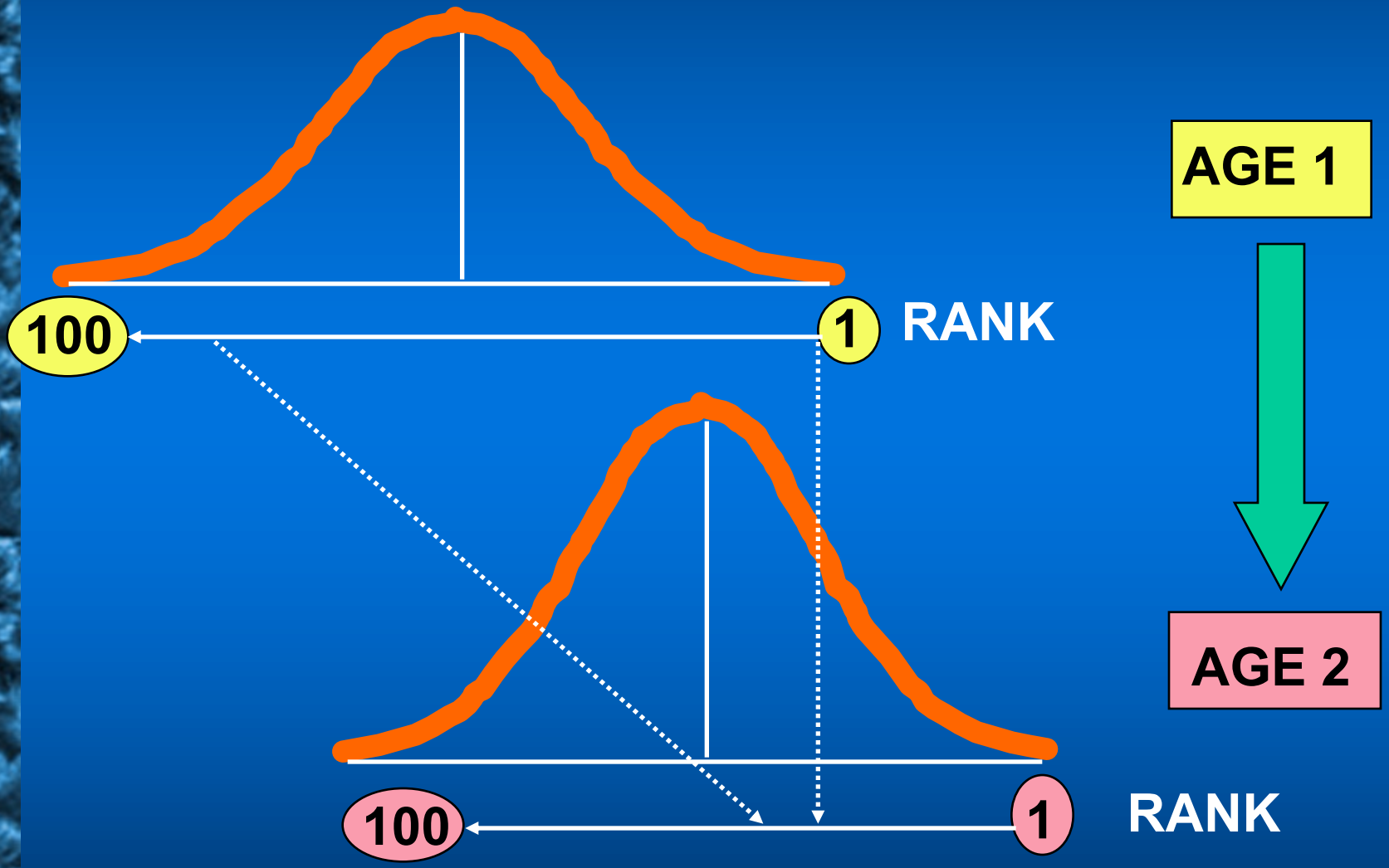
CRC for Premium Quality Wool

Basic Genetic Terminology as Applied to Merino Breeding

Produced for the CRC for Premium Quality Wool undergraduate program by;
Dr. Brad Crook, The University of New England.

Repeatability

Phenotypic variation in fleece weight



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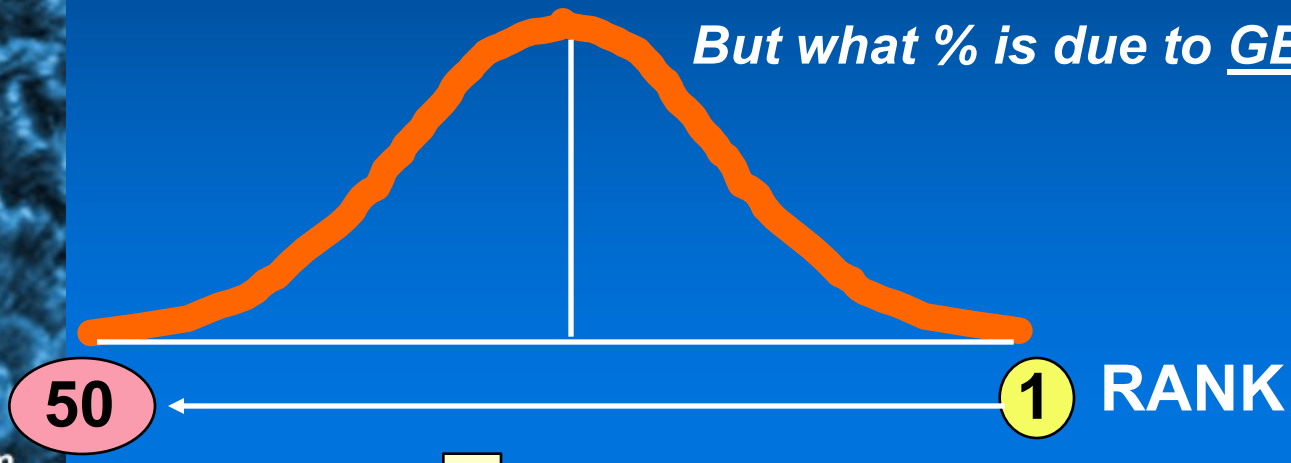
Heritability

Phenotypic variation in fleece weight

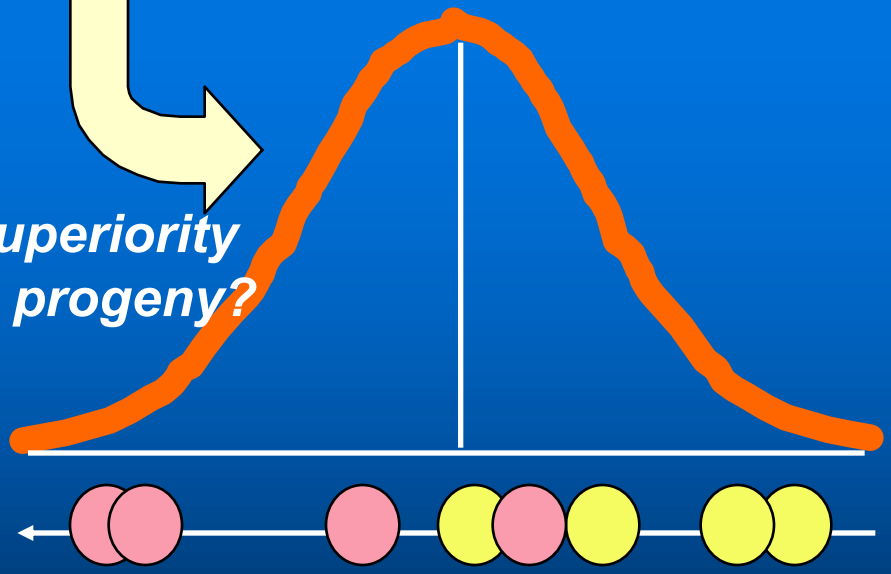


But what % is due to GENETIC variation?

RAMS

PROGENY

What % of superiority is passed to progeny?



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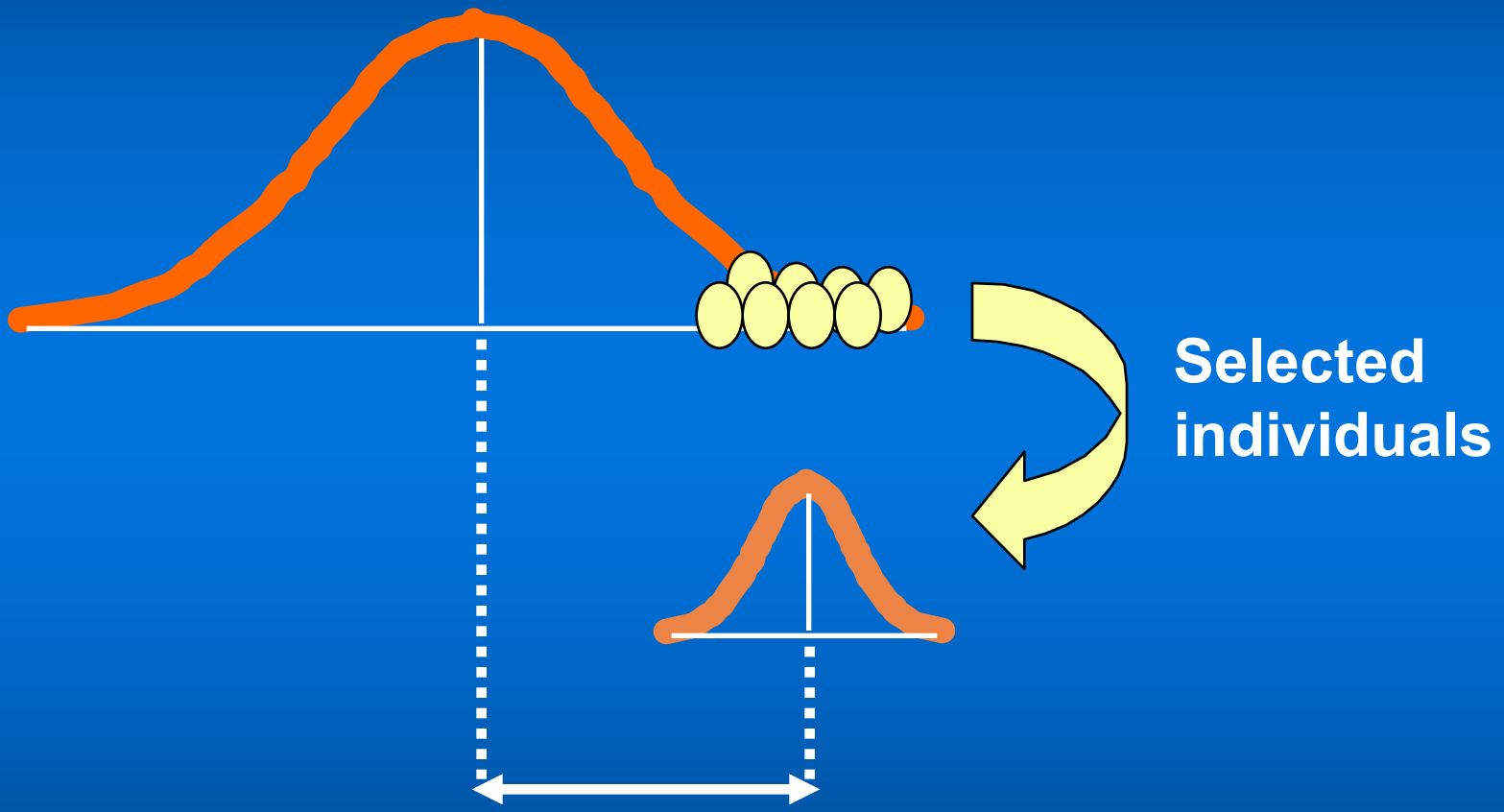
Selection Differential

Phenotypic variation in fleece weight



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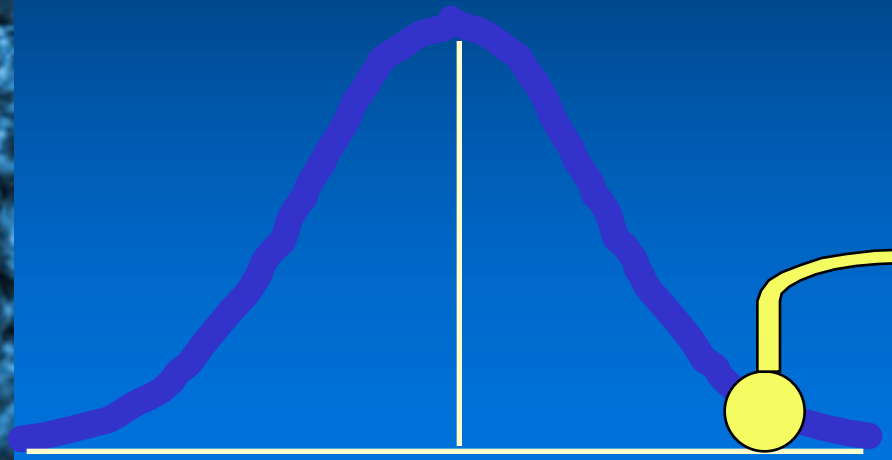
Phenotypic variation in GFW



8 kg

Predicted superiority = +3 kg

5 kg

$EBV_{GFW} = h^2_{GFW}$ x predicted superiority

Information on genetic merit of individual

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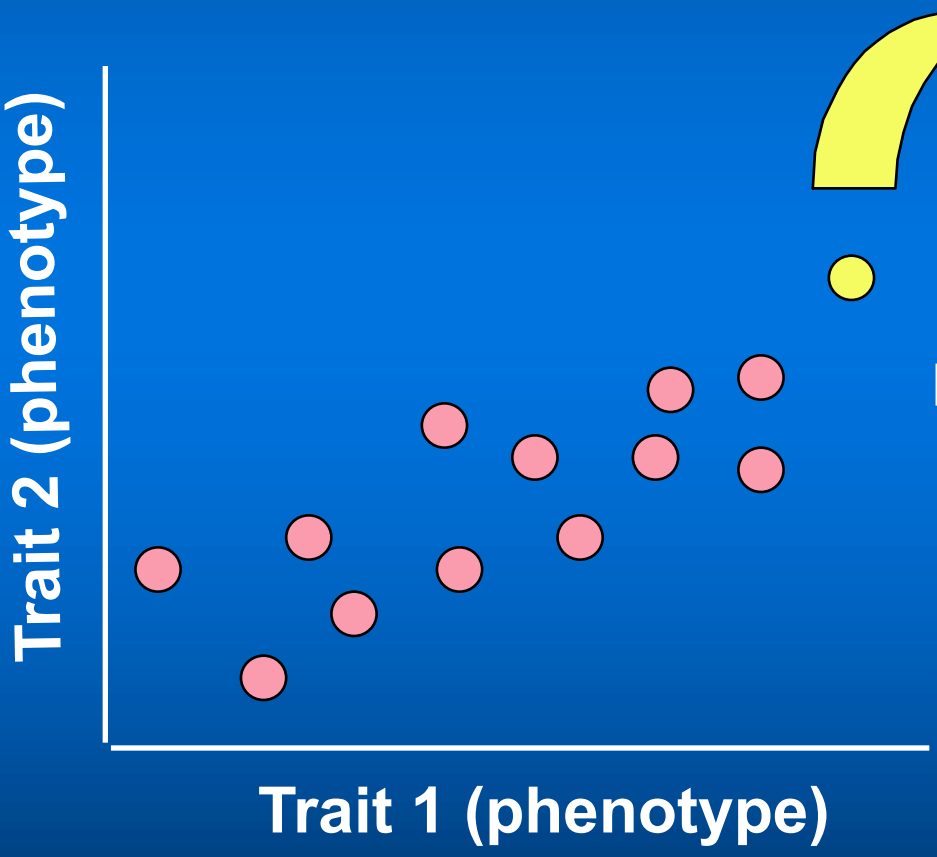
Genetic Correlation

The extent to which two traits are controlled by the same set of genes



To what extent will selection of individuals of high performance for trait 1, give rise to progeny of high performance for trait 2?

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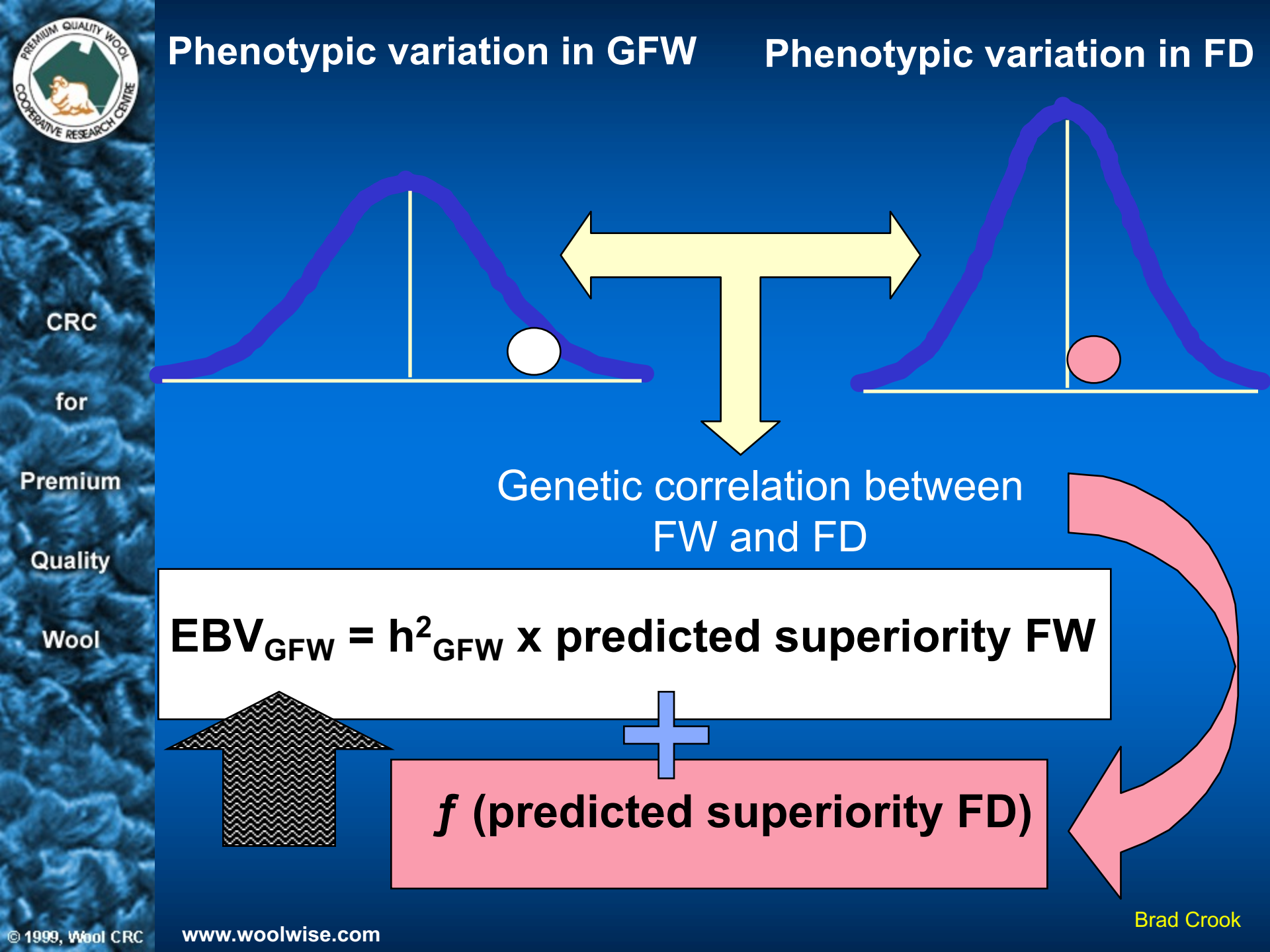
Phenotypic variation in GFW
Phenotypic variation in FD
Genetic correlation between FW and FD
$EBV_{GFW} = h^2_{GFW}$ x predicted superiority FW
ƒ (predicted superiority FD)
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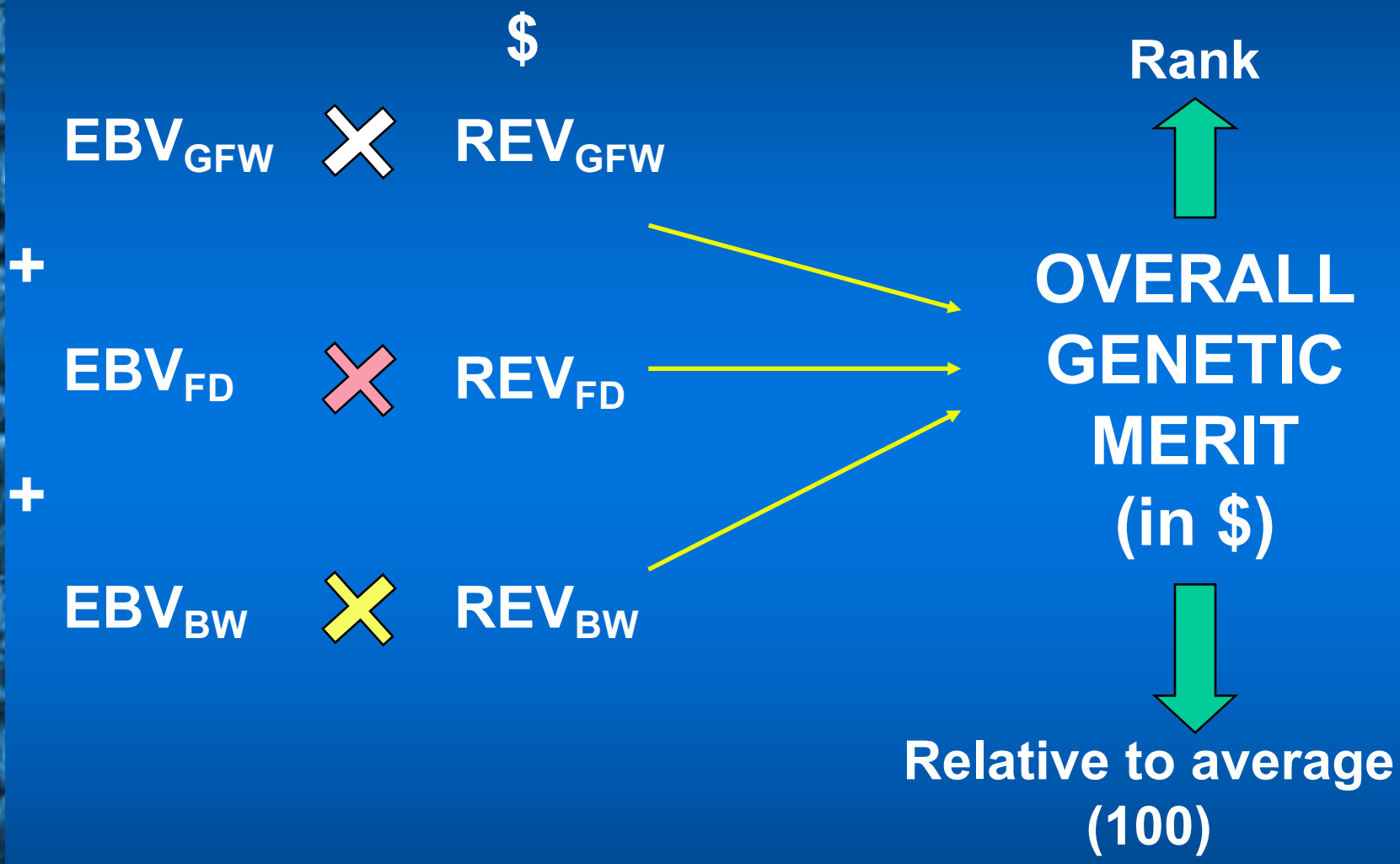

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