

**ADAPTING  
TO NEW TECHNOLOGIES,  
USING FEWER RESOURCES AND PUTTING A  
CHERRY  
ON TOP.**



# FARMERS DO MORE THAN MAKE ICE CREAM HAPPEN — THEY ARE FEEDING THE WORLD.

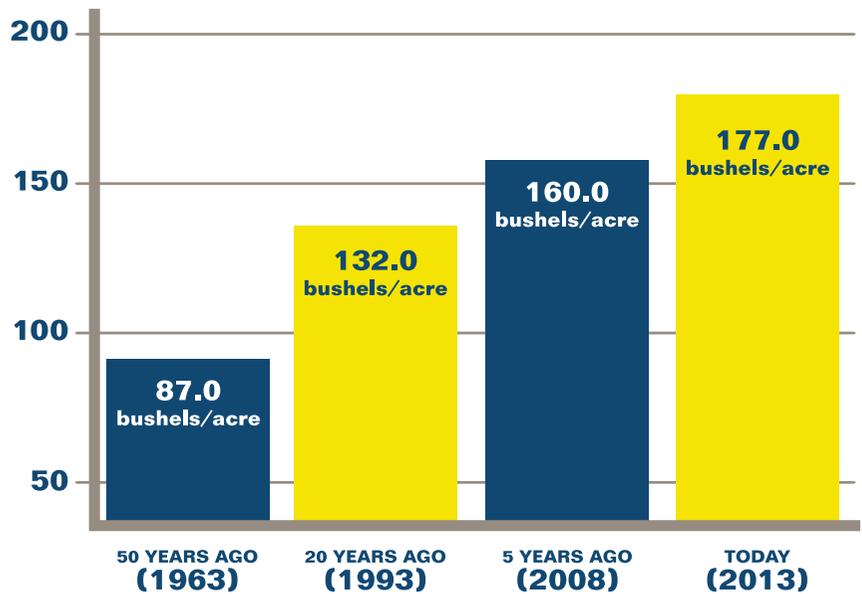
## NOW AND THEN<sup>1</sup>

In 1961, the U.S. population was about 184 million. By 2006, it had increased by 63% to approximately 300 million people. If agriculture today was no more productive than it was in 1961, more land would be required or the food supply per person would be reduced 63%!

Just as we expect technology to provide us with smarter phones, faster Internet access, fuel-saving cars and energy-wise appliances, farmers need to leverage advances in agriculture. As nostalgic as it may be, farmers can't meet consumer demand operating the same way as even just one or two generations previous.

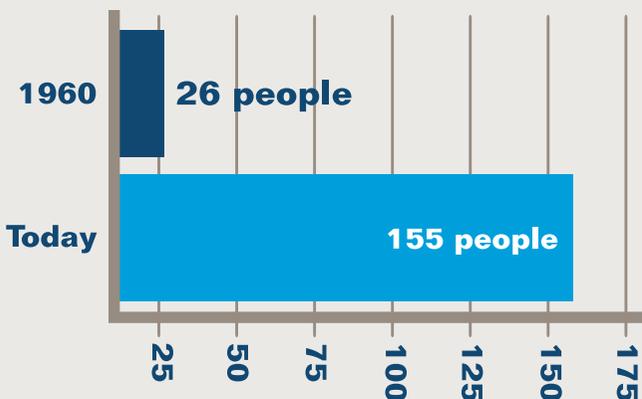
Raising food looks much different today than it did 50, 20 — or even five — years ago, with corn production nearly doubling since 1963.

## Corn Yields<sup>2</sup>



The farmers of today combine generations of lessons with new technologies and solutions to support their families, and nourish yours.

## Feeding More



## ADAPTING FOR THE FUTURE

Thanks to advances in technology, American farmers are feeding more people using fewer resources. In fact, the average farmer supplies food for approximately 155 people in the U.S. and abroad, compared with about 26 people in 1960.<sup>3</sup>

Proper animal care leads to the production of high-quality meat, milk and eggs. Improvements in livestock diets, clean and dry living conditions, regular veterinary care and advances in animal and plant breeding help farmers do more with less.

Today's livestock farms offer animals advanced care. Here are just a few things livestock farmers do to care for their animals:

- Provide indoor and free-stall housing as protection from the elements, diseases and predators
- Regulate temperatures during periods of extreme cold and heat
  - Sufficient warmth is provided to protect animals from the stress of huddling and shivering
  - Efficient fans and misters keep animals cool to avoid heat fatigue or death
  - Advanced ventilation systems keep air circulating
- Ensure fresh, suitable bedding such as sand, straw or wood chips, and non-slip floors

- Implement innovative equipment. Automatic milking machines, for example, can cut time in half, improve the quality and safety of milk, and reduce stress on cows
- Employ professional nutritionists to develop scientifically formulated, balanced and nutritious diets
  - Today's animals have access to food and clean water at all times
- Develop veterinarian-approved animal-health programs and provide prompt, targeted medical care when needed
- Maintain appropriate biosecurity measures to help keep livestock free from disease
- Follow best transport practices to avoid undue stress from overcrowding or improper handling

In addition, biotechnology helps grow higher yielding, disease- and drought-resistant crops with fewer resources, which in turn, get used for livestock feed. Improvements in breeding allow farmers to produce more high quality meat, milk and eggs with less feed, labor and resources.



## DOING MORE WITH LESS

**Each pound of pork raised** requires 41% less water and 78% less land<sup>6</sup>  
2009 vs. 1959

**Each pound of beef raised** requires 19% less feed, 33% less land and 12% less water<sup>7</sup>  
2007 vs. 1977

**Every gallon of milk produced** requires 65% less water and 90% less land<sup>8</sup>  
2007 vs. 1944



**ANIMAL AGRICULTURE IS MORE THAN  
ICE CREAM SUNDAES.  
IT'S ADAPTING TO CHANGE  
AND EMBRACING INNOVATION SO FARMERS CAN FEED  
9 BILLION PEOPLE BY 2050.**

Indiana's livestock farms are a part of the community fabric, caring for the land and animals that feed their families, and yours.

As community leaders and economic contributors, Indiana's livestock farm families are responsible neighbors invested in their heritage, their future and the health of the community.

Learn more about Indiana's livestock farmers at  
[www.farmersdeliver.com](http://www.farmersdeliver.com)

**Funded with Indiana soybean and corn checkoff dollars.**



<sup>1</sup>Midwest Dairy Association. 2011. Sustainability and Dairy Farming Fact Sheet. Accessed November 2014. Retrieved from: <https://www.extension.iastate.edu/sites/www.extension.iastate.edu/files/4h/SustainabilityFactSheet.pdf>.

<sup>2</sup>USDA, National Agricultural Statistics Service. Quick Stats. Acreage, Yield, Production and Price for Corn. Accessed November 2014. Retrieved from: [http://www.nass.usda.gov/Quick\\_Stats/Lite/#1AAD6A5E-1110-3C3A-9514-DF4450B2F267](http://www.nass.usda.gov/Quick_Stats/Lite/#1AAD6A5E-1110-3C3A-9514-DF4450B2F267).

<sup>3</sup>Fuels America. 2014. How Farmers Are Feeding and Fueling the Country. Accessed November 2014. Retrieved from: <http://www.fuelsamerica.org/facts/entry/how-farmers-are-feeding-fueling-the-country>.

<sup>4</sup>Purdue University, Agricultural Economics. Economic Importance of the Indiana Dairy Industry. Accessed November 2014. Retrieved from: <http://www.agecon.purdue.edu/extension/pubs/paer/2006/august/McNamara2.asp>.

<sup>5</sup>Purdue University, Food Animal Education Network. Dairy Facts. Accessed November 2014. Retrieved from: <http://www.ansc.purdue.edu/faen/dairy%20facts.html>.

<sup>6</sup>Pork Checkoff. 2012. New Study Shows Today's Pork Production More Sustainable than 50 Years Ago. Accessed November 2014. Retrieved from: <http://www.pork.org/new-study-shows-todays-pork-production-sustainable-50-years-ago/>.

<sup>7</sup>Cattlemen's Beef Board and National Cattlemen's Beef Association. 2010. Beef's Shrinking Environmental Footprint Fact Sheet. Accessed November 2014. Retrieved from: [http://www.explorebeef.org/CMDocs/ExploreBeef/Beefs%20Shrinking%20Environmental%20Footprint\\_Fact%20Sheet.pdf](http://www.explorebeef.org/CMDocs/ExploreBeef/Beefs%20Shrinking%20Environmental%20Footprint_Fact%20Sheet.pdf).

<sup>8</sup>Capper, J., R. Cady and D. Bauman. 2009. The environmental impact of dairy production: 1944 compared with 2007. *Journal of Animal Science*.