

Combination Cooking Methods

Unit: Preparing Foods

Problem Area: Food Preparation

Lesson: Combination Cooking Methods

- **Student Learning Objectives.** Instruction in this lesson should result in students achieving the following objectives:

- 1 Define combination cooking and related cooking methods.**
- 2 List foods commonly prepared using a combination cooking method.**

- **Resources.** The following resources may be useful in teaching this lesson:

“Combination Cooking Fundamentals,” *Rouxbe Cooking School*. Accessed Feb. 16, 2012. <http://rouxbe.com/cooking-school/lessons/210-combination-cooking-fundamentals/objectives>.

“Combination Cooking Methods,” *How to Cook Gourmet*. Accessed Feb. 16, 2012. <http://www.how-to-cook-gourmet.com/combinationcooking.html>.

Gisslen, Wayne. *Professional Cooking*, 7th ed. Wiley, 2010.

Labensky, Sarah R., Priscilla R. Martel, and Alan M. Hause. *On Cooking: A Textbook of Culinary Fundamentals*, 5th ed. Pearson Prentice Hall, 2010.

McGreal, Michael J. *Culinary Arts Principles and Applications*, 2nd ed. American Technical, 2011.



■ Equipment, Tools, Supplies, and Facilities

- ✓ Overhead or PowerPoint projector
- ✓ Visual(s) from accompanying master(s)
- ✓ Copies of sample test, lab sheet(s), and/or other items designed for duplication
- ✓ Materials listed on duplicated items
- ✓ Computers with printers and Internet access
- ✓ Classroom resource and reference materials

■ Key Terms. The following terms are presented in this lesson (shown in bold italics):

- ▶ blanching
- ▶ braising
- ▶ broasting
- ▶ combination cooking
- ▶ curing
- ▶ dry-heat cooking
- ▶ moist-heat cooking
- ▶ sear
- ▶ simmer
- ▶ stewing
- ▶ stock

■ Interest Approach. Use an interest approach that will prepare the students for the lesson. Teachers often develop approaches for their unique class and student situations. A possible approach is included here.

In a small sauce or sauté pan, blanch a small quantity of broccoli florets until the brilliant color comes out. Drain the broccoli and, without chilling, add it to a preheated sauté pan with a bit of oil. Sauté the vegetable and add the herbs and/or spices of your choice. Cook until barely tender. Then pour the broccoli onto a plate. Ask students what cooking methods you used (poaching and sautéing). Then ask if anyone can tell you why you cooked the vegetable as you did.

Explain that using poaching (moist method) and sautéing (dry method) to cook the broccoli is a form of combination cooking. The moist method added moisture and brought out the color (in the case of broccoli), and the dry method allowed for the addition of flavor (through the use of fat, herbs, and spices). Cook more broccoli florets using one method at a time to illustrate the positive effect of combination cooking. Separate the cooking methods: Cook some broccoli by poaching only and cook some by sautéing only. Then ask students to compare them to the vegetable cooked by the combination method.

CONTENT SUMMARY AND TEACHING STRATEGIES

Objective 1: Define combination cooking and related cooking methods.

Anticipated Problem: What is combination cooking? What cooking methods are involved?

I. Combination cooking defined

A. **Combination cooking** is a method that involves preparing a product using two or more processes: usually one moist-heat method and one dry-heat method (although one may combine two dry or two wet methods). Generally, the methods used in combination provide different values and/or benefits to the final product that one cooking method alone cannot provide.

1. **Moist-heat cooking** is a method that always includes the addition of moisture (e.g., water, broth, or wine) during the cooking process. Examples of moist-heat methods are:

- a. Steaming
- b. Boiling
- c. Blanching
- d. Poaching

2. **Dry-heat cooking** is a method that adds no liquid during the cooking process. Examples of dry-heat methods are:

- a. Broiling
- b. Grilling
- c. Roasting
- d. Baking
- e. Sautéing
- f. Frying

B. Common combinations—The two most commonly joined methods of dry- and moist-heat cooking are searing and simmering. These two methods create the two classic styles of combination cooking: braising and stewing. Both methods begin with a tough cut of meat and, after careful prolonged cooking, create a tender dish.

1. **Braising** (from the French braiser—a pan) is a combination of searing and baking (or simmering). Typically, a large whole cut of meat, such as a roast, is selected for braising. Historically, each kitchen had a braiser pan: a pan with a sunken lid to hold “live” charcoal so the meat was cooked from above and from below. Braised meat is usually placed on a bed of chopped aromatic vegetables and herbs. Bacon may be added to provide a cured or smoky flavor.

2. **Stewing** is a classic French method of slow cooking with moisture under low heat in the oven or on the stovetop. It is not to be confused with boiling. Stewing is nearly identical to braising, except the meat is typically cut into smaller, even bite-size pieces. Also, the ratio of liquid to meat is higher: $\frac{1}{2}$ pint liquid to 1 pound meat.
 - a. To **sear** is to briefly cook the food over high heat until the surface is browned. This seals the food product's surface and adds color and flavor to the dish.
 - b. To **simmer** is to cook food in liquid or sauce at a temperature just below the boiling point, about 180°F, so the surface of the liquid barely ripples. Simmering is not a classic cooking method per se, but the technique is to cover the food in a flavorful liquid (e.g., wine or stock) and slowly cook the food in a covered pan or crock at low heat until the food is tender. Simmering may be done in the oven or on the stovetop. **Stock** is a flavorful broth made by simmering bones, vegetables, and herbs together for hours. Stock or wine is generally the preferred liquid for a stew, rather than water, because stock and wine add flavor and dimension to the dish.

Teaching Strategy: Use VM–A to illustrate dry- and moist-heat cooking methods.

Objective 2: List foods commonly prepared using a combination cooking method.

Anticipated Problem: Which foods are commonly cooked using a combination method?

II. Common foods that use combination-cooking methods

- A. Braising and stewing are the most common combination cooking methods. They both generally use tough cuts of meat that are tenderized by a dual-cooking method. Searing seals, browns, and adds flavor to the meat. The slow and moist simmering process breaks down the meat's connective tissues (that makes it tough), leaving a flavorful and tender dish. Meats used for braising and stewing include:
 1. Chuck roasts are used for Swiss steak and pot roast.
 2. Beef brisket (a tough, stringy meat) is used as a tender, rich, and flavorful beef for slicing (e.g., corned beef and New England boiled dinner).
 3. Pork butt roast (a tough and somewhat fatty cut of pork with an odd shaped bone) is perfect for “pulled pork” sandwiches. The pork butt roast is braised to allow for easy removal of the bone. Then the meat is shredded.
 4. Ribs and rib tips are commonly cooked with a reverse combination method. The meats are usually simmered, slow baked, or roasted with liquid in the pan first and then are seared on the grill after they are tender.
 5. Stewing hens (older chickens) are often seared and then simmered or roasted for hours in a flavorful liquid. These older, tougher birds become tender and flavorful during this long cooking process.

B. Other combination cooking processes

1. **Blanching** is plunging meats or vegetables into boiling water for a short time (1 to 3 minutes), removing them from the boiling water, and immediately plunging them directly into ice-cold water to stop the cooking process. With meat, blanching serves to firm the flesh and allow the meat to be larded; it preserves the whiteness of some types of meat (e.g., chicken, rabbit, and sweetbreads). Vegetables are often blanched before cooking by a second method. Blanching vegetables serves to lock in and enhance the bright color. When vegetables are blanched, the amount of time required for cooking to order—sautéing, roasting, and baking—is shortened.
 - a. Blanching allows the skin of vegetables and fruits (e.g., tomatoes, peaches, and peppers) to be peeled easily without damaging the food.
 - b. Blanching brings out vibrant colors of vegetables and sets those colors before freezing (i.e., green beans are greener).
 - c. Blanching does not have to be done in water. For example, potatoes to be fried (e.g., French fries) are commonly blanched in oil prior to freezing. In this case, blanching brings out and locks in the color and sets up the surface of the vegetable for crisping during cooking in the oven or in the fryer.
2. Grains are often cooked through multiple methods. For instance, oats are often boiled before adding them to cakes and cookies. Ground cornmeal is boiled into a mush, formed into cakes, and then is fried. Rice is typically steamed before its final preparation as a fried rice dish.
3. **Broasting** is a combination cooking process of broiling and roasting. Broasted chicken is very juicy with crispy skin. Some restaurants use the term “broasting” when only one method—broiling or roasting—is used in the preparation. In this case, the second cooking method is probably frying because it promotes an even crisper skin but technically misrepresents the cooking method as a true combination style.
4. **Curing** is the process of preparing meats, fish, or vegetables for immediate or future use by drying, salting, smoking, and other preservation methods. Curing is technically a combination method in which the food is cooked via salting and/or sugaring in a dry rub or a liquid brine. This process alters the proteins through the use of salt and/or sugar, and then the food is slow cooked under low heat roasting or smoking. These low-heat cooking methods add flavor and more fully cook the meat (e.g., a ham or a cured bacon).
5. While braising and stewing are the primary combination cooking methods designed specifically to address tenderizing tough cuts of meat, there are endless varieties of combination cooking. If tenderizing is not the primary goal, combination cooking offers ways to adjust food textures, colors, and flavors. It allows chefs to free up certain cooking equipment for other uses by starting the cooking process of foods in one way and completing them in another.

Teaching Strategy: Use VM–B to review the foods that work best in combination-cooking methods. Assign LS–A.

- **Review/Summary.** Use the student learning objectives to summarize the lesson. Questions at the ends of chapters in the textbook may also be used in the Review/Summary.
- **Application.** Use the included visual master(s) and lab sheet(s) to apply the information presented in the lesson.
- **Evaluation.** Evaluation should focus on student achievement of the objectives for the lesson. Various techniques can be used, such as student performance on the application activities. A sample written test is provided.
- **Answers to Sample Test:**

Part One: Multiple Choice

1. c
2. c
3. d
4. a
5. b
6. d

Part Two: True/False

1. F
2. F
3. T
4. T
5. F
6. T

Part Three: Completion

1. dry
2. simmering
3. blanching
4. tough
5. crispy
6. braised

Combination Cooking Methods

► Part One: Multiple Choice

Instructions: Circle the letter of the correct answer.

- Combination cooking is _____.
 - using one method properly
 - always more than two cooking methods
 - generally a moist- and a dry-heat method
 - plunging food into boiling water quickly and then into ice-cold water
- Dry-heat cooking methods include all of the following except _____.
 - grilling
 - roasting
 - stewing
 - sautéing
- Foods are often seared as part of a combination cooking method because searing _____.
 - adds flavor
 - adds color
 - seals the surface
 - All of the above
- Of these foods, _____ would *not* be cooked using a combination method.
 - fried catfish
 - BBQ ribs
 - fried rice
 - pot roast



5. Blanching broccoli before adding it to a stir-fry dish accomplishes all of the following *except* _____.
- bringing out the bright green color
 - browning the broccoli
 - slightly cooking and tenderizing the broccoli
 - shortening the time the broccoli needs to be stir-fried
6. Of the following combination cooking methods, _____ are the most common.
- boiling and baking
 - broasting and parboiling
 - searing and simmering
 - braising and stewing

► Part Two: True/False

Instructions: Write T for true or F for false.

- _____ 1. Dark green leafy vegetables are often prepared using a combination cooking method.
- _____ 2. Dry beans are usually soaked in water overnight before they are boiled; this is an example of combination cooking.
- _____ 3. “Curing” meat generally requires salting or brining it before it is smoked, roasted, or somehow cooked further.
- _____ 4. Stock is a better choice than water to use when stewing.
- _____ 5. The term “broasting” technically refers to the use of both baking and roasting.
- _____ 6. When meat is braised, it is usually placed on a bed of chopped aromatic vegetables and herbs.

► Part Three: Completion

Instructions: Provide the word or words to complete the following statements.

1. Roasting is an example of a _____-heat cooking method.
2. Cooking slowly in liquid that is just barely bubbling is called _____.
3. The process of briefly plunging food into boiling liquid or hot oil is called _____.
4. Ribs and brisket are commonly cooked using a combination method because they are _____ cuts of meat.
5. Blanching potatoes before they are fried makes them _____.
6. Stewing meats are often _____ and then simmered or roasted for hours in a flavorful liquid to fully tenderize the meat.

COMBINATION COOKING EXAMPLES

- ◆ Searing can be done with any food, as long as the heat is high and browning occurs quickly. Searing is one of the dry-heat cooking methods.



- ◆ Boiling corn-on-the-cob after searing it on the grill would be an example of combination cooking. Specifically, it would be braising as long as the cooking liquid was flavored. Boiling is one of the moist-heat cooking methods.



- ◆ Stew is made using the “braising” method, but note how small the meat pieces are for stew. The meat is brown because it was seared before adding liquid. Another classic example of a braised dish is Boeuf Bourguignon.



- ◆ Beef Wellington is a good example of combination cooking in which both methods are dry—sear and bake. The roast is seared, wrapped in pastry, and then baked.



- ◆ Ribs are notoriously tough, so they are usually baked, smoked, steamed, or par-boiled to tenderize them before they are put on the grill. Grilling occurs just prior to serving.



FOODS ASSOCIATED WITH COMBINATION COOKING METHODS

- ◆ Tough cuts of meat, such as this chuck roast, require combination cooking to become tender and flavorful.
- ◆ Tough older chickens (stewing hens) are commonly cooked using combination cooking methods, such as this classic French dish: Coq au Vin.



◆ Tough root vegetables—such as the celeriac, parsnips, eggplant, and carrots shown here—are often cooked using a combination method to increase flavor and tenderness. Although combination cooking may not be stated in a recipe or formula, the chef always has the option of shortening the “cook-to-order foods” by blanching, parboiling, etc. ahead of receiving the orders.



◆ Potatoes, such as these French fries, fry up much crispier when they are blanched before they are fried!



◆ Blanching tough vegetables before stir-frying makes the vegetables tender and brighter in color. It reduces the amount of time necessary to cook the dish.

◆ Rice is steamed before it is combined with other ingredients to make Chinese fried rice.



Combination Cooking Methods Exercise

Purpose

This purpose of this activity is to practice the theory of combination cooking by applying three-dimensional problem solving.

Objectives

1. Define and explain combination cooking methods.
2. Determine the foods best suited to each type of combination cooking method.

Materials

- ◆ lab sheet
- ◆ writing utensil
- ◆ textbooks or reference books
- ◆ Internet access
- ◆ other reference materials (magazines, cookbooks, etc.)

Procedure

1. **Part 1 Define and Explain:** Answer the following questions in a sentence or two.
 - a. What is the difference between braising and stewing?



- b. List two benefits of cooking using a combination method.
 - c. List three specific cuts or types of meat that would benefit from combination cooking.
 - d. Some vegetables are blanched before fully cooking via another method. List three vegetables that benefit from blanching before completing their cooking with a second method. Explain why the method works well with the vegetables you named.
 - e. Juanita blanched some broccoli. Later in the evening, she boiled the vegetable until it was tender. Did Juanita use a combination cooking method? Why or why not?
2. **Part II Combination Cooking Research:** Use the Internet, textbooks, cookbooks, magazines, etc., to find one recipe for each of the following foods that uses a combination cooking method. Approach this from a creative standpoint; look for food dishes in which the preparation is begun in one way (method 1) and possibly incorporated into a recipe that is cooked in a second way (method 2). Be prepared to present your findings to the class, explaining which cooking methods are used and how each benefits the final dish.
- a. Beef recipe name:
 - (1) Method 1:
 - (2) Method 2:
 - (3) Benefits:
 - b. Pork recipe name:
 - (1) Method 1:
 - (2) Method 2:
 - (3) Benefits:

c. Poultry recipe name:

- (1) Method 1:
- (2) Method 2:
- (3) Benefits:

d. Lamb recipe name:

- (1) Method 1:
- (2) Method 2:
- (3) Benefits:

e. Vegetable recipe name (not potato):

- (1) Method 1:
- (2) Method 2:
- (3) Benefits:

f. Grain recipe name (oats, rice, etc.):

- (1) Method 1:
- (2) Method 2:
- (3) Benefits:

Combination Cooking Methods Exercise

1. Part I:

- a. *Braising and stewing require searing and simmering in a flavorful liquid, but braising uses large whole pieces of meat. Stewing uses smaller bite-size cuts of meat.*
- b. *Answers may vary, but they could include the following as reasons to use a combination method: tenderizing, adding flavor, increasing crispiness, preserving color, altering texture, and saving money through less expensive cuts of meat.*
- c. *Answers may vary, but they could include the following cuts or types of meat: older chickens or poultry (stewing hens, etc.), brisket, chuck roast, mutton, lamb shank, pork butt, veal shank, round steak, eye of round, picnic ham, pre-cut stew meat, squid, and octopus, etc.*
- d. *Answers may vary, but they could include the following vegetables that are often blanched before finishing with a second cooking method: a) potatoes (to make them crisper) or even to bring out the flavor (as in double bakes); b) any root or tuber vegetable or even cruciferous vegetables (broccoli or brussel sprouts) to bring out colors, hasten the cooking time at service, or prepare them for better use in the next stage of cooking; and c) some tender vegetables such as baby bok choy could be blanched to bring out color and add moisture prior to grilling and to prevent the burning of the leaves.*
- e. *No, the process described is not a combination cooking method because in both cases boiling was the method used to cook the broccoli. In a true combination cooking method, there would be two or more different methods used to finish the vegetable (e.g., boiling and baking or parboiling and sautéing, etc.).*

2. Part II: Combination Cooking Research

Because of the numerous potential responses, no answer key is available for this section. However, look for variety within each student's responses, and encourage three-dimensional solutions, such as: Oatmeal cake for the grain example that is boiled and then baked and fritters for the vegetable example in which blanching is the first method and frying in a batter is the second method.