Telling Our Agricultural Story

Resources to help our students, customers and the non-farm public learn more about agriculture, food and the farmers who grow it.

*Telling Our Agricultural Story* is a project coordinated by the Wisconsin Farm Bureau’s Ag in the Classroom Program. The project was funded with a Cooperative State Research, Education, and Extension Service (CSREES) Agriculture in the Classroom Excellence Grants Program (ACE). You may download the student handouts, lesson plans and activities at [www.wisagclassroom.org](http://www.wisagclassroom.org).
Telling Our Agricultural Story

Farm and food topics not just for the agricultural community to discuss. The public’s renewed interest in where their food comes from, allows farmers to offer valuable insights to customers about how food gets from the farm gate to their food plate.

A great deal of information exists about food and agriculture. To help students, teachers, and the public process this information, make educated decisions and form opinions based on fact, “Telling Our Agricultural Story” offers a one-stop-shop of information, sources to contact and other resources.

This resource book accompanies a set of lesson plans for middle and high school aged students called “Telling Our Agricultural Story”. It offers educational displays and a number of lessons and activities for a classroom setting or with youth groups such as 4-H and FFA. Resources include this booklet covering modern agriculture, a student handout, tri-fold brochure, bookmarks and lesson plans. The lessons can also be downloaded from the Wisconsin Ag in the Classroom website (www.wisagclassroom.org) by clicking on ‘Lesson Plans’.

This booklet contains a sampling of educational and factual resources that commodity partners, agricultural organizations and businesses have available. Most of these groups have many other educational resources on their websites. There is also a list of websites that connect teachers, students and the non-farm public with farmers. Finally, a list of social media contacts feature current blogs and Facebook pages to follow.

Thank you for your interest in agriculture!

Wisconsin Ag in the Classroom
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Like most consumers, your constituents likely have many questions regarding the health and safety of their food – sustainability, animal welfare, antibiotics, and more. According to a 2012 survey, 3 in 5 Americans would like to know more about how food is grown and raised, but they don’t feel they have the time or money to prioritize it. America’s farmers and ranchers can provide answers based on the work we do everyday.

U.S. Farmers & Ranchers Alliance (USFRA®) consists of nearly 80 farmer- and rancher-led organizations and agricultural partners representing virtually all aspects of agriculture working to engage in dialogues with consumers who have questions about how today’s food is grown and raised. USFRA is committed to continuous improvement and supporting U.S. farmers and ranchers efforts to increase confidence and trust in today’s agriculture.

Questions About Issues Impacting America’s Farmers and Ranchers?

Contact
Lisa Cassady
USFRA
cassady@usfraonline.org
314-749-5408

FoodSource
Balanced, Accurate Online Resource

USFRA’s FoodSource tool serves as a central portal to today’s most heavily discussed food and agriculture issues. Find balanced, in-depth agriculture information such as infographics, videos and news articles housed by topic at www.fooddialogues.com/foodsource.

FoodDialogues.com
Learn More About Where Your Food Comes From

Join the Conversation on Facebook and Twitter

FoodSource
Balanced, Accurate Online Resource

USFRA Resources
www.fooddialogues.com
www.facebook.com/USFarmersandRanchers
twitter.com/USFRA | #FoodD
www.youtube.com/user/usfraonline

Wholly or partially funded by one or more Checkoff programs.
While Wisconsin is known as America’s Dairyland, the state’s beef industry is also thriving. Beef cow numbers increased about 10 percent between 2000 and 2005, and there were approximately 245,000 beef cows in Wisconsin in 2005. Beef cows, beef heifers over 500 pounds, steers and other heifers (excluding dairy heifers) account for nearly 23% of the total cattle population in the state (Wisconsin Agricultural Statistics Service, 2005). While 1.2 million dairy cows dominate Wisconsin’s rural landscape, beef is a growing business. This growth in beef cattle numbers appears to reflect an increase in the number of operations, along with the expansion of existing operations.

Wisconsin’s beef industry is diverse. It includes traditional cow-calf operations in which brood cows are maintained on pasture and their calves are often weaned and sold, stocker operations that usually raise lightweight cattle primarily on pasture, operations that feed cattle in feedlots, farmers who raise genetically superior cattle for breeding purposes (seedstock producers), and farms where young cattle are taught to eat out of a bunk before heading to a feedlot (backgrounding operations).

Wisconsin’s beef farmers and livestock specialists understand the overall characteristics of the beef industry in Wisconsin, but know less about the management practices employed by these diverse operations. A 2006 survey of Wisconsin beef operators sheds some light on their management and feeding practices, as well as their sales and income. This information will help farmers and those who serve the beef industry improve their businesses.

The 2006 Wisconsin Beef Cattle Farm Poll was conducted by CIAS in cooperation with UW Extension Beef Cattle Specialist Jeff Lehmkuhler.

This four-page survey emphasized forage and farm management strategies. The questionnaire was sent to 400 likely beef farmers chosen randomly from a list of 2,500 self-identified participants. The results of this survey are not statistically representative of the state’s beef industry, as it was not possible to obtain a list of all beef producers in Wisconsin. With a seventy percent response rate, however, the results provide good information about the management practices used by many Wisconsin beef farmers.

**Wisconsin’s beef cattle farms**

The majority of beef cattle operations in Wisconsin in 2006 were cow-calf enterprises of about 45 cows, owned by the farmer-operator who ran the farm business. Sixty percent of survey respondents operating a beef farm had a commercial beef cow-calf herd. Some farmers had more than one type of beef enterprise, including the following: 34 percent of responding beef farmers ran a feedlot operation, 32 percent had a seedstock enterprise, 20 percent direct marketed their beef, 7 percent had stocker operations and 1.8 percent were organic.

Stocker operations were typically running 30 head per year, while finishing beef cattle enterprises tended to have about 40 cattle. The range of cattle numbers was wide, however, from the low single digits to the handful of beef farmers with over one thousand head in the state.

The size of farms in Wisconsin having beef operations is not unlike that of Wisconsin dairy farms, in part because 90 percent of active beef operations in the survey also grew crops in 2005. Apart from a very few farms with thousands of acres of cropland and pasture, the typical beef operation owned 265 acres, leased an additional 47 acres and used about 180 acres for cropland and 60 acres for pasture. The distribution of Wisconsin beef farms by acres owned is shown in the graph on the next page.

**Feeding and forage management practices**

Most of the beef farmers participating in this survey fed raised or purchased hay for 150 to 180 days per year. Participating farmers with cow-calf herds raised
their cattle primarily on pasture. While the number of acres these farmers devoted to pasture for their beef cattle varied from zero to 1,650 acres, most used about 60 acres at a stocking density of one cow-calf pair or stocker per acre.

Nearly 8 out of 10 of these farmers supplemented their herds with very little grain, feeding zero to three pounds of grain per head per day. Another 13 percent of beef farmers fed their cattle three to six pounds of concentrate, while only a few farmers fed more. Less than 10 percent of farmers finished their beef cattle on pasture, though nearly two-thirds of those farmers used a grain supplement.

Pasture management approaches used in beef grazing tend to be less intensive than in dairy grazing due to lower returns and the resulting need to tightly control expenses. Labor inputs are also typically much lower in beef operations. Nearly 80 percent of the beef enterprises in this survey were part-time income activities. Eighty-five percent reported that they did not improve their pastures. The most commonly reported improvement was fertility enhancement through mechanically applied manure or chemical fertilizer, while less than a third of the respondents indicated they routinely soil sampled. While about one-third of farmers continuously grazed their beef cows, 40 percent moved their cattle approximately every two to four weeks. Three-quarters started their grazing seasons between April 30 and May 15, 2005, and most ended their grazing seasons between October 30 and November 15.

Since beef was a part-time enterprise for most of the responding farmers, half of them had non-farm jobs that provided their main support. Another 27 percent derived most of their income from other farming enterprises, and about 12 percent lived mainly on retirement income.

Two-thirds of those surveyed had household incomes between $50,000 and $200,000 from all sources, and over 80 percent were satisfied with their quality of life. In addition, most had grown up on a farm and 40 percent had dairy farmed at one time. These findings indicate that beef farming is a choice that many Wisconsin farmers find compatible with their lifestyles, backgrounds and desire to raise livestock.

Sales and income
In 2005, the responding farmers sold about 40 beef cattle on average, although this number varied from none to 4,500 for the year. Over half sold their livestock at auction barns. Nearly a third sold animals directly off the farm, and ten percent direct marketed meat. Farmers received, on average, $101 per hundred pounds of liveweight in 2005. Reported prices were much higher for seedstock and exhibition animals.
Where’s the Beef In Wisconsin?

Wisconsin Beef Cattle Industry Facts

Ranks 3rd in the United States for increasing cattle numbers with 260,000 head of beef cattle
- Only 18 states are not decreasing herd size, of that only Nebraska and Washington are gaining more than Wisconsin.

Wisconsin has over 1,975 more beef than dairy producers with 14,775 beef farms
- 20th in the nation for number of farms with beef cows
- Average herd size is 18 head

Ranks 11th in US for number of cattle on feed with 240,000 head
- Number of cattle on feed has doubled since 1987
- Average feedlot size is 28 head

Beef Cattle are ranked 3rd in agricultural cash receipts for the state behind dairy and corn
- In the upper Midwest Wisconsin is the only state to list beef in the top three

Ranks 5th in the US for cattle harvested
- Accounts for 5% of all cattle harvested in the US
- Produces 2.264 billion pounds of beef yearly
- Is ranked 2nd nationally for number of meat processing plants
- Provides 18% of the nation’s ground beef supply

Wisconsin is the home to 3 of the 4 largest AI Companies
- ABS Global, Inc., Genex Cooperative, Inc., and Accelerated Genetics

Top 10 Wisconsin Counties in Beef Cattle Numbers

1. Grant 6. Crawford
2. Iowa 7. Sauk
3. Lafayette 8. Buffalo
5. Monroe 10. Marathon

Wisconsin Beef Information Center
http://fyl.uwex.edu/wbic/
## Where does Wisconsin rank?

<table>
<thead>
<tr>
<th>State</th>
<th>No. Beef Cows</th>
<th>Avg Herd Size</th>
<th>No. Beef Operations</th>
<th>Top 3 Ag Total Receipts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indiana</td>
<td>235,000</td>
<td>19</td>
<td>12,700</td>
<td>Corn, beans, Hogs</td>
</tr>
<tr>
<td>Illinois</td>
<td>429,000</td>
<td>29</td>
<td>14,800</td>
<td>Corn, Soybeans, Hogs</td>
</tr>
<tr>
<td>Iowa</td>
<td>904,000</td>
<td>43</td>
<td>20,800</td>
<td>Corn, Soybeans, Hogs</td>
</tr>
<tr>
<td>Minnesota</td>
<td>400,000</td>
<td>28</td>
<td>14,400</td>
<td>Corn, Soybeans, Hogs</td>
</tr>
<tr>
<td>Missouri</td>
<td>2,089,000</td>
<td>40</td>
<td>51,300</td>
<td>Soybeans, Corn, <strong>Cattle/calves</strong></td>
</tr>
<tr>
<td>Michigan</td>
<td>109,500</td>
<td>14</td>
<td>7,900</td>
<td>Dairy, Corn, Soybeans</td>
</tr>
<tr>
<td>Ohio</td>
<td>294,000</td>
<td>17</td>
<td>17,400</td>
<td>Soybeans, Corn, Dairy</td>
</tr>
<tr>
<td><strong>Wisconsin</strong></td>
<td><strong>260,000</strong></td>
<td><strong>18</strong></td>
<td><strong>14,775</strong></td>
<td>Dairy, Corn, <strong>Cattle/calves</strong></td>
</tr>
</tbody>
</table>

### Beef Cow Cattle Inventory January 1

Since 1986 Beef Cow Inventory has...
- Decreased by 8.5% in United States
- Grown by 44% in Wisconsin


Last Updated: August, 2011

**Wisconsin Beef Information Center**

[http://fyi.uwex.edu/wbic/](http://fyi.uwex.edu/wbic/)

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Today's Beef Choices

More than one million beef farmers and ranchers raise cattle in every state in the country. They use the diverse resources available in their local areas to produce nutritious, safe and delicious beef. For consumers, that means there are a variety of beef choices such as grain-finished, grass-finished, natural and certified organic beef. From the pasture to the plate, the entire food chain works together to ensure high-quality and healthy beef for Americans. So, no matter what you desire, there is a great beef choice for you.

- **Grass-Fed**
  - All cattle spend a majority of their lives eating grass on pastures

- **Natural**
  - Most beef does not contain any additives and is not more than minimally processed\(^1,2\)

- **Nutritious**
  - Beef is a powerful protein and an excellent or good source of 10 essential nutrients

- **Safe**
  - Vigilance on farms, rigorous safety inspections and strict government guidelines ensure the highest level of safety

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Beef can be:

- **Grain-finished**
  - Cattle spend most of their lives grazing on pasture, then spend 4 – 6 months in a feedlot
  - Fed scientifically and healthy balanced diet of grains, such as corn, wheat or soybeans
  - May judiciously be given FDA-approved antibiotics or growth promoting hormones
  - May be given vitamin and mineral supplements
  - Can be difficult to produce year-round in North America due to changing seasons and weather conditions

- **Grass-finished**
  - Cattle spend their entire lives grazing on pasture
  - May judiciously be given FDA-approved antibiotics or growth promoting hormones
  - May be given vitamin and mineral supplements
  - Can be difficult to produce year-round in North America due to changing seasons and weather conditions

- **Naturally raised**
  - Cattle can be grain-finished or grass-finished—look at the label for details
  - Have never received antibiotics or growth promoting hormones
  - May be given vitamin and mineral supplements
  - Must be certified by USDA’s Agricultural Marketing Service\(^3\)

- **Certified organic**
  - Cattle can be grain-finished or grass-finished, as long as the feed is 100% organic
  - Have never received antibiotics or growth promoting hormones
  - May be given vitamin and mineral supplements
  - Must be certified by USDA’s Agricultural Marketing Service\(^4\)
  - Look for the official label

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BEEF nutrition.org
Nutrient-rich beef

All choices of beef are excellent or good sources of 10 essential nutrients and there are 29 cuts of beef that meet government guidelines for lean. Several of the key nutrients in beef, specifically iron and choline, are known to be lacking in the diets of many Americans, especially women and children. Research shows beef offers several health benefits including heart health, muscle development and weight management.

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Lean Beef</th>
<th>Grassy Beef</th>
<th>Grainy Beef</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protein</td>
<td>48%</td>
<td>46%</td>
<td>44%</td>
</tr>
<tr>
<td>Selenium</td>
<td>41%</td>
<td>39%</td>
<td>37%</td>
</tr>
<tr>
<td>Iron</td>
<td>37%</td>
<td>35%</td>
<td>33%</td>
</tr>
<tr>
<td>Magnesium</td>
<td>25%</td>
<td>23%</td>
<td>21%</td>
</tr>
<tr>
<td>Phosphorus</td>
<td>20%</td>
<td>18%</td>
<td>16%</td>
</tr>
<tr>
<td>Choline</td>
<td>17%</td>
<td>16%</td>
<td>15%</td>
</tr>
<tr>
<td>Zinc</td>
<td>12%</td>
<td>11%</td>
<td>10%</td>
</tr>
<tr>
<td>Riboflavin</td>
<td>10%</td>
<td>9%</td>
<td>8%</td>
</tr>
<tr>
<td>Calories</td>
<td>8%</td>
<td>7%</td>
<td>6%</td>
</tr>
</tbody>
</table>

A 3-ounce serving of lean beef (154 calories) contributes less than 10 percent of calories to a 2,000-calorie diet, yet it supplies more than 10 percent of the Daily Value for:

- Protein
- Selenium
- Iron
- Magnesium
- Phosphorus
- Choline
- Zinc
- Riboflavin

While all beef offers small amounts of omega-3 fatty acids and can contribute to omega-3 intake, the American Heart Association recommends fatty fish such as salmon as the primary source for omega-3 fatty acids.

Beef’s beneficial fatty acid profile

While an animal’s diet can impact beef’s fatty acid profile, it remains primarily monounsaturated and saturated fatty acids regardless of the feeding practice. For example, extended grain feeding can actually increase the amount of monounsaturated fat, which has cholesterol-lowering effects. And, feeding grass longer can influence the amount of omega-3 fatty acid in beef. Either beef choice offers the same health benefits in a healthy, balanced diet.

Half the fatty acids in beef are monounsaturated, the same heart-healthy kind found in olive oil. One-third of the saturated fat in beef is stearic acid, which has a neutral effect on blood cholesterol levels and is the same fat recognized in chocolate for its benefits. Polyunsaturated fatty acids represent the smallest class of lipids found in beef which include omega-3, omega-6 and conjugated linoleic acid (CLA).

Grass-finished beef fatty acid profile

<table>
<thead>
<tr>
<th>Fatty Acid</th>
<th>SFA</th>
<th>MUFA</th>
<th>Omega-3</th>
<th>Omega-6 minus CLA</th>
<th>CLA</th>
</tr>
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<tbody>
<tr>
<td>Total polyunsaturated fats = ~ 13%</td>
<td></td>
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The Beef Community: Who We Are and What We Do

Cattle Ranchers and Their Legacy

- According to the U.S. Department of Agriculture’s 2007 Census of Agriculture, which is the most up-to-date information about American agriculture, more than 97 percent of beef cattle farms and ranches in the United States were family farms and more farms were classified as beef cattle operations (31 percent) than any other type of farm.¹
- There are 687,540 farms classified as beef cattle operations.¹
- There are more than 1 million beef producers in the United States who are responsible for almost 90 million head of beef cattle.¹
- Although cattle farms and ranches are spread across the United States, nearly a third of cattle operations are located in the Plains states and 79 percent have fewer than 50 head of cattle.¹

The People Under the Cowboy Hats

- The average age of the American farmer is 57 years old and has been above 50 since the 1974 Census of Agriculture and has increased in each census since that time.¹
- The average number of years a beef producer has been on the farm or ranch is 22 years. In fact, 75 percent of beef cattle ranchers and farmers have lived and worked on the farm 10 or more years.¹
- According to USDA's Economic Research Service (ERS), nearly one in five cattle producers is a college graduate, one in four has attended some college and 89 percent are high school graduates.²

Cattle Income

- According to USDA's ERS, the average annual gross income from livestock on farms in this country in 2011 was $44,666.²
- Less than one-third of cattle operators claim farming as their primary occupation and 19 percent consider themselves retired. However, 61 percent say they work more than 1,000 hours a year on their farming operations.
- Eighty percent of the primary operators for beef cattle farms and ranches live on the farm or ranch.¹

Strong Demand for Beef

Consumers’ love of great steaks and burgers, their confidence in the safety of U.S. beef and their renewed interest in the nutritional benefits of protein help create strong demand for beef.
- Consumer spending on beef was $84.7 billion in 2012 and has grown $25 billion since 2002.³
- Per capita spending for beef in retail and foodservice was about $269 in 2012 – up more than $60 since 2002.³
- In 2010, per capita consumption of beef was 57.2 pounds, compared to 57.9 pounds for chicken.³

Beef in Retail

Beef dominates the retail meat department in volume (pounds) of sales and total dollar amount. Additionally, the value of beef sales continues to increase. The following statistics represent supermarkets with annual sales of $2 million or more. Data includes select supercenter and club retail stores. Data does not include butcher shops or independent grocery stores with annual sales of less than $2 million.
- Beef accounts for more than 49 percent of dollars spent on meat at retail. In comparison, chicken accounts for 23 percent of dollars spent on meat at retail.⁴
- In 2012, 5.0 billion pounds of fresh beef were sold at retail, a slight decrease of 4.0 percent in volume from the previous year.⁴
- In 2012, beef accounted for 34.4 percent of the pounds of meat purchased at retail.⁴
For 2012, natural/organic beef sales comprised 4.9 percent of the total beef volume (pounds) and 6.1 percent of the total beef sales (dollars) in retail. This represents an 18 percent increase in total pounds and a 15 percent increase in total dollars from the previous year.

### Beef in Foodservice

The foodservice sector includes both "restaurants" (limited and full service) and "beyond restaurants," such as lodging, business and industry (e.g., private, corporate and employee dining facilities), colleges and schools.

- In 2012, the food supplied to the U.S. food marketing system, including food service and food retailing, was worth $1.22 trillion. Of this total, foodservice facilities supplied approximately $556 billion.\(^5\)
- In 2012, beef secured 32 percent of the total protein market which totaled 25 billion pounds, thus maintaining the position of number one protein served in restaurants.
- Overall, the foodservice sector purchased 8.0 billion pounds of beef in the US in 2012. This equated to $32.9 billion in wholesale purchases.\(^6\)
- Ground beef represents the largest share of volume in foodservice at 64 percent and also the largest share of dollars at 35 percent.\(^6\)

The following statistics measure beef volume in commercial restaurants, which account for about 69 percent of all consumer beef spending in foodservice.

- In 2012, 5.5 billion pounds of beef were purchased by commercial restaurant operators.\(^6\)
- Limited Service Restaurants, such as McDonalds and Wendy’s, accounted for more than 65 percent of all beef served in commercial restaurants in 2012.\(^6\)

### Beef in the Home

- More than eight out of 10 individuals consume fresh beef regularly (an average of 1.7 times per week) in home.\(^7\)
- Ground beef is the most popular beef item for consumers preparing meals in their home. In 2010, ground beef was present at 61 percent of all in-home beef servings. Steak is the second most popular in-home beef item.\(^7\)
- According to NHANES data, Americans consume 1.7 oz of beef daily, on average.\(^8\)

### Impact on Society

Beef production positively affects the U.S. economy. According to USDA, producers of meat animals in 2012 were responsible for more than $87 billion in added value to the U.S. economy, as measured by their contribution to the national output.\(^9\)

- Nearly one-half of cattlemen and women volunteer with a youth organization and more than one-third donate their time to other civic organizations, compared to a national average of 7 percent of all Americans.\(^10\)
- Nearly one-fourth of U.S. cattlemen and women have served in the military, more than the national average of 14 percent, and 94 percent vote in national, state and local elections; comparatively, only 64 percent of the general population votes. One-half of cattlemen and women have run for elected office and 81 percent have been elected to serve.\(^10\)
- Livestock grazing is the primary use of an estimated 587 million acres of permanent grassland, pasture and rangeland. Much of the land grazed is not suitable for growing other food products.\(^11\) By raising cattle, farmers and ranchers more than double the land area that can be used to raise food for a growing population.

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3. Cattle Fax: [www.cattlefax.com](http://www.cattlefax.com)
4. FreshLook Data (IRI Scanner) Research
8. National Health and Nutrition Examination Survey
10. Profile of U.S. Cattlemen, Aspen Media & Market research, July 2010
In Wisconsin, it’s all about cows.

Have your students watch the “Dairy Farming in Wisconsin—It’s About the Cows” video. Then have them write a creative essay with the subject: “A Day in the Life of a Wisconsin Dairy Cow.”

Watch the video:

http://wmmb.com/ag/facts2

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What is dairy doing to keep Wisconsin green?

Ask your students to choose and write an essay about sustainability, bio-energy and other ways farmers are managing our land and water resources.

Find resources:
http://wmmb.com/ag/lead3

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Robots & Cows
It's not science fiction but a way of life for an increasing number of farms across the state.

Play this video on robotic milking technology and use it as a springboard for discussing the many ways modern technology can help dairy farms today:

http://wmmb.com/ag/careers5

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Another great field trip idea:

Have your students get to know the many diverse dairy farm families we have in Wisconsin:

http://wmmb.com/ag/lead8

Then, have your students vote on the one they’d most like to visit.
Over the past 60 years, dairy farmers have reduced the carbon footprint of their products by 63% by improving farm management practices.

Source: Cornell University
Understanding Non-Dairy Milk Alternatives

Cow’s milk has always been the gold standard as a nutrient-rich beverage. Recently, there have been several other non-dairy options available including soy, rice, almond, and hemp beverages. More importantly, consumers have raised questions on how these beverages compare to cow’s milk.

Fast Facts

Q: Why drink cow’s milk?
A: Cow’s milk not only provides high-quality complete protein, but is also an excellent source of calcium, and seven other nutrients needed to build healthy bodies. As the gold standard, other beverages use cow’s milk as a nutritional benchmark for quality, nutrient density and taste.

Q: How do other beverages measure up to calcium and protein found in cow’s milk?
A: These beverages are not a nutritional powerhouse like cow’s milk and more importantly, these beverages are not technically milk. The nutritional and caloric content of these products vary depending on the brand, so it is important to check the Nutrition Facts panel for the nutritional content. Let’s take a look at some of the basic facts about these non-dairy beverages:

Soy Beverages: Made from soybeans and contain five to seven grams of soy protein, but the soy protein is a lower quality protein than the eight grams of complete protein found in cow’s milk. Soy milk is fortified with calcium, but the amount of calcium is not standardized.

Rice Beverages: Generally processed from brown rice and is fortified with nutrients such as calcium and vitamin D. Rice contains almost no protein.

Almond “Nut Based” Beverages: Roasted almonds are blended resulting in a liquid that is then fortified with nutrients (like calcium, vitamin D and Vitamin E). At only one gram of protein per serving, it also lacks the natural benefits found in almonds.

Hemp “Seed Based” Beverages: This is a newer milk substitute that is commercially available. Hemp milk contains Omega-3 and Omega-6 fatty acids which have made them popular, but it also falls short on protein content. Hemp milk may be fortified with calcium, but does not contain a natural source of calcium.

Q: What about Lactose Intolerance? Do I need to drink a non-dairy beverage option?
A: Individuals who are lactose intolerant can drink lactose-free milk products and do not need to choose non-dairy milk alternatives. In lactose-free products, the milk sugar, lactose, has been completely broken down; and nutritionally it compares to regular cow’s milk.

Review the Research

According to research published in the American Journal of Clinical Nutrition, the calcium in cow’s milk is absorbed 25% better than that found in soy milk. Non-Dairy milk alternatives do not replace the unique package of nutrients contained in dairy products beyond calcium, such as phosphorus, magnesium, vitamin D and protein.

Choosing Three Servings Every Day

Nutrient-rich dairy including milk, cheese and yogurt and lactose-free or lactose-reduced milk as needed, are strategies children and adults can use to get at least three servings of dairy in their everyday diet. Cow’s milk is an excellent nutritional and economic value. It provides nine key nutrients, many of which are shortfall nutrients for both children and adults in the United States, including calcium, potassium and Vitamin D. Milk beverage imitators fall short nutritionally when compared to great-tasting cow’s milk.

For more information visit NationalDairyCouncil.org
Facts About Organic Milk

Organic or conventional milk are choices for the consumer at the dairy case. Stringent government standards for all milk production ensure that the US milk supply is safe, wholesome and nutritious. Organic milk has no scientifically proven health advantage over conventional milk and both products can be part of the three servings of dairy needed every day for good health.

Fast Facts

Organic Milk

Farm management practices for organic milk are strictly monitored by the United States Department of Agriculture (USDA). The use of ‘USDA Organic’ labeling assures consumers that the product is produced, processed and certified to consistent standards. Cows on organic farms must be allowed access to pasture, but are not always grass fed. Organic farms face strict restrictions on the use of synthetic hormones, pesticides and antibiotics. Milk and other dairy products are among the most tested, monitored and safest products available in the grocery store.

All Milk is Free of Antibiotics

Consumers do not have to purchase organic milk to be assured that milk is antibiotic free. Every tanker of milk entering every dairy plant is tested for antibiotics. In the rare event that a tanker of milk tests positive for antibiotics, the product is not allowed in to the food supply. According to recent Food and Drug Administration (FDA) data, less than one tanker in 1,000 tests positive for any animal drug residue.

Organic Farm Practices Do Not Affect Milk Nutrient Composition

All types of milk are similar in composition. A 2008 study reported in the Journal of the American Dietetic Association compared the composition of milk labeled ‘organic’, ‘rbST-free’ and regular milk and found no detectable antibiotics in any product, no significant difference in bacterial count, no significant difference in nutrient content and no differences in concentration of bST.

Pesticides in Food

Pesticides are not a cause for health concerns in the US food supply, according to FDA and USDA testing which indicates that levels of pesticides in foods are far below the allowable limits. Detectable residues of pesticides in milk are among the lowest of all foods in the U.S. food supply and well within consumer protection standards.

Nutritional Quality

In 2010 the American Journal of Clinical Nutrition reported there is no significant difference in the nutrient content of organic foods when compared to conventional foods. Organic milk contains the same 9 essential nutrients as conventional milk. Milk supplies calcium, protein, carbohydrates, Vitamin A and D, phosphorus, potassium, Vitamin B12, riboflavin and niacin. Like conventional milk, organic milk is pasteurized.

Hormones and rbST

Non-organic dairy farmers may choose to supplement some cows with rbST to boost milk production and ensure a plentiful milk supply. All cows produce a natural protein hormone (bST) that helps them produce milk. Because bST is a protein, it is digested into amino acids and peptides that have no hormonal activity in humans. Organic milk is rbST free, but there is no health advantage to this claim, according to the FDA.

Make the Choice

Evaluate nutrition quality, flavor and price before choosing milk to enjoy with meals and snacks every day. Organic milk, cheese and yogurt are often more expensive to purchase and may taste slightly different. Some organic products are produced locally and help support local farmers. Review the label carefully before buying.

Choosing Three Servings Every Day

Whether the choice is organic or conventional, when it comes to dairy products, nutrient-rich milk, cheese and yogurt are easy to include in your every day diet. Choose reduced-fat, low-fat or fat-free, organic or flavored options to fit your nutrient needs.

- Milk—8 ounces (1 cup)
- Natural Cheese—1 1/2 ounces
- Yogurt—8 ounces (1 cup)

Serve milk and flavored milk with meals, offer fruit and yogurt for breakfast and snack time, add cheese to sandwiches or salads at lunch and dinner. For more great ideas and recipes featuring Wisconsin cheese, milk and yogurt, visit www.EatWisconsinCheese.com and www.NationalDairyCouncil.org/recipes.

www.WisconsinDairyCouncil.com
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To meet a growing consumer demand, U.S. farmers have nearly doubled pork production in the last 50 years...

Total pounds of pork raised by farmers

1959

12.1B LBS. OF PORK

2009

22.8B LBS. OF PORK

Today’s on-farm efficiency means that pound for pound of pork, farmers are now using far fewer of our earth’s precious resources than they were in 1959.

Over the decades, America’s pig farmers have made dramatic improvements in how they raise pigs:

- Enhanced protection from harsh weather and predators
- Better genetics and animal care
- Improved diets to better match animals’ needs

Effective measures: All combine to reduce greenhouse gas emissions and U.S. pork’s carbon footprint by 35% per pound of pork.

1. How crops are raised
2. How pigs are fed
3. How nutrients are recycled

Today’s on-farm efficiency demonstrates the commitment America’s pig farmers have to sustainable environmental principles as part of their We CareSM initiative. It’s another example of how today’s farmers are ensuring a greener earth today and for generations to come.

50 years of innovation demonstrates the commitment America’s pig farmers have to sustainable environmental principles as part of their We CareSM initiative. It’s another example of how today’s farmers are ensuring a greener earth today and for generations to come.

Earth-Friendly Choice...

A 2007 U.S. government report found that U.S. pork contributed to only one-third of one percent of greenhouse gas emissions, making U.S. pork a very responsible choice when choosing your next meal.
Changing Dynamics Have Brought Specialization, More Consumer Choice

Today, there are more than 69,000 U.S. hog farms that produce pork to meet a wide variety of marketplace demands. Overall, greater efficiencies and growth in productivity have resulted in a more abundant, affordable supply of pork to consumers in the United States and abroad. These changing dynamics also have fostered a variety of farm sizes and types today. Some farms specialize in raising certain breeds, others focus on pigs at specific stages of development and yet others raise pigs to meet various consumer niche demands. Whether large or small, the basic tenets of animal agriculture remain the same: good animal care, stewardship of the land, production of safe, wholesome food and care for employees and communities. These are the core values that the pork industry strives to uphold.

Raising Pigs in America

Sixty-two percent of the U.S. pig herd is raised in Corn Belt states, where the farmers have relatively easy access to the region’s abundant supplies of feed grains and soybean meal. Another 15 percent of the U.S. herd is in North Carolina.3


State Rankings by Number of Hogs
1. Iowa
2. North Carolina
3. Minnesota
4. Illinois
5. Indiana
6. Missouri
7. Nebraska
8. Oklahoma
9. Ohio
10. Kansas

Source: 2012 Pork Industry Progress Report
Types of Hog Farms

There are five basic types of hog farming operations in the United States:

- **Farrow-to-finish farms** manage all stages of pig growth and development, from breeding through finishing, to market weight of about 275 pounds.
- **Farrow-to-nursery farms** specialize in the breeding of sows and raising of 40- to 50-pound feeder pigs, which are then moved to finishing farms.
- **Farrow-to-wean farms** oversee breeding herds and raise pigs until weaned and reach weights of 10 to 15 pounds, at which time they are moved to wean-to-finish farms.
- **Wean-to-finish farms** purchase weaned pigs and grow them until they reach market weights.
- **Finishing farms** buy 40- to 50-pound feeder pigs and raise them until they reach market weight.

Types of Animal Housing

Pigs can be raised completely outdoors, completely indoors or in a combination of the two. However, most pigs today are raised in specially designed barns that allow the animals to be protected from extreme weather conditions, predators, vermin, etc., and that allow farmers and veterinarians to more easily monitor the health of individual pigs. The type of animal housing used is dictated by various factors, including the farm’s geographical location and climate, the facility’s proximity to populated areas and whether the ultimate product will be marketed to a particular consumer niche. Experts who study animal welfare and behavior agree that an animal’s environment can have an enormous impact on its health and well-being. Therefore, decisions regarding optimal housing systems should be considered on a farm-by-farm basis.

Leaner Pork to Meet Consumer Demand

Over the last 20 or so years, consumers have become more concerned about fat content. The industry has responded by breeding pigs to be leaner today than they were decades ago. Compared with pigs from the 1950s, a typical pig today has 75 percent less fat. As a result, the six most common cuts of pork are 16 percent leaner and contain 27 percent less saturated fat than they did 20 years ago.

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*Based on 3-ounce cooked servings (roasted or broiled), visible fat trimmed after cooking. Reference: USDA, Agriculture Research Service, 2009.*

Source: 2012 Pork Industry Progress Report
America’s pork producers are among the most environmentally and socially conscious food producers in the world today. From their continual emphasis on the welfare of the animals under their care to their stewardship of the soil, water and land they call home, pork producers are leaders on many environmental fronts. And as always, producers continue to ensure that the food they produce is done so in a responsible and caring way for animals, consumers and the environment.

Just as they took steps in the 1980s and ‘90s to protect the soil and water, today’s pork producers are leaders in assessing and understanding their carbon footprint. Through the Pork Checkoff, producers are funding research efforts at the University of Arkansas’ Applied Sustainability Center to measure and identify the overall carbon footprint involved with pork production. They are determined to address this important area and capitalize on opportunities that make good environmental sense and are economically sustainable.

Some key facts to consider:

- **Pork production’s carbon footprint is a small fraction of U.S. greenhouse gas (GHG) emissions.**

  Animal agriculture as a whole contributes a small part of U.S. GHG emissions. According to U.S. Environmental Protection Agency (EPA), in 2007 only 2.8 percent of U.S. GHG emissions came from animal agriculture and pork production contributes even less—just over one-third of one percent (0.35%) of total U.S. GHG emissions.¹
Livestock-related GHG emissions in the U.S. have declined per unit of production.
Since 1990, U.S. farmers increased meat production by almost 50 percent, milk production by 16 percent, and egg production by nearly 33 percent.\(^3\) The fact that GHG emissions from U.S. animal agriculture have remained relatively constant while protein production has dramatically increased reflects improved feed efficiencies, better manure-management strategies and efficient use of cropland. So, every gallon of milk or pound of meat produced in the U.S. today has a smaller carbon footprint than it used to have.

Pork producers are determined to lead in carbon-footprint knowledge.
The National Pork Board has created a comprehensive working group. It consists of pork producers and representatives of the feed-crop production, feed formulation, meat packing and processing, and retail marketing components of the pork chain. While it’s already known that the three gases of primary interest in pork production are carbon dioxide (CO\(_2\)), methane (CH\(_4\)) and nitrous oxide (N\(_2\)O), much more remains to be discovered. That’s why the industry is diligently working to assess pork’s life-cycle from feed to fork. The goal is identify areas where producers can continue the trend of producing more food using fewer resources for an ever-more eco-friendly and economically viable result.

The National Pork Board’s carbon footprint project is comprehensive with multiple phases.
Since June 2008, the National Pork Board has been working on a specific plan to assess and better understand the pork industry’s carbon footprint. The Checkoff-funded research has completed:
- A review of available literature and information related to energy use and greenhouse gas emissions from pork production.
- A summary or “scan level” life-cycle assessment of energy use and emissions across the entire pork chain, including feed crop production, feed formulation, swine production, transportation, meat processing and retail components.
- A detailed, in-depth life-cycle assessment of the on-farm animal production component covering all aspects of raising the animals, including manure-management practices.
- A producer-friendly software tool called the Live Swine Carbon Footprint Calculator. It calculates the greenhouse gas emissions involved in sow and grow-finish production, which can help producers identify areas for potential improved efficiency.

For more information on Pork Checkoff’s environmental sustainability effort, visit [www.pork.org/sustainability](http://www.pork.org/sustainability)

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Pigs produce little expellable gas from enteric fermentation.
Unlike some other livestock species, pigs with their single stomach don’t produce much expellable gas during digestion, which is why pork producers are determined to lead in carbon-footprint knowledge.

Pigs produce less GHG emissions than humans.
In GHG emission terms, producing pork is easier on the environment than people are. In terms of waste handling, Humans generate 2.65 percent of total GHG emissions just from municipal sewage treatment plants and solid-waste landfills. Meanwhile, pigs only create 0.3 percent in total.

U.S. animal agriculture is very eco-friendly.
A 2006 United Nation’s report\(^4\) concluded that about 74 percent of agricultural GHG emissions come from developing countries. The vast majority of global GHG emissions attributed to livestock production (12 - 18 percent) results from deforestation and converting rain forests and other lands to grow crops or pasture. Such actions do not occur in the U.S., which has actually seen an increase in the total acreage of forested land over the last several decades – even while total agricultural production has increased.

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We Care is an overarching philosophy and set of ethical principles that guides America’s pork producers to do what comes naturally to them – demonstrating their commitment to maintaining a high standard for safe food, animal well-being, public health, natural resources, employee care and community.

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This message funded by America’s Pork Checkoff program.

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SCi-TECH
Hog farmers recognize their obligation to protect public health by:

- Using management practices consistent with producing safe food
- Managing the use of animal health products to protect public health
- Managing manure and air quality to protect public health

**Producing Safe Food**

As noted in the first ethical principle, “Produce Safe Food,” there are multiple safeguards in place to help ensure pork is safe for everyone, including:

- Comprehensive education and training through PQA Plus that offers certification for farm personnel in safe production practices
- Regulatory oversight and/or inspections by the U.S. Department of Agriculture (USDA) and the U.S. Food and Drug Administration (FDA)
- Research funding by the Pork Checkoff, the USDA and many of our nation’s universities to unlock deeper understanding of production issues that impact public health

**The First Line of Defense: Farm Biosecurity**

Pigs, like people, can become ill from a variety of diseases. Farmers naturally want to defend against any threat to their herds, workers or the public. Therefore, biosecurity measures — management practices designed to prevent the introduction of diseases and disease-causing agents into a herd — are essential. One way to promote biosecurity is to carefully manage access to and movement from a farm of anything capable of carrying disease, including people, pigs, birds, wild animals, rodents, equipment and water. The pork industry’s leading education and certification program, Pork Quality Assurance® Plus (PQA Plus®), provides farmers and farm personnel information on how to implement detailed biosecurity protocols.

Focus on biosecurity occurs at many different levels, including through industry, universities, organizations and the U.S. government. There are multiple entities that provide input on biosecurity activities as outlined below.

**USDA Animal and Plant Health Inspection Service (APHIS) Veterinary Services**

APHIS has oversight of all animal health issues. APHIS develops and administers programs to defend America’s animal and plant resources from agricultural pests and diseases. In the event that a pest or disease of concern is detected, APHIS implements emergency protocols, which can include strict biosecurity procedures, and works closely with veterinarians and industry partners in affected states to quickly manage or eradicate the disease.

**National Animal Health Monitoring System (NAHMS)**

Under the direction of APHIS, this program conducts national studies by combining the efforts of multiple government agencies, institutions, and public- and animal-health professionals and provides up-to-date trend information to decision-makers in the livestock industry.

Source: 2012 Pork Industry Progress Report
Responsible Antibiotic Use Remains a Priority

Antibiotics are an important part of a comprehensive herd-health program on farms of all sizes. Experts agree that disease in food animals can threaten food safety, so it is important to protect animal health. There are many steps farmers take to protect herd health, and judicious use of antibiotics is one part of an overall herd health management plan. Antibiotics represent considerable cost to farmers, so they naturally want to minimize their use whenever possible. Responsible antibiotic use, combined with other practices relating to proper diet and nutrition, access to fresh water, vaccinations, barn sanitation and biosecurity all work to protect pig health. The pork industry supports science-based approaches to ensure that antibiotics used to advance animal health are safe for the food supply.

PQA Plus: Principles of Responsible Antibiotic Use

Farmers’ guidelines call for:

Principle I: Take appropriate steps to decrease the need for the application of antibiotics.

Principle II: Assess the advantages and disadvantages of all uses of antibiotics.

Principle III: Use antibiotics only when they provide measurable benefits.

Principle IV: Fully implement the management practices described for responsible use of animal health products into daily operations.

Principle V: Have a working veterinarian/client/patient relationship and follow the responsible antibiotic use guidelines.

Biosecurity Basics

The procedures listed below are among the suggested actions toward the development of a herd biosecurity plan as outlined in the PQA Plus book:

- Limit the number of visitors to the facility and minimize their contact with the pigs.
- Require visitors to register upon arrival and report, in detail, any recent contact with animals and the time gap between animal or farm visits.
- Supply outer clothing (e.g., coveralls, plastic boots) to all visitors.
- Require workers and visitors to wash their hands, or shower, before entering animal areas. (Some facilities also require visitors/employees to shower upon leaving their pork operation.)
- Prohibit livestock truck drivers from entering animal areas, as they are likely to have been on other farms or agriculture operations.
- Require trucks to be cleaned on arrival at a farm and/or require all visitors’ vehicles to be parked at a designated location away from where animals are located.
- Take great care in introducing any new pigs to a facility by conducting an extensive veterinary evaluation and/or placing the new pigs in temporary isolation to ensure that no diseases can be spread.

Source: 2012 Pork Industry Progress Report

IN FOCUS

“A good biosecurity program is the first line of defense in disease prevention, and it’s an ongoing process that requires vigilance and attention every day.”

Dr. Lisa Becton, director, swine health and research, National Pork Board

“One of the many ways that we measure antibiotic use in our operation is to look at how much we spend on feed antibiotics for each pig that we sell. It makes good business sense to use antibiotics only when we need them. The trend over the last six years has gone from spending around $3 a pig down to less than $1. And that has stayed pretty consistent for the last several quarters.”

Heidi Vittetoe, farmer, Iowa
Safeguards for Antibiotic Use

Regulations and safeguards are in place to ensure that antibiotics for food animals are safe and administered in a responsible manner. The following safeguards are in place to monitor this aspect of pork production on a constant basis.

- The FDA has regulatory oversight for review and approval of all antibiotics used in pork production and prohibits using antibiotics in ways that are not on the label.
- The FDA regulates antibiotic use in both humans and animals and inspects the feed mills that produce medicated feed.
- FSIS monitors and tests the meat to ensure there are no harmful residues.
- Veterinarians also play an important role in ensuring judicious use of antibiotics.
- The PQA Plus certification program provides good production practices for producers that reinforce the responsible use of antibiotics.
- The USDA inspects processing facilities to make sure those regulations for antibiotic use are followed.
- Pork industry organizations at the state and national levels have a long history of working with farmers to comply with all regulations.

Environmental Management

Hog farmers are proactively involved in managing manure and air quality to protect public health. As both food producers and community members, hog farmers understand the impact their operations have on the world in which they live. Ongoing research and innovative practices in this area will lead to even more sustainable, environmentally sound production methods.

To learn more about specific practices, safeguards and oversight on environmental management, information can be found under Ethical Principle #4, “Safeguard Natural Resources in All of Our Practices.”

“Being a fourth-generation farmer, I can tell you that we have significantly decreased the amount of antibiotics we are using today compared with what my father and grandfather used when they were producing pigs.”

Dereke Dunkirk, farmer, Illinois

“Farmers and their veterinarians have a limited number of health management tools. They realize the importance of these tools and make every effort to use them for the benefit of the animals and public health.”

Dr. Scott Hurd, associate professor, College of Veterinary Medicine, Iowa State University

“You need only look to the history of the PQA Plus program to realize the value farmers place on using antibiotics in a strategic and judicious way.”

Dr. Paul Sundberg, vice president of science and technology, National Pork Board
Misconceptions of Antibiotic Use in Livestock

To protect pig health and food safety, it is essential to take a science-based approach when assessing antibiotic use. Dr. Scott Hurd, associate professor at the College of Veterinary Medicine, Iowa State University, addresses some misconceptions about antibiotic use in hog farming.

Myth: Drug-resistant infections such as methicillin-resistant Staphylococcus aureus (MRSA) in humans, which have grown significantly over the past two decades, are attributed to the overuse of antibiotics in livestock.

Dr. Hurd: Most drug-resistant infections of concern to the Infectious Disease Society of America have little to no relationship to animal agriculture. The types of drug-resistant infections that are lethal are often associated with hospital-acquired infections — and the antibiotic used in those facilities. According to the FDA, resistance in foodborne illness is stable to declining over the last several years. Scientific risk assessments conducted by myself and others have shown a person is more likely to die from a bee sting than have a mild illness due to a resistant infection acquired from on-farm antibiotic use.

Myth: Antibiotics that are fed to healthy animals to promote growth and prevent disease are contributing to a public health crisis.

Dr. Hurd: Strategic use of antibiotics in animal agriculture prevents disease and produces safer food. Because antibiotics have been used in humans for more than 60 years and in livestock for about 50 years, if there was going to be an epidemic of resistance related to antibiotic use in agriculture, it would have occurred by now. The fact that it has not means that antibiotic use in animals is not a major risk to human health.

Myth: The impact of antibiotic use on farms also can be felt through the environment (e.g., water runoff and air transmission).

Dr. Hurd: There is no evidence to support these routes contribute to the human health risk from antimicrobial resistance. Environmental spread of pathogens and resistance has long been of interest to farmers and the pork industry. Resources, including funding research, have been dedicated to gaining more understanding and knowledge in this area.

Myth: Antibiotic use on farms in Denmark are used sparingly and only when animals are sick.

Dr. Hurd: That is true. So sparingly, in fact, that farmers and veterinarians are not even allowed to use antibiotics to prevent common illnesses they know are coming and will make their animals sick. According to the World Health Organization (WHO), the Danish Pilot Program resulted in an increase in diarrhea in pigs and a 25 percent increase in deaths. The number of farms went from 25,000 in 1995 to fewer than 10,000 in 2005. What appeared to be a ban on antibiotic use in healthy pigs actually pointed out the benefits of its use in helping pigs grow in a healthy way.

Source: 2012 Pork Industry Progress Report
Hog farmers recognize their obligation to protect and promote animal well-being by:

- Providing feed, water and an environment that promotes the well-being of our animals
- Providing proper care, handling and transportation for pigs at each stage of life
- Protecting pig health and providing appropriate treatment, including veterinary care when needed
- Using approved practices to euthanize, in a timely manner, those sick or injured pigs that fail to respond to care and treatment

Raising Healthy Animals in a Respectful, Safe Manner

For hog farmers, ensuring animal well-being is more than taking care of business. Good animal husbandry is part of America’s agricultural heritage, and the pork industry is intent on preserving — and building upon — that legacy. There’s no question that hog farming looks different today than it did a few generations ago, but many people don’t realize that a very large percentage of these changes have advanced animal health, safety and comfort. Today, pigs are raised on farms specially designed to promote the health, comfort and well-being of animals and the safety of the food produced.

Indoors Versus Outdoors: Which Method Is Better?

Animal housing options have evolved as new research and technology have emerged. Today’s pig farms are carefully designed to help producers provide the best possible care for their animals. Pigs can be raised completely outdoors, completely indoors or a combination of the two. The type of animal housing used is dictated by various factors, including the farm’s geographic location and climate, the facility’s proximity to populated areas and whether the ultimate product will be marketed to a particular consumer niche.

Over the last few decades, there has been a trend toward raising hogs indoors in large barns instead of outdoors. There are many reasons for this transition, nearly all related to animal well-being and food safety. Many people may think that raising pigs indoors inevitably has an overall negative impact on the animals’ health and comfort. In fact, by virtually any measure, the opposite is true. Here are a few things to consider:

- Indoor facilities have advanced climate-control features. The pigs are kept at a comfortable temperature (piglets are provided more warmth in their living areas, in accordance with their needs).
- Pigs do not have sweat glands and are susceptible to heat stress, so misters and evaporative coolers are used as needed to support their comfort.
- Feed and water can be automated and very carefully monitored in accordance with each individual pig’s needs.
- Buildings are designed and maintained to keep out predators, parasites and vermin, which is vital to prevention of pig injury and disease. In turn, feed and water are less susceptible to contamination.
- Ventilation systems are in place for the health of animals and facility workers. For example, hog barns can be equipped with curtains that can be raised or lowered to let in fresh air and natural light. Other farms use sophisticated mechanical ventilation to ensure good air quality.
- Facilities have strict biosecurity practices in place to ensure that diseases are not accidentally introduced to the animals. Outdoor facilities would be much harder to control in this regard. These security protocols lead to healthier pigs and a safer food supply.
Experts agree that a pig’s environment is important to its health and well-being and that decisions regarding optimal housing systems should be considered on a farm-by-farm basis.

**Education and Certification**

**Pork Quality Assurance® Plus (PQA Plus®)**

The pork industry has taken proactive steps to support and promote proper, humane animal care. The industry’s flagship education program for farmers and their employees is PQA Plus®. Individuals can become certified in PQA Plus by successfully completing the program’s course, which is administered by a trained, independent advisor (a veterinarian, an Extension specialist or an agriculture educator). As of August 2012, more than 55,000 farmers and farm employees were PQA Plus certified.

To help ensure implementation of the program, on-farm site assessments are a key component of PQA Plus. To date, more than 16,000 farms have been assessed; this represents more than 75 percent of all pigs produced in the United States. The industry has a goal that at least 90 percent of commercial pigs marketed come from sites that have achieved PQA Plus site status by Dec. 31, 2012.

**Distance-Learning Courses**

In addition to face-to-face training, distance-learning programs provide farm workers access to a wide array of information to help better care for animals. The distance-learning courses are interactive programs that can be executed in a variety of ways. Topics cover all phases of production. The following lists a few examples of distance-learning courses available (offered both in English and in Spanish):

- Your Role as a Swine Caretaker
- Breeding and Gestation Management
- On-Farm Euthanasia of Swine
- Pork Production Safety System

**Sow Stalls**

There has been increasing attention on sow housing. To better understand the issue, it is helpful to recognize the reasons individual maternity pens for sows (female pigs that are pregnant or have given birth) were introduced. Individual maternity pens were created to protect sows from other aggressive sows and better provide individual care and nutrition. There are two types of maternity pens commonly used on modern hog farms today.

The first type of pen is used to house pregnant pigs. Like many animals, pigs must establish a hierarchical social order when mixed together. In this social hierarchy, dominant sows can be aggressive and injure or even kill less dominant, or submissive, sows. Submissive sows also may have difficulty getting access to enough food because of the dominant sows. Farmers want all pigs to receive adequate food and water and be free of injury, so maternity pens were introduced as a means to help protect and nurture each pig. They also allow for better monitoring of the health of individual sows while they are pregnant.

The second type of pen is used for farrowing. These maternity pens are used to house sows that gave birth to and nurse a litter of piglets. Sows naturally choose a place away from the herd to farrow, but in an open pen environment this natural desire is impeded. Farrowing pens allow the sow to be away from other sows and provide a dry environment for the piglets to be farrowed. The pens also reduce the occurrence of the nursing sow rolling onto, crushing and killing the piglets. Farrowing pens are designed to allow piglets to easily nurse while keeping them safe.

The nation’s leading veterinarians say individual pens are humane but acknowledge there are advantages and disadvantages to any sow housing system. That is why research is ongoing to improve sow housing in ways that both protect pigs and make them as comfortable as possible.

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**New Pig Adventure**

Few people have the chance to visit a working hog farm, yet many people want to better understand how their food is produced. To provide an opportunity to see and learn about modern hog farming, the National Pork Board announced in 2011 its support for the Fair Oaks Pig Adventure. This facility will allow consumers to see firsthand the way pigs are being raised in a modern barn. At the site of the existing Fair Oaks Dairy Education Center in northwestern Indiana (located about an hour’s drive from downtown Chicago), plans are under way for a working 2,700-head sow farm that will allow visitors to view all aspects of production from an enclosed walkway above. Plans also call for a separate education center equipped with exhibits and other educational tools. A $2 million contribution on behalf of America’s pig farmers will be combined with funding from the Indiana Pork association and private funding. The adventure is expected to open in the spring of 2013.

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“Safe pork is what we strive for. We don’t want birds or rodents to reach the pigs. We want the pigs to be in a very clean and very safe environment. Our barns help protect the pigs.”

Steve DeBruin, farmer, Iowa

Source: 2012 Pork Industry Progress Report
“PQA is designed to provide measurements and assessments and thus give a basis for more substantial discussion on the ways that farms and the industry as a whole can improve the provision of care. I have been encouraged by the broad uptake of PQA Plus and the broad discussions that are occurring in the industry.”

Dr. John Deen, University of Minnesota

Resource Library

Pork producers and farm managers need access to resources to help them train their employees. Through collaboration of national and state organizations, the comprehensive resource library offers a wide array of electronic and printed brochures, videos and links to useful third-party websites that address topics such as animal care, pig disease prevention and pig handling. Some of these materials are available in both English and Spanish.

Transport Quality Assurance® (TQASM)

Producers recognize that their obligation to animal care does not end when the pig leaves the farm. Because it’s vital that proper and humane methods are used for handling and transporting pigs at all stages of life, the National Pork Board launched the Transport Quality Assurance® (TQASM) program. TQA is an education and certification program that trains swine transporters, farmers and handlers about best practices in handling, moving and transporting pigs. Farmers, their employees and transporters wishing to be certified must attend a training seminar and then successfully pass an exam. As of August 2012, there were more than 29,000 handlers certified in the TQA program. The goal for the TQA program is to achieve a 10 percent increase in the number of individuals certified in 2012 over 2011.

Research Investments Help Improve Animal Health and Well-Being

Farmers have long been proactive in funding research that leads to better care for animals. Over the past 10 years alone, the National Pork Board has invested more than $1.5 million of farmer funds into swine-housing research and $3.13 million in general research to improve animal well-being. Funding for research is directed to leading agriculture education institutions in the United States. Some of the research projects recently spearheaded by the National Pork Board include:

- Comparison of management factors affecting aggression in group-housed sows
- Protecting low-ranking sows in group-housing systems
- Determining the proper protocols for bedding and boarding trailers when transporting weaned pigs
- Evaluating nutritional efficiency of feed
- Studies to better understand, prevent and treat swine diseases

“PQA Plus success in influencing on-farm practices is the training of PQA Plus advisors who have swine production or veterinary medical experience. These individuals offer tailor-made recommendations for each production unit evaluated.”

Dr. James McKean, associate director, Iowa Pork Industry Center

“Our farm recently went through its second PQA Plus site assessment. While we have had quarterly walk-throughs with our consulting veterinarian for about 15 years, these visits have focused mostly on herd health, production and any issues at hand. What I really liked about the site assessment was the thoroughness of the format that was followed.”

Dale Norton, farmer, Michigan

Source: 2012 Pork Industry Progress Report
**Making Progress in the Fight Against PRRS**

In every segment of animal agriculture, disease prevention continually poses challenges; new diseases occasionally appear that are not easily understood. These diseases not only threaten the ability of animals to grow, but they also threaten the overall comfort of the animal and, sometimes, the safety of the food supply. For these reasons, the pork industry is continually focused on how to mitigate the introduction of disease into the herd. Farmers have been battling a disease known as porcine reproductive and respiratory syndrome (PRRS). The PRRS virus causes both respiratory and reproductive disease in pigs.

The good news is that the efforts to combat PRRS are paying off. The Pork Checkoff established the PRRS Initiative Research in 2004, and this effort has since funded 123 projects totaling more than $10 million. The Pork Checkoff has just published a 38-page report, *PRRS Initiative Research, 2004-2011*, which contains key findings and applications for PRRS based on the research funded during this period. These research funds have helped support scientists at more than 25 universities, U.S. Department of Agriculture laboratories and private research facilities in the United States and abroad. One recent example of progress in fighting PRRS is the PRRS Host Genetics Consortium. Member scientists from around the country have discovered a genetic marker in pigs that identifies whether a pig has a reduced susceptibility to PRRS. Scientists involved in the research believe the identification of the marker gene will allow genetics companies to more easily focus on selecting breed stock that is PRRS-resistant. In the future, producers can introduce new “PRRS-resistant” lines into their herds.

**Preharvest Traceability and Swine ID**

U.S. hog farmers support nationally standardized premises identification, animal identification and record-keeping as cornerstones for animal health, disease surveillance and rapid and accurate preharvest traceability for animal health. This is important to help monitor and contain an incident in the event of an animal disease or foodborne illness outbreak. Since the late 1980s, hog farmers have had a system for identifying and tracing pigs in interstate commerce from the last farm of ownership to the point at which they enter a harvesting, or processing, facility. This system included very specific means of officially identifying market hogs, sows and boars, as laid out in the federal Code of Regulations. Farmers and facilities are required to make these records available to animal health officials when necessary.

The Swine ID Plan is one example of pork industry-led efforts to enhance preharvest traceability for animal health purposes. Program standards developed in 2004 for the Swine ID Plan promote the implementation of a nationally standardized animal identification and preharvest traceability system for animal health that is consistent across all states. There are three key components to implementing the Swine ID Plan: premises identification, animal identification and animal tracing. By design, the plan provides animal health officials the ability to rapidly perform a systematic trace-back for disease events that could affect commerce and trade. The National Pork Board has been conducting an educational campaign to promote implementation of the key components of the Swine ID Plan. Today, more than 95 percent of all swine premises are registered.

**Keeping the Promise**

Animal agriculture has changed and evolved over the years, in part because farmers understand that it is in their interest to adopt practices that lead to healthier animals. To further advance animal well-being and farming methods, the National Pork Board plays a key role in bringing together recognized agriculture specialists and researchers to continuously promote a standard of excellence in hog farming. Committees led by farmers, veterinarians and animal well-being experts collaborate on the development of uniform programs and practices that can be shared with farmers throughout the country. These efforts address areas such as employee training, research priorities, certification programs, best practices and standard operating procedures. The National Pork Board then disseminates the latest recommended practices and protocols to farmers to adopt in their individual operations. This coordinated, unified approach has enabled farmers to address strategic health and care issues more quickly and effectively than would otherwise be possible. As a united group, hog farmers will continue to demonstrate their commitment to protect and promote animal well-being and bring best practices to farms across the United States.

**Research Spurs Improvement in Pig Well-Being During Transport**

The amount of bedding used in trailers to haul pigs can have a significant impact on animal well-being, according to John McGlone, professor and swine welfare specialist, Texas Tech University. Dr. McGlone was one of the researchers who conducted a 2012 study funded by the Pork Checkoff, which found that more bedding is not always better in cold temperatures and that overuse of bedding in the summer can be detrimental to animal well-being. The study focused on transporting hogs on trailers with various numbers of hay bales in hot, mild and cold temperatures.

Transport losses refer to pigs that die or become nonambulatory during transport to market. To date, the industry has made good progress in reducing the incidence of transport losses. For finishing pigs, it is estimated that more than 99.3 percent of pigs transported to harvesting facilities arrive in good condition. The National Pork Board will continue the efforts to identify areas for improvement in animal transport.

**“This could be one of the tools used to help eliminate PRRS, but more important, this work may provide the platform for finding similar marker genes responsible for conveying resistance to other economically devastating diseases.”**

Chris Hostetler, director of animal science, National Pork Board

Today, more than 95% of all swine premises are registered.
Produce Safe Food

Hog farmers recognize their obligation to produce safe food by:

- Using management practices consistent with producing safe food
- Managing the health of the herd to produce safe food
- Managing technology to produce safe food

Food Safety: The Highest Priority

Providing safe, wholesome food is the pork industry’s most important responsibility. Ensuring food safety is a complex undertaking that requires a deep understanding of and appreciation for the role that everyone in the food chain plays. On the farm, many factors can have an impact on food safety, which is why today’s farming operations employ a wide variety of technology and techniques to minimize food safety threats.

Supporting Pork Safety Through Research

In the past five years, the pork industry has invested more than $1.3 million in research to support issues associated with pork safety. In 2011, the National Pork Board funded four studies at renowned animal science institutions — Iowa State University, Kansas State University and the University of Minnesota — designed to shed light on ways to better understand and improve food safety. Issues being studied range from the epidemiology of foodborne pathogens throughout the pork chain, to genetic diversity as it relates to viruses within specific pig populations, to the development of diagnostic tests. These studies are selected for funding based on priorities established by producer-led committees and assisted by scientific advisors and animal agriculture experts.

Modern Farming Methods Help Reduce Foodborne Illness

Today, the pork industry is more focused on food safety than ever before. Thanks to new technologies and adoption of scientifically approved methods, hog farmers are better equipped to produce consistently safe, nutritious food for consumers all over the world. One of the most important trends that has improved food safety is the shift from raising hogs outdoors to raising them indoors. Here are the key reasons that food safety is enhanced by housing the animals in modern hog buildings:

- The buildings are designed and maintained to keep out predators, parasites and vermin — vital to prevention of pig injury and disease.
- Feed and water are less susceptible to contamination.
- Facilities have strict biosecurity practices to help ensure that diseases are not accidentally introduced to the animals. Outdoor facilities would be much harder to control in this regard. For example, visitors may be required to sign in and out, state when they last visited another farm, wear special boots and coveralls, and even shower before entering and upon exiting. These security protocols lead to healthier pigs and a safer food supply.

“It’s undeniable that U.S. consumers enjoy the safest pork supply in the world.”

Marcos Rostagno, DVM, MPVM, Ph.D., research animal scientist, USDA-ARS

Source: 2012 Pork Industry Progress Report
“It’s exciting to see producers, along with allied industry and government, work together to set the course for new pork-specific research. We know the Pork Checkoff’s involvement helps spur advances in science, but what’s particularly gratifying is how this investment in research helps make a difference in how farmers produce food in an efficient and socially responsible way.”

Everett Forkner, farmer, Missouri, and past president of the National Pork Board

Coordinated Approach to Food Safety

America’s hog farmers actively engage with the scientific community, governmental agencies and food chain partners in the development of sound programs and policies to advance food safety. The task of ensuring food safety is vast and complicated, so well-coordinated, forward-thinking programs have been developed to advance good production practices and food safety throughout the pork supply chain.

PQA Plus® and Good Production Practices

The industry’s leading certification program, Pork Quality Assurance® Plus (PQA Plus®), was originally established to promote uniform food safety practices on farms throughout the country. Scientists, veterinarians and animal agriculture experts helped craft the program and continue to update it regularly at the request of the National Pork Board. Today, PQA Plus brings the latest knowledge and science on food safety and animal well-being issues into the farm setting. (For more background on the PQA Plus program, see Page 7.)

The 10 Good Production Practices (GPPs) are the foundation of PQA Plus. They serve as guidelines for safe and responsible use of animal health products and for continually and objectively evaluating and improving animal care. The GPPs are based on:

- The HACCP principles — the standard for controlling hazards in foods produced and processed in the United States
- The Food and Drug Administration’s Compliance Policy Guide (CPG) 7125.37 — “Proper Drug Use and Residue Avoidance by Non-veterinarians”
- The Animal Medicinal Drug Use Clarification Act (AMDUCA) of 1994
- Science-based animal care and well-being practices

The Truth About Trichinosis and the Importance of Biosecurity

Many people believe they must cook pork until it’s well-done. The fact is, that is not necessary, according to the U.S. Department of Agriculture (USDA). The notion that pork must be cooked well-done dates back a few generations when a certain pathogen, *Trichinella spiralis* (trichinae), was a problem for the pork industry and for consumers. Today, we know that *Trichinella spiralis* is transmitted to pigs as a result of poor feeding practices and/or exposure to pathogen-infected animals. The widespread adoption of improved feeding practices and high levels of biosecurity and hygiene, under which nearly all pigs are now raised, have virtually eliminated the presence of trichinae in the U.S. pig herd. Biosecurity measures, in particular, have become very sophisticated and effective. Because most pigs raised for food today are housed in barns instead of outdoors, facility workers can carefully manage barn biosecurity to help keep out disease-causing pathogens. Because the pathogen related to trichinosis is virtually eliminated from the U.S. pig herd, the risk of trichinosis from U.S. pork is virtually eliminated, too.

To educate consumers about how best to prepare meat, the U.S. Department of Agriculture’s Food Safety and Inspection Service has stated: “Cooking raw pork, steaks, roasts and chops to 145°F with the addition of a three-minute rest time will result in a product that is both microbiologically safe and at its best quality.” (USDA News Release, May 2011)

Liz Wagstrom, chief veterinarian, National Pork Producers Council

“We all share the goal of providing safe, wholesome food. It’s our No. 1 responsibility, and it’s vital to maintaining the trust customers and consumers have in us.”

Source: 2012 Pork Industry Progress Report
**Good Production Practices**

1. Establish and implement an efficient and effective herd health management plan.
2. Use a veterinarian/client/patient relationship (VCPR) as the basis for medication decision-making.
3. Use antibiotics responsibly.
4. Identify and track all treated animals.
5. Maintain medication and treatment records.
6. Properly store, label and account for all drug products and medicated feeds.
7. Educate all animal caretakers on proper administration techniques, needle-use procedures, observance of withdrawal times and methods to avoid marketing adulterated products for human food.
8. Follow appropriate on-farm feed processing and commercial feed processor procedures.
9. Develop, implement and document an animal caretaker training program.
10. Provide proper care to improve swine well-being.

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**Consumer Education**

An important part of the National Pork Board’s mission is to help educate the consuming public about food safety issues, such as handling, preparation and cooking time. The organization provides information to consumers through a variety of channels, including print and online media. Also, as a member of the Partnership for Food Safety Education, the National Pork Board supports the Fight! BAC (bacteria) program. Fight! BAC combines the resources of the federal government, industry and consumer organizations to conduct broad-based food safety education to arm consumers with the information they need to cook meat products properly and ensure safe handling.

The following are basic good-handling procedures that should always be followed when preparing food. As always, when meat is handled and cooked properly, there is virtually no risk of becoming sick from a foodborne pathogen.

- **CLEAN**
  - Wash hands and surfaces often.
- **SEPARATE**
  - Don’t cross-contaminate.
- **COOK**
  - Cook to proper temperature. Use a meat thermometer.
- **CHILL**
  - Refrigerate promptly.

Source: 2012 Pork Industry Progress Report
Government Oversight of Pork Safety

Many checks and balances are in place throughout the production chain to ensure the integrity and security of the food supply at every step in the process. The U.S. food system has earned a global reputation for the safety of its products, and governmental oversight is part of the reason for this success. Various federal, state and local entities contribute to our nation’s food security safety net through regulation or inspection. The following entities have responsibility for various aspects of ensuring food safety:

U.S. Department of Agriculture (USDA)
The U.S. Department of Agriculture’s Food Safety Inspection Service (FSIS) has regulated meat and poultry processing for more than a century. The centerpiece of its meat and poultry food-safety regulation is the 1996 Hazard Analysis and Critical Control Point (HACCP) rule. The agency works to enhance public health by protecting consumers from foodborne illness and by ensuring that the nation’s meat, poultry and egg products are safe, wholesome and correctly packaged. This systematic preventive approach to food safety identifies physical, chemical and biological hazards in production processes that can cause the finished product to be unsafe, and it designs measurements to reduce these risks to a safe level.

National Animal Identification System (NAIS)
NAIS is a streamlined information system that helps producers and animal health officials respond quickly and effectively to animal disease events in the United States. Its work is carried out through a voluntary state-federal-industry partnership.

Food and Drug Administration (FDA)
Under the Department of Health and Human Services, the FDA is responsible for regulating more than $1 trillion worth of consumer goods. Areas of regulation that impact the pork industry are related to food safety and veterinary products.

Center for Veterinary Medicine (CVM)
The CVM is a branch of the FDA that regulates food, food additives and drugs that are given to animals, including food animals and pets. Its primary focus is to ensure medications that are used for food animals do not affect the human food supply.

National Antimicrobial Resistance Monitoring System (NARMS)
The FDA conducts monthly retail meat sampling as part of NARMS. The results of that testing consistently indicate that pork has a very low incidence of foodborne pathogens.

Food Animal Residue Avoidance Databank (FARAD)
FARAD is a national, USDA-sponsored, cooperative project, with a primary mission to prevent or mitigate illegal residues of drugs, pesticides and other chemicals in foods of animal origin. This computer-based decision support system is designed to provide livestock producers, Extension specialists and veterinarians with practical information on how to avoid drug, pesticide and other environmental contaminant residue issues.

Source: 2012 Pork Industry Progress Report
Fast Facts About Potatoes  
Come to the Source: Wisconsin

Efficient Growing/Packaging Practices

Wisconsin potato growers and packers have adopted state-of-the-art technology into the production and packaging of their product. The latest machinery and equipment is used in planting, cultivating and harvesting, enabling Wisconsin to consistently rank among the nation’s leaders in high yields per acre of U.S. No. 1 potatoes. Equally sophisticated are the modern packing sheds found in Wisconsin potato country. Elaborate electronic sizing machines are widely used, as is the Lectro-tech hollow heart detector, scanning potatoes for internal defects. Automated bagging machines and computerized inventory control ensure accuracy when shipping the wide variety of Wisconsin potatoes.

State-of-the-Art Storage Facilities

Modern storage warehouses which carefully balance elements such as temperature, humidity and handling, go a long way toward preserving potatoes at the highest level of quality. This means Wisconsin can provide top quality potatoes all season long.

Reliable Transportation

What good is a great supply of raw product if you can’t get it where it needs to go? Wisconsin has the transportation resources to assure you of timely deliveries. You can rest easy when you order from Wisconsin. We are an overnight delivery to most locations in the United States.

Dependability

With Wisconsin’s abundant supply of water, extensive use of irrigation, modern growing and packaging technology, unlimited supply of trucks and state-of-the-art storage, we can deliver the crop both at harvest and when you need it throughout the year. On-time delivery and top-quality product are trademarks of the Wisconsin potato industry.

Commitment to Research

Wisconsin potato growers commit hundreds of thousands of dollars every year for research. The research station at Hancock, Wisconsin is deeply involved in trying new methods to insure ever better quality, decrease chemical use and enhance the economic vitality of the Wisconsin farmer. Scientists at the University of Wisconsin are recognized internationally as world-wide leaders in potato research.

Wisconsin Potato & Vegetable Growers Association  
P.O. Box 327  
Anigo, WI 54409  
Phone: 715-623-7683  
FAX: 715-623-3176
FAST FACTS ABOUT POTATOES

HELPFUL HINTS

BUYING - Choose potatoes:
- that are clean, firm and smooth.
- with a regular shape - to avoid waste in peeling.
- of uniform size - to provide consistent cooking.
- Avoid potatoes with dark areas or with a green appearance.

PREPPING - For optimal results:
- gently scrub with vegetable brush or cellulose sponge to clean.
- keep the skin on when cooking - to preserve nutrients.
- if peeled - peel thin. Lemon juice will prevent browning.
- don’t bake in foil and get a fluffier, higher quality texture.

STORING - With raw potatoes:
- don’t wash before storing - speeds development of decay.
- don’t refrigerate or freeze - turns potato starches to sugar.
- keep in a cool, dark, well ventilated place.

WHAT ABOUT POTATOES:
- with green areas caused by too much light!
  Cut away the green areas if not excessive.
- stored below 40°F that turn dark when cooked?
  Texture and nutrient content have not been affected.

NUTRITIONAL INFORMATION

- Like an orange, high in Vitamin C.
- High in fiber.
- No fat, no cholesterol.
- More useable iron than any other vegetable.
- Low in sodium.
- Low in calories.
- More potassium than a banana.
- Chock full of complex carbohydrates.

COOKING IDEAS

OVERALL:
- Reds, whites and russets can be used interchangeably in most recipes.
- Potatoes are easy to cook with other foods - you can vary their cooking time and temperature.
- Are they done? Just check with a fork for tenderness.
- 1 pound (3 med. potatoes) peeled and cubed - makes 2 1/3 cups and serves 2-3.
- 2 pounds, cooked and mashed, serves 4-5.

MICROWAVE HINTS:
- Pierce with fork in several places before cooking.
- Place on paper towels in oven.
- Cook a medium/large potato on high for an avg. of 4 mins. (warning: microwave ovens vary).
- Add 1-2 minutes cooking time for each additional potato.
- After removing from oven, let sit as spud will continue to cook for about 5 minutes.

BOILING HINTS:
- Use a heavy sauce pan with a tight fitting lid.
- Boil in 1-2 inches salted water until tender.
- 30-40 minutes for whole potatoes.
- 20-25 minutes for cut-up potatoes.
- Try steaming for 25 minutes as an alternative - preserves nutrients.

CONVENTIONAL OVEN HINTS:
- Pierce in several places with a fork.
- If cooking just potatoes - 40-50 minutes at 400-425°F.
- By adjusting time, can cook with other items at range of heat from 325-450°F.
- After cooking, slit lengthwise to allow steam to escape prevents sogginess.
FAST FACTS ABOUT POTATOES  
BUYING, STOCKING, SELLING

TYPES AND VARIETIES

RUSSETS
Varieties - Russet Burbank, Norkotah, Centennials and Frontiers

WHITES
Varieties - Superior, Katahdin, Kennebec, White Rose

REDS
Varieties - Red Pontiac, Norland, Red LaSoda, La Rouge, Sangre, McClure

YELLOW FLESH OR FINISH
Most common trade name - Yukon Gold

CLASSIFICATIONS

SIZES
- Size A - 17/8 inch and larger, 40% over 21/2 inches or 6 ounces.
- Size B - 11/2 - 21/4 inches (sometimes called new potatoes).
- Baby - 11/2 inch and smaller, usually packed in pint baskets or tubs.
- Consumer Packs - 17/8 inch or 4 ounce minimum, packed in bags.

CARTON COUNTS - 50 LB. CARTON

<table>
<thead>
<tr>
<th>COUNT SIZE</th>
<th># OF SPUDS IN CARTON</th>
<th>AVG. WEIGHT EACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>49-52</td>
<td>16.0 oz.</td>
</tr>
<tr>
<td>60</td>
<td>58-60</td>
<td>13.0 oz.</td>
</tr>
<tr>
<td>70</td>
<td>66-72</td>
<td>11.5 oz.</td>
</tr>
<tr>
<td>80</td>
<td>78-82</td>
<td>10.0 oz.</td>
</tr>
<tr>
<td>90</td>
<td>90-95</td>
<td>9.0 oz.</td>
</tr>
<tr>
<td>100</td>
<td>100-105</td>
<td>8.0 oz.</td>
</tr>
<tr>
<td>110</td>
<td>108-115</td>
<td>7.5 oz.</td>
</tr>
<tr>
<td>120</td>
<td>118-130</td>
<td>6.5 oz.</td>
</tr>
</tbody>
</table>

STORAGE TIPS

COOL, DARK AND WELL VENTILATED.
- Ventilation - Store on a pallet to enhance ventilation. This limits spoilage by allowing potatoes to breathe oxygen and give off carbon dioxide.
- Temperature - Between 45 and 50° F is ideal. 50° will result in sprouting, increased flabbiness and faster decay. Potatoes stored below 40° will convert starches to sugar. This will cause potatoes to turn dark when fried.
- Light - Too much light causes potatoes to turn green (also causes a bitter taste). It is recommended that the potato section be covered during off hours.

MERCHANDISING TIPS

1. Rotate stock daily. Clean out the bin thoroughly, place new stock at the bottom or back of the bin, and refill your most recent unsold stock on the top or in the front of the bin.
2. Make displays more powerful. “Spill overs,” waterfalls and large compelling displays really move the spuds. Try a second big display in the front of the section during major promos.
3. Sell a wide variety. Provide a supply of bulk reds, whites and russets, plus an assortment of 5, 10 and 20 lb. bags. Use color breaks to separate the natural and variegated hues of potatoes.
4. Use signage. Recipes, price cards, nutritional info and serving information all increase sales. Sales really skyrocket when signage is used in conjunction with ads.
5. Advertise. Potato features create traffic for your department and the entire store.
In recent years, the expanding ethanol industry has meant success for corn growers looking for new markets for their versatile product. While field corn has hundreds of different uses, the amount going into ethanol has increased sharply, helping clear the air, soil and water of contaminants and providing nutritious feed for livestock via some important coproducts.

At present, an estimated 3 billion bushels of field corn is used for ethanol production, a number expected to increase in the years to come. Besides ethanol, this corn also will result in key coproducts that replace some of the corn going straight into feed for livestock. That’s because only the starch portion of the corn kernel (about two-thirds of the kernel by weight) is used to produce ethanol. The kernel’s remaining protein, fat, and other nutrients and minerals are passed through the process and used as animal feed, commonly known as distillers grains. In some cases, ethanol plants also remove the fat from the kernel and use it to produce corn oil for human food use.

Understanding these various coproducts requires knowing there are two processes by which corn is converted to ethanol, a dry milling process and a wet milling process.

Each bushel of corn produces 2.8 gallons of fuel ethanol.

In the dry milling process, each bushel of corn produces 17.5 pounds of distillers dried grains with solubles in addition to the ethanol. A high-protein livestock feed, corn distillers grains contain all the nutrients from the incoming corn minus the starch.

In the wet milling process, 13.5 pounds of gluten feed are produced from each bushel of corn used. Corn gluten feed is rich in highly digestible fiber and is processed as either dry pellets or wet feed. These feeds are widely used for dairy and beef cattle, poultry, swine and pets. This process also results in 2.6 pounds of gluten meal, a high-protein concentrate that is excellent cattle feed providing a high level of rumen bypass protein. Finally, this process also results in 1.5 pounds of corn oil from each bushel used.

NOTE: A bushel equals 56 pounds, about the size and weight of a large bag of dog food.
Ethanol is a fast-changing industry, and a lot of old information – as well as misleading rumors – have been spread over the past few years. Here are the top myths about ethanol, and the facts to set them straight.

**MYTH:** Ethanol raises the price of food.

**FACT:** Ethanol has had almost no impact on the price of food at the supermarket. In fact, while corn prices have steadily decreased, food prices have increased and stayed at high levels. Nearly 96 percent of the hike in food prices can be attributed to price speculation, drought and a weak U.S. dollar. Other factors influencing high food prices include costs for labor, transportation, advertising and packaging.

**MYTH:** Ethanol is made from corn that should be used for food.

**FACT:** The corn we use to make ethanol isn’t the same corn you buy in the grocery store, and isn’t typically used in food. It does, however, contain proteins and nutrients that make a valuable feed for livestock, and the process of making ethanol keeps that feed intact. The ethanol industry is now one of the largest providers of this feed, called distillers grains.

**MYTH:** Ethanol doesn’t help the environment.

**FACT:** From “well to wheel,” ethanol from today’s modern plants reduces greenhouse gas emissions by up to 59 percent compared to gasoline, according to the latest study. That’s taking into account the entire lifecycle of ethanol, from tilling the land to planting the corn, to transportation, and eventually to your gas tank and tailpipe. Future ethanol production methods could reduce greenhouse gas emissions even further - cellulosic ethanol may eventually reduce emissions by 80 percent or more. Today, ethanol is the only renewable fuel that’s practical for use in the cars we already have – and it’s better than gasoline for both the environment and America.

*Source: Yale’s Journal of Industrial Ecology*
MYTH: It takes more energy to make ethanol than it provides.

FACT: According to the U.S. Department of Agriculture, ethanol now provides 67 percent more energy than it takes to produce, and is improving with new technology.

MYTH: The potential of ethanol is inherently limited by the fact that it can only be made from two or three sources - and technology to move beyond that is still years away.

FACT: The next generation of ethanol is here now. It’s made from cellulose, the most common renewable biomass on the planet. It’s found in all plants, and today’s ethanol producers are making it from corn cobs, wood waste, agricultural waste and more. Other sources all over America are in development, and with continued support, next-generation biofuels could replace much of our imported oil by 2030. The technology of cellulosic ethanol could be used all over the world to help make poor countries and rural communities energy independent, too.

MYTH: Ethanol is bad for my car.

FACT: Over 70 percent of gasoline pumped in America contains ethanol. This means your car is probably already using ethanol, and you may not even have noticed. Virtually all cars made after 1980 could run on higher blends such as E15. Your car may run on even higher blends - check your owner’s manual or ask your mechanic. Many automakers now have flex fuel vehicles (FFVs) available in America, which are designed to run on any blend up to E85.

Ethanol is a clean-burning, high-octane fuel that reduces emissions and helps keep your engine clean. It’s the only practical, renewable fuel available right now, for the car you already have.

MYTH: Increasing the amount of corn used for ethanol will lead to deforestation.

FACT: The crops needed for ethanol won’t require new land due to increased efficiencies in the field and at the ethanol plant. Corn farmers have consistently increased their crop yields so that today, they grow five times as much corn as they did in the 1930s - on 20 percent less land. Average yield per acre has increased from 24 bushels in 1931 to 163 today and experts expect it to double again in the next 25 years. Mirroring those gains have been improvements in the efficiency of ethanol production which squeezes more and more ethanol out of every bushel. Twenty years ago, ethanol producers averaged around 2.5 gallons of ethanol per bushel and today it’s almost 3. Over a recent five-year period, there was a better than six percent gain in ethanol yield, showing that the process continues to get better all the time. All of these improvements indicate that additional land won’t be needed for ethanol production and that’s why deforestation has dropped by half in the past decade while ethanol production has exploded.

Ethanol is more than a fuel. It’s a solution. Learn more at GrowthEnergy.org.
Biodiesel is:
Biodiesel is America's advanced biofuel. It is a drop-in diesel alternative, made from domestic, renewable resources such as plant oils, animal fats, used cooking oil and even new sources such as algae. Biodiesel contains no petroleum, but can be blended with petroleum diesel. Biodiesel blends can be used in compression-ignition (diesel) engines with little or no modifications. Biodiesel is cleaner burning, simple to use, biodegradable, nontoxic, and essentially free of sulfur and aromatics.

Biodiesel is not:
Biodiesel is not raw vegetable oil. Fuel-grade biodiesel must be produced to strict industry specifications (ASTM D6751) in order to ensure proper performance. Only biodiesel that meets the spec and is registered with the Environmental Protection Agency is a legal motor fuel.

Biodiesel is not the same as ethanol. Biodiesel is made from a variety of materials for use in diesel engines, with different properties and benefits than ethanol.
MYTH: Biodiesel does not perform as well as diesel.

FACT: Biodiesel can be used in existing diesel engines and fuel injection equipment in blends up to 20 percent with little impact on operating performance. Biodiesel has higher cetane than U.S. diesel fuel. B20 (20 percent blend of biodiesel with diesel fuel) provides similar fuel economy, horsepower, torque, and haulage rates as diesel fuel. Biodiesel also has superior lubricity, and it has the highest BTU content of any alternative fuel.

MYTH: Biodiesel takes more energy to produce than what it returns.

FACT: Biodiesel has the highest energy balance of any fuel, returning 5.5 units of energy for every unit of fossil energy needed to produce it.

MYTH: No objective biodiesel fuel standard exists.

FACT: Just like gasoline and diesel, biodiesel has fuel quality specifications. ASTM’s original specification for pure biodiesel is D6751. Other ASTM specifications include:

- Blends of diesel and biodiesel, from 6 to 20 percent (D7467)
- Biodiesel blends up to B5 in diesel fuel (D975)
- Home heating and boiler applications (D396)

MYTH: Biodiesel doesn’t work in cold weather.

FACT: Properly managed, high quality biodiesel blends are successful in the coldest of climates. Just like No. 2 diesel, biodiesel will gel in very cold temperatures. Although pure biodiesel has a higher cloud point than No. 2 diesel, blends of 20 percent biodiesel are usually managed with similar techniques. Blends of 5 percent and below have virtually no impact on cold weather operability. See www.biodiesel.org/cold for a cold weather guide.

MYTH: Biodiesel fuel quality is inconsistent.

FACT: Studies by the National Renewable Energy Laboratory show the biodiesel industry has substantially met national fuel quality standards. Plants certified under BQ-9000, the industry’s quality assurance program, consistently hit the quality mark. Biodiesel production facilities certified under the program represent more than 80 percent of the U.S. biodiesel market volume.

For more information on the BQ-9000 quality program, visit www.bq-9000.org.

MYTH: Biodiesel use voids manufacturers’ engine warranty coverage.

FACT: All major U.S. automakers and engine manufacturers accept the use of up to at least B5, and the majority of major engine companies have stated formally that the use of high quality biodiesel blends up to B20 meeting ASTM specs will not void their parts and workmanship warranties. In fact, all of Ford Motor Company’s new F-Series Super Duty diesel pickup trucks feature a B20 emblem right on the side! For specific statements from manufacturers, visit www.biodiesel.org/resources/oems.

MYTH: Biodiesel increases greenhouse gases because it causes land to be cleared.

FACT: U.S. biodiesel is an advanced biofuel, reducing lifecycle carbon emissions by up to 86 percent. New cropland is not needed to make biodiesel because it is produced from co-products and byproducts of crops already grown for food and other materials. From 2004 to 2008, when U.S. biodiesel production climbed to 700 million gallons, soybean acres in the U.S. stayed virtually the same, and soybean acres in Brazil decreased. There are surplus stocks of U.S. fats and oils sufficient to meet demand.

MYTH: Biodiesel contributes to rising food prices.

FACT: Biodiesel actually benefits the world’s protein supply. Processing biodiesel from soybeans uses only the oil portion of the soybean, leaving all of the protein available to nourish livestock and humans. By creating a new market for soybean oil, we increase the availability of protein-rich meal for human and livestock consumption. The increased meal supply results in a more cost-effective food and feed source.

Biodiesel is the most diverse fuel on the planet, produced from renewable resources such as:

- soybean oil/other plant oils
- fats
- recycled grease
- and soon, algae

MYTH: Biodiesel is a first-generation, conventional biofuel.

FACT: Biodiesel is the only domestically produced, advanced biofuel commercially available in the U.S. EPA defines biodiesel as an advanced biofuel in federal statute, based on its greenhouse gas reductions compared to petroleum. It is the best carbon mitigation strategy for diesel engines right now, and for generations to come.

For more information on sustainable biodiesel, visit www.biodieselsustainability.com.
Land Stewardship

No crops are grown for biodiesel production, so it doesn’t lead to the clearing of land. In fact, U.S. Department of Agriculture data shows overall U.S. acreage for crop production has not increased since 1959.

“The efficiency of American agriculture shouldn’t be underestimated when we ask agricultural systems to provide both food and fuel. We’ve seen a 400-fold increase in soybean yield per acre during the last century. We’ve accomplished this with lower inputs of water and fertilizer per bushel, even as cropland has declined.”

— Dr. Stephen Kauffman, University of California - Davis Department of Plant Sciences.

The federal Renewable Fuels Standard ensures sustainable resources are used in meeting the renewable fuel usage goals in the U.S. The Environmental Protection Agency only approves renewable fuels for the program if:

- Greenhouse gas emissions are significantly reduced compared to petroleum
- It is certified that land was not converted to produce the renewable fuel
- Biodiesel is the only commercially available fuel to meet the EPA’s definition of an advanced biofuel. These requirements protect forests and native grasslands, and ensure renewable fuels have multiple environmental benefits over fossil fuels.

www.biodieselsustainability.org
Made from abundant, diverse resources, biodiesel is America’s only commercially available advanced biofuel.

A Breath of Fresher Air
Biodiesel is a renewable, cleaner-burning diesel fuel replacement for any diesel engine.

Environmental benefits*:  
- Reduces lifecycle greenhouse gases by 86%  
- Lowers particulate matter by 47%, reduces smog and makes our air healthier to breathe  
- Reduces hydrocarbon emissions by 67 percent  
- For every unit of fossil energy it takes to produce biodiesel, 5.5 units of renewable energy are returned, the best of any U.S. fuel

Easing Oil Consumption, Boosting the Economy
- The U.S. biodiesel industry supports 31,000 green jobs  
- Generates at least $3 billion for the U.S. economy rather than spending on foreign oil  
- Global biofuels production cuts consumption of crude oil by 1 million barrels a day

Food and Fuel
**Biodiesel enhances the world’s protein supply**
Making biodiesel from soybeans uses only the oil portion of the soybean, leaving all of the protein available to nourish livestock and humans. By creating a new market for soybean oil, biodiesel has increased the availability of protein-rich meal more cost-effectively.

“In 2010, U.S. biodiesel produced from soybean oil co-produced enough soybean meal for 57 billion servings of protein like those used in global hunger programs.”

— Jim Hershey, Executive Director  
World Initiative for Soy in Human Health (WISHH)

*Biodiesel is the most diverse fuel on the planet,* produced from agricultural by-products and co-products such as:
- soybean oil and other plant oils  
- rendered fats  
- recycled grease  
- algae

“Biodiesel is already one of the most environmentally friendly fuels available, and as an industry we’re going even further, continually increasing those environmental benefits.”

— Emily Bockian Landsburg of BlackGold Biodiesel and Chair of the National Biodiesel Board’s Sustainability Task Force

Water Conservation
- Biodiesel is nontoxic and biodegradable  
- Biodiesel production reduces wastewater by 79% and hazardous waste by 96%*  
- A to-go latte takes 26 times more water to produce than a gallon of biodiesel

*compared to petroleum diesel
Social Media Resources

www.facebook.com/WIFarmBureau
www.facebook.com/WIAgintheClassroom
www.facebook.com/USFarmersandRanchers
www.facebook.com/PorkBeInspired
www.facebook.com/WIPork
www.facebook.com/ThePorkCheckoff


www.facebook.com/pages/Wisconsin-Farmers-Environmental-Stewards

www.facebook.com/EatWisconsinPotatoes

www.porkbeinspired.com/PorkSocial.aspx
National Pork Board - Offers a variety of social media and YouTube videos

wfbf.com/newspublications/blogs
Wisconsin Farm Bureau Federation members’ blogs

thenewfamilyfarm.wordpress.com
If you would like to learn more about Wisconsin farmers and the opportunities and challenges of agribusiness, please visit The New Family Farm. This blog not only explores how farming in Wisconsin affects the state’s water and environment, but also how it impacts the mother who feeds her kids with vegetables grown locally and the hundreds of thousands of Wisconsin residents employed in agriculture.

feedingyourfamily.wordpress.com
Feeding Your Family Blog - How food gets to you and the process it takes to get there is all looked at in this blog.
Websites you may want to visit!

This website list offers many educational resources and links to farmers and the agricultural community. There are many others available. Please contact Wisconsin Ag in the Classroom if you need assistance finding information or a contact.

www.agfoundation.org
The American Farm Bureau Foundation for Agriculture offers PreK-12 grade educational resources about agriculture.

www.americasheartland.org
America’s Heartland gives consumers an inside look at the people and processes involved in bringing food, fuel and fiber to those in the United States and around the world. America’s Heartland offers more than 700 hundred informative and compelling stories about farm families, agricultural technology, consumer issues, animal welfare, environmental concerns, organic farming and crop sustainability. It strives to give urban viewers a better understanding of the challenges and opportunities facing modern agriculture.

www.animalagalliance.org
Includes individuals, companies and organizations that are interested in helping the consumers better understand the role that animal agriculture plays in providing a safe, abundant food supply to a hungry world. It has a teacher’s guide, Adopt a Teacher program and many other educational resources.

www.biodiesel.org
The National Biodiesel Board (NBB) is the national trade association representing the biodiesel industry in the United States.

www.cornfarmerscoalition.org
The Corn Farmers Coalition is an alliance of the National Corn Growers Association and 14 state corn associations representing thousands of farmers. They produce an annual Corn Fact Book filled with information about growing corn, uses, exporting, ethanol, feeding animals and people and policy.

www.DairyDoingMore.org
The Wisconsin Milk Marketing Board is a nonprofit organization funded by dairy farmers that promotes the more than 600 varieties, types and styles of Wisconsin cheese and other dairy products from America’s Dairyland.

www.Dairyfarmingtoday.org
A website connecting dairy farmers and consumers.

www.farmersfeedus.org/wi
Spend a little time getting to know some Wisconsin farmers and their families. Watch them at work and take a quick tour of their farms to learn more about their dedication to growing safe food and raising healthy crops and livestock, all the while protecting and conserving the land.

www.factsaboutbeef.com
Funded by the Beef Checkoff Program, this website offers a variety of research information and sources, blogs from farmers, and information about safety, animal care, and other related items.

www.fb.org
The American Farm Bureau Federation is the unified national voice of agriculture, working through its grassroots organizations to enhance and strengthen the lives of rural Americans and to build strong, prosperous agricultural communities. Click on “Today’s Agriculture” to connect to consumer information.

www.findourcommonground.com
America’s farmers produce food that is safe, affordable, accessible and nutritious. With so many food choices available, CommonGround serves as a resource to help you sort through the myths and misinformation surrounding your food.

www.FoodDialogue.com
A one-stop-shop to answer questions and explore new content related to food production. The new website features a stylish news-like home page and intuitive layout that allows users to easily navigate the site and engage with content. As part of the newly designed website, USFRA launched FoodSource - a custom-created site that was built around a series of unique sections covering the nine most pressing topics in food production today including animal welfare, antibiotics, hormones and growth tools, pesticides, fertilizer and herbicides, water quality, GMOs, water quality, farm size and ownership, and food choices and prices.

www.FoodInsight.org
The International Food Information Council (IFIC) Foundation is dedicated to the mission of effectively communicating science-based information on health, nutrition and food safety for the public good.

www.Getbiotechsmart.com
United Soybean Board (USB) has produced the GetBiotechSmart.com website to provide biotechnology information and tools to teachers and students. This web portal is designed to address the questions around biotechnology and generate corresponding discussions through video podcasts, e-learning modules, a teacher forum and other e-resources.

www.healthygrown.com
Healthy Grown brand potatoes provide healthy, environmentally-friendly produce. Healthy grown potatoes are independently certified and have been grown according to stringent reduced-pesticide, environmentally friendly growing standards. Healthygrown.com is a collaborative effort by the Wisconsin Potato and Vegetable Growers Association, World Wildlife Fund, the University of Wisconsin and conservation groups such as the International Crane Foundation and Defenders of Wildlife.

www.Humanewatch.org
A watchdog group that monitors and responds to the information and activities of the Humane Society of the United States (a critic of animal agriculture).

kidsdigwipotatoes.com
WI Potato Growers Auxiliary - Offers educational resources and activities for fourth grade students and teachers.

www.meatmattersinfo.org
American Meat Institute’s Consumer Information Center offers information dedicated to providing retailers and consumers with accurate, information. Their brochures are easily downloaded.

www.meatmythcrushers.com
This website was developed in consultation with leading experts in the field of meat and animal science, food safety and nutrition to provide consumers and media with the other side of the story; a side that often is overlooked in media reports and on the Internet. The American Meat Institute hosts the site and materials have been reviewed by members of the American Meat Science Association and other experts.
National Corn Growers Association is the preeminent voice representing the needs of the nation’s corn growers. It offers opportunities for corn growers to meet domestic and global market demand while increasing environmental and economic sustainability. It advocates for policies that retain viable risk management tools, encourages science-based regulations, fosters a positive public perception of agriculture and creates additional opportunities to expand the uses and efficiencies of corn.

From the National Pork Board, this website features information about nutrition, recipes, diet and cuts of pork.

The National Pork Board and National Pork Producers Council’s website has information for consumers, students and educators. It answers questions about food production including how livestock is raised. The annual Pork Industry Progress Report offers consumers insight into the pork community, producing safe food, and the business side of hog farming.

Learn how farmers and ranchers - whether they farm using biotechnology or organically, on 10,000 acres or 10 acres - produce wholesome, safe and affordable foods for their family and yours.

Truth About Trade & Technology (TATT) is a non-profit advocacy group led by farmers who support freer trade and a farmer’s freedom to choose the tools, technologies and strategies they need to maximize productivity and profitability in a sustainable manner.

Connect with veal farmers as they educate consumers about veal. Farmers have embraced a set of ethical standards and code of conduct that reflects their commitment to producing safe food, providing excellent animal care, educating employees, preserving the environment and positively contributing to the local community. In addition, veal farmers are dedicated to transitioning their barns to group housing pens.

This website answers questions about GMOs and is funded by the members of The Council for Biotechnology Information. Its members are dedicated to the responsible development and application of plant biotechnology.

The Department of Agriculture, Trade and Consumer Protection (DATCP) protects food, fair business practices, agricultural resources, consumers, plants and animals in Wisconsin. It has responsibilities related to many different boards and advisory councils.

The Wisconsin Farm Bureau Federation is the state’s largest general farm organization representing farms of all sizes, commodities and management styles. This website offers consumer information, links to blogs and Facebook, and resources about agricultural issues.

Wisconsin Farmers: Environmental Stewards is a group of proactive farmers who maintain agricultural production practices that are environmentally friendly. They ensure their practices are science-based and work constantly with the research community to make sure their processes stay that way. They clearly and effectively communicate their practices and wish to engage in conversations to help inform and broaden the public’s knowledge base.

Wisconsin Potato and Vegetable Growers Association, helps growers conduct and utilize the latest research and technologies, garner government support, produce environmentally sound research and stay in touch with consumers.

The Wisconsin Pork Producers Association website is a resource for pork producers and consumers. You’ll find great pork recipes, a source for show pigs and see what is happening on the legislative front related to agriculture.

The Wisconsin Dairy Council features educational resources for teachers about the Wisconsin dairy community.
Ag in the Classroom is a program coordinated nationally by the U.S. Department of Agriculture to help students in grades pre-K-12 understand the importance of agriculture.

Ag in the Classroom is run by the Wisconsin Farm Bureau Federation, with a grant from the Wisconsin Department of Agriculture, Trade, and Consumer Protection. The program is supported by other ag organizations and businesses.

Ag in the Classroom incorporates resources into existing curricula, emphasizing history, geography, technology, economics and careers in agriculture.

Volunteer Network
Wisconsin’s Ag in the Classroom program utilizes a network of local volunteers across the state who work with schools to introduce the program, help arrange farm tours and provide classroom presentations.

Resources and Activities
• Lesson Plans and Hands-on Activities
  Lesson plans and hands-on activities are available for all grade levels on a variety of subjects and commodities. Lessons are correlated to Wisconsin Model Academic Standards in social studies, math, English and science.

• Websites
  www.wisagclassroom.org
  Wisconsin’s Ag in the Classroom web site is an archive of resources for teachers, students and volunteers. The website also has links to educational resources, downloadable applications and county contact information.
  www.agclassroom.org
  The United States Department of Agriculture Ag in the Classroom website offers teachers and students lesson plans, a national resource directory, state profiles and other resources.

• Online Resource Guide
  This online directory provides information about Wisconsin agriculture for classroom use. Find the resource guide at www.wisagclassroom.org/agriculture-resources

• Soybean Science Kits
  Kits containing curriculum and teaching supplies for 21 lessons connecting agriculture and science are funded by the Wisconsin Soybean Marketing Board.

• Ag Mags
  This is a visually exciting, four-color tabloid designed to educate students in elementary grades. Topics include dairy, pizza, beef, careers and biotechnology.

• Wisconsin Farm Facts
  These brochures contain statistical and economic information about Wisconsin’s ag industry.

• Children’s Library Books
  This selection of children’s books provides readers an accurate, up-to date portrayal of modern agriculture.

• Essay Contest
  This annual contest provides fourth and fifth grade students an opportunity to learn about a selected topic, research information and then write an essay.

• Teacher Training
  Various teacher training opportunities are offered to explore ways to incorporate agriculture into their classes. In-services and graduate options are available.

• Grants
  Matching grants are offered to groups for projects that promote ag literacy. Teacher mini-grants are offered to teachers to develop ag literacy curriculum and activities.

• Outstanding Teacher Award
  This award recognizes teachers for their achievements in teaching students the importance of agriculture.

Ag in the Classroom Contact:
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