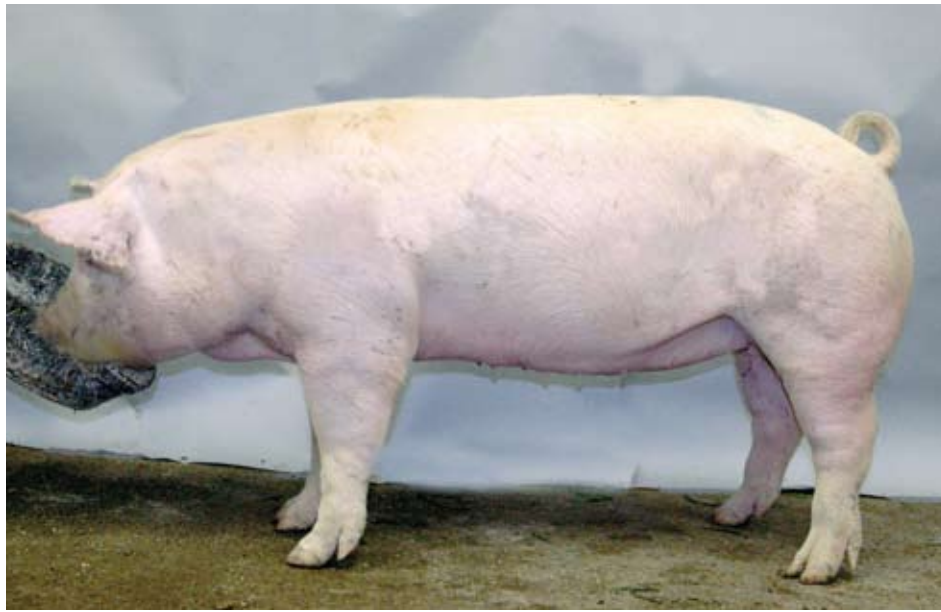


# Conformation and Structural Soundness Guidelines for Replacement Gilts



This gilt displays excellent front and rear feet and leg structure, levelness of top and good depth in the rib and flank areas.

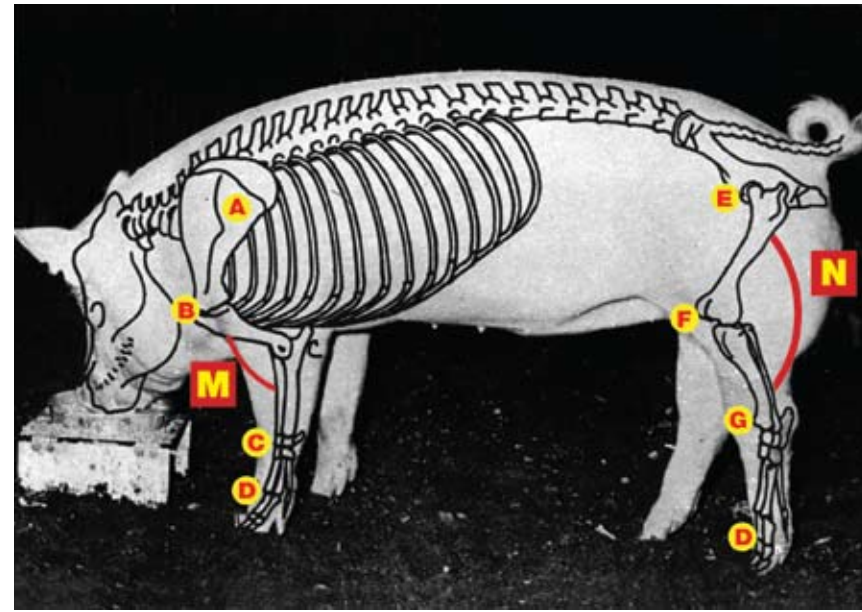


Figure 1. Desirable front and rear leg structure.

The skeletal structures in Figures 1 and 2 were drawn, in part, from radiological examinations of live pigs. Emphasis is placed on the angles formed at the front legs (M) and rear legs (N).

Desirable front and rear structure is illustrated in Figure 1, while undesirable bone conformation is illustrated in Figure 2.

Figure 1 shows a flatter top, more level rump and higher tail setting. As you view the animal from the side, note how the front leg slopes from the shoulder (M). This angle allows for the normal shock-absorbing effect at the point of the shoulder (B).

The spine of the animal in Figure 2 is arched very high. The angle (M) is greater than 90 degrees, which positions the shoulder blade bone more directly over the bones of the front legs. Additional pressure may be applied at the point of the shoulder (B) and at the knee joint (C) to compensate for this straightness. As a result, the knee joints often buckle. The abnormally straight front leg posture in Figure 2 often results in abrasion of the foot pads and toes.

The angle displayed in the rear legs (N) is smaller in Figure 1 than the angle in Figure 2. The rear leg joints in Figure 1 are properly angled to allow the hip (E), the stifle (F) and the hock joints (G) to absorb weight and pressure more equally. The pasterns (D) are sloping and long to provide a cushioning effect for the gilt in Figure 1, and the toes rest squarely on the floor surface.

The rear leg structure in Figure 2 shows a rump that is too steep and the tail setting too low. The hip (E), the stifle (F) and the hock joints (G) in Figure 2 lock in a straight-line position with each step the animal takes. The pasterns (D) are short and straight, which gives the appearance that the gilt is standing on her tiptoes. Often, these animals have shorter toes with a higher tendency toward injury (cracks, tears, bruises) and uneven wear. The rear feet of these straight-legged animals may exhibit excessive sole wear with subsequent injury or swelling of the pads of the feet and, consequently, lameness.

The illustrations and photos provide additional examples of foot and leg deficiencies. Illustrations adapted, with permission, from *Pork Industry Handbook*.

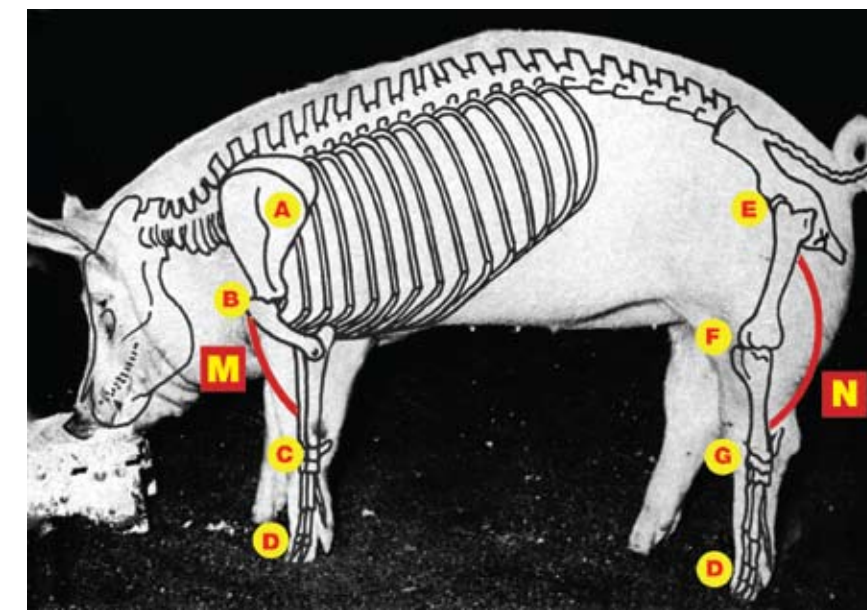
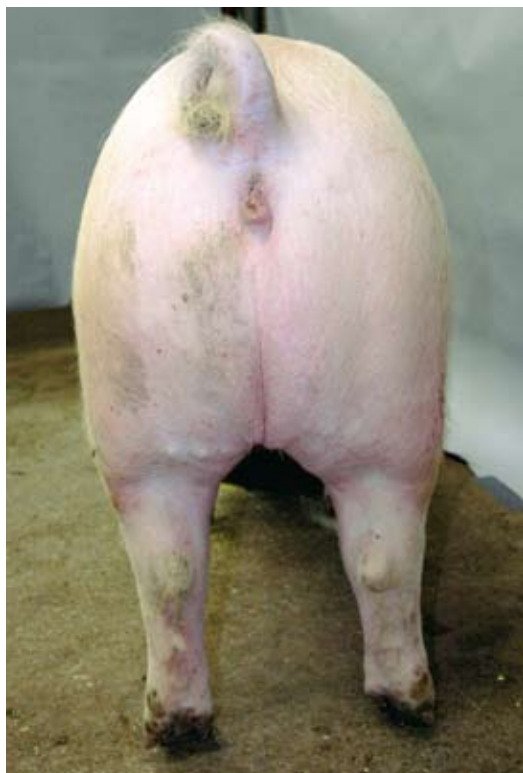


Figure 2. Undesirable front and rear leg structure.



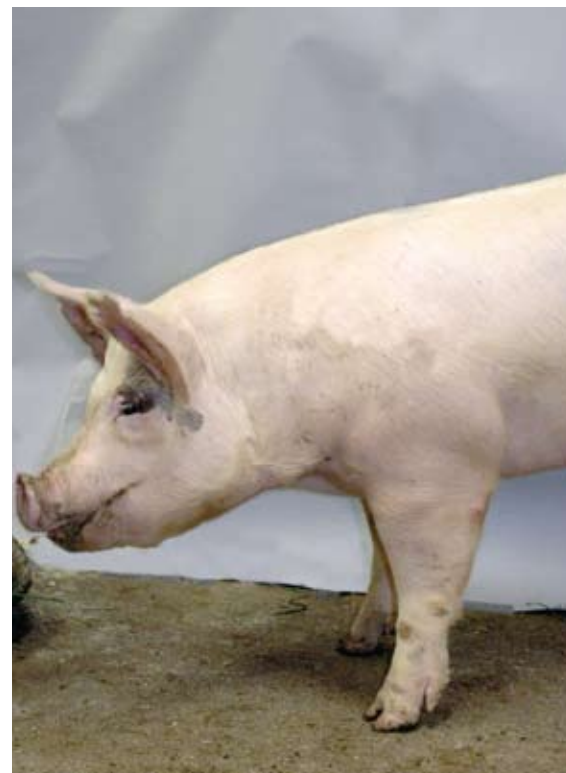
This gilt's front and rear legs are very straight and undesirable. She is high topped, steep rumped and shallow in the rib and flank.



From the rear, this gilt displays very good leg set, good width between her legs and shape of the ham muscles.



This angle shows good width, depth and spring of rib, good width between the back legs, depth and squareness throughout the body cavity.



This gilt represents a good example of proper angle of the shoulder, good length and cleanness of the neck and jowl.



This gilt displays an improper structure of the shoulder and spine, often referred to as "broken-topped" or "broken-shouldered."

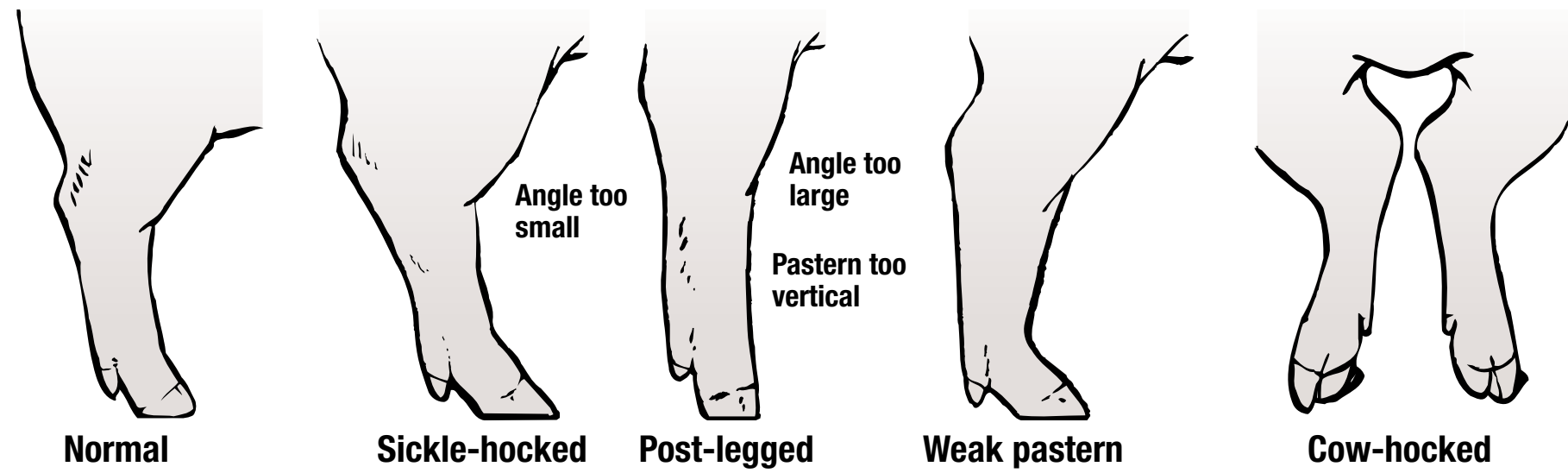


This gilt shows a narrow rib and chest floor, which is an indication of narrowness throughout the body.

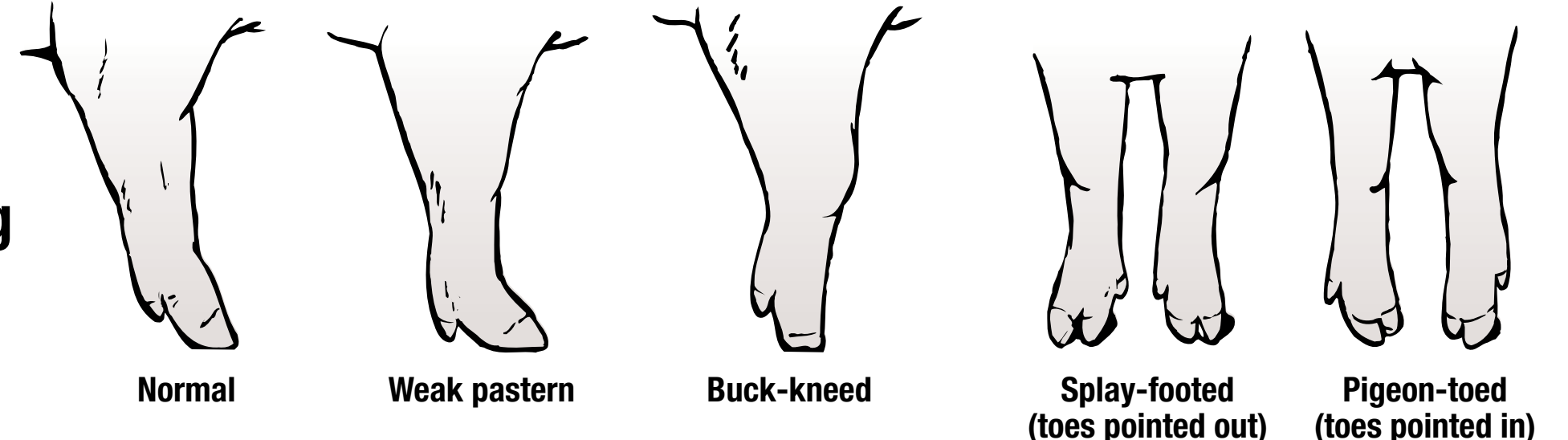


Narrow set to the rear legs is often an indication of narrowness throughout the body cavity.

## Side view of rear leg



## Side view of front leg



This is a side view of normal (good) rear leg structure. Note the angle of the hip, stifle and hock joints.



When the angle of the hip, stifle and hock joints is too small, the deficiency is called "sickle-hocked."



When the angle of the hip, stifle and hock is too large, the animal is described as "post-legged."



Weak rear pasterns are considered undesirable. In severe cases, damage to hocks and dew claws can result.



When the hocks of the rear legs turn inward, the condition is described as "cow-hocked."



This side view shows normal (good) front leg structure. Note how the front legs slope from the shoulder.



This is an example of soft (weak) front pasterns. Note the full dew claw touching the floor.



Straight front legs often cause knee joints to buckle, often called "buck-kneed."



The tendency of the front toes to point outward is commonly called "splay-footed."