

K-STATE

Show Pig Guide



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As a result of the ongoing COVID-19 pandemic, the 2021 Kansas Junior Swine Producer Day was transitioned to a virtual series in order to adhere to state and local health guidelines, as well as protect the health and well-being of the families we serve. Even during this uncertainty, we continue forward toward our main goal: educate young producers and their families on the selection and management of swine projects. Having the opportunity to feed that energetic spark in the swine industry is also an added bonus. The enthusiasm and passion youth have for their projects is contagious and no one misses experiencing it in person more than we do! We can't wait to see everyone's smiling faces at a junior event in the future!

In addition to this written document, several videos have been created for the 2021 Kansas Virtual Junior Producer Week. Hopefully, these all will be helpful resources to guide your youth swine project. The videos have been assembled into a playlist on the KSU Youth Livestock Program YouTube channel. The link is provided below. We also plan to update this list in the future as relevant videos are developed.

<http://bit.ly/KSUJrSwinePlaylist>

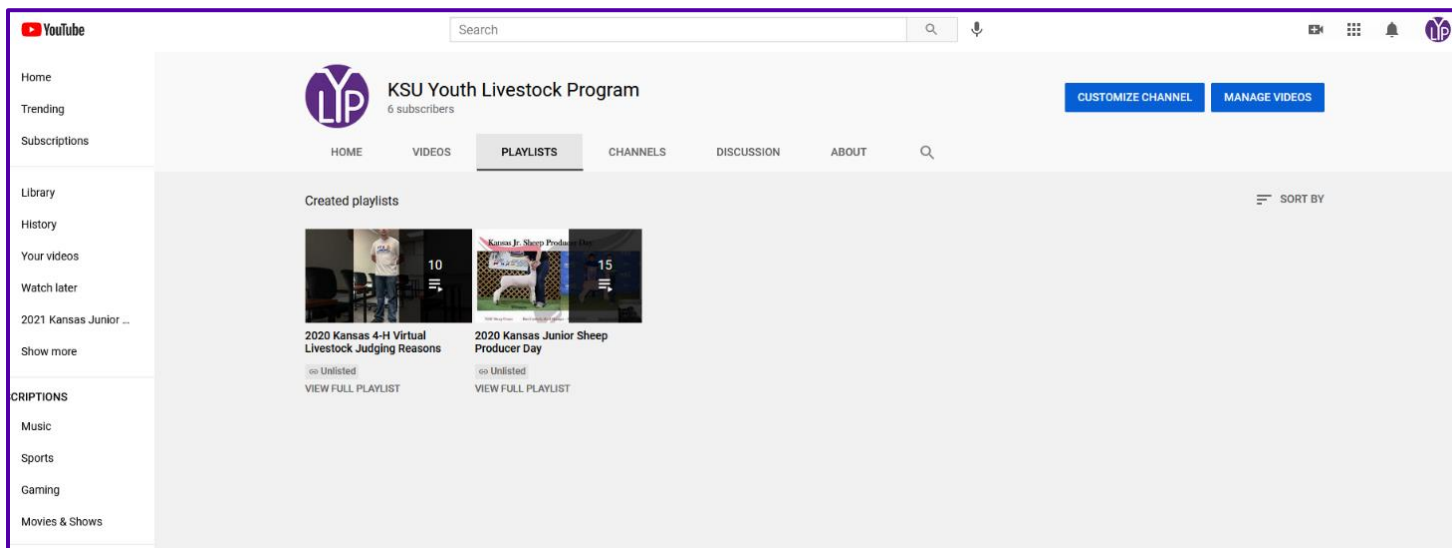




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Contributions

A special thanks to these people and organizations for helping us develop this great material.

Kansas Pork Association

National Hog Farmer

National Swine Registry

Certified Pedigreed Swine

National Pork Board

Pork Checkoff

Lexie Hayes

Dr. Travis O'Quinn

Lois Schreiner



Educational Materials

Listed below are educational resources available for use. Many of the websites have excellent information that can assist you with your youth swine project.

KSU Youth Livestock Program

<http://www.YouthLivestock.KSU.edu>

Kansas State Youth Livestock Program Facebook page (@ksuylp)

KSU Swine Nutrition and Management

<http://www.ksuswine.org>

KSU College of Agriculture

<http://www.ag.ksu.edu>

<http://www.facebook.com/KStateAg?v=wall>

<http://twitter.com/kstateag>

The Kansas Pork Association

<http://www.kspork.org/>

<http://www.facebook.com/pages/Kansas-Pork-Association/65989263077>

<http://twitter.com/KansasPorkNews>

<http://www.youtube.com/user/KansasPork>

<http://piggingout-n-about.blogspot.com/>

US Pork Center of Excellence – Pig Information Gateway

<http://ksu.porkgateway.com>

The National Pork Board

<http://www.pork.org>

<http://www.facebook.com/ThePorkCheckoff>

<http://twitter.com/PorkCheckoff>

<http://www.youtube.com/user/PorkCheckoff>

Veterinary Feed Directive (VFD) Information

<http://www.pork.org/production-topics/antibiotics-resource-center/>

<https://www.beefcattleinstitute.org/veterinary-feed-directive/>

The Pig Site

<http://www.thepigsite.com>

The National Swine Registry for Hampshire, Duroc, Landrace, and Yorkshire

<http://www.nationalswine.com>

Certified Pedigree Swine for Chester Whites, Spotted, and Poland China

<http://www.cpsswine.com>

The National Berkshire Association

<http://americanberkshire.com>

Breeds of Swine

<http://www.ansi.okstate.edu/breeds/swine/>



Notes



Selecting Your Youth Swine Project

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Before selecting your youth swine project, you should consider factors such as where you will be exhibiting your animal, gender, and breed classification. There are some shows that only allow barrows or only allow gilts. It is necessary to research this early and to know where you would like to exhibit your animal.

If you choose a specific breed, you must follow the purebred classification guidelines in order to be allowed to show in that particular breed. Also, be sure you understand any requirements for registration papers to show a purebred gilt or barrow at the various shows you plan to attend.

Selecting the correct age and size of pig is one of the most important factors in selecting your youth swine project. You do not want to purchase an animal that is too old and will be larger than needed at the show and/or too young that will not make the weight for the show. For county fairs in July, you will want January or very early February born pigs as a general rule. For the August county fairs, middle to late January and early February born pigs are generally ideal. For the Kansas State Fair, the end of January to end of February and for the Kansas Junior Livestock Show February and March born pigs are a reasonable target age for market pigs. For Kansas State Fair, purebred breeding gilts must be born after January 1 and for Kansas Junior Livestock show breeding gilts must be born after February 1 of the show year.

Look for physical characteristics such as muscle top shape, ham expression, thickness of shoulders as well as base width in your animal. You will want a leaner animal that is free of excess fat and clean topped, not wasteful through the middle portion of the body and one that exhibits a clean neck/jowl.

Another characteristic to look for is structural correctness. Things to look for in structural correctness include: even size and shape of toes, angulation and backward slope through the knee of the front legs, the set of the hock in the hind legs, free of joint swelling, and looseness in the hip and shoulder, allowing them to walk without restraint.

Speaking with your local extension agent or swine project leaders are excellent good resources to guide you to sales or producers who might be the best fit to meet your personal project objectives. There are many places both in state and out of state to purchase pigs. You may visit prospect sales, breeder's farms or raise your own. For a quick list of breeders you can visit www.thepigplanet.com.



Project Selection Checklist

Here is an easy checklist for selecting your youth swine project:

- Where will you be exhibiting your project? _____
- Is there a gender specification for this show? _____
- What breed(s) are you going to exhibit? _____
- What age should your animal be for ideal weight at your show? _____

Things to look for:

- Physical Characteristics
 - Muscle top shape
 - Ham expression
 - Thickness of shoulders
 - Base width
- Leanness
 - Free of excess fat and cleaned topped
 - Clean neck/jowl
 - Not wasteful through the middle portion of the body
- Structural Correctness
 - Even size and shape of toes
 - Angulation and backward slope through the knee of the front legs
 - Set of the hock in the hind legs, hocks free of joint swelling
 - Looseness of the hip and shoulder, allowing them to walk without restraint



Selecting Your Youth Swine Project

Dr. Joel DeRouchey, Kansas State University

Information is available on the following pages that will help explain terms and descriptions in selection and judging of market and breeding swine. This will help you gain more knowledge for evaluating your youth project.



Swine Terminology

Breeding Swine Terminology

Breeding swine are generally placed on a combination of:

- Structural correctness
- Volume
- Scale – growth potential
- Correctness of condition
- Balance
- Muscle
- Reproductive characteristics

Market Swine Terminology

Market swine are generally placed on a combination of:

- Muscle
- Leanness
- Structural correctness
- Balance
- Volume

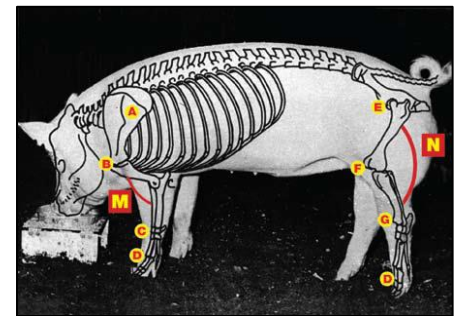
Structure

Desirable

Angulation/cushion of pastern
 Sounder
 More flex (give) through his/her hock or knee
 Freer or easier moving
 More desirable slope to his/her shoulder
 Leveler rumped gilt that was more correct in her movement
 Longer strided
 Straighter tracking
 Truer from knee to ground
 Looser jointed
 Heavy bone
 More durable, heavier structured
 More even toe size
 Sets down a bigger foot
 More conferment adaptable as she is ...

Undesirable

Stiff or steep in her pasterns
 Least structurally correct
 Stiff and peggy behind
 Tighter moving
 Straight shouldered
 Steep rumped
 Short strided
 Cow hocked
 Over in his knees
 Tight jointed
 Frail
 Refined
 Uneven toe size
 Small footed



Desirable front and rear leg structure.



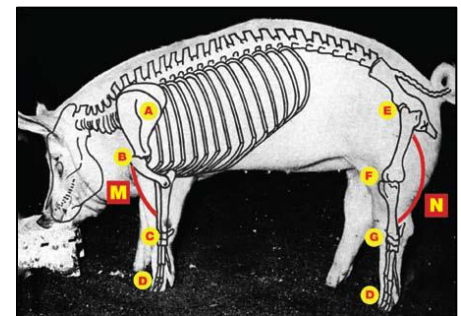
Normal (good) rear leg structure.

Good leg set, good width between her legs.

Narrow set to rear legs.

Example of soft (weak) pastern.

Straight front legs, "buck-kneed."



Undesirable front and rear leg structure.

*All photos in Swine Terminology courtesy of Pork Checkoff, Iowa State University Extension and National Hog Farmer.



Swine Terminology

Growth - Production

Desirable

Appears to be faster growing
More youthful/fresher appearing
Later maturing
Larger (scaled, outline)
More production oriented

Undesirable

Slowest growing
Stale appearance looking
Earlier maturing
Small scaled, short bodied
Slow growing, pounds light

Muscling

Breeding Gilts

Desirable

More (correct, desirable) in her muscle (design, pattern)
Longer and looser in her muscle design
Heavier muscled
Squarer and thicker rumped, hiped
Longer & looser in her muscle design
More muscular down her top
More expressive down her top
Meatier spread down her top
Thicker (top, rump, ham)
More correctly shaped down her top

Undesirable

Tight in her muscle design
Tight wound
Light muscled
Narrow rumped

Market Hogs

Desirable

More expressively muscled
Square, more muscled top
Wider rumped
More shape to ham

Undesirable

Flat
Narrow topped
Narrow rumped
Flat hammed

Leanness

Desirable

Leaner/trimmer
Cleaner elbow pocket
Leaner shape of top
Cleaner jowl
Showed more blade action, movement

Undesirable

Heavier condition
More condition in elbow pocket
Round top
Wasty jowl



Swine Terminology

Balance

Desirable

Leveler design/leveler topped
 High tail setting
 Longer necked, longer fronted
 Longer sided

Undesirable

Broken topped or high topped
 Steep rumped
 Short necked
 Short sided, coupled

Volume/Stoutness

Desirable

Higher volume/more capacious
 Fuller ribbed
 More spring of her rib
 Greater spring of rib
 Wider based
 Wider chested
 Wider (between/through) his blades
 More width of skeleton
 Bigger bladed, bolder bladed

Undesirable

Least capacious
 Shallow ribbed/tight ribbed
 Flat rib
 Flat ribbed
 Narrow based
 Narrow chested
 Narrow and flat shouldered
 Narrow skeleton
 Tight shouldered

Sex Characteristics

Female

Desirable

Prominent underline
 More evenly spaced underline
 Finer, more desirable texture
 More correct teat (nipple) design
 Set further forward



A good underline.

Undesirable

Flat underline
 Uneven spacing
 Coarse underline
 Inverted nipple/pin/blunt
 Pin nipple



A poor underline.

Male

Desirable

More testicular development
 Cleaner tighter sheath
 More rugged/muscular appearing
 More aggressive

Undesirable

Least testicular development
 Wasty sheath
 Frail, fine boned

Carcass

Desirable

Should rail a carcass requiring the least fat trim
 Should yield a carcass with a higher % muscle
 Should have a greater lean yield
 Should have a leaner, more shapely carcass
 Should have a higher % of primal cuts

Undesirable

The lowest % muscle or lean
 The most fat trim



Notes



Purebred and Crossbred Lines

Purebred

Duroc

- Red pig with drooping ears
- Excellent terminal sire breed
 - Growth and feed efficiency
 - Carcass characteristics
 - Excellent meat quality
- Originated in New York/New Jersey area in early 1800's



Classification (National Swine Registry):

- Must be red in color and possess Duroc Breed Character (ears must be down and medium size).
- Must be ear notched within seven days of birth.
- Must NOT have any white hair located on the animal.
- Must NOT have any black hair.
- Must NOT have more than three black spots on the skin and none of these spots can be larger than two inches in diameter.
- Must NOT have any shading or indication of a belt.
- Must be stress negative.

Hampshire

- Black pig with white belt and erect ears
- Originated in Hampshire, England
- Imported to U.S. in 1825
- Terminal sire breed
 - Excellent growth rate and efficiency
 - Excellent carcass characteristics



Classification (National Swine Registry):

- Must be black in color with a white belt starting on the front leg. The belt may partially or totally encircle the body.
- Must possess Hampshire breed character (ears must be erect and not rounded).
- Must be ear notched within seven days of birth.
- Must NOT have any white hair or indications of streaking on the forehead.
- Must NOT have any red hair.
- Must be stress negative.



Purebred and Crossbred Lines

Yorkshire

- White pigs with erect ears
- Maternal line breed:
 - Highly prolific
 - High milk production
- Originated in York, England
 - Imported to U.S. in 1820's

Classification (National Swine Registry):

- Must be white in color and possess Yorkshire breed character (ears must be erect).
- Must be ear notched within seven days of birth.
- Must NOT have any colored hair other than white.
- Must NOT have colored skin pigmentation larger than one U.S. minted silver dollar.
- Must NOT have masking above the eyes larger than a silver dollar.
- Must be stress negative.



Landrace

- White in color
- Ears droop and slant forward with its top edges nearly parallel to the bridge of a straight nose
- Noted for their ability to farrow and raise large litters
- Descended from the Danish Landrace that originated in 1895

Classification (National Swine Registry):

- Must be white in color and possess Landrace breed character.
- Must be ear notched within seven days of birth.
- Must NOT have any colored hair other than white.
- Must have down ears.
- Occasional spot of black on the skin may appear on the body only.



Berkshire

- Black with 6 white points, erect ears
- Originated in Berkshire Co. England and imported to the U.S. between 1820 and 1850
- Terminal Line Boar
 - Popularity has increased with interest in meat quality "Berkshire Gold"
 - Good pork quality but poor overall growth

Classification (National Swine Registry):

- A black and white animal with erect ears exhibiting Berkshire character.
- Must have white on all four legs, face and tail (unless tail is docked). One of the white leg points may also be missing.
- Must be ear notched within seven days of birth.
- Must NOT have a solid white or a solid black face from the ears forward.
- Must NOT have a solid black nose (rim of nose).
- White is allowed on the ears, but NO solid white may appear on the ears.
- Occasional splash of white may appear on the body.





Chester White

- White pigs with down ears
- Maternal line breed:
 - Highly prolific
 - Highly durable
 - High milk production
- Originated in Jefferson County, New York in 1884

Classification (Certified Pedigreed Swine):

- Must possess Chester White breed characteristics.
- Must be ear notched within seven days of birth.
- Must be solid white in color, no color on the skin larger than a U.S. silver dollar, no colored hair.
- Any skin pigmentation other than white that exceeds five in number are disqualified.
- Ears must be down and medium size.
- Any signs of weighted ear tags or evidence of past existence of such ear tags are determined to be not permissible and are grounds for disqualification.



Poland China

- Terminal line breed:
 - Muscle
 - Big framed
 - Long bodied
- Originated in Ohio in 1816

Classification (Certified Pedigreed Swine):

- Must possess Poland China breed characteristics.
- Must be ear notched within seven days of birth.
- Must be black with six white points (face, feet and switch) with an occasional splash of white on body. A hog may not possess more than one (1) solid black leg and be determined as a Poland China. Note* (tail docking is permissible)
- Must have down ears.
- Must not have evidence of a belt formation.
- Cannot have red or sandy hair and/or pigment.
- Hogs that have weighted ear tags or evidence of tampering of ears with possible ear tags are ineligible.





Purebred and Crossbred Lines

Spotted

- Terminal line breed:
 - Growth
 - Carcass quality
- Originated in Ohio in 1880's

Classification (Certified Pedigreed Swine):

- Must be black and white.
- Must possess Spotted breed characteristics.
- Must be ear notched within seven days of birth.
- Ears cannot be erect.
- Any red tinted or brown spots are ineligible.
- No solid black head from ears forward.
- No distinct white belt pattern (hair or skin) encircling and extending down and onto each shoulder.
- Any signs of weighted ear tags or evidence of past existence of such tags are determined to be not permissible and are grounds for disqualification.



Hereford

- Red with white face and points with down ears
- Terminal line breed:
 - Leanness
 - Feed efficiency
- Early 1900's stain of hogs resembling Hereford cattle was developed by R.U. Weber of LaPlata, MO; group of hog breeders in IA and NE developed a strain from Duroc and Poland China mating's.

Classification (Certified Pedigreed Swine)

- Red body with white head, ears, and four white legs
- Underline may be red or white; breeder's preference
- Ears must be down
- Maximum and minimum white requirements to register breeding stock; must be at least 2/3 red.



Pietrain

- Originated in Belgium, imported to U.S. in 1960's
- Terminal line boar
 - Noted for extreme carcass characteristics
 - Noted for high stress susceptibility
 - Recent interest in carcass leanness has increased the breeds role in various boar lines





Purebred and Crossbred Lines

Crossbred Swine



X



=



X

=



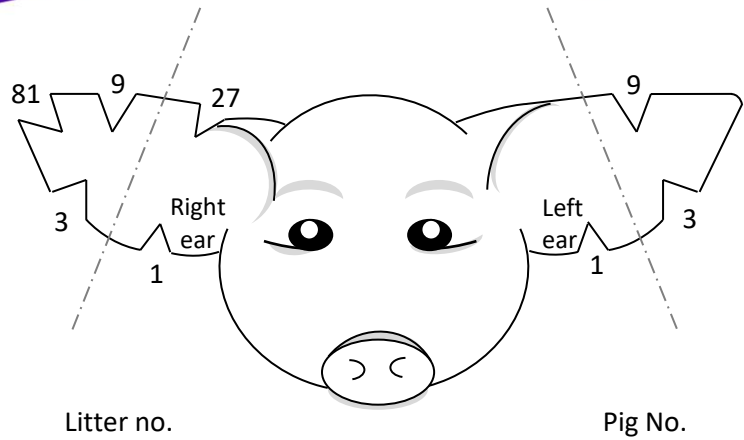


Notes



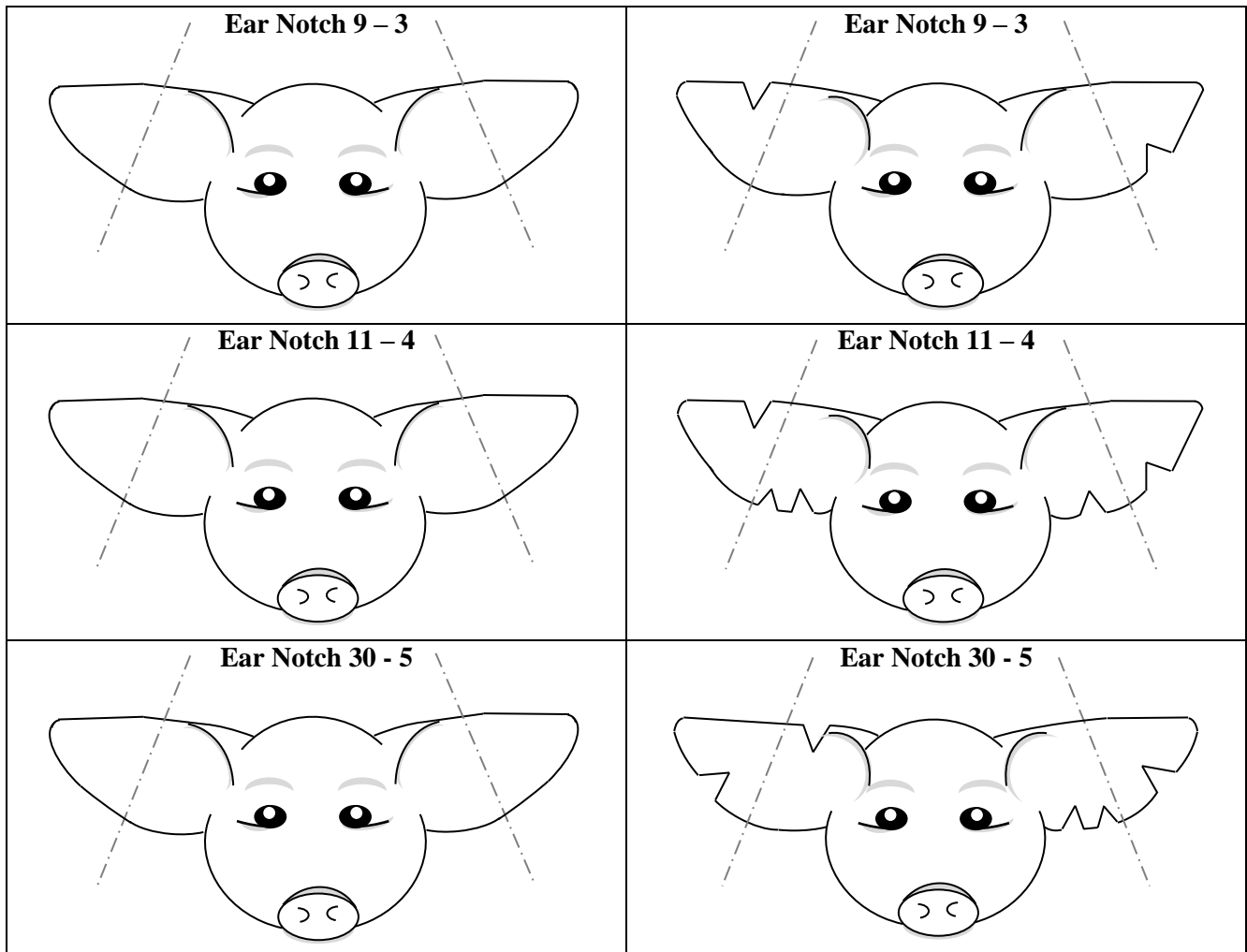
Universal Ear Notching System

Joel DeRouchey
Extension Specialist
Updated January 2015



The Universal Ear Notching System is the standard way to permanently identify swine. This is generally completed during the first week after farrowing while the pigs are still small and easy to handle.

The pig's right ear is the litter ear and the pig's left ear is the individual pig number in the litter.





Notes



General Care and Management

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Facilities

- Warm, draft-free pen when pigs first arrive home.
- Check pen for sharp objects or corners that might scratch or injure your pig.
- Provide a large pen (generally at least 16 square feet per pig) so the pigs have room to move around freely. There should always be a dry area for the pig to lay to prevent them from chilling at night or causing other stress.
 - Even if your pigs have access to a wet area during hot days, they **MUST** have a dry place to sleep at night.
- Proper shade and ventilation
 - Clean, dry bedding in cool seasons.
 - In warm summer months, dampen sand or use wood shavings to provide the best environment for the pigs to stay cool.
 - Avoid using excess straw for pigs in summer.
 - This type of bedding simply holds in too much heat.
 - Use common sense when using facilities that are too enclosed or hot. Ask yourself would I like to stay in here during a hot, humid Kansas day?
 - **DO NOT** expose white hogs to direct sunlight for an extended time as they will sunburn!
 - Red and black marked hogs can be exposed to some sunlight to help darken their skin.
- **ALWAYS** provide access to fresh water and feed
 - Provide cool water – large tanks and hoses in the summer sun produce warm or hot water and they drink less or can refuse to drink.
 - Clean water tanks out weekly.
 - Your animal's performance will only be as good as the water that it drinks. This is easily one of the most overlooked areas when caring for your swine project.
 - Check the feeder daily to ensure that old or moldy feed is not preventing your pig from eating.

Health Status

- Have a relationship with your veterinarian so you have a point of reference for help when needed.
- Check daily for sickness (coughing, rough hair coat, limping, will not stand, etc.).
- Administer proper medication when ill or lame.
- Be aware of all withdraw times (time from vaccination until marketing) when using vaccines and/or medicated feed.
- Treat for internal and external parasites/worms once a month. Rotate the type used.

Weigh Each Pig—Mandatory

- Determine if you can purchase a scale or find a location you can go to weigh your pig throughout the summer.
- The most important information you can have is the weight and gain of your pig throughout the spring and summer.
- No two pigs are alike in their growth patterns.
- Always weigh pigs at the same time (i.e. before or after you feed when hand feeding).



General Care and Management

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- Keep a notebook of the date and weight of each pig from year to year. This will help you with your yearly management if you have documented history of previous body weights at certain times of the year.
- If you do not have a scale and do not have access to one, you can use clothing tape to help you estimate the weight. With the procedures below, it should get you ± 15 lbs.
 - A confined pig is required to get an accurate measurement.
 - We suggest taking three separate heart girth measurements and using the average inches measured.
 - Measure the distance from the top of the shoulders down and around the chest of the pig just behind the front legs and back up to the starting point.
 - The pigs should be on continuous feed and water to ensure accuracy of results.

Inches of clothing tape	Estimated pig weight, lb
25	49
26	59
27	69
28	67
29	89
30	99
31	110
32	120
33	130
34	140
35	150
36	160
37	171
38	181
39	191
40	201
41	211
42	221
43	232
44	242
45	252
46	262
47	272
48	282

Groesbeck et al. 2003, KSU



General Care and Management

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Washing

- Pigs should be washed weekly to help remove old, dry skin and soften the hair.
 - Especially helps prevent/remove stains from on white colored pigs.
 - Any mild soap, such as dish soap, works very well. Also numerous “show” type soaps sold that are very effective.
 - You can also apply a conditioner to soften and moisten the hair.
- Always brush your pig after washing until it is almost dry.
 - Brush the hair from the front to the rear of the pig at a downward angle.
- Can apply a thin coat of baby oil (or mineral oil) to the hair and skin once the pig is dry to soften skin and hair of dark colored hogs (not white areas of any pig).
 - Use a spray bottle to apply the oil; it only takes a small amount.
 - Only apply oil in the evenings. Pigs will get extremely warm during the day with a coat of oil that was applied in the morning.
 - Applying oil to white pigs can cause them to lose their white brightness as dirt accumulates on skin when an oil layer is present.
 - Other “show” skin conditions are very effective as well.
- Keeping the pen clean of feces and dirt will help reduce the staining of white colored pigs.
- Overall goal is to improve the hair coat and freshness of the pig. Washing and brushing your pig is an effective way to calm and relax your pig before you go to the show.

Exercise

- Exercise builds the respiratory system so they do not tire and get as warm when driven at the show.
- Always drive pigs when exercising as you would in the show ring. This will get used to your commands. DO NOT do anything to the pig that you would not do in the show ring.
- The first few times will be challenging as the pigs do not know where to go or what you are expecting of them. Do not chase, yell or do anything to scare your pig when exercising.
 - Everyone stay clam!
- Exercise increases their metabolism rate, this is beneficial if the pig is getting too big
- Generally, you can start routinely exercising your pig when it reaches 150 lbs.
- In the beginning, exercise two to four times per week for 10 to 15 minutes.
- Build up to 15-30 minutes the weeks leading up to your show. If you do this, you will be at an extreme advantage as your pig will handle great at the show.
- Exercising helps the pig loosen its joints and makes the pig “feel better.”
- Halt exercising your pig if it is sick, lame, or injured.
- Set up an obstacle course and practice driving your pig. Your pig will be familiar with your commands and this will help you be more competitive in showmanship.



Notes



Show Pig Nutrition

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Starting your pig off right!

- Allow free access to feed and clean water at all times.
- From 50 to 100 lb a 1.20% to 1.30% total lysine diet is generally fed.
- From 100 to 200 lb a 1.0 to 1.1% total lysine diet is generally fed.
- From 200 to market weight diet a 0.80 to 0.90% total lysine is generally sufficient to meet the pigs needs for proper muscle development.

Rules of thumb in determining feed costs:

1. The average amount that your pig will grow a day is between 1.7 and 2.0 pounds.
2. The average amount of feed your pig will consume a day is between 5 and 7 pounds per day.

****The amount of feed that it will take to feed a pig from 50 pounds is as follows (Assuming a 3:1 feed conversation; that is, for every three pounds of feed your pig eats, he/she will gain one pound of weight)

Ending Weight	Amount of Feed
240 lb	570 lb
250 lb	600 lb
260 lb	630 lb
270 lb	660 lb
280 lb	690 lb

Ideal situation:

- Place on full feed from time of purchasing until show day.
- Reality is this situation rarely occurs to maximize your pig's appearance, and an alteration in daily feed intake by the pig is often a necessity to maximize appearance of your pig.

How do I push the pig to gain more weight in a small amount of time?

- Feed the pig 4 to 6 small portions a day.
- Mixing feed in a gruel – or “wet feeding” can increase intake as well in some pigs.
- For the last 14-28 days prior to the show, you can feed a product called Paylean which will increase weight gain by 6-8 pounds compared to if it was never fed.
 - Paylean can also give your pig more muscle expression, but overdoing it can cause a tighter or more restricted movement when it walks.
 - This supplement is sold by all show pig feed dealers.
- If your pig has a low appetite, adding a liquid fat (any vegetable oil) or dry fat (sold by all show pig feed dealers) to the diet can help add needed weight as the pig is consuming a higher level of energy that can be used for weight gain.

➤ *Consequences of this type of feeding program:*

- Increased average daily gain.
- Maximum potential for muscle deposition will occur.
- An increased amount of body fat will develop due to the pig simply putting on more weight in a shorter period of time.
- Pigs will generally look very “full” as a larger middle section will develop which may or may not be desirable for your pig.

➤ *When is the best time to push your pig for increased daily gain?*

- Reality is as soon as you realize you are behind in weight; you should try to increase the gain of your pig.
- Realistically, pigs need to be over 125 lb before you really start to “push” them for extra weight gain to have an effect.



Show Pig Nutrition

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How do I properly lower daily gains to prevent an excessively heavy pig?

- If you determine your pig is going to be too big for your show, allow them to stay on full feed until they reach 125-150 lb.
 - Now is the time to slow growth rate.
- You must lower the feed intake and hand feed each day.
 - However, you must feed enough to meet the maintenance requirement (see chart below).
- Feeding at maintenance level will not stunt growth, simply prevent additional growth and maintain body weight.
 - In this situation, you would still want to target a slower growth rate, such as gaining 1 lb/day.
- NEVER feed below the maintenance requirement of your pig!

Maintenance requirements by body weight

Weight, lb	Complete feed required, lb	Mcal, ME	Lysine requirement, g/d
150	2.1	3.21	0.9
160	2.2	3.34	0.9
170	2.3	3.46	0.9
180	2.4	3.58	1.0
190	2.5	3.70	1.0
200	2.5	3.81	1.1
210	2.6	3.93	1.1
220	2.7	4.04	1.1
230	2.8	4.15	1.2
240	2.8	4.26	1.2
250	2.9	4.36	1.3
260	3.0	4.46	1.3
270	3.0	4.57	1.3
280	3.1	4.67	1.4
290	3.2	4.77	1.4

1 lb of corn = 1.55 Mcal, ME; 1 lb of SBM = 1.53 Mcal of ME

- ***The amount of feed per day listed in the chart does not seem like very much feed at all, what can I do so the pig is not so hungry all the time?***
 - Remember, the amount in the chart is for no weight gain, you can increase that amount to grow the pig slowly, which is the recommended practice, not just holding at the same weight.
 - You can feed a portion of the ration as a fibrous ingredient such as beet pulp, whole oats, wheat middlings or soybean hulls. This will add bulk and make the pig feel fuller after the meal but only add a small amount of energy.
 - Show feed suppliers offer various holding supplement products or complete rations to help with this issue.
 - But... fibrous ingredients themselves do not provide enough protein (amino acids) to meet the body needs... so you must use these in combination with the normal ration to meet the dietary needs. In addition, you may provide a top dress protein additive.
 - It is recommended that pigs are weighed a minimum of twice per week to determine progress of the holding period.



Show Pig Nutrition

Dr. Joel DeRouchey, Kansas State University

- ***Do I need to top dress with additional protein, vitamins or mineral sources when I am holding my pig?***
 - Only if prolonged restricted feeding longer than 14 days decreases occurs. At this point your pig may start to make the pig look stale and begin to lose muscle shape.
 - However, show feed suppliers offer supplements that can be used during holding periods to ensure all the proper nutrients are still consumed by your pig.
 - Typically, the most economical protein source to top dress with is soybean meal. Other sources that can be used include show feed supplements, dried whey, or eggs.
 - Soybean meal is generally the least expensive and matches the pigs needs for daily protein very well.
 - In addition, restriction of feed intake will lower the amount of vitamins and minerals coming into the body. A maintenance diet will not cause deficiencies...but...we should supply additional vitamins and minerals to the pig to prevent body losses. Either show supplements or provide the pigs with human complete vitamins daily.
 - When you are done holding, gradually over three to four days increase the feed amount until they are back on full feed.
 - Pigs will compensate for some of the weight restriction by gaining faster the week after they are brought back up on feed, so monitor closely their weight gain.
 - If a pig has been restricted from feed for over 2 weeks, it is not uncommon if let back on full feed they will weigh 20-25 lb heavier after just one week on full feed.
- ***What if I purchase the right size of pig and determine at a weight over 200 lb that the pig is going to be too big?***
 - Start to reduce the amount of feed intake as soon as possible.
 - When holding in this weight range, you should top dress with a protein product/supplement.
 - Never feed below the energy maintenance requirement.
 - Use a fibrous ingredient to help “bulk” the ration to increase the amount of feed fed each day so the pig does not become shallow in appearance.
 - Exercise, exercise, exercise!
 - Your pig will burn calories when exercised. You should exercise every other day for 20-30 minutes, which will help reduce weight gain and keep your pig feeling good during this time.
 - Weigh pigs twice weekly at a minimum during this time period to monitor weight adjustments.
- ***It is 2 weeks before the show and my pig is already at the ideal weight, now what?***
 - Crucial management is now required. This situation is the most unwanted by all pig showmen, and you can do the most harm to the appearance of the pig if you do not pay close attention.
 - For one week, feed the pig at or just above maintenance, supply a protein top dress, and exercise daily. Also, add a high fiber ingredient or supplement to keep the pig full and not get a hollow appearance.
 - After week one, bring pig back up on feed, continuing to feed a protein top dress to bring back a fresh appearance.
 - NEVER use water restriction as a way to reduce body weight.
 - Be very cautious when using the feed additive Paylean during this time, as Paylean increases growth rate of pigs, which wants to be avoided during this time.



Notes



Ractopamine Hydrochloride (Paylean)

Dr. Joel DeRouchey, Kansas State University

What is this feed additive?

- Feed additive manufactured by Elanco Animal Health.
- Label claims of increased weight gain, improved feed efficiency, and increased carcass leanness.
- FDA approved for use in pigs only (not for cattle and sheep).
- No withdrawal time when feeding this product.
- Paylean is labeled to be fed to pigs over 150 lb during their final 45 to 90 pounds of gain before market.
- The dosage of Paylean in feed is labeled for 4.5 to 9 grams/ton. All feeding levels (lower or higher) are in violation of labeling by FDA.

What are the limitations and cautions for use?

- Paylean is labeled to be fed in a complete swine ration containing at least 16% crude protein.
- Pigs fed Paylean are at an increased risk for exhibiting the downer pig syndrome. Pig handling methods to reduce the incidence of downer pigs should be thoroughly evaluated prior to initiating use of Paylean. Paylean is NOT labeled for use in breeding swine.
- The only approved feed medication that is approved to be fed with Paylean is Tylosin (Tylan) at 100 g/ton.

Realistically, what can I expect from feeding this product?

- For the first two weeks, expect a 5 to 15% increase in weight gain and feed efficiency. After 28 days of feeding, do not expect any further improvements in gain compared to a diet not containing Paylean. After 28 days, pigs will generally be 6-8 lb heavier than if they were not fed Paylean.
- Muscle mass will not be noticeably different until Paylean is fed for three weeks (increased loin eye area).
- If Paylean is fed for more than 4 weeks, feed intake and weight gain will begin to decrease.
- Every pig will be affected slightly differently with this product. An obvious consequence will be jeopardized structural correctness and an increase in the stress gene expression if your pig carries this genetic gene.

Where do I purchase Paylean?

- Show feed suppliers generally have two options: 1) Already in a complete feed you can purchase or 2) have it in a concentrated supplement that you will mix into the current feed you are providing.

How and when to feed Paylean?

- Generally, it is fed for 2 to 4 weeks prior to your show.

How much of this product should I feed?

- If you are only feeding this product for 1 to 2 weeks before show day, then 4.5 or 9 g/ton is an appropriate level.
- If you are feeding this product for over 2 weeks, then generally feed 4.5 g/ton complete feed.
- Be very careful if feeding this product as a top dress and not in the complete ration. It can be very easy to overfeed when in a top dress form.



Paylean® (Ractopamine Hydrochloride)

Dr. Joel DeRouchey, Kansas State University

What are the concerns or side effects of this product?

- *Almost all major packers will **not** purchase pigs fed Paylean, so understand your show rules with Paylean feeding!*
- If you start feeding it, you DO NOT want to stop or take them off. Your pig will lose the muscle shape and extra weight gain within a couple days.
- Observations have shown in some cases that the temperament of your pig is increased. Pigs NEED to be handled more gently and with greater care, as they can be more prone to show stress and become more hyper.
- By far, the largest concern is how structural soundness can be jeopardized. Some pigs clearly become restricted in movement from the increased weight gain and muscle in the short period of time that they are on it.
- Prolonged feeding of Paylean can also cause hoof cracks. A hoof conditioner can be used to keep them soft and not dry out which is a leading reason for cracking.
- Visit with your feed supplier more about their recommendations and the levels of Paylean that they offer in their feed.

Prospect Pig Buyer Beware!

- Some reports indicate some feeder pigs being sold as youth projects are being fed Paylean.
- In addition, gilts and boars of breeding age at different shows and sales may have been fed swine rations with Paylean, so ask before you buy.
- Always ask the breeder or seller of your youth project if their pigs have ever been fed Paylean.
- If the feeder pigs have been fed Paylean, I suggest passing on them.



Clipping Your Pig

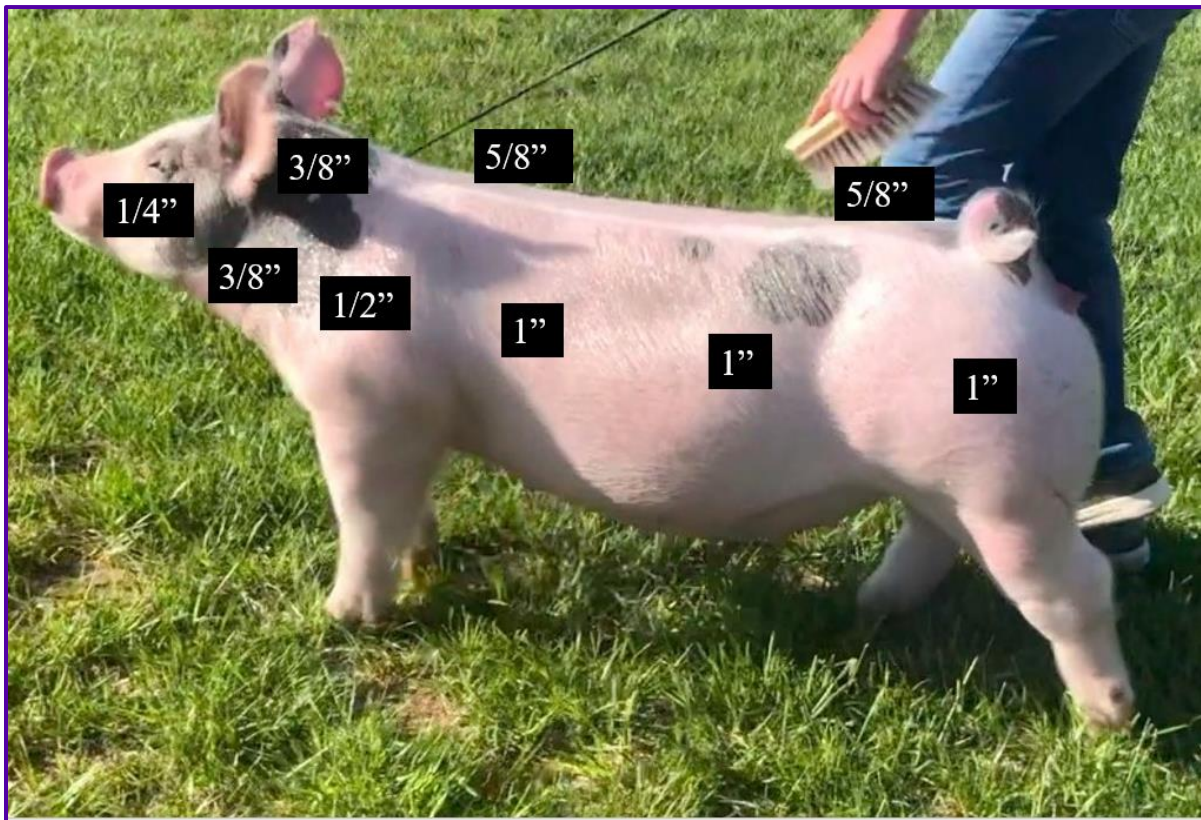
Dr. Joel DeRouchey, Kansas State University

Clipping is a tool used to help trim the long hairs of a pig to help give it a fresher, more attractive look and improve the muscle shape of your pig by removing long hairs that cover up their natural curves. Clipping, when done correctly, can enhance the appearance of your pig, but when done incorrectly, it can make your pig look unattractive.

- If you choose to clip your pig, it ideally will be done **two to four days before going to your show.**
 - Prior to clipping - It is important that you have been applying some baby oil, mineral oil or other “show” skin conditioner for several days prior to clipping so the hair is soft and will trim easily. Also, if the hair is hard after clipping, it will stand up and not lay down nicely (i.e. your pig will look like a porcupine!).
 - Washing with shampoo and conditioner (low-cost human products work great) can dramatically improve the softness of hair, as well as allow your pig to become use to you touching it, especially around their head. When washing, a moderately stiff brush should be used to scrub off dead skin cells and dirt.
 - After washing, use a dry towel to remove excess water from your pig. Excess water can decrease the sharpness of your blades and dull them more quickly.
 - **NEVER** shave the hair off a pig – this makes your pig look unattractive and market purchasers can refuse these pigs due to the short hair length. Always use clipper guards described below that attached to your clippers before clipping your pig.
 - Begin by clipping the body first. Determining the desired length of the body that looks the best, will allow you to more easily blend the other sections of the pig together (i.e., the head and rump) Start clipping from the rear of the body moving your clippers up and forward, which will be against the grain (lay) of the hair. Most pigs should only be clipped with a 1” or ¾” guard on the body as it helps blend in and look natural.
 - Topline – from the top of the shoulder back to tail, most pigs can be clipped slightly shorter than you used on the body – such as a ¾ or ⅝” guard.
 - Neck – use a guard smaller than the body, such as a ½” or ⅜” guard.
 - Face and under the jaw - use a smaller guard than the neck, generally about ¼” to give the pigs face a clean and crisp look.
 - Tail - use a ¾ or ⅝” guard to clip the hair on the bottom ¾ of the tail, and then just trim slightly the long hairs off the end of the tail. You do not want to trim the tail hair too far so when the pig curls its tail, it will look natural.
 - If you have a red hog, do not do a dramatic difference in guard width, as the hair clipped at different lengths will have contrasting red colors.
 - Generally, you can clip the entire pig while it is eating and/or laying down. However, if you have to restrain your hog to clip the head and face, use a soft rope that has a loop on the end. If you use a regular hog snare, place duct over the cable wire so the nose does not scratch.
 - When you are done, brush off clipped hair and apply a light coat of oil or skin conditioner.
- **Avoid clipping your pig at the show.** This practice is to be done at home prior to leaving. Many shows have rules that do not permit clipping at the fair location. There are valid reasons including:
 - May add to the stress level of the pig and cause it to get excited and hot.
 - Since your pig may not be used to being clipped, it might now be more scared of you, which will not help when you show your pig!



Notes





Show Preparation: Week Prior and at the Show

Dr. Joel DeRouchey, Kansas State University

One week before the show

- If your pig is on a self-feeder, monitor its appearance closely. Some pigs may look more attractive if you begin to hand feed instead of remaining on the full feeder.
- Make sure your pig has clean bedding that will help the hair this last week. Avoid keeping the pig in a muddy pen the week prior to the show if possible.
- Wash your pig two to three times during this week with a mild soap. Rinse your pig and brush dry. Then apply a light coat of baby or mineral oil to the dark hairs of your pig. This will soften the hair, shine the skin, and will help develop a fresher appearance. Only apply oil in the evening when it is cool.
- Know all of the policies, requirements, and rules at your show for hair products that can be used in the show ring.
- Start packing your show box. **You should pack the following supplies before you leave:**
 - Bedding
 - Health paper
 - Sprinkle can
 - Short hose
 - Hand cleaner
 - Electrolytes
 - Soap and scrub brush
 - Towels
 - Driving tool and small pocket brush
 - Waterer, feeder and plenty of feed
 - Hammer, nails, zip ties, wire, and pliers
 - Safety pins or pocket clip for exhibitor number card
- If you want to clip your pig, now is your last chance and this should generally be done 3 or 4 days prior to leaving for the show.

Leaving for the show

- Feed your pig only $\frac{1}{2}$ to $\frac{3}{4}$ of the normal daily ration of the morning you leave. This will help your pig travel more comfortably. To help keep your pig hydrated, you may want to use electrolytes in the water. You can use electrolytes in the water at the show as well. Do not add more than the recommended amount as electrolytes and vitamin water supplements can be very bitter, which will cause the pigs to drink less.
- When loading your pigs for the show on the trailer, do not overcrowd and keep them comfortable. It is recommended you practice loading your pigs a few times prior to loading for the show. This will allow the pigs to know the routine and lower the stress of the pigs and you!

At the show fairgrounds

- Calmly move your pig to the correct pen after you unload.
- Be sure that there is plenty of clean dry bedding for your pig at all times.
- Give your pig a drink of fresh water. Also, give your pig about $\frac{1}{4}$ of a regular feeding. This can help calm and relax them.
- Weigh your pig in at its natural weight.
- After weighing in, be careful not to full feed your pig immediately. This can cause digestive upset due to the changes in feeding amounts the couple days prior. Giving many smaller amounts can help lower the chance of them going off feed.
- Feed your pig to give them a natural look.
- Always provide all the water they want to drink.
- In the evening when the weather cools, exercise your pig to help its joints stay loose and flexible. However, avoid going in and out of the same gate in the show ring, as your pig will learn more quickly the location to leave the show ring and go back to the pen, which will cause problems show day.
- Get plenty of sleep; you have a big day tomorrow!



Show Preparation: Week Prior and at the Show

Dr. Joel DeRouchey, Kansas State University

Show morning

- First thing you can take your pig out of the pen for a quick exercise. This will allow it to loosen joints and give you time to clean the pen of manure. Also, remove any feed not consumed overnight so you can give them fresh feed.
- Give enough feed and water to get a proper fill to make your pig look its best. Never overfeed first thing in the morning, as it could cause them to go off feed for the rest of the day. Remember, you can always feed again later that morning or afternoon if your pig could use more before you go into the ring.
- Cleaning your pig:
 - Wash pig with gentle soap and thoroughly rinse.
 - You can use a hand cleaner (i.e. Go-Jo) on your pig and let it cover the pig for a couple of minutes and rinse. This really will get the dirt off and add a shine and luster to the hair and skin.
 - Brush the hair so the hair lies properly (brush front to back).
 - Before returning your pig to its pen, make sure all dirt and manure is removed from its pen. Add additional clean bedding if needed.
 - After your pig dries, you can apply a coat of hair conditioner to start shining the skin and hair. All show equipment suppliers have swine skin conditioners available.

Show time

- Give your pig a small drink of water.
- Make sure that your pig is brushed off so no dirt or bedding is present.
- Be sure to have a nice looking driving stick and small pocket brush.
- Spray a small amount of water on your pig to give it a fresh look.
 - Many shows do not allow the use of an oil product before going into the ring. These can get on everyone else and make your pig hot.
- Most importantly, make sure you look ready.
- Wear proper clothing. If a T-shirt is given to wear, be sure to wear it. If not, wear a clean, neat shirt and dark pants. Wear leather shoes or boots. Never wear tennis shoes or a hat in the show ring.
- Be sure that you are wearing the proper exhibitor number.
- Know your pig's ear notch or tag number for easy check-in.
- If you have to wait in a holding pen, stay calm and try to keep your pig from getting dirty.
- Once you enter the show ring, have fun!!

After the show

- Once the show is completed, you still have the responsibility of taking care of your pig.
- Your pig should always continue to have plenty of fresh water and feed and stays cool.
- Also, pay close attention to your pig so that it is relaxed and not overly stressed from being shown.



Swine Showmanship

Dr. Joel DeRouchev, Kansas State University

Showmanship is the skill of exhibiting your animal in a way that the judge sees the best physical characteristics of your animal. Due to the nature of the livestock you are exhibiting, proper showmanship is not something that happens automatically. Hogs, like all show animals, require time training. Showmanship is based on how well you, the exhibitor, handle and control your hog in the show ring.

What to Do at Home

Your animal will not cooperate in the show ring without proper practice and training at home. Since hogs can roam freely through the show ring, they require more attention to be able to control and drive them. Necessary steps need to be taken at home, before the show, to ensure that your animal is tame and can be shown to the best of their ability.

To drive a hog means to controllably move a hog throughout the ring with your driving tool.

First 30 days at home

The first 30 days you have your hog is an essential time for you to interact with your animal. Since your hog has been moved to a new facility, usually without other animals it's used to, you need to gain your animal's trust. This also helps calm your animal and make them tame. During this time, you should "become friends" with your animal by feeding, washing, brushing and cleaning their pen. Pigs really gain your trust when you scratch them and rub their belly – they will often then roll on their side. This really helps later when you need to clip them prior to the show. By doing these small things the animal will slowly become docile and easy to work with. This process takes a lot of time with some animals.

Exercising and Practicing

Exercising routinely helps your animal's growth and development as well as gives you showmanship experience. Here are some tips to keep in mind when starting to work with your animal:

- Anything you do with the animal at home will relate to what your animal does in the show ring.
- Use the same type driving tool at home as you plan to use in the show ring.
- Mix up your exercise pattern, animals can fall into a rut of doing the same thing over and over again.
- Once your animal is easily controlled with your driving tool it is a good practice technique to put up obstacles to walk your animal around.
- A well-groomed animal is essential for the showing. This includes the pig being clean, free of scratches, sunburns and other blemishes. Also, having a neatly clipped pig is important so both of you look sharp.

At the Show

Once you arrive at the show, prepare your pen for your animal and get all of your tack set up. It is a good practice to keep the same routine at the show as you would normally do at home so your animal will not get stressed in a new environment. If you arrive to your show a few days early, feed at your regular feeding times and exercise daily as you did at home. Feed, water and wash your animal ahead of time on the day of the show. Make sure you have a clean pen for your hog if it were to lie down before the show.



Swine Showmanship

Dr. Joel DeRouchey, Kansas State University

During the Show

It is important to remember that the judge is looking at how you exhibit your animal during showmanship. Many times, neat dress is a factor that comes into play. Proper dress for show day is jeans without holes or tears, leather boots, belt, and a button up shirt. It is important for you to take a brush into showmanship with you in case your animal was to get dirty in the ring.

When you enter the show ring, stay calm. Once your animal is let out of the gate, drive your animal slowly across the ring so that the judge gets a good front, rear and side view of your animal. If your animal takes off running when the gate opens do not run, but rather walk fast to catch up and control your animal. Once in the ring, stay at about the half-way point across the ring from the judge and show ring gate until all pigs are in the ring. This prevents your pig from running out of the show ring and allows other exhibitors to bring their pigs into the show ring without your pig interfering. Once all animals and exhibitors are in the ring, now is the proper time to slowly walk your animal toward the judge for a proper view (front, rear and side view). This is the first impression you will give the judge and often is the determining factor in placing's.

It is important to keep eye contact with the judge and know where they are in the ring at all times. Do not crowd the judge; instead, leave approximately 10 feet in between your animal and the judge. If the judge walks behind your pig, keep it moving forward, never let it stop. Also, you should never get between the pig and the judge. It is appropriate to walk in front of your pig, if needed, rather than walk between the judge and your pig.

Try to keep your animal in the center of the ring and if your animal gets in a corner or on the fence use your hand around its face to move it from the corner. You should also drive the pig at the judge to give a front view as well as walk the pig directly away to show the rear view. Never hit your animal hard with your driving tool, this is unprofessional and looked down upon in showmanship.



Penning Your Animal

If the judge asks you to pen your animal, direct your hog toward the pens and drive him there. Do not open a pen until your animal is near the gate. If your animal moves away from the pen close the gate so that other exhibitor's animals do not accidentally go into the pen. Once you get your animal in the pen, do not stop showing. Often, judges watch the exhibitors in the penning area. It is good practice to brush your animal once in the pen to get off any excess dirt that may have gotten on the animal while walking in the ring. Attempt to keep the pigs head in the corner of the pen that opens, this helps get your pig out of the gate faster and easier. Do not let your animal lay down in the pen if at all possible. Once the judge asks you to come out of the pen make sure to close the gate behind you.



Swine Showmanship

Dr. Joel DeRouchev, Kansas State University

Questions

A large portion of showmanship to some judges is how much the exhibitor knows about their project. During showmanship, a judge may choose to ask each exhibitor a question. It is important to know about the daily care of your project as well as talk to your parents and/or extension agents about possible questions. Some of these may include:

- What is the breed of your animal?
- What is the ear notch of your pig (or they may ask what is the ear notch of the pig in the next pen!)?
- What are positive and negative traits of your animal?
- What are positive and negative traits of another showman's pig?
- What is the weight of your animal?
- How much do you feed your animal?
- What ingredients are in a pig feed?
- How much does the feed cost?
- What is the current market price for a market pig?
- What is the gestation length of a breeding gilt or sow?

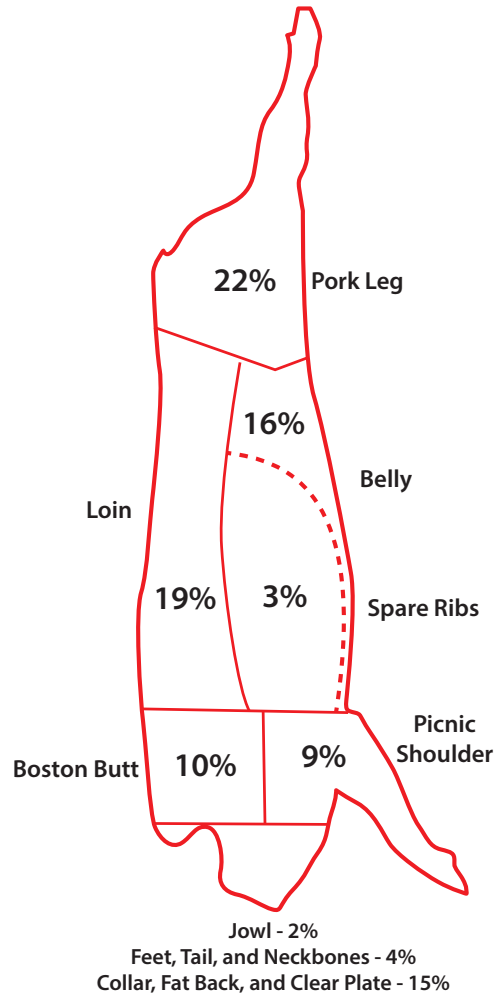


Above all, showmanship is enjoying your youth swine project and having pride for all your hard work showcased while in the ring. While it is important to be serious when showing your pig, do not forget to have a good time. Judges can see when this is something the exhibitor wants and enjoys doing.

Use these tips to work on your showmanship skills with your swine project!



Pork Processing Options for Consumers



The primal cuts of pork as a percentage of carcass weight.

This guide explains the choices available to consumers when they take a pig to be processed. It provides information on the approximate amount of meat that should be returned from each primal after the animal has been prepared to customer specifications.

Picnic shoulder: Generally, the picnic shoulder is cut into bone-in or boneless roasts. Some or all of the meat from the picnic shoulder could also be used to make ground pork or sausage.

Boston butt: The two options for Boston butt are boneless or bone-in blade steaks. Customers who would consume pulled pork may prefer to keep the Boston butt as whole or as partial roasts that can be made either bone-in or boneless.

Loin: The options for cuts made from the loin include bone-in loin chops or boneless top loin chops and a tenderloin roast. Another option is to have sirloin chops or a sirloin roast made from part of the loin. Additionally, country style ribs, blade chops, and back ribs made from the loin may be of interest to the customer.

Pork leg: The pork leg can be cut into bone-in or boneless hams. These hams can be cured and smoked, or kept fresh, depending on customer's preference. Some customers may prefer either fresh or cured ham steaks as an alternative.

Belly/Spareribs: Primarily, the belly will be cured, smoked and sliced into bacon of desired thickness. A set of spareribs will be returned from each half of the carcass.

Ground pork: Any of the carcass can be used to make ground product. The ground product can be made into fresh ground pork or sausage shaped into patties, linked, and/or cooked and smoked.

Miscellaneous: Each half of the carcass has a jowl and two hocks, as well as two pig's feet. If the customer desires, the hocks can be smoked. Smoked hocks and jowls can be used for soups.

Pork Cutout Table

The numbers are based on a pork carcass with a 205-pound hot (unchilled) carcass weight with average muscling. A 3% shrink (cooler shrink and cutting loss) is assumed. The percentage of the hot carcass and the approximate weight in pounds for cuts from each primal are shown below.

Cut Options	% of Hot Carcass	Weight (lbs)
Picnic Shoulder Picnic shoulder roasts or steaks Often used for sausage or ground pork	8.0	16.4
Boston Butt Whole Boston butt roast Blade steaks	8.6	17.6
Loin Bone-in pork chops Boneless pork chops Back ribs Tenderloin roasts Country style ribs	14.6	30.0
Ham Cured ham (boneless or bone-in) Fresh ham steaks Fresh ham roasts	15.8	32.4
Belly Fresh side Cured bacon	12.6	25.9
Spareribs Spareribs St. Louis style ribs	2.9	6.0
Trimming Ground pork and sausage	7.8	15.9
Miscellaneous Bone, skin, and fat Jowl	26.7	54.7
Total meat	70.3	144.2
Total fat and bone	26.7	54.7

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