



Herbs and Spices

Ann A. Hertzler*

History

Wars have been fought and countries discovered because of treasured spices. Marco Polo's stories of his trip to China in the late 1200s told of the spice trade in these then unknown lands and brought many Europeans in search of spices. In the 15th to 17th centuries the Spanish, English, Portuguese, and Dutch traders competed in the spice trade from the Far East. By the 1800s America was involved in the spice trade. America's first millionaires made their money in the spice trade.

Many families in the colonies had their own herb gardens. Herbs and spices were also imported. These were used for cuisine specialties, as preservatives for the food supply, and for special medications. During the 1800s spices contained large amounts of fibrous or woody materials. Better processing techniques have done much to solve this problem. In the early 1900s many salesmen went from door-to-door selling spices; Golden Rule, Watkins, Raleigh, and Mc Ness were some of the well-known brands.

Use of Herbs and Spices

The use of herbs and spices in cooking offers the chance to prepare exotic, gourmet dishes, or cultural meals and a way to cut or save calories and fat in cooking. Diet related diseases (heart disease, cancer, stroke, diabetes, and atherosclerosis) accounted for 66% of all deaths in Virginia in 1994. The cost for treatment of any one of these diseases averages \$27,000 per person each year. Using herbs and spices can moderate dietary levels of fat, sugar and sodium.

For example, removing a tablespoon of fat removes about 10 grams of fat and 100 calories - an amount which could represent a 10 pound weight loss in a year. The calories in herbs and spices are far less than in breadings, batters, gravies, sauces and fried foods. Cost savings are realized by reducing the number of ingredients in preparation and/or by the possibility of dressing up inexpensive foods for a special meal.



SUBSTITUTIONS

FRESH OR WHOLE SEASONING

- 1/3 cup slices fresh onion
- 1/2 teaspoon minced fresh garlic
- 1 clove garlic
- 1/2 cup diced fresh pepper
- 1/2 cup diced fresh celery
- 1/2 cup diced peppers, onion, celery and carrots
- 1/2 to 1 cup fresh parsley
- 1 teaspoon chopped fresh ginger
- 1 teaspoon grated fresh lemon or orange peel
- 1/4 cup chopped fresh mint
- 1 whole bay leaf

DEHYDRATED SEASONINGS

- 1/4 cup onion flakes
- 1/4 teaspoon instant minced garlic
- 1/8 teaspoon garlic powder
- 1/4 cup Bell pepper flakes
- 1/4 cup celery flakes
- 1/4 cup mixed vegetable flakes
- 1/4 cup instant parsley flakes
- 1/4 teaspoon ground ginger
- 1 teaspoon dried lemon or orange peel or 1/2 teaspoon lemon or orange extract
- 1 tablespoon dried mint
- 1 teaspoon cracked bay leaf

DRIED HERBS 1/2 teaspoon dried = 1/4 teaspoon ground = 2 to 3 teaspoons freshly minced

Many people are looking for flavors to substitute for salt or sodium. A teaspoon of salt has 2300 mg sodium - almost the amount recommended as the daily requirement. Many other condiments as well as packaged and processed foods contain around 1000 mg salt. Seasoning salts are regular salt with seasoning. A teaspoon of most herbs and spices contains few calories and little or no sodium. Herbs and spices add zest and flavor to unsalted foods.

*Extension Specialist, Human Nutrition, Foods, and Exercise, Virginia Tech

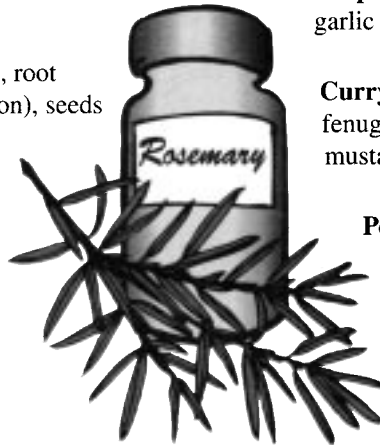
Definitions of Herbs and Spices

Definitions of herbs and spices vary somewhat but can be identified as follows:

Herbs are leaves of low-growing shrubs. Examples are parsley, chives, marjoram, thyme, basil, caraway, dill, oregano, rosemary, savory, sage and celery leaves. These can be used fresh or dried. Dried forms may be whole, crushed, or ground. Many herbs can be grown in the United States in or out of doors.

Spices come from the bark (cinnamon), root (ginger, onion, garlic), buds (cloves, saffron), seeds (yellow mustard, poppy, sesame), berry (black pepper), or the fruit (allspice, paprika) of tropical plants and trees.

Many **dehydrated vegetable** seasonings are available. These include onion, garlic, sweet peppers, mint, mixed vegetables, and freeze-dried chives and shallots.



Condiments are usually a combination of herbs and spices blended in a liquid form. Examples are prepared mustard, catsup, Worcestershire sauce, tabasco sauce, and many of the steak sauces and specialty vinegars. Many of these contain sodium.

Seasoning blends are mixtures of spices and herbs. Check spice companies for exact mixtures. Some examples of seasoning blends are:

Chili powder (red pepper, cumin, oregano, salt, and garlic powder)

Curry powder (coriander, turmeric, cumin, fenugreek seed, white pepper, allspice, yellow mustard, red pepper, and ginger)

Poultry seasoning (white pepper, sage, thyme, marjoram, savory, ginger, allspice, and nutmeg)

Pumpkin pie spice (cinnamon, ginger, nutmeg, allspice, and cloves)

Spicing it Up Without the Salt Shaker

A dot (●) means the seasoning at the top goes well with the food to the left.

	ALLSPICE	BASIL	CARAWAY SEEDS	CHIVES	CLOVES	CURRY POWDER	DILL	GARLIC	GINGER	MARJORAM	ONION POWDER	OREGANO	POPPY SEEDS	ROSEMARY	SAVORY	TARRAGON	THYME	TURMERIC	
Pot Roast	●							●	●								●		
Meat Loaf	●							●	●								●		
Fish				●			●									●			
Poultry									●				●		●				
Soups					●			●											
Pastas												●		●					
Tomatoes		●									●								
Rice		●			●					●								●	
Bulgur		●			●					●								●	
COOKED VEGETABLES:																			
Cabbage			●		●				●										
Broccoli			●		●				●										
Brussels Sprouts			●		●				●										
Cauliflower			●		●				●										
Carrots			●	●															
Beets			●	●															
Green Beans						●							●						
Lima Beans						●							●						
Peas						●							●						

Storing Spices

Whole herbs and spices last much longer than crushed or ground forms. Many consumers prefer to buy the whole form and crush or grind as needed for greater freshness. Herbs and spices can be crushed with a mortar and pestle, by using a rolling pin with spices between two cloths, or by using the back of a spoon in a cup.

Check ground or crushed herbs and spices for freshness at least once a year. If no aroma is detected after crushing, the seasoning needs to be replaced. Mustard seed and poppy seed aromas will be difficult to detect. Buying the smaller size instead of the economy size container will save money if the large package is not used while it is still fresh.

1. Store away from moisture. Dampness causes caking and a loss of quality.

Store in tightly covered, air tight container.

Use clean, dry spoons for measuring.

2. Store in a cool place.

Do not store in a window or in sunlight, or near heat sources such as the cooking areas or the dishwasher.

In hot climates, store spices such as paprika, red pepper, and chili powder in the refrigerator to maintain quality.

Storage Life of Herbs and Spices

Seasoning	Storage Time
Whole	2-5 years
Ground Spices	6 months-2 years
Leafy Herbs	3 months-2 years
Dehydrated Vegetables	6 months rice.

Enhancing Sweet Flavors

Enhance flavor with sweet tasting spices instead of sugar: allspice, anise, cardamon, cinnamon, cloves, ginger, mace, nutmeg.

Milk-Yogurt-Cheese: custards, puddings, sauces

Meats: beef, fish, poultry, sauces, bean dishes

Vegetables: beets, carrots, sweet potatoes, squash, pumpkin

Fruits: fruit compote, baked fruit, spiced fruit

Breads: gingerbread, sweet yeast breads, pumpkin bread, banana bread, rice or bread pudding.

Enhancing Savory Flavors

Seasoned salts (garlic salt) contain salt. Most meat sauces (steak sauce, soy sauce) are high in sodium.

Make yogurt-based spicy dressings to use with salads and fruit dishes. The following spices are good to use as a substitute for salt/sodium and fat: basil, bay leaf, celery seed, chili powder, cumin, curry powder, dill, marjoram, mustard, oregano, paprika, pepper, rosemary, sage, tarragon, thyme. You can use these spices with fondue, cheese spread, chowder, meats, soufflé, curried dishes, beans and soups, salads, greens, tomatoes/juice, pasta salads, specialty breads, and rice.



So You Don't Consume Much Sodium? Check It Out.

How you choose and prepare foods affects the amount of sodium in your diet. Check the box that best answers these questions:

How often do you –

	Less Than Once A Week	1 or 2 Times A Week	3 To 5 Times A Week	Almost Daily
1. Eat cured or processed meats such as ham, bacon, sausage, frankfurters, and other luncheon meats?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Choose canned vegetables or frozen vegetables with sauce?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Use commercially prepared meals, main dishes, or canned or dehydrated soups?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Eat process cheese?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Eat salted nuts, popcorn, pretzels, corn chips, or potato chips?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Add salt to cooking water for vegetables, rice, or pasta?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Add salt, salt-based seasoning mixes, salad dressings, soy sauce, or steak sauce to foods during preparation or at the table?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Salt your food before tasting it?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

How did you do?

The more checks you have in the last two columns, the higher your diet is likely to be in sodium. To cut back on sodium, choose lower sodium foods more often and balance higher sodium foods with those that are lower. For example, if you serve ham for dinner, plan to serve fresh or frozen vegetables cooked without added salt.

The Art of Seasoning

The art of using herbs and spices is learning how much to add and how to combine flavors. Several guidelines suggest amounts to use in developing recipes:

Use strong, pungent spices such as red pepper in small amounts. More delicate seasoning can be used in greater amounts without ruining the final product. Although the herb or spice should enhance and not overpower the flavor, cultural preferences will influence your decision.

Herb Bread

Many cultural specialties feature yeast breads and quick breads using a variety of spices and herbs.

Add the following ingredients per pound (3 to 4 cups flour) of yeast dough.

1 tsp. sage, 2 tsp. caraway seed, and 1 1/2 tsp. nutmeg
1 1/2 Tbsp. dill seed or 1 1/2 Tbsp. caraway seed and 1/8 cup instant minced onion
1/2 tsp. sage, 1/2 tsp. thyme, and 1/2 tsp. marjoram

Herb Vinegar Dressings

Use with vegetable salads or cooked vegetables.

1/8 tsp. ground black pepper, 1 tsp. dry mustard, 1/2 tsp. paprika, 3/4 tsp. garlic powder, 1 Tbsp. finely chopped chives, 3 Tbsp. cider vinegar, 1/2 cup vegetable oil, 2 Tbsp. pickle relish, 2 Tbsp. lemon juice. Yield: 3/4 to 1 cup

3/4 cup tomato juice, 2 Tbsp. lemon juice, 2 Tbsp. instant minced onion, 1 Tbsp. basil leaves crushed, 1/4 tsp. garlic powder, 1/8 tsp. ground cumin seed, 1/8 tsp. ground red pepper. Yield: 3/4 to 1 cup.

Start with a tested recipe. After it has been prepared, decide if more or less seasoning is needed for the next time.

Spice and herb companies recommend about 1/4 teaspoon (a pinch) of spice per pound of meat or pint of liquid when creating recipes. Only use 1/8 teaspoon of stronger seasonings such as red pepper and garlic. Remember, it is easier to add more than to try to compensate for too much.

More than one herb or spice can be used in a recipe. When creating a recipe, start by using only one or two choices. As you gain experience in cooking with herbs and spices, taste will tell if others might be added.

Adding Spices to a Recipe

Whole Spices and Herbs

Tie herbs and spices in a cheesecloth, nylon net or muslin bag, or place them in a tea ring. The bag or ring is easy to remove to stop the seasoning process. Particles that may cause difficulty in chewing or swallowing also can be removed.

Add whole herbs and spices at the start of cooking in recipes that will cook for an hour or longer. Examples are soups and stews.

Many herbal and spiced teas can be made using whole herbs and spices.

Flavoring seeds can be toasted briefly in the oven or on top of the stove to enhance flavor.

Whole herbs are usually crumbled and added near the end of cooking.

Crushed and Ground Herbs and Spices

Add about 15 minutes before the end of cooking. The flavors in crushed or ground spices are released quickly.

Crushing or grinding whole spices and herbs provides more flavor than the whole form.

Ground black pepper in a pepper shaker does not have the zest of freshly ground pepper. Grinding pepper from the pepper corn provides more flavor.

For cold salad dressings, mix herbs and/or spices with vinegar for several hours before adding oil in order to develop the flavor.



Be Creative

Be both a scientist and an artist as you learn to cook with spices. Start with several herbs and spices, learning to know the flavoring and how it complements different dishes. Look for new ideas by checking labels on spice packages and by collecting recipes on regional or other specialty dishes.