

Breeding Values for Deer

Jason Archer
Wilkins Farming Stag Walk
Balfour, December 2009



Farming, Food and Health. **First**

Te Ahuwhenua, Te Kai me te Whai Ora. Tuatahi



What factors influence performance?



- Sex of calf
- Feed and management
- Age of mother
- Animal genetics
- Animal health
- Other random events in animal's life (eg. temporary lameness)



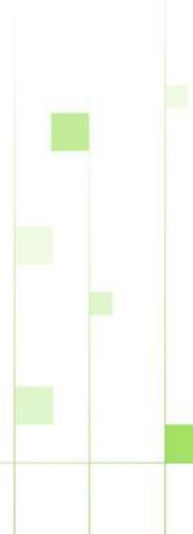
What factors influence performance?



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- A large herd of brown deer is gathered in a lush green field. In the background, there are rolling green hills and a few trees under a clear sky. The deer are of various ages and are looking in different directions.
- Sex of calf
 - Feed and management
 - Age of mother
 - Animal genetics = what you take home when you purchase a stag
 - Animal health
 - Other random events in animal's life (eg. temporary lameness)

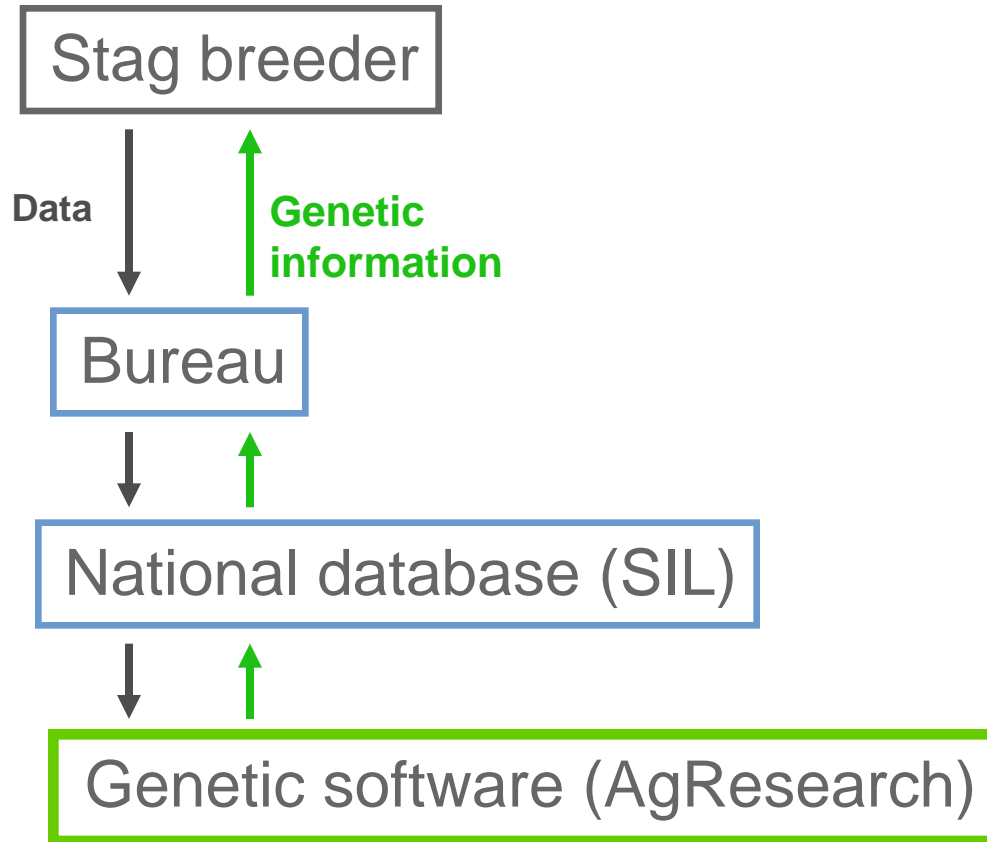
Breeding values

1. Strip out the systematic differences in performance which are caused by non-genetic factors such as:
 - Herd and environment
 - Feeding and management
 - Sex
 - Age of dam
2. Use knowledge of trait properties to predict genetic merit
 - Adjust performance records for how heritable a trait is.
 - Use the performance of relatives to help predict genetic merit.
3. Compare genetics from herds around New Zealand.





DEERSelect



Deer Industry Steering Committee



3 modules – Growth, Early conception, Velvet

Operates an across-herd analysis – red deer are compared nationally.

Reporting

- Herd reports provided to clients (on-demand, quick turn-around)
- Sire summaries publically available on DEERResearch website.

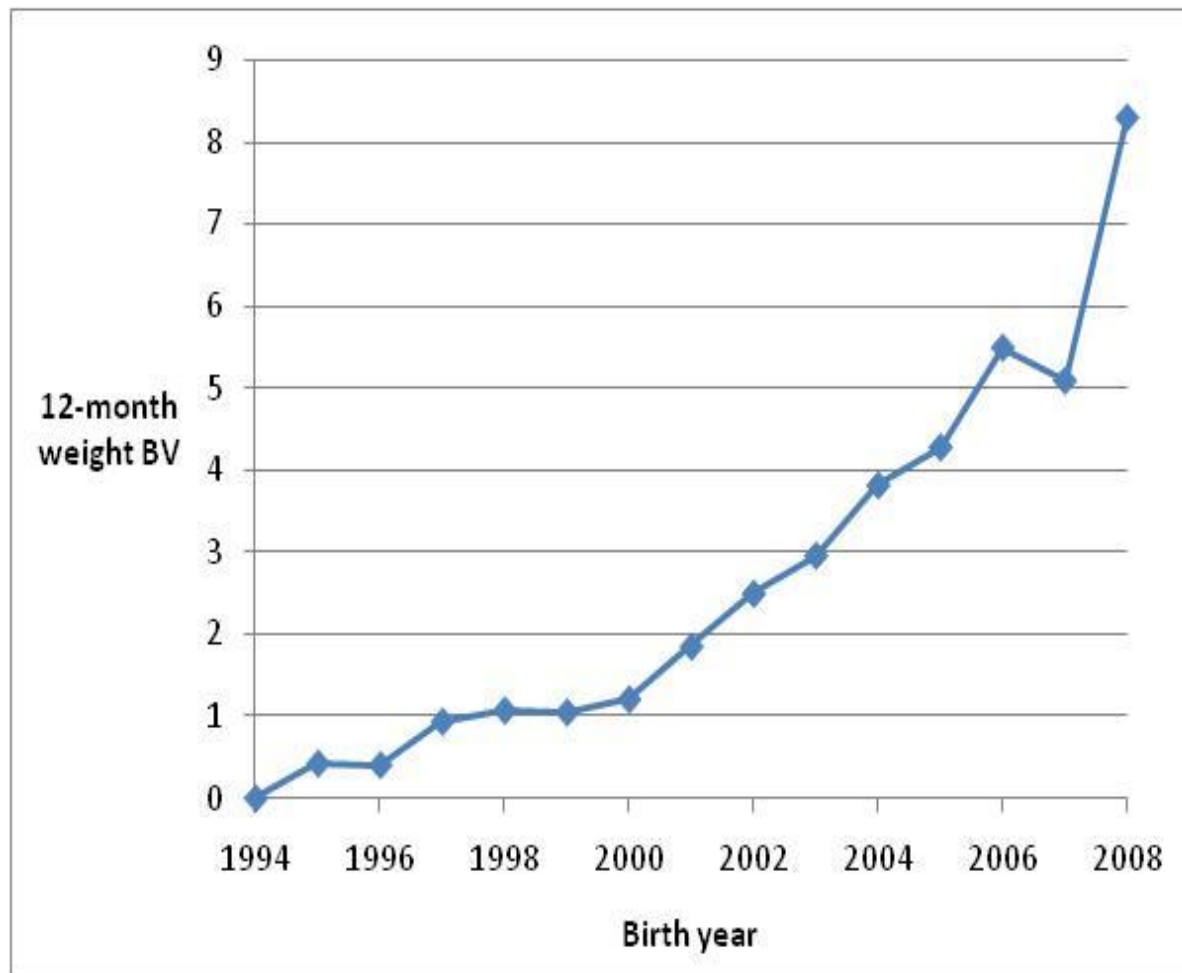


Sire Summaries



Birth Herd	Birth Tag	Current Tag	No Progeny	W12BV	W12Acc	MWTBV	MWTAcc	Current Flock Prefix
Canterbury Imp Red Deer	31/04	SONNY BILL	13	25.7	0.85	24.9	0.73	Canterbury Imp Red Deer
Stanfield Eastern	03152/03	MEGAMILIAN	252	25.5	0.97	22.2	0.82	Wilkins Farming
Peel Forest Estate	03556/03	ATLAS	60	25.4	0.94	22.1	0.79	Peel Forest Estate
Deer Improvement	06306/06	CZAR	95	25.3	0.95	18.4	0.75	Deer Improvement
Doncaster Deer Partnership	05063/05	CORLEONE	25	24.8	0.89	16.1	0.72	Deer Improvement
Deer Improvement	06259/06	BREMEN	83	24.8	0.94	15.6	0.74	Deer Improvement
Doncaster Deer Partnership	06583/06	06583	29	24.7	0.9	17.8	0.72	Deer Improvement
Doncaster Deer Partnership	06549/06	06549	26	23.6	0.89	18.3	0.71	Deer Improvement
Black Forest Park	02P162/02	KURGAN	50/98	23.3	0.95	22.1	0.85	Black Forest Park
Peel Forest Estate	04052/04	04052	7	22.4	0.83	20.8	0.71	Peel Forest Estate
Canterbury Imp Red Deer	02685/02	COSSAR	287/301	22.2	0.98	20	0.81	Deer Improvement
Stanfield Eastern	97020/97	MAXIMILIAN	82/452	22.1	0.98	25.4	0.94	Stanfield Eastern
Black Forest Park	03T649/03	DENZEL	41	21.6	0.89	18.5	0.81	Totara Hills
Deer Improvement	06260/06	06260	37	21.4	0.91	13.9	0.74	Deer Improvement
Deer Improvement	06305/06	COMMODORE	64	21.2	0.93	13.3	0.75	Deer Improvement
Peel Forest Estate	00264/00	ADMIRAL	425/475	20.8	0.98	12.5	0.85	Deer Improvement
Doncaster Deer Partnership	041943/04	WAIPAHI	34	20.6	0.9	15.4	0.72	Deer Improvement
Fairlight	063179/06	063179	51	20.6	0.93	15.4	0.73	Deer Improvement
Black Forest Park	99P043/99	KABUL	5/294	20.5	0.98	19.9	0.93	Black Forest Park
Black Forest Park	04Y068/04	04Y068	19	20.5	0.85	18.9	0.73	Black Forest Park

Genetic trends

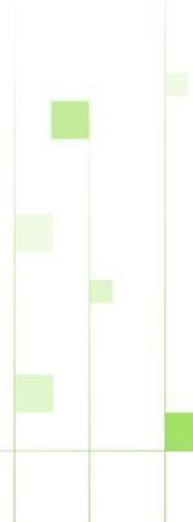


Selecting Sires



1. Identify your requirements

- venison, velvet, trophy
- Growth, hind size, reproductive performance, early calving

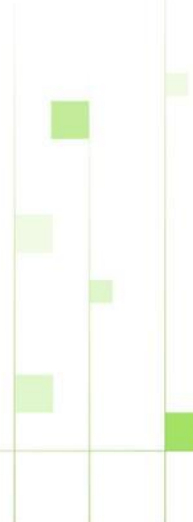


Selecting Sires



2. Identify herds moving in the direction you want to go

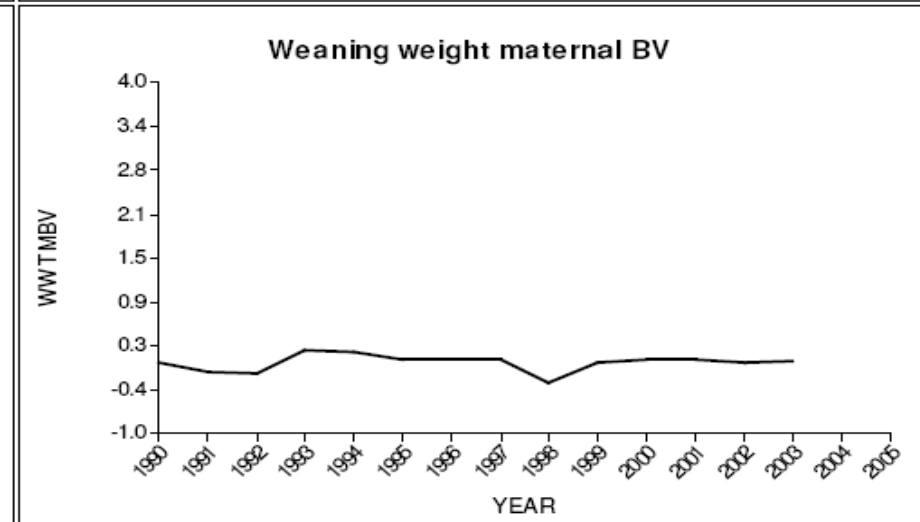
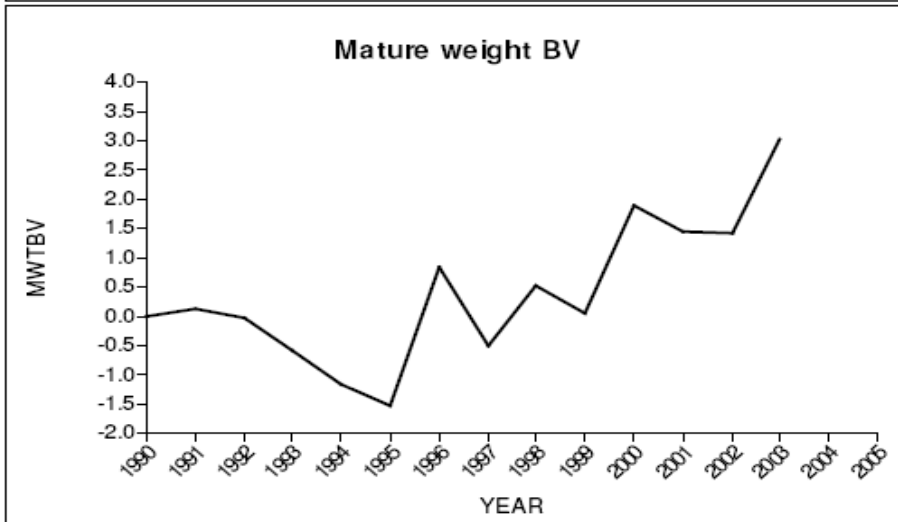
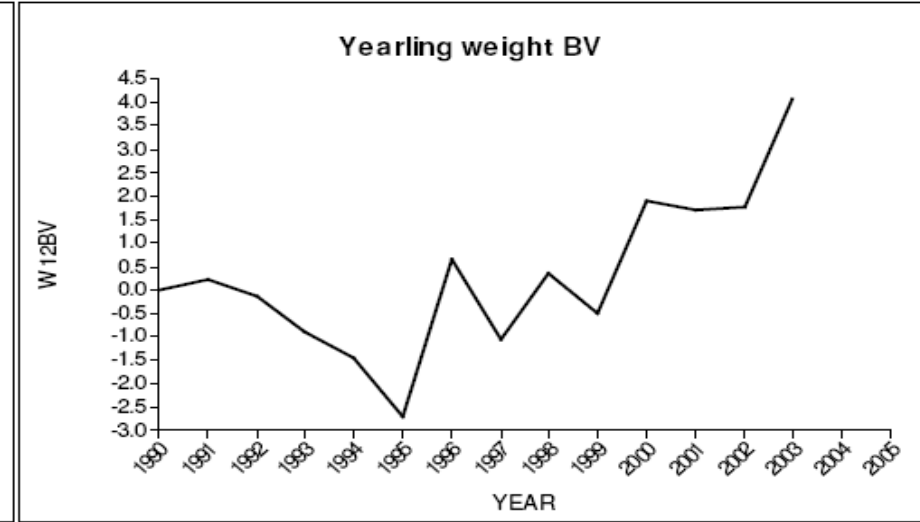
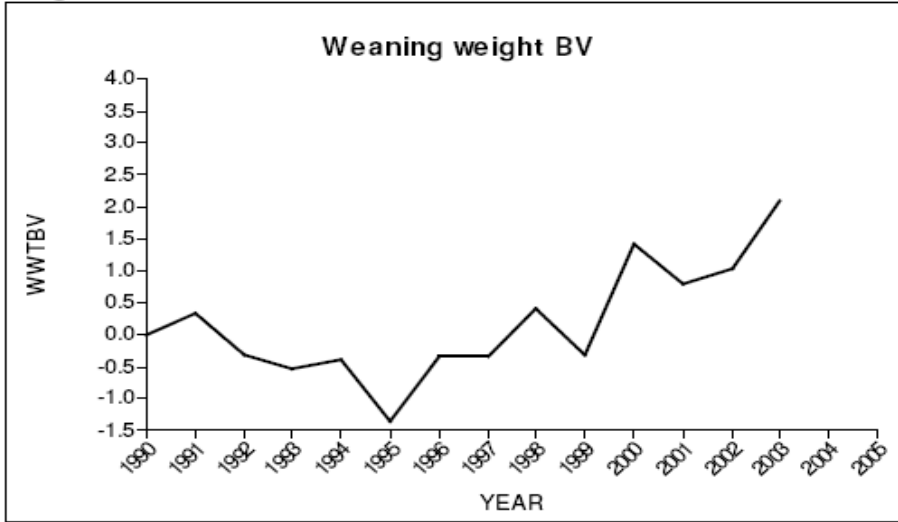
- Look for suitable sires in across-herd sire summaries
- Look at genetic trends of individual herds





SIL Genetic Trends Graphs for flock All

GE Analysis #10922 10/5/2005

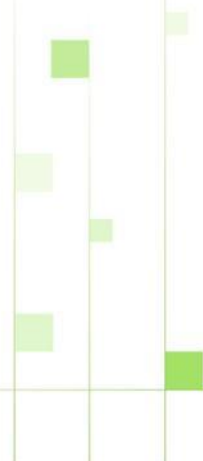


Remember



About 80% of your genetic progress is determined by the breeders selection of sires (60%) and dams (~20%).

Your selection of a stag (within a herd) adds about 20% of the genetic gain in your herd.

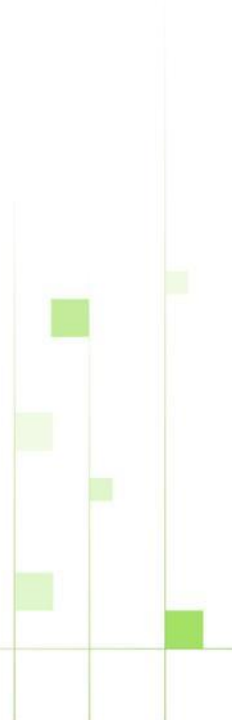


Selecting Sires



3. Select individual young stags

- Look at BVs first (for traits available) – narrow down your selection.
 - 12-month growth
 - Hind mature size?
 - Mature Velvet weight – if velvet is relevant to your business!
- Look at animals selected in first cut on BVs.
 - Traits for which BV information not available
 - Conformation, Temperament ??
- Talk to the breeder about the animals you are interested in.
 - temperament
 - reproductive performance of relatives
- Price!!



Stags available in this catalogue

