onions, sliced

1 cup fresh mint, finely chopped

1/4 cup olive oil

1 large tomato, chopped

1/4 teaspoon pepper

Method:

1. Bring water to a boil. Remove from heat, add bulgur, and cover. Let stand for 30 minutes or until all water is absorbed.
2. Fluff bulgur with a fork. Add the onion, green onion, parsley, mint, cucumber, olive oil, and lemon juice. Mix well.
3. Add the tomatoes, salt, and pepper.
4. Chill and serve.

Risotto

Ingredients:

1 1/2 quarts chicken stock

3 ounces onion, minced

2 ounces parmesan cheese

2 ounces, divided butter

12 ounces arborio rice

Method:

1. Place the chicken stock in a medium saucepan and bring to a simmer.
2. Heat 1 1/2 ounces of butter in a large, heavy saucepan.
3. Add the onions and sauté until translucent.
4. Add the rice, stirring constantly until the rice is slightly brown.
5. Add the stock, 1 cup at a time. Stir frequently. Allow the stock to absorb completely before adding more. This should take 30 to 40 minutes.
6. After all the stock has been incorporated, remove from the heat and add the remaining butter and parmesan cheese.

Rice Pilaf

Ingredients:

2 ounces butter

2 cups long-grain rice, rinsed

4 cups chicken stock, hot

1/4 teaspoon pepper

4 ounces onion, finely chopped

1 bay leaf

1 teaspoon salt

Method:

1. Melt the butter in a large, heavy saucepan over moderate heat.
2. Add the onions and cook until translucent.
3. Add the rice and the bay leaf. Sauté until the grains are well coated with butter.
4. Add the hot chicken stock, salt, and pepper.
5. Cover the pan and simmer for 18 to 20 minutes over low heat.
6. Remove bay leaf. Fluff with a fork before serving.

EVALUATION OF GRAIN DISHES

1. Taste each variation and place the numerical score for each characteristic in the upper left hand corner of each box. (Score System: 1=very poor; 2=poor; 3=fair; 4=medium; 5=good; 6=very good; 7=excellent)

2. Provide comments/descriptions to justify the numerical score.

VARIETY	APPEARANCE	CONSISTENCY/ TEXTURE	TENDERNESS	FLAVOR	OVERALL QUALITY
POLENTA					
CHEESE GRITS					
QUINOA AND BLACK BEAN SALAD					
BULGAR PILAF					
COUSCOUS WITH MIXED FRUIT					
TABOULI SALAD					

EVALUATION OF PASTAS

1. Taste each variation and place the numerical score for each characteristic in the upper left hand corner of each box. (Score System: 1=very poor; 2=poor; 3=fair; 4=medium; 5=good; 6=very good; 7=excellent)

2. Provide comments/descriptions to justify the numerical score.

VARIETY	APPEARANCE	CONSISTENCY/ TEXTURE	TENDERNESS	FLAVOR	OVERALL QUALITY
FRESH PASTA					
DRY PASTA: REGULAR					
DRY PASTA: WHOLE WHEAT					

EVALUATION OF RICE

1. Taste each variation and place the numerical score for each characteristic in the upper left hand corner of each box. (Score System: 1=very poor; 2=poor; 3=fair; 4=medium; 5=good; 6=very good; 7=excellent)

2. Provide comments/descriptions to justify the numerical score.

VARIETY	APPEARANCE	CONSISTENCY/ TEXTURE	TENDERNESS	FLAVOR	OVERALL QUALITY
LONG-GRAIN RICE					
WILD RICE					
BROWN RICE					
SHORT-GRAIN RICE					
RISOTTO					
RICE PILAF					
BOILED RICE					

COSTING GRAIN RECIPE (THE MAIN GRAIN RECIPE YOU MADE)

My Grain Recipe _____

1. List each ingredient, cost for amount purchased and unit purchased, and amount used in recipe in the table below. You will need to obtain a copy of the receipt from your instructor.

2. For each ingredient, calculate and record the cost for the amount used.

3. Calculate the total cost to prepare your grain recipe.

INGREDIENT	COST FOR AMOUNT PURCHASED AND UNIT PURCHASED	AMOUNT USED IN RECIPE	COST FOR AMOUNT USED
Total cost to prepare your grain recipe:			

LEARN MORE:

Grain Science

◆ Grains are the seeds of cereal grasses. They are composed of three basic parts: the **bran, endosperm,** and **germ**. The bran is a protective covering that surrounds the endosperm and the germ. The endosperm is a starchy food sac that nourishes the sprout. The germ is the part of the seed that sprouts when a seed is planted. The germ and bran are rich in vitamins, minerals, fiber, and healthful phytochemicals. The endosperm is starch-rich, so it provides plenty of energy (calories).
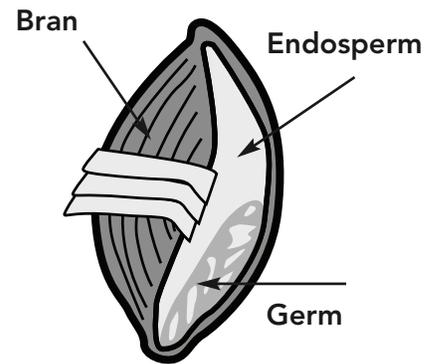
◆ **Whole grains** contain all three parts of the grain. The endosperm, as well as vitamins, minerals, fiber, and disease-fighting phytochemicals from the bran and germ, make them rich in energy. Whole grains can be the whole food, such as brown rice, popcorn or oatmeal, or an ingredient in a food, such as whole wheat bread.

◆ **"Refined"** grains have had the bran and germ removed to improve their shelf life and produce a finer texture. For example, white rice is the refined version of whole grain brown rice and white flour is the refined version of whole wheat flour. During the milling process used to make white flour, the bran and germ are removed and only the endosperm is left; so white flour is energy-rich (calorie-rich) but otherwise nutrient-poor.

◆ In an effort to produce more whole wheat bread that would be favored by those who prefer the refined white bread, wheat growers now plant hard white winter wheat. Traditionally, whole wheat bread is made out of whole wheat flour produced from red wheat, hence the darker color and differences in taste and texture. Today, whole wheat bread can be produced from the white winter wheat, creating a softer loaf of bread with the traditional white color, yet still whole grain to add nutrient benefits to the product.

◆ The FDA (Federal Drug Administration) requires manufacturers to add back some of the nutrients discarded during the milling process, including iron and several B-vitamins. This process is called **enrichment.** It should be noted that enrichment adds back only a few of the many valuable nutrients found in whole grains and does not add back any fiber. Folic acid is added in levels that exceed those found in the whole grain (fortification) because of its importance in preventing neural tube birth defects.

◆ **Resistant starch** is indigestible to the small intestine giving it a fiber-like mode of action. Some researchers suggest adding it to food formulations to increase total dietary fiber in their product. It acts the same as other fibers, going through the body undigested. Some health benefits include improved glycemic control, colon health, weight management, and energy.

Grain Tips for Consumers

◆ Dietitians recommend that at least half the grains eaten are whole grain. For most people, this means eating about three servings of whole grain foods each day. A serving is equal to 1 slice of bread, ½ to 1 cup of dry cereal, 1/2 of a bagel or English muffin, or 1/2 cup of cooked grains such as rice, pasta, or oatmeal.

◆ Buying whole grain foods is a great way to add valuable nutrients to the average diet, but sometimes it's tricky to tell if a food is really a whole grain. Watch out for these marketing tricks:

   • **Color** - Brown-colored bread may actually be "white" bread with molasses or other darker ingredients added.
   • **Name** - Some types of breads like "Wheat Bread," "Enriched Wheat Bread," "Honey Wheat," "Multigrain," and "Nine Grain" sound like they should be whole grains, but usually are not.

◆ When looking for whole grain products, read the label. Some foods that are ALWAYS whole grain include oatmeal, corn tortillas, popcorn, brown rice, and breads labeled "100% Whole Wheat." For other foods, look for the word "whole" connected to a grain as the first ingredient listed the ingredient list – for instance, "whole wheat", "whole oats", or "whole corn." If a whole grain is not one of the first ingredients listed, the product probably does not contain a significant amount of whole grain ingredients (Remember, ingredients on food labels are listed in order from most to least by weight).

◆ Another way to identify whole grain products is by looking for the gold whole grain council stamp. Products displaying *100%* on the stamp contain a full serving of whole grain per serving. Products without the 100% contain at least half a serving of whole grain per serving.

www.eatright.org

◆ Some products display the amount in grams of whole grain they contain per serving. When evaluating these products, keep in mind that one serving of whole grain is equal to 16 grams. An "excellent source" of whole grain will contain 16 grams per serving, and a "good source" of whole grain will contain 8 grams per serving. If every grain food eaten is a "good source," the goal of making half the grains eaten whole grain has been met.

◆ Since whole grain flours and meals are less refined and contain oil in the germ, they require a little extra care to ensure best quality and to avoid rancidity. It is best to shop for these products in a store that has a high turnover. Be sure to check expiration dates to select the freshest product. At home, store whole grain flours and meals such as whole-kernel cornmeal or whole wheat pasta in air-tight containers and place in a cool, dark storage area. If the flour or meal will not be used within 6 months, store in the refrigerator or freezer.

◆ You may already know that whole grain foods are rich in fiber, which is good for digestive health. But the health benefits of whole grains go far beyond regularity. Eating whole grain foods instead of refined grains may help you maintain a healthy weight and protect against many troublesome chronic diseases such as diabetes, heart disease, and several forms of cancer.

◆ Clients with Celiac disease, or gluten intolerance, need products that do not contain gluten. Quinoa (pronounced "keen-wa") is increasingly popular as a gluten-free "superfood" in the United States. It is high in plant protein (13%) and has more lysine than wheat, making it an excellent option for vegetarians.

Grain Questions

1. Which of the grain foods prepared in class today are whole grains? How can you tell?

2. Celiac disease patients cannot tolerate grains containing the protein gluten. Which of the grains foods prepared in class today are appropriate for a person with Celiac disease?

3. What are some easy ways to incorporate three whole grain foods into your own diet on a daily basis?

4. Compare the results of the recipe costing exercise completed by each group. Which recipe offers the most nutrition bang for the buck? Why?

Grains Teacher Tips

Overview

This lab experience will take 2 - 2¼ hours to complete.

◆ The students will study the market forms of rice and compare for cooking times, yield, appearance, palatability, and nutrition.

◆ The students may be introduced to grains that are not typically consumed in their part of the country or by their own ethnic group.

◆ The students will study the proportion of liquid and cooking times required for selected grains.

◆ The students may be introduced to selected gluten free grains.

◆ The students will explore how to add fruits or vegetables to grain products to enhance nutrition as well as palatability and interest.

◆ The students may be introduced to equipment they have not used previously such as a rice cooker and pasta roller.

Lab Management

Demonstrations

◆ This is a good opportunity to demonstrate equipment such as rice cookers and a pasta press; what else can you prepare in a rice cooker?

Time Management

◆ The pasta and the polenta take the most time. Other products may be completed in about 1 ½ hours.

◆ For the kitchen making bulgur pilaf and risotto, have the group start with the risotto recipe first. While it is cooking, they can begin their second recipe. Risotto is another recipe that will be one of the longest recipes to prepare.

◆ For the group making fresh pasta, if the lab does not have a pasta roller, have this group divide up the dough, thin it out the best they can with a rolling pin, and cut it into desired shapes. This will be one of the longest recipes to prepare.

◆ Using a rolling pin to roll the dough takes a long time. Using a pasta press would significantly reduce the amount of time required.

Sensory Evaluation

◆ Instruct the students on how to display and when to evaluate the products. As time allows, a student from each kitchen should comment about the preparation of the dish and the final product.

◆ Evaluate at the same time, side by side: all pastas; all rice; and all bulgur dishes.

Nutrition Points for Discussion:

◆ The Dietary Guidelines for Americans recommend that all Americans eat more grains, with at least half of the recommended amount being whole grains. Americans eat primarily refined grains. Whole grains include the entire grain seed (bran, germ, and endosperm). Some examples are buckwheat, bulgur, millet, oatmeal, quinoa, rolled oats, brown or wild rice, whole grain barley, whole rye, and whole wheat. Refined grains have been milled to remove the bran and germ from the grain. This gives a finer texture, improves shelf life, and removes dietary fiber, iron, and many B vitamins. Some of these grains are enriched with thiamin, riboflavin, niacin, folic acid, and iron.

◆ Discuss parts of a whole grain (bran, endosperm, and germ) and which parts are highest in nutrients. Review the health benefits of whole grains and how many servings per day are recommended.

  • Discuss refined grains and the milling process.
  • Review terms such as enrichment and fortification.

◆ Eating approaches like the Mediterranean Diet and the DASH (Dietary Approaches to Stop Hypertension) Diet include a plate that is half whole grain.

◆ Discuss the function of fat in each of the recipes where it is used.

  • How would the polenta be different (e.g. texture, flavor) if it was made with skim milk? What are the potential calorie and fat savings? Would the product be different if you used cooking spray rather than a fat to grease the pans? What are the differences in nutritional value and in cost?
  • What is the role of fat in the quinoa and black bean salad? Can it be reduced or eliminated?
  • What is the role of fat in bulgur (wheat pilaf)? Can it be reduced or eliminated?
  • What is the role of olive oil in the tabouli salad? Can it be reduced or eliminated? What is the role of butter in the rice pilaf? Can it be reduced or eliminated?
  • Salt has either been eliminated from the traditional recipe or listed as optional. Discuss with the students the function of salt in these recipes. What other spices could be used if the students find them lacking in flavor. Does salt have another role in grain cookery?

◆ Select a nutrition tip for each of the recipes. For example:

- Compare and contrast the nutrient value of white rice, brown rice, and wild rice.
- What is the nutritional value of cornmeal used in making polenta?
- Compare and contrast the nutritional value of refined and stone-ground grits.
- Quinoa is a gluten-free grain. Compare its nutrient value to wheat.
- Is the nutrient value of fresh pasta superior to that of dry and/or whole wheat pasta? Why would you prepare fresh pasta?
- What nutrients does the apple add to the couscous? What other additives could be put in couscous?
- What ingredients, in addition to bulgur, are required to be called "tabouli" and what nutrients do they provide?
- Is the nutritional value of Arborio different from short or long grain rice?

SHOPPING LIST: (8 SECTIONS)

Item	Utilized Unit/Lab Section	Purchased Unit
Onions	2 large	2 large
Apple	1 cup	1
Tomato	1 large	1
Green Onions	5 stalks	1 bunch
Green Bell Pepper	1 med.	1 med.
Cucumber	1 med.	1 med.
Garlic, minced	2 cloves	1 head
Fresh Parsley	1 cup	1 bunch
Fresh Mint	1 cup	1 package
Black beans, canned	15 oz	1 can
Corn, frozen	1 cup	1 bag
Dried Mixed Fruit	1 cup	1 package
Tabasco sauce	1 tsp	1 bottle
Chicken stock	4 ½ quarts	5 cont.
Lime Juice	2 TBSP	1 bottle
Lemon Juice	¼ cup	1 bottle
Apple Juice	3 cups	1 cont.
Olive Oil	3.5 oz	1 bottle

SHOPPING LIST: (8 SECTIONS) CONTINUED

Item	Utilized Unit/Lab Section	Purchased Unit
Pasta sauce	2 jars	2 jars
Regular noodles	16 oz	1 box
Whole wheat noodles	16 oz	1 box
Quinoa	½ cup	1 box
Bulgur	20 oz	1 bag
Couscous	2 cups	2 boxes
Arborio Rice	12 oz	1 cont.
Long grain rice	4 cups	1 bag
Wild Rice	1 cup	1 bag
Brown Rice	1 cup	1 bag
Short grain rice	1 cup	1 bag
Grits	1½ cups	1 cont.
Yellow Cornmeal	6 oz	1 cont.
Bread Flour	12 oz	1 bag
Semolina Flour	8 oz	1 bag
Bay Leaf	2	1 cont.
Cumin	1 tsp.	1 cont.
Salt	8 tsp.	1 cont.
Pepper	1 tsp.	1 cont.
Milk	3½ pints	½ gallon
Parmesan Cheese	3 oz	1 cont.
Cheddar Cheese	8 oz	1 package
Butter	10 oz	1 block
Eggs	14	18 packages