Module 1
Teacher’s Guide

GOAL: Students will learn why we eat and use pork; how farmers produce safe, healthy pigs and hogs; and of the careers and businesses that support Kentucky’s pork industry.

History of Pork
Ask students from where pigs or swine come. Some may be surprised to know that they are not native to America.

Points to Ponder
Despite some marketing claims:
• It is illegal to give swine hormones for growth. All pork is raised without added hormones.
• Antibiotic-free – Some producers choose not to use antibiotics. If antibiotics are used, those animals may not enter the food supply until the antibiotics have left their system (withdrawal period). Any animal in violation is rejected. Either way, there should never be any antibiotic residues in pork.
• There are different types of pork production. Some animals are in confinement so their environments, diets, and safety can be regulated more carefully. Some animals are kept outside year-round and allowed to forage (eat what is available). Some farmers choose something in between these two systems. Production method decisions are based on production costs for the farmer; opinions on what is best for the animals (health, welfare) and what provides a safer product; availability of resources (feed, labor, land, water, energy); and the price customers are willing to pay for products.

Pig Breeds
• There are several breeds of domestic pigs, each having unique characteristics. Purebreds and Crossbreds are typically selected for growth rates, amount of fat, and environment adaptability.
• The “small/local” food movement has resurfaced many heritage pig breeds for consumers looking for unique products. Specialty swine diets can alter flavor.

Kentucky Hog farmers
Today, there are different scales for pork farming, depending on available markets, availability of resources, and consumer needs. Kentucky is home to many pig farms using a variety of production methods.

VIDEO (30-sec. Commercial): The O’Bryan family operates the largest hog farm in Kentucky, supplying 54 million pounds of pork each year. They also grow their own corn and soybeans for feed, and they compost the pig waste to sell as organic fertilizer. Ask students what they thought about the commercial.

VIDEO (8 minutes): Meet Caleb Ragland, a farmer from LaRue County, Kentucky. He talks about how he and his family care for the sows and pigs. Learn more at porkcares.org.

Optional Activity
- After watching the videos, have students complete the “What’s Important” Worksheet to think about farmer profitability, animal welfare, and consumer desires. There are no wrong answers, but students should be encouraged to defend their answers. All factors should be of some concern to both the farmer and consumer as they are all related.

Kentucky’s Pork Industry
• Kentucky farmers raise about 300,000 pigs/hogs annually.
• There are several processing facilities across the commonwealth.
• The largest is JBS in Louisville, Kentucky. All JBS pig suppliers are certified by the National Pork Board Pork Quality Assurance Plus Program to ensure the highest standards of meat quality, food safety and animal welfare.
• Specialty Food Group is located in Owensboro, Kentucky. They own Fischer’s, Field, Kentuckian Gold, and Kentucky Legend Brands, among other meat brands.
• Purnell’s Old Folks Sausage is a smaller processor in Simpsonville.
• Many other facilities specialize in processing a smaller number of hogs for individuals and local markets.
Processors

VIDEO - Broadbent’s Country Ham - Curing hams are also big business in Kentucky. Let’s learn about Broadbent’s Country Hams in Kuttawa, Ky. The Kentucky Farm Bureau auctions the winning country ham at the Kentucky State Fair each year for charity.

VIDEO - Purnell’s “Old Folks” Country Sausage is operated in Simpsonville, KY. They make and sell sausage and food products to several nationwide restaurants and retail grocery stores.

Optional Activity: As students learn about production and processing, have them complete the “Careers in Production, Processing and Distribution” Worksheet to explore careers in agriculture and the food industry.

Other Pig Uses
Pigs have many uses beyond human food. All parts of the animal can be utilized:
- Leather and hair (paint and hair brushes)
- Industrial and consumer products – glues, lubricants, fertilizers, bonding agents
- Pet and zoo animal foods, treats, supplements, vaccines, and medicines
- Human nutritional supplements and pharmaceuticals
- Heart valve transplants in humans
- Skin repair in humans
- Research is being conducted to determine if swine hearts and lungs can be successfully transplanted into humans due to a lack of human donors.
- Learn more: GOOGLE - Why Pigs are So Valuable for Medical Research or Sustainable Swine Resources (Link is provided in presentation).

Exit Ticket
Have students complete the questions. A printable worksheet is provided.

1. Who were the first people to domesticate pigs?
2. Name one pig breed.
3. List two things you learned today.
4. What is one question you still have?

Additional Activities and Resources

Porkfoodservice.org is a great place to learn more about pig breeds, production practices, and animal welfare. Click on “About Pigs.”

Reading Comprehension Activities (see folder on the flash drive) - Several articles have been provided for your students to learn more about the Kentucky pork industry:
- Informational Text 1 - Kentuck Pork Industry is Growing
- Informational Text 2 - Lincoln’s Neighbors
- Informational Text 3 - Hogs on the Highway

Have them perform a “close read” and answer the following questions. The first article also has specific questions to answer. (This worksheet is provided on the flash drive as well.)

Questions to Guide Your Understanding

Before You Read/View
1. What do you think is the subject of this article or video?
2. What do you know about this subject, or what opinion do you have about this subject?
3. Note the source, author, and date of the article or video. Do you believe the source/author is credible and the information is still relevant? Why or why not?

While You Read/View
4. As you read or watch, write down any terms that are new to you. Use context—the surrounding text or information—to create a definition of those terms.

After You Read/View
5. Write down two new facts or statements you learned from reading the article or viewing the video.
6. Did the information change any opinions you had about the subject? Why?
7. Write a short (25 words or less) summary, fact, or opinion statement that you would want to share with your friends/peers about this subject.
What’s Important?

As you learn about pigs and pork production in Kentucky, think about what factors are important to the farmer, and what factors are important to you, as a consumer. What factors are important to both? Place the words and phrases provided for you into the appropriate circle of the Venn Diagram.

CRITICAL THINKING QUESTIONS: What factors on the farmer side are related to factors on the consumer side? What factors of pork production are most important to you? Would you pay more for the product if the farmer met your standards? How much more?
CRITICAL THINKING QUESTIONS: What factors on the farmer side are related to factors on the consumer side? What factors of pork production are most important to you? Would you pay more for the product if the farmer met your standards? How much more?

NOTE: There are no right or wrong answers. Encourage students to defend their thoughts.

Digging Deeper: Have students research meat prices based on different production methods and marketing strategies.
Makin’ Bacon Career Exploration

As you learn about pigs and pork production in Kentucky, think about what careers and jobs are needed to provide pork products to consumers. Careers may be organized by PRODUCTION, PROCESSING, and DISTRIBUTION. All categories may need business/administration support.

<table>
<thead>
<tr>
<th>PRODUCTION</th>
<th>PROCESSING</th>
<th>DISTRIBUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Feed, Water, Shelter, Animal Health)</td>
<td></td>
<td>(Sales, Marketing, Retail)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

BUSINESS SUPPORT
# Makin’ Bacon Career Exploration

As you learn about pigs and pork production in Kentucky, think about what careers and jobs are needed to provide pork products to consumers. Careers may be organized by PRODUCTION, PROCESSING, and DISTRIBUTION. All categories may need business/administration support.

## PRODUCTION
(Feed, Water, Shelter, Animal Health)
- Animal Nutritionist
- Grain Farmer
- Feed Ingredient Buyer
- Feed Processor (Mill)
- Truck Drivers
- Water Treatment or Well Drilling Plumber
- Water and Feed System Engineers
- Equipment Manufacturers & Mechanics
- Architects & Engineers
- Animal Welfare Consultant
- Materials Manufacturing
- Construction Workers
- Project Managers & Building Inspectors
- Electricians
- Heating/Ventilation/AC Technicians
- Environmental Consultant
- Veterinarian & Veterinary Technician
- Pharmaceutical Sales & Manufacturing
- Animal Managers and Caretakers
- Waste Removal
- Extension Educators and Researchers
- Disease Diagnostics

## PROCESSING
- Truck Drivers
- Animal Buyers
- Plant Managers
- USDA Inspectors and Meat Graders
- Butchers and Packers
- Quality Assurance
- Food Science & Product Development
- Equipment Engineers, Sales, Technicians & Operators
- Warehousing

## DISTRIBUTION
(Sales, Marketing, Retail)
- Marketers & Advertisers
- Truck Drivers
- Grocer and Restaurant Managers
- Chefs & Cooks
- Servers
- Product Stockers
- Sales staff
- Customer Service
- Food Service Technicians
- Nutritionists
- Food Safety & Health Inspectors

## BUSINESS SUPPORT
- Office/Business Managers
- Accountants
- Loan Officers/Bankers
- Human Resources
- Attorneys
- Insurance Sales
- Communications & Public Relations
- Market Analyst
- Government Program Administrator

**NOTE:** While there are fewer job titles, food product distribution has more job availability.
EXIT TICKET--MODULE 1

1. Who were the first people to domesticate pigs?
2. Name one pig breed.
3. List two things you learned today.
   a. 
   b. 
4. What is one question you still have?