

Physical Characteristics of Swine

SWINE have major physical characteristics on foot (alive) and as carcasses (after harvest). Originally, swine were grouped into two categories: meat-type hogs and fat- or lard-type hogs. Today, nearly all swine produced fall into the meat-type category. Swine have evolved over the last 30 years or so into lean, long-bodied, efficient meat-producing animals. Fat- or lard-type hogs were popular in the early years because the fat or lard was used as the main source of oil for cooking purposes. With advancements in other fat and oil utilization, fat- and lard-type hogs are no longer desired and are rarely raised by pork producers.



Objectives:



1. Locate the major physical characteristics of live swine.
2. Locate the major physical characteristics of swine carcasses.

Key Terms:



Boston shoulder
ham
hock
jowl
picnic shoulder
snout

Physical Characteristics of Live Swine

When examining the physical characteristics of a hog on foot, you may notice several pronounced features. Any amateur could identify the head, tail, and legs. But you are trying to distinguish major differences between features of a group of hogs in a livestock judging class. You need to know the technical terms for these physical characteristics when explaining your reasons.

Starting at the front of a hog, you will find a rectangular-shaped head that is masculine for a boar and feminine for a gilt or sow. At the tip of the head, just above the mouth, is the snout. The **snout** contains two large nostrils and has a firm, cartilage-type texture. Above the eyes are a broad forehead and the ears. The ear set varies between breeds: erect, semi-erect, or droopy. A hog should have a defined neck between the head and the shoulders. Common characteristics of the shoulders include some width between the blades and little fat deposited in the area. The top of a hog should be long, lean, and semi-level. A heavily muscled hog often has a crease between the loin muscles, defining the spinal bone area. The rump of a hog should be fairly long and well shaped, with the tail head set appropriately. Below the rump is the largest characteristic, called the **ham**. It is deep with muscle, lean, and proportionally shaped with the rest of the body. The ham rounds off the back of the animal and slopes toward the hind leg. The animal should have tough, heavy, long cannon bones with structurally free joints. Set at the middle of the hind leg is the hock. The **hock** rounds out from the rear leg bone structure and resembles a backwards knee. The foot of a hog contains two even toes and is set square on the leg. Moving up the belly line should be two even rows of at least six teats each on a gilt or sow used for production. A boar or barrow has a sheath set at the center of the belly. A hog has defined characteristics of the rib. The rib lies above the chest, is rectangular, is narrow at the top, is behind the shoulders, and becomes wider at the bottom, above the chest. The chest is

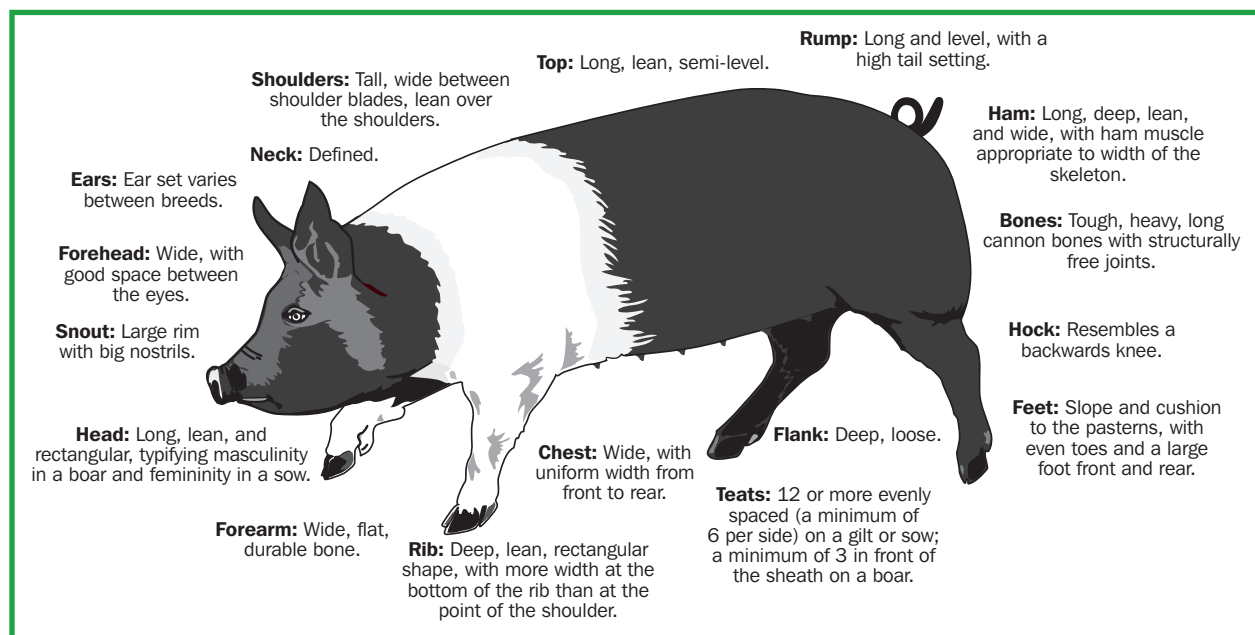


FIGURE 1. Physical characteristics of live swine.

wide from front to rear. The front leg, known as the forearm, has a wide, flat bone. The front leg should be square with the shoulder and have a good foot set.

Hair-coat color and patterns vary between breeds. Generally the physical characteristics of hogs are similar between sexes, except for the muscular head and the sheath of the male. Today's hog should be lean across the top, down through the rump, around the ham, and across the belly. Another common physical characteristic includes the length of side. This characteristic can be used to evaluate the length of body. Length of body is the distance from the rear of the front shoulder to the beginning of the ham, evaluated halfway up the side of the animal. Evaluation of this physical characteristic can be used to distinguish a short-bodied hog from a longer-bodied one.

Physical Characteristics of Swine Carcasses

Swine have long, lean, defined carcass characteristics. The proper names for the portions of a swine carcass include hock, leg, loin, side, Boston shoulder, picnic shoulder, and jowl. The leg, or ham, the loin, the Boston shoulder, and the picnic shoulder make up the largest share of the carcass and are the most valuable portions. The hock, the side, and the jowl are less valuable but are still processed into edible meat.

Starting at the top of the carcass that is hanging from a rail, you will find the hock. The hock on a carcass includes the foot and lower third of the leg. Below the hock is the largest portion of the carcass, known as the leg or ham. It is referred to as leg when it is fresh but is called ham when it is smoked. Attached below the leg are the loin and the side. The loin lies across the back of the carcass, with two defined muscles. The loin is thick and meaty, with minimal fat coverage. The side is below the loin and includes the belly region. It has significantly more fat and is commonly cut into bacon. The front portion of the hog includes the Boston shoulder, the picnic shoulder, and the jowl. The **Boston shoulder** is the upper half of the front shoulder. It includes the blade muscle of the animal. The **picnic shoulder** is the lower half of the front shoulder. It includes much of the front leg skeletal structure. The **jowl**

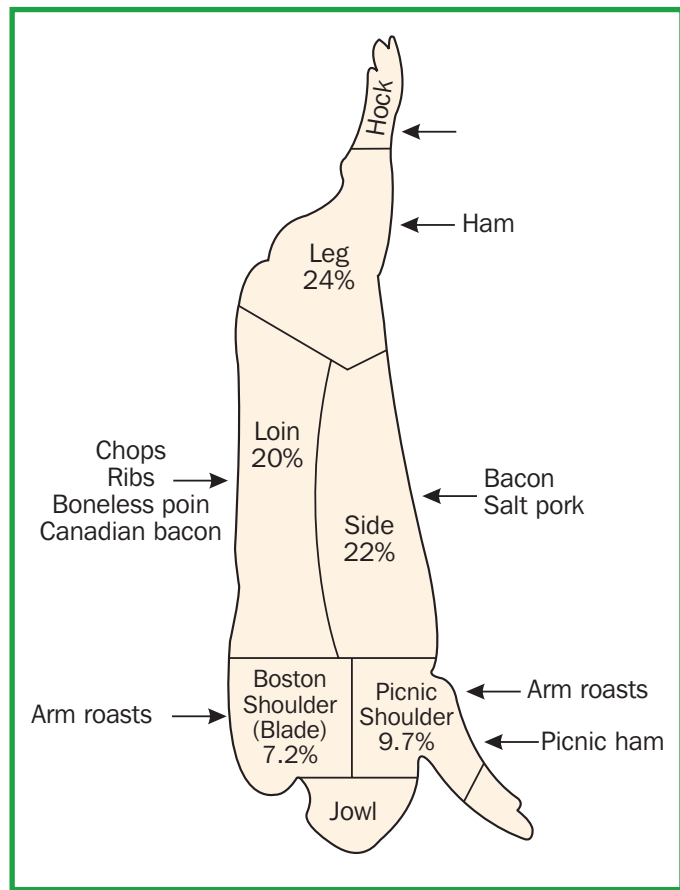


FIGURE 2. Physical characteristics of swine carcasses.

is the lowest portion of the carcass. It provides a fattier cut of meat originating from the neck of the hog. The physical characteristics of a swine carcass can be cut out into individual primal cuts and are defined by the muscle, bone, and fat content.

Summary:



Because of advancements in breeding programs and better genetics, meat-type hogs are the type most commonly found in pork production. They provide high-quality, consistent carcasses with a wealth of meat suitable for human consumption. Other than hair coat and placement of ears, the external characteristics of swine are very similar. The carcasses of swine are also very similar. The ability to identify the parts of a carcass is important when selecting pork for consumption.

Checking Your Knowledge:



1. Beginning at the snout, identify the major physical characteristics of a hog on foot.
2. Identify two major differences in the physical characteristics of male and female swine.
3. Name the four portions of the swine carcass that make up the largest share.

Expanding Your Knowledge:



Visit a swine farm and a swine processing facility. Evaluate and identify the major physical characteristics of hogs on foot at the farm and on the rail at the processing facility. Consider having an employee describe extreme differences between animals. Notice the muscular head of a male hog as compared with the head of a female hog. Observe the sheath of a male hog. Also, notice the fat and muscle differences in the primal cuts of a carcass.

Web Links:



Physical Characteristics of Breeds of Swine

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

Pig Basics 101

<http://www.farmtofork.ca/brochures/pigbasics.htm>

Explore Pork Wholesale Cuts

http://www.askthemeatman.com/hog_cuts_interactive_chart.htm