

Native Americans—the Indians who lived here long before white settlers arrived and long before statehood—were the region's first farmers. The two major tribes were the Ojibwe (Chippewa) and the Dakotas (Sioux).

The Ojibwe lived and traveled among the northern lakes and forests of what would later become Minnesota. They hunted wild game, caught fish and harvested wild blueberries, cranberries, plums and other fruits. They tapped the maple trees of the hardwood forests to make maple syrup and maple sugar. In summer Ojibwe women planted corn, pumpkins and squash. There was wild rice to harvest too.

Minnesota's wild rice has provided food for people for over 500 years. To gather the rice—a very special crop of the north's shallow waters—the Ojibwe paddled canoes out to the rice paddies, bent the stalks over the sides and gently tapped the sides of the stalks to make the rice fall into the canoes. The stalks sprang back to continue growing in the water. Some rice fell into the water as seed for the next year's crop. The Indians still hand-harvest the natural stands the same way today!

The Dakotas settled in the south and southwestern plains areas of what is now Minnesota. Dakota villages dotted the Mississippi, Minnesota, St. Croix and Cannon River banks. River water was needed for drinking and crops, and the softer soil along the river banks made for easier tilling. The Dakota men were hunters and warriors; the Dakota women were the farmers. Working with bone or wooden hoes, they harvested corn and squash. Most of the food was eaten as it ripened, but some was always stored for winter eating and spring planting.

By the early 1820's, things were changing. Fort Snelling was built on a hill overlooking the point where the Mississippi and Minnesota Rivers meet. Colonel Josiah Snelling ordered that 200 acres of the land beside the Minnesota River be tilled for crops. In 1823 they harvested wheat, oats, corn and garden vegetables. Reports say that 4,500 bushels of potatoes were stored for winter. Not bad for starters!

Soon a lot of cropping was taking place in the area surrounding Fort Snelling. Besides the Indian farmers, squatters came

along—people who settled on unoccupied land without a legal claim to do so. The squatters felt safe and secure being so close to Fort Snelling, and they traded their extra produce for other supplies at the fort.

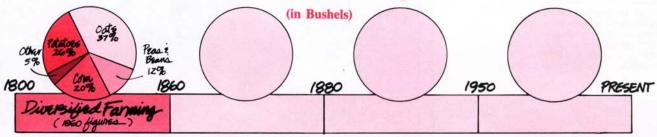


Cradling grain...a method of harvesting in the early 1800s. Photo Courtesy Minnesota Historical Society.

Another group of Minnesota's early farmers were immigrants from Europe. Fleeing near-starving conditions, they were hoping for a land where they could grow as much food as they needed. These people were self-sufficient or **subsistence** farmers. That meant they grew the food to keep themselves and their own families alive. Like the Indians, they hunted, fished and picked wild berries, too. It was a tough life, especially with little or no money, meager tools and a few household goods. But the grit and determination of the subsistence farmer helped him/her and the family survive. Were your ancesters among these hardy folks?

Early subsistence farmers of Minnesota were **diversified** farmers, meaning they planted different crops. Many planted oats, potatoes, corn, beans, kept a dairy cow or two for milk, a pig or two for meat and lard, and a few sheep for food and fiber (wool). These diversified farmers were able to subsist, or live, on what they provided for themselves.

Agricultural Output



Your timeline shows the 4 periods of Minnesota's agricultural history. Now you know about the first. Watch your coming issues; they'll complete the remaining 3 sections!

Machines Change Farming:



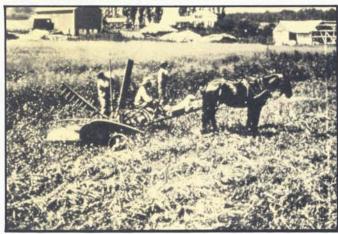
our last AgMag described how early Minnesota farmers were diversified farmers. They planted many different crops and frequently kept a few of several kinds of animals to give them what they needed to subsist, or live. Eventually, farmers were producing enough crops and livestock to meet their own needs with some extra to sell to people near and far.

Around 1860, big changes began to happen in farming. There were many reasons. Here are five of them:

- 1. The Homestead Act of 1862. This act of Congress was meant to encourage farming on the vast lands the U.S. Government had gained through the Louisiana Purchase. A citizen or immigrant who was head of a family or 21 years old could claim any 160 acres not already claimed by someone else. The rules were simple: pay a small fee, stay on the land for five consecutive years, and improve the land (generally by cultivating and building a house). The Homestead Act called "Westward Ho!" to many who began moving west to settle.
- 2. The Civil War (1861-1865). This war wasn't fought on Minnesota soil, but it affected the state's people and economy. What happened when hired hands and young men from farm families were called into military service? Farmers needed to find ways to get their work done with fewer people to help, and hand power gave way to horse power. Machines such as reapers and threshers, invented in the 1830's and 40's, made it possible to farm more land. Moving westward offered bigger spreads of land to farm, and bigger farms led to investing in more machinery-and sometimes yet more land.
- Railroad Expansion. Railroad companies were land promoters. They received large grants of land from the government, some of which they in turn sold to farmers. The money from land sales was used to build the railroads that were driving ever westward. The railroad companies moved grain for the farmers and sometimes built elevators—special buildings for storing bulk grain until it could be moved to buyers. Nonfarmers built businesses and shops near the elevators, and

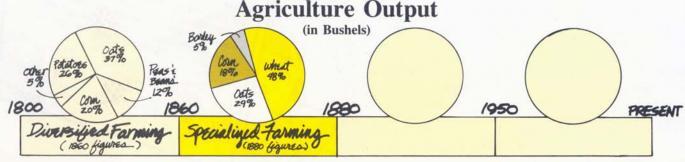
towns began to spring up along the railroads heading west.

- 4. Wheat became a specialized crop. When farming began to spread into the new expansion areas of the plains and the Red River Valley, wheat farming began to boom. By the 1880s, wheat was Minnesota's leading crop. World-wide demand for the high-quality flour milled in Minnesota (a great story in itself!) brought higher prices to the wheat farmers, who in turn expanded their operations. One-crop, or maincrop farming was called specialized farming, and wheat became the king of crops.
- 5. Bonanza farming. The giant, specialized farms that flourished during this time period were called bonanza farms or factory farms. Picture this: Enormous tracts of land (often 10,000 acres or more) were bought by business people from the East. They brought in hundreds of horses and big teams of workers and machinery. Row upon row of wagons ringed the fields at harvest time to bring in the crops on these factory farms. Millions of bushels of wheat were produced and farming in Minnesota soared to new heights.



1870's...self raking reaper, reaping grain. Photo Courtesy Dahl Collection, State Historical Society of Wisconsin.

You'll find out in the next AgMag why bonanza farming was a short-lived boom; in the meantime wheat was the king of crops and Minneapolis became the Flour Milling Capital of the World.



The Return of Diversified Farming



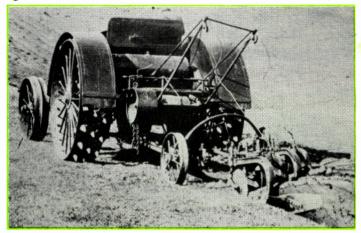
Vou remember from your last AgMag that wheat was the king of crops in Minnesota throughout the late 1800's. The booming wheat market boosted **specialized farming**, especially in the Red River Valley where huge **bonanza farms** of 6,000 acres or more produced millions of bushels of wheat a year. It also made Minneapolis and St. Paul a world flour milling center by the 1890's. Because the demand for flour was so strong, the demand for wheat was strong; farmers got a good price so they kept producing wheat for a good market.

But then things started to change. The booming bonanza farms produced so many bushels of wheat that a **surplus** (an oversupply) was created. When there's too much of something, its value is less than when it is scarce. Wheat **supply** was greater than wheat **demand**, and prices for wheat went down. At the same time wheat prices were dropping, farmers had others problems, too. Not only were they receiving less money per bushel of wheat, they were growing fewer bushels of wheat per acre. What caused this turn of events? The economic depression of the 1890's meant people didn't have enough money to pay good prices for wheat. The soil was becoming exhausted, too. Continuous tillage of the same fields for several years used up the nutrients needed for healthy crops and yields were smaller.

Another problem during these changing times was increased land value. That's good news and bad news. Many farmers had received their 160-acre farms free from the government under the **Homestead Act.** Now that the land was tilled and cultivated to produce crops or feed livestock, its value was greater. Farmers were happy to see land increase in value, but what if they wanted to buy more land to add to the size of their farms? Now they had to pay higher prices for land. To make the land pay for itself, they planted crops that made as much money as possible. Wheat was no longer such a profitable crop, and many farmers began growing corn, oats, and a new hay crop called

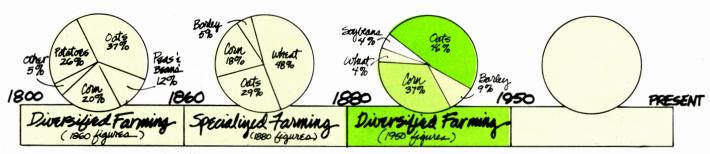
alfalfa. Some planted fruit trees and others discovered they could make money in dairy farming, especially in the rolling southeastern Minnesota countryside.

Meanwhile, in the Red River Valley, bonanza farms continued to produce millions of bushels of wheat. The grain milling industry had grown powerful enough to buy wheat anywhere. Naturally, millers wanted to pay the lowest wheat prices. Sometimes that meant buying from growers outside Minnesota. How do you think this affected our bonanza farmers? There was a great supply of wheat, and you know what that does to the prices. Wheat prices stayed low and it was the beginning of the end for the bonanza farms. When they were unable to keep growing wheat for a profit, many bonanza farms, owned by absentee owners, were divided and sold. This created many small farms instead of a few huge ones. Farmers on the smaller plots of land followed the lead set by those in other parts of Minnesota, and the switch was back to diversified farming once again.



Early 1900's tractor in field. Increased mechanization allowed the farmer to be more productive. Photo Courtesy Minnesota Board of Water and Soil Resources.

Agricultural Output



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Moving Through The '80s
1950-Present

The story of agriculture is the story of a changing world. In the other AgMags you read about the changes from hand power to horsepower and from horsepower to machines...all giant leaps for production. By 1954, tractors outnumbered horses and mules. Time-saving inventions like the combine could cut, thresh and clean crops in just one pass through the field. Farmers could farm more land and produce more food in less time. Electricity became widely available; it was another worksaver that increased production. More cows could be milked in less time with electric milking machines. More land could be irrigated with electric pumps. More grain could be moved with electric elevators. Then computers came along to help farmers and agribusinesses.

The chemical era of 1950 to 1980 raised production even further. Chemicals and fertilizers were developed that controlled weeds, pests, insects and diseases as they boosted growth and yields. But there were consequences. Your January AgMag described some of the serious concerns, such as chemicals getting into groundwater supplies.

Now in the 1980s, American agriculture is being propelled into the age of biotechnology and information technology. This age may bring the greatest changes ever. That's good, because predictions are that a majority of the food we'll need by the year 2000 must come from increased yields that can only be possible through new technologies.

We're just on the threshold of the biotechnology era. The big contributions to food crops are yet to come, but here's a peek at possibilities. New biotechnologies in *plant agriculture* could improve crops to:

- produce more and higher quality proteins;
- resist insects and diseases;
- * grow in harsher environments;
- ★ provide their own nitrogen, fertilizer, reducing the need for chemicals that harm groundwater, air and soil.

In animal agriculture, animals will produce more offspring, meat, eggs etc. (See p. 8). Animal disease prevention and treat-

ment will be greatly advanced.

Information technologies (computers) give scientists ways to see cells and study biological systems. That information will improve production in both plants and animals. With careful planning and respect for the environment, all this will help create a food supply that's larger, safer, less expensive and more nutritious.

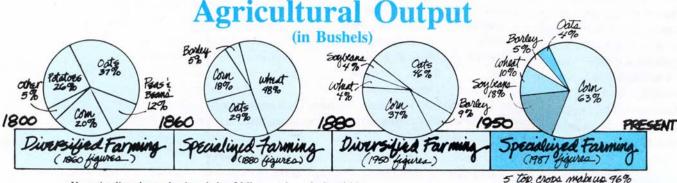
Today's farms are specialized again, but different from the bonanza farms you learned about in your second AgMag. Now, many Minnesota farmers produce one of three types of products: cash crops such as grains; livestock; and dairy. Our state ranks in the top ten in all three categories.

The timeline at the bottom of this page is a reminder of the switch between diversified and specialized farming through the years. In this AgMag you read about new farming choices. Some farmers are diversifying again to avoid "putting all their eggs in one basket." What's *your* prediction for the timeline of the next 25 years?

Agriculture has been continuously changing since the first seeds were planted and the first animals tamed. Change will continue. That's one thing we can count on!



Technology certainly has changed machinery in agriculture. This monster of a combine is very fast and efficient. Photo Courtesy MN Dept. of Agriculture.



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