

Texas 4-H Swine Skill-A-Thon 2012-2013 Study Guide

RULES: The Swine Skill-a-Thon will consist of a preliminary round with a written exam and four “skills” stations. The top five individuals in each division will then compete in the finals. Seniors and Intermediates will give a five minute impromptu presentation on a topic assigned at the event.

1) AGE DIVISIONS

Contestants must be currently enrolled 4-H member, and academically eligible.

Ages will be determined as of August 31, 2012 age divisions are:

Intermediate – 11 to 13 as of August 31, 2012

Seniors – 14 to 18 as of August 31, 2012

2) No late entries will be accepted. Substitutions must be verified by the County Extension Agent using a substitution form.

3) Substitutions

Substitutions should be used only as a means of keeping an entry active when members have been forced to drop out for unexpected reasons (i.e. major illness, death or other conflicts). All substitutions must be approved by the county Extension agent in charge of the project area. The form may be signed, completed and brought to the contest site. Once the contest check in closes no substitutions may be made.

4) State Representative

This is a non-qualifying state contest. All individuals may participate at state regardless of their placing at the District Contest.

6) Contest

Preliminary Rounds

A) Written Exam - 100 points per person

Questions are derived from the vast amount of information available in the study guides as well as from knowledge and skills that can be obtained actually raising the project pig. The Exam will be made up of multiple choice or True/ False questions. The test may have 100, 1 point questions or 50, 2 point questions. The exam will be administered using questions from the following sources.

1) Swine Quiz Bowl Question Bank – http://texas4-h.tamu.edu/project_swine

2) Texas FFA Livestock CDE Test Bank - (Questions pertaining to Swine)

<http://www.texasffa.org/%5Cdocs/Livestock+Exam+Key.pdf>

B) Skills Stations - 100 points per person

Four skill stations will be done individually by contestants. A score sheet will be provided with a total of 25 points for each station. The evaluator/station moderator can allow for partial credit at each station.

- 1) Identifying External or Internal parts of a Swine:
- 2) Ear Notching
- 3) Projecting and Calculating Weigh Gain
- 4) Feedstuff Identification and Nutritional Purpose
- 5) Pork Retail Meat Cut Identification
- 6) Reading and Interpreting Registration Papers
- 7) Reading & Following Feed & Medication Labels
- 8) Identifying Tools and Equipment used in the swine Industry

Finals

C) Interview/Presentation - 100 points per individual

The top five individuals in each division will be called back for the finals. Intermediates and Seniors will be assigned a topic related to the swine industry and asked to prepare a five minute presentation related to that topic. They will have fifteen minutes to prepare. The Speech or Interview will be conducted over one of the following three topics and will be assigned upon qualification to the finals:

- 1) How has the commercial swine industry changed in the past 20 years?
- 2) What knowledge & skills have you learned from participating in the swine project and how will these skills help you throughout your life?
- 3) What would you tell individuals who oppose animal agriculture, specifically the commercial swine production industry?

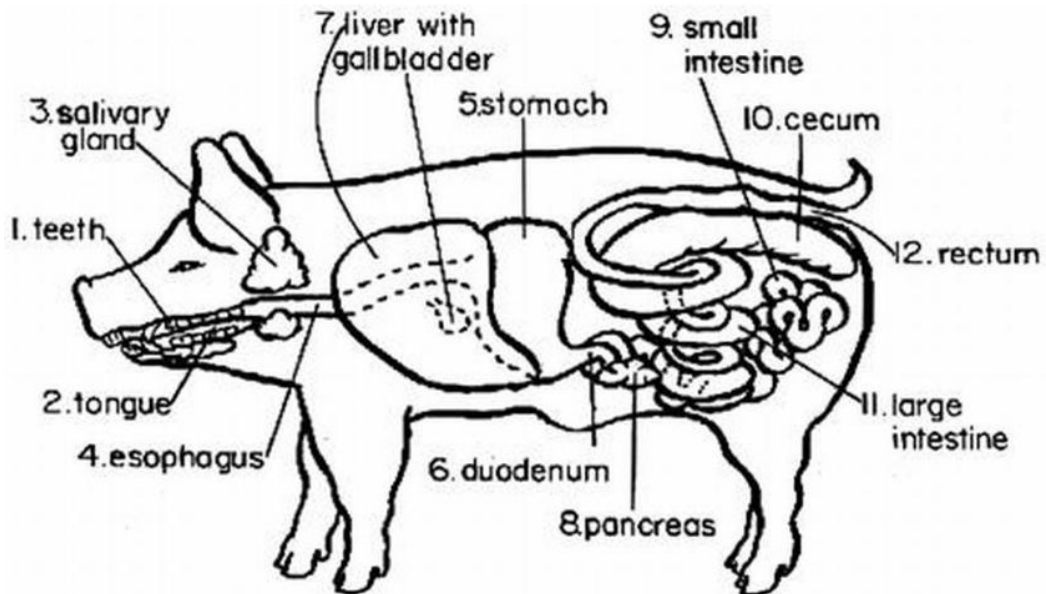
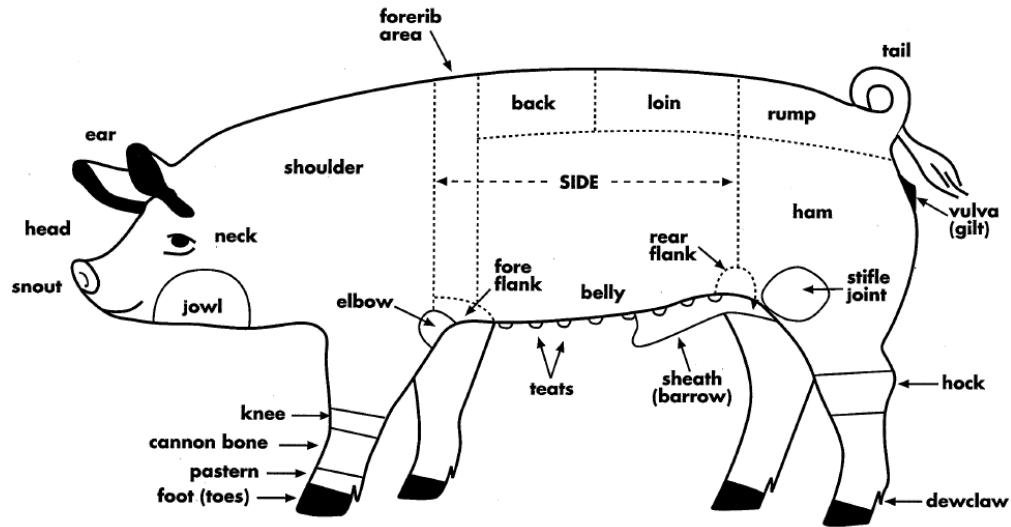
Additional Resources for Study and Preparation Include:

- 1) National Pork Board: www.pork.org (Youth PQA Manual & "Pork Industry at a Glance")
- 2) National Pork Producers Council: <http://www.nppc.org>
- 3) Texas Pork Producers Council: <http://www.texaspork.org>
- 4) Texas A&M University Animal Science Youth Swine Publications: <http://animalscience.tamu.edu/youth-projects/#swine>
- 5) USDA Fact Sheets: http://www.fsis.usda.gov/factsheets/Pork_From_Farm_to_Table/index.asp
- 6) Texas 4-H Swine Project Guide:
- 7) Quality Counts Manual:

Skills Stations Guidelines:

Identifying the Internal & External Parts of a Swine

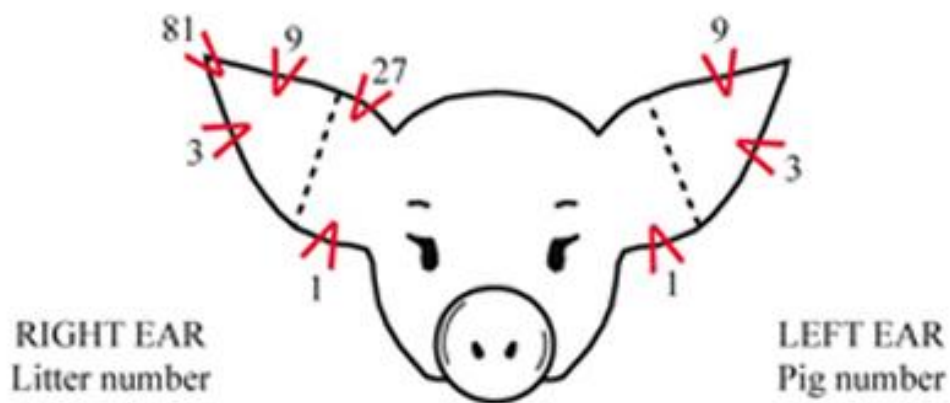
The ability to properly identify the parts of a swine is essential knowledge to swine management. This ability will allow you to quickly and efficiently detect health issues including external injuries, or internal problems. The skills station this year will focus on external body part identification, and the digestive system.



Ear Notching

During the ear notching skills station, youth will be asked to utilize a set of ear notchers to properly notch a model of a pig's ear. They may also be asked to read the notches of a pig that has already been notched.

Ear notching is a system that has been utilized for many years for the purpose of properly identifying swine. The pig's right ear is utilized to record the litter number. The litter mark ear is divided into five sections, and each section has a numerical value, either 1, 3, 9, 27, or 81 (see image below). Each section, except for 81, can have 1 or 2 notches only. All offspring of the same litter will have identical litter numbers in their right ear. The left ear is used to record the pig's individual number. Each pig will have different notches in the left ear. The left ear is divided into three sections, with values of 1, 3, and 9 (see image below). Ear notches should always be read with the litter number first, followed by the individual number.



Projecting & Calculating Weight Gain

Understanding and projecting weight gain is an important part of both 4-H swine projects and commercial swine operations. Individuals participating in the swine project need to be able to evaluate how much their project animal will need to gain from the time of purchase until the show date. This should be determined using the following formula:

$(\text{Desired Show Weight}) - (\text{Current Weight}) = (\text{Pounds needed to Reach Desired Weight})$

$\text{Pounds Needed to Reach Desired Weight} / (\text{Number of Days Until Show}) = (\text{Pounds of Gain per Day})$

Hogs usually need to eat 4 to 5 pounds of feed for every 1 pound of gain. The average daily gain of market hogs is 1.5 to 1.8 pounds per day. It is important to understand that expecting a hog to less than 1 pound each day is not a realistic expectation if that hog is to look its best on show day, nor is expecting a hog to sustain weight gains over 2.5 pounds per day in order to reach a minimum weight at the show.

Feedstuff Identification and Nutritional Purposes

The skill of properly identifying feedstuffs and additives, as well as understanding their purpose in the feed ration will enable you to ensure that your swine project is receiving the proper nutrients. It will also allow you to make critical feeding adjustments to alter the way your project puts on condition, or the speed at which your project grows. Below are the various feedstuffs that will be selected from for 2012-2013 swine skillathon contest. Participants will be asked to identify between 5 and 10 samples and categorize the group of nutrients to which they belong (energy, mineral, or proteins)

Energy

Whole Corn

Cracked Corn

Wheat

Grain Sorghum (Milo)

Barley

Oats

Rye

Wheat Middlings

Protein

Soybean Meal

Blood Meal

Fish Meal

Dried Whey

Mineral

Dicalcium Phosphate

White Salt

Trace Mineral Salt

Ground Limestone (Calcium Carbonate)

A helpful website for studying these feeds and their uses is:

<http://www.ca.uky.edu/agripedia/agmania/feedid/>

Pork Retail Meat Cut Identification

Profitability in the pork industry is linked to the amount and quality of the retail meat cuts that can be produced. As a result it is important for 4-H swine project members to be able to identify high value cuts of meat.

Senior contestants in the Swine Quiz Bowl should refer to the following website for a list of cuts that could appear at this skills station: <http://aggiemeat.tamu.edu/judging/id4H.html> (Pork Cuts Only)

Participants will only be required to list the common name of the meat cut. (For Example: Butterfly Chops)

Junior and Intermediate contestants in the Swine Quiz Bowl should refer to the following website for a list of cuts that could appear at this skills station: <http://aggiemeat.tamu.edu/judging/id4Hinter.html>

(Pork Cuts Only) Participants will only be required to list the common name of the meat cut. (For Example: Butterfly Chops)

Reading & Interpreting Registration Papers:

To implement a successful genetics program, one must be able to read and understand registration papers. It is important to properly identify an offspring's dam, sire, grand dam, grand sire, etc... There is also a great deal of information related to identifying the pig, and identifying its EPD numbers that can be derived from the registration papers. Below is a sample set of registration papers and a list of items you should be able to answer questions about during this skills station.

REGISTRATION NUMBER SEX EAR NOTCH DATE BORN ANIMAL NAME PSU5 REGAL 5-2 303263002	CERTIFICATE OF REGISTRY PSU3 REGAL 3-4 261874004 SIRE SPI 103.69	PSU1 REGAL 2-11 208189011 SIRE OF SIRE SPI 104.55
TOTAL PIGS BORN 9 NUMBER BORN ALIVE 8	PSU4 PR SUSAN 17-5 272709005 DAM SPI 104.91	PSU1 C2 SUSAN 13-1 208207001 DAM OF SIRE SPI 106.35
BREEDER PENNSYLVANIA STATE UNIVERSITY		BV2 PROSPECT 1-8 248858008 SIRE OF DAM SPI 103.78
OWNER PENNSYLVANIA STATE UNIVERSITY DAVID HOSTERMAN 124 SWINE CENTER - PORTER RD UNIVERSITY PARK, PA 16802		PSU2 GG SUSAN 3-1 237342001 DAM OF DAM SPI 109.31
AMERICAN YORKSHIRE CLUB, INC. P.O. BOX 2417 • W. LAFAYETTE, IN 47906 09/07/95 <i>Darrell D. Anderson</i> DATE REGISTERED EXECUTIVE SECRETARY	PERFORMANCE RECORD TRAITS EPD INDEXES EPD PIGS BORN ALIVE 21 DAY WEIGHT DAYS TO 230 BACKFAT THICKNESS	DATE OF SALE MATERNAL LINE TERMINAL SIRE SPI

- What is the registration number of this animal?
- What is the sex of this animal? (Gilt, Barrow, Boar)
- Who is the Sire of this animal?
- Who is the Dam of this animal?
- Who is the maternal grand sire and who is the paternal grand sire of this animal?
- Who is the maternal grand dam and who is the paternal grand dam of this animal?
- What is this animal's birth date?
- What is this animal's ear notch?
- Who is the owner of this animal?
- Who is the breeder of this animal?
- How many littermates did this animal have?
- Where all of the littermates born alive?
- What breed of pig is this animal?

Reading and Following Feed and Medication Labels

Any medicine or feed you give your animals will affect their health in some way, either positively or negatively. Ultimately, the health of your animals may affect consumers. When deciding how to care for your animals, you must make decisions responsibly so that you do no harm to the animals or to consumers. One of the most important things you must learn is how to read feed tags and medication labels. Below is an example of a medication label and information you should be able to derive from examining it. (Examples borrowed from the Quality Counts Book)

Medication Insert

Name of Product

1 → **Omnibiotic**
(Hydrocillin in Aqueous Suspension) ← **2**

Directions for use: See package Insert

For use in beef cattle, lactating and non-lactating dairy cattle, swine and sheep ← **3**

Read entire brochure carefully before using this product
For Intramuscular Use Only

Active Ingredients: Omnibiotic is an effective antimicrobial preparation containing hydrocillin hydrochloride. Each ml of this suspension contains 200,000 units of hydrocillin hydrochloride in aqueous base.

Indications: **Cattle** — bronchitis, foot rot, leptospirosis, mastitis, metritis, pneumonia, wound infections. **Swine** — erysipelas, pneumonia. **Sheep** — foot rot, pneumonia, mastitis. And other infections in these species caused by or associated with hydrocillin-susceptible organisms.

Recommended Daily Dosage
The usual dose is 2 ml per 100 lb of body weight given once daily.
Maximum dose is 15 ml/day.

Body Weight	Dosage
100 lb	2 ml
300 lb	6 ml
500 lb	10 ml
750 lb or more	15 ml

Continue treatment for 1 or 2 days after symptoms disappear.

Caution: 1. Omnibiotic should be injected deep within the fleshy muscle of the neck. Do not inject this material in the hip or rump, subcutaneously, into a blood vessel, or near a major nerve because it may cause tissue damage. 2. If improvement does not occur within 48 hours, the diagnosis should be reconsidered and appropriate treatment initiated. 3. Treated animal should be closely observed for at least 30 minutes. Should a reaction occur, discontinue treatment and immediately administer epinephrine and antihistamines. 4. Omnibiotic must be stored between 2° and 8°C (36° and 46°F). Warm to room temperature and shake well before using. Keep refrigerated when not in use. ← **8**

Warning: Milk that has been taken from animals during treatment and for 48 hours (four milkings) after the last treatment must not be used for food. The use of this drug must be discontinued 30 days before treated animals are slaughtered for food. ← **9**

10 → **How supplied:** Omnibiotic is available in vials of 100 ml.

Active Ingredients

What can this product be used to treat

Cautions: What type of injection should be administered

Must be refrigerated

Withdrawal period

Indications: What is this product designed to treat or do

What dose should be administered

Observation after treatments is required for this medication

How is the product supplied

Pig & Cattle Grower

Medicated for horses, rabbits, cattle, goats, poultry and swine

Administer Calf-Manna as a nutritional supplement for better growth and performance. Calf-Manna's four main ingredients—high-quality proteins, digestible carbohydrates, anise and brewer's dried yeast—meet the needs of many animals by providing for more growth, energy, palatability, and better digestion.

Guaranteed Analysis

Crude Protein	.....min. 25.0%
Lysine	.....min. 1.4%
Methionine	.....min. 0.3%
Crude Fat	.....min. 3.0%
Crude Fiber	.....min. 3.0%
Crude Fiber	.....max. 6.0%
Acid Detergent Fiber	.....max. 10.0%
Calcium	.....min. 0.7%
Calcium	.....max. 1.2%
Phosphorus	.....min. 0.6%
Salt	.....min. 0.5%
Salt	.....max. 1.0%
Sodium	.....min. 0.2%
Sodium	.....max. 0.4%
Copper	.....min. 15 ppm
Copper	.....max. 35 ppm
Selenium	.....min. 0.1 ppm
Zinc	.....min. 125 ppm
Vitamin A	.....min. 20,000 IU/lb

Ingredients

Soybean Meal, Corn, Hominy Feed, Feeding Oatmeal, Dried Whey, Dehydrated Alfalfa Meal, Linseed Meal, Brewer's Dried Yeast, Vegetable Oil, Fenugreek Seed, Anise Oil, Calcium Carbonate, Monocalcium Phosphate, Dicalcium Phosphate, Salt, Sulfur, Iron Oxide, Ferrous Carbonate, Ferrous Sulfate, Copper Oxide, Copper Sulfate, Manganous Oxide, Zinc Oxide, Sodium Selenite, Cobalt Carbonate, Calcium Iodate, Vitamin A Supplement, Vitamin D₃ Supplement, Vitamin E Supplement, Choline Chloride, Thiamine Mononitrate, Niacin Supplement, Riboflavin Supplement, Calcium Pantothenate, Pyridoxine Hydrochloride, Vitamin B₁₂ Supplement, Folic Acid, Biotin, Calcium Propionate (a preservative).

Feeding Instructions

Beef calves	..... 10% of creep ration
Show cattle	..... 1–2 lb/day
Brood cows & bulls	..... 1 lb/day
Baby pigs	..... $\frac{1}{4}$ – $\frac{1}{2}$ lb/day
Show hogs	..... $\frac{1}{2}$ –1 lb/day
Gestating sows	..... $\frac{1}{4}$ – $\frac{1}{2}$ lb/day
Lactating sows	..... $\frac{1}{2}$ – $\frac{3}{4}$ lb/day
Boars	..... $\frac{1}{4}$ – $\frac{1}{2}$ lb/day

Manufactured by:
Manna Pro Corporation
Net Weight 50 pounds (22.7 kilograms)

Reading a Feed Tag

1. What is the main ingredient in this feed?

2. What is the crude protein level?

3. What is the minimum crude fat level of this diet?

4. Is ground milo included in the ingredients of this diet?

5. How much supplement should be fed to show cattle? Show hogs?

6. What is one of the four main ingredients found in this supplement?

7. What are the minimum and maximum calcium levels of this diet?

Identifying Tools & Equipment Used in the Swine Industry

Participants must also be able to identify both actual samples and pictures of equipment used in the swine industry. 5 to 10 samples will be provided at this skills station of tools and equipment used in the show industry and the commercial swine industry. Below is a list of possible products that will appear at this skills station.

Show Whip

Rice Root Brush

Soft Bristle Brush

Foam Tipped Insemination Rod

Spirette Insemination Rod

Farrowing Crate

Heat Lamp

Ear Notchers

Scales

Sorting Panels

Clip in Feeder

Grill Brick

Pump Up Sprayer

Clippers

Wood Shavings

Syringes

Needles

Feed Pans

Nipple Waterers

Cup Waterers