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# corn FACT BOOK

from America's Family Corn Farmers

[www.CornFarmersCoalition.org](http://www.CornFarmersCoalition.org)



A story of technology  
and innovation.



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*Hora family | Washington, Iowa*

Kurt and Heather Hora own and operate their family farm in Washington, Iowa. "We strive to produce a better crop every year in terms of yields, but also in terms of reducing the amount of fertilizer and other inputs for every bushel we produce," Kurt said. "It's the smart thing to do for today and important for the next generation who will farm this land. We owe it to them to do the right things now."



**90% of all corn is produced by family farms.**

Source: USDA



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## Introduction

Through innovation, technology and hard work, America's corn farmers are producing record crops, allowing them to satisfy all the traditional uses of corn plus allow the United States to build a growing portfolio of renewable products that utilize corn as a feedstock.

Farmers battle the weather – a wet spring, heat and dry weather in August and a combination in the fall during the critical harvest season. Occasionally you'll even see a farmer bucking snow drifts with his combine in an effort to get the last few acres harvested.

The results are astounding, with the highest yields and crop production numbers in history coming over the last seven years, despite some downright terrible weather. We're talking corn being stored in every nook and cranny available and even on the ground. The spring of 2009 saw unheard of planting delays and a fall that was wet and cold. Yet a record 13.1 billion bushels of corn was produced with a record average yield of 165 bushels per acre nationwide – a yield 20 percent larger than in 2000.

How can this happen? How can American family farmers continue to produce more corn per acre? How can they produce 20 percent more corn per acre than any other country in the world? There are a lot of ways to answer these questions, but a big part of the answer is simply good old fashioned ingenuity and hard work.

Ingenuity comes from the willingness to try new things – to learn and adapt, to get better. Family farmers – who grow 90 percent of the corn in America – have certainly done that. They use more precise equipment and take advantage of the resources that allow them to adopt conservation tillage, which keeps the soil in place and holds in moisture. They check the nutrients in the soil and replace only what is necessary. They use seed that has a great yield potential and the ability to protect itself from insects.

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Hard work? Well, that comes naturally to any farmer who relies on the weather, complex equipment and dozens of unplanned situations that require attention. It's simply the nature of the business – and farmers thrive on it.

Their success benefits many. After all, more than 300 million people living in this great country need to eat. Without corn farmers – all farmers, really – we wouldn't be here. Every year we ask farmers for more food but give them less land on which to produce it. We want farmers to be more efficient and use less energy. Every year they manage to succeed – with less than 2 percent of the population feeding the rest of the country (and managing to export a fair bit as well). Certainly farmers should be respected for the work they do – and perhaps we should acknowledge that they may indeed know what they are doing.

Corn farmers, for example, ensure livestock and poultry producers have access to a high-quality feed ingredient. Plus they produce a crop in such bounty, skilled processors are able to convert corn into dozens of useful products that find their way into food and non-food applications. Ethanol producers convert starch from the kernel into ethanol and return the rest as a concentrated protein feed for livestock. Researchers, meanwhile, are looking for even more opportunities to use corn as a replacement for dozens of petroleum-based products.

Why keep looking? Why do we keep exploring new opportunities for corn? The answer lies in the fact that corn yields continue to advance – and do so rapidly. We're talking yields that in a decade may be 40 percent larger than today and 80 percent larger by 2030. This gives us many opportunities to take advantage of a crop adapted to grow incredibly well across the country and to make the most of the innovation and technology on America's family farms.

At the same time, farmers aren't resting on their laurels. They're getting better at what they do. Every year. They use fewer chemicals and fertilizers, practice conservation tillage, purchase high-tech equipment and more to ensure they are leaving their land in better condition than when they started farming. Certainly someone who works with the soil for a living wants to care for it in the best way possible – especially since corn farming is so often a multi-generational undertaking.

To family corn farmers, success isn't measured by a single growing season, but in the ability to produce a crop in the right way and leave that legacy for the future.

In this edition of *The Corn Fact Book* we highlight a few farmers and tell a bit of their story. We highlight some important facts and provide some background as to how American farmers became so successful at raising corn – and the opportunities that provides for us all.

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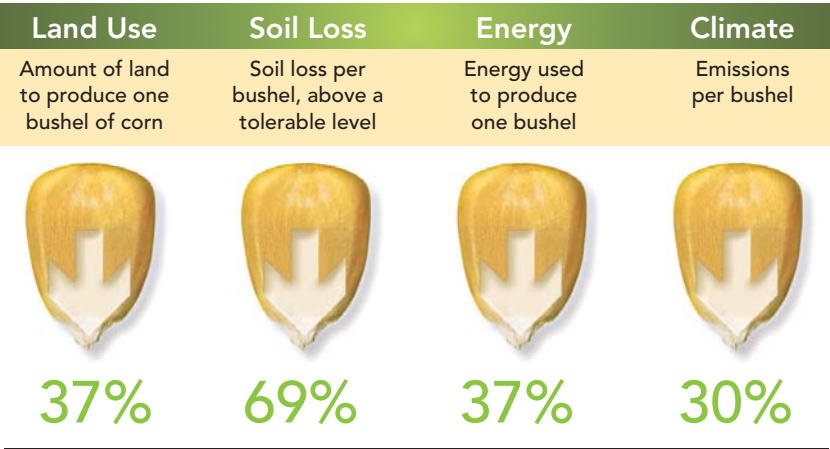
In the mid-1950s, Henry A. Wallace, former Vice President, former Secretary of Agriculture and an early developer of hybrid seeds, noted that the Corn Belt had developed into the “most productive agricultural civilization the world has ever seen.”

# The Corn Farmers Coalition

To help tell the story of the American corn farmer, farmers from across the country came together through their state corn organizations to found and fund the Corn Farmers Coalition. They partnered with their national organization – the National Corn Growers Association – to help highlight how farmers care for the land and produce corn in such abundance that it is available for use in many new industries.

The largest yields in history all occurred in the last seven years. Consequently, seven of the largest crops in history also occurred over the last seven years.

## THE IMPACT OF GROWING CORN, 1987-2007



Corn production over this 20-year time period grew 83 percent, but new production practices, advanced technologies and more allowed America’s corn farmers to produce significantly more corn with a smaller environmental footprint. (Source for data: Field to Market Report.)

The farmers who comprise the coalition have as diverse a set of interests and backgrounds as those who read this publication. However, the soil and the corn seeds they plant in it every spring tie them together. It gives them a common purpose and desire to let the world know how farming has changed – and the opportunity we have to grow a future around renewable products made from corn.



America's corn farmers are by far the most  
productive in the world,  
growing 20% more corn per acre than  
any other nation.

Source: USDA



**Chris Wagner | Longmont, Colorado**

Chris Wagner of Longmont, Colorado knows that America's corn farmers are the most productive in the world. "We are in a mode of continuous improvement," Chris said. "We have good land, good hybrids and the production knowledge to get the job done the right way." Chris is a third generation family farmer who is involved in his community and referees basketball games in his spare time. He lives with his wife, Janie, a schoolteacher, daughter Sarah and the family pet "Max."



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## Family corn farmers. American ingenuity.

By the time Lewis and Clark began their expedition from the Illinois Territory in 1804, what we know today as corn had been grown successfully by settlers for more than a century across the continent. As it was domesticated over thousands of years prior, corn developed into a versatile crop, growing in a number of climates and soil types. Corn became a dependable staple across the Americas.

When reports from the Lewis and Clark scientific journey known as the “Corps of Discovery” began to trickle back East, farmers and settlers pointed their wagons West. They were looking to settle in the vast lands in the Central Plains described by Lewis and Clark as being fertile and rich. Perfect for growing corn, wheat and cotton. Perfect for providing the agriculture resources needed by a growing nation.

From this humble beginning of settlers scratching a living from the soil, farmers aimed to produce a better crop every year, to take one year’s knowledge and apply it to the next. As it turned out, the vast Midwestern United States and its fertile soil is an ideal location to grow corn. As decades passed, farmer know-how exploded. Land-grant universities sprang up and research led to improved corn varieties and farm management.

Soon, these fertile plains in the middle of the United States became known as the Corn Belt, even though the widely adaptable corn plant allows it to be planted and harvested with great success in nearly every state and many countries around the world.

### A hybrid by any other name

In the late 1880s, experiments involving a new method of breeding seed corn showed great promise. Corn, plant breeders found, can express heterosis or hybrid vigor.

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This means plant breeders can take two corn plants with favorable characteristics and cross them – allowing one of the plants to pollinate the other. If all goes as planned, the “hybrid” seed produced from the mating would be superior to both parents when planted and grown. It could have a higher yield potential, be more uniform, grow as a hardier plant and more, depending on how inherent the desirable characteristics were in each parent.

**Is a national average of 300 bushels of corn per acre possible? Consider this: The average yield of National Corn Yield Contest winners last year was 307 bushels per acre. If they can do it, certainly others will follow.**

This understanding created immense opportunities. Suddenly plant breeders could cross and re-cross different varieties of corn with the hope of creating a hybrid that could outperform other corn seed. Universities and agriculture publications began to promote the benefits of corn hybrids and national corn yields began to rise as farmers, seeing the benefits in their own fields, began to purchase the latest hybrids every spring.

It was a new and exciting age of agriculture. In 1933, less than 1 percent of planted corn was hybrid. By the early 1940s, hybrid usage rose to 78 percent and continued upward. In the mid-1950s, Henry A. Wallace, former Vice President, former Secretary of Agriculture and an early developer of hybrid seeds, noted the Corn Belt had developed into the “most productive agricultural civilization the world has ever seen.”

Such productivity continues today, with America’s corn farmers producing 20 percent more corn per acre than any other country in the world.

## Record after record

How do America’s family farmers out-produce everyone else? The roots of this success run deep and wide.

There’s know-how – the everyday working knowledge and understanding of how best to plant, raise and harvest a crop. This is not simply tossing a few seeds to the ground and hoping for the best. It involves high-tech equipment that places hybrid seeds at the desired depth in the soil and the optimal number of seeds per acre. It’s the ability to help keep that crop healthy during the growing season. The understanding of where plant nutrients are needed and when – and the technical savvy to do just that. The optimism to invest hundreds of thousands of dollars into a crop Mother Nature can wipe out in an instant.

Then comes the continuing advancement of hybrid seed corn – every year means better hybrid seeds for farmers. Plant breeders today have advanced tools to better predict which desirable characteristics will come from its two parents. They can identify those with potential and run tests before a single seed is ever planted in the ground. Add the advances gained through biotechnology and the potential from mapping the corn genome, its DNA, and it’s safe to say today’s yields – unimaginable a generation ago – are just the beginning.



Seven of the largest crops in history all occurred in the last seven years, culminating with 13.1 billion bushels produced in 2009. That's enough corn to fill bushel baskets – the size of a small round laundry basket – that when lined up could go from the earth to the moon and back more than seven times.

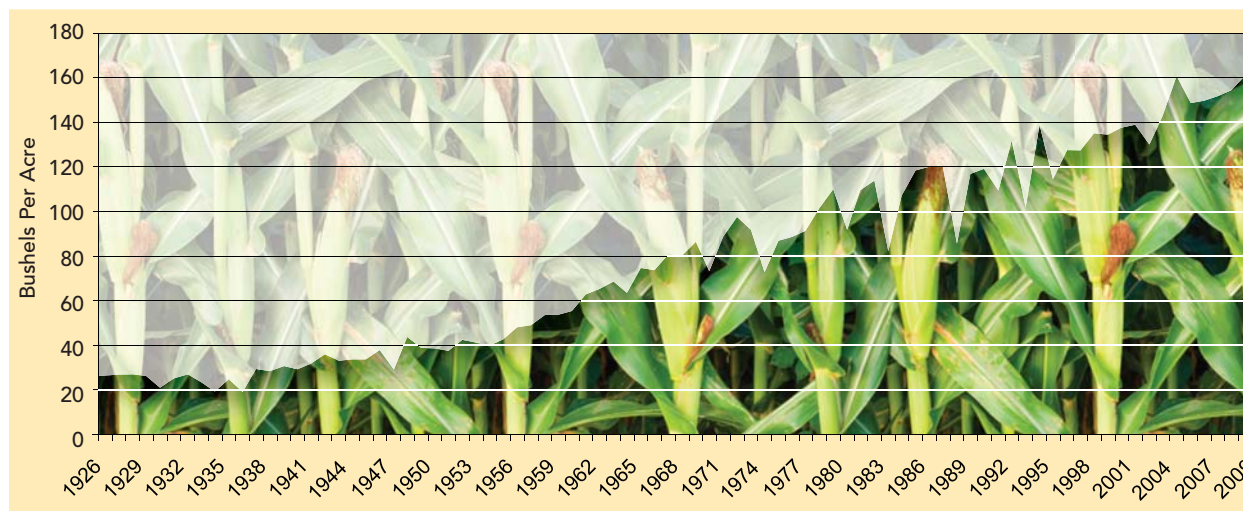
Yet even today's yields are impressive compared to those of just a decade ago. The national average and record 164.7 bushels produced on each acre in 2009 was 20 percent larger than the average yield in 2000 – and plant breeding experts estimate yields may jump 40 percent before 2020 and, perhaps, hit a national average of 300 bushels per acre by 2030.

Is this simply a pipe dream? Consider this: The average yield of National Corn Yield Contest winners last year was 307 bushels per acre. Contest winners are generally trendsetters. If they can do it, certainly others will follow.

These higher yields will mean crops of 15 billion bushels and more – all from the same number of acres.

Farmers saw this incredible upward trend in corn production coming. It's why they've invested in new markets and new opportunities, and because of this, we have the opportunity to use corn in ways we never thought possible – beyond the traditional markets.

## AVERAGE CORN YIELDS



Corn farmers produced a record 164.7 bushels per acre in 2009 — a yield that was 20 percent larger than in 2000. Researchers estimate yields may surpass an average of 210 bushels by 2020 and reach a national average of 300 bushels by 2030.

**James Tanner | Platteville, Colorado**

James Tanner is a second generation farmer who has been farming in the Platteville, Colorado area for three decades. "My wife Lynette grew up in Denver and never had a farming experience until she married me," James said. "We've worked hard on the farm and in several related businesses, but farming is what keeps us grounded. It's our passion and by caring for the land, it takes care of us and supports the local economy." James primarily raises corn, alfalfa and wheat, although he's been known to keep a few hogs and cattle over the years.



**America's corn farmers exported \$9 billion worth of corn last year – one of the few American products with a trade surplus.**

Source: USDA



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## Imagine the possibilities

So, American farmers are good at growing corn. Very good, in fact. How does that fit in with today – or tomorrow? How will the growing productivity of family corn farmers be used? How can we take advantage of this crop and cultivate its economic value?

For many years, farmers saw their expanding ability to grow corn stacking up against slow-growing demand. They decided to do something about it, forming organizations that could promote research, technology and invest in new markets.

After all, less than 1 percent of the country's crop is sweet corn – the kind we eat frozen, from a can or fresh off the cob. A vast majority of the crop is field corn – yellow corn is comprised of starch, fiber, protein and oil. Farmers knew if they could develop new markets that use those components they could keep supplies from getting burdensome and stifling ingenuity.

Certainly feed for livestock and poultry has also been a critical and important market for corn – and still is. Ditto for corn exports. Yet demand from both of these traditional markets has remained fairly consistent over the years even as corn production continued to expand more quickly. Corn farmers weren't the only ones getting better: Livestock and poultry producers themselves were producing more meat, milk and eggs with fewer inputs, including fewer bushels of corn.

### Unlocking the kernel

Fortunately, as our knowledge of corn production grew, so did our understanding of the individual kernel. We began to discover new ways to harness the components that make up the kernel. Once companies saw the capabilities, dozens of new products made from corn came to market.

Corn starch, for example, has dozens of uses. It can be a thickening agent and an anti-caking agent. It helps frozen foods maintain their texture. Roasted starch – dextrins – can be found in hundreds of adhesive applications. You can find citric and lactic acid produced from corn in hundreds of foods and other products. (For more, go to <http://WorldOfCorn.com>.)

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Another new use for corn is fuel ethanol. To make ethanol, the starch in the kernel is converted to sugar and fermented – the rest of the kernel is returned as a high protein livestock feed. The result is a renewable fuel that has tremendous benefits. In fact, corn-based ethanol can be found blended with gasoline in most fuels sold today. In 2009, U.S. ethanol production supported thousands of jobs, added more than \$15 billion to federal, state and local government tax revenues and displaced more than 360 million barrels of imported oil. As the sector continues to grow, so will these positive developments.

Farmers saw that corn production was growing faster than demand. They knew that developing new markets would keep supplies from getting burdensome and stifling ingenuity.

Like corn farmers, ethanol producers are also getting more efficient. An article in the scientific journal "Biotechnology Letters" noted ethanol production has seen a 28 percent reduction in

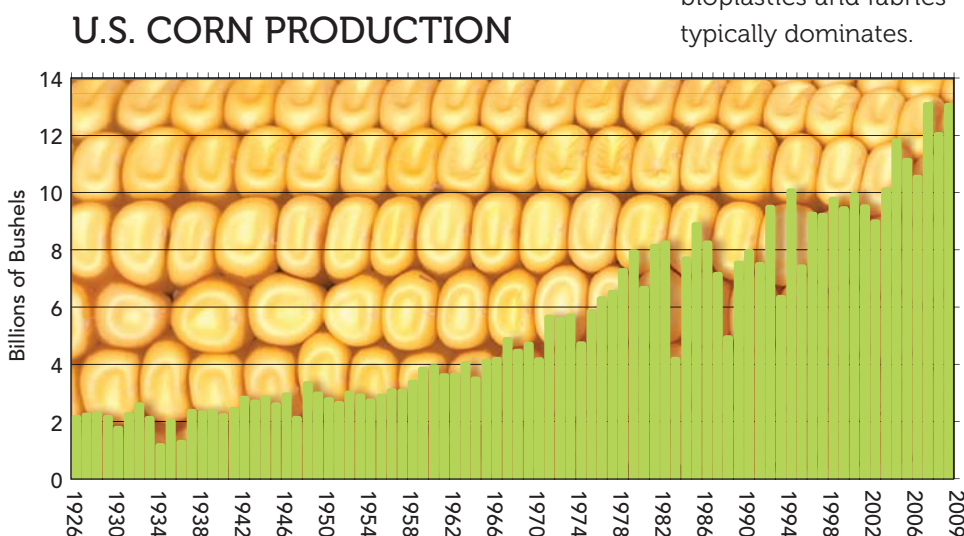
energy use, a 32 percent reduction in water use, and a 5.3 percent increase in ethanol yields all in less than a decade.

A recent report from the U.S. Department of Agriculture noted corn-based ethanol has a net energy ratio of 2.3 to 1, meaning for every unit of energy it takes to make ethanol, 2.3 units of energy are produced as ethanol. Every year, that figure grows simply because corn and ethanol production gets more efficient. A study in the "Journal of Ecology" noted that between 10 and 19 gallons of ethanol are produced for every gallon of petroleum used in the entire corn to ethanol production life-cycle.

Corn-based ethanol is the most successful renewable fuel in history – yet farmers know it is just the beginning. Soon, more ethanol may come from corn cobs and other agricultural biomass, and thanks to corn-based ethanol leading the way, markets will be ready.

## Another petroleum replacement

Besides replacing oil-based fuels, researchers have discovered ways to convert corn into bioplastics and fabrics – areas where petroleum typically dominates.



A record 13.1 billion bushels of corn were produced in 2009 — a 32 percent increase over what was harvested in 2000. The tremendous growth in yields and production allows corn to be used in new ways, including ethanol, fibers and bioplastics.



Corn is incredibly versatile and our ability to grow it so successfully allows us to use it in a number of non-traditional ways – from ethanol to bioplastics.

In fact, you can find corn-based plastics in a growing number of utensils, gift cards, safety seals, snack chip bags, water bottles and more. These versatile plastics are compostable, meaning that over time they will break down completely when composted. Characteristics vary between different forms of bioplastics, allowing them to be combined and create new products. The opportunities are endless.

Others take these corn bio-materials and spin them into fabrics, again replacing oil-based polyester and nylon. These materials are soft on the skin and have a number of performance advantages. Alternatively, tough, stain resistant corn-based fibers are spun into carpets.

Yet these petroleum-replacing products are just the first wave – research underway now will result in greener chemicals that can be used in industrial applications instead of their oil-based counterparts.

Yes – there is a trend here. Corn is incredibly versatile and our ability to grow it so successfully allows us to use it in a number of non-traditional ways. All it takes is a little imagination and ingenuity.



Jon Holzfaster | Paxton, Nebraska

## Fuel and feed from the same bushel

Some of Jon Holzfaster's corn ends up at a corn-based ethanol plant – and the cattle in his cattle feeding operation couldn't be happier for what they get in return.

"That return is distillers grains – a feed ingredient produced by corn ethanol plants," explained Jon, a farmer from Paxton, Nebraska. "Ethanol plants only use the starch in the kernel of corn, so the rest of that kernel comes back as livestock feed," he said. "Cattle love it and they perform very well when it is in their feed."

Ethanol, essentially, is a two for one bargain. "We get fuel and feed, not one or the other," said Jon, who holds a degree in ag economics from the University of Nebraska.

Jon also practices precision agriculture on his farm, which provides many benefits. "My fuel supplier called wanting to know what he could do to get our business back," he said. "The fact was, we hadn't switched suppliers. We were simply saving so much fuel that it was having a visible impact on his revenue."

Jon uses "strip-till" practices, a type of conservation tillage that involves preparing a narrow seedbed and applying seed and fertilizer precisely using satellite-based technology that is accurate to less than an inch. "We're preparing the ideal environment for the seed as we till, fertilize and plant in one pass – and that saves time and fuel," he said.

A third-generation farmer, Jon said farmers have changed with the times through a combination of necessity and technological advancement.

"We're more efficient than ever. We're using less fuel and traveling across the land fewer times. We have better genetics to help us optimize yields from existing acres and our use of chemicals has decreased dramatically," he said. "In this respect, the good old days are actually happening right now."

## Cleaner and Greener

At the same time corn farmers produce record crop after record crop – and discover new ways to use those crops – they’ve changed how they grow it, too.

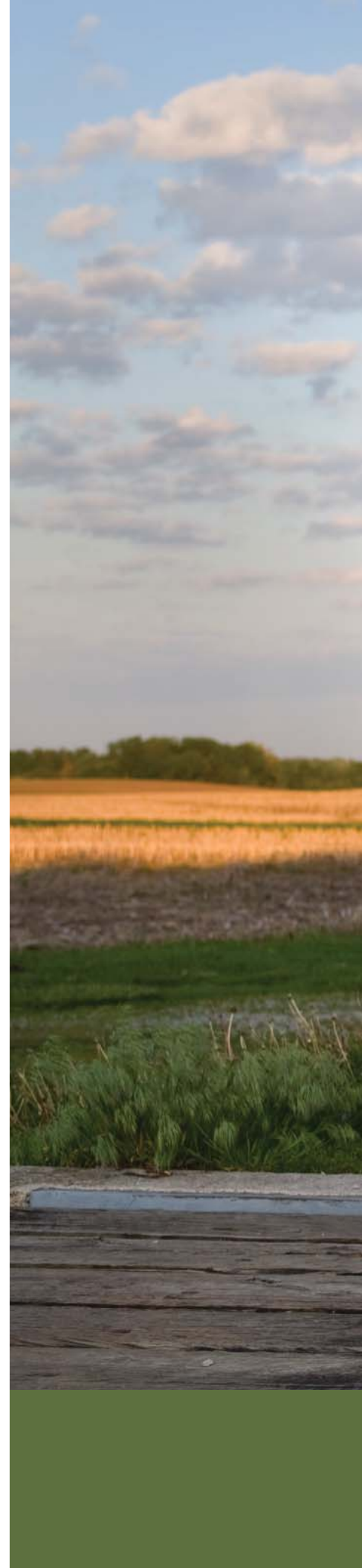
In other words, the way things were done 40, 20, 10 and even five years ago simply don’t apply any more. Things change: management practices, equipment, technology, science. It all comes together in a tractor cab, which, in some cases, is as wired (and wireless) as a business park.

Today’s farmers have adopted conservation tillage on millions of acres of land – and continue to expand the use of these no-till and minimal till practices. The benefits for the environment are significant. No-tilling means remnants from the previous year’s crop are left untouched. Not only does this improve the soil over time, but it significantly reduces soil run-off during snowmelt or heavy rain. In fact, the U.S. Department of Agriculture noted America’s corn farmers have cut soil erosion 44 percent in two decades by using these innovative conservation methods.

Yet eliminating run-off keeps more than just soil in the field where it belongs. It also keeps crop nutrients in place and holds moisture in the soil during the growing season. Plus, by traveling across the field less often, farmers use less diesel fuel. Using less fuel means using less energy – and the energy used to grow a bushel of corn has fallen 37 percent because of this and the adoption of other technologies.

It all ties together well – but it’s not the whole story. Conservation tillage is an option for more farmers today because of technological advances. Corn plants that are resistant to safer herbicides means controlling weeds in a no-till field is more efficient and less harmful to the land – and people. Seeds that resist insect damage mean fewer insecticides (and fewer passes across the field) are needed to protect the crop. These technologies are made possible through advances in biotechnology.

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## John and Sue Adams | Atlanta, Illinois

John and Sue Adams are the fifth generation to own and operate the family farm in Atlanta, Illinois.

It's a farm they own along with several family members of different generations. "We believe strongly in conservation tillage and adopted no-till on our farm in 1983, significantly reducing wind and water erosion," John said.

The Adams use Integrated Pest Management to determine which crop production products to use to control insects and weeds and worked with a university on nitrogen rates studies so they could better understand the amount of nitrogen to apply to their cornfields for the most profitable yields and income. These efforts allowed them to increase corn yields by 60-75 bushels per acre while applying significantly less insecticide, crop protection products and fertilizer – and using 50 percent less fuel to power their equipment.

A photograph of John and Sue Adams, a fifth-generation farm family in Atlanta, Illinois. They are standing in a field with a large metal grain silo in the background. John is on the left, wearing a green jacket and a baseball cap, and Sue is on the right, wearing a blue jacket. They are both holding a large white sign with the number 8. In front of them is a wooden basket filled with yellow corn cobs.

**An acre of corn removes 8 tons  
of harmful greenhouse gas, more than that  
produced by your car annually.**

Source: EPA



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**Adam Howell | Middletown, Indiana**

Although he considered becoming an investment banker while attending an Ivy League school, farmer Adam Howell of Middletown, Indiana noted that he “grew up on a farm and probably knew all along that I would eventually farm myself.” Adam, along with his wife Keri and three daughters, operates their family farm with eight close family members, including his parents and siblings and their families. In addition to growing corn and soybeans, the Howell farm produces tomatoes and pumpkins.

**Thanks to new, innovative fertilization methods,  
today's American corn farmers are producing  
70% more corn per ounce of fertilizer.**

Source: USDA



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## Farming by 'prescription'

If you're familiar with a GPS – a global positioning system – unit that lets you know if you should turn left or right (or that it's "recalculating" after missing a turn), you have an idea of what farmers have access to in the tractor cab.

What farmers use, however, is much more precise – from 6-7 inches all the way down to less than an inch accuracy while moving across a field. This technology can do more than just provide directions – it can actually steer the tractor or harvesting equipment, keeping it on track while the farmer monitors all the other pieces of technology and goings-on. It reduces overlaps in the field, which are wasteful because they use up more seed and nutrients and require more passes in the tractor.

Along the way, an on-board computer keeps track of everything through an entire growing season – from how many seeds are planted on every acre, to where crop nutrients and other inputs have been applied to how many bushels are being harvested at the end of the year. All this data is available via a thumb drive or wirelessly to a home computer where the farmer can examine the data.

What does that data provide? It lets the farmer see how a field performed – what parts of the field had high yields and what parts didn't. When combined with soil sampling, which checks the nutrients available to plants in different parts of the field, custom nutrient applications are possible.

This means a farmer applies more nutrients in some areas that need it and less in others. The goal is to have only what is needed by the plants in the right place every season. If a farmer has advanced technology in his planter, he can even control how many seeds are planted in different parts of the field – more seeds where yield potential is higher and fewer where it isn't.

**America's corn farmers have cut soil erosion 44 percent by using innovative conservation tillage methods.**

Combined, all of this technology and know-how is referred to as "prescription agriculture" because farmers calculate and then prescribe everything from crop inputs to seed placement at multiple points across a field. The plan is carried out with the assistance of the on-board computer, which controls, based on the prescription, how much fertilizer is applied as the tractor moves across the field.

(continued)



Ken, Joe and Evan Davis | Leesburg, Ohio

## Technology means more with less

**L**ike a growing number of U.S. farmers, Ken Davis uses a global positioning system to assist in planting seeds and applying just the right amount of fertilizer on his fields.

It helps produce more corn without increasing input costs from chemicals such as fertilizer or herbicides, said Ken, whose farm is outside Leesburg, Ohio, a town of 1,200 surrounded by the checkerboard squares of dozens of other family farms.

Four generations of Davises have farmed this land, going back to 1932. Yet these days Ken, who has a master's degree in agriculture, has a leg up: New technology means larger yields every year with less of an environmental impact.

Ken figures the fields he's already cultivating using GPS are saving him 10 percent in fuel, seeds and pesticide. He'll also be doing less tilling of his corn, which saves about 40 percent of the fuel he needs to plant and harvest his crop, disturbs the land less, prevents erosion and keeps greenhouse gases in the soil and out of the air.

"Every year," Ken says, "corn farmers are proving to the world that we can, and are, producing an abundance of safe, healthy, nutritious food, feed and fuel, and we are doing it while improving the quality of our environment, our communities and our economy. Next to our creator and our family, the land is a farmer's greatest asset. Only by caring for the land can we hope to reap any reward."

*Cleaner and Greener...continued*

Thanks to these and other innovative fertilization methods, American corn farmers are producing 70 percent more corn per ounce of fertilizer applied.

## What does the future hold?

The advancements made over the last few years in how farmers grow corn are just the start. While the accomplishments are incredible, research continues for new ways to reduce farmers' environmental footprint while growing yields.

The understanding of conservation tillage, the timing and placement of nutrients and more will only be better understood with time. Production methods like cover crops are gaining interest and advanced hybrids will offer new opportunities to produce more corn with fewer inputs.

For example, drought tolerant corn hybrids will soon be widely available. These hybrids will allow corn to yield better when stressed by a lack of water – times when Mother Nature brings on the heat and rain is lacking. It will also allow farmers in more drought-prone areas here and around the world to produce more consistent crops.

There are more than 300,000,000 people living in the United States. Only 2,000,000 farm so the rest of us can eat – and of that number 300,000 are family corn farmers.



"Our collective definition of a 'good job' has evolved into something that no longer resembles Work, and that has detached us from a great many things, including our food, and the people who provide it."

– Mike Rowe at [MikeRoweWorks.com](http://MikeRoweWorks.com)

Actually, many hybrids grown today are already more drought tolerant than those grown 20 and 30 years ago because their roots have built-in insect protection. Strong roots allow plants to reach down farther for water and better take up nutrients.

All of this is important because the only water most American-grown corn receives comes in the form of rainfall. In fact, 87 percent of the crop is only watered by Mother Nature. The rest also receives rainfall but is supplemented with some water via irrigation – although technology continues to reduce the amount of water applied.

What else does the future hold? Well, it's pretty wide open, especially considering that scientists have decoded the corn genome. Researchers are essentially looking at a blank slate. It's exciting to imagine – the opportunities are endless.



Calvin Haile and family | Dunnsville, Virginia

## No-till makes a difference

"Taking our operation to 100 percent no-till has reduced at least two trips across the field and in many places more. This saves us in fuel and equipment wear," said Calvin Haile of Dunnsville, Virginia.

Calvin, who farms with his father, James, said no-till also prevents erosion on their farm in Virginia's Northern Neck alongside Chesapeake Bay.

The Hailes grow corn, wheat and soybeans on 2,500 acres, which is about the average size for a farm in Virginia. Calvin also offers custom services to other farmers. The farm has three full-time employees and two part-timers.

Calvin said he uses a nutrient management plan to ensure that he spreads fertilizer efficiently and uses only what is necessary to meet the plants' needs. He also plants winter cover crops that fertilize the fields naturally and help hold soil and moisture in place, while insect-resistant seed has reduced his pesticide use 10 percent.

In the photo above, Calvin is shown with his wife Noel, father James and mother Gerry. Calvin and Noel's children are, from left, Jackson, James III, Brooke and Sydney.

## Down-to-earth people

Why does a farmer farm? Planting a seed every spring takes a bit of optimism – hoping the seed will grow and mature, that there will be enough rain but not a storm to wipe out the crop, that there will be enough warm days but not so much heat that it stifles the crop. Corn markets move up and down, seemingly at a whim. It's quite a life.

Yet it's a life farmers wouldn't trade for anything.

Why? The reasons are as varied as the farmers themselves. Some feel they are called to do the work they do, working with land and watching a crop grow and mature. They love the lifestyle and living in a rural community. They are proud of producing grain that feeds animals and people and helps fuel a nation. They appreciate the opportunity to work in a multi-generational business. They love to watch their kids grow up learning to appreciate hard work and stewardship. They take great pride in their work while caring for the land and water so their farm can be passed along to the next generation.

Of course, these are generalizations, and while true for many farmers they may not tell the whole story for others. Thanks to new technology, however, it is easier for anyone to reach out to a farmer and ask a question.

### Get to know a farmer

The opportunity to talk directly to a farmer comes, in a big part, due to new communication tools, including smart phones. They allow farmers to be online where they are accessible to others – from Facebook to Twitter to blogs.

More and more farmers understand that they need to tell their story – how they farm and why – so people have a better understanding. Social media and its related tools make that easier, especially since a growing number of farmers have smart phones that allow them to post photos and videos while commenting on what they are up to or answering questions.





## ***Stirling Family | Martinton, Illinois***

Scott Stirling, his wife Connie and his son Andy of Martinton, Illinois are a prime example of a multi-generational, family owned and operated corn farm. Together they work and manage their farm with an eye toward the future. "We strive to do the best job we can on every row every year" Scott said. "That means caring for the soil, minimizing crop inputs and learning from others. We want our farm to be successful on many levels so we can continue to enjoy it now and future generations can live off this land, too."



**95% of all corn farms in America are family owned.**

Source: USDA



**CORN FARMERS  
COALITION**





To help tell their story, American corn farmers joined together to form and fund the Corn Farmers Coalition. Producing *The Corn Fact Book* and [www.CornFarmersCoalition.com](http://www.CornFarmersCoalition.com) are part of their efforts – but so is providing messages like these shown in Union Station in Washington, D.C. In fact, signs like these were seen by 60,000 people a day in Union Station alone because the Corn Farmers Coalition took every available ad spot in the station. Over the two-month effort, ads across the Metro, Reagan National Airport and other key locations in Washington were expected to make more than 10 million impressions.

Those who have questions about farming can go online and search them out. On Twitter, a popular hashtag or word to search for is "agchat." Many farmers of all kinds follow that hashtag and would be able to help – or seek out the answer.

While there are more than 300 million Americans – and growing – less than 2 million are involved in farming and provide the basis for all the food we enjoy today. If broken down further, there are only about 316,000 corn farms in the United States and 95 percent of those – some 300,000 – are family farms, many of which are multi-generational.

**"Farming looks mighty easy when your plow is a pencil and you're a thousand miles from the corn field."**

**– Dwight Eisenhower**

That's a small amount of the total population, but their output is staggering – they produce the corn that feeds livestock and poultry, provide the basis for beneficial ingredients in food and industrial applications, expand the opportunity to develop green solutions that are an alternative to petroleum and provide the feedstock for ethanol plants which in turn provide fuel and feed.

Farmers are experts at what they do, choosing to live a life that involves a tremendous risk in the markets and weather because they love doing it. Yet they are often taken for granted and pushed to the side because we've forgotten our roots – we've forgotten that farming and agriculture are the backbone of this nation and that without it, the civilized life we enjoy wouldn't exist.

Agriculture – farming – and corn production are truly an American success story – but the story isn't complete. In some ways, the best chapters are still to come.



**Tom, Riley and John Tibbits** | Minneapolis, Kansas

## Telling the story one tweet at a time

**W**hen Tom Tibbits gets his corn in – or is battling the weather to manage his crops – chances are he'll tweet about it.

Tom farms with his dad John and granddad Riley near Minneapolis, Kansas and enjoys having conversations on Twitter (his handle is @ksfarmboy), but also takes the time to write a blog that includes a number of photos in addition to an explanation.

"Pictures give people a chance to see what's happening instead of me just explaining it in words," he said. "It really helps tell the story."

Tom, who has three young kids with his wife Sandy, said he spent some time working away from the family farm in between stints at college. "I lived in a suburb for a while and got to see urban sprawl first hand," he said. "After coming back to the farm, I saw a report about the great interest some people living in the city had about how wheat is grown. That got me thinking that I should try and share my own story of farming with anyone who would care to read about it."

That's how Tom's blog got started – but after getting a new smart phone, he decided to give Twitter a try. "I thought Twitter was a neat tool and have enjoyed it," he said. "It gives me a chance to be involved in a lot of conversations and help people to better understand what we do and why."

He encouraged those who are interested or have questions about farming to go online and to talk to farmers. "There are a growing number of farmers out there who would appreciate being asked a question about what they do," he said. "They are on Twitter, Facebook and blogging, it's just a matter of looking."

The Tibbits' farm produces corn, wheat, sorghum, soybeans and sunflowers – all of which are tweeted about and included in Tom's blog.



All facts in *The Corn Fact Book* and related communication efforts have been sourced from U.S. Department of Agriculture, U.S. Environmental Protection Agency and other organizations. For more information and details, please go to [www.CornFarmersCoalition.org](http://www.CornFarmersCoalition.org)



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The Corn Farmers Coalition – an alliance of the National Corn Growers Association and 14 state corn associations – educates policy-makers in Washington about how innovative farmers are growing more corn every year with fewer resources while protecting the environment.

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