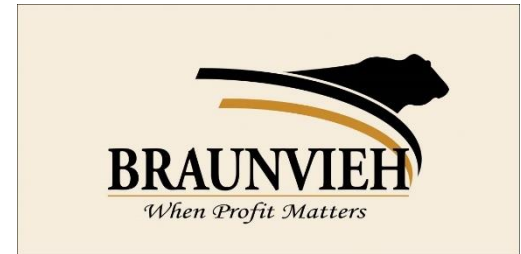




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PAUS



GBLUP

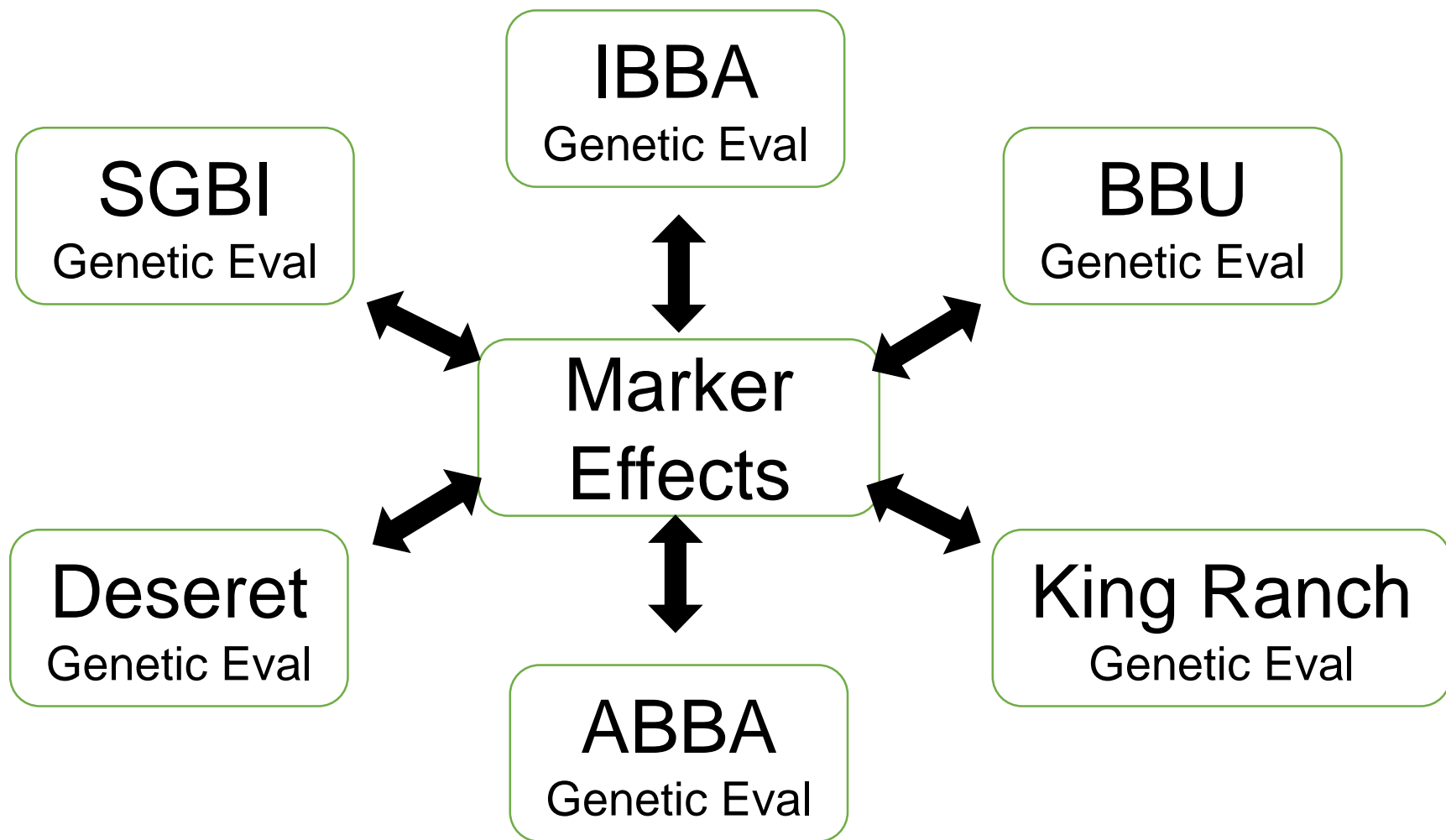
$$\begin{bmatrix} X'R^{-1}X & X'R^{-1}Z \\ Z'R^{-1}X & Z'R^{-1}Z + H^{-1} \otimes G_0^{-1} \end{bmatrix} \begin{bmatrix} \hat{b} \\ \hat{u} \end{bmatrix} = \begin{bmatrix} X'R^{-1}y \\ Z'R^{-1}y \end{bmatrix}$$

$$H^{-1} = A^{-1} + \begin{bmatrix} 0 & 0 \\ 0 & G^{*-1} - A_{22}^{-1} \end{bmatrix}$$

American Breeds

Group	# Pedigree	# Genotyped	Runs per Year
Brangus	1,500,000	21,500	12
Santa Gertrudis	900,000	3,400	12
Beefmaster	1,300,000	6,700	2
Deseret	150,000	6,800	as needed
King Ranch	20,000	8,000	as needed
Brahman	930,000	-	6
Total	4,800,000	46,400	

Group	Growth	Ultrasound	Carcass	Fertility
Brangus	X	X		X
Santa Gertrudis	X	X	X	X
Beefmaster	X	X		
Deseret	X	X	X	X
King Ranch	X	X	X	X
Brahman	X	X		



GBLUP - version 2

1. Indirect Predictions for Young Animals
2. Weighting of Gb

Lourenco, et al 2015 - Genetic evaluation using single-step genomic best linear unbiased predictor in American Angus.

Agri Beef

Wagyu Herd

Data

Packing Plant

Fat Calves

Cooperating Feedlots

Feeder Calves

Bulls



Cooperating Ranches



GeneSeek

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