

Dwarfism

How to Identify it and why it needs to be kept out of your herd

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Bovine dwarfism can be caused by either the in utero environment (nutrition, hormone imbalances or toxicity) or genetics (traits inherited from one or both of the parents). The only way to determine if the form of dwarfism is caused by a genetic defect is through DNA testing.

Bulldog Dwarfism or Dexter Dwarfism

Achondroplasia



Heterozygote



Homozygote

- Identification:** Short-legged, short headed, pinched-in nose, blocky and heavily muscled appearance (heterozygote carriers)
- Inheritance:** Incomplete dominant
- Known Breeds:** Dexter and Florida Cracker (one of the original Spanish breeds that is closely affected related to the Texas Longhorn)
- Testing:** DNA testing is conducted using hair pulled from the tip of the tail
- Risk:** If both the sire and the dam possess this form of dwarfism (heterozygotes) they will produce a homozygous bulldog calf, which is a fatal gene mutation. The fetus will be aborted at 6-8 months gestation. The aborted (bulldog) fetus will have a compressed skull, the nose will be divided by furrows and it will have a shortened upper jaw giving it a bulldog appearance.

Long-Nosed Dwarfism
Dolichocephalic



- Identification:** Normal sized head on a small body. The calves appear normal at birth, the body will stop growing but the head will continue to grow.
- Inheritance:** Simple recessive
- Known Breeds:** Angus and Hereford
- Affected**
- Testing:** DNA testing is conducted using hair pulled from the tip of the tail.
- Risk:** The affected individual will pass on the gene mutation. Long-headed dwarfs appear to be healthy with normal fertility but the gene has been linked to cystic fibrosis and the affected individuals tend to make a gurgling sound in their chest.