

Selecting for Feet and Leg Soundness in Replacement Gilts

Front Feet and Toe Size



Even front toes with slight spread, good slope and cushion to the pastern allows the foot to set squarely on the floor surface.



Small front toes, close together, with short pasterns can create soundness problems as gilts grow heavier.



Small inside toes are a common defect. As gilts grow older and heavier, this defect may contribute to joint and foot injuries.

Feet and leg unsoundness caused by toe size, unevenness of toe size, skeletal structure and/or injury to feet and legs are constant concerns that ultimately affect gilts' lifetime productivity in the breeding herd.

The ideal foot should have two fairly even toes that are big and slightly spread apart to improve stability and ease of movement. The outside toe is normally slightly wider and longer than the inside toe. It is important to select gilts with good slope and cushion to the pastern, which allows the sole of the foot to rest squarely on the floor surface.

This poster focuses on front and rear leg unsoundness caused by improper toe and foot size and injuries to legs, knees and hocks of the front and rear legs. Conformation and structural guidelines were presented in the first in this series of three posters focusing on improving lifetime productivity of replacement females.

The most common defect of the toes is small inside toes of the front and rear feet. As the gilt gets older and heavier, the legs tend to conform to the shape and the size of the toes. Avoid gilts that have 1/2 inch or more difference in toe size on the same foot. The larger toe is more likely to develop lesions. Small inside toes are likely genetic based.

In addition to toe size, foot size and leg structure, abnormalities of the bone and cartilage (osteochondrosis), disease or infectious agents causing arthritis, nutrition, genetics, floor surface and exercise can affect feet and leg soundness. Cracked hooves, torn pads and swollen legs or joints are common causes of lameness and remain a leading cause for culling replacement gilts and sows.

Information for this poster adapted, with permission, from the *Pork Industry Handbook*.

Front Feet and Leg Injuries



The swollen area above the knee on this gilt's front leg should be cause for concern. Swollen legs or joints are common causes of lameness.



Calluses and abrasions of the front knees can indicate difficulty getting up and down, foot size and leg conformation deficiencies.



Calcification on the front knee, caused by structural deficiency and/or injury, is cause for concern.

Rear Feet and Toe Size



Even rear toes with slight spread, good shape and cushion to the pastern allows the foot to set squarely on the floor surface.



Small rear toes, close together, with short pasterns can create soundness problems as gilts grow heavier.



Small inside toes are a common defect. The injury above the toe may cause uneven wear, foot injury and stress to the joints.



The rear outside toe, more than 1/2 inch longer than the inside toe, has already incurred a slight injury.



Callused rear legs may indicate structural deficiencies, difficulty getting up and down, and a tendency to sit on the haunches.

Rear Feet and Leg Injuries



Calluses on the hocks, also called "knobby hocks," are a clue that the gilt is having difficulty getting up and lying down.



Swollen or puffy hocks may indicate trauma or injury caused by difficulty getting up and lying down or joint infection.



Small outside toes can cause legs to conform to heavier weights, creating a bow-legged appearance. Note dew claw damage.



Small, short rear toes provide less area to distribute weight and may have contributed to the injury and swelling of this foot.



Close inspection is required to identify the cracked rear toe of this gilt, which could create future lameness problems.



The cracked inside rear toe is not a recent injury. Note the discoloration and ulceration of the injured portion of the toe.



Pen point indicates where the foot pad is torn and separated on the weight-bearing surface of the foot.



Pen point shows hoof crack. If damaged or irritated, the foot may become infected and/or swollen.