

# HORNED & POLLED Fact Sheet

Beef producers are looking for the best management strategy for their herd. As identifying Polled cattle becomes more important for both economic and animal welfare reasons, we explain how you can better predict if your calves will be horned or Polled.

A Polled animal will not necessarily have a Polled calf, as it may be carrying a recessive horned gene. Since you can't "see" if an animal is a carrier of a horned gene, genetic testing is used to determine if the Polled animal is homozygous or heterozygous for the Polled gene. Choosing a homozygous Polled animal will ensure your calves are born Polled.

**Allele** - the variant form of a given gene.  
Polled or horned

**Dominant** - masks the characteristic of the recessive allele. The Polled allele is Dominant

**Recessive** - this allele is completely masked if paired with a dominant allele. It is only expressed if both alleles are recessive. The horned gene is recessive, requiring two copies for the animal to have horns.

**Homozygous (Homo) Polled** - the animal carries two copies of the Polled Gene (one from each parent).

- Sometimes cattle are referred to as "Double Polled" to indicate the animal is descended from two Polled animals. Without a genetic test, this is not a guarantee the progeny will be homozygous Polled, or even Polled at all.

## Example

A Homozygous Polled bull is mated to a heterozygous Polled cow. There are four possible outcomes, and in this example, all four outcomes will result in the animal having no horns. Two of the possible outcomes will carry the horned gene and two would be heterozygous Polled.

	Heterozygous Polled Cow (Pp)	
Homozygous Polled Bull (PP)	PP - Polled	PP - Polled
	Pp - Polled	Pp - Polled

## What about Scurs?

Scurs typically do not appear until about four months of age and stop growing after a few inches if left on. Scurs do not attach to the animal's skull like a horn.

The gene for scurs is on a different chromosome than the Polled and horned gene. Horn growth makes it impossible for scurs to develop on the same spot, but horned animals can still carry the gene for scurs.

Traditionally the scurred trait has been reported as sex influenced. Male cattle only need one allele for scurs to exhibit the trait, while females need two. Therefore, all female cattle with scurs are considered to be homozygous scurred.

Contact the Canadian Hereford Association for more information on how to test your animals.



**Heterozygous (Hetero) Polled** - the animal carries one Polled gene (dominant) and one horned gene (recessive). Because the Polled gene is dominant, the animal has no horns.

## Example

A Heterozygous Polled bull is mated to a Heterozygous Polled cow. There are four possible outcomes; three will result in the progeny having no horns. There is a 25% chance that the progeny will have horns.

	Heterozygous Polled Cow (Pp)	
Heterozygous Polled Bull (Pp)	PP - Polled	Pp - Polled
	Pp - Polled	pp - Horned