A Chronicle of Economic Botany

James P. Smith Jr

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The purpose of this compilation is to identify the dates of various critical discoveries, events, voyages, inventions, publications, etc. that relate to economically important plants. I begin by setting the stage, so to speak, with cosmological considerations -- the formation of the universe, solar system, and our planet. The next several entries relate to the appearance of life on the earth, beginning about 4 billion years ago. The evolution of our immediate ancestors began about 4 million years ago, with the first true human beings appearing in Africa approximately 1.5 million years ago. Our use of plants begins at about that point, with such discoveries as fire-making, the building of shelters, and the cosmetic use of dyes. About 150,000 years ago we began incorporating flowers into ritual burials; there is some evidence that 60,000 years ago we started using various herbs because of their medicinal properties. Farming of cultivated plants began about 16,000 years ago; the domestication of various plants and animals approximately 10,000 years ago. Most of our important crop plants were domesticated over the next few thousand years. Only a handful of plants have been domesticated in the last two millennia.

In about A.D. 800, Irish voyagers reached Iceland, beginning an age of exploration that would last for a thousand years. Among the many notable accomplishments of Marco Polo, Christopher Columbus, James Cook, and others was a dramatic increase in our knowledge of the natural history of our planet and the exchange of plants and plant products around the globe. As the sixteenth century came to a close, newly developed instruments and techniques in the fields of botany and chemistry formed the basis of our modern understanding of the plant kingdom. This was followed by the appearance of a series of inventions designed to extract various products from plants and to process them.

The nineteenth century saw the refinement of chemical extraction procedures that allowed us to isolate and purify a number of economically important materials, especially certain alkaloids with medicinal and psychoactive properties.

In the twentieth century, we have witnessed the growth of giant industries based upon the supplying of a long list of plant products to the consumer. It was a little over a hundred years ago that the field of genetics was founded with the investigations of Strasburger and von Beneden into the mechanisms of mitosis and meiosis. For the last several decades, we have developed the techniques needed to control the genetic heritage of many of our most important crops and to create entirely new ones in our laboratories. Our studies have also shown how dangerous plant products such as alcohol, tobacco, and the opiates can be; how destructive to the natural environment our conversion of land for the growing of crops can be; and how we have become increasingly dependent upon a relatively short list of genetically-impoverished plants.
<table>
<thead>
<tr>
<th>DATE</th>
<th>EVENT, DISCOVERY, PUBLICATION, ETC.</th>
</tr>
</thead>
<tbody>
<tr>
<td>13,800,000,000</td>
<td>The &quot;Primordial Explosion&quot; or &quot;The Big Bang&quot;</td>
</tr>
<tr>
<td>12,500,000,000</td>
<td>Galaxies form</td>
</tr>
<tr>
<td>6,000,000,000</td>
<td>Sun forms</td>
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<tr>
<td>5,000,000,000</td>
<td>Solar system forms</td>
</tr>
<tr>
<td>4,500,000,000</td>
<td>Earth forms</td>
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<tr>
<td>4,000,000,000</td>
<td>Beginning of life on Earth (bluegreen algae)</td>
</tr>
<tr>
<td>3,700,000,000</td>
<td>Oldest microbial life (stromatolites in Greenland)</td>
</tr>
<tr>
<td>1,600,000,000</td>
<td>Multicellular plant life evolves</td>
</tr>
<tr>
<td>425,000,000</td>
<td>Terrestrial plant life evolves</td>
</tr>
<tr>
<td>395,000,000</td>
<td>Insects evolve</td>
</tr>
<tr>
<td>380,000,000</td>
<td>Ferns evolve</td>
</tr>
<tr>
<td>350,000,000</td>
<td>Gymnosperms (cone-bearing plants) evolve</td>
</tr>
<tr>
<td>216,000,000</td>
<td>Mammals evolve</td>
</tr>
<tr>
<td>200,000,000</td>
<td>Continental drift begins</td>
</tr>
<tr>
<td>123,000,000</td>
<td>Flowering plants evolve</td>
</tr>
<tr>
<td>69,000,000</td>
<td>Primates evolve</td>
</tr>
<tr>
<td>67,000,000</td>
<td>Extinction of the dinosaurs</td>
</tr>
<tr>
<td>60,000,000</td>
<td>Grasses evolve (oldest fossils)</td>
</tr>
<tr>
<td>14,000,000</td>
<td>Ramapithecus, oldest human-like primate, evolves in Africa and India</td>
</tr>
<tr>
<td>11,000,000</td>
<td>Grazing animals evolve</td>
</tr>
<tr>
<td>7,000,000</td>
<td>Sahelanthropus tchadensis (&quot;Toumai man&quot;), oldest hominin species, evolves in Africa</td>
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<tr>
<td>4,400,000</td>
<td>Ardipithecus ramidus (&quot;ardi&quot;) evolves in Africa</td>
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<tr>
<td>4,000,000</td>
<td>Australopithecus afarensis (&quot;Lucy&quot;) evolves in Africa</td>
</tr>
<tr>
<td>3,700,000</td>
<td>Modern horses evolve</td>
</tr>
<tr>
<td>3,400,000</td>
<td>Early human diet now involves consuming grasses and sedges of the savannah</td>
</tr>
<tr>
<td>3,200,000</td>
<td>Large ice sheets build up over northern continents</td>
</tr>
<tr>
<td>2,400,000</td>
<td>Paleolithic (Old Stone Age) begins</td>
</tr>
<tr>
<td>2,400,000</td>
<td>Hominids in Africa make first stone tools</td>
</tr>
<tr>
<td>2,000,000</td>
<td>Australopithecus boisei and A. robustus evolve</td>
</tr>
<tr>
<td>1,900,000</td>
<td>Homo habilis (&quot;Handy Man&quot;) evolves in Africa; first hand axes</td>
</tr>
<tr>
<td>1,800,000</td>
<td>First stone dwellings (Tanzania)</td>
</tr>
<tr>
<td>1,760,000</td>
<td>More advanced stone tools in use in present day Kenya</td>
</tr>
<tr>
<td>1,600,000</td>
<td>Apes and prehumans use red ochre as a cosmetic</td>
</tr>
<tr>
<td>1,500,000</td>
<td>Homo erectus, first true human, emerges in Africa</td>
</tr>
<tr>
<td>1,400,000</td>
<td>Discovery of fire (Kenya)</td>
</tr>
<tr>
<td>1,000,000</td>
<td>Earliest evidence of campfires for cooking and socializing</td>
</tr>
<tr>
<td>1,000,000</td>
<td>Homo erectus migrates through the Old World tropics</td>
</tr>
<tr>
<td>900,000</td>
<td>First stone tool use in Europe (southeastern Spain)</td>
</tr>
<tr>
<td>800,000</td>
<td>Homo erectus populates temperate zones; makes shelters from branches</td>
</tr>
<tr>
<td>700,000</td>
<td>Humans in northern Europe, based on 32 black flint artifacts</td>
</tr>
<tr>
<td>420,000</td>
<td>First huts (France); first fishermen (France)</td>
</tr>
<tr>
<td>200,000</td>
<td>Homo sapiens (&quot;Thinking Man&quot;) evolves</td>
</tr>
<tr>
<td>200,000</td>
<td>Artistic hand axes appear</td>
</tr>
<tr>
<td>150,000</td>
<td>Neanderthal Man emerges in Paleolithic Europe; ritual burials there and in Far East</td>
</tr>
<tr>
<td>127,000</td>
<td>Last glaciation and associated warming period</td>
</tr>
<tr>
<td>79,000</td>
<td>Oil-burning lamps made of stone in use</td>
</tr>
<tr>
<td>72,000</td>
<td>Early humans use fire to heat rocks during tool making</td>
</tr>
<tr>
<td>Year</td>
<td>Event</td>
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<td>------</td>
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</tr>
<tr>
<td>60,000</td>
<td>Earliest evidence of herbal medicine</td>
</tr>
<tr>
<td>50,000</td>
<td>Humans first populate Australia</td>
</tr>
<tr>
<td>45,000</td>
<td>Music and oral literature developed (Asia)</td>
</tr>
<tr>
<td>40,800</td>
<td>Oldest cave paintings (El Castillo, Spain)</td>
</tr>
<tr>
<td>35,000</td>
<td>Oldest written records</td>
</tr>
<tr>
<td>35,000</td>
<td>Asian hunters cross Bering Strait</td>
</tr>
<tr>
<td>35,000</td>
<td>Cro-Magnons appear; Neanderthals decline</td>
</tr>
<tr>
<td>35,000</td>
<td>Flute, first known musical instrument, discovered in a cave in Germany</td>
</tr>
<tr>
<td>30,000</td>
<td>Earliest use of flour from tubers (perhaps potato) in Italy, Russia, and Czech Rep.</td>
</tr>
<tr>
<td>30,000</td>
<td>Human settlements in Mexico</td>
</tr>
<tr>
<td>27,000</td>
<td>Cave art (France); ceramics and sculpture (Czechoslovakia)</td>
</tr>
<tr>
<td>27,000</td>
<td>First humans colonize Japan</td>
</tr>
<tr>
<td>20,000</td>
<td>Barley milled, the oldest evidence of food processing (Israel)</td>
</tr>
<tr>
<td>21,000</td>
<td>Sewing needle invented</td>
</tr>
<tr>
<td>18,000</td>
<td>Bow and arrow invented (Europe)</td>
</tr>
<tr>
<td>18,000</td>
<td>Laurentide and Scandinavian ice sheets attain their greatest extent</td>
</tr>
<tr>
<td>16,000</td>
<td>Mesolithic begins</td>
</tr>
<tr>
<td>16,000</td>
<td>Farming of cultivated plants begins</td>
</tr>
<tr>
<td>15,000</td>
<td>Ropes invented (France)</td>
</tr>
<tr>
<td>13,000</td>
<td>Grinding stones for grain developed (Egypt)</td>
</tr>
<tr>
<td>11,000</td>
<td>Pottery developed (Japan)</td>
</tr>
<tr>
<td>11,000</td>
<td>Bottle gourd domesticated (Africa ?)</td>
</tr>
<tr>
<td>10,000</td>
<td>Dog domesticated (Iraq/Palestine)</td>
</tr>
<tr>
<td>10,000</td>
<td>World population reaches 4,000,000</td>
</tr>
<tr>
<td>9000</td>
<td>Neolithic (New Stone Age) begins</td>
</tr>
<tr>
<td>9000</td>
<td>Emmer wheat and barley domesticated (Palestine)</td>
</tr>
<tr>
<td>9000</td>
<td>Sheep domesticated (Iran/Afghanistan)</td>
</tr>
<tr>
<td>8500</td>
<td>First town built (Jericho, north of the Dead Sea)</td>
</tr>
<tr>
<td>8500</td>
<td>Lima bean domesticated (South America)</td>
</tr>
<tr>
<td>8000</td>
<td>Flax, the oldest textile fiber, first used</td>
</tr>
<tr>
<td>8000</td>
<td>Last Ice Age ends</td>
</tr>
<tr>
<td>8000</td>
<td>Bering Land Bridge severed</td>
</tr>
<tr>
<td>8000</td>
<td>Dog domesticated (North America)</td>
</tr>
<tr>
<td>8000</td>
<td>Goat domesticated (Iran and Iraq)</td>
</tr>
<tr>
<td>8000</td>
<td>Potato domesticated (Peru)</td>
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<tr>
<td>8000</td>
<td>Pumpkin domesticated (Mesoamerica)</td>
</tr>
<tr>
<td>8000</td>
<td>Sweet potato domesticated (Peru)</td>
</tr>
<tr>
<td>8000</td>
<td>Common bean domesticated (South America)</td>
</tr>
<tr>
<td>8000</td>
<td>Ulluco domesticated (South America)</td>
</tr>
<tr>
<td>8000</td>
<td>World population reaches 5 million</td>
</tr>
<tr>
<td>7500</td>
<td>Rice domesticated (Indochina)</td>
</tr>
<tr>
<td>7500</td>
<td>Water buffalo domesticated (Indochina)</td>
</tr>
<tr>
<td>7500</td>
<td>Pig domesticated (E. Asia)</td>
</tr>
<tr>
<td>7500</td>
<td>Rye domesticated (Syria)</td>
</tr>
<tr>
<td>7000</td>
<td>Agriculture begins to replace hunting-gathering</td>
</tr>
<tr>
<td>7000</td>
<td>Village life in the Near East</td>
</tr>
<tr>
<td>7000</td>
<td>Einkorn wheat domesticated (Syria)</td>
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<tr>
<td>7000</td>
<td>Durum wheat domesticated (Anatolia)</td>
</tr>
<tr>
<td>7000</td>
<td>Yams domesticated (Indonesia)</td>
</tr>
<tr>
<td>7000</td>
<td>Banana domesticated (Indonesia)</td>
</tr>
<tr>
<td>7000</td>
<td>Coconut domesticated (Indonesia)</td>
</tr>
<tr>
<td>7000</td>
<td>Cattle domesticated (Anatolia)</td>
</tr>
<tr>
<td>7000</td>
<td>First metalworking (Anatolia)</td>
</tr>
<tr>
<td>7000</td>
<td>Sugar cane domesticated (New Guinea)</td>
</tr>
</tbody>
</table>
6800 Lentils in cultivation (Israel)
6500 Beans and gourds domesticated (Mexico)
6500 Earliest domestication of plants in Andes
6500 Flax domesticated (Silesia)
6500 Weaving and printed textiles developed (Anatolia)
6300 Quinoa domesticated (South America)
6000 Copper Age begins
6000 Bread wheat domesticated (Southwest Asia)
6000 Citrus fruits domesticated (Indochina)
6000 Squashes domesticated (Mexico)
6000 Brewing of malted beer begins
6000 Bulrush millet domesticated (Algeria)
6000 Finger millet domesticated (Ethiopia)

5500 Maize domesticated (Mesoamerica)
5500 Foxtail millet domesticated (Central China)
5500 Peach domesticated (Central China)
5000 Maize a major crop in Tehuacan Valley of Mexico
5000 Avocado domesticated (Mexico)
5000 Chicken domesticated (Southern Asia)
5000 Llama and alpaca domesticated (Peru)
5000 Horse domesticated (Kazakhstan)

4500 Date palm domesticated (India)
4500 Sorghum domesticated (Sudan)
4500 Hunting/gathering and fishing in Japan
4300 Cotton domesticated (Mexico)
4300 Tepary bean domesticated (Mexico)
4004 Year of Creation in the Christian calendar
4000 Bronze Age begins
4000 Grape domesticated (Turkestan); wine making begins
4000 Oil palm domesticated (Sudan)
4000 Silkworm domesticated (China)

3760 Year of Creation in the Hebrew calendar
3641 Year of Creation in the Mayan calendar (10 February)
3500 Wheel invented (Sumeria)
3500 First writing
3500 Olive domesticated (Crete)
3500 Zebu cattle domesticated (Thailand)
3300 Jack bean domesticated (South America)
3300 Coca domesticated (South America)
3000 Cities spread into Nile Valley
3000 Plow invented (Near East)
3000 Accurate stellar calendar invented (Egypt)
3000 Cotton domesticated (India)
3000 Peanut domesticated (Peru)
3000 Donkey domesticated (Palestine)
3000 Two-humped camel domesticated (Iran)
3000 Elephant domesticated (India)
3000 Mule domesticated (Palestine)
3000 Rice under cultivation in China

2800 Hemp rope invented (China)
2800 Major flood covers much of Mesopotamia
2800 Sickle invented (Sumeria)
2800 Empire Shen Nung publishes “Pen Tsao,” the first herbal
2700 Tea first used in China
2600 Pyramids built in Egypt; cities in the Indus Valley
2600 Egyptian bakers develop more than 50 varieties of bread
2600 Egyptian voyage to Byblos to gather cedar
2500 Cat domesticated (Egypt)
2500 Yak domesticated (Tibet)
2500 Egyptians use papyrus as writing material
2500 Pharaoh Sahure sends fleet to Punt for myrrh
2500 African yam domesticated (West Africa)
2000 Alfalfa domesticated (Iran)
2000 Tea and banana cultivated in India
2000 Apples cultivated in Indus Valley
2000 Figs cultivated in Arabia
2000 Guinea pig domesticated (Peru)
2000 Watermelon cultivated (Africa)
2000 World population reaches 50 million

1750 Code of Hammurabi regulates beer
1700 Rye cultivated in eastern Europe
1680 Egyptians develop leavened bread
1500 Soybean domesticated (Manchuria)
1500 Bronze sickles and scythes used in Europe
1500 African rice domesticated (West Africa)
1495 Queen Hatshepsut sends team to Land of Punt to collect spices
1450 Mesopotamians use seed drill
1400 First alphabet completed
1400 Glass invented
1400 Smelting and forging of iron (Anatolia)
1300 Manioc domesticated (South America)
1300 Sunflower domesticated (North America)
1200 Iron Age begins
1000 Oats domesticated (Central Europe)
1000 Phoenicians terrace hillsides to prevent erosion
1000 Maize with large ears domesticated (Mexico)
1000 Millets domesticated (Korea)

800 Oldest New World pyramids
800 Widespread flood appears to destroy much of Mesopotamia
700 Founding of Rome
700 Hoe invented (North America)
600 Rise of science in Greece, China, etc.
500 Tea domesticated (Tibet)
500 Cloves domesticated (Indonesia)
500 Selection and breeding of maize in South America
500 Currant domesticated
500 Reindeer domesticated (Central Asia)
500 Bronze sickles and scythes in use in Europe
484 Herodotus sees cotton in India
400 Tobacco domesticated (South America)
400 Hippocrates compiles list of uses for herbs and spices
399 Socrates commits suicide, presumably using poison hemlock (Conium maculatum)
350 Tobacco first used in North America
300 Turkey domesticated (Mexico)
300 Greek farmers rotate crops to main soil fertility
200 Pearl millet cultivated in sub-Saharan Africa
250 Cacao cultivated by Maya in Belize
Vertical and horizontal waterwheels in use
Chinese use dried chrysanthemum flowers as first insecticide
Seed-drill plough invented (China)
Herodotus publishes "Histories" of his Mediterranean journeys
Rotary winnowing machine invented (China)

**Beginning of the Current or Christian Era:**

Year's supply of cinnamon used at funeral of Poppaea Sabina, wife of Emperor Nero
Pliny the Elder publishes 37-volume "Natural History"
Dioscorides publishes "De Materia Medica"
Sieva bean domesticated (Mexico)
T'sai Lun invents first true paper from paper mulberry, hemp, and scrap fibers
Galen extracts juices from plants for medicinal uses
Potato domesticated (Peru and Bolivia)
Moche priest interred with gold and silver ornaments shaped like the peanut (Peru)
Theophrastus describes caprification of figs
Alexander the Great finds bananas growing in Indus Valley
First written Greek reference to wheat
First written account of tea processing
Alaric the Visigoth demands 3000 lbs. of pepper to ransom Rome
Earliest recorded use of tobacco (Mexico)
Whisky developed (attributed to St. Patrick)
Sweet potato domesticated (Polynesia)
Epidemic of ergot poisoning hits France
Tea introduced into Japan
Mayans establish earliest known cacao plantations in northern South America
Greeks pass law calling for death penalty for stealing fruits or molesting fruit trees
Windmill for grinding grain invented (Persia)
Mayan civilization reaches its zenith
Achira (Canna edulis) domesticated (Mexico)
Hops first added to beer (Bavaria)
First printed newspaper (Peking)
Polynesians begin long range ocean voyages
Lu Yu publishes "First Tea Classic"
Irish voyagers reach Iceland
Emperor Charlemagne orders imperial farms to grow flax and various spices
First reference to use of coffee (Kaffe Province of Ethiopia)
Ergot poisoning reported in Germany
First shipment of spices from East Indies arrives in England
Bjarni Herjulfsson lands in Nova Scotia or Newfoundland
Ergot fungus kills 40,000 in France
Iroquois form village communities and cultivate maize and beans
Colonization of Oceania complete
Leif Eriksson lands in New World
First Crusade begins
Crusaders plant sugar cane in Holy Land
1148 Returning Crusaders bring sugar to Europe
1150 First European paper factory opens (Spain)
1191 Tea introduced in Japan from China
1212 Tofu introduced from China to Japan
1227 Oldest extant botanical garden founded (Vatican City)
1250 Roger Bacon invents magnifying glass
1253 Linen first made in England
1271 Marco Polo travels through Asia [to 1295]
1300 Arnau de Villanova discovers distillation of wine to brandy
1328 First sawmill constructed
1347 "Black Death" kills one-third of Europe
1350 Shogun of Japan prohibits drinking of tea
1391 First paper mill opens (Nuremberg, Germany)
1400 Coffee domesticated (Arabia)
1420 Bottom-fermentation of beer invented in Germany
1476 Oca domesticated (South America)
1492 Columbus lands in New World, believing it to be India
1492 Jews forbidden to serve as spice dealers
1493 Columbus introduces European grape and sugar cane into New World
1493 Second voyage of Columbus to New World [to 1496]
1493 Columbus founds Isabella, the first European settlement in the New World
1493 Columbus observes Indians using tobacco as medicine
1497 Vasco de Gama sails around Cape of Good Hope (Africa)
1497 Romano Pane describes tobacco and its use by Indians
1498 Third voyage of Columbus [to 1500]
1498 John Cabot explores North America
1499 Amerigo Vespucci makes first written observation of coca use
1500 World population reaches 500 million
1502 Fourth voyage of Columbus to New World [to 1504]
1503 Refinement process for raw sugar developed
1509 Sugar cane first harvested in the New World (Hispaniola)
1510 First Black slaves arrive in the New World (Cuba)
1510 Spanish introduce sunflower to Europe as an oil crop
1511 Portuguese capture Malacca, center of East Indies spice trade
1511 Coffee houses in Mecca closed
1512 Portuguese discover nutmeg trees in Moluccas
1513 Ptolemy's "Geography" recognizes two continents in New World
1513 Juan Ponce de Leon introduces orange and lemon trees in Florida
1514 Pineapple introduced into Europe
1516 Indigo introduced into Europe
1516 Maize first planted in China
1516 Spanish introduce banana into the New World
1517 Coffee introduced into England
1519 Hernán Cortes lands in Mexico
1519 Ferdinand Magellan sails from Spain in search of Spice Islands
1519 Hernan Cortes records use of cacao in the court of Emperor Montezuma
1520 Ferdinand Magellan circumnavigates globe [to 1524]
1520 Spanish bring wheat to New World
1520 Hernan Cortes introduces chocolate into Europe
1521 Tenochtitlán, capital of the Aztec Empire, falls to Cortes
1523 Sugar first grown in Cuba
1523 Anthony Fitzherbert publishes "Book of Husbandry," first English agricultural manual
1525 Paracelsus develops laudanum (opium dissolved in alcohol)
1525 Portuguese introduce chili peppers to India
1529 Sweet orange introduced into Europe
1530 Spinning wheel in general use in Europe
1532 Inka Empire falls to Francisco Pizarro
1532 Sugar cane first grown in Brazil
1534 First written description of tomato published (Italy)
1536 Gonzalo de Oviedo publishes "Historia General y Natural de Las Indias"
1540 Francisco de Orellano explores South America
1540 Francisco Basquez de Coronado explores American Southwest and Great Plains
1540 Benzoni describes cacao preparation
1545 Spanish introduce hemp into New World
1546 Tobacco cultivation begins in Europe
1546 Spain's Council of the Indies prohibits plant exploration by foreigners
1546 André Thevet introduces tobacco seeds into Europe
1551 William Turner publishes "New Herball"
1556 Tobacco cultivation begins in Europe
1556 Spain's Council of the Indies prohibits plant exploration by foreigners
1558 Portuguese introduce cassava into Africa
1561 Jean Nicot sends tobacco to Catherine de' Medici
1562 Witchcraft made capital offense in England
1564 John Hawkins introduces sweet potato into England
1564 Jesuit priests introduce European grape vine into California
1565 Oranges introduced into Florida
1565 John Hawkins introduces tobacco from Florida into England
1566 First European seed drill patented
1568 Alexander Nowell, Dean of St. Paul's Cathedral in London, invents bottled beer
1569 Gerhardus Mercator prepares first comprehensive world map
1569 Bernardino de Sahagun publishes "Historia General de las Cosas de la Nueva Espana"
1569 Pope Pius V declares that chocolate is a beverage and could be consumed during fasting
1575 Sir Francis Drake begins circumnavigation of globe [to 1580]
1578 Sir Francis Drake reaches East Indies by sailing around South America
1580 Prospero Alpino establishes that flowering plants have two sexes
1582 Ergot cited as means for quickening childbirth
1583 André Caesalpino publishes "De Plantis"
1585 First shipment of cacao beans from Vera Cruz, Mexico arrives in Seville
1587 Thousands die from ergot poisoning in German states
1587 Eggplant introduced into England (now seen as a tragic event!)
1589 Elbert de Veer invents hemp mill
1590 Hans & Zacharias Janssen invent compound microscope
1590 Tomato introduced into England
1595 Dutch establish colonies in East Indies
1596 Li Shih-Chen publishes 52-volume "Catalogue of Medicinal Herbs"
1597 John Gerard publishes "Herbal or General Historie of Plantes"
1597 Ergotism found to be caused by infected rye
1600 England's East India Company founded
1600 Spanish make rum from molasses (Barbados)
1600 Seeds and unroasted coffee beans smuggled out of the Arabian port of Mocha
1601 The word "coffee" first appears in an English account of William Parry's Persian travels
1602 Oat introduced into the U. S.
1602 Dutch East India Company founded
1604 King James I publishes (anonymously) "Counterblaste to Tobacco"
1605 King James I authorizes London's Worshipful Company of Gardeners
1610 Tea introduced to Europe by Dutch East India Company
1612 John Rolfe plants Caribbean tobacco at the Jamestown Colony in Virginia
1615 Coin-operated vending machines for dispensing tobacco leaves appear in English taverns
1615 Chocolate paste from the New World introduced into Europe
1616 Coffee introduced into Europe
1616 Dutch smuggle a coffee tree from Aden to Holland
1616 Schouter and Lemaire discover new route from Europe to Pacific, around Cape Horn
1618 Wheat cultivated in Virginia
1618 David Ramsay and Thomas Wildgoose invent ploughing machine
1619 First Black slaves arrive in Virginia
1619 Burgandy bans the growing of potatoes because they cause leprosy
1620 Pilgrims arrive in Plymouth, Massachusetts
1621 Potato planted in Germany for first time
1621 Potato introduced into North America
1621 European grapes planted on east coast of U. S.
1621 Dutch cut down three-quarters of clove trees in the Moluccas
1621 Jamestown colonists build first American grist mill to process wheat
1623 Dutch establish first commercial brewery
1623 Gaspard Bauhin publishes “Pinax,” a compilation of plant names from herbals and other sources
1624 Pope Urban VIII threatens snuff users with excommunication
1625 Francis Bacon publishes “Of Gardens,” in which he describes the ideal garden
1629 John Parkinson publishes “Paradisi in Sole Paradisus Terrestris”
1630 Lemonade invented
1630 Kikkoman soy sauce invented
1632 Jesuits introduce quinine powder into Spain and Rome
1633 Bananas first sold in London
1635 Jesuits introduce grapes into California
1635 Louis XIII founds Jardin des Plantes in Paris
1635 French restrict tobacco sales to physician’s prescription
1636 Tulipmania strikes in the Netherlands
1636 Dutch seize Ceylon and impose cinnamon quotas
1640 John Parkinson publishes “Theatrum Botanicum”
1641 Dutch seize Spice Islands from Portuguese
1641 Czar Michael Romanov of Russia forbids sale and use of tobacco
1642 Abel Tasman reaches New Zealand
1643 Abel Tasman reaches Fiji and New Guinea
1645 Richard Weston publishes first description of crop rotation
1647 Rice cultivation begins in the Carolinas
1650 First coffee house opens in Oxford, England
1651 Francisco Hernandez publishes "Rerum Medicarum Novae Hispaniae Thesaurus..."
1651 Frederich Wilhelm of Prussia orders cultivation of potatoes
1652 First coffee houses open in London
1652 British fell pine trees for ship masts in their American colonies
1653 Nicholas Culpeper publishes "The English Physician, or Herball"
1655 Robert Hooke observes structure of cork; first use of "cell"
1656 William Coles publishes "Art of Simpling"
1657 First chocolate shop, called the Coffee Mill and Tobacco Roll, opens in London
1658 Dutch begin to grow coffee in Ceylon
1658 Dutch oust Portuguese from Ceylon, thereby gaining control over cinnamon
1658 Oliver Cromwell dies of malaria after having refused quinine bark treatment
1660 Samuel Pepys notes in his secret diary that he has drunk a "cup of tee...."
1661 Robert Boyle extracts methyl alcohol
1663 Robert Hooke reports microscopic structure of petrified wood
1670 Covent Garden, famous produce market, opens in London
1672 John Josselyn publishes "New England Rarities Discovered," a treatise on herbal cures
1674 Severe outbreak of ergotism in Gatinais, France
1674 "Women's Petition Against Coffee" published
1676 Antoni von Leeuwenhoek discovers microorganisms ("animacules")
1676 Nehemiah Grew determines that higher plants reproduce sexually
1676  British troops poisoned by jimson weed in Jamestown, Virginia
1676  Compagnie de Limonadiers (lemonade vendors) founded in Paris
1677  London Pharmacopoeia recognizes cinchona, jalap, and ipecacuanha
1682  Nehemiah Grew describes function of stamens and carpels in "Anatomy of Plants"
1683  Antoni von Leeuwenhoek discovers bacteria
1686  John Ray develops concept of plant species in "Historia Plantarum"
1688  Dom Pierre Perignon makes champagne
1690  Physick Garden founded in Edinburgh
1692  Witch trials in Salem, Massachusetts
1694  Rudolph Camerarius distinguishes male and female floral parts
1695  Rice introduced ('accidently through shipwreck) into U. S.
1696  Dutch plant coffee trees in Java
1697  Czar Peter of Russia permits open sale and use of tobacco

1701  Jethro Tull invents seed drill
1706  One coffee tree from Java reaches Amsterdam Botanic Garden
1710  British Parliament passes act preserving trees in American colonies for ship's masts
1712  Cotton Mather publishes 13 letters on natural history and biology
1716  Cotton Mather observes hybridization in maize
1717  Giovanni Lancisi suggests that malaria transmitted by mosquitos
1719  Rem de Reaumer suggests that paper can be made from wood fiber
1720  Coffee introduced into New World
1721  Ergot poisoning prevents Peter the Great's attack on the Ottoman Empire
1722  Philip Miller begins management of the Chelsea Physic Garden in England
1724  Paul Dudley describes cross-pollination in maize
1727  Stephen Hales discovers root pressure
1727  Coffee trees planted in Brazil
1728  Vitus Bering sails through Arctic strait, proving Asia and North America not joined
1728  Failure of oat crop in Ireland prompts Jonathan Swift's "A Modest Proposal..."
1729  China bans the importation of opium
1730  John Bartram founds first U. S. botanical garden (near Philadelphia)
1732  J. S. Bach composes the "Coffee Cantata"
1732  Dubuisson of France invents a table mill for grinding cacao beans
1733  John Kay invents flying shuttle that speeds the weaving process
1735  French Academy of Sciences sends expedition to South America
1737  Carolus Linnaeus publishes "Genera Plantarum"
1738  Charles Marie de la Condamine sees quinine trees in Ecuador
1739  John Bartram experiments with cross-breeding in flowers
1739  Potato crop fails in Ireland, resulting in about a half million deaths
1740  Oat crop fails in Ireland
1741  Elizabeth Pinckney begins indigo cultivation
1742  Pehr Kalm begins exploration and plant collecting in North America [to 1745]
1743  Charles Marie de la Condamine explores the Amazon
1743  Sir Joseph Banks born in London
1744  Frederich II distributes free potatoes to Prussian peasants
1747  Andreas Margraff discovers sugar in sugar beets
1750  Brussel sprouts appear as a "sport" (Belgium)
1752  Joseph Koelreuter publishes his studies on sex in plants
1753  Carolus Linnaeus publishes "Species Plantarum," the starting point for scientific names
1753  Sugar cane first grown in the U. S. (Louisiana)
1753  James Lind discovers that lemon juice cures scurvy
1755  Pierre Poivre smuggles pepper and cinnamon into Mauritius
1756  Joseph Black discovers carbon dioxide
1758  Jedidiah Strutt invents machine to knit hose
1759  Arthur Guinness opens a brewery in Dublin
1760  Royal Botanic Gardens at Kew (England) opens
1761  John Hill notes development of nasal "polypusses" after excessive use of snuff
1763 Josef Kohlreuter discovers pollination
1764 James Hargreaves invents spinning jenny
1765 Date introduced into California
1765 James Baker and John Harmon set up chocolate factory in Massachusetts
1765 Potato now Europe's most widely used food
1765 Lazzaro Spallanzani discovers that food can be preserved in air-tight bottles
1765 James Watt improves steam engine
1766 Louis Antoine de Bougainville begins round-the-world voyage [to 1769]
1767 George Washington plants potato at Mount Vernon
1768 Capt. James Cook begins his first voyage to the South Pacific [to 1771]
1768 Richard Arkwright invents machine to spin cotton
1768 Lazzaro Spallanzani disproves theory of spontaneous generation
1769 Father Junipero Serra plants grapes, olives, sweet oranges, and figs in California
1769 The water frame, for spinning yarn, invented
1769 Baron Alexander von Humboldt born in Berlin
1770 Dutch destroy a year's supply of nutmeg and cloves to maintain their high price
1770 Apricot introduced into California
1770 Governor Pierre Poivre smuggles nutmegs from Dutch E. Indies and plants them on Mauritius
1770 Sir Joseph Banks discovers and names Botany Bay in Australia
1770 Joseph Priestly coins the term "rubber" for the Pará rubber latex
1771 Joseph Priestley discovers that plants release oxygen
1771 Arkwright opens first spinning factory in England
1771 Faculte de Paris declares potato not only safe to eat, but useful
1772 King George III appoints Joseph Banks as his scientific advisor for the royal gardens
1772 Second voyage of Capt. James Cook [to 1775]
1772 Daniel Rutherford discovers difference between oxygen and nitrogen
1772 Karl Scheele isolates oxygen
1772 Joseph Priestley ("Father of the soft drink") demonstrates carbonating apparatus
1773 Boston Tea Party
1773 East India Company obtains monopoly on production and sale of opium
1773 Richard Arkwright produces first cloth made entirely of cotton
1773 Tea Act passed by Parliament, allowing East India Co. to export tea to colonies
1774 Andreas Marggraf demonstrates that cane sugar and beet sugar are identical
1775 Frederick the Great prohibits importation of green coffee into Prussia
1775 British Navy replaces French brandy with West Indian rum as its daily grog
1776 Third voyage of Capt. James Cook [to 1779]
1778 Joseph Banks elected President of the Royal Society in England
1779 Jan Ingenhousz discovers that sunlight essential for oxygen production in leaves
1779 Samuel Crompton invents spinning mule
1780 John Hannon opens first chocolate factory in the U. S. (Dorchester, MA)
1780 James Watt develops steam-driven flour mill
1780 Abbe Felix Fontana demonstrates that curare poison acts on voluntary muscle, not the heart
1784 Andrew Meikle invents threshing machine
1784 Richard March invents rope-making machine
1784 Karl Scheele discovers citric acid
1785 Cartwright invents power loom
1785 Ransome invents cast iron plow
1785 William Withering publishes "An Account of the Foxglove and Some of Its Medical Uses..."
1785 Louis XVI promotes use of potato in France
1785 Oliver Evans invents automatic grist mill
1786 Sugar beet cultivated in France
1786 Rice riots in Edo (Tokyo)
1787 Lt. William Bligh sails to Tahiti on H. M. S. Bounty to collect breadfruit seedlings
1787 Calcutta Botanic Garden founded
1787 William Curtis begins publishing "Botanical Magazine," world's longest running journal
1788 Sir James Edward Smith founds Linnean Society (London)
1789 Johann W. von Goethe suggests that all plant parts are modified leaves
1789  First cotton factory powered by steam opens (Manchester, England)
1789  Elijah Craig, a Baptist minister, distills bourbon whisky (Kentucky)
1789  Antoine Laurent de Jussieu publishes "Genera Plantarum"
1789  Ninety percent of Americans engaged in farming and food production
1790  Pineapples introduced into Sandwich Islands (Hawai'i)
1790  Vatican opens its own tobacco factory
1790  Johann Wolfgang von Goethe publishes his theory of the similar nature of leaves and floral parts
1791  First cotton mill in U. S. (Rhode Island)
1791  Samuel Peel patents India rubber cloth
1792  William Bligh sets out on his second "breadfruit voyage" to Tahiti on H. M. S. Providence
1792  Robert Thomas publishes first "Famer's Almanack"
1793  Eli Whitney invents cotton gin
1793  Karl Sprengel establishes that some plants wind-pollinated
1793  Franz Achard extracts sugar from sugar beets
1793  Captain William Bligh arrives in St. Vincent with 722 breadfruit seedlings
1795  Hydraulic press invented
1795  F. A. Chalons-sur-Marne develops sterilization and bottling/canning of food
1795  British Navy eliminates scurvy by supplying sailors with lemon juice
1795  Joseph Fry of England uses steam engine to grind cacao beans, which leads to large scale production
1795  King of Spain grants Don Jose Maria Guadalupe de Cuervo license to produce mezcal wine
1796  J. Lowitz prepares pure ethyl alcohol
1796  Edict of Peking forbids importation of opium into China
1796  British take Ceylon from Dutch, thereby gaining control of cinnamon
1796  United States enters world spice trade by importing Sumatra pepper
1798  Nicholas Robert invents machine for making continuous lengths of paper
1798  Thomas Malthus publishes "An Essay on the Principle of Population..."
1799  Alexander von Humboldt and Aimée Bonpland explore South America [to 1804]
1799  John Ferriar suggests correlation between digitalis and heart disease
1799  Dutch East India Company fails

1800  Jute domesticated (India)
1800  Humboldt and Bonpland observe curare preparation on Orinoco
1800  Sugar beet introduced into U. S.
1800  Matthew Koops develops vegetable fiber paper
1801  Sugar beet domesticated (Silesia)
1802  Franz Achard designs first sugar beet factory
1802  Soybean introduced into United States
1803  Friedrich Sertürner isolates morphine from crude opium latex
1803  Andrew Duncan isolates cinchonine
1804  A. D. Thaer develops concept of crop rotation
1804  England's Royal Horticultural Society founded
1804  Meriwether Lewis and William Clark begin exploration of western U. S. [to 1806]
1804  World population reaches 1 billion
1805  Leschenault describes preparation of upas tieute, a Javanese dart poison
1805  J.-M. Jacquard invents draw power loom
1806  Benjamin Thompson invents coffee pot with metal sieve
1806  Partial failure of potato crop in Ireland
1806  Napoleon Bonaparte offers 100,000 franc prize for creating sugar from a native plant
1807  Baron von Humboldt publishes first of 30 volume treatise on travels in Spanish America
1808  Joseph-Louis Proust identifies glucose, fructose, and sucrose in plant juices
1808  John Stearns demonstrates efficacy of ergot extracts during child birth
1809  Louis Vauquelin isolates atropine
1809  J. B. Lamarck suggests that organs are improved with use and acquired traits are inherited
1809  Nicholas Appert develops heat-bottled foods
1809  Louis Vauquelin identifies nicotianine as active principle in tobacco
1810  J. L. Gay-Lussac discovers that sugar breaks down into alcohol and carbon dioxide
1810  Philippe de Girard invents hemp and flax spinning machine
1810 Napoleon decrees that sugar beets grown in France and that processing factories be built
1811 Louis Figuier develops bone charcoal filtering technique for sugar purification
1812 Austria passes law allowing for confiscation of contaminated rye
1812 James Mease publishes first recipe for tomato catchup
1812 Gottlieb Lorchoff demonstrates that starch breaks down to glucose
1813 Augustin de Candolle coins "taxonomy," for the science of classification of organisms
1813 John Clark invents air and water beds made of India rubber cloth
1813 Humphry Davy publishes "Elements of Agricultural Chemistry"
1814 John Lunan introduces term "grapefruit" in his "Hortus Jamaicensis"
1814 Donkin, Hall, & Gamble introduce first commercially available canned food
1815 J. B. Lamarck, French naturalist, introduces a modern species concept
1815 Robiquet isolates narcotine
1815 P.-J. Pelletier and Magendie isolate emetine
1816 Lane invents harvester/thresher
1816 P.-J. Pelletier and J. Caventou extract a green pigment and call it "chlorophyll"
1816 P.-J. Pelletier and J. Caventou isolate strychnine
1816 British plant tea in India
1816 Johann Siegert formulates Angostura bitters
1816 U. S. government instructs its foreign diplomats to send home seeds of useful plants
1816 François-Louis Cailler produces first commercially available chocolate for eating
1816 P.-J. Pelletier and J. Caventou isolate brucine
1816 Oersted isolates piperine
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1819 U. S. Pharmacopæia published
1819 Thomas Hancock invents rubber masticator
1819 P.-J. Pelletier and J. Caventou isolate cinchonine
1819 John Chapman (Johnny Appleseed) plants orchards
1819 Charles Macintosh discovers solubility of rubber in naphtha
1819 Royal Horticultural Society sends David Douglas to collect fruit trees in North America
1819 British Navy distributes Cocoa Issue (1 oz. chocolate block) to sailors
1819 David Douglas explores western United States
1819 Coffee cultivation begins in Hawaii
1819 Otto Unverdorben develops distilled indigo dye (aniline)
1819 Michael Faraday establishes the empirical formula for Pará rubber
1819 Salicin isolated from willow bark
1820 P.-J. Pelletier and J. Caventou isolate colchicine and quinine
1820 Robert Johnson eats tomato before crowd of 2000 people and lives!
1820 Thomas Hancock opens England's first rubber factory
1820 Runge isolates caffeine from coffee
1820 U. S. Pharmacopæia published
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1820 Michael Faraday establishes the empirical formula for Pará rubber
1820 Salicin isolated from willow bark
1821 Heinrich Merck begins commercial production of morphine
1821 Robert Brown discovers cell nucleus while working on orchids
1821 Robiquet and Colin isolate alizarine red from madder
1821 Charles Darwin begins his voyage on H. M. S. Beagle [to 1835]
1821 Pierre Robiquet isolates codeine
1822 Coenrad van Houten develops process for removing fat from cacao beans
1823 Asa Gray publishes "Elements of Botany," first American botany textbook
1823 Grain combine invented
1824 Charles Darwin begins his voyage on H. M. S. Beagle [to 1835]
1824 Sylvester Graham develops the Graham Cracker
1824 Thiboumery isolates thebaine
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1826 Grain combine invented
1826 Theodor Schwann demonstrates sugar fermentation the result of yeast activity
1836 Charles Cagniard de la Tour observes yeast growth during fermentation
1837 John Deere invents the steel-bladed plow
1838 Schleiden and Schwann develop cell theory
1838 Captain Charles Wilkes leads U. S. Navy expedition to Pacific
1838 Viceroy in Canton orders destruction of almost 3 million pounds of British opium
1839 Charles Goodyear develops vulcanized rubber
1839 Opium Wars in China begin  [to 1842]
1839 Jan Purkinje coins the term "protoplasm"
1839 John Lawes develops artificial fertilizer
1839 U. S. Congress appropriates $1000 to provide free seed to farmers
1839 Assam tea auctioned off in London
1840 Friedrich Keller makes first all-wood paper
1840 Justus von Liebig establishes that some minerals can limit growth in plants
1840 Jean-Baptise-Joseph Dieudonne shows that plants obtain nitrogen from soil nitrates
1840 J. Schweppes Co. develops tonic water
1840 Grapefruit trees from Spain introduced into Florida
1841 William Jackson Hooker becomes first official Director of Kew Botanic Gardens
1842 English develop first chemical fertilizers
1843 Franciscans introduce almond into California
1843 Smoking of opium banned in China
1843 Charles Goodyear patents process for vulcanization of rubber
1844 F. Keller invents wood-pulp paper
1844 John Mercer invents process that improves cotton's durability and sheen
1845 E. B. Bigelow invents power loom for carpet manufacture
1845 J. Heilman invents machine for combing cotton
1845 Late blight of potato causes famine in Ireland and Europe  [to 1848]
1845 Stephen Perry invents rubber bands from vulcanized rubber
1846 Elias Howe invents sewing machine
1846 Christian Schonbein discovers solubility of cotton cellulose
1846 H. von Mohl describes protoplasm
1846 U. S. repeals Corn Laws, imposing import duties
1846 Figuier and Purmarède invent vegetable-based parchment paper
1846 Charles Hancock invents sponge rubber
1847 Sir William Hooker's Museum of Economic Botany opens to public at Kew Gardens
1847 Herbert reports that crossing of some plants yields fertile offspring, but others sterile
1847 Fry & Sons in England develop chocolate for eating
1848 Heinrich Merck isolates papaverine
1848 Explorer Richard Spruce trains in tropical botany at Kew [to 1849]
1849 Robert Fortune brings 2000 tea plants and 17,000 seeds out of China
1852 Ephraim Bull develops Concord grape, a cross between European and catawba grapes
1850 Claude Bernard discovers that curare blocks nerve impulses to muscle tissue
1850 John Heath invents the grain binder
1850 Sorghum introduced into U. S. from Africa
1850 Marijuana listed in the U. S. Pharmacopeia
1850 Milo or Kaffir-corn introduced into U. S.
1850 Delicious red apple found in Iowa
1850 American Vegetarian Society founded
1850 Frist transatlantic cable, protected by gutta-percha, laid between Dover, England and Calais, France
1850 William Alcott, a cousin of Louisa May, opens America's first health food store (Boston)
1851 Robert Fortune brings 2000 tea plants and 17,000 seeds out of China
1852 Ephraim Bull develops Concord grape, a cross between European and catawba grapes
1852 Nelson Goodyear and Charles Macintosh develop vulcanite and ebonite (hard rubber)
1853 Alexander Wood and Charles Pravaz invent the hypodermic syringe
1853 Charles Hancock invents sponge rubber
1853 Concord grape exhibited by Massachusetts Horticultural Society
1854 John Polson develops corn flour
1854 -14-
1856 John Dauglish develops aerated bread
1856 Ghirardelli's California Chocolate Manufactory established
1856 Louis Pasteur discovers process now called pasteurization
1856 Second Opium War; Britain and France defeat Manchu armies [to 1860]
1856 N. Pringsheim observes entrance of sperm into ovum
1857 Louis Pasteur publishes "Mémoire sur la Fermentation Apnelle Lactique"
1857 Count Agoston Harszthy de Moksá establishes California wine industry in the Valley of the Moon
1858 Remak and Virchow develop theory that cells arise from divisions of pre-existing cells
1858 Hyman Lipman invents the pencil with attached eraser
1858 Mace and nutmeg crops planted on Grenada
1858 J. Schweppes patents quinine tonic water
1858 Treaty of Tientsin legalizes importation of opium into China
1858 Charles Darwin reads paper on plant and animal domestication before Linnean Society
1858 Charles Darwin publishes "The Origin of Species by Means of Natural Selection..."
1858 Franz Knop and Julius von Sachs establish that plants can grow in nutrient solutions
1858 Karl von Scherzer isolates cocaine from coca leaves
1858 Richard Spruce and Robert Cross send cinchona seeds from S. America to England
1858 Louis Pasteur publishes "Mémoire sur la Fermentation Alcoolique"
1858 Frederich Walton invents linoleum
1858 Charles Baudelaire publishes "Les Paradis Artificiels..."
1858 Henry Shaw opens garden in St. Louis; it would become the Missouri Botanical Garden
1858 Richard Spruce ships plants and seeds of Cinchona from Ecuador to London
1858 Louis Pasteur publishes "Mémoire sur les Corpuscles Organisés Qui Existent dans l' Atmosphere"
1858 Robert Cross brings 637 cases of cinchona to London from Ecuador
1858 Julius von Sachs establishes that starch a product of photosynthesis
1858 Ebenezer Stevens invents the bread-making machine
1858 John Leighton invents the rubber stamp
1858 Charles Darwin publishes "On the Various Contrivances by which ... Orchids are Fertilized..."
1858 U. S. Congress passes Morrill Land-Grant Act
1858 U. S. Congress prohibits distillation of alcohol without a license
1858 U. S. Navy abolishes rum ration for its sailors
1858 United States Department of Agriculture established
1858 Root louse (Phylloxera vasatrix) attacks European vineyards
1858 Emperor Louis Napoleon asks Pasteur to study maladies of wine
1858 Pasteur discovers that heat kills bacteria
1858 Peter Smirnoff, a former Russian serf, open charcoal-process distillery in Moscow, Russia
1858 Pasteur shows that organism causing fermentation not spontaneously generated
1858 Jobst and Hesse isolate phystostigmine from calabar bean (Phystostigma venenosum)
1858 Gregor Mendel publishes "Experiments in Plant Hybridization"
1858 David Livingstone publishes "Narrative of an Expedition to the Zambesi..."
1858 Adolphus Busch and Eberhard Anheuser open a brewery in St. Louis, Missouri
1858 Charles Ledger of England smuggles cinchona out of Bolivia
1858 Sir Joseph Dalton Hooker, son of William Hooker, becomes second director of Kew Gardens
1858 Richard and George Cadbury sell pure cocoa in Britain
1858 Louis Pasteur publishes "Etudes sur le Vin"
1858 Jack Newton Daniel opens the distillery that bears his name in Tennessee
1858 Thomas Dickson opens a distillery in Essex, CT to manufacture witch hazel extract
1858 Atropine shown to block effects of vagal nerve stimulation
1858 Britain introduces tea into Ceylon
1858 Charles Darwin publishes "The Variation of Animals and Plants Under Domestication"
1858 James Arnold's estate finances the establishment of Harvard University’s Arnold Arboretum
1858 John Cadbury mass-markets first boxes of chocolate candies
1859 Schneider discovers navel orange in Brazil
1859 Digitoxin isolated from foxglove plant
1859 Charles Fleischmann founds yeast-production industry in USA
1859 Thomas Welch pasteurizes Concord grape juice to make unfermented sacramental wine
1860 Thomas Adams develops chicle-based chewing gum
1870  Friederich Miescher discovers DNA
1870  MacIntosh apple propagated
1870  Ground wood paper pulp first made (Germany)
1870  Benjamin Franklin Goodrich opens rubber factory in Akron, Ohio
1872  Ebers Papyrus (1500 B.C.) discovered in Thebes
1872  Pará rubber (Hevea brasiliensis) domesticated (South America)
1872  Carl Ekman develops the sulphite processing of wood pulp
1872  Luther Burbank develops the Burbank potato
1873  Don Cenobia Sauza distillery exports first tequila to the U. S.
1872  Asa T. Soule of Rochester, NY invents hop bitters, the most successful patent medicine
1874  Mennonites introduce Turkey red wheat into the U. S.
1874  Othman Zeidler develops DDT
1875  Pilocarpine isolated from jaborandi leaf
1875  Richard Joshua Reynolds founds tobacco company in Winston, North Carolina
1875  Luther Burbank establishes experimental garden in Santa Rosa, California
1875  Bing cherry developed in Oregon
1875  Ferdinand Tiemann patents process for synthetic vanilla
1875  Machine invented that strips corn kernels from cobs
1875  Henry Wickham delivers Pará rubber seeds from Brazil to Royal Botanic Gardens at Kew
1875  First Agricultural Experiment Station established in the U. S. (Connecticut)
1876  Charles Darwin publishes "The effects of Cross and Self-fertilisation ... "
1876  Henry J. Heinz develops catsup
1876  Daniel Peter and Henri Nestlé create milk chocolate
1876  Henry Wickam smuggles seeds of Pará rubber out of Brazil
1876  John Henry Kellogg develops flake cereal, to curb sex drive
1876  Eduard Strasburger describes mitosis in plants
1876  Lydia Estes Pinkham patents "Mrs. Lydia E. Pinkham's Vegetable Compound"
1876  Charles E. Hires promotes "Hires Rootbeer Household Extract"
1876  Thomas Johnstone Lipton opens his first tea shop
1876  Phylloxera destroys more than 1 million acres of France's vineyards
1876  Wilhelm Pfeffer discovers osmosis
1877  John Harvey Kellogg develops a cereal he calls "Granula"
1877  Caleb Chase & James Sanborn form company specializing in coffee and tea
1878  John Appleby invents grain binder
1878  P.-M.-A. Millardet develops Bordeaux mixture to protect grapes against fungi
1879  Constantine Fahlberg and Ira Remsen invent saccharin
1879  Thomas Edison successfully tests carbonized bamboo filament in incandescent light bulb
1879  Rudolphe Lindt invents conching, a procedure for improving smoothness of chocolate
1879  Daniel Peter and Henri Nestlé form the Nestlé Company
1879  Daniel Peter develops first milk chocolate candy bar
1879  Sugar beets raised commercially for first time in U. S.
1880  John Boyd Dunlop invents hollow tire made of rubber latex and cloth
1882  A. P. De Candolle publishes "L'Origine des Plantes Cultivees"
1882  Albert King discovers that mosquitoes transmit malaria
1883  Edouard J. L.-M. von Beneden discovers meiosis
1883  French develop rayon, first synthetic fiber
1883  James Buchanan Duke begins making machine-manufactured cigarettes
1884  William S. Halsted discovers anesthetic property of cocaine
1884  Carl Dahl invents sulfate (Kraft) pulp
1885  Karl Benz invents first gas-powered automobile
1885  John S. Pemberton markets Coca Cola
1886  R. S. Lazenby develops Dr. Pepper
1886  Hires Root Beer marketed
1887 Nagai Nagayoshi isolates ephedrine from mahuang (Ephedra sinica)
1887 U. S. Congress passes Hatch Act, providing funds for agricultural experiment stations
1888 John Boyd Dunlop invents pneumatic tire for bi- and tricycles
1888 Heinrich von Waldeyer-Hartz discovers chromosomes and coins term for them
1888 Angus Campbell invents cotton picker
1889 Gottlieb Wilhelm Daimler invents gasoline-powered automobile
1889 James Buchanan Duke founds American Tobacco Company
1889 United States Department of Agriculture founded
1889 United Fruit Company founded
1890 John H. Kellogg develops peanut butter for his toothless patients
1891 W. Riman describes spontaneous fertile wheat x rye hybrids
1892 Asa Chandler founds Coca-Cola Co.
1893 Henry Perky develops Shredded Wheat
1893 Charles Post develops Postum, a coffee substitute
1893 Thomas Lipton takes out a trademark on his tea
1893 O. Hesse develops heroin from morphine and acetic anhydride
1893 U. S. Supreme Court declares the tomato to be a vegetable, not a fruit
1893 Luther Burbank publishes "New Creations in Fruits and Flowers"
1894 W. A. Burpee introduces "iceberg" lettuce
1895 John Harshberger coins the term "ethnobotany"
1895 John and Will Kellogg develop wheat flake cereal
1895 Arthur Heffter isolates mescaline from peyote cactus
1896 Pineapple introduced into Hawai'i
1896 George Washington Carver begins his studies of products made from peanuts
1896 New York Botanical Garden founded
1897 Ronald Ross identifies protozoan as cause of malaria
1897 Felix Hoffmann of Bayer synthesizes stable form of acetylsalicylic acid
1898 Richard Willstatter determines structure of atropine and cocaine
1898 M. W. Dejerinck discovers that tobacco mosaic disease caused by virus
1898 Bayer introduces heroin as a cough suppressant
1899 Hermann Dreser and Felix Hoffmann develop aspirin
1899 Mexican boll weevil, a beetle, enters U. S.
1900 United Fruit Company founded
1900 Spinal anesthetic using cocaine developed
1900 Beitter isolates alkaloids from khat
1900 Milton Hershey opens factory to produce chocolate bars
1900 H. de Vries, C. E. Correns, and E. Tschermak von Seysenegg rediscover Mendel's work
1900 David Barrows awarded first doctorate in ethnobotany
1900 David Wesson markets first edible cottonseed oil
1900 Hugo De Vries coins term "mutation"
1901 Gerrit Grijns discovers that berberi caused by nutrient-poor, polished rice
1901 James Dole establishes first pineapple plantation on Oahu, Hawai'i
1901 Ludwig Roselius develops 97% caffeine-free coffee
1901 Satori Kato develops soluble instant coffee
1901 Nagai Nagayoshi of Japan isolates rotenone from Derris elliptica
1901 U. S. bans use of coca leaf extracts in Coca Cola
1902 James Dole founds Hawaiian Pineapple Co.
1902 Caleb Bradham founds Pepsi Cola Co.
1903 Walter Sutton shows that chromosomes carry hereditary material
1903 Christian Gray and Thomas Sloper invent cross-ply rubber tire
1903 Ludwig Roselius introduces Sanka Coffee
1904 Postum Co. introduces "Elijah's Manna," later to be called "Post Toasties"
1905 A. E. Douglass develops technique of dating tree rings
1905 Heinrich Braun introduces novocaine into clinical use
1905 Vick's Magic Croup Salve introduced
1905 Ludwig Roselius develops decaffeination process
1906  U. S. Congress passes Pure Food and Drug Act
1906  William Bateson coins "genetics" for new science
1906  Gerrit Grijns suggests beriberi caused by nutrient deficiency in rice
1906  William Keith Kellogg (brother of J. H. Kellogg) founds W. K. Kellogg
1907  American Spice Trade Association founded
1907  President Theodore Roosevelt declares Maxwell House coffee “good to the last drop”
1907  C. W. Post develops "Post Toasties"
1907  Melita Bentz invents once-through coffee brewing filter using linen towel
1907  MSG (monosodium glutamate) isolated from seaweed
1907  Jacques Brandenberger, a Swiss chemist, invents cellophane
1907  Henry Wickham publishes “On the plantation, cultivation, and curing of Pará Indian rubber”
1909  U. S. prohibits importation of opium
1909  U. S. Bureau of Soils declares soil an indestructible
1909  Pictet and Gams synthesize papaverine
1909  Wilhelm Johannsen coins "gene," "genotype," and "phenotype"
1909  Aaron Levene discovers RNA
1909  Karl Hofmann makes synthetic rubber from butadiene
1909  Sir Thomas Lipton begins blending and packaging of tea leaves
1909  George Washington develops soluble coffee powder
1910  Thomas Hunt Morgan discovers specific genes occur on specific chromosomes
1910  U. S. D. A. establishes its Agricultural Research Center at Beltsville, MD
1910  William Cadbury urges companies not to purchase cacao beans from slave-based plantations
1910  Harvey Firestone invents non-skid tire
1911  A. H. Sturtevant produces first chromosome map
1911  U. S. Supreme Court dissolves American Tobacco Co.
1911  Procter Gamble introduce "Crisco," the first solid vegetable shortening
1911  Henry Ginaca invents the pineapple processing machine
1911  Polish chemist Casimir Funk discovers "vitamines," a rice hull extract, that cures berberi
1911  Kudzu is introduced from Japan for erosion control and forage
1912  J. Suzuki, T. Shimamura, and S. Ohdake extract anti-beriberi substance from rice hulls
1912  Casimir Funk coins the term "vitamin"
1912  Richard Willstatter determines structure of chlorophyll
1912  U. S. Congress passes Harrison Narcotic Act
1912  U. S. Congress passes Smith-Lever Act, establishing agricultural extension service
1912  Chaim Weizmann uses a bacterium to ferment sugars to yield acetone, butanol, and ethanol
1915  Absinthe with wormwood banned
1916  Quaker Oats develops instant oatmeal
1917  Donald Jones develops double-cross hybrid maize
1917  Clarence Birdseye develops freezing techniques for preserving foods
1918  Brazil bans export of Pará rubber seeds
1918  First use of airplane in crop dusting
1918  Alcohol use in U. S. prohibited by 18th Amendment to Constitution
1919  K. Spiro and A. Stoll extract ergotamine
1919  Joseph Krieger invents the tea bag
1919  Rudolf Boysen develops the boysenberry (blackberry x raspberry x loganberry)
1920  George Washington Carver testifies before U. S. Congress on uses for the peanut
1920  Thomas Hunt Morgan develops chromosome theory of heredity
1920  "Nobilized" form of sugar cane produced (Java)
1920  E. M. East and G. M. Shull produce hybrid maize
1920  First U. S. soybean refinery opens (Illinois)
1921  "Wheaties" introduced into U. S. market
1922  W. K. Kellogg develops Rice Crispies
1922  Robert Robinson synthesizes morphine
1922  Automatic potato-peeling machine invented
1923  N. I. Vavilov publishes "Centers of Origin of Cultivated Plants"
1924  Henry Wallace founds Pioneer Hi-bred International
1925  Maize hybrid seed becomes available
1926  H. J. Mueller discovers that X-rays induce genetic mutations
1926  I. G. Farben invents Buna S (synthetic rubber)
1926  Ergot poisoning in U. S. S. R.
1927  John and Mack Rust perfect the mechanical cotton picker
1927  World population reaches 2 billion
1927  Thomas Edison, Henry Ford, and Harvey Firestone found Edison Botanic Research Foundation
1928  Sir Alexander Fleming discovers that Penicillium spores kill certain bacteria
1928  Albert Szent-Györgyi isolates Vitamin C from paprika pepper
1928  Josef Stalin orders collectivization of Soviet farms
1928  Adolf Otto Reinhold Windaus reports chemical structure of digitoxin
1928  Henry Ford establishes Fordlandia, a 2.5 million acre rubber plantation in South America
1928  A. Harden and H. von Euler-Chelpin win Nobel Prize for work on sugar fermentation
1928  E. Murphy and W. Chapman invent foam rubber
1928  Wonder Bread (Continental Bakery) introduces sliced bread
1929  American Maize Products develops first genetically modified maize
1929  General Foods develops Minute Rice
1929  R. T. French develops instant mashed potatoes
1930  U. S. Congress passes Plant Patent Act
1930  Postum Co. markets frozen foods
1930  Castetter establishes masters program in ethnobotany at Univ. of New Mexico
1930  Sydney Smith isolates digoxin from Digitalis lanata
1930  Clarence Birdseye patents a process for the quick freezing of food
1930  Norman Haworth, English chemist, synthesizes Vitamin C
1930  Louis Lewin publishes "Phantastica..."
1931  Indian snakeroot reported as useful in treatment of certain mental disorders
1931  First plant hormone (indole acetic acid) discovered
1931  Wallace Carothers develops Du Prene (later called neoprene), first synthetic rubber
1931  Du Pont markets synthetic rubber
1931  Walter Haworth synthesizes Vitamin C
1931  Germans develop atabrine (quinachrine hydrochloride), a synthetic quinine
1932  Charles King isolates Vitamin C (ascorbic acid) from lemon juice
1932  Prohibition repealed by 20th Amendment to U. S. Constitution
1932  Golden Cross Bantam corn, first widely planted hybrid, introduced
1932  Ernest and Julio Gallo build winery in Modesto, California
1932  Soil Erosion Service established in U. S. Department of Interior
1932  Sanforization, a technique for reducing shrinkage in cotton fibers, developed by Sanford L. Cluett
1933  J. P. Lent isolates coumarin from spoiled clover
1933  Wallace Carothers invents nylon, an artificial fiber
1933  Philip White and Roger Gautheret get plant tissue culture to survive
1935  Ergonovine proven effective in obstetrics
1935  Trofim Lysenko's "scientific" views become official Soviet policy
1935  Alcoholics Anonymous founded
1935  Rudolph Hass patents his avocado cultivar
1936  Andrei Belozersky isolates pure DNA
1936  Tadeusz Reichstein isolates cortisone
1937  Pierre Givaudon discovers colchicine induces chromosome doubling
1937  U. S. Congress passes Marijuana Tax Act
1937  Michael Sveda and L. F. Audrieth invent the artificial sweetener "Cyclamate"
1937  Albert Szent-Györgyi awarded Nobel Prize (Chemistry) for discovery of vitamin C
1938  Arthur Stoll and Albert Hofman synthesize LSD (lysergic acid diethylamide)
1938  Nestlé Co. develops instant coffee (Switzerland)
1938  Richard Gill discovers that curare made from Chondrodendron tomentosum
1939  Paul Müller of Geigy Pharmaceuticals discovers insecticidal properties of DDT
1939  U. S. D. A. successfully tests DDT against Colorado potato beetle
1939  F. H. Muller relates smoking and lung cancer
1939  Japanese beetles threaten U. S. crops
1940  Automatic hay baler invented
1940  T. D. Lysenko becomes Director of Institute of Genetics in Soviet Union
1940  N. I. Vavilov arrested by Soviet government for being British spy
1941  George Beadle and Edward Tatum develop "one-gene, one-enzyme" hypothesis
1941  Stem rust devastates Mexican wheat crop
1942  R. E. Marker synthesizes human sex hormones from Japanese yams
1942  U. S. Congress passes Opium Poppy Control Act
1942  President Franklin D. Roosevelt declares “modern war cannot be won without rubber”
1943  N. I. Vavilov dies in Soviet labor camp
1943  Albert Hofmann discovers LSD, a powerful hallucinogen
1943  DDT introduced to fight insects in U. S.
1943  Rockefeller Foundation and Mexican government found CIMYTT
1943  U. S. distilleries produce alcohol for synthetic rubber
1944  Robert Woodward and William Doering synthesize quinine
1944  Avery, McCarty, & McLeod identify DNA as molecular basis of heredity
1944  Chiquita banana introduced by United Fruit Co.
1945  2, 4-D introduced for general use
1945  Alton Ochsner relates smoking and lung cancer at Duke Univ. address
1945  Food and Agriculture Organization (FAO) of the United Nations founded in Rome
1945  Samuel Salmon discovers semi-dwarf wheat variety (NORIN 10)
1945  Univ. of California develops long-season strawberry
1945  Self-rising corn meal first marketed in U. S.
1946  Dutcher isolates d-tubocurarine
1946  Thor Heyerdahl's sails on the raft “Kon Tiki” from Peru to an island near Tahiti
1947  NORIN 10 gene introduced into North American wheat
1947  Herbicide 2,4-D introduced
1947  Karl Link develops Warfarin from an anticoagulant in sweet clover
1948  Cortisone found effective in treatment of rheumatoid arthritis
1948  Liberty Hyde Bailey coins the term “cultivar”
1948  Paul Müller receives Nobel Prize for his discovery of the toxic properties of DDT
1949  Robert Boyer patents vegetable protein fibers derived from soybeans
1950  Barbara McClintock publishes "The Origin and Behavior of Mutable Loci in Maize"
1950  Hoagland and Arnon develop balanced mixture of 11 nutritional salts
1950  Cyclamate introduced
1950  General Mills introduces "Minute Rice"
1950  Richard Doll, British physician, presents first statistical proof linking smoking and lung cancer
1950  National Science Foundation established
1951  Woodward synthesizes cortisone
1951  J. Watson, F. Crick, and M. Wilkins propose DNA structure
1952  Emil Schlitter isolates reserpine from Indian snakeroof
1953  James Watson and Francis Crick publish "Molecular Structure of Nucleic Acids"
1953  Evarts Graham and Ernest Wydner show that cigarette tars may cause cancer
1954  Woodward synthesizes strychnine
1954  Nathan Kline develops reserpine (anti-depressant)
1954  Wheat stem rust destroys 75% of Durum wheat crop
1954  Ernest Sears demonstrates that wheat chromosomes can be substituted
1955  Hurricane Janet destroys 75% of Grenada's nutmeg trees (about 40% of world crop)
1955  Severo Ochoa synthesizes RNA
1955  James Schlatter develops aspartame, an artificial sweetener
1956  Sorghum hybrid seed becomes commercially available
1956  Arthur Kornberg synthesizes DNA
1956  Pincus discovers that wild yams will stop ovulation in humans
1956  U. S. Congress passes Narcotic Drug Control Act
1957  Gibberellins (plant growth hormones) isolated
1957  Vinca alkaloids from periwinkle found effective against leukemia
1957  Eli Lilly releases "Darvon," a codeine alternative
1958  Kiwi fruit domesticated
1958  Robert Noble and Charles Beer isolate vinblastine, one of the vinca alkaloid, from the periwinkle
1958 U. S. Congress requires enrichment of rice
1958 Sweet 'n Low introduced
1958 Mass of cultured cells gives rise to complete plants
1958 George Beadle and Edward Tatum win Nobel Prize for one gene-one enzyme work
1959 National Seed Storage Laboratory founded at Fort Collins, CO
1959 Society for Economic Botany founded
1959 U. S. Dept. of Agriculture seizes 25% of cranberry crop, fearing weed-killer contamination
1960 Georges Morel clones cultured cells
1960 FDA approves Enovid for birth control
1960 World population reaches 3 billion
1961 J. A. Wilson and W. M. Ross develop stable cytoplasmic-male-sterile wheat
1961 Melvin Calvin wins Nobel Prize (Chemistry) for work on photosynthesis
1962 James Watson and Francis Crick win Nobel Prize (Medicine) for DNA work
1962 International Rice Research Institute (IRRI) opens in Philippines
1962 Coby Lorenzen, Jr. invents tomato harvester
1962 Rachel Carson publishes “Silent Spring”
1964 Edwin Mertz develops high-lysine maize
1964 World Health Organization warns of psychological dependence on khat
1964 Mutant opaque-2 gene increases lysine and tryptophan content of maize
1964 IRRI begins "Green Revolution" with new strains of high-yield rice
1964 Surgeon General Luther Terry links cigarette smoking and lung cancer
1965 T. D. Lysenko dismissed as Director of Soviet Institute of Genetics
1965 V. Vasil and A. G. Hildebrant regenerate complete tobacco plant from single cells
1965 Standard Malaysian Rubber grading system comes into use
1965 Raphael Mechoulam of Israel synthesizes tetrahydrocannabinols
1965 U. S. Congress requires warning labels on cigarettes
1965 U. S. Congress passes Drug Abuse Control Amendment
1966 International Rice Research Institute releases IR8 "Miracle Rice"
1966 Michael Sporn and coworkers report highly toxic aflatoxins on peanuts
1966 General Mills introduces flavored protein that tastes like bacon
1967 U. S. D. A. begins tests of irradiating food to kill insects
1967 A. E. Porsild and Charles Arington germinate 10,000 year old lupine seeds
1967 Clinton Corn Processing Co. introduces high fructose corn syrup
1967 James Faria & Robert Wright patent Astroturf, an artificial grass
1968 W. Gaud, head of the U. S. Foreign Aid Program, coins the phrase "green revolution"
1970 Norman Borlaug receives Nobel Prize (Peace) for development of dwarf wheat
1970 Male sterile strains of maize hit by southern leaf blight
1970 Rust hits Brazilian coffee crops causing $3 billion loss
1970 barley hybrid seed becomes commercially available
1971 Centro Internacional de la Papa (CIP) founded
1971 Canadian Int. Development Agency investigates triticale as food for humans
1971 First Starbucks opens in Seattle’s Pike Place Market
1972 Wild rice domesticated
1972 Black sigatoka fungus attacks Central American bananas
1972 Use of DDT banned in the U. S.
1973 High lysine strains of sorghum developed
1973 Herbert Boyer and Stanley Cohen create DNA with sticky ends
1973 Stanley Cohen and Herbert Boyer recombine and duplicate DNA from two species
1974 Wheat hybrid seed becomes commercially available
1975 Endorphins (naturally occurring morphine-like hormones) discovered
1975 Miller Brewing Company introduces "Lite" beer
1975 Soft drinks now more popular than coffee
1975 World population reaches 4 billion
1975 Schell & Van Montagu find crown gall genes occur in plasmids
1975 Seed Savers Exchange founded
1976 Soft drinks now more popular than milk
1976 HFCS (high fructose corn syrup) developed
1976 Herbert Boyer and Robert Swanson found Genentech, first genetic engineering company
1979 Raphael Guzman discovers perennial teosinte (Mexico)
1980 Coca Cola switches from sugar to high fructose corn sweeteners
1980 U. S. Supreme Court rules that genetically-engineered bacteria may be patented
1981 Liza Hohenschutz et al. isolate castanospermine, useful in HIV treatment, from Moreton Bay chestnut
1981 Whitely & Schnepf find gene in Bacillus thurgensensis that kills insects
1982 Horst Binding and Jonathan Gressel develop protoplast fusion
1983 Barbara McClintock receives Nobel Prize for discovery of “jumping genes”
1983 N. Murai inserts protein from bean plant into a sunflower
1983 NutraSweet, a synthetic sugar substitute, introduced
1983 Functioning bacterial plasmid transferred into plant cell
1983 Murray & Szostak construct first artificial chromosome
1985 T. Fujimara regenerates rice protoplasts
1985 U. S. Board of Patent Appeals rules that plants may be patented
1985 Coca Cola replaces its traditional recipe with a new, sweeter version
1985 Coca Cola pulls “New Coke” from market
1986 U. S. D. A. approves irradiation of fruits and vegetables
1986 U. S. D. A. approves field-testing of genetically altered, high-yield tobacco
1986 World population reaches 5 billion
1987 Genetically-engineered, frost-resistant potatoes field-tested in California
1987 Genetically modified tobacco with herbicide-tolerance, gene field-tested
1988 Carol Rhodes inserts foreign gene into maize
1988 U. S. carries out experiments using robots to pick fruits
1988 Monsanto Corporation field-tests Roundup-resistant tomato
1988 James Anderson discovers that oat bran lowers cholesterol levels
1989 Taxol, from the Pacific yew, found effective in treatment of human breast cancer
1991 U. S. Government declares second-hand smoke a health hazard
1991 Sale of salsa in the U. S. exceeds that of catsup
1992 One hundred ninety-two countries sign Convention on Biodiversity
1994 Food and Drug Administration approves sale of genetically-engineered "Flavr Savr" tomato
1994 First genetically-engineered food goes on sale in California and Illinois
1994 U. S. Congress passes Dietary Supplement Heath & Education Act
1995 Food and Drug Administration declares nicotine a drug
1995 Monsanto introduces Newleaf potato, genetically engineered to kill potato beetle
1995 Environmental Protection Agency approves marketing of genetically-engineered maize
1996 California passes Proposition 215, thereby legalizing medicinal use of marijuana
1997 John Pezzato discovers anti-cancer properties of resveratrol in grapes and other fruits
1997 The Liggett Group admits that tobacco is addictive
1997 U. S. District judge rules F. D. A. can regulate tobacco as a drug
1999 Institute of Medicine calls for clinical trials of medical marijuana
1999 DuPont purchases Pioneer Hi-Bred, world’s largest seed corn company
1999 Food and Drug Administration approves use of "Olestra" in processed foods
1999 World population reaches 6 billion
1999 John Losey finds Bt corn pollen toxic to butterflies
1999 Plum pox found for first time in North America
1999 Monsanto releases “terminator seeds”

2000 Human genome decoded
2000 Royal Botanic Garden, Kew establishes Millenium Seed Bank at Ardingly, England
2001 Aventis CropScience is ordered to pay millions in compensation for genetically altered corn
2001 Syngenta and Myriad Genetics decode rice genome
2001 U. S. Congress passes “Fruit, Vegetable, and Plant Smuggling Act”
2001 U. S. Supreme Court rules that use of medicinal marijuana violates federal law
2001 Environmental Protection Agency renews authorization for use of genetically modified corn
2002 California Supreme Court ruling protects medicinal use of marijuana
2003 U. S Congress renames the french fry as freedom fry
2003 Virgin Airlines cancels flight to Australia because of smell of durian fruit in passenger cabin
2004 Ninth Circuit Court rules D. E. A. lacks authority to ban foods derived from hemp
2004 FDA bans ephedra – first ban of a dietary supplement
2005 Swiss government allows limited production of absinthe
2005 Complete genome sequence of rice mapped (37,544 genes)
2006 FDA declares no scientific support for medicinal use of marijuana
2007 Global Seed Vault established on the Norwegian Island of Spitsbergen
2007 FDA requires tests of ingredients in herbal supplements, but not their safety or effectiveness
2007 French and Italian researchers map the pinot noir grape genome (about 30,000 genes)
2007 The Netherlands bans sale of hallucinogenic mushrooms
2008 California bans use of khat
2008 Mars Candy Co. purchases William J. Wrigley, Jr. chewing gum
2009 American Med. Assoc. urges federal government to remove marijuana from Schedule 1 list
2009 U. S. Department of Energy publishes sorghum genome
2009 Air New Zealand conducts test of jet fuel made partially from jatropha oil
2009 Keerti Rathore of Texas A & M Univ. discovers how to inactivate gossypol gene in cotton
2010 Kraft purchases Cadbury Chocolate for $19B
2010 USDA, IBM, and Mars Candy Co. complete preliminary cacao gene sequence
2010 Drought destroys 20% of Russian wheat crop
2010 Apple genome decoded; 57,000 genes identified
2010 U. S. Navy orders 150,000 gals. of fuel made from algae
2010 U. S. Supreme Court lifts ban on genetically engineered alfalfa
2010 California voters defeat Proposition 19, which would have legalized recreational use of marijuana
2010 Earliest evidence of wine making (6100 years ago) found in Armenian cave
2011 Potato genome decoded; 39,000 genes
2011 U. S. D. A. approves growing genetically engineered sugar beets
2011 U. S. D. A. approves Enogen, genetically engineered corn for use in ethanol production
2012 Tomato genome decoded; 31,760 genes
2013 U. S. Supreme Court rules that farmers must pay Monsanto for each use of its modified soybeans
2014 Human genome now estimated at 19,000 genes
2014 U. S. D. A. approves genetically engineered potato with less acrylamide, a suspected carcinogen.
2016 United Airlines begins use of a biofuel made from feed stocks, natural oils, and agricultural waste
2016 World population reaches 7.4 billion

PRINCIPAL SOURCES


