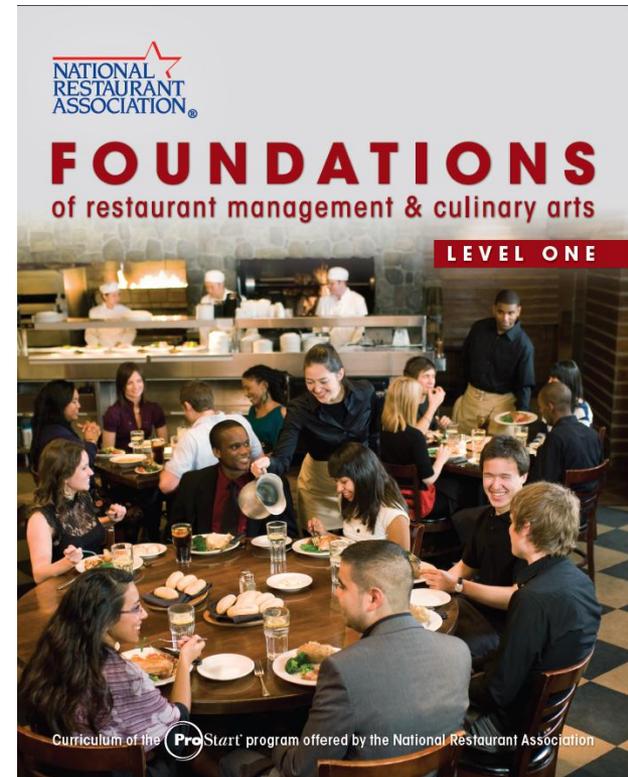


Chapter 9

Fruits and Vegetables





Fruits: Types and Market Forms



A **fruit** is an organ that develops from the ovary of a flowering plant and contains one or more seeds.

- Fruit can be the perfect snack food, or the basis of a dessert, colorful sauce or soup, or an addition to meat, fish, shellfish, or poultry.
- Fruits are both delicious and nutritious. The sweetness of fruits comes from fructose, a natural form of sugar.
- Fruits and vegetables should be plump and free of bruises, mold, brown or soft spots, and pest damage.
- Any attached leaves should be firm and not wilted.
- Overall, the color and texture should be appropriate to the particular type of fruit or vegetable.



Fruits



- Fruits are grouped by growing season and location:
 - Summer fruits include berries, cherries, grapes, melons, peaches, nectarines, plums, and pears. Most summer fruits are delicious when eaten raw.
 - Winter also offers a good selection of fruits that provide plenty of nutrition and great taste. Winter fruits include apples and citrus fruits, such as oranges, grapefruits, lemons, limes, and tangerines.
 - Tropical fruits are named for the climatic conditions under which they are grown. Tropical fruits include figs, dates, kiwis, mangos, bananas, papayas, pomegranates, guava, star fruit, and passion fruit.



Purchasing Fruits



- Some fruits are available all year while others have a specific growing season.
- The quality, degree of ripeness, and price of fruit vary with the season.
- During a fruit's growing season, supply is plentiful, quality is higher, and the price is usually lower.
- **Quality grades** are a rating system for fruit based on quality standards—the better the quality, the higher the quality grade assigned to it.
- Quality is based on a combination of size, color, shape, texture, and defects.



Storing Fruits



- Many ripe fruits, except for bananas, can be stored at 41°F or lower.
- If possible, fruits should be stored in their own refrigerator, separate from vegetables.
- Certain fruits emit **ethylene gas**, which causes fruits to ripen.
- Most fruits need to be kept dry because excess moisture causes produce to spoil quickly.
- Fruits that need to ripen should be stored at room temperatures of 65°F to 70°F.

Preparing Fruits



- Cleaning is the first step in preparing fruit.
- Preparing fruit includes removing skins, removing cores, removing seeds and stones, zesting, and removing stems.
- Use a sharp knife to cut fruit to ensure that your cuts are clean.
- Fruit is often cut into wedges, slices, chunks, or cubes for service.
- Fresh fruit can be juiced and puréed.
- Dried fruit can be served as is, without any advance preparation. However, when it is an ingredient in a dish or baked item, rehydrate or soften dried fruit before adding it.

Cooking Fruits



- Preparing fruits for cooking involves washing them with water, and then peeling, slicing, and cutting them.
- A chemical process called enzymatic browning occurs when the oxygen in the air comes in contact with the flesh of cut fruit, causing the fruit to turn brown.
- To keep cut fresh fruits from discoloring, coat them with some form of acid, such as lemon juice, as soon as they are cut.
- When fruit is cooked with sugar, the sugar is absorbed slowly into the cells, firming the fruit.
- When grilling or broiling fruits, cook them quickly to avoid breaking down the fruit's structure.
- Fruits that are poached are cooked in simmering liquid.

Cooking Fruits (cont.)



- Fruit has a rich, syrupy flavor when sautéed in butter, sugar, and spices.
- Some of the most popular fruit sauces include applesauce, fresh berry coulis, and compotes.
- Fruit sauces are made by cooking the fruit in liquid until the fruit has been broken down. Then a sweetener, such as sugar, honey, or syrup, is added.
- When baking fruits, choose firm fruits that are whole or cut into large pieces. Apples are the most popular baked fruit because they are easy to prepare.
- Fruit plates and salads are a popular way to serve fruit. Serve fruit at room temperature to make sure it has the best flavor.

Section 9.1 Summary



- The three main groups of fruit are summer, winter, and tropical.
- USDA grades for fresh fruit include U.S. Extra Fancy, U.S. Fancy, U.S. No. 1, U.S. No.2, and U.S. No 3. Canned fruit is rated U.S. Grade A Fancy (highest quality), U.S. Grade B Choice (second best), and U.S. Grade C standard (poor quality).
- The factors that affect purchasing decisions of fruit include recipe requirements, staff skills, available equipment, and vendor limitations.
- Fruit needs to be kept dry to avoid spoiling. Fruit that needs to ripen should be stored at room temperatures of 65°F to 70°F.
- Preparing fruit for service may include any combination of cleaning, peeling, seeding, trimming, cutting, juicing, and puréeing.
- Fruit can be grilled, broiled, poached, sautéed, baked, or microwaved.



Vegetables: Types and Market Forms



A **vegetable** is an edible, herb-like plant. The edible parts of vegetables include the leaves, fruit, stems, roots, tubers, seeds, and flowers.

- Vegetables are often categorized by their botanical origins or by their edible parts:
 - **Flower vegetables** include broccoli, cauliflower, Brussels sprouts, and cabbage.
 - **Fruit vegetables** include avocados, cucumbers, eggplants, peppers, squash, and tomatoes.
 - **Green leafy vegetables** include various types of lettuce, mustard greens, spinach, and Swiss chard.
- Some greens are lettuces; some are related to cabbage; others, like radicchio, are chicory. Even leafy herbs like cilantro find their way into flavorful salads.



Vegetables: Types and Market Forms (cont.)



- **Spring greens** are the new leaves of leafy vegetables that had been harvested the previous season:
 - **Field mixes** may be more tender and can be planted in the spring for harvest a few weeks later.
 - **Seed vegetables** include corn, peas, and beans.
 - **Root vegetables** include carrots, beets, radishes, turnips, and onions.
 - **Tuber vegetables** include potatoes, sweet potatoes, and yams.
 - **Stem vegetables** include asparagus, celery, artichokes, and mushrooms.
- In **hydroponic farming**, vegetables are grown indoors year-round, under regulated temperatures and light, in nutrient-enriched water.
- As with fruit, during their growing seasons vegetables are plentiful, the quality is higher, and the prices are usually lower.
- The same USDA fruit quality grades apply to vegetables as well.

Storing Vegetables



- Roots and tubers should be stored dry and unpeeled in a cool, dark area.
- If possible, vegetables should be stored separately in one refrigerator and fruit in another refrigerator.
- Most vegetables need to be kept dry because excess moisture causes produce to spoil quickly.
- Produce should not be peeled, washed, or trimmed until just before it is used.
- Vegetables that need to ripen should be stored at room temperatures of 65°F to 70°F. Once produce is ripe, refrigerate it immediately or it will become overripe.
- Green vegetables must be placed carefully in a refrigerator.

Preparing Vegetables



Vegetables must be properly prepared before they are cooked.

- All fresh vegetables must be cleaned thoroughly. Washing removes surface dirt as well as other contaminants.
- When cutting vegetables, the cutting surface should be at a comfortable height. The cutting station should have a container to hold peelings and another to hold the cut vegetables.
- For safety, foods such as raw meat, fish, and poultry require a different cutting board from that used for fruits and vegetables:
 - **Dicing** is cutting a product into cubes with a chef's knife. Normally, dicing refers to about a half-inch cube. This is a common technique for use with vegetables.
 - **Mincing** is a fine chop cut made by using a chef's knife or mezzaluna. This cut is commonly used on smaller foods, such as garlic, fresh herbs, and ginger.

Cooking Vegetables



- Prepare vegetables for cooking as close to the actual cooking time as possible to ensure the vegetables' freshness.
- Vegetables must be cooked in a way that protects their texture, flavor, color, and nutrients:
 - **Boiling** is best for hard, starchy vegetables. Blanch vegetables by quickly and partially cooking them in hot water or oil.
 - **Parboiling**, like blanching, partially cooks vegetables in boiling water.
 - **Steaming** is the best way to retain vitamins and minerals.
- Cook vegetables in a microwave-safe container, covered, in a small amount of liquid. Or leave the vegetable whole, with the skin or peel intact, and steam it with its own moisture.
- Roast or bake vegetables in a hot or moderate oven. This cooking method is best suited to vegetables with thick skins that protect the interior from drying or scorching.

Cooking Vegetables (cont.)



- While thick-skinned vegetables are well suited for roasting, vegetables with little or no skin are best when sautéed.
- **Glazing** is a finishing technique that gives vegetables a glossy appearance.
- Cooks often coat pan-fried vegetables with breading or batter. Cook batter-dipped vegetables in oil or butter until their exteriors are lightly browned and crisp.
- To marinate vegetables, soak them in oil or vinegar, herbs, and spices. This gives them added flavor and helps to tenderize the vegetable.
- Vegetable stews and braises are good ways to retain the vitamins and minerals that are transferred to the cooking liquid.
- The best way to maintain overall quality is to cook vegetables soon after purchase and then serve them as quickly as possible.

Section 9.2 Summary



- Flower, fruit, green leafy, seed, root/tuber, and stem are categories of vegetables.
- Hydroponic farming allows vegetables to be grown indoors year-round under regulated temperatures and light in nutrient-enriched water.
- Roots and tubers should be stored dry and unpeeled in a cool, dark area.
- There are many ways to cook vegetables, including boiling (blanching, parboiling), steaming, microwaving, roasting and baking, sautéing and stir-frying, pan-frying, deep-frying, *sous vide*, stewing and braising, grilling, and puréeing.
- The best way to maintain overall quality is to cook vegetables rapidly and then serve them as soon as possible.