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World Crops Derived  
from the Indians



# SOUTHWEST MUSEUM L E A F L E T S

NUMBER 17

THIRD EDITION

1953

## WORLD CROPS DERIVED FROM THE INDIANS

By EDWIN F. WALKER



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(U. S. National Museum)

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# WORLD CROPS DERIVED FROM THE INDIANS

By EDWIN F. WALKER

IT is necessary to use the term "Indians" for all the pre-Columbian natives of the Western Hemisphere because Columbus permanently fastened that name on the American aborigines when he believed he had reached India. The generally accepted theory is that the Indians are a brown (mongoloid) people whose ancestors in many migrations over a period of thousands of years came from different parts of Asia, crossing at or near Bering Strait. These migrants reached the American continent apparently without bringing with them any knowledge of agriculture—possibly because it was before the time that agriculture was practiced anywhere. On this hemisphere there were no wild growths similar to those which the early farmers of the Old World ultimately developed into food products that have played such an important part in the history of mankind—rice, wheat, barley, rye, and oats.

The early Indians, the real discoverers of America, were hunters, fishermen, root-diggers, and seed-gatherers. But on this hemisphere, as occurred in other parts of the world, they independently made the discovery that edible seeds and roots could be planted and would reproduce more of the same kind. When hunters made this discovery and planted a crop, it followed that the crop must be watched until ready for the harvest, and this necessitated a settled habitation for the duration. When agriculture finally was developed so extensively as to meet the food quest, a permanent settlement was possible and progress toward civilization could develop. Civilization is difficult to define, but the ancient civilizations are usually considered as determined by such features as agriculture, architecture, engineering, mathematics, astronomy, ceremonial religion, impressive temples, organized government, definite laws, metal-working, arts, history, and an expressive language, sometimes written. Such were the outstanding cultures of the pre-Columbian Indians of Mexico, Central America, Ecuador, Peru, Bolivia, and Chile, built on an agriculture that was entirely native to this hemisphere, but which has since been taken over by the world.

When the cultures of Mexico, Central America, and Peru were discovered by the Spaniards, the invaders had a highly developed mode of warfare superior to that of the Indians, but the latter had developed an agriculture far above that of any European country.

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During the 450 years that whites have been in the New World, they have improved many agricultural products, but they have not developed from its wild growth a single major agricultural product, with the possible exception of guayule (gwah-yoo'-lay); whereas the Indians developed more than twenty important products; and in addition they cultivated or utilized a great number of wild growths,—all of which acquired by the world aggregate more than half of its present agricultural wealth.

Crops that were acquired from the Indians fall into three classes: first and most important were those the Indians developed from wild growths and skilfully cultivated, such as corn; second, those that were taken over from the wilds without changing their character, and were cultivated by the Indians in their gardens and orchards, such as the avocado; and, third, the plants that in their wild state were utilized by the Indians for leaves, bark, roots, fiber, seeds, or such gums as rubber and copal.

Following are some important crops adopted from the Indians, arranged approximately in the order of their value as products at the present time, with some current theories as to their dim and distant past.

POTATOES—The word *potato* comes from the Taíno Indian word *batata*, which Columbus found in use in Haiti for what now is usually called the sweet-potato.

The sweet-potato had been developed from wild root-tubers, from an unknown source, but probably in Brazil, from a vine of the morning-glory family; and its pre-Columbian distribution was over much of South America and into North America.

In 1565 the sweet-potato was obtained on the northern coast of South America by Sir John Hawkins, who probably was the first to take it to England with its then current name of potato, a name which persisted in England for many years. This is what Shakespeare referred to when he had Falstaff say, "Let the sky rain potatoes." And it was the sweet-potato that Sir Walter Raleigh grew on his estates in Ireland under the name of potato.

There are two principal classes of sweet-potatoes, known as the dry-fleshed and the moist-fleshed. In some areas the moist-fleshed carries the name of *yam*; and in the Southern States all sweet-potatoes often are called yams. The word *yam* is from Senegal in western Africa, where *nyami* means "to eat," and is there applied to various edible roots and tubers. It is

thought that the word was brought to this country by negro slaves and by them applied to American sweet-potatoes. In the West Indies the word yam is also applied to plants having large starchy roots.

When the Spaniards entered Peru they brought with them the word *batata* for sweet-potato and applied it to the white tubers which in that area had been developed into what are now generally called potatoes, but which the Incas of Peru called *papas*. Spanish ship captains who, while cruising about western South America, had been feeding their crews with these white potatoes, were probably the first to take to Europe this strange food of the New World. This was soon after the year 1580. From Spain the cultivation of the potato presently spread to Italy, Belgium, and Austria; but strangely the cultivation of the plant was almost exclusively for its blossoms. It was nearly a century later that it attained a reputation as a food staple.

It is not definitely known by whom or at what date white potatoes were introduced into Ireland, though it positively is known that they were under cultivation there as a field crop before 1663. In time the Irish learned to relish them exceedingly, and to subsist largely upon them. Emigrating to New England in 1719, Irish colonists brought along with them the potatoes which the Yankees called Irish potatoes. Other colloquial names for them are "murphies" and "spuds," the latter being the name of the long narrow spades sometimes used in digging potatoes.

In 1744 Frederick the Great of Prussia compelled the peasants to grow potatoes. At the time of the Seven Years' War a Frenchman, Antoine Auguste Parmentier, while a prisoner in Germany was fed upon potatoes and learned to like them; and on his return to his own country he induced Louis XVI to popularize potatoes in France. This was accomplished by growing the tubers in a large field, conspicuously guarded by soldiers during the daytime only. At night, when the guards were absent, the people stole the potatoes which they would eat or would plant in their own gardens. And then when the King and his Queen, Marie Antoinette, wore potato blossoms on their elaborate costumes, the popularity of the potato became firmly established.

Potatoes belong to the nightshade family and it is believed that they were developed from tiny white tubers in Peru; but as no wild potatoes are found there now, botanists generally

state that they do not know from what plant the prehistoric Indians succeeded in developing potatoes.

The distribution of potatoes probably did not extend beyond western South America in pre-Columbian times; but in recent centuries they have found their way around the globe, being more generally used in Europe than in America. The world's potato crop has assumed such importance that by now it possibly is exceeded only by the rice crop.

CORN—*Maize* was the name in the language of the extinct Taíno Indians of Haiti for a great cereal, and it is still known as maize in many parts of the world; but in the United States, Canada, and Australia it is corn. It was so named by English colonists who applied an old Anglo-Saxon word which had several meanings.

Originally corn referred to a small hard grain, such as a grain of sand, of salt, or of cereal, and is used thus in the Bible passage "a corn of wheat," and in the expression "corned beef," meaning beef cured with grains of salt in a brine. Later, according to the use of the word in the "Corn Laws," corn also meant all of the English cereals, which then were wheat, barley, and oats. Finally corn was employed also to designate the principal crop of a country—oats in Scotland, wheat in England. It is this English use of corn for wheat which appears in the King James version, "There is corn in Egypt," and "Jesus went on the Sabbath day through the corn."

English settlers in the American colonies, recognizing the Indian grain as the principal crop, gave it the name "Indian corn," or merely "corn," which is appropriate and prophetic, because corn has become the principal crop of the United States, exceeding in production and value all its other cereal crops combined. Many Americans do not realize this fact because most of the corn never leaves the farm where it is grown.

The beginning of corn is lost in antiquity. Until recently it was believed to have been developed in Middle America from the seed of a wild grass known as *teocentli*. Now some botanists adopt the theory that both *teocentli* and corn have come from a common ancestor, long extinct; while some believe that corn was originally developed from an unknown wild growth in the lowlands of South America. In any case the development of corn by prehistoric Indians is the most remarkable achievement in the history of agriculture. Of all grains, corn is the most completely domesticated, being the only one that cannot sow itself and take care of itself. It

must be husked, shelled, planted, cultivated, and hilled, usually fertilized, sometimes irrigated, and finally harvested. Other grains, oats for example, have closely related wild relatives such as the two species of wild oats in California, which in a hundred years or so have spread through the length of the state. They probably came in as packing in the ships in San Francisco Bay, or in the fleece of Spanish sheep, or with the seed of other grains.

Not only is corn the most highly developed of all the grains, but because of that fact it is believed by some prominent botanists to be the oldest of all grains; and if this be so, there was a basis for civilization on this hemisphere earlier than anywhere else.

The Indians developed a great many varieties of corn, which fall into five principal classes—flint corn, dent corn, flour corn, popcorn, and sweet corn.

Some varieties of corn require 180 days to mature, whereas that developed by the most northerly Indian farmers could be harvested in less than half that time. In some places the cultivation of corn was very extensive, Columbus reporting corn-fields 18 miles in length.

In prehistoric times the distribution of corn extended from Patagonia to Canada. When Columbus, returning to Spain, took some seed corn with him, he was extending the distribution of the crop that was to bring vastly more wealth to the world than all the gold the Spaniards so ruthlessly stole.

Nowadays, as a world crop, corn probably is exceeded only by rice and potatoes, having surpassed wheat in volume, a fitting climax to the achievement of the prehistoric Indian agriculturists.

**COTTON**—Until Columbus came to America, most of the people of the Old World did not have cotton, but dressed in linen, wool, or leather. Before the Christian era, a cotton with a very short staple was indeed known in India, Abyssinia, and some other lands; but the present long-staple cotton of Egypt, the Argentine, Brazil, Peru, Russia, the United States, and other principal growing countries must be credited to the Indians, who developed it from the small wild growths they discovered, probably in Mexico and South America.

The importance of long staple (staple meaning the cotton fiber) lies in the fact that the longer the staple the stronger the fabric which is manufactured from it.

Present names for the most important varieties are "Upland" for a medium long-staple cotton, and "Sea Island" for an ex-

ceedingly long-staple cotton. Sea Island is named from the islands off the coast of Georgia and South Carolina where formerly it was grown.

The commercial value of the world's crop of Indian long-staple cotton reaches figures of incredible magnitude.

**TOBACCO**—Tobacco is exclusively an Indian product; but after Europeans discovered its use it was distributed so widely throughout the world and adopted by so many peoples in distant lands that now it is difficult to picture it as having once been confined to the Western Hemisphere.

The tobacco plant first was brought into Europe in 1558 by Francisco Fernández, a physician who had been sent by Philip II of Spain to Mexico to investigate its agriculture. For some years tobacco in Europe was regarded as a medicinal plant only.

It was Sir Walter Raleigh who, in honor of the Virgin Queen, gave the name Virginia to the region covered by the patent Elizabeth granted him for colonization. The claim to Virginia then extended from Newfoundland to Florida and westward to the Pacific. Although he never visited Virginia, Sir Walter financed out of his private fortune the first two unsuccessful attempts at settlement there, which were in what is now North Carolina near Cape Hatteras. Sir Francis Drake searched for the earlier Roanoke colony, where the discouraged governor, Ralph Lane, and his settlers asked Sir Francis to take them back to England, which he did. This was in 1586 when, so far as known, Ralph Lane was the first person to smoke tobacco in Europe.

Ralph Lane had brought with him from Virginia a quantity of Indian tobacco and tobacco pipes with which he supplied his patron, Sir Walter Raleigh, and taught him to smoke. Sir Walter being a gentleman of fashion, the Elizabethan courtiers followed his lead, and soon the custom of smoking commenced to spread.

Life went badly with Sir Walter Raleigh, however, and in 1618 he was beheaded. About the last thing he did before he walked to the block was to smoke a pipe of tobacco.

The pipe-makers of London became an incorporated body in 1619. Throughout the XVII century the custom of smoking spread far and wide in spite of opposition by priests and statesmen, severe laws, flogging, excommunication, and even capital punishment.

Tobacco was introduced into France by a French consul to Lisbon, Portugal,—Jean Nicot, from whose name is derived

the term *nicotine*. Later, French aristocrats set the fashion of taking snuff from exquisite snuffboxes. In time this fashion was copied in England by the upper classes, among whom snuff-taking largely supplanted smoking for many years. Meanwhile the habit of chewing tobacco grew rapidly, especially among sailors and Americans.

The word *tobacco* is Indian, probably from the Taíno word *tabaco*, meaning the pipe in which it was smoked, though it may mean tobacco leaves rolled for smoking.

There are many different species of tobacco, several of which were grown by the Indians. Two species were evidently cultivated by Indians in South America; and in pre-Columbian times one or both of these had been distributed over most of South America and as far north in North America as the climate permitted cultivation by Indian farmers, which was in Canada. Both of these species are still grown, one much more than the other, and in all the countries in the temperate and tropic zones of the world.

**RUBBER**—When early British golfers were playing with a ball made of feathers packed into a leather cover, Indians were playing a game with a ball made of rubber. For untold centuries before the time of Columbus, Indians had known and used rubber, and they were the only people anywhere of which this can be said. Very elaborate stone ball-courts were erected in Middle America to provide a suitable place for their ball games, which were religious in character, and ball-courts probably of similar significance were used as far north as northern Arizona.

When the Spaniards first saw rubber balls, they were amazed at the remarkable way they would bounce. Not only balls, but many other articles, including waterproof bags and the original "gum boots," were manufactured from rubber by the Indians, for they had mastered the required processes just as they had devised ways for obtaining the sap and treating it.

Several kinds of rubber trees were utilized, principally in Middle America and in the valley of the Amazon. Nowadays most of the planting of rubber trees is in distant countries, but it is well to remember that all of it is rubber of the American Indians.

Long after the time of Columbus the name rubber was applied by the English, who first used the product to rub out pencil marks.

To people who ride on rubber and to all nations who wish

to win wars, it would be difficult to exaggerate the importance of rubber as a crop, as we learned during the recent war.

**BEANS**—Not all beans came from the Indians. The broad-bean of Europe, Asia, and Africa is featured in the old fable of Jack-the-Giant-Killer. This is the only bean that the early Anglo-Saxons knew, and it is what the word bean really means.

Soy beans came from China. The Persians and some of the Orientals had small-seeded beans from time immemorial; but most beans as they are known today in the Americas and in many other parts of the world were developed by prehistoric Indians.

Lima beans carry the name (mispronounced with a broad *i*) of the city in Peru founded by Pizarro, from which they were shipped. *Frijoles* (free-ho'-laze) still have the name for the common Indian beans given them by the Spaniards. In France, American Indian beans are grown extensively and are called haricot (ar'-e-ko) from the Nahuatl (Nah'-wah-tl) language, the tongue of the Aztecs, with whom the word is *ayecotli*.

Kidney beans are a variety of field beans. The kind of field bean known as "navy" has a seed coat which does not absorb moisture readily, hence its traditional use by ocean-going ships before the days of canning. Pole, dwarf (usually referred to as "bush"), wax, and string are types of garden beans. All these carry modern names for the beans the early Indians developed from the wild growths they discovered probably in Middle America and South America.

The pre-Columbian distribution of beans covered most of the tropic and temperate zone regions of North and South America.

**SQUASHES AND PUMPKINS**—Squashes and pumpkins are classified by botanists as belonging to the gourd family, of which there are representatives in the Old World as well as in the New World.

The English colonists, on seeing a yellow vegetable growing in the cornfields of the Indian farmers, gave it the name pumpkin, a word from the Greek *pepon*, meaning mellow, ripe. However, the word *squash* is thoroughly Indian, being an abbreviation of one of those long Massachusetts Indian words, *askútasquash*, meaning "eaten while green".

American pumpkins and squash occasionally were referred

to by European travelers as melons, and this gave rise to the belief that melons were native to the Western Hemisphere, which is incorrect.

There is much confusion as to which are pumpkins and which are squash. Common names do not help much. The so-called summer squash, such as crook-neck squash and scallop squash, are pumpkins; and among the winter squashes the mammoth Chile squash takes first prize at county fairs as the biggest pumpkin. In England all large squashes are called pumpkins. Vegetable marrow, so popular there, is a variety of the American pumpkin.

American squash and pumpkins were developed probably in Middle America and South America, and their prehistoric distribution extended well over both western continents.

**TOMATOES**—Whether or not the tomato was poisonous was a question that aroused controversy in times past; but nowadays the tomato is known to be wholesome, a great source of vitamins, and a valuable addition to the modern table. The United States leads all countries in appreciation of its merits. The word is Indian, derived from the Nahuatl *tomátl*. It is believed that the plant was developed in South America; and its pre-Columbian distribution was in South America and Middle America. By the time Europeans arrived there were several distinct species of tomato, and a great many varieties. In the United States we ordinarily see only one of these species.

**CHOCOLATE**—Hot chocolate was not known to the Aztecs. They drank their's cold, but with a liberal addition of chile pepper in it; and they called it *chocolátl*. The Spaniards improved it by the substitution of sugar for the fiery chile; and the English, about the year 1700, gave it the finishing touch by the addition of milk.

Chocolate comes from the seed of a tree. Both seed and tree were called in the Nahuatl Indian language *cacáuatl* (kah-kah'-wah-tl). This was corrupted in Spanish to *cacao* (kah-kah'-o), which became its first scientific name and was widely used until a peculiar corruption in English resulted in the word *cocoa*, formerly pronounced ko-ko'-ah, now ko'-ko. Following the general adoption of the word *cocoa*, came the trade-name of cocoa-beans for the seeds, cocoa-shells for the husks, cocoa-nibs for the roasted seeds, cocoa-butter for the oil, and cocoa for powdered chocolate (minus some of its oil), and also for the beverage made from that powder.

The trees have been extensively planted in other lands, notably in West Africa, where the crop is much greater than in the homeland, tropical America; but nowhere are the trees more treasured than in Mexico, where the Aztecs used the seeds as the basis of a complete monetary system.

While "a cup of chocolate" has held its unique place through the centuries, the greatest increase in the use of the product has been as food and a confection.

PEANUTS—The peanut plant has a very odd way of maturing its fruit; the flower stalk bends downward and plunges the pods into the earth to ripen, which explains why often it is called the groundnut.

Peanuts are famous at circus time, especially when used to feed the animals; this is the reason why in England peanuts are called "monkey nuts".

Another name is *goobers*, a term derived from the widespread Bantu language of Africa, and brought to this hemisphere by negroes. The term is generally used for peanuts in the Southern states. During the Civil War the name "goobers" was given to conscripts of the wooded districts of North Carolina and adjoining states. During the campaigns in Virginia and the Carolinas a great many soldiers first became acquainted with the growing of peanuts, and when they "beat their swords into plowshares", they extended the cultivation of the crop into other states. Now the annual value of the crop in the United States runs into millions of dollars.

Probably originally developed by the prehistoric Indians of Brazil, the peanut is at present cultivated in all tropical and sub-tropical countries of the world.

STRAWBERRIES—In Europe and Asia there were wild strawberries before the time of Columbus; but the present cultivated strawberries of America were originally developed from the two varieties of the wild berries that are native to this hemisphere, both of which were cultivated by the Indians. These are the Chilean, which grows along the Pacific coast of South and North America, and the Virginian, common over the eastern and central parts of North America.

Probably it was not until the 17th century that the English brought under cultivation the wild species of Europe, and it was still later that, by introducing the American species, they improved their own varieties of strawberries, which are small and not very sweet.

The name strawberry probably was given because the runners of the plant somewhat resemble straws; though it is possible, as popularly believed, that the name came from the custom of strewing straw between the rows to keep the fruit from the ground.

**PINEAPPLES**—In his usually accurate Diary, John Evelyn of London wrote: "9th August, 1661. I saw the famous Queen Pine brought from Barbadoes and presented to his Majesty [Charles II]; but the first that were ever seen in England were those sent to Cromwell four years since." But seven years later Evelyn made the entry: "19th August, 1668. In the banqueting house . . . standing by his Majesty at dinner there was that rare fruit called the King Pine, growing in Barbadoes and the West Indies, the first of them I had ever seen. His Majesty, having cut it up, was pleased to give me a piece off his own plate to taste of."

Pineapples being established by royal favor as a desirable luxury, wealthy families ultimately grew them in England in hothouses. But the growing of pineapples in Europe was largely discontinued when their cultivation had reached extensive proportions in the Canary Islands and the Azores.

During this century pineapples have been grown so extensively in the Hawaiian Islands as to give the impression that they are native there; however, all pineapples came from tropical America.

The name pineapple was given because the fruit somewhat resembles a pine-cone, the word apple being used in the old English meaning of fruit.

**AVOCADOS**—The Spanish word for advocate is *abogado*, and as this sounds somewhat like the Aztec name *ahuacatl* (ah'-wah-cah-tl), some of the Spaniards used avocado as the name for the pear-shape fruit. By an even more unfortunate corruption the name is transformed into "alligator pear", which botanists hope will be discontinued.

In its wild state the avocado tree was found in Mexico and Central America, and in South America into Peru and Brazil. It was transplanted by the Indians and cultivated in their orchards. In recent centuries it has been introduced into India, Mauritius, Reunion, and other tropical regions.

**JERUSALEM ARTICHOKE**—The Jerusalem artichoke did not come from Jerusalem, but probably from Canada and the upper Mississippi valley, where its tuberous roots provided an

important food for the Indians, who planted it in their fields and cultivated it.

The plant was early introduced into Europe, where it is raised in considerable quantities. In places it is called sunflower-artichoke, as it is a species of sunflower. The Italian word for sunflower is *girasole* (jeer-ah-so'-lay), and by a surprising corruption this is rendered Jerusalem.

**TAPIOCA**—A deadly poisonous plant is bitter *manioc*; but back of its poison is great food value. How the Indians knew this is still another of the unsolved achievements of the aborigines. They developed the technique of grating the large roots and pressing out the poisonous juice, and producing tapioca, cassava bread, and Brazilian arrowroot.

*Manioc*, or more accurately *manibot*, is the native name of the plant in Brazil, where probably it was developed. There are two maniocs, the bitter and the sweet. The latter is not poisonous, but is not grown in the main area. Bitter cassava is one of the names of the plant, cassava being the Spanish form of the Taino (Tai'-no) Indian word *cassavi*. *Tapioca* is a native Brazilian word meaning "juice removed". The word arrowroot has an interesting history; originally it meant a root used to absorb poison from a wound inflicted by a poisoned arrow.

Manioc has been transplanted into Africa and the Malay archipelago, where it is a large and important crop. Its pre-Columbian distribution was from the middle of South America northward to Cuba and Central America.

**QUININE**—De Soto's death probably was due to malarial fever, which some Indians would have known enough to cure by using quinine. Quinine comes from a bark named *cinchóna*, after Countess Ana of Chinchón, wife of the Spanish viceroy of Peru, whose life was saved in 1638 by quinine obtained from an Indian. The word quinine itself comes from a Spanish corruption of the Indian term *quinquina*, in the Quechua tongue, the language of the Incas.

The method of getting the cinchona bark was to cut down the trees, which grew in the forests of Columbia, Ecuador, Peru, and Bolivia. In 1854 the Dutch government obtained several hundred trees, which were planted in Java and have resulted in almost a monopoly of quinine.

**MAPLE SYRUP**—Not only in Vermont, but northward into Canada, westward into Minnesota, southward into Florida,

wherever there were sugar maples, there the Indians made maple sugar.

In getting maple sap in the early spring and in making it into sugar, the Indians devised the methods that are continued today, though when they boiled the sap they did it in pottery kettles and even in wooden troughs and containers made of bark into which they put hot stones. It is the Indian we can thank for that delicious product, genuine maple syrup.

This product was of great importance to the Indians in getting a satisfactory diet; and so far as diet is concerned it is probable that 500 years ago the American Indians had the best balanced diet in the world.

CHICLE—From humble beginnings, the chewing-gum industry has become big business, built on *chicle* (chee'-klay). This principal ingredient of "gum" is from a tree, also named chicle, that yields one of the finest white resins in the world. This is in Middle America, where, during the rainy season, the Indians extract the resin by a process similar to that for obtaining rubber. The Indian name in the Nahuatl language is *chictli*.

Incidentally, the wood of the tree is of remarkable value. The Maya carved logs of it into beams for their vast temples, where it has withstood the ravages of time for a thousand years.

VANILLA—No wonder vanilla has a delightful flavor. It is from an orchid, a fragrant climbing variety native to tropical America, but now cultivated extensively in Java, Tahiti, Mauritius, and other islands of the tropics. The word *vanilla* is from Spanish *vainilla*, referring to the long slender pod (*vaina*) containing the seeds.

The Indians originated the technique of obtaining vanilla extract by picking the pods before they were ripe, drying them, and then removing the crystals from outside the pods.

TONKA BEANS—Bathing was a feature of Roman civilization; but with the arrival of the Dark Ages the bathtub practically disappeared from Europe for more than a thousand years. Even as late as the time of Columbus the use of soap was very limited, but perfumes were exceedingly popular. Consequently, when Europeans learned that the Indians of Guiana had discovered the exquisite fragrance of the tonka beans,—the fragrance of "new-mown hay",—they took the

beans to Europe to aid the perfumery business. The perfumers used tonka beans as an ingredient in sachet powder and in perfumers' bouquets. Nowadays tonka beans also are used for flavoring smoking tobacco, perfuming snuff, and adulterating vanilla.

The name tonka probably is a corruption of Tongking, as at one time the beans were used extensively in mixing with tobacco grown in Tongking, French Indo-China.

The beans are derived from the majestic tonka tree, eighty feet high, native of tropical America.

**CASHEW NUTS**—A tropical American tree of the *cashew* (ka-shoo') family has been so extensively naturalized in Africa and Asia that many people mistakenly believe cashew nuts had their origin in those continents.

The American Indian devised the method of treating the nuts to counteract a highly corrosive poisonous juice. The Indian's method was to roast the nuts in the shell, and this treatment today is what makes cashew nuts so palatable and wholesome.

**PEPPER**—The era of Columbus was a time when there were no ice-boxes; so pepper and other spices were needed from India to disguise the condition of meat. That was why Columbus planned a short-cut to India by the water route. The Spaniards did not find black pepper; all of that comes from southern Asia. But in America they did find red pepper, which was even more potent,—so the long voyage was justified.

Thereafter pepper plants were grown extensively in the Old World, resulting in the theory that red peppers were native of Eurasia, even some botanists sharing in this misunderstanding. But recently botanists have determined that it is from plants developed in tropical America that the world obtains all of its red pepper—Cayenne pepper (the name of a seaport in French Guiana), chile peppers (a Mexican name), tabasco (name of a state in Mexico), pimiento (from a Spanish word), and even Hungarian paprika.

**COCAINE**—Probably centuries before people in the Old World had any anesthetic whatsoever, Peruvian Indian surgeons were successfully performing difficult operations with the aid of *coca* leaves, the source of cocaine.

The prehistoric distribution of cultivated coca plants was in western South America and Panama in North America. They were very extensively grown by the Incas in their

terraced gardens. Nowadays most cocaine comes from Java, which has an extensive cultivation of the coca plant, whose original habitat was Peru and Bolivia. The word *coca* is from the Quechua Indian language of those countries.

Some of the crops of minor importance, either first cultivated or first utilized by the Indians, now grown in various parts of the world are:

allspice	ipecac
anil (indigo; one species native to America)	logwood
arracacha	mamey apple
arrowroot	maypop (passion-flower fruit)
Barbadoes cherry	oca
Brazil nut	papaya
butternut	Paraguay tea (maté tea)
cascara sagrada	pawpaw
chayote	pecans
cherimoya	persimmon (one species)
chinkapin	Peruvian balsam
copaiba	quinoa
copal (certain varieties)	sapote
cranberries (only certain varieties)	sarsaparilla
custard apple	sassafras
fustic	sisal hemp
gourds (certain varieties)	sour-sop
guava	star apple
guayule	stramonium
henequen	sweet-sop (sugar apple)
hickory	tolu
	yam (one variety)

Here endeth the tale of the crops that the modern world acquired from the ancient Indians.

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