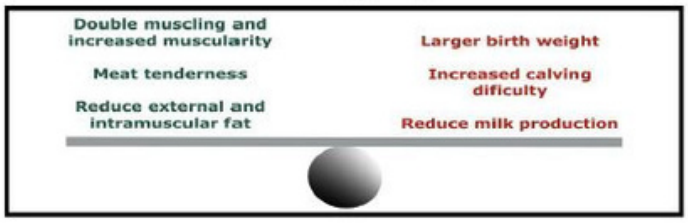
MYOSTATIN INFORMATION

GENETIC DEFECTS & MAJOR GENES

- Example: Myostatin

- Different variants can give you different results



- Knowing the genetics in your herd can help you maximise the returns and minimise the undesirable affects

MYOSTATIN

- Gene which influences muscle development
- Mutations in the gene (Gene variants) can affect the control of muscle growth- lead to increased muscle mass-double muscling
- Homozygotes for the gene variant (2 copies) put on more muscle-double muscling
- 19 known variants-9 of economic interest

MYOSTATIN VARIANT AFFECTS

- Double muscling
- Muscling ↑
- Birth weight ↑
- Calving difficulty ↑

- Milk production ↓
- Fat ↓

WEATHERBYS
SCIENTIFIC

Myostatin Variant name	Double Muscling	Increased muscling	Increased Birth weight	Increased Calving difficulty	Decreased Milk production	Increased Meat Tenderness	Decreased Fat	Breeding recommendation
E226X	X	X	X	X				Not recommended to use a homozygous bull on a homozygous heifer or cow with smaller pelvis.
E291X	X	X	X	X				Not recommended to use a homozygous bull on a homozygous heifer or cow with smaller pelvis.
C313Y	X	X	X	X				Not recommended to use a homozygous bull on a homozygous heifer or cow with smaller pelvis.
nt419	X	X	X	X				Not recommended to use a homozygous bull on a homozygous heifer or cow with smaller pelvis.
Q204X	X	X	X	X	X			Best for breeding terminal animals. Not recommended to use a homozygous bull on a homozygous heifer or cow with smaller pelvis.
nt821del11	X	X	X	X	X			Best for breeding terminal animals. Not recommended to use a homozygous bull on a homozygous heifer or cow with smaller pelvis.
F94L		X				X	X	Ok for all breeding animals to be homozygous;
S105C		X				X	X	Ok for all breeding animals to be homozygous
D182N		X				X	X	Ok for all breeding animals to be homozygous

Myostatin Genetics Quick Reference Guide