The Columbian Exchange

**BY** [**J.R. MCNEILL**](http://www.learnnc.org/lp/people/149)

Geologists believe that between 280 million and 225 million years ago, the earth’s previously separate land areas became welded into a landmass called Pangaea. About 120 million years ago, they believe, this landmass began to separate. As this happened, the Atlantic Ocean formed, dividing the Americas from Africa and Eurasia. Over the course of the next several million years in both the Americas and in Afro-Eurasia, biological evolution followed individual paths, creating two primarily separate biological worlds. When Christopher Columbus and his crew made land in the Bahamas in October 1492, these two long-separated worlds were reunited. Columbus’ voyage, along with the many voyages that followed, disrupted much of the biological segregation brought about by continental drift.

The flow from east to west: Crops and animals

Eurasians sent much more than disease westward. The introduction of new crops and domesticated animals to the Americas did almost as much to upset the region’s biological, economic, and social balance as the introduction of disease had. Columbus had wanted to establish new fields of plenty in the Americas. On his later voyages he brought many crops he hoped might flourish there. He and his followers brought the familiar food grains of Europe: wheat, barley, and rye. They also brought Mediterranean plantation crops such as sugar, bananas, and citrus fruits, which all had originated in South or Southeast Asia. At first, many of these crops fared poorly; but eventually they all flourished. After 1640, sugar became the [mainstay](http://www.learnnc.org/lp/editions/nchist-twoworlds/glossary#mainstay) of the Caribbean and Brazilian economies, becoming the foundation for some of the largest slave societies ever known.

The production of rice and cotton, both imported in the Columbian Exchange, together with tobacco, formed the basis of slave society in the United States. Wheat, which thrived in the temperate latitudes of North and South America and in the highlands of Mexico, eventually became a fundamental food crop for tens of millions of people in the Americas. Indeed, by the late 20th century, wheat exports from Canada, the United States, and Argentina were feeding millions of people outside the Americas. It is true that the spread of these crops drastically changed the economy of the Americas. However, these new crops supported the European settler societies and their African slave systems. The Native Americans preferred their own foods.

Of all the animals introduced by the Europeans, the horse held particular attraction. Native Americans first encountered it as a fearsome war beast ridden by Spanish conquistadors. However, they soon learned to ride and raise horses themselves. In the North American great plains, the arrival of the horse revolutionized Native American life, permitting tribes to hunt the buffalo far more effectively. Several Native American groups left farming to become buffalo-hunting nomads and, incidentally, the most [formidable](http://www.learnnc.org/lp/editions/nchist-twoworlds/glossary#formidable) enemies of European expansion in the Americas.

Cattle, sheep, pigs, and goats also proved popular in the Americas. Within 100 years after Columbus, huge herds of wild cattle roamed many of the natural grasslands of the Americas. Wild cattle, and, to a lesser degree, sheep and goats, [menaced](http://www.learnnc.org/lp/editions/nchist-twoworlds/glossary#menace) the food crops of Native Americans, notably in Mexico. Eventually ranching economies emerged, based variously on cattle, goats, or sheep. The largest ranches emerged in the grasslands of Venezuela and Argentina, and on the broad sea of grass that stretched from northern Mexico to the Canadian prairies. Native Americans used the livestock for meat, [tallow](http://www.learnnc.org/lp/editions/nchist-twoworlds/glossary#tallow), hides, transportation, and hauling. Altogether, the suite of domesticated animals from Eurasia brought a biological, economic, and social revolution to the Americas.

The flow from west to east: Crops and cuisine

America’s vast contribution to Afro-Eurasia in terms of new plant species and cuisine, however, transformed life in places as far apart as Ireland, South Africa, and China. Before Columbus, the Americas had plenty of domesticated plants. By the time Columbus had arrived, dozens of plants were in regular use, the most important of which were maize (corn), potatoes, [cassava](http://www.learnnc.org/lp/editions/nchist-twoworlds/glossary#cassava), and various beans and squashes...

Despite maize’s success, the humble potato probably had a stronger impact in improving the food supply and in promoting population growth in Eurasia. The potato had little impact in Africa, where conditions did not suit it. But in northern Europe the potato thrived. It had the most significant effect on Ireland, where it promoted a rapid population increase until a potato [blight](http://www.learnnc.org/lp/editions/nchist-twoworlds/glossary#blight) ravaged the crop in 1845, bringing widespread famine to the area. After 1750, Scandinavia, the Low Countries, Germany, Poland, and Russia also gradually accepted the potato, which helped drive a general population explosion in Europe. This population explosion may have laid the foundation for world-shaking developments such as the Industrial Revolution and modern European [imperialism](http://www.learnnc.org/lp/editions/nchist-twoworlds/glossary#imperialism). The potato also fed mountain populations around the world, notably in China, where it encouraged settlement of mountainous regions.

Cassava, a tropical shrub native to Brazil, has starchy roots that will grow in almost any soil. In the [leached](http://www.learnnc.org/lp/editions/nchist-twoworlds/glossary#leach) soils of West and Central Africa, cassava became an [indispensable](http://www.learnnc.org/lp/editions/nchist-twoworlds/glossary#indispensable) crop. Today some 200 million Africans rely on it as their main source of nutrition. Cacao and rubber, two other South American crops, became important export items in West Africa in the 20th century.

The sweet potato, which was introduced into China in the 1560s, became China’s third most important crop after rice and wheat. It proved a useful supplement to diets throughout the [monsoon](http://www.learnnc.org/lp/editions/nchist-twoworlds/glossary#monsoon) lands of Asia. Indeed, almost everywhere in the world, one or another American food crops caught on, complementing existing crops or, more rarely, replacing them. By the late 20th century, about one-third of the world’s food supply came from plants first [cultivated](http://www.learnnc.org/lp/editions/nchist-twoworlds/glossary#cultivate) in the Americas. The modern rise of population surely would have been slower without them.

No species introduced from the Americas revolutionized human affairs or animal ecology anywhere in Afro-Eurasia. In terms of animal populations as with disease, the Americas contributed little that could flourish in the conditions of Europe, Africa, or Asia.