Food Plants Native to the Americas

Five hundred years ago, the great meeting of the Old World and the New World yielded an extraordinary exchange of commodities, including food plants. Though few of these are native to Florida, except Black Walnut and Blueberry, the Americas added many foods to the European table, and Florida keeps many of them on American tables.

by Nancy C. Coile

In this year of 1992, on the 500th anniversary of Columbus’ landing on the western continent, we acknowledge the staggering consequences of that encounter. The indigenous peoples of the New World were changed forever. Diseases brought by the Old World adventurers, and the slavery, slaughter, and assimilation of the Amerindians caused the native New World peoples to all but disappear.

But the New World gained from the Europeans—the wheel, iron weapons and implements, goats, horses, cows, rats, cloves, black pepper, wheat, rice, rye, barley, apples, citrus, wine grapes, olives, cabbage, and broccoli.

The Old World, in turn, gained much from the New World, besides the vast amounts of gold and silver that were exported to Spain.

A less-often-remembered benefit were the new foods added to the pantries of the Old World. Here are some of those New World foods, developed by the Amerindians and now in use worldwide, especially in European cultures.

Spices

Although the Old World came west looking for spices, Columbus and the other explorers were disappointed in that quest. Only three popular spices in use today are from the New World: allspice, vanilla, and red peppers. The impact of these three on our menus, however, is strong.

Allspice. The name “allspice” implies that this is a combination of the spices. The flavor is reminiscent of cloves, cinnamon, and nutmeg all rolled into one. Allspice is Pimenta dioica (L.) Merr., a member of the family Myrtaceae, which also includes guava, eucalyptus, cloves, and bay rum. The part of the aromatic tree which is used as allspice is the unripe fruit. (Pimenta should not be confused with pimiento peppers which are discussed later.)

Although not native to the state, allspice grows well in south Florida, and is a specimen tree at Kanapaha Gardens in Gainesville.

Without allspice, luncheon meats would taste different. Pickling spice mixes always include these rounded, pungent fruits. Allspice is used to flavor Benedictine and Chartreuse liqueurs. Spice cakes usually include allspice as one of the flavorings.

Vanilla. Vanilla is the flavoring derived from the fruit of certain members of the orchid genus, Vanilla. Several species are native to Florida. The shape of the fruit is similar to a bean, which led to the term “vanilla bean”. My mother had a sugar canister with vanilla beans buried in it to give extra flavor to the sugar. You can make your own wonderful vanilla extract by soaking a vanilla bean in a bottle of vodka. The alcohol in vodka acts as a solvent to extract the flavorful compounds and color from the vanilla beans to produce pure vanilla extract.

Vanilla flavoring is artificially flavored to taste like vanilla without the presence of the real thing. The main flavoring agent is vanillin, which has been artificially produced since 1874. Pure vanilla extract has a more subtle essence than does vanilla flavoring because vanilla extract contains a combination of several flavoring agents including vanillin.

Without vanilla, how dull and flavorless most of our desserts would be! Chocolates marries well with vanilla and most chocolate recipes require vanilla extract or flavoring. Just think: no vanilla wafers, no vanilla ice cream, no vanilla pudding, no vanilla milk shakes would Columbus and his companions have ever had, had they not been searching for the spices of the Orient and discovered the New World instead.

Red peppers. The red peppers include cayenne peppers, paprika peppers, jalapeño peppers, tabasco peppers, chili peppers, cherry peppers, habaneros, and many other hot peppers. Most of these hot peppers belong to Capsicum annuum L. var. annuum, as do the bell peppers and pimiento peppers.

Many of the dishes we think of as characteristic of Old World countries owe their flavor to the New World peppers. Hungarian goulash would lack an integral element without paprika, a form of red pepper. The hot dishes of Sechwan and Hunan provinces of China would be mild without New World red peppers. The hot Thai dishes and Indian dishes also owe red peppers for the sizzle. Couscous, the staple starch food of North Africa, would be extremely bland without red peppers. What about that New World invention, barbecues? Barbecues would be boring without red peppers to add some kick to the sauces. The Cajun cooking of south Louisiana is famous for its use of hot red peppers.

By the way, all peppers are native to the New World: the bell, the pimiento, and the banana, etc., are sweet rather than spicy like the hot peppers. Though not native to the state, all of these peppers are grown throughout Florida as a winter crop, especially bell peppers. The bird peppers (Capsicum annuum L. var. glabriusculum (Dunal) Heiser & Pickersgill) are the wild peppers found on shell mounds and coastal areas in Florida. Also growing naturalized in Florida are the tabasco peppers, Capsicum frutescens. McIlhenny Parish, Louisiana, is renowned for its Tabasco Pepper Sauce.

The hot pungent ingredient in all of the hot peppers is capsaiacin, which is concentrated in the placental tissues that supply the seeds. This pungent principal element is so strong that 1/100,000 can be detected by taste. Peppers may be rated
on a scale from zero for bell peppers to around 5,000 for jalapeño peppers to around 250,000 for the tiny habanero peppers from Cuba. Capsaicin is used medically in treatment of rheumatism, neuralgia, and high blood pressure.

**Edible plants.**

In addition to the spiciness, the New World also provided the Old World with many plant foods as shown in this list from A to Z: avocados, blueberries, butterbeans, chocolate, corn, cranberries, field peas, green beans, muscadine grapes, peanuts, pecans, pineapples, potatoes, pumpkins, red peppers, squashes, sweet peppers, sweet potatoes, tomatoes, black walnuts, wild rice, and zucchini. Without these foods we would miss some of the favorites on our menus.

**Tomatoes** are the prime ingredient of spaghetti sauces, ravioli, and pizza. How could we survive without tomato sandwiches such as the famous BLT? Catsup, or ketchup, would not exist; some persons could never eat eggs, since the only way they can bear them is smothered with catsup. Salsa (tomatoes, onions, and hot peppers) would not exist, nor would our favorite cold weather dish of chili, which includes chili peppers.

Botanically, tomatoes are fruits of *Lyco persicon esculentum* Miller (L. *lycopersicum* Annes), but they are officially classed as vegetables. The tomato fruit is a two-carpeled berry, which was at first considered poisonous by Europeans.

Because many members of the Solanaceae are poisonous, including bella donna, deadly nightshade, datura, and tobacco, the fear of tomatoes had some basis. However, many solanaceous plants are used as foods, such as tomatoes, hot peppers, bell peppers, potatoes, and eggplants, or as ornamentals, such as petunia, nierembergia, browallia, and nicotiana.

Of course, tomatoes are grown throughout Florida in home gardens, although nematodes can be a problem. Dade County, Ruskin in Hillsborough County, and Quincy in Cades County are big production areas.

**Potatoes** come in many shapes, sizes, and colors, although most of us know only a few: the baking potato, the red-skinned ("new") potato, and russets. The part of the potato we eat is the underground stem or tuber, which stores vast amounts of starch. Potatoes are tetraploid cultivars of *Solanum tuberosum* L. We think of potatoes as Irish, but these starchy vegetables originated in South America where generations of selections were made by the Amerindians. The first freeze-drying occurred centuries ago in the high Andes Mountains, where potato tubers were exposed to the dry, cold air by the Incas to prepare the potatoes for long term storage.

In Florida there are two major potato growing areas: the Hastings area in a little town called Spuds, and the Homestead area in south Dade County.

The Irish depended on the potato for food, and many starved in the 1840s when a blight destroyed their potato crop. Many Americans of Irish descent blame the potato blight for their ancestor’s flight to the United States.

Without potatoes? No potato salad, no potato chips, no mashed potatoes, no French fries, no baked potato with our steaks, no German potato pancakes, no vichyssoise. Beef stew needs potatoes, and what would Yankees do without hash browns for breakfast? The meat-and-potato-man would be...?

Do not confuse white potatoes with sweet potatoes, which are in the morning glory family. In fact, sweet potato, *Ipomoea batatas* (L.) Lam., is also a New World food, originating in Central America as a pentaploid cultivar. Sweet potatoes have tuberous roots, while solanaceous potatoes described above have tubers (underground stems modified for starch storage). Sweet potatoes spread early by sea to Polynesia and New Zealand where they became the staple food, because the islands lacked grains.

Sweet potatoes are relished in the South prepared as a “souffle” with eggs, sugar, raisins, butter, and vanilla; often a topping of brown sugar and pecans is added, although many prefer marshmallows. Sweet potatoes vary from light yellow to deep orange and also vary in the amount of stringy fibers. They are grown from the Gainesville area northward, especially the Panhandle.

Sweet potatoes are sometimes erroneously called yams. Yams (* Dioscorea batatas* Decne and about 60 other species) belong to the Dioscoreaceae, a family closely related to the Liliaceae. Yams produce edible tubers that superficially resemble sweet potatoes. Several species of yams produce diosgenin, a steroidal sapogenin that is a precursor of progesterone and cortizone, and these species have been cultivated for the diosgenin, which is used for producing oral contraceptives.

Speaking of sweet, many of us occasionally get a craving for a candy bar. But the choice of candy would be small without Hershey’s, M&M, Nestle’s, Milky Way, and other chocolate candy makers.

**Chocolate** is derived from seeds of the cocoa tree, *Theobroma cacao* L., which originated in the Amazon region. The cocoa trees are cauliflorous, which means the flower and fruits are borne directly on the trunks and stems. *Mole* (pronounced mo-ley) is an ancient Mexican recipe of turkey prepared with an unsweetened chocolate sauce containing hot peppers. The Aztecs prepared a frothy unsweetened drink of cocoa and vanilla.

Milk chocolate was not invented until the 1800s, so our early ancestors could not have eaten the delicious milk chocolate candy bars we eat. How distressful to lack chocolate cake, chocolate ice cream, chocolate chip cookies, browines, hot chocolate, chocolate fudge, chocolate truffles, chocolate sprinkles, chocolate syrup, and all the other chocolate confections. The chocolate lovers would have no object for their affection!

The alkaloids in chocolate are stimulating. Especially well known is theobromine, which is similar to caffeine in coffee. Also in this family are *Cola acuminata* (Pal.) Schott & Endl. and *C. anomala* Shumman, from whose kola “nuts” the cola industry derives the caffeine for their drinks. Another New World product is *Erythroxylum coca* Lam., the source for cocaine, whose similar name has caused some confusion. But this species is in family Erythroxylaceae, while cocoa and kola are in family Sterculiaceae.

**Peanut.** The peanut, *Arachis hypogaea* L., arose as a hybrid in the Andes Mountains of the New World. The yellow flower blooms above ground, but the “peg” elongates and pushes the young fruit underground where it develops to maturity. Often called the groundnut, the peanut is a member of the bean family (Fabaceae or Leguminosae) and is an important food source in Africa, India, and China.

Peanuts are a source of a high quality, tasteless vegetable oil used in cooking, and also of dietary protein.

Florida peanut-producing areas are Alachua County northward, especially Jackson, Santa Rosa, Escambia, and Levy counties.

Peanuts are an important constituent of curry dishes of the Indochina area. The Peanut-Buster Parfait is a New World triumph: layers of vanilla ice cream, chocolate syrup, and roasted peanuts. Roasted peanuts are salted before cooking by soaking the peanuts (still in the shell) in a brine solution. Without peanuts, the picturesque boiled peanut vendor would not exist. The unshelled, boiled peanuts are cooked in a brine solution. Cajun boiled peanuts have red peppers added to the water.

Peanut brittle requires peanuts and lots of sugar to make. There are also peanut butter pies, peanut cakes, and such, but they do not have a great deal of popularity. We seem to prefer the peanuts very sweet, salted, with chocolate, or as a spread. Over half the peanuts in the U.S. are made into peanut butter.
after-school snack for American youngsters is the peanut-butter-and-jelly sandwich.

**Corn**, *Zea mays* L., is a grain or cereal native to Mexico. In other English-speaking countries, “corn” refers to any grain (e.g., wheat), while *Zea mays* is called “maize”.

There are five kinds of corn: pop, flint, dent, flour, and sweet corn. Sweet corn is the kind grown in Florida throughout the state. Zellwood in Orange County has an annual sweet corn festival, scheduled when the corn gets ripe.

“Indian corn” has variously colored kernels and comes in flint or flour varieties. Popcorn needs to have a moisture content of 11 to 14% before it will pop.

Corn is deficient in tryptophan and lysine (essential amino acids) and also binds up most of niacin, a B vitamin. Since corn was a primary food source for Southerners, it contributed to the dietary deficiency of niacin, causing pellagra, a common ailment in the South prior to the 1900s. Hominy is made from corn grains that are soaked in lye. In Hominy, the poor man's fare of cornbread and butterbeans helped to provide a balanced meal, especially when tomatoes and peppers were added to satisfy the need for vitamin C.

**Beans.** Several genera of beans (Vigna, *Vicia, Phaseolus, Cicer, Glycine*, etc.) were known in the Old World, but include only broad beans, chick peas (also called garbanzos), lentils, English peas, black-eyed peas, mung beans, soy beans, and a few others.

The New World is responsible for the common green bean and the lima bean, which are both native to tropical South America. The common bean, *Phaseolus vulgaris* L., has hundreds of cultivars, including navy beans, field peas, great northern beans, kidney beans, pinto beans, string beans, bush beans, pole beans, wax beans, black beans, etc. Butterbeans and butterpeas, *Phaseolus lunatus* L., are in the lima bean category. Scarlet runner bean (*Phaseolus coccineus* L.), cultivated for its scarlet flowers, is native to Central America. Common green beans are grown as a winter vegetable throughout the state, commercially as a winter vegetable in south Florida.

The *Phaseolus* genus and *Strophostyles* genus of beans can be found growing wild in Florida. If they had been selected by the native Florida Indians for cultivation, perhaps we would have a different bean as one of our foods!

Bean flowers are mostly self-pollinating and thus cherished cultivars “come true” when seeds are saved to replant. Beans are a good source of protein, iron, and B vitamins. When eaten with corn, all the essential amino acids are supplied. So the poor man’s fare of cornbread and butterbeans helped to provide a balanced meal, especially when tomatoes and peppers were added to satisfy the need for vitamin C.

**Squashes** (*Cucurbita* spp.) were part of the big three of the Amerindians: corn, beans, and squash. The squash blossom motif is frequently used in jewelry and other decorative items by Amerindians. There are numerous varieties of squash, including the varieties of *Cucurbita pepo* L.: acorn, summer crookneck, marrow, gourd, pattypan, scallop, pumpkin, and zucchini; the varieties of *Cucurbita maxima* Duchesne: Hubbard squash, winter squash, pumpkin, and turban; and the varieties of *Cucurbita moschata* (Duchesne) Poitev: butternut, pumpkin, and winter crookneck.

In winter, squashes are grown commercially in south Florida.

Squash casserole made from yellow crookneck squash is a favorite of many Southerners, while many others disdain squash in any form.

**What Southerner could long survive without butterbeans and cornbread, chowchow on the side, squash casserole, slices of tomato and Cayenne peppers, and sweet potato souffle? How would we get through Thanksgiving without turkey (another New World food), cranberry sauce, cornbread dressing (not “stuffing!” that’s a Yankee invention), wild rice, and green beans? Chocolate cake, black walnut ice cream, pecan pie, pecan tarts, pecan sandies, toasted pecans, pumpkin pie with pecans, blueberry pie, and — my favorite— sweet potato pie...oh, my!**

If any of the above foods or spices were missing, people all over the world would be affected. The commercial value of these foodstuffs probably far exceeds the value of the gold taken home by Spain. Certainly, the world is richer for possessing and devouring these marvelous foods and spices.

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