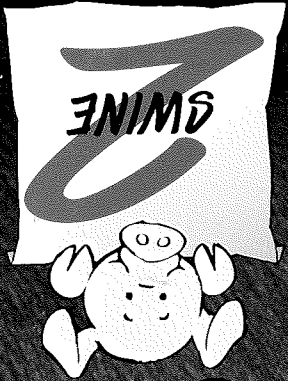


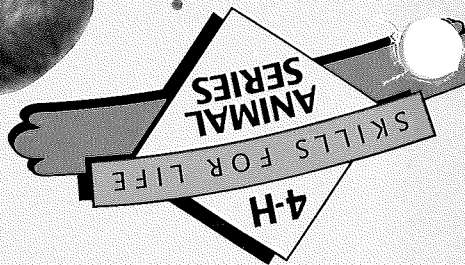
REVIEWED & RECOMMENDED
National 4-H Curriculum



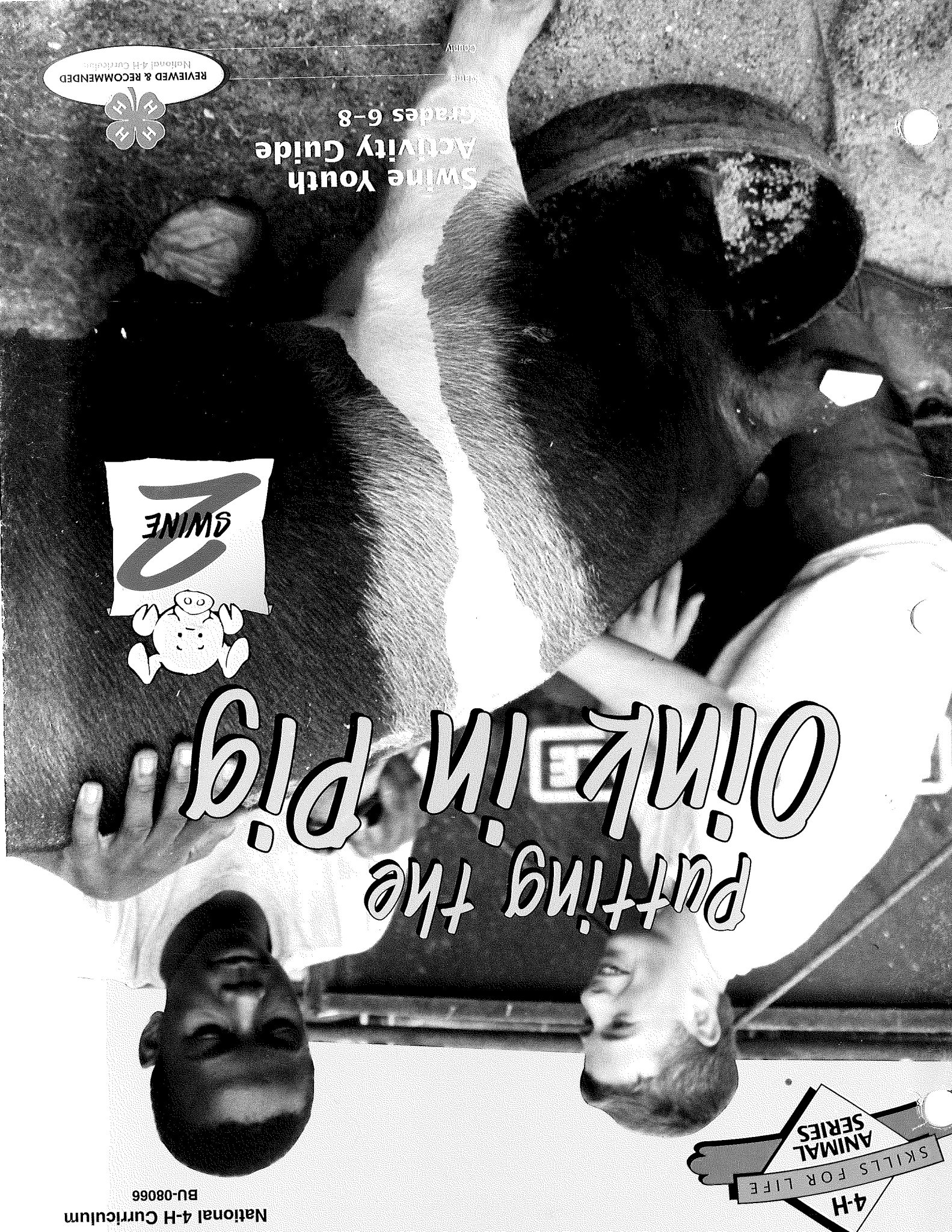
Swine Youth Activity Guide Grades 6-8



Oink in Pig Patting the

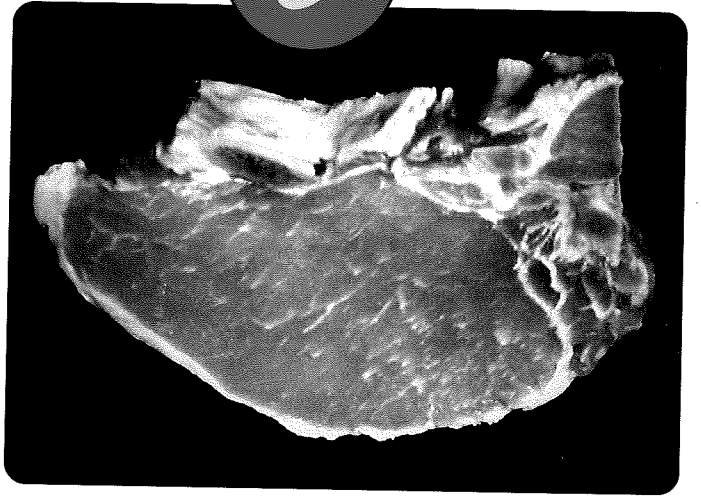
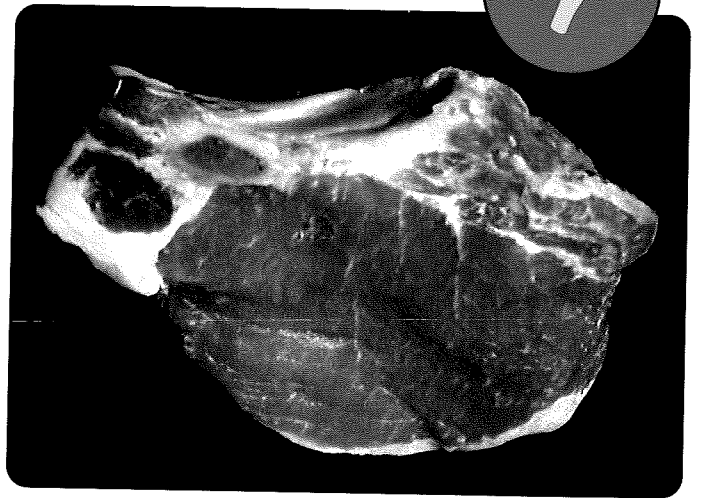


National 4-H Curriculum
BU-08066



Pork Chop Class

Use with Judging Pork Cuts activity on page 10 of Swine 2, Putting the Oink in Fig.



What's Inside?

Putting the Oink in Pig

Pork Chop Class Inside Front Cover
 Pork Quality Standards Inside Back Cover
 1 What's Inside?
 2 Note to the Project Helper
 3 Having Fun with the Swine Project
 4 Setting Goals
 5 Swine 2 Achievement Program

Chapter 1 Selection and Judging

6 Breed Characteristics
 8 Judging Oral Reasons
 10 Judging Pork Cuts

Chapter 2 Management and Health

12 Keeping Health Records
 14 Exploring Swine Diseases
 16 Waste and Your Environment
 18 Expanding Your Facilities

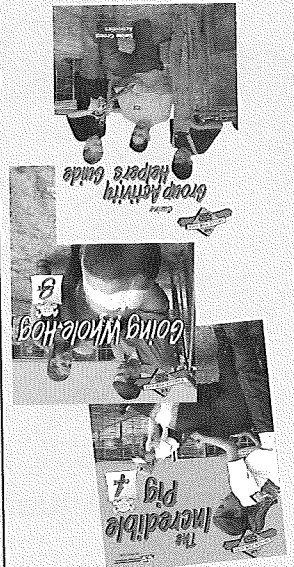
Chapter 3 Nutrition and Carcass

20 Finding the Feedstuffs
 22 Exploring the Digestive System
 24 How Does Fat Measure Up?

Chapter 4 Beyond the Pen

26 Developing a New Pork Product
 28 Building Character
 30 Discovering Swine Careers
 32 Locating Swine in the World
 33 Pig Talk 2
 36 Swine Resources

For more on swine look for these other guides in this set.



Going Whole Hog

Chapter 1 Selection and Judging
 Planning a Breeding Program
 Understanding Breeding Systems
 Judging Breeding Gills
 Chapter 2 Management and Health
 Facilities for Farrowing/Finishing
 Practicing Baby Pig Management
 Maintaining Herd Health
 Chapter 3 Nutrition and Carcass
 Balancing a Ration
 Carcass Quality
 Preparing for Action
 Beyond the Pen
 Thinking of the Neighbors
 Finding a Career
 Gaining Experience
 Exploring International Markets

The Incredible Pig

Swine Breeds
 Retail Cuts of Pork
 Chapter 1 Selection and Judging
 Naming the Breed
 Learning the Parts
 Judging Market Hogs
 Chapter 2 Management and Health
 Meeting the Budget
 Home Sweet Home
 Feed, Fed, Finished
 Examining a Healthy Pig
 Chapter 3 Nutrition and Carcass
 Identifying Pork Cuts
 Discovering Pork By-products
 Preparing Pork
 Chapter 4 Beyond the Pen
 Looking Your Best
 Showing
 Writing a Thank-you Letter

Group Activity Helper's Guide

Developing Life Skills
 Youth Learning Characteristics/
 Science Standards
 Teaching and Learning Experimentally
 Recognition Model
 Evaluating Impact
 Chapter 1 Selection and Judging
 Selecting a Pig Project
 Puzzling Pig Parts
 Chapter 2 Management and Health
 Feasting on Food Safety
 TLC for Pigs
 Chapter 3 Nutrition and Carcass
 Boning Up on the Skeleton
 Exploring a Meat Counter
 Chapter 4 Beyond the Pen
 Animal Well Being
 Conducting a Swine Quiz Bowl
 Running a Swine Skilathon
 Organizing a Swine Showmanship
 Clinic
 Preparing to Say Good-bye
 Swine Project Meeting Ideas
 Answer Key: Swine 1, 2 and 3
 Swine Resources

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Note to the Project Helper

C ongratulations! A young person has asked you to serve as his/her helper for this level of the Swine Project. You may be a family member, project leader or advisor, teacher or a neighbor. Your role in guiding, encouraging and rewarding progress is very important. How you choose to be involved will often determine the success the youth has in developing important life skills while learning what pigs are all about. The youth's interest in swine is the vehicle leading to life skill development. You'll find that these guides are designed to encourage active involvement and exploration rather than simply providing answers.

Your Role

- Review this guide and the *Swine Helper's Guide*.
- Support youth in his/her efforts to set goals and complete the Swine 2 Achievement Program.
- Serve as a resource person to help connect youth with the community, resource materials and others knowledgeable about the project.

Project Activity Guides

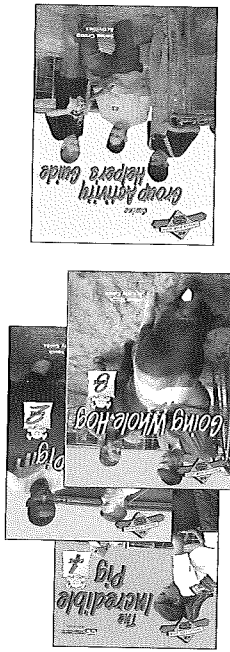
This project activity guide is a part of the 4-H "Skills for Life" Animal Science Series. The three youth guides in the swine series are designed for beginner, intermediate and advanced learners respectively. Each guide includes an achievement program to provide challenging activities, a way to expand project experiences beyond the animal and a means to recognize youth for what they have accomplished. The activities in this guide are specifically designed to help youth develop skills in decision making, relating to others, communicating with others and learning to learn.

Each guide is organized with four chapters:

1. Selection and Judging
2. Management and Health
3. Nutrition and Carcass and
4. Beyond the Pen

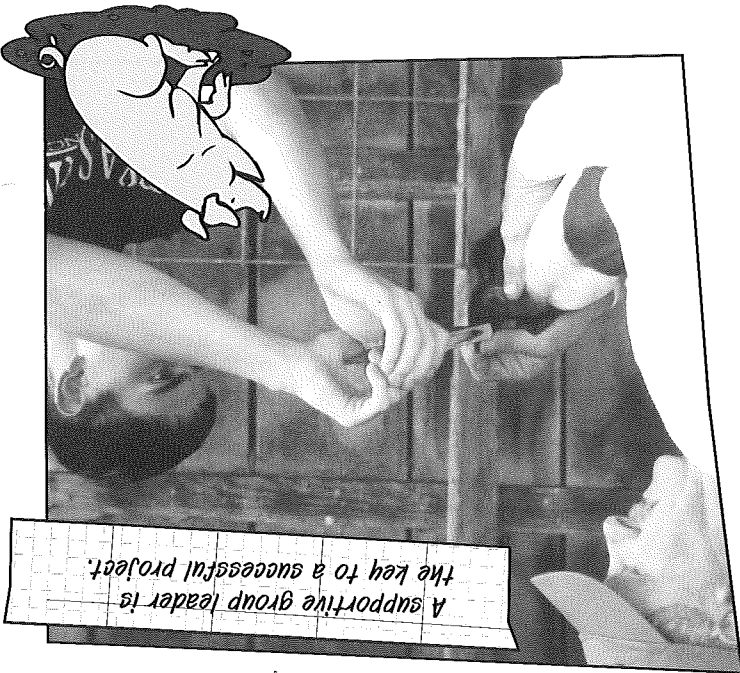
Swine Helper's Group Activity Guide

The fourth piece of the swine series, *Swine Helper's Group Activity Guide*, provides additional learning-by-doing activities that can be adapted to the family, the classroom, 4-H projects groups, clubs or other groups. You'll also find information on characteristics of youth, additional ideas for project experiences and helpful hints on developing life skills.



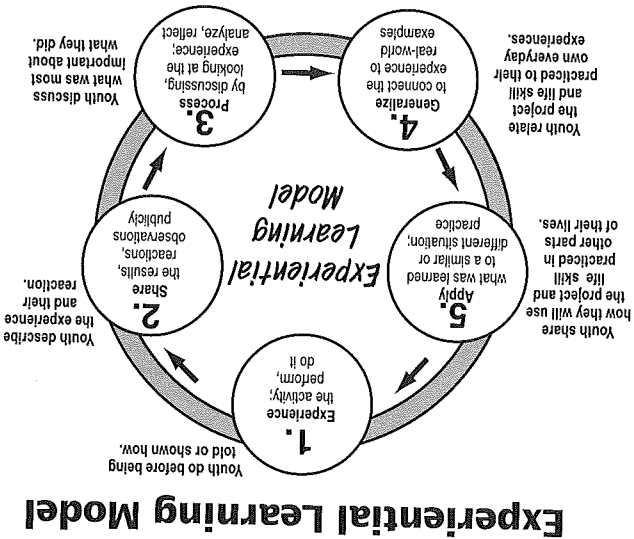
Good luck in your role as project helper!

A supportive group leader is the key to a successful project.



This five-step model is included in each activity in this series. As you can see, the youth first attempt the activity on their own. After the youth do as much as they can and answer the questions, you then meet together and discuss. What they did? What was important about what they did? How does what they did relate to their lives? And finally, how might they use the life and project skills practiced in the future? Sample questions are included following each experience for the youth to answer and the two of you to discuss. Your ability to ask additional thought-provoking questions and to clarify and expand the youths' ideas will add to the educational experience.

Pfeiffer, J.W., & Jones, J.E., "Reference Guide to Handbooks and Annals" © 1983 John Wiley & Sons, Inc. Reprinted with permission of John Wiley & Sons, Inc.



Having Fun with the Swine Project

Let's get started! This guide is an important part of the swine project. Swine 2 offers you new challenges and opportunities to explore a wide range of activities related to swine. You'll also have fun meeting new people, becoming better acquainted with your community and expanding your interests and goals. Like Swine 1, an achievement program is included to guide your efforts and provide you an opportunity to be recognized for meeting your goals.

You'll be surprised at the many fun and interesting things you'll learn. Don't be afraid to jump right in, and don't give up if the activity doesn't work out the first time. You're still learning, right? The most important thing is to try. Once you try, then think and talk about what happened or didn't happen, and why.

Tape a picture of you and your project helper here.

Swine 2 Project Guidelines

- Do a minimum of seven activities in Level 2 of the Swine Achievement Program each year.
- Complete Level 2 within three years from the time you begin.
- Practice and develop the life skills of making decisions, leading self and others, relating to change and planning and organizing.
- Participate in a minimum of five of the learning experiences listed on the Planning Guide each year.
- Keep the Planning Guide current by setting project goals and recording project highlights you experience.
- Increase your swine knowledge and skills.

Swine 2 Achievement Program

The activities will challenge you to explore areas of the project you perhaps haven't experienced before. Do your best to complete each activity and answer the questions. Work with your helper to complete each experience. You may need additional resources to complete some of the activities. Swine magazines, books, tapes, commodity groups, feed and equipment manufacturers and marketing groups are good resources. The library will also have several references to help you.

Remember this is your own personal project activity guide. As you complete the activities, answer the questions and record your project highlights. You'll realize how much you have accomplished in this project. Have fun!

Your Project Helper

The choice is yours! The person you choose to be your project helper needs to be willing to support your efforts to complete Level 2 of the Swine Achievement Program. Your helper will meet with you to set goals, plan activities, suggest resources to use, discuss each activity with you and date and initial your achievement program each time you have successfully completed an activity. Write the name and phone number of your project helper here:

My Project Helper _____

Phone # _____

E-mail _____

Setting Goals

My Swine Project Goals

Name _____

Pigs _____

Breed(s) _____

1. _____

2. _____

3. _____

4. _____

What I want to do and learn in Swine 2:

Check (✓) when you do any of the following:
 Plan to do at least three each year.

Learning Experiences

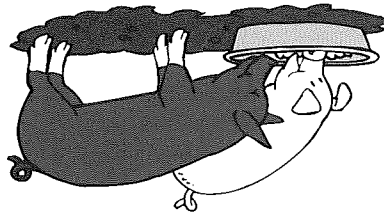
Activity	Year	Year	Year
Give a demonstration			
Help organize a swine show			
Attend three swine project meetings			
Recruit a swine project member			
Take pictures of a pig			
Exhibit a pig at a fair			
Attend a swine clinic			
Conduct a swine skillathon			
Participate on a swine quiz bowl team			
Help a younger project member			
Organize a swine showmanship contest			

What do you know?

Here's an easy way to tell if you learned something new and developed important project skills. BEFORE you start doing the activities in this guide, indicate what you know now, then indicate what you know AFTER you complete the Swine Project Achievement Program. You may be surprised how much you learned! Share the results with your helper.

Begin each statement with the words "I know how to..." then circle 1 (not at all), 2 (somewhat) or 3 (to a great extent).

	Before	After
Match production periods and management practices and give an illustrated talk on one of the periods.	1 2 3	1 2 3
Make a swine health care plan.	1 2 3	1 2 3
Identify symptoms of 10 swine diseases.	1 2 3	1 2 3
Plan and pack a showbox for the fair.	1 2 3	1 2 3
Record the results of a pork tasting party.	1 2 3	1 2 3
Complete a plan for a new product.	1 2 3	1 2 3
Write reasons how and why a class of pork cuts was placed.	1 2 3	1 2 3
Discuss eight ethic-related situations.	1 2 3	1 2 3
Identify at least 15 jobs or careers that were involved in bringing a pork chop to dinner.	1 2 3	1 2 3
Locate eight breed origins on a map.	1 2 3	1 2 3
Recognize the differences in swine breeds.	1 2 3	1 2 3
Planning and organizing a facility expansion.	1 2 3	1 2 3



Swine Project Highlights

Date and list exciting things you do and learn.

Date

Swine 2 Achievement Program

Guidelines

- Do at least seven of the required and optional *Putting the Oink in Pig* Achievement Program activities each year.
- Complete at least 21 of the required and optional activities within three years to complete this achievement program.
- Have your project helper date and initial the activities as you complete them.

Activities	Date	Helper's Initials
Chapter 1 – Selection and Judging		
Breed Characteristics		
Judging Oral Reasons		
Judging Pork Cuts		
Chapter 2 – Management and Health		
Keeping Health Records		
Exploring Swine Diseases		
Waste and Your Environment		
Expanding Your Facilities		
Chapter 3 – Nutrition and Carcass		
Finding the Feedstuffs		
Exploring the Digestive System		
How Does Fat Measure Up?		
Chapter 4 – Beyond the Pen		
Developing a New Pork Product		
Building Character		
Discovering Swine Careers		
Locating Swine in the U.S.		



Date _____ Helper's Initials _____

Write your own activity here.

Date _____ Helper's Initials _____

Write your own activity here.

Date _____ Helper's Initials _____

Write your own activity here.

Page	#	Date Completed	Helper's Initials

Optional Activities

Select and do any of the More Challenges in *Putting the Oink in Pig* or make up your own. Record the page and number of each one you complete.

More challenges



Breed characteristics are important in the selection of show pigs.

Your Challenge

Rewiew the criteria that is listed below and from Breed, lesson in Level 1, decide which breed would best fulfill your needs for the ideal hog. (There may be more than one answer or breed that would meet your needs).

The ideal hog will vary depending on your needs. If you're wanting an ideal hog that will be a good mother, you may pick one breed, but if you're wanting one for their muscling, you may pick another.

Situation: You would like to cross two breeds together to get a hog that has a low amount of fat and heavy muscling as well as females that would produce large litters and great mothering skills

I would select a: _____

crossed with _____

Situation: You would like a cross that has high feed efficiency and a high rate of gain, but also one that has heavy muscling and low backfat.

I would select a: _____

crossed with _____

Breed Characteristics

Have you ever been around people that are different than you? Of course so, we all have. Sometimes though, it is difficult to appreciate the differences in others. Through this activity you will learn that having

differences can actually make things better. Each swine breed has some positive different trait about them which can make a better hog. Good luck deciding which breed will best help you toward your goal of making the ideal hog.

Chapter 1



Selection and Judging

Swine Skill:

Recognizing the differences in swine breeds

Life Skill:

Recognizing and appreciating differences

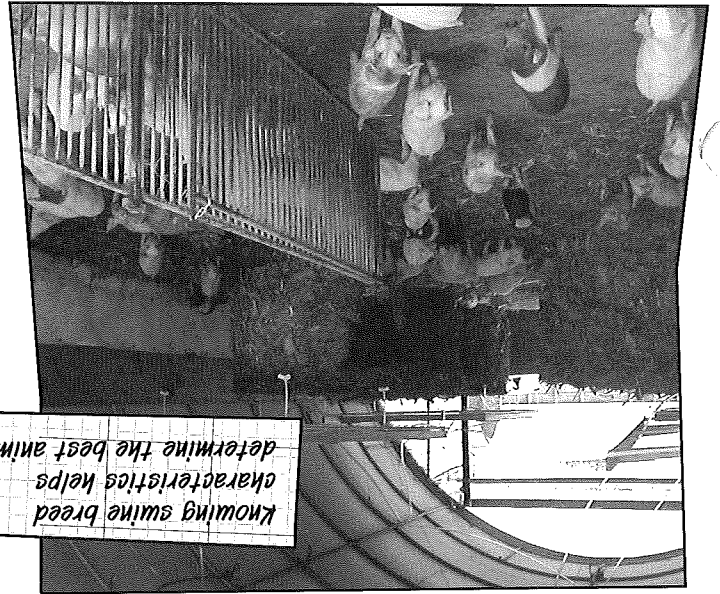
Success Indicator:

Understands the positive heritability traits that each breed can contribute

More challenges



1. Find out more information about the National Junior Swine Association. Membership is free to all youth who are 21 and under. Visit their web site.



Knowing swine breed characteristics helps determine the best animal.

Horizontal lines for writing answers to the 'More challenges' section.

Apply What You Learned
With people, some are shorter, some taller, some stockier and some more slim. How could you help your peers develop an appreciation for the differences in others?

Horizontal lines for writing answers to the 'Generalize to Your Life' section.

Generalize to Your Life
What times do different personalities or work styles might make a group of people work better?

Process What's Important
How can differences among hog breeds actually make hogs better?

- How did you decide which breed would work best for the scenario written?
- What other factors do you think producers should factor in when they are deciding which breeds to cross together?
- What crossings would work?

Share What You Did



Judging Oral Reasons

H

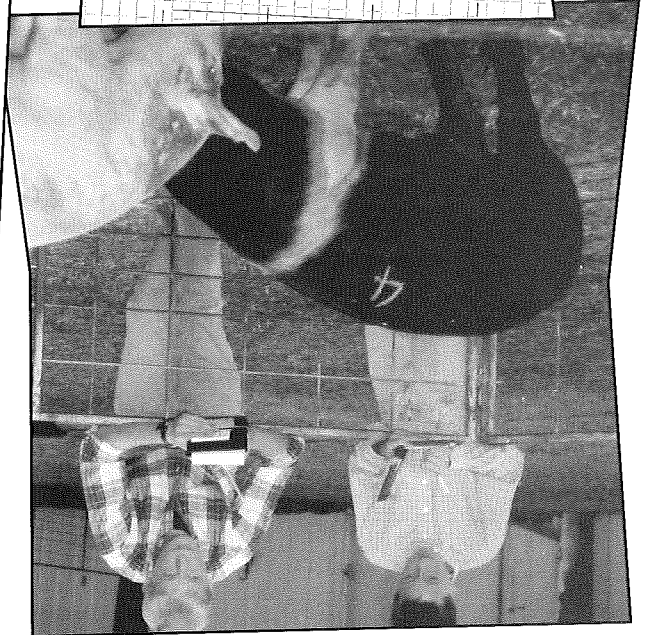
Have you ever had to explain why you did something the way you did. Some people have great difficulty explaining themselves or defending an opinion. Through the judging reasons process, you will learn how to express an opinion in a logical order and defend decisions that you have made. Who knows, you may also want to join the school debate team.

Swine Skill: Evaluating and selecting
Life Skill: Communicating with others
Success Indicator: Presents oral reasons.

Your Challenge

R

Referring back to the Judging Market Swine section of your level 1 book, rank the 4 hogs 1-4. After you have ranked the hogs, develop a set of reasons to explain why you placed the hogs the way you did. A sample set of reasons is included in Facts as an example.



Careful evaluation of a pig and an organized outline of information are key to giving a great set of oral reasons.

My Reasons

Class _____

My Placing _____

Cuts _____

Lined writing area for student responses.

More challenges



1. Participate as a member of a judging team.
2. Serve as the official judge or as an apprentice judge for a judging contest or swine show.

In a close middle pair of stylish, well-balanced barrows, I preferred the additional meat animal shape of 1 to place him over 3. The 1 barrow has more length across his stifle and more shape and dimension to his hip. 1 also reads leaner over his front legs. Due to his advantage in leanness and muscle, the 1 barrow should produce a higher cutability carcass than 3. I realize the 3 barrow offers the least shape and dimension to his hip and stifle, so I left him third.

In the bottom pair, 3 is obviously leaner than 4. 3 is a bigger scaled, longer fronted barrow that offers more market weight flexibility. 3 should generate more producer incentive on a value-based marketing system. No doubt, the speckle-rumped 4 barrow has more flare to the base of his ham, but he's also the fattest barrow in the drive. This is due to the fact that he's the smallest scaled and earliest maturing barrow. 4 should produce the deepest probing carcass requiring the most retail fat trim, so I placed him last.

Sample Reasons

Class of Crossbred Barrows
 Official Placing: 2-1-3-4
 Cuts: 2-3-5

I placed the crossbred barrows 2-1-3-4. In this challenging class, I started with the blue-butt 2 barrow as he appears to be the stoutest made, most muscular hog of the drive. Ideally, he could be higher in his tail setting and more extended through his front end. However, the only barrow with a shoulder tattoo appears to be wider based and meatter than 1. The 2 barrow works a larger blade and has more dimension to his forearm and stifle. He should rail more total pounds of product than 1. I admit, the 1 barrow is the longest though his face and neck. He also gives the appearance of being the leanest. But the 1 barrow falls short of the width and muscle expansion needed to win, so I placed him second.



WHAT AM I? I am very popular for 4-H and FFA market hog projects. I originate from the crossing of two or more of the purebreeds.

Apply What You Learned

How was learning to give oral reasons helped you in other situations?

Generalize to Your Life

Describe another time when you tried to convince someone your idea was better.

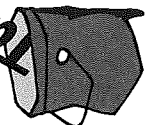
Process What's Important

Why are your reasons more important than how you placed the class? How is giving oral reasons or communicating by comparing, like trying to sell something?

- How did you feel as you presented your reasons?
- What do you think you did the best?
- What do you think you need to practice more?
- What new parts did you learn?

Share What You Did

Talking it over



WHAT AM I? I am a long white hog with erect ears.

See answers on page 32 of the Swine Helper's Guide

Extra!

Resources in series - Colored class of meat Level 1 - Identifying Pork Cuts NPPC Outside resources -

Meat packaging labels help to identify the pork cut.



Did you know... The supermarket where your mother purchased her ham only makes \$0.40 on each dollar. How much money would the supermarket make?

A series of horizontal lines for writing answers to the 'Did you know...' question.

Reasons Note Card Format

Review the photos of four pork loin chops on the inside front cover. Use them to place this class and write the reasons for your placing on the reasons note card. An example of a set of reasons on another class of pork chops (not yours) is shown under Pig Facts to help you write your reasons.

R

Your Challenge

Ever go to a store to help with the grocery shopping and have to pick the best pork chops or bacon? What did you look for?

E

Judging Pork Cuts

Swine Skill: Selecting quality pork Life Skill: Communicating with others Success Indicator: Judges and writes reasons on a class of pork cuts.

In this activity you will have an opportunity to sharpen your judging skills and at the same time develop even better communication skills.

How do you pick a good piece of pork?

My Reasons

Class

My Placing

Cuts

Look for the answer somewhere in this activity.



Sample Reasons for a Pork Chop Class

Placing—1-2-3-4
Cuts—5-2-5

1/2 I easily placed 1 over 2 due to greater muscling and trimness resulting in higher cutability. 1 displayed a much larger loin eye, as well as less fat opposite the loin eye and in the tail region. Moreover, 1 exhibited a more reddish-pink colored, firmer loin eye. I acknowledged 1 presented a greater amount of marbling in the loin eye.

2/3 In a close pair, 1 placed 2 over 3 due to advantages in trimness. 2 possessed less fat over the loin eye and less seam fat. Furthermore, 2 had less bone. I admit 3 had a larger, more reddish-pink colored loin eye.

3/4 Due to superior quality resulting in higher merchandising value, I easily placed 3 over 4. 3 revealed more marbling in a much more reddish-pink colored, firmer loin eye. I realize 4 was a higher cutability pork chop as shown by a clearly larger loin eye with less fat in the tail region and less bone.

4 I acknowledge 4 was the highest cutability pork chop in the class as evidenced by the largest loin eye, the least amount of fat in the tail region, and the least amount of bone. Nevertheless, 1, without hesitation, placed 4 last, as it was obviously the lowest quality pork chop in the class. 4 displayed the softest, most discolored lean in the class. Therefore, 4 would have the lowest merchandising value as the pork chop was unwholesome.

3. Help conduct a meats judging contest.
4. Give a talk to your club or class on how to select quality port.

- How did you place the class?
- What are some desirable characteristics to look for in any retail cut?

Share What You Did

Process What's Important
 What did you learn from judging pork cuts? Why is it important for the producer to raise pigs with high quality carcasses?

Generalize to Your Life
 How does judging and writing reasons help you be a better communicator?

Apply What You Learned

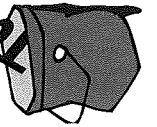
How can you use your judging skills in other circumstances?

1. Participate in a meats judging contest.
2. Observe a meat cutter preparing retail cuts for sale.

More challenges



Talking it over



Management and Health



Keeping Health Records

Pigs are susceptible to several diseases. Erysipelas, parvovirus, rhinitis and viral pig pneumonia are four of the most important of these diseases. Baby pigs, from birth to weaning, are prime targets for various forms of scours. Breeding stock are most seriously

affected by reproductive diseases that may cause infertility, abortion, or small, weak litters. Your challenge is to have a plan to prevent these diseases or know how to treat them if your pigs get any of them. In this activity, you will make a health care plan for your hogs.

- Life Skill:** Planning for prevention
- Swine Skill:** Keeping swine healthy
- Success Indicator:** Outlines a swine health care plan.

Your Challenge

Hogs require vaccination to prevent certain diseases. Write in the letters of the vaccinations, parasite spray and/or breeding steps you would take at the ages shown for the pigs or gilts. Check and discuss your choices with your helper.

Baby Pigs		
Time/Age	Vaccination/Parasite Control	Management/Breeding
1-2 days	a	
7 days		
2 weeks		
4 weeks		
Weaning + 10 days		
Weaning + 20 days		
Weaning + 30 days		
4 months		h

Gilts		
Time/Age	Vaccination/Parasite Control	Management/Breeding
6 months		
7 months		
8 months		
9 months		
10 months		
6 weeks before farrowing		
4 weeks before farrowing		
2 weeks before farrowing		
1 week before farrowing		
4 weeks after farrow		

1. Vaccination and Parasite Control Choices

- Clostridium (1st and 2nd weeks)
- rhinitis (1st and 2nd weeks)
- E. coli bacterium (1st and 2nd weeks)
- deworm
- erysipelas
- spray for lice and mange (1st and 4th weeks)
- Leptospirosis
- Erysipelas
- TGE

2. Management and Breeding Choices

- pregnancy check (35-60 days after breeding)
- select gilts
- reduce feed intake to six pounds/day until bred
- include bulk in ration
- wash sow thoroughly before she enters the farrowing house
- wean pigs
- record litter and sow information

1. Vaccination and Parasite Control Choices

- iron injection (1st and 2nd weeks)
- rhinitis vaccinations (1st and 2nd weeks)
- deworm
- Pasturella vaccination (1st and 2nd weeks)
- erysipelas
- spray for lice and mange (1st, 2nd, and 3rd weeks)

2. Management and Breeding Choices:

- wean
- withdraw all feed
- castrate
- clip needle teeth
- clip tails
- notch ears

Share What You Did

- What happens at each age?
- Where or how did you figure what needed to happen at each age?

Process What's Important

Why is it important to have a disease prevention plan for your hogs? For yourself?

Generalize to Your Life

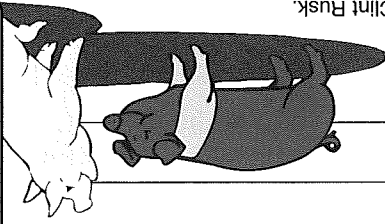
What is meant by the phrase "an ounce of prevention is worth a pound of cure?"

Apply What You Learned

How can you help prevent the spread of diseases as you travel to farms and sales to purchase your 4-H pigs?

Acknowledgments: Revised by Clint Rusk.

WHAT AM I? I am black with a white belt completely encircling my body, including both forelegs.



Proper Injection of Animal Drugs

- Properly restrain the animals before giving an injection.

- Give injections according to label instruction: Subcutaneous (SQ) means under the skin; intramuscular (IM) means in the muscles; intravenous (IV) means into the blood.

- When the label directions permit, give the injections under the skin so the muscle tissue is not injured.

- Use sterilized needles and syringes. Keep the bottle cap clean.

- Give injections at clean, dry sites on the animal.

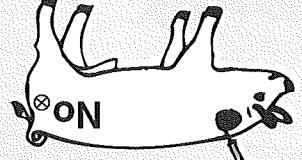
- Do not transfer needles back and forth from animals to bottle, because you may carry bacteria from the animal's skin back into the bottle.

Health records are important, just like human health and immunization records.

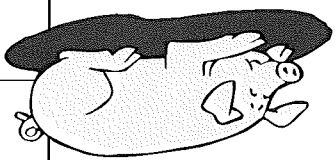


More challenges

1. Describe what is meant by this graphic.

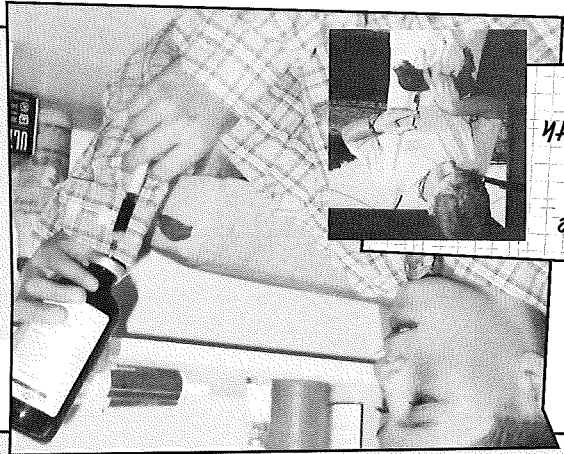


Why should injections into the rump and hind legs be avoided?



- M** Reduced gain, poor growth and reproductive failures in the breeding herd
- L** Reproductive disease causing abortions, mummies and weak pigs
- K** Diarrhea containing blood and mucus, off feed, death in pigs under three weeks
- J** Sneezing, tearing of eyes, snorting, coughing, twisting of nose (crooked)
- I** Infection of the mammary gland, udder hard and hot to touch, off feed
- H** Worms in feces, decreased food, intake, slow growth
- G** Infertility, abortions 15 days after breeding
- F** No energy, sleepy, rough hair coat, wrinkled skin, hard breathing, poor growth
- E** Watery, yellowish diarrhea, wet tail
- D** 1-8 day-old pigs, watery diarrhea, high death rate, vomiting
- C** Itching, rough skin, decreased feed intake
- B** Sows abort mid-pregnancy or have weak litters and nursing pigs die suddenly
- A** Poor conception rate, reabsorbed litter, mummies and small litters

Disease Symptoms



Some swine diseases must be treated with injections.

W Write the correct number of the diseases in the blank by the symptoms. Consult an experienced swine manager or a veterinarian if you are not sure about some of the symptoms.

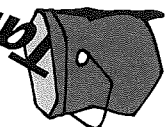
Your Challenge

Y You don't feel well. Your eyes are watering. You've got the sniffles, sore throat and a headache. You are fortunate. You can discuss your feelings and symptoms with your doctor. But your pig depends

Exploring Swine Diseases

Life Skill: Locating and using resources
Swine Skill: Recognizing swine diseases
Success Indicator: Identifies the symptoms of 10 swine diseases.

on you to interpret its symptoms and, if necessary, call the veterinarians. In this activity, you'll learn the symptoms of some of the common swine diseases and recognize normal and abnormal behavior.



Share What You Did

- What were the hardest diseases to find? Why?
- Where did you go for information?

Process What's Important

Why is it important to understand swine diseases?

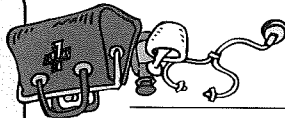
Generalize to Your Life

Which swine diseases can be prevented with the proper use of a vaccine?

Apply What You Learned

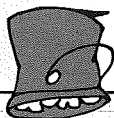
How could you use your knowledge of diseases to develop a herd health plan?

WHAT AM I? I am white in color with a medium sized ear that has 1/2 to 2/3s of the ear drooping.



1. Go with a friend to visit a commercial swine operations. Interview the manager or owner and about how he or she handles disease problems and what health supplies are kept on hand. Discuss the results of your findings with the younger 4-H members enrolled in the swine project in your club.
2. For each swine disease we can not vaccinate against, present to your helper how each can be prevented and/or treated.

More challenges



In order to exhibit your 4-H swine project at a local, county or state show, you must obtain a health paper for your hogs from a veterinarian. Most shows require a health paper to be written within 30-90 days of unloading your hogs at the show. The health paper verifies the hogs listed on the paper have passed a negative blood test for pseudorabies (PRV). The only exception in most states is if your pigs are raised on a farm that tests its hogs for pseudorabies on a regular basis and has the status of being a PRV qualified herd.

You should read the health requirements for the shows you want to attend and be sure to allow enough time to have your pigs bled so the test results are back in time to get a health paper to take with the pigs to the show. Many states will not accept hogs for exhibition if they have not been vaccinated for pseudorabies. It is best to only buy project pigs that come with a health paper showing a negative test to PRV.

Obtaining a Health Paper

Calculating Waste and Its Effect

A s your pigs grow or herd numbers increase so will the amount of swine waste produced on a daily basis. Left unkept swine facilities can become a health hazard and hamper the growth of your swine

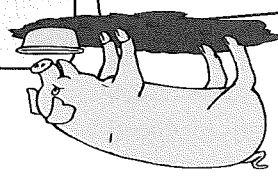
project. In this activity, your main concerns will be managing the daily cleaning of the swine feeding facilities and properly handling and disposing of swine waste. The information in the Swine Facts section will be helpful.

Life Skill: Planning and organizing
Swine Skill: Proper handling and disposal of swine waste.
Success Indicator: Develops a waste management plan.

Your Challenge

S ay you will receive four 50-pound pigs that you will grow to 250 pounds. The pigs will be on feed for approximately 150 days. Your challenge is to calculate the average daily amount of waste produced by the four pigs as well as the total pounds of waste for the 150 day feed period. Discuss the importance of managing swine waste with your helper. Then prepare a waste management plan for your swine project using the waste management outline. Information located in the facts section on the next page will provide helpful information for the development of your waste management plan.

Fill in the blank charts.



Calculating the Waste

Daily Waste Produced:
 Daily pounds (dp) of wasted produced per swine (hd): _____
 Number of swine (# of hd): _____
 Total pounds produced per day (dp X # of hd = tppd): _____

Weekly and Monthly Waste Produced:
 Weekly pounds produced (tppd X 7 days): _____
 Monthly pounds produced (tppd X 30 days): _____

150 Day Waste Produced
 Total amount of waste produced for the 150-day feeding period. (tppd X 150 days): _____

Selecting a Disposal Site for Swine Waste

- When selecting a disposal site for swine waste it is very important to observe the surrounding environment. The following questions will help you in selecting a site to properly dispose the waste. If you said yes to any of the questions then an alternative site or disposal method should be considered.
1. Will the site lead to the contamination of human drinking water, such as a water well, rivers or streams? Yes No
 2. Will the site lead to the contamination of drinking water for animals and livestock, such as a water well, rivers, streams, stock tank, or water holes? Yes No
 3. Is there a potential for run-off from waste to move to unwanted areas? Yes No
 4. Will odor from the manure effect you, your family or your neighbors? Yes No
 5. Will the site of the disposal site be offensive to the public or your neighbors? Yes No

Waste Management Planning Check Sheet

Check all that apply

Equipment needed to clean pens:

- Scoop / Shovel / Manure rake
- Garden Rake or Garden Hoe
- Wheel barrow or transport container
- Water hose to flush concrete or clean tools
- Gloves
- Dust mask

Waste disposal process:

- Compost
- Manure pile to be spread
- Lagoon waste system

Daily Cleaning Scheduled:

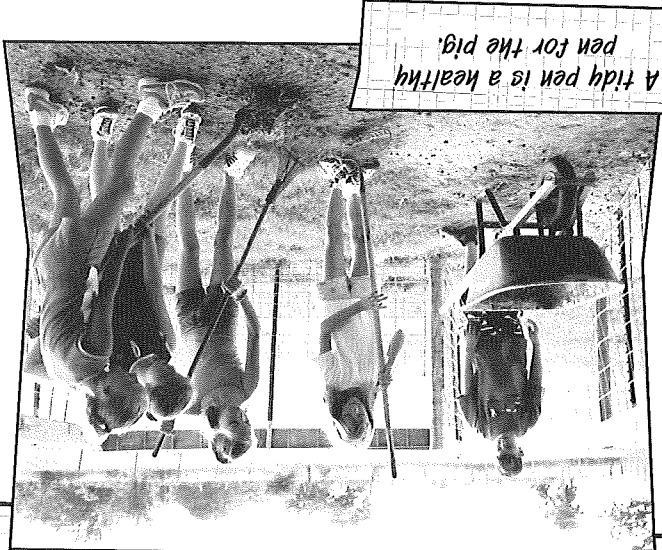
- A.M.
- P.M.
- Both A.M. and P.M.

1. Go to the Farm and Ranch Supply Store and check out the various types of livestock fencing. Which ones would work best for pigs?

More challenges



Did you know... swine waste can be used as a fertilizer to help build and maintain soil fertility.



Apply What You Learned
How might this activity be useful to anticipating future management plans for handling products that can be hazardous to the environment?

Generalize to Your Life
How does it make you feel when you enter a public restroom that has not been properly maintained?

Process What's Important
Why is it important to know the proper handling and management of swine waste?

- What did you think about when you were deciding how large to make your pen.
- What supplies would you need to handle swine waste?

Share What You Did



Manure Production



Animal	Size, pounds	Solid matter (solid/lb)	Liquids (gal/day)	Total manure production
Nursery pig	35	2.3	0.3	
Growing pig	65	4.2	0.5	
Finishing pig	150	9.8	1.2	
	200	13.1	1.6	
Gestating sow	275	9.0	1.1	
Sow and litter	375	22.5	2.7	
Boar	350	11.5	1.4	

Did you know... According to the National Pork Producers Council ... Pigs reared outdoors must deal with extreme changes in temperature, snow, rain, mud and parasites. Pigs housed in modern buildings are provided with a more uniform temperature and protection from the weather.

Expanding Your Facilities

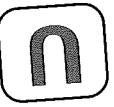
Life Skill: Planning and organizing
Swine Skill: Designing a swine operation
Success Indicator: Plans and designs a swine unit.

Planning and organizing are important features of a growing swine operation. As your swine business continues to increase not only in the number of swine being fed, but as your swine grow physically there will be a need to expand your facilities. There are many factors to consider when planning expanding your feeding facilities such as environmental regulations, industry regulations, satisfaction from your neighbors and economic profitability. In this

activity you will develop plans for expanding your current feeding facilities to meet the needs and future direction of your swine operation. But before you get started on the activity, you need to decide what type of unit you will be building for the expansion. Here are some options:

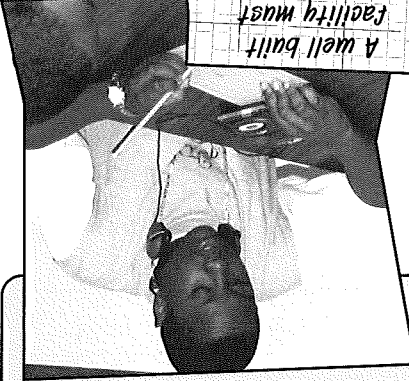
- Contract finisher
- Contract nursery
- Wean to finish

Your Challenge

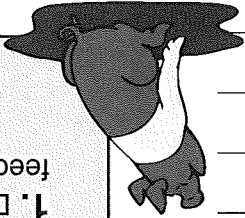


Utilizing your current facilities design, organize a facility layout which maintains harmony with the existing design and with your neighboring landowners. As you are designing your expansion be sure to complete a cost estimate of the new facility.

My Swine Unit Design Draw both the current facilities and the expansion of the new facilities in a single drawing. Use two different color makers to draw the new design. Use one color to show existing facilities and another color to show expansion unit.



A well built facility must first be designed on paper.



More challenges



1. Design an automated watering and feeding system for your swine unit.

Apply What You Learned
 How can this activity be useful to anticipate future environmental problems associated with raising swine?

Generalize to Your Life
 How can you use what you learned about expanding your facilities to help you plan for a career?

Process What's Important
 Why is it important to consider all the consequences before making a decision?

- How did you develop your new expansion unit?
- What considerations were made in your mind about the "site" on which to build your expansion unit?
- Why did you choose the type of swine unit that you did for your operation?

Share What You Did



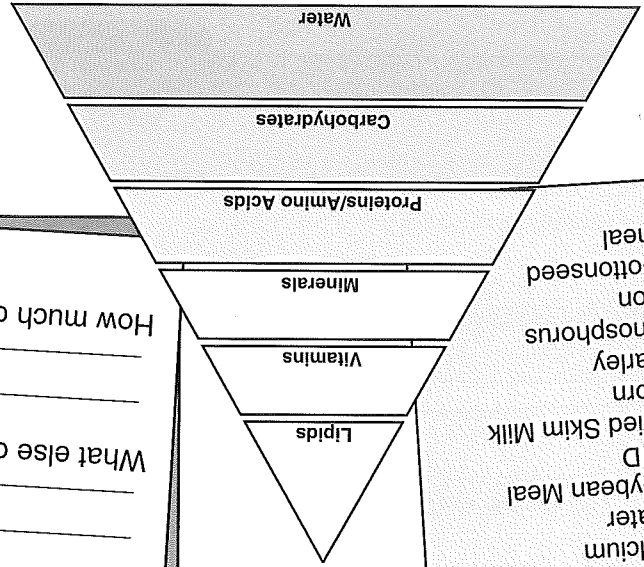
Facts

Swine Unit Design Tips

1. Decide how many hogs you want to manage.
2. Determine the amount of pen space needed and draw the pens to scale as best you can. Graph paper may be helpful.
3. Plan for a waterer, feeder and waste removal system.
4. Choose a ventilation and temperature control system.
5. Select the type of flooring you will use and the material needed to construct the pens.
6. Design the type of building needed to provide you hogs with protection from the elements and that will allow you to effectively control the environment in order to optimize the growth of animals.
7. Layout the location of the facilities, for example: the feedmill, shop and waste water lagoons. Include your own house, garage and your neighbors' houses in your drawing.
8. Draw a load-out area where hogs will be shipped on a truck or trailer when they are ready to sell. Be sure to allow plenty of room for large semi-trucks to have easy access. Remember, loading hogs is one of the hardest jobs on the farm and a well-designed facility can make a big difference.

Additional Resources:
 Livestock Waste Facilities Handbook (1993) 3rd. ed.
 Midwest Plan Service, Iowa State University, Ames, Iowa.

Did you know...that a baby pig has four teeth at birth. When the pig is mature, it will have 44 teeth!



- Feed Ingredients**
- a. Calcium
 - b. Water
 - c. Soybean Meal
 - d. A, D
 - e. Dried Skim Milk
 - f. Corn
 - g. Barley
 - h. Phosphorus
 - i. Iron
 - j. Cottonseed meal

How much does the feed cost per pound? _____

What else does the feed tag say is in the feed? _____

What ingredients can you see in the feed? _____

Weigh this much of your sample.

100-pound pig eats in a day? _____

How much do you think a _____

How does it smell? _____

How does it feel? _____

What form is it in? (Ground, pellets, etc.) _____

To what size pig is it fed? _____

What kind of feed is it? _____

2. On the Swine Feed Pyramid write the letters of the feed ingredients in the spaces that describe how the ingredients are used by the pig. For example since phosphorus is a mineral you would write the letter "h" in the mineral space.

1. With a couple of friends, examine the feed and feed tag. Share with your helper how it smells, how it feels, how much a 100 pound pig eats per day, what ingredients are in the feed, what form it is in (ground, pellets, etc.), and which ingredients are used for sources of protein, vitamins, minerals and energy.

3. Analyze a feed tag. Use the sample feed tag provided to learn what is in the feed you are providing to your pigs and if you are feeding the right feed to the right pigs. Use the feed tag to answer these questions.

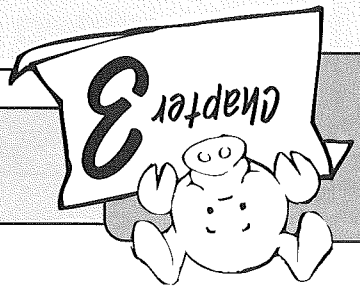
Obtain about 10 pounds of any swine ration and a feed tag for the feed.

Your Challenge

What do pigs eat? Anything? That may be mostly true. But pigs need to be fed a balanced diet to stay healthy, grow fast and provide the consumer with a quality product. You also need a balanced diet to grow

or just to keep in shape. In this activity you will discover what is included in a balanced ration for a pig and how the nutrients are absorbed as the feed moves through the pig's digestive system.

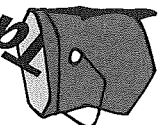
Finding the Feedstuffs



Swine Skill: Feeding swine
Life Skill: Making decisions
Success Indicator: Identifies and names the primary uses of five feed ingredients.

Nutrition and Carcass

Talking it over



● **Share What You Did**
 ● What did you learn about the feed that pigs eat?

Process What's Important

Why is it important for the pig to eat ingredients from each of the nutrient groups each day?

Generalize to Your Life

How is a pig's digestive system like yours?

Apply What You Learned

How does knowing feed ingredients and swine digestion help you raise swine?

PIG STARTER
 MEDICATED

FOR CONTROL OF SWINE DYSENTERY (BIBRIOSIS), DYSENTERY, BLOODY SCOURS, OR HEMORRAGIC DYSENTERY; CONTROL OF BACTERIAL SWINE ENTERITIS (SALMONELLOSIS OR NECROTIC ENTERITIS CAUSED BY *Serpulina* spp.); INCREASED RATE OF WEIGHT GAIN AND IMPROVED FEED EFFICIENCY

CARADAXO..... 50 g/TON

ACTIVE DRUG INGREDIENT

GUARANTEED ANALYSIS

CRUDE PROTEIN..... MIN 21.00%

LYSINE..... MIN 1.50%

CRUDE FAT..... MIN 6.00%

CRUDE FIBER..... MAX 2.50%

LACTOSE..... MIN 20.00%

CALCIUM..... MIN 0.80%

CALCIUM..... MAX 1.20%

PHOSPHORUS..... MIN 0.70%

SALT..... MIN .50%

SALT..... MAX 1.00%

SODIUM..... MIN 0.25%

SODIUM..... MAX 0.50%

SELENIUM..... MAX 0.30 PPM

ZINC..... MIN 2350.00 PPM

COPPER..... MIN 200 PPM

INGREDIENTS

Grain Product, Dried Whole Lactose, Animal Protein Product, Plant Protein Product, Animal Fat, Ground Limestone, Calcium Phosphate, Salt, L-Lysine Monohydrochloride, Methionine Supplement, Zinc Oxide, Zinc Sulfate, Ferrous Sulfate, Manganese Oxide, Copper Sulfate, Calcium Iodate, Sodium Sulfate, Vitamin A, Vitamin D₃ Supplement, Vitamin B Supplement, Methionine, Calcium Phosphate, Vitamin B₁₂ Supplement, Thiamine, Mononitrate, Pyridoxine Hydrochloride, Choline Chloride, Biotin, Ethoxyquin (as a Preservative)

Recommended as the first feed for pigs weaned between 16 and 24 days of age. Feed for 7 days postweaning. Formulated for pigs weaned at approximately 21 days of age.

WARNING: Do not feed to swine weighing more than 75 lbs. body weight. Do not feed to swine within 10 weeks of slaughter. Contains high levels of copper; do not feed to sheep.

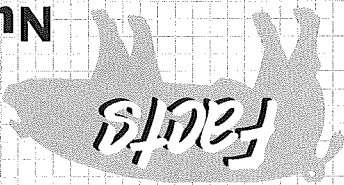
MANUFACTURED BY:
 SKILLATHON FEED

NET WEIGHT 50 POUNDS (2.7 KILOGRAMS)
 OR AS SHOWN ON SHIPPING DOCUMENT



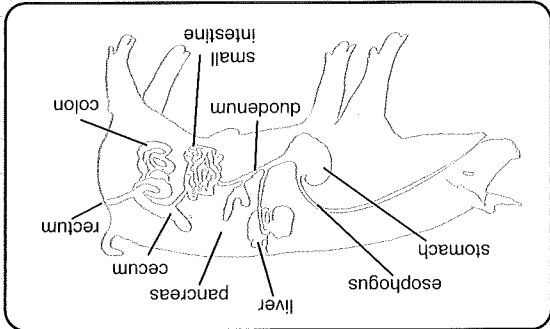
More challenges

1. Interview a swine raiser about the swine feed. Share what you find with your helper.



How Nutrients Are Absorbed in the Digestive System

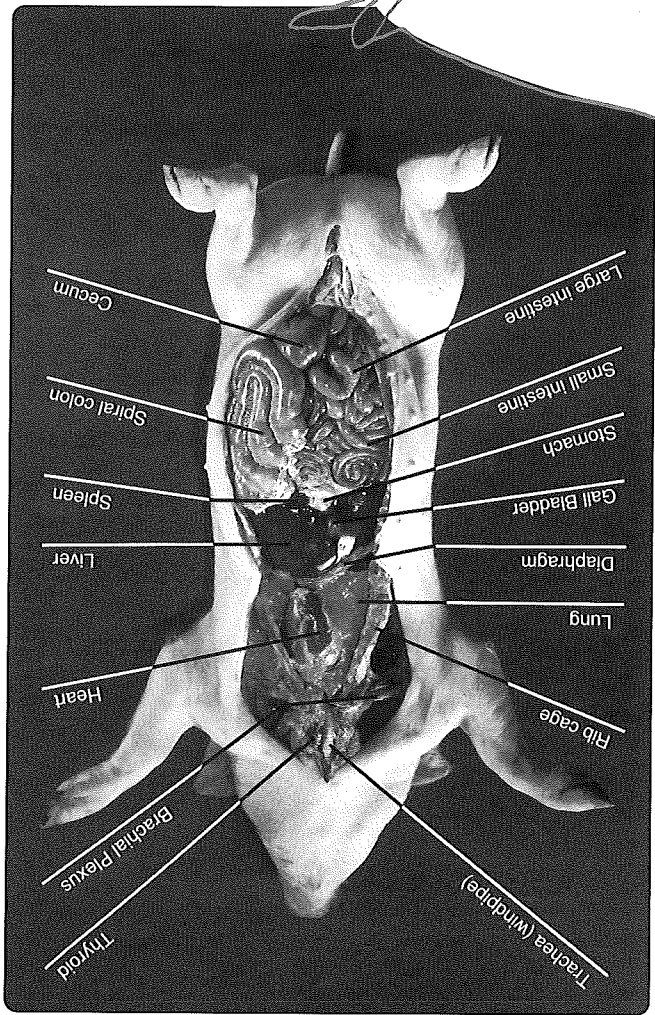
Feed starts to be broken down the moment a pig takes a bit of feed! Feed is reduced in size by chewing, and then enzymes and acids break the nutrients apart and suspend them in solution so that finger-like projections in the intestine can absorb the nutrients into the blood. The blood carries the nutrients to the body tissues.



FEEDS AND NUTRITION RESOURCES

- Related resources in series -
- Color insert of swine's digestive system
- Level 2 - The Right Stuff
- Swine Group Activity Guide, Down the Hatch - Outside resources
- Purdue Pork Page
- Pork Industry Handbook

Pig Talk WORDS
 Nutrient, Digestive System



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**Pig Parts
Word Bank**

- a. colon
- b. pancreas
- c. mouth
- d. duodenum
- e. esophagus
- f. rectum
- g. small intestine
- h. cecum
- i. liver
- j. stomach
- k. large intestine

S Study the drawing of the digestive system of a pig on the next page. Use colored pencils to draw the digestive system on the outlined pig below. Label the parts using the word bank below.

Your Challenge

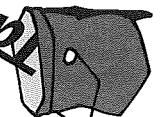
T he pig is a simple-stomached animal called a monogastric. The pig's digestive system is very similar to our own single-stomached design. Both swine and humans start digesting their food in the mouth. Understanding the digestive system of pigs will help you feed your animals in a

Exploring the Digestive System

Swine Skill: Understanding a pig's digestive system
Life Skill: Learning through comparison
Success Indicator: Identifies 10 parts of a pig's digestive system

more cost-effective way. It will also help you more fully appreciate the many processes necessary to convert feed to energy and eventually into meat. In this activity, you will draw and color the digestive organs in order to better understand how food moves through the pig's digestive system.

Talking it over



Share What You Did

- Why is it important to learn the digestive organs of the monogastric system and the function of each organ?
- How does feed move through the system?

Process What's Important

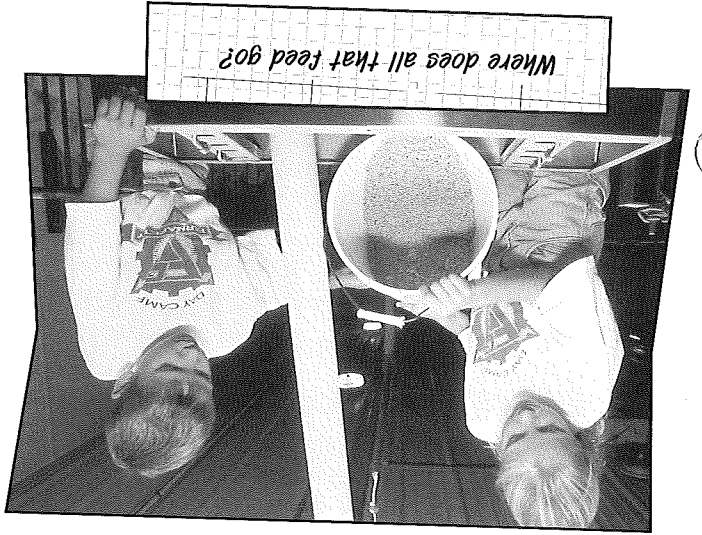
How is the digestive system of a pig different than that of a cow or ewe and to the food each animal eats?

Generalize to Your Life

What did you learn about a human digestive system by drawing the monogastric system of a pig?

Apply What You Learned

How will this activity help you do a better job of feeding your pigs?



Where does all that feed go?

Pig Digestive System Functions



Mouth - The teeth break food into small particles, and an enzyme begins carbohydrate digestion.

Esophagus - Muscle contractions move the food from the mouth to the stomach.

Stomach - The main function is to serve as a kind of vat where chemicals are added to the food to start the digestion of fats, protein and carbohydrates.

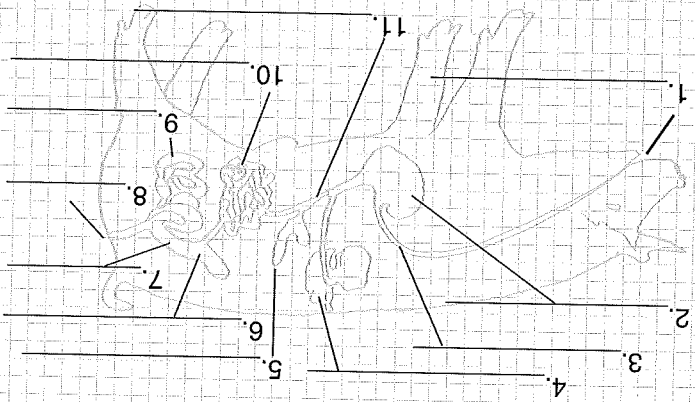
Some nutrients are absorbed through the wall into the bloodstream.

Small intestine - In this very complex, very long tube composed of the duodenum and the ileum, digestion and absorption continue. More nutrients are absorbed here than anywhere else.

Cecum - Often called the blind gut, this has very little function in the pig. However, in two ruminants, the horse and the rabbit, fibrous foods are digested here.

Large intestine - Main function is to absorb water. It also adds mucous material to the remaining food to aid in movement of the food through the tract.

Rectum - Leads to opening through which the undigested portion of the feed is eliminated.



More challenges



1. Label two additional organs that provide digestive enzymes along the digestive tract.
2. Enlarge your drawing and make it into a poster to exhibit at the fair or use in an illustrated talk.

Did you know... Hogs are a source of nearly 40 drugs and pharmaceuticals on the market.

How Does Fat Measure Up?

T he breeding value of any individual pig in a herd can be determined by both the sire and dam performance and carcass information. Documentation of an animal's actual or estimated carcass traits as well as other important economic traits will be

a critical part of a successful breeding program. There are two main methods of obtaining an accurate estimate of backfat thickness in live hogs. Both tests should be conducted with your project helper or a veterinarian.

Swine Skill:	Identifying the leanness of the carcass
Life Skill:	Learning through comparison
Success Indicator:	Compares and contrasts the thickness of different products.

Your Challenge

To practice the technique of backfat probing you will use the same procedure on several different fruits and vegetables. This will allow you time to practice the procedure and to compare the thickness of different fruits and vegetables.

- Wrap the blade of a steak knife with masking tape. This will be utilized to mark each depth.
- Insert the knife through the skin of each product listed on the chart. Try to utilize the center portion of the fruit.
- Force the knife through the meat of the fruit until it hits the inner core or seed.
- Mark on the masking tape where each fruit measures. Use a ruler to measure the depth. Record the results on the chart.

Product	Thickness
Avacado	
Peach	
Tomato	
Potato	
Apple	

Backfat Probing

Equipment

- nose snare or squeeze chute,
- scalpel or sharp knife
- a six inch backfat probe with 1/20 inch graduation

Procedure

- Make the backfat measurements 1 1/2 inches off the midline and above the elbow, last rib and flank. This corresponds to the first rib, last rib and last lumbar vertebra respectively in the carcass. In conducting the probe, the hog should be held with a nose snare or squeeze chute. The procedure follows:
- Wrap the scalpel or knife with tape about 3/8 inch from the tip. This prevents the blade from going too deep.
 - Insert the scalpel or knife through the skin at a right angle to the hogs body.
 - Insert the probe in the cut and slant the probe slightly so it points toward the center of the hogs body.
 - Force the probe through the fat down to the loin muscle. When the probe has reached the loin muscle, you will meet a firm resistance.
 - Push the clip on the probe down to the skin. Remove the probe and read the measurement.

Back fat can be determined through back fat-probing or carcass evaluation.



1. Probe live hogs for backfat thickness. This is a simple operation that can be done with very little practice. No injury or infection should result. This procedure should always be done with the assistance of your project helper or veterinarian.

More challenges



Resources: Measuring Carcass Traits in Live Hogs, Cooperative Extension Service, Division of Agriculture, Oklahoma State University.

A sound selection program should not only indicate carcass traits such as backfat thickness and possibly loin eye area but other important economic traits which includes sow productivity, post weaning growth (days to 230 lb.) and structural soundness. Purebred breeders should utilize their breed associations "Sow Productivity" and "STAGES" programs which indicate such traits. It is strongly believed that seedstock producers who survive in the future will be the ones who produced breeding stock for the production of healthy, fast growing, efficient, lean and high quality pigs.

Selection Program

Obtaining backfat thickness and the time required to reach 230 pounds are the requirements for purebred breeders who enroll in Stage 1 of STAGES (Swine Testing and Genetic Evaluation System). STAGES is currently being sponsored by all eight of the major purebred swine associations. The two primary methods of obtaining backfat thickness in live animals are the manual probe and the use of ultrasonic machines.

Stages

Thickness of backfat has long been recognized as the most useful single live indicator of carcass lean improvement of average fat thickness in a swine herd is easy to achieve if accurate measurements of backfat thickness are obtained and wisely utilized. There has been considerable research which indicates that backfat thickness is highly heritable. Therefore, selection for decreased fat thickness should result in rapid improvement of leanness in a herd. Normally selection for decreased backfat should accompany selection for increased growth rate.

Backfat Thickness



Share What You Did

- What did you learn by comparison testing different products?
- What did you learn about backfat probing?

Process What's Important

How can comparing the measurement of fruit help in the measurement of carcass lean?

Generalize to Your Life

Why is it important to compare?

Apply What You Learned

What future decisions might you need to make a comparison decision about?

My New Pork Product

Describe your product

Research plans

Financing plans

Promotion and marketing plans

Your Challenge

D evelop a new pork product and promote it to a group of at least 20 people. Record what you do. Start by doing the research. Take a poll of 20–30 people in the grocery store to get some ideas for a new pork product. You may also want to call the marketing department at the National Pork Producers Council, to see if you can obtain leads on new product ideas. Once you have an idea, check with the local or state pork producers group to see if they have financing available to help you develop and promote your pork product.

Seek help from others in your club to develop the product. Once you have it to the production phase, decide how you want to promote the product. Check with local newspapers, radio or television stations for advice on how to most effectively reach the consumer. You might also develop a display for the county fair, grocery store or mall. You may want to do a taste test with your classmates, club members or another local group. Be creative! If your new product is a hit, send the idea to the National Pork Board or to the group who financed you.

Developing a New Product

Y ou should be proud to be part of an industry that produces a quality product—pork. But it is not enough just to produce a good product. You must

become involved in telling others about its versatility and nutritional value, so the industry will continue to grow.

Beyond the Pen

Chapter 4



Swine Skill: Promoting pork

Life Skill: Communicating with others

Success Indicator: Completes a plan for a new product.

Share What You Did

- What did you learn by doing the initial survey?
- What is the most important thing you think people need to know about pork? Why?

Process What's Important

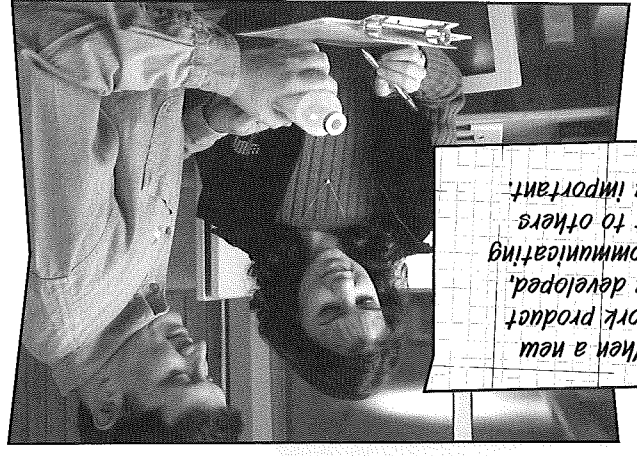
How did having a written plan help sell your idea to promote pork to others?

Generalize to Your Life

What did you learn about communicating with others about doing this promotion?

Apply What You Learned

If you were doing something similar in the future, what would you do differently?



When a new pork product is developed, communicating it to others is important.

WHAT AM I? My breed originated in Butler and Warren Counties, Ohio. We were developed in the 1870's by two farmers, A. G. Moore and D. M. Magie. In 1972 our name was made official. We are best known for leanness and/or muscling.

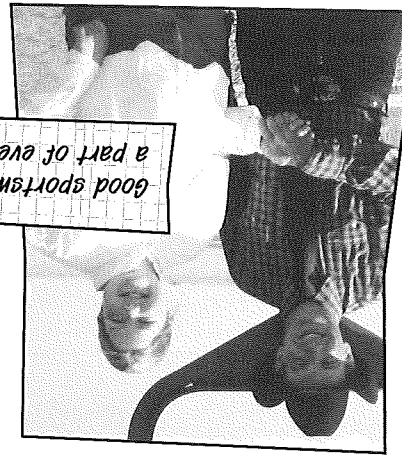
Pork Industry Targets for the 21st Century

- 195 lb. carcass
- Desirable muscle quality
- Minimum loin muscle of 6.5 sq. in. with appropriate
- color
- water holding capacity
- ultimate pH
- Intramuscular fat level greater than or equal to 2.9 percent
- High health production system
- Produced by a producer who has completed NPPC's Environmental Assurance Program and who is certified at Level III of the Pork Quality Assurance (PQA) Program
- Free of the stress gene
- Result of a terminal crossbreeding program
- From a maternal line capable of weaning 25 pigs per year
- Marketed at 156 days of age
- Performance on a corn/soy equivalent diet from 60 to 260 pounds of weight
- Live weight feed efficiency of 2.4
- Fat-free lean gain efficiency of 6.4
- Fat-free lean gain of .78 lbs per day
- Standard Reference backfat of .8
- Fat-free Lean Index of 49.8

Source: Pork Facts 2000/2001 National Pork Board

More challenges 

1. Write, call or e-mail your state or national pork producers organizations. Find out their three most successful promotions and why they were successful. Share what you find with your group.



Good sportsmanship is a part of every project.

- Q. Which of the six pillars of character are involved in the decision? Record your answer.
- Q. Who will be affected by this decision? How might they be affected?
- Q. What decision would provide the most good to the most people?

The following situations were designed to help you think about some ethical issues related to your swine project. If possible, form a group to discuss the situation. Each person can play one of the following roles:

- 4-H member
- Parent
- Extension educator
- General public

Your Challenge

Ethics are principles of accepted behavior for individuals. They outline how one should behave. Ethics deal with the ability to distinguish right from wrong and the commitment to do what is right. There is not always a single ethical response to a problem, but some behaviors are more ethical than others. We usually think of people who lie, cheat and steal as "unethical." Living by the Six Pillars of Character can help you become more ethical.

Building Character

Swine Skill: Practicing ethical behavior

Life Skill: Developing character

Success Indicator: Discusses eight ethic-related situations

Ethics are important in life everyday, and that includes swine projects. Being responsible for caring for your hog, being honest when telling others about the breeding of your animal, and treating other people in your swine club with respect are all part of having good character and being ethical. If you knowingly break those rules, lie about your hog's age, or mistreat your hog, you will tarnish your reputation. Not only that, but you also discredit your family, club and the 4-H organization.

Situations

1. Tom beats on his pig to make the hams swell. He thinks this will make them look larger and firmer.
2. Shari keeps forgetting to clean her pig's pen. After a few weeks, the odor causes the neighbors to complain to the county animal control officer.
3. Before selling breeding swine, Ari uses paint to conceal objectionable markings.
4. After the novice showmanship contest, Terr's dad yells at her. He tells her she is lazy and stupid for not winning first place. Many people hear his angry outburst.
5. D. J., a college student, feeds and trains Maru's pig. Maru has never even seen her pig until check in day at the fair.
6. This is the first year Sue's boyfriend has taken a 4-H swine project. She helps him by correcting some grooming mistakes just before the fitting and showing contest. Sue wins first place, and her boyfriend wins second place.
7. Beth had the grand champion pig for five years in a row. Some people say her parents do all the feeding and training for her.

Describe some other situations of unethical behavior you have seen.

Describe three situations where you have seen 4-H members act very ethically in swine projects.



Share What You Did ● How did you solve each ethical problem?

Process What's Important

How often do these problems really happen?

Share why you think it's important to act "ethically" in these situations.

Generalize to Your Life

How have you reacted in the past?

How can the Six Pillar of Character help you in the future?

Apply What You Learned

Pretend you are revising the rules for the next fair. How would you improve those rules?

WHAT AM I? We are what most commercial hog units produce.

Did you know... Saying that someone "eats like a pig" is usually meant as an insult, but it really should be taken as a compliment. Although pigs are not fussy eaters, they do not over eat and they are not particularly messy eaters.

Acknowledgments: Character Counts is a program of the Josephson Institute of Ethics. Activity written by Arlen Etling.

Six Pillars of Character



The six core ethical values called the Six Pillars of Character always outrank non-ethical values like wealth, fame, status, happiness, pleasure, personal freedom and being popular. (These aren't unethical values, they just don't have anything to do with ethics.) That means that trustworthiness, respect, responsibility, fairness, caring and citizenship override, outweigh and come before other choices.

Pillar Citizenship Is it law-abiding and just? Does it help others? Does it respect the democratic process? Is it open (nonsecretive) and responsible?

Caring Is it kind giving, sharing, serving and helpful?

Fairness Is it just, equal, open minded, willing to change or admit wrong?

Responsibility Is it pursuing excellence, committed, competent, well informed, well-prepared, diligent, busy, taking responsibility for actions and lack of action, leading by good example, helping the reputation of family, company, profession, self?

Respect Is it courteous, prompt, and decent? Is it respectful of the dignity and privacy of others, allowing them the make their own decisions?

Trustworthiness Is it honest, true, sincere, open, direct, brave, reliable and loyal? Will it make people trust you more? Will it mark you as a person who keeps promises, who keeps appropriate secrets and who volunteers helpful, complete information without telling lies or half truths?

If the answer is "yes" to these questions, you know that your decision is ethical and you should feel good about that! If you answer "no" to these questions, well then, make a new plan.

More challenges



1. Call your county or state 4-H office to get the 4-H Character Counts activity kit and explore Character Counts as a project or group activity.

Where Do They Fit?

Production	Processing	Distribution	Marketing	Finance	Research	Wholesale/ Retail
------------	------------	--------------	-----------	---------	----------	----------------------



Swine industry professionals oversee thousands of sows daily.

Your Challenge

With your family or project group, imagine or draw a pork chop in the center of a plate. Think of all the people and jobs that made it possible to be there. This is called "brainstorming," where any idea, no matter how far fetched, is O.K. Set a timer for 10 minutes of brainstorming. Write all ideas on a separate piece of paper. Think of at least 20 jobs or careers related in some ways to the swine industry. Be creative. Give yourself extra credit if you name 30 or more jobs or careers.

Once you made your list, put each job or careers on the chart below. See how many new careers come to mind. Discuss careers that are of interest to one or more group members.

Discovering Swine Careers

There are hundreds of exciting careers available to the person who wants to learn about career choices. Have you made a career choice? Are you really certain about it? Why is it important to think about this now? How might it influence the subjects you

take in school? It's important to get a good foundation in science and math for most (almost 70%) future careers. In this activity you'll become acquainted with possible careers related to your interest in the swine industry and other parts of agribusiness.

Exploring careers in agriculture
 Life Skill:
 Success Indicator:
 Identifies at least 15 jobs or careers that are involved in bringing a thick, juicy pork chop to your dinner table.



2. Pick one or two careers you'd like to explore. Determine what skills you need to learn to be good in them. For example, a person who paints animals needs to know bone structure of animals, perspective, shading and how to mix colors. A family doctor needs to be able to perform minor surgery (tonsillectomies and appendectomies), deliver babies, stitch cuts, and recognize and treat colds, measles, mumps and other common diseases.

1. Visit at least three individuals who have jobs or careers you believe you would enjoy. Ask them what they like and dislike about what they do.

More challenges



Produced by Minnesota Pork Producers

WAX	HEART VALVE	S O W A X C A T C O R N M E A L O P O B T N E M E C A
WATER	HEALTHY	T O P B S C I T E M S O C T S E N V I R O N M E N T Z
SOYBEAN MEAL	HAM	E M Y R E H T A E L K S S R E V L M S I A B C D Z S S
SOW	GLUE	L N O B O A R H O I J P N Q H L K E A S K S L I M E T
SAUSAGES	GLOVES	G I L T E E F I G P L O O C A J X U T N E O C P C N
PORK PRODUCER	GILT	I X T R T A N C D L M H A M T V I Y S L S V R I Q N E
SHOES	FINANCES	P A B T V S N O Y A R C U V A T H Z A E G O C N D A I
PORK CHOPS	ENVIRONMENT	W X Y Z E A B M A S B K C D M R U A G B J L R E F N R
PORK	CRAYONS	S H O E S R C D E M M R N K F A G B E R A G I E H I T
PLASMA	COSMETICS	V Y H T L A E H F A K O L R K E M J S U K R T S T F U
PIGLETS	CORNEAL	J I N S U L I N G H L P J O P H P K R S R E N C U A N
NUTRIENTS	CHALK	P O R K P R O D U C E R I P L M K L A H C P R S O D W
MEDICINE	CEMENT	
MATCHES	BUTTONS	
LOIN	BRISTLE BRUSH	
LITTER	BOAR	
LEATHER	BARN	

Discovering Swine Careers – Word Find

Word Bank

Each hidden word is a key element in raising hogs. Important by-products are intertwined among these words. You can also find products that you use everyday.

1. _____
2. _____
3. _____

Apply What You Learned

If you had to pick your top three career choices now, what would they be?

Generalize to Your Life

What did you learn about yourself as you did this activity?



- ### Share What You Did
- Did your ideas about careers change as you did this activity? Why?
 - How does it feel to think about future jobs? Is it easy?

Process What's Important

Why is it important to explore and plan for future careers while you're young instead of after you're grown up?

Acknowledgments: Written by Arlen Elling.

- Italian sausage _____
- Sweet and sour pork _____
- Westphalian ham _____
- Huevos rancheros _____
- Pork fried rice _____
- Pork chops and sauerkraut _____

4. What countries developed the following pork dishes?

3. Which countries and which U.S. states grow the most pigs?

2. Which countries import swine products? Check the Swine, Level 1 manual, "Discovering Pork By-products" on page 24 for a list of swine products. Then, look up imports in the country descriptions in the world almanac.

1. Where did the following breeds originate? Check the encyclopedia or Swine, Level 1 manual for the answers. Then, find the countries and states on your world map.

- Berkshire
- Poland China
- Chester White
- Spot
- Tamworth
- Hampshire
- Landrace

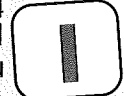
● Encyclopedia—volume "S" for swine
 ● World almanac—a paperback book that can be found in any bookstore or library
 ● Large world map

you will need:
 swine projects. To answer the following questions, some current international connections for 4-H questions in this activity, then discuss international connections. Answer the se learning resources to discover swine's



Your Challenge

International connections have been part of the swine industry for a long time. In fact, swine breeds developed in Europe and were brought to North America by English and Spanish colonists in early history.

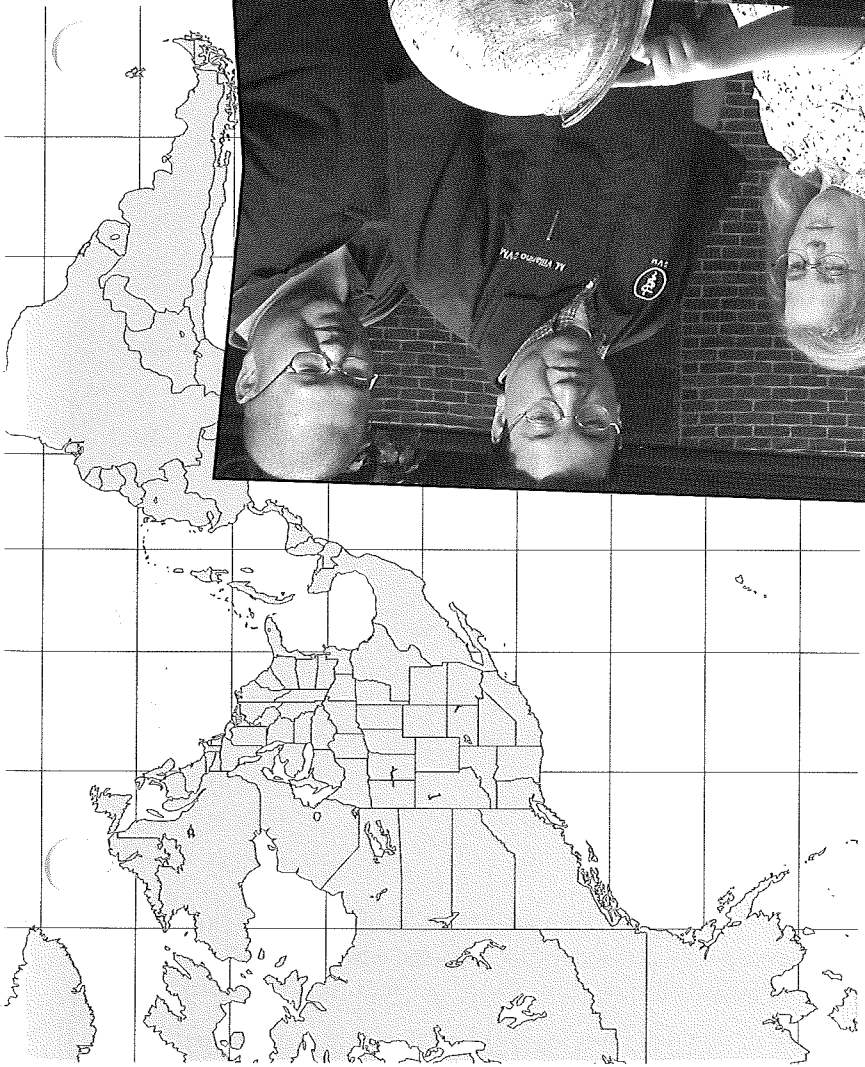


Locating Swine in the World

Many of these breeds were later improved in the United States. If you really enjoy "international awareness," you may want to study about other countries through 4-H.

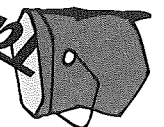
5. Extension educators have been asked to help the map and in the world almanac. In which countries might you start 4-H swine clubs?

Swine Skill: Exploring the swine industry
 Life Skill: Learning to learn
 Success Indicator: Locates swine breed origins on a world map.



International projects in the swine industry are endless

Talking it over



Share What You Did
 ● What did you discover as you answered the questions?

Process What's Important
 What did you learn about international swine connections that surprised you?
 What should swine producers know about other countries?

Generalize to Your Life

A friend says, "I'm not interested in other countries, I just want to grow and sell my pigs." How would you answer your friend?

Apply What You Learned

If other countries never existed, what would the swine industry be like?

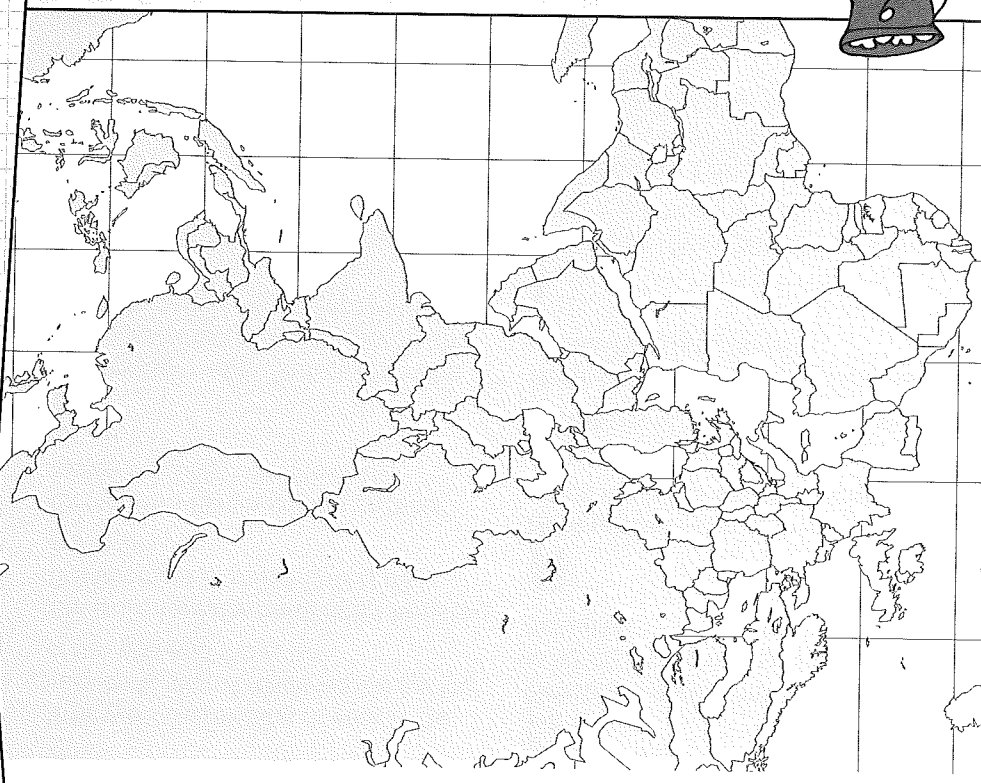
More challenges



1. Give a presentation at a fair on one or more of the baby pig management practices.

2. Contact your county or state 4-H office to find out about both travel and hosting opportunities with the International 4-H Youth Exchange and Japan exchange.

3. Write a speech or design a poster on "Swine's International Connections" to present at a 4-H meeting. What will you say?



Facts

- About 30-40 percent of U.S. agricultural production is sold to other countries. That helps the economy.
- If the U.S. did not sell to other countries, prices for swine products might go down.
- International experience and knowing a second language can help you find a job.
- Breed associations and state Departments of Agriculture often have excellent information on agricultural exports to other countries.

Pig Talk 2

This is the second of three Swine Talk Glossaries for you to use to increase your "swine" vocabulary. See how many of these words your family knows.

A

Abortion - Premature expulsion of the fetus from the uterus.

Aterbirth - Collective term for membranes, placenta and other tissues that protected and nourished the pigs while in the uterus and which are expelled immediately after the pig is born.

Anemia - A deficiency of hemoglobin, iron or red blood cells.

Animal abuse - Any act or neglect that causes or permits unnecessary pain, suffering or death of an animal.

Antibiotic - A medication, such as streptomycin or penicillin, used to destroy or inhibit the growth of microorganisms.

Antiseptic - Substances or procedures that prevent the growth and reproduction of microorganisms.

Average daily gain - Amount of weight gained per day per pig during a defined period of time.

B

Bacteria - Large group of widely distributed, one-celled microorganisms. They may appear singly or in colonies as spherical, rod-shaped or spiral, tread-like cells. **Breeding herd** - Term that includes all replacement boars, service boars, replacement gilts and sows present on a farm.

C

Cannibalism - Behavior pattern in which one pig bites or chews some part of another.

Castrate - Removal of the testes from the male animal.

Compost - a mixture of decomposing vegetable refuse, manure, etc., for fertilizing and conditioning the soil.

Confinement - Holding swine in a restricted area.

Consumer - Person who buys and uses a product.

D

Culling - Process of eliminating unwanted or poor-quality animals from the breeding herd.

Disease - Condition, usually caused by an infectious organism, that prevents the body from functioning normally, thus reducing growth, reproduction and other production.

Dressing percent - Carcass weight of a meat animal divided by its live weight.

Egg - Reproductive cell of the female; ovum.

Embryo - Developing animal in the very early stages following the joining of the egg and the sperm.

Environmentally controlled housing - Confinement of swine during their entire life.

Excretion - Elimination of animals waste products from the body.

F

Farrowing crate - Stall in which the sow is confined during farrowing and lactation periods to prevent her from turning around.

Farrowing interval - Number of days between two consecutive farrowings for an individual sow.

Feed conversion - Amount of feed consumed per pig to produce one pound of body weight gain.

Feeding procedures - Pigs have free access to feed at all times; most common for *Ad libitum* and growing pigs and lactating sows.

Limit or restricted - Daily feed intake is intentionally limited to below voluntary intake levels; most common for feeding sows and gilts during gestation.

Hand feeding - Feed is manually delivered to pigs at each meal; common in limited feeding situations such as gestation feeding of sows.

H

Heat period - Estrus; period during which female is sexually receptive.

Hormone - General name for secretions of the endocrine gland.

Host - Animal upon which another animal lives as a parasite.

I

Immunity - Resistance to disease, usually created through vaccination.

Inbreeding - Type of mating system where the animals produced are more closely related than the average of the population.

Infection - Abnormal condition, such as illness or abscess (infected wound), caused by disease-producing microorganisms that impair health and performance.

L

Line breeding - Type of mating system used to concentrate the genes of a particular ancestor into pedigrees of the offspring.

Litter weight - Total birth weight of the live pigs in a litter.

Self-feeding - Pigs are allowed to get feed themselves from a device (self-feeder) that holds sufficient feed for several meals.

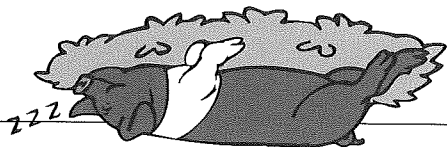
Floor feeding - Feed is placed on the floor for pigs to consume; common in limit and interval feeding situations.

Fertility - Ability to produce sperm, ova or offspring.

Fertilization - Process in which sperm and ovum fuse to form a zygote.

Fever - Increase in body temperature that occurs with some diseases and infection; normal body temperature in swine is 101-102 degrees F.

Gestation stall - Individual stall in which a pregnant sow is held during gestation.



Swine 2 Word Find

Word Bank

NCITMRHEVHG YATF
 UOBNEATOTPENINE
 RUIVBASRSIAERER
 SNETRRIINTPCOMET
 EFOTABEFIAORTEI
 RSSIRZEEETAOCNL
 YAAETCICHDIIPAIL
 COTETROLCIUSBFT
 DFTISGOYIUNYFNY
 AIOAEIZBRTLGEOS
 ONONASDZABRLGCE
 ANTIABIOTICMEIKG
 LATANTSOPLLEFNG
 IMMUNITYNEGORPG
 EERGIIDEP LACENTA
 Abortion Afterbirth Immunity Host
 Infection Antibiotic Inbreeding
 Bacteria Infection Mastitis Necropsy
 Confinement Culling Disease Pathogen
 Egg Embryo Placenta Postnatal Progeny
 Fertilization Fever

T
Tail biting - Specific form of cannibalism in pigs.
Total pigs born - All pigs born in a litter, including those born live, stillborn or mummified.
Type - Refers to structure or conformation of an animal, or the type of product it produces; examples are meat-type hog and wool-type sheep.

U
Uterus - Part of the reproductive tract in female mammals where the fetus develops during pregnancy.

V
Vaccination - Medicine or antigen given with a syringe and a needle.
Vaccine - Medication that contains live, modified or dead organisms or their products; it's injected into animals to protect them from disease caused by that particular organism.

Q
Quarantine - Separation of sick animals from healthy animals; new animals are also quarantined until it is sure they are healthy and can be mixed with other animals in the herd. For some diseases, an entire herd is quarantined to prevent movement of sick animals to other herds.

R
Replacement gilt - Gilt of superior quality selected to become part of the breeding herd.
Run off - Something that runs off, as rain in excess of the amount absorbed by the ground.

S
Statted floor - Floor having any kind of opening through which urine or manure may fall.
Stillborn pigs - Fully-developed pigs found dead behind the sow, or in the afterbirth, after farrowing.
Supplement - A feed or feed additive given to animals to provide nutrients such as protein, minerals or vitamins that were deficient in the basic ration.

M
Mammary system - Udder, teats, glands and tissues associated with milk production in the sow.
Manure Pile - a mass of manure heaped together.
Mastitis - Infection and inflammation of the udder and mammary glands that impairs normal milk production; reduced milk causes poor performance in pigs nursing the sow.
Mummified pigs - Pigs born discolored and shriveled or decomposed; they died sometime during gestation.

N
Natural immunity - Natural or inborn resistance of host to disease; generally considered to be transferred genetically.
Necropsy - Examination that involves dissecting a dead animal to learn the cause of its death.
Nursery - Area where pigs are moved following weaning and kept until approximately 40-50 pounds.

P
Partial confinement - Confinement of swine during a portion of their lifetime.
Pathogen - Agent (such as bacteria, protozoa, nematode, etc.) that may produce disease or illness.
Pedigree - Listing of the names of an animal's ancestors.
Placenta - Structure attaching the navel (umbilical cord) of an unborn pig to the lining of the sow's uterus to provide nutrients and other material necessary to allow the pig to grow.
Postnatal - Following birth.
Premix - Blend of a small amount of a dietary ingredient with a suitable carrier; for example, a small amount of feed additive in cornmeal.
Progeny - Offspring of an animal.
Progeny testing - Evaluating genotype of an individual by studying the performance of its offspring.

Swine Resources

The following are examples of resources to help you complete this activities and learn more about this exciting project. The Extension Service does not endorse any non-extension resources.



Magazines

Hogs Today
Pork '94
(Includes "Swine Practitioner" with subscription)

Vaneck Livestock Publications
7950 College Blvd.
Shawnee Mission, KS 66210

National Hog Farmer
Intertec Publishing Corp.
Webb Division

7900 International Drive
Minneapolis, MN 55425

Organizations

National Pork Producers
P. O. Box 10383
Des Moines, IA 50306

National Research Council
2101 Constitution Ave.
Washington, DC 20418

Other Resources

Judging and Evaluation Handbook
National Swine Registry
P. O. Box 2417
West Lafayette, IN 47996-2417

Swine.Net

Swine Judging Video
National Swine Registry
P. O. Box 2417
West Lafayette, IN 47996-2417

Cooperative Extension Service Resources

Contact your Cooperative Extension Services

Swine Resource Handbook

The Ohio State University
Communication and Technology
Media Distribution
2021 Coffee Road
Room 385 Kottman Hall
Columbus, OH 43210-1044

Pork Industry Handbook (PIH)

A resource book available in most county Cooperative Extension offices.
Agricultural Communication Service
Media Distribution Center
Purdue University
301 South Second Street
Lafayette, IN 47901-1232

National 4-H Curriculum

Swine Series
Swine 1 - The Incredible Pig
BU-08065
Swine 2 - Putting the Oink in Pig
BU-08066
Swine 3 - Going Whole Hog
BU-08067
Swine Helper's Guide
BU-08068
(See back cover for ordering information)

Swine Housing and Equipment Handbook

Midwest Plant Service - Contact the Extension Agricultural Engineer at your state land-grant university.

Swine Learning Laboratory Kit

The Ohio State University
Curriculum Materials Services
1114 Chambers Road
Columbus, OH 43212

Breed Associations

American Berkshire Assoc.
PO Box 2346
West Lafayette, IN 47906

American Landrace Association
PO Box 2340
West Lafayette, IN 47906-2340

Chester White Swine Records
PO Box 9758
Peoria, IL 61612-9758

National Spotted Swine Records Assn.
PO Box 9758
Peoria, IL 61612-9758

Hampshire Swine Registry
PO Box 2807
West Lafayette, IN 47906-2807

American Yorkshire Club
PO Box 2417
West Lafayette, IN 47906-2417

Poland China Record Assn.
PO Box 9758
Peoria, IL 61612-9758

United Duroc Swine Registry
PO Box 2397
West Lafayette, IN 47906

Business Resources

Contact local and national feed manufacturers for brochures on feeding and managing swine.



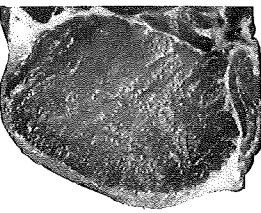
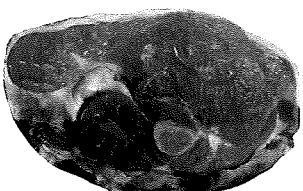
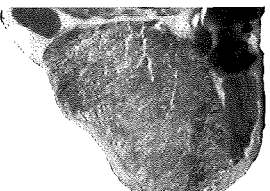
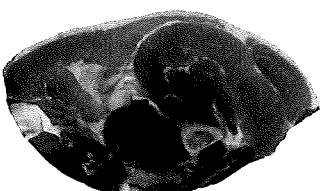

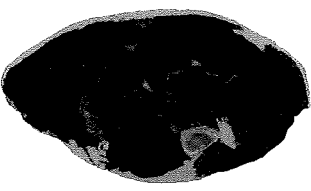

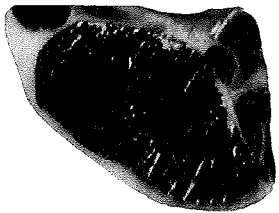
Computer Software

Swine Pro
(USDA swine management support system)

NPPC Pork Quality Standards

Quality of fresh pork varies greatly. The quality levels shown will appear differently to consumers, taste differently when cooked and perform differently when converted to processed products. High quality pork has greater monetary value than low quality pork. Quality can be evaluated by simple visual appraisal, or it can be determined more accurately by scientific tests. This chart may be used to help identify variations in pork quality.

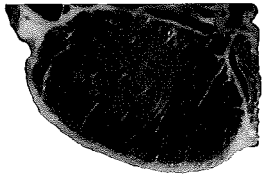
Color – Texture – Exudation

<p>PSE – Pale pinkish gray, very soft and Exudative. Undesirable appearance and shrinks excessively.</p>  <p>Pale pinkish gray (1)*; very soft and very watery (1)</p>  <p>Grayish pink (2), soft and watery (2)</p>  <p>Grayish pink (2), soft and watery (2)</p>	<p>RSE – Reddish pink, Soft and Exudative. Desirable color but subject to excessive shrinkage.</p>  <p>Grayish pink (2), soft and watery (2)</p>  <p>Reddish pink (3), soft and watery (2)</p>	<p>RFN – Reddish pink, Firm and Non-exudative. "IDEAL". Desirable color, firmness and water-holding capacity.</p>  <p>Reddish pink (3), firm and moderately dry (4). (Color ranges from grayish pink (2) to purplish red (4). Firmness/wetness ranges from slightly firm and moist (3) to very firm and dry (5).)</p> 	<p>DFD – Dark purplish red, very Firm and Dry. Firm and sticky surface, high water-holding capacity.</p>  <p>Purplish red (4), firm and moderately dry (4)</p>  <p>Dark purplish red (5), very firm and dry (5)</p> 
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Marbling Content



(1)* Dvoid to practically devoid, <2% fat**



(2) traces to slight, 2-3% fat



(3) small to modest, 4-5% fat



(4) moderate to slightly abundant, 6-8% fat

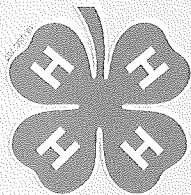


(5) moderately abundant or more, >8% fat

* Number in parenthesis is a color, firmness/wetness, or marbling score as described in "Procedures to Evaluate Market Hogs", 1991, NPPC. ** Fat content is intramuscular lipid only.

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Explore more curriculum projects online at: www.4-hcurriculum.org



I pledge
my Head to clearer thinking,
my Heart to greater loyalty,
my Hands to larger service, and
my Health to better living,
for my club, my community,
my country, and my world.

The 4-H Pledge

Putting the Oink in Pig
Completion Certificate
I certify that _____
has completed all requirements in the
Putting the Oink in Pig Achievement Program.

Helper's Signature _____
Date _____

