### Railroads and Commercial Agriculture in Nineteenth-Century United States

**十九世纪美国的铁路和商品农业**

By 1850 the United States possessed roughly 9,000 miles of railroad track; ten years later it had over 30,000 miles, more than the rest of the world combined. Much of the new construction during the 1850s occurred west of the Appalachian Mountains—over 2,000 miles in the states of Ohio and Illinois alone.

在1850年之前美国有约9，000英里铁轨，几年之后铁轨的长度增加到30,000多英里，比世界上其他地方的总和还要多。在19世纪50年代大部分新建的铁轨在阿巴拉契亚以西，有2，000多英里在俄亥俄州和伊利诺斯州。

The effect of the new railroad lines rippled outward through the economy. Farmers along the tracks began to specialize in corps that they could market in distant locations. With their profits they purchased manufactured goods that earlier they might have made at home. Before the railroad reached Tennessee, the state produced about 25,000 bushels (or 640 tons) of wheat, which sold for less than 50 cents a bushel. Once the railroad came, farmers in the same counties grew 400,000 bushels (over 10,000 tons) and sold their crop at a dollar a bushel.

新的铁路线带动了经济发展向外辐射。铁路沿线的农民开始从事农作物专业化生产，并在遥远的市场上出售。他们用取得的利润购买制成品。而在这之前，他们都是在家里制作自己所需物品。在田纳西州开通铁路之前，它能出产25,000蒲式耳（或640吨）的小麦，每蒲式耳只出售不到50美分。开通铁路之后，该州农民可出产400,000蒲式耳（超过10，000吨），并且每蒲式耳可出售一美元。

The new railroad networks shifted the direction of western trade. In 1840 most northwestern grain was shipped south down the Mississippi River to the **bustling** port of New Orleans. But low water made steamboat travel hazardous in summer, and ice shut down traffic in winter. Products such as lard, tallow, and cheese quickly spoiled if stored in New Orleans’ hot and humid warehouses.Increasingly, traffic from the Midwest flowed west to east, over the new rail lines. Chicago became the region’s hub, linking the farms of the upper Midwest to New York and other eastern cities by more than 2,000 miles of track in 1855. Thus while the value of goods shipped by river to New Orleans continued to increase, the South’s overall share of western trade dropped dramatically.

新的铁路网改变了西部贸易的方向。在1840年大部分西北部的粮食沿着密西西比河向南运输到新奥尔良繁忙的港口。但是密西西比河夏天水位低，蒸汽船运行有危险，而到了冬天，河上结冰又封锁了交通。像猪油、牛油和奶酪一类的货物如果储存在新奥尔良湿热的仓库里就会很快变质。然而，从中西部到达东部的铁路逐渐打通。在1885年，通过2，000多英里的铁路线，芝加哥成为了连通上中西部地区和纽约及其他东部城市的中心。因此，当经由水路运输到新奥尔良的货物价值继续增加的时候，南部地区所占的西部贸易份额就大大下降了。

A sharp rise in demand for grain abroad also encouraged farmers in the Northeast and Midwest to become more commercially oriented. Wheat, which in 1845 commanded $1.08 a bushel in New York City, fetched $2.46 in 1855; in similar fashion the price of corn nearly doubled. Farmers responded by specializing in cash crops, borrowing to purchase more land, and investing in equipment to increase productivity.

国外对粮食需求的急剧增加同时也鼓励东北部和中西部的农民变得越来越商业化。小麦在1845年纽约城里只能卖到1.08美元每蒲式耳，在1855年就卖到了2.46美元每蒲式耳。玉米的价格同样的也将近增加了一倍。农民因此专们种植经济作物，借款购买更多的土地，并且投入设备增加生产率。

As railroad lines fanned out from Chicago, farmers began to acquire open prairie land in Illinois and then Iowa, putting the fertile, deep black soil into production. Commercial agriculture **transformed** this remarkable treeless environment. To settlers accustomed to eastern woodlands, the thousands of square miles of tall grass were an awesome sight. Indian grass, Canada wild rye, and native big blue stem all grew higher than a person. Because eastern plows could not penetrate the densely tangled roots of prairie grass, the earliest settlers **erected** farms along the boundary separating the forest from the prairie. In 1837, however, John Deere patented a sharp-cutting steel plow that sliced through the sod without soil sticking to the blade. Cyrus McCormick refined a mechanical reaper that harvested fourteen times more wheat with the same amount of labor. By the 1850s McCormick was selling 1,000 reapers a year and could not keep up with demand, while Deere turned out 10,000 plows annually.

随着铁路线从芝加哥呈扇形向外扩展，农民开始在伊利诺斯州和爱荷华州购买开阔的草原土地，利用肥沃的土壤进行种植。商品农业改变了这种不长树的荒芜环境。对于适应了东部林地的定居者来说，成千上万平方英里的茂盛草丛令人惊叹。印度草，加拿大野麦和当地的大须芒草长得比人还要高。因为东部的耕犁不能穿透到浓密草丛错综复杂的根部，所以最早的定居者只是在森林和草原的边界上修建农场。然而，到了1837年，约翰 迪尔取得了锋利铁犁的专利权。这种铁犁可以切开草皮同时土壤不会黏在犁刃上。赛勒斯 麦考密克改良了机械收割机，使得收割速度提高到劳力生产的14倍。到19世纪50年代之前，麦考密克每年能出售1，000台收割机并且供不应求。迪尔每年售出的铁犁也高达10，000台。

The new commercial farming fundamentally altered the Midwestern landscape and the environment. Native Americans had grown corn in the region for years, but never in such large fields as did later settlers who became farmers, whose surpluses were shipped east. Prairie farmers also introduced new crops that were not part of the earlier ecological system, notably wheat, along with fruits and vegetables.

新兴的商品农业从本质上改变了中西部地区的地理环境。虽然美洲原住民数年来一直在此种植玉米，但是只有后来的定居者（后来变成农民）才第一次在如此广阔的土地上从事农业生产。他们把剩余农产品运往东部。这些农民还引进了不属于原有生态系统的新的农作物，主要是小麦，还有水果和蔬菜。

Native grasses were replaced by a small number of plants cultivated as commodities. Corn had the best yields, but it was primarily used to feed livestock. Because bread played a key role in the American and European diet, wheat became the major cash crop. Tame grasses replaced native grasses in pastures for making hay.

作为商品来种植的几种植物取代了当地的草类。玉米产量最多，主要用于喂养牲畜。因为面包是美国和欧洲饮食中的主食，小麦成了主要的经济作物。为了制作饲料，栽培牧草取代了当地草类。

Western farmers altered the landscape by reducing the annual fires that had kept the prairie free from trees. In the absence of these fires, trees reappeared on land not in cultivation and, if undisturbed, eventually formed woodlots. The earlier unbroken landscape gave way to independent farms, each fenced off in a precise checkerboard pattern. It was an artificial ecosystem of animals, woodlots, and crops, whose large, uniform layout made western farms more efficient than the more-irregular farms in the East.

大火曾经用来使草原上不长树，（农业商品化之后）西部农民减少了焚烧由此改变了地貌。没有了大火，树木在没有耕作的土地上重新生长出来，如果没有干扰，最终会长成林地。早期完好无损的地貌成了独立的农场，每个农场四周用围栏围起来，组成精确的棋盘状的图案。通过这些人为活动，形成了动物、林地和农作物的人造生态系统。其庞大和统一的布局使得西部农场比不规则的东部农场更加高效。