

# Feeding for Velvet production

## Regional Workshop Poverty Bay July 17



**David Stevens**  
**AgResearch Invermay**  
**and Tony Pearse DINZ**

# Velvet growth



# What's working now workshop

- Velvet Production Management
  - Key objectives
- Stag groups
  - Genetic and selection programme
- Meeting Nutritional Demand
  - Your key objectives
  - Timing
  - Diet choice
  - Feeding management

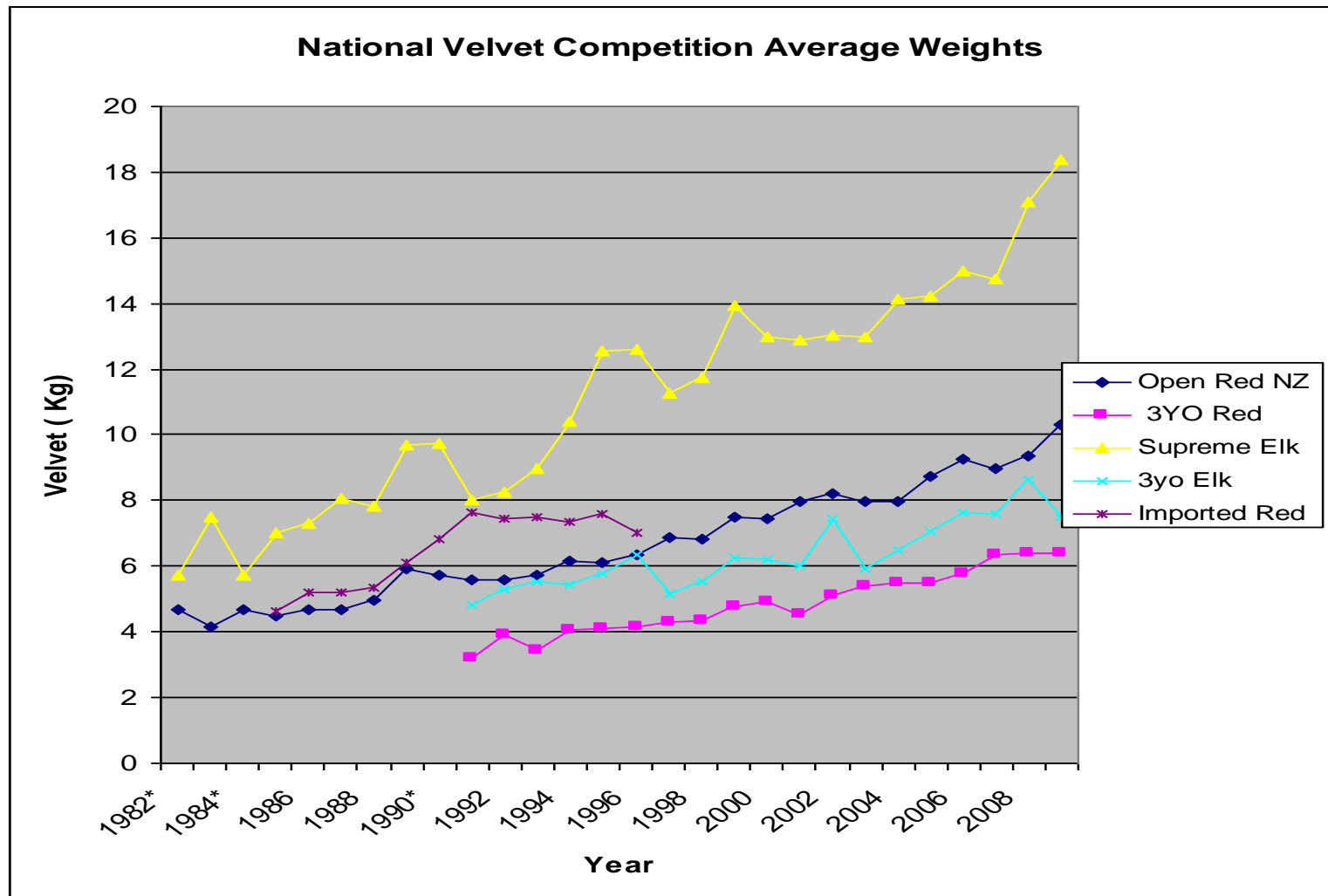
# Genetics and feeding.

“luxury feeding won’t deliver anything more that the stag is capable of”





# Genetic gain in NZ





agresearch



# What's working now workshop

- Velvet Production Management
  - Key objectives
- Stag groups
  - Genetic and selection programme
- Meeting Nutritional Demand
  - Your key objectives
  - Timing
  - Diet choice
  - Feeding management

# Recommendations from China

Table 1: A concentrate diet formulation for a production Wapiti stag (*Malu*) in China (Liang et al 1993). Diets like this are often the result of local availability, and may overstate the requirements for protein feeds.

Growth phase	Soybean cake (kg)	Maize (kg)	Bran (kg)	Distillers grain(kg)	ME intake (MJ/day)	Dry Matter intake (kg/d)	Diet energy density MJME/kg
Pre antler	1.0	0.5	0.7	1.5	45	3.7	12.1
Antler	1.45	0.7	1.1	1.5	58	4.75	12.2
Rutting	0.8	0.45	0.65	-	23	1.9	12.1
Recovery	0.95	0.45	0.65	1.25	40	3.3	12.1





# Energy or Protein

Both are important

Energy especially post- rut and in early spring around casting time

Protein needs varies with age

Antler growth period targets minimum of 16% -18% base (ideal)

# Translation into NZ

Stock class	Period	Protein requirements	
		% CP <sup>1</sup>	% CP <sup>2</sup>
Fawn	Post-weaning	28.0	16.5
Yearling	Winter	18.0	11.5
	Antler growing	22.4	24.5
2-3 year old	Winter		9.0
	Antler growing	19.0	19.0
Mature	Winter		10.5
	Antler growing	17.0	15.5

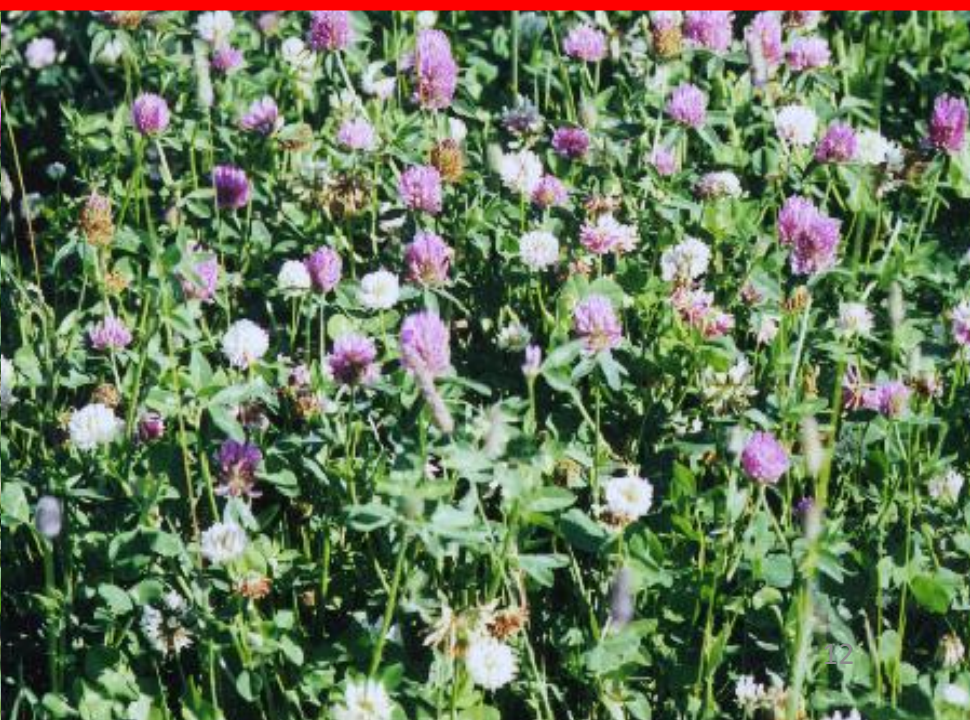
<sup>1</sup> Crude protein requirements of reported Chinese diets

<sup>2</sup> Crude protein requirements assuming a digestibility of 0.75 for pasture





# Grasses herbs and legumes





Winter feeding programmes include fodder crops, hay and silages.

Growth is difficult in winter but good cost effective feeding minimizes stress, disease risk and social unrest

Essential for preparation for velvet growth



# Bottom line

- “any restriction in feeding stags ( for maintenance or growth, phases, particularly from autumn until spring has a significant and negative impact on antler growth in NZ pastoral based feeding systems “
- Strategic feeding concepts starts with nutrition of the pregnant hind and then lactation
- Pedicle initiation next nutrition challenge

# Minerals

Minerals are important, but extra minerals do not improve antler production

Ca, P, Cu, Zn, Mn

NZ wintering systems especially if grain dependent may lead to NA and Ca deficits

# Management factors

- Calf growth can influence later initiation and velvet weight.
- Cohorts of stags should be well established before casting and left alone ... basically age groupings .
- Feeding strategies should ensure that stags have access to 'individual feed' sources. ie reduction of competition
- Settled stags don't waste energy and recover rut weight loss quickly





Major shift in thinking:

- Strategic crops for lactation and weaning and drought proofing
- Special application for velvet stags across the seasons