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Breeding Swine Selection

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STRUCTURAL CORRECTNESS

- Critical due to confinement production systems
- Level top, level rump, higher tail setting vs. high top step rump, low tail setting
- Forelimb: Angulation to provide maximum cushion to stride, prefer sloping forearm, cannon bone, and pastern (sickle shape). Uniform and large toe size Discriminate against:
    - Top arched too high
    - Shoulder blade pushed forward
    - Shoulder angle greater than 90°
    - Bones of front leg in straight line
    - Steep pasterns: This abnormal angulation puts stress on both scapula and humerus joint and knee-joint, less resistance at knee so animal's front legs buck over (buck kneed). This structure puts animal up on toes and results in abnormal wear on both pad and toes.
- Hind Limb: Prefer angulation to joins of stifle and hock, cushion to pastern. Discriminate against:
    - Hip, stifle and hock joins form a straight line—restricts stride off rear legs, especially a problem with boards with mating…they'll fall backwards.
- Toe Size: Prefer even toe size, large toe size, even weight distribution. Discriminate against:
    - Uneven toe size, generally smaller inside toe, because this results in abnormal wear on outside toe, exposing pad and causing lameness.
- Ruggedness-Stoutness: Substance of bone and foot size

SIZE AND SCALE

- Moderately large framed (later maturing) vs. Small framed (earlier maturing)
- Reach 240+ pounds without excessive fat deposition
- Long necked
- Long bodied
- Long rumped

MUSCLE

Selection for muscle has been sporadic over the years. In the late 1960s and early 1970s, swine breeders wanted animals to be as thick as possible, with a butterfly shaped top, tremendous cutting individuals….however reproductive and stress problems surfaced.

- PSS-Porcine Stress Syndrome-sudden death due to stress, tail tremors, skin blotching, heavy respiration. This is an autosomal recessive trait, carriers are intermediate in characteristic of carcass-detectable by gene markers or Halothan screening that takes 3 minutes.
- PSE Pork is pale, soft, and exudative.

In the late 70s, "long smooth muscle", actually was extremely flat and light muscled.
In the 1980s and 1990s, swine were selected for muscle dimension. Shape is important, and judges discriminated against round, tight and short muscle which hinders movement and could result in reproductive problems.

Today, swine type has returned to early 70s….muscle locations: shoulder, forearm, top, loin, rump, and ham.

FAT COVER

•Prefer 1.0" or less for 240 pound market animals at the last rib measurement
•Fat is deposited front to rear. Locations to look for fat are the jowl, underline, flank, base of ham, shoulder blade, elbow pocket, base of tail, and top. A turn over the top (prefer a rounded shape, not square. Square shape is associated with fatter animals and "Shelfing."

CAPACITY

Locations to look:
•Depth to forerib and rear rib
•Depth to flank
•Spring and shape to rib
•Width through chest floor (sternum)

Descriminate against:
•Shallow bodied or "round ribbed"
•Flat ribbed. This was a problem in the late 70s, farrowing crate disasters as laid down as coul dnot get up, so we need curvature to rib shape to prevent problems.
•Narrow chested

REPRODUCTIVE TRAITS

Vulvas:
- •Normal
- •Tipped (upturned): problem with natural service, pasture or pen mating situations
- •Infantile- only outward indicator of female trait, could signify small, underdeveloped reproductive tract or infertility.

Scrotal Size: not related to puberty in daughter of particular sire

Underlines:
- •At least 12 evenly spaced teats (6 per side)
- •Functional
- •Fine textured
- •Prefer to have underline start further forward (front of navel)

Underline Problems:
- •Poor spacing
- •Pin nipples: extremely small and non-functional
- •Inverted nipples: attached to body wall, non-functional
- •Blunt nipple: "blind" nipple has been rubbed off due to perhaps abrasive confinement surface and generally drops down at farrowing and is functional
- •Coarse, fleshy teats: problem for young pigs to nurse because they are too large

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