

## **Swine Skill-a-thon Study Guide**

This packet contains study material for the annual skill-a-thon contest. Every member taking a livestock project is encouraged to look over this material. Not every skill-a-thon station is represented in this packet. Members are also encouraged to use other resources to study (ie. Online resources and livestock resource books). These packets are the members' to keep; they do not need returned to the Extension Office.

Feed samples are available upon request. (These will need returned to the Extension Office).

As always, if you have any questions please call the Extension Office at 419-354-9050.

Coming from England, these animals have long, large-framed, white bodies with erect ears. They are known as the “mother” breed because they produce large litters and are good mothers.

The members of this Ohio breed have black bodies with six white points. The white points are their four legs, tail, and nose. They also have droopy ears. These animals are lean with heavy muscles.

Developed in Indiana, these animals are medium-sized. They have black and white spotted bodies and droopy ears. Also, they gain weight easily and are aggressive breeders.

This breed came from England. These animals have black bodies with white feet, tails, and faces. They also have sound skeletons; dish snouts; and short, erect ears.

This breed was developed in Pennsylvania. These animals have white bodies and medium-sized, droopy ears. They are also good mothers.

This American breed came from crosses between red hogs in New York and red hogs in New Jersey. These animals have light red to dark red bodies and droopy ears. They grow quickly and efficiently.

Coming from Denmark, these animals have very long, white bodies and very large floppy ears. They are good mothers.

Developed in England, these animals have black bodies with a white belt around the shoulders and both front legs. They also have erect ears and heavy muscles.

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Yorkshire

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Poland China

Developed in Indiana, these animals are medium-sized. They have black and white spotted bodies and droopy ears. Also, they gain weight easily and are aggressive breeders.

Spotted

This breed came from England. These animals have black bodies with white feet, tails, and faces. They also have sound skeletons; dish snouts; and short, erect ears.

Berkshire

This breed was developed in Pennsylvania. These animals have white bodies and medium-sized, droopy ears. They are also good mothers.

Chester White

This American breed came from crosses between red hogs in New York and red hogs in New Jersey. These animals have light red to dark red bodies and droopy ears. They grow quickly and efficiently.

Duroc

Coming from Denmark, these animals have very long, white bodies and very large floppy ears. They are good mothers.

Landrace

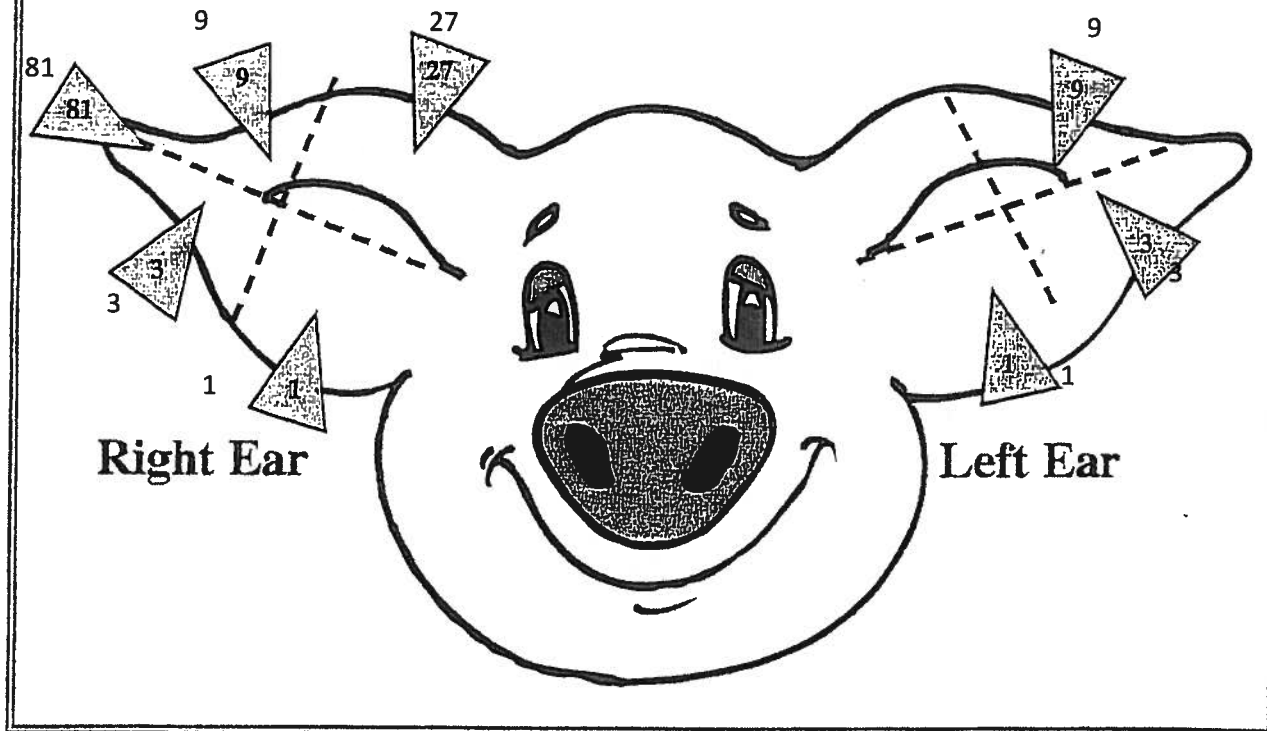
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Hampshire

ng



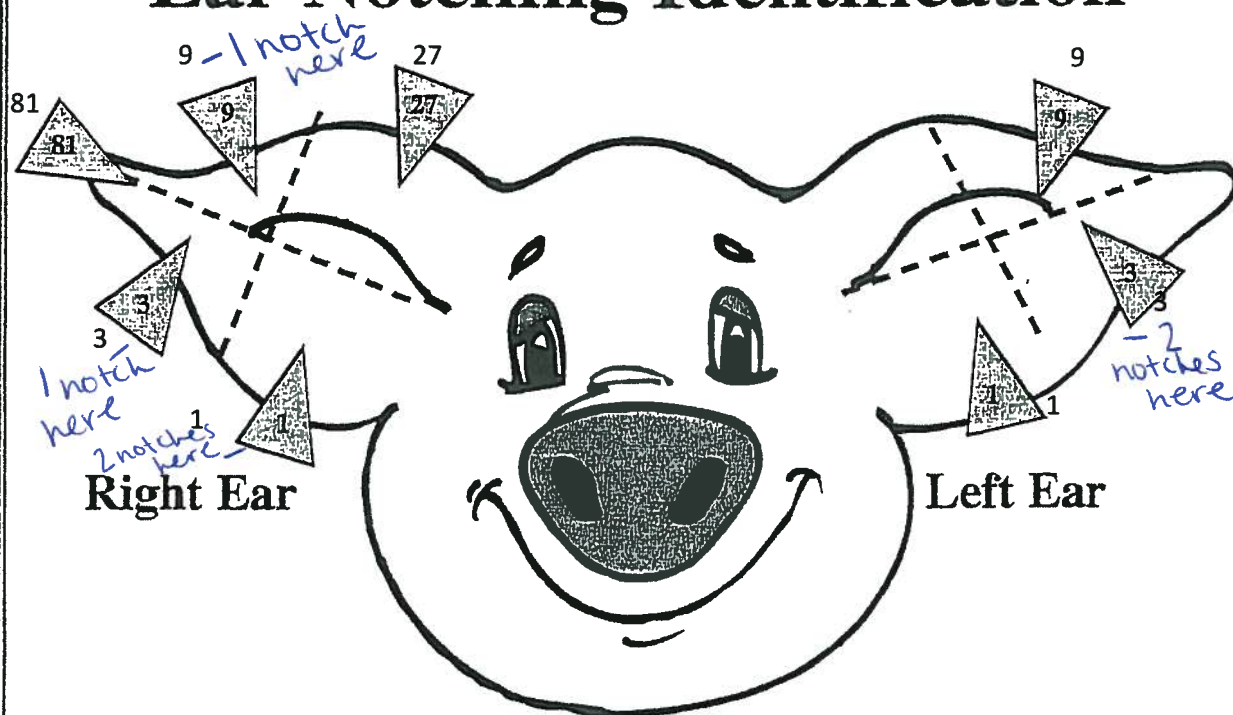
## Ear Notching Identification



Using the pig “Omelet” place the notches on her ears so that she is identified as 14-6 . You may use the chart above to help you.



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**Adventure Mills  
PIG GROWER  
MEDICATED**

FOR PIGS FROM 30 POUNDS TO 75 POUNDS

ADMINISTER TO SWINE IN A COMPLETE FEED FOR REDUCTION OF THE INCIDENCE OF CERVICAL ABSCESES; TREATMENT OF BACTERIAL SWINE ENTERITIS (SALMONELLOSIS OR NECROTIC ENTERITIS CAUSED BY SALMONELLA CHOLERAESUIS AND VIBRIONIC DYSENTERY). MAINTENANCE OF WEIGHT GAINS IN THE PRESENCE OF ATROPHIC RHINITIS.

**ACTIVE DRUG INGREDIENT**

CHLOROTETRACYCLINE .....	100 G/TON
SULFATHIAZOLE .....	100 G/TON
PENICILLIN .....	50 G/TON

**GUARANTEED ANALYSIS**

CRUDE PROTEIN .....	MIN 18.00%
LYSINE .....	MIN. 1.10%
CRUDE FAT .....	MIN. 6.50%
CRUDE FIBER .....	MAX. 4.00%
CALCIUM .....	MIN. 0.60%
CALCIUM .....	MAX. 1.10%
PHOSPHORUS .....	MIN. 0.55%
SALT .....	MIN. 0.40%
SALT .....	MAX. 0.90%
SELENIUM .....	MIN. 0.30 PPM
ZINC .....	MIN. 140.00 PPM

**INGREDIENTS**

Grain Products, Plant Protein Products, Processed Grain By-Products, Animal Fat, Animal Protein Products, Calcium Phosphate, Lignin Sulfonate, Ground Limestone, Salt, L-Lysine Monohydrochloride, Methionine Supplement, Zinc Oxide, Zinc Sulfate, Ferrous Sulphate, Manganous Oxide, Copper Sulfate, Calcium Iodate, Sodium Selenite, Vitamin A Acetate, Vitamin D-3 Supplement, Vitamin E Supplement, Menadione Dimethylpyrimidinol Bisulphite, Riboflavin Supplement, Niacin, Calcium Pantothenate, Vitamin B-12 Supplement, Thiamine Mononitrate, Folic Acid, Choline Chloride, Pyridoxine Hydrochloride, Biotin, Ethoxyquin (As A Preservative)

**FEEDING DIRECTIONS**

FEED as the only ration to pigs weighing from 30 pounds to 75 pounds bodyweight.

CAUTION: In order to obtain the desired performance results, the animals should be self fed.

WARNING: Withdraw 7 days prior to slaughter; contains high levels of copper; do not feed to sheep.

**MANUFACTURED BY:**

Adventure Mills Livestock Feeds  
Covtn, OH 43210

NET WEIGHT 50 POUNDS (22.7 KILOGRAMS)  
OR AS SHOWN ON SHIPPING DOCUMENT

## How to Read a Feed Tag

### Pig Grower Feed Tag Questions

1. What is the main ingredient in this feed supplement?
2. How many active drug ingredient(s) are in this feed?
3. What is the minimum crude protein level of this diet?
4. For how many days prior to slaughter should this feed be removed?
5. What is the minimum crude fat level of this diet?
6. Is ground limestone included in the ingredients of this diet?
7. At what stage of growth should this ration be fed?

### Pig Grower Answers:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.

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5. What is the minimum crude fat level of this diet?
6. Is ground limestone included in the ingredients of this diet?
7. At what stage of growth should this ration be fed?

### Pig Grower Answers:

1. grain products
2. 3
3. 18%
4. 7
5. 6.5%
6. yes
7. pigs weighing between 30 and 75 pounds

# Medication Label

\_\_\_\_\_ **Carramycin-152** \_\_\_\_\_

(oxytetracycline HCl) \_\_\_\_\_

## **DIRECTIONS FOR USE:**

**See package indications and directions for use.**

**Warning:** The use of this drug must be discontinued for 5 days before treated animals are slaughtered for food. Exceeding the highest recommended dosage level may result in antibiotic residues in meat beyond the withdrawal time.

**Store below 77°F (25°C).**

**Keep dry and keep away from light.**

\_\_\_\_\_ Net contents: 4.78 oz. packet

*Distributed by*

**Livestock Health, Inc.** \_\_\_\_\_



# Medication Label

Trade  
Name of Drug \_\_\_\_\_

**Carramycin-152**

(oxytetracycline HCl) \_\_\_\_\_

Active  
Ingredients \_\_\_\_\_

## DIRECTIONS FOR USE:

**See package indications and directions for use.**

Cautions  
and Warnings \_\_\_\_\_



**Warning:** The use of this drug must be discontinued for 5 days before treated animals are slaughtered for food. Exceeding the highest recommended dosage level may result in antibiotic residues in meat beyond the withdrawal time.

Withholding  
Times \_\_\_\_\_

**Store below 77°F (25°C).** \_\_\_\_\_

Storage \_\_\_\_\_

**Keep dry and keep away from light.**

Quantity  
of Contents \_\_\_\_\_

Net contents: 4.78 oz. packet

Distributed by

**Livestock Health, Inc.**

Name of  
Distributor \_\_\_\_\_

## Pork Nutrients

: A 3-oz. serving of pork contains 7% of the daily value this nutrient. Getting enough of this nutrient is a problem for some women, especially women of childbearing age. Heme (found in meat) is absorbed more readily than nonheme (found in plant based foods). Thus, anyone who avoids meat without the help of their health professional may increase their risk of \_\_\_\_\_ - deficiency anemia.

: A 3-oz. serving of pork contains 6% of the daily value for this nutrient. This nutrient is important for the normal function of many enzymes (catalysts for the body's chemical reactions), glucose, and muscle action.

: A 3-oz. serving of pork contains 22% of the daily value for this nutrient. This mineral strengthens bones and generates energy in cells.

: A 3-oz. serving of pork contains 11% of the daily value for this nutrient. This mineral, also known as an electrolyte, plays a major role in water balance and helps maintain normal blood pressure.

: A 3-oz. serving of pork contains 15% of the daily value for this nutrient. A component of more than 70 enzymes, this nutrient is a key player in energy metabolism and the immune system.

: A 3-oz. serving of pork contains 53% of the daily value for this nutrient. Without this key mineral, metabolism of carbohydrate, protein, and fat would be significantly comprised. Animal protein is one of the best sources of this nutrient, and among the choices, pork is tops.

: A 3-oz. serving of pork contains 19% of the daily value for this nutrient. Next to milk, there are few foods that have as much of this nutrient per serving as pork. This nutrient has an important role in the release of energy from foods.

: A 3-oz. serving of pork contains 20% of the daily value for this nutrient. This nutrient is important for the normal function of many enzymes in the body and involved in the metabolism of sugars and fatty acids.

: A 3-oz. serving of pork contains 33% of the daily value for this nutrient. This nutrient helps build red blood cells and metabolize carbohydrates and fats.

: A 3-oz. serving of pork contains 18% of the daily value for this nutrient. This nutrient is important for the normal function of enzymes and co-enzymes, which are needed to metabolize protein, carbohydrates, and fats. Plus, it plays a critical role in the regulation of glycogen (stored carbohydrates) metabolism.

## Pork Nutrients

**Iron:** A 3-oz. serving of pork contains 7% of the daily value this nutrient. Getting enough of this nutrient is a problem for some women, especially women of childbearing age. Heme (found in meat) is absorbed more readily than nonheme (found in plant based foods). Thus, anyone who avoids meat without the help of their health professional may increase their risk of \_\_\_\_\_ - deficiency anemia.

**Magnesium:** A 3-oz. serving of pork contains 6% of the daily value for this nutrient. This nutrient is important for the normal function of many enzymes (catalysts for the body's chemical reactions), glucose, and muscle action.

**Phosphorus:** A 3-oz. serving of pork contains 22% of the daily value for this nutrient. This mineral strengthens bones and generates energy in cells.

**Postassium:** A 3-oz. serving of pork contains 11% of the daily value for this nutrient. This mineral, also known as an electrolyte, plays a major role in water balance and helps maintain normal blood pressure.

**Zinc:** A 3-oz. serving of pork contains 15% of the daily value for this nutrient. A component of more than 70 enzymes, this nutrient is a key player in energy metabolism and the immune system.

**Thiamin:** A 3-oz. serving of pork contains 53% of the daily value for this nutrient. Without this key mineral, metabolism of carbohydrate, protein, and fat would be significantly comprised. Animal protein is one of the best sources of this nutrient, and among the choices, pork is tops.

**Riboflavin:** A 3-oz. serving of pork contains 19% of the daily value for this nutrient. Next to milk, there are few foods that have as much of this nutrient per serving as pork. This nutrient has an important role in the release of energy from foods.

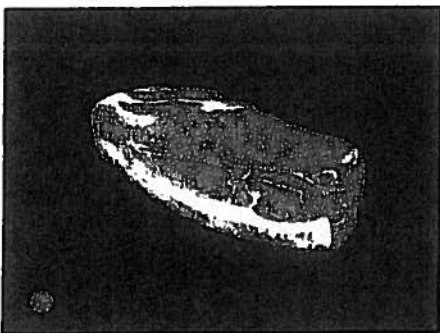
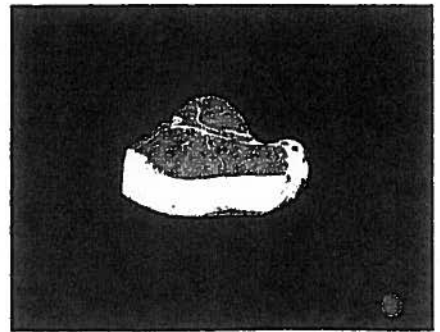
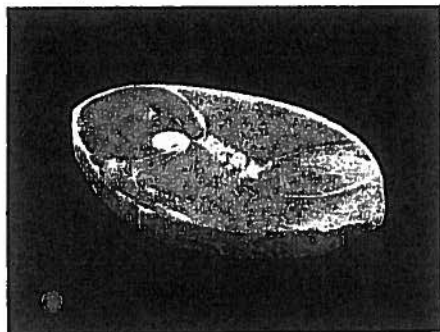
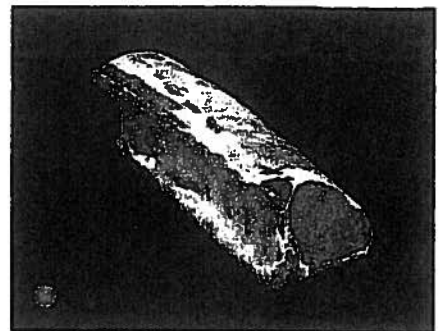
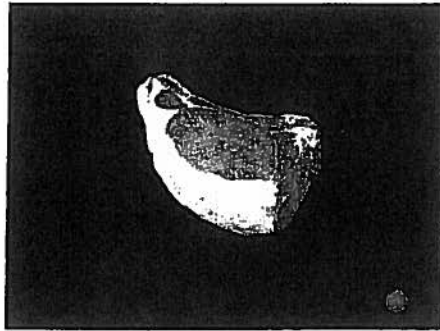
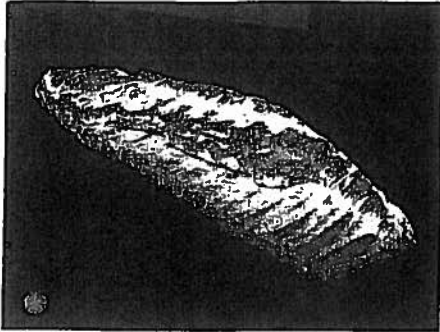
**Niacin:** A 3-oz. serving of pork contains 20% of the daily value for this nutrient. This nutrient is important for the normal function of many enzymes in the body and involved in the metabolism of sugars and fatty acids.

**Vitamin B-12:** A 3-oz. serving of pork contains 33% of the daily value for this nutrient. This nutrient helps build red blood cells and metabolize carbohydrates and fats.

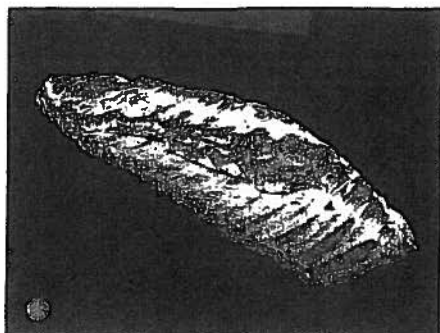
**Vitamin B-6:** A 3-oz. serving of pork contains 18% of the daily value for this nutrient. This nutrient is important for the normal function of enzymes and co-enzymes, which are needed to metabolize protein, carbohydrates, and fats. Plus, it plays a critical role in the regulation of glycogen (stored carbohydrates) metabolism.

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## Retail Cuts



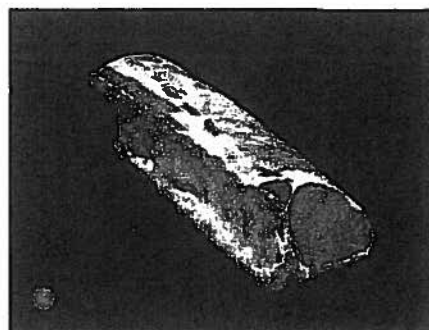
## Retail Cuts



**Spareribs**



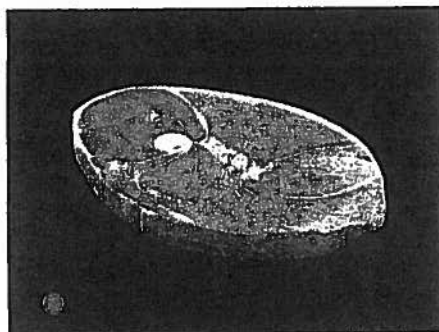
**Rib Chop**



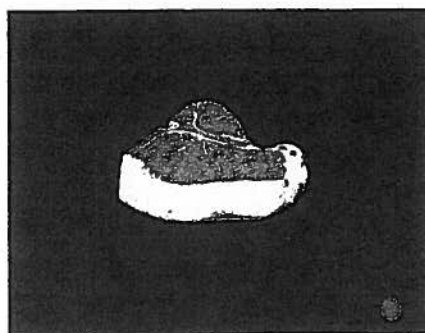
**Center Rib Roast**



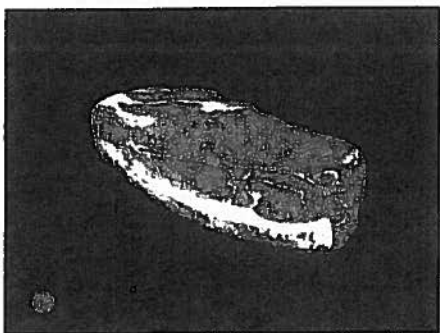
**Smoked Ham Shank  
Portion**



**Smoked Ham Center  
Slice**



**Loin Chop**

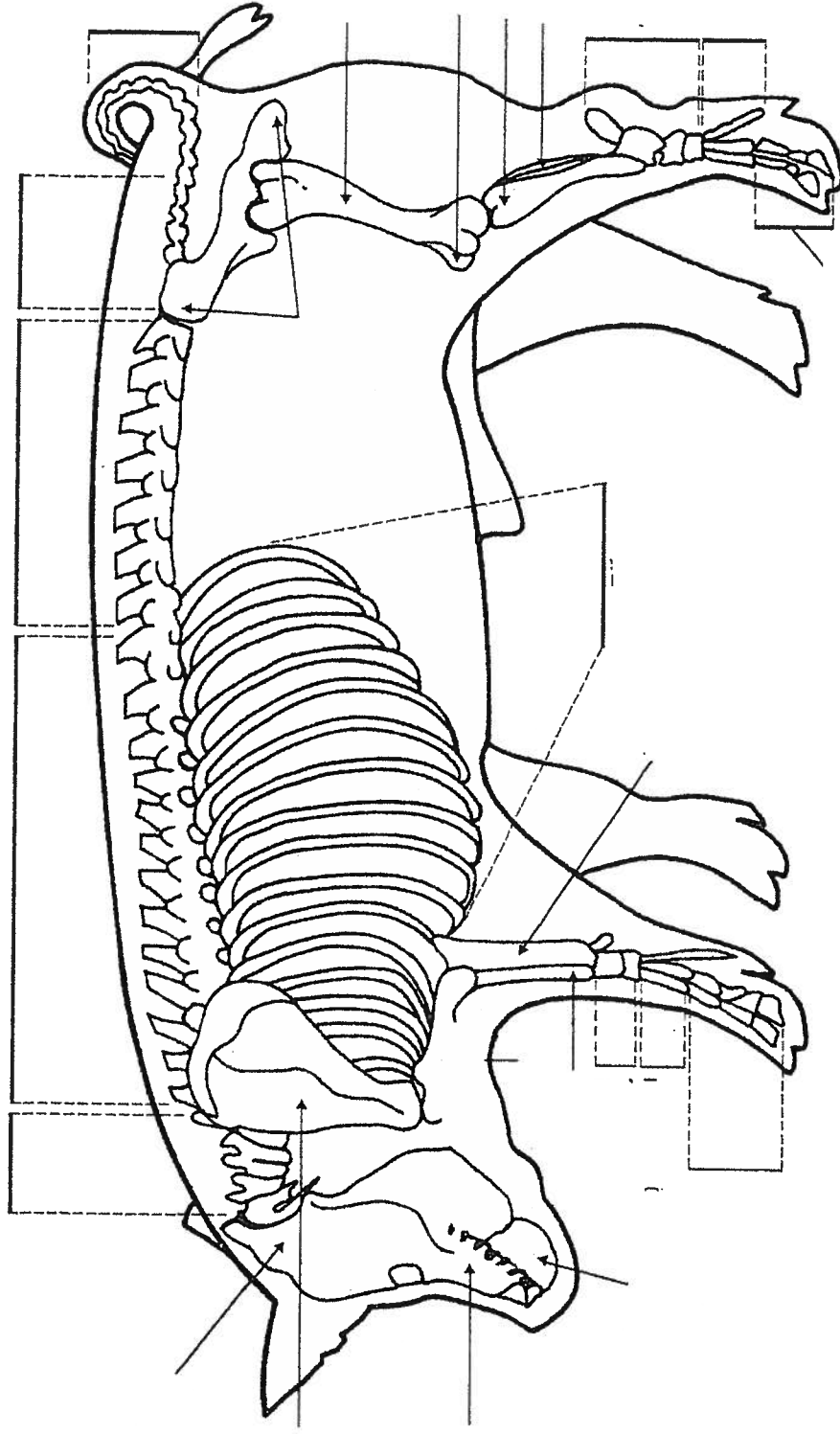


**Blade Steak**



**Center Loin Roast**

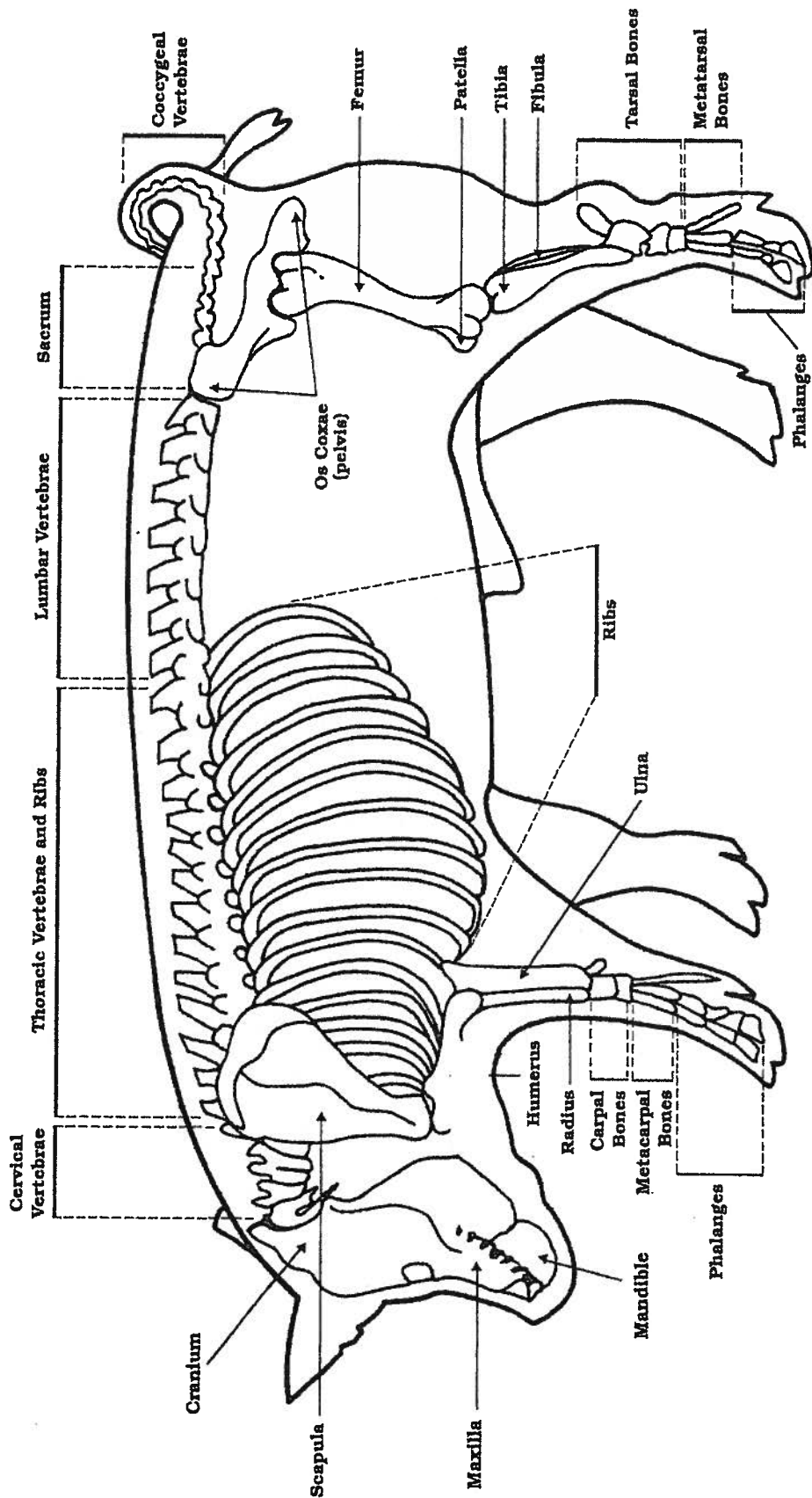
# Hog Skeletal System



Exploratory Learning: Educational Program

Product distribution through the Curriculum Materials Service

# Hog Skeletal System



**SWINE**  
LEARNING LABORATORY KIT

Exploratory Learning: Educational Program

Product distributed through the Curriculum Materials Service

### Swine Diseases

∴ This disease is a severe, often fatal pneumonia of growing-finishing swine. This disease is worldwide and causes significant economic losses in the swine industries in many countries. Pigs of all ages are susceptible, but most common affected are growing pigs 40 pounds to market weight. Sudden death of apparently healthy pigs may be the first sign that the disease is present in the herd. Death losses often follow a stressful period, such as relocation, weather change, and mixing. Infected pigs may have labored breathing, high fever (104-107 degrees F.), depression, and reluctance to move. Pigs that do survive may have severely damaged lungs. Because the organisms are spread through the air, the number affected in a group can quickly reach 100%, with a death loss reaching 20- 40% or more if immediate treatment is not started. Pigs held in overcrowded, poorly ventilated buildings are more likely to have problems. Sudden weather changes and drafts can also increase the chances for an outbreak.

is an inflammation of the mucous membranes that line the pig's nose. When caused by certain bacteria, it is a contagious disease characterized by the wasting away or lack of growth of the turbinate bones in the nose. The turbinate bones are small, mucous membrane-covered structures in each nostril. They condition the air by warming, moistening and filtering it. The organisms that cause this disease also cause pigs to grow more slowly and have poorer feed conversion. Common signs of the disease are sneezing, sniffing, snorting, and coughing. A moist crescent-shaped area on the face below the eye caused by excessive tearing is usually present. Also, a clear-to-yellowish discharge from the nostrils is observed. In advanced cases, the snout may be shortened and crooked.

This condition is commonly called "greasy pig disease" as the affected pigs develop areas of brown debris on the skin starting on the head and neck. All parts of the body become dark and greasy to touch. This is a bacterial infection caused by *Staphylococcus hyicus* and is most often seen in nursery pigs. The condition spreads to other pigs in the group if the affected pigs are not removed and treated. Many of the pigs die of dehydration while the survivors are stunted. Treatment consists of antibiotics and spraying with dilute disinfectants. Control includes minimizing skin abrasions/wounds, reducing relative humidity, and insuring adequate availability of drinking water.

For this disease, *Lawsonia intracellularis* bacteria infect the cells of the intestinal tract wall causing it to become thickened. The diarrhea it produces can be seen in pigs from weaning to market weight. Some heavier hogs may die suddenly when the infection causes massive hemorrhage into the intestinal tract. Most experience chronic diarrhea and weight loss. While many things are not known about the spread of this disease, it's known that the introduction is usually via new herd additions.

Signs of this disease are usually confined to gestating sows where this disease will cause abortions, stillbirths, mummies, weak pigs, and decreased litter size. The disease is spread by contact with the urine of sick and carrier animals. As the organism lives much longer in wet conditions, the elimination of standing water and wet areas in housing areas is recommended. Many species of animals, both domestic and wild, can carry this disease, which infects swine. Rats are a recognized threat in the spread of this disease. Because it is so difficult to control exposure, vaccination of breeding swine is routinely done prior to each breeding.

∴ This disease is caused by a virus. In pregnant sows it is responsible for premature farrowings, stillborn and mummified fetuses. Those piglets born alive are usually weak and many die. The sows usually have poor conception rates at the next breeding. In growing pigs, the disease leads to respiratory problems as the virus attacks the defenses of the lungs. Pigs with the disease often have additional diseases and do not respond to



normal treatments. The disease is usually brought into a herd with infected animals which can shed the organism for several months. Transmission is most often by close contact. Laboratory testing is often needed to confirm the diagnosis of the disease. When investigating herd additions, only disease negative pigs from disease negative herds should be considered. While several vaccines are available to reduce disease losses, special management effort is also needed.

1: This disease is an acute, frequently fatal disease affecting most species of animals, except humans. The disease is caused by a virus and involves the nervous and respiratory systems. Diagnosis, of course, should always be confirmed by lab tests, as the virus may be isolated in the spleen, lungs, liver, or brain. It can affect pigs of all ages. The disease is spread mainly by direct contact between swine with the nose and mouth being the main entry points. Recovered pigs may become carriers of the virus and can later infect other pigs and most domestic animals (cattle, sheep, goats, cats, and dogs). The chances for introduction of the disease can be minimized by the owner through strict control of the movement of people, animals, and objects into swine premises. Clean clothes should be worn, and instruments, boots, and other objects should be decontaminated routinely.

2: This disease is a bacterial infection. While infection with the most common species leads to septicemia and pneumonia, another species causes diarrhea. Apparently healthy carrier pigs are the usual means of introduction into a herd. Ingestion of contaminated material is the main route of infection. The organism is shed in the feces, and can survive in water for 24 days, in a mixture of water and swine manure sludge for 78 days, or in pasture dirt for over a year. Outbreaks are often associated with a stress such as transportation, co-mingling, and overcrowding. Control is based on sanitation, minimizing stress, treatment with antibiotics, and vaccination.

3: This disease is a bacterial infection carried in the nose and tonsils of many swine and is often acquired by piglets during the act of farrowing. The infection can also be transmitted by a pig to its pen mates through nose-to-nose contact. After a period of stress, the organism spreads from the tonsils to other parts of the body such as body cavities, joints, heart, lungs, and brain. Infections can also occur with skin wounds such as tail biting, tail docking, and abrasions of knees on rough floors. This infection is a common cause for convulsions 1-2 weeks post weaning. If one or more pigs in a group are diagnosed with this disease, all pigs in the group should be treated with antibiotics immediately to prevent further losses in the group. Vaccines are available to prevent future outbreaks.

4: This virus causes short but severe respiratory disease episode. Outbreaks of the virus often occur in pigs that have been moved or co-mingled, such as at a show and sale. The disease spreads rapidly so that the entire group seems to get sick in the matter of a day. Breathing becomes labored and open-mouthed. There are episodes of barking coughs. While nearly all the pigs get too sick to move around or eat for a couple days, only rarely does one die. Recovery is almost as quick as the disease onset. Antibiotics are of limited use but vaccines are now available to help prevent such outbreaks.

### Swine Diseases

**Actinobacillus Pleuropneumonia:** This disease is a severe, often fatal pneumonia of growing-finishing swine. This disease is worldwide and causes significant economic losses in the swine industries in many countries. Pigs of all ages are susceptible, but most common affected are growing pigs 40 pounds to market weight. Sudden death of apparently healthy pigs may be the first sign that the disease is present in the herd. Death losses often follow a stressful period, such as relocation, weather change, and mixing. Infected pigs may have labored breathing, high fever (104-107 degrees F.), depression, and reluctance to move. Pigs that do survive may have severely damaged lungs. Because the organisms are spread through the air, the number affected in a group can quickly reach 100%, with a death loss reaching 20- 40% or more if immediate treatment is not started. Pigs held in overcrowded, poorly ventilated buildings are more likely to have problems. Sudden weather changes and drafts can also increase the chances for an outbreak.

**Atrophic Rhinitis:** This disease is an inflammation of the mucous membranes that line the pig's nose. When caused by certain bacteria, it is a contagious disease characterized by the wasting away or lack of growth of the turbinate bones in the nose. The turbinate bones are small, mucous membrane-covered structures in each nostril. They condition the air by warming, moistening and filtering it. The organisms that cause this disease also cause pigs to grow more slowly and have poorer feed conversion. Common signs of the disease are sneezing, sniffing, snorting, and coughing. A moist crescent-shaped area on the face below the eye caused by excessive tearing is usually present. Also, a clear-to-yellowish discharge from the nostrils is observed. In advanced cases, the snout may be shortened and crooked.

**Exudative Epidermitis:** This condition is commonly called "greasy pig disease" as the affected pigs develop areas of brown debris on the skin starting on the head and neck. All parts of the body become dark and greasy to touch. This is a bacterial infection caused by *Staphylococcus hyicus* and is most often seen in nursery pigs. The condition spreads to other pigs in the group if the affected pigs are not removed and treated. Many of the pigs die of dehydration while the survivors are stunted. Treatment consists of antibiotics and spraying with dilute disinfectants. Control includes minimizing skin abrasions/wounds, reducing relative humidity, and insuring adequate availability of drinking water.

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**Leptospirosis:** Signs of this disease are usually confined to gestating sows where this disease will cause abortions, stillbirths, mummies, weak pigs, and decreased litter size. The disease is spread by contact with the urine of sick and carrier animals. As the organism lives much longer in wet conditions, the elimination of standing water and wet areas in housing areas is recommended. Many species of animals, both domestic and wild, can carry this disease, which infects swine. Rats are a recognized threat in the spread of this disease. Because it is so difficult to control exposure, vaccination of breeding swine is routinely done prior to each breeding.

**Porcine Reproductive and Respiratory Syndrome (PRRS):** This disease is caused by a virus. In pregnant sows it is responsible for premature farrowings, stillborn and mummified fetuses. Those piglets born alive are usually weak and many die. The sows usually have poor conception rates at the next breeding. In growing pigs, the disease leads to respiratory problems as the virus attacks the defenses of the lungs. Pigs with the disease often have additional diseases and do not respond to

normal treatments. The disease is usually brought into a herd with infected animals which can shed the organism for several months. Transmission is most often by close contact. Laboratory testing is often needed to confirm the diagnosis of the disease. When investigating herd additions, only disease negative pigs from disease negative herds should be considered. While several vaccines are available to reduce disease losses, special management effort is also needed.

**Pseudorabies (Aujeszky's Disease):** This disease is an acute, frequently fatal disease affecting most species of animals, except humans. The disease is caused by a virus and involves the nervous and respiratory systems. Diagnosis, of course, should always be confirmed by lab tests, as the virus may be isolated in the spleen, lungs, liver, or brain. It can affect pigs of all ages. The disease is spread mainly by direct contact between swine with the nose and mouth being the main entry points. Recovered pigs may become carriers of the virus and can later infect other pigs and most domestic animals (cattle, sheep, goats, cats, and dogs). The chances for introduction of the disease can be minimized by the owner through strict control of the movement of people, animals, and objects into swine premises. Clean clothes should be worn, and instruments, boots, and other objects should be decontaminated routinely.

**Salmonellosis:** This disease is a bacterial infection. While infection with the most common species leads to septicemia and pneumonia, another species causes diarrhea. Apparently healthy carrier pigs are the usual means of introduction into a herd. Ingestion of contaminated material is the main route of infection. The organism is shed in the feces, and can survive in water for 24 days, in a mixture of water and swine manure sludge for 78 days, or in pasture dirt for over a year. Outbreaks are often associated with a stress such as transportation, co-mingling, and overcrowding. Control is based on sanitation, minimizing stress, treatment with antibiotics, and vaccination.

**Streptococcus Suis:** This disease is a bacterial infection carried in the nose and tonsils of many swine and is often acquired by piglets during the act of farrowing. The infection can also be transmitted by a pig to its pen mates through nose-to-nose contact. After a period of stress, the organism spreads from the tonsils to other parts of the body such as body cavities, joints, heart, lungs, and brain. Infections can also occur with skin wounds such as tail biting, tail docking, and abrasions of knees on rough floors. This infection is a common cause for convulsions 1-2 weeks post weaning. If one or more pigs in a group are diagnosed with this disease, all pigs in the group should be treated with antibiotics immediately to prevent further losses in the group. Vaccines are available to prevent future outbreaks.

**Swine Influenza (Flu):** This virus causes short but severe respiratory disease episode. Outbreaks of the virus often occur in pigs that have been moved or co-mingled, such as at a show and sale. The disease spreads rapidly so that the entire group seems to get sick in the matter of a day. Breathing becomes labored and open-mouthed. There are episodes of barking coughs. While nearly all the pigs get too sick to move around or eat for a couple days, only rarely does one die. Recovery is almost as quick as the disease onset. Antibiotics are of limited use but vaccines are now available to help prevent such outbreaks.

# Swine Terms

▪	The average number of pounds an animal gains in a day. This can be determined at any stage of growth, but is usually determined from weaning weight to slaughter weight.
▪	The required amount of essential nutrients supplied to a hog during a 24 hour period.
▪	A group of animals with similar external characteristics that are passed on from one generation to another.
▪	A pig that is from parents of different breeds
▪	This term is applicable to unborn offspring from the date of implantation to the termination of pregnancy
▪	Special chemicals made in the body that cause changes in the body
▪	A chemical compound that is needed by the body. These requirements vary by age and weight of the pig
▪	High frequency sound waves used to observe the internal anatomy of the hog without the need for surgery or invasive techniques. Often used to determine pregnancy status.
▪	The long, flexible tube that is attached to the placenta at one end and to the abdomen of the fetus at the other. It is the lifeline of the fetus.

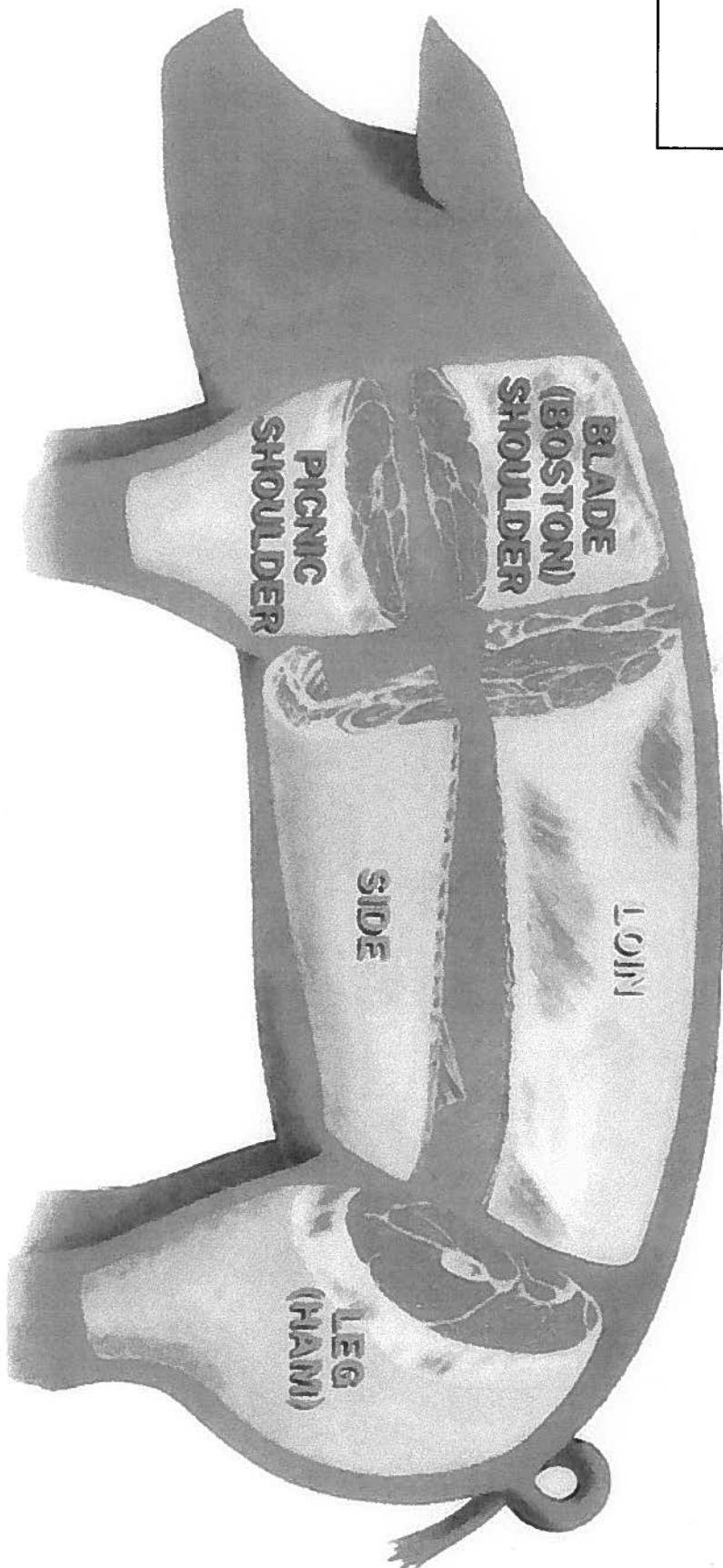
# Swine Terms

▪ Average Daily Gain	The average number of pounds an animal gains in a day. This can be determined at any stage of growth, but is usually determined from weaning weight to slaughter weight.
▪ Balanced Ration	The required amount of essential nutrients supplied to a hog during a 24 hour period.
▪ Breed	A group of animals with similar external characteristics that are passed on from one generation to another.
▪ Crossbred	A pig that is from parents of different breeds
▪ Fetus	This term is applicable to unborn offspring from the date of implantation to the termination of pregnancy
▪ Hormone	Special chemicals made in the body that cause changes in the body
▪ Nutrient	A chemical compound that is needed by the body. These requirements vary by age and weight of the pig
▪ Ultrasound	High frequency sound waves used to observe the internal anatomy of the hog without the need for surgery or invasive techniques. Often used to determine pregnancy status.
▪ Umbilical Cord	The long, flexible tube that is attached to the placenta at one end and to the abdomen of the fetus at the other. It is the lifeline of the fetus.

# Whole Sale Cuts



# Whole Sale Cuts



**Swine By-Products**

Hair for artist brushes  
Gelatin for marshmallows and photographic film  
Bone for bone china  
Rennet for making cheese  
Stearin for making chewing gum and candies  
Glycerin for explosives  
Hides and skins for leather goods  
Ingredients for medicines and surgical sutures  
Binders for asphalt paving  
Drumheads and violin strings  
Cutting oils and other industrial lubricants  
Special glues for marine plywood

**Not Swine By-Products**

Textiles for car upholstery  
Leather sporting goods  
Hydraulic brake fluid for  
machines  
Rugs and clothing  
Imitation ivory and piano keys