

GENETICS

STRENGTHENING THE NATIONAL HERD

GENETIC DEFECTS

BVSC

BLAD: Affects white blood cells, causing extreme susceptibility to infection.

CVM: Responsible for aborted fetuses and stillborn calves.

CITRULLINAEMIA: Ataxia, aimless wandering, blindness, head pressing, convulsions and death.



SMALL CALF SYNDROME

Identified through genetic data and pedigree records, came from a gene present before 1960.

GENETIC TRAITS, MUTATIONS & DEFECTS

Where both parents carry the recessive gene there is one in four chances that the progeny will be affected.

	RY	Ry	rY	ry
RY	RRYY	RRYy	RrYY	RrYy
Ry	RRYy	RRyy	RRYY	Rryy
rY	RyYY	RRYY	rrYY	rrYy
ry	RrYy	Rryy	rrYy	rryy

R: Solid coat

r: Spotted coat

Y: Black coloured face

y: White coloured face

ALLELE

Variants of genes that control characteristics.

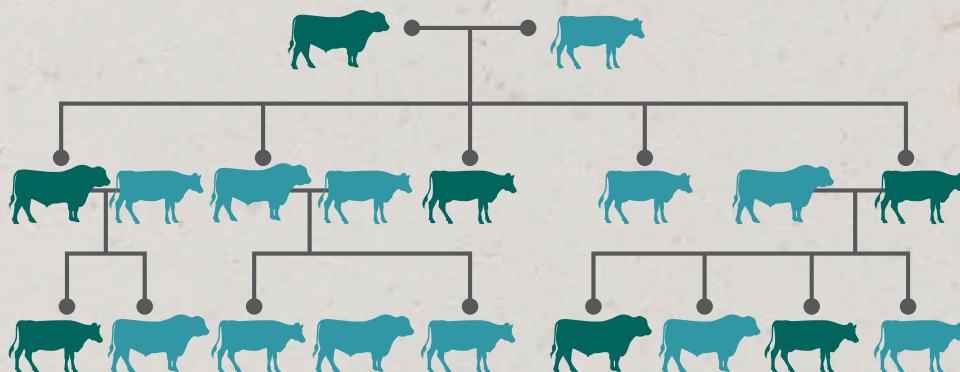
HOMOZYGOUS

Having identical pairs of alleles (AA or aa).

HETEROZYGOUS

Having different pairs of alleles (Aa or aA).

IDENTIFYING TRAITS THROUGH PEDIGREE CHARTS



New Zealand techniques for freezing semen improved meaning the best bulls could be used long after they were dead.