



**DEER INDUSTRY
NEW ZEALAND**



**SOUTH CANTERBURY/NORTH OTAGO FOCUS FARM
LOCAL FIELD DAY**

WEDNESDAY 10TH FEBRUARY from 12.30PM

WHITEROCK STATION

*4 Wheel Drives Please
BYO lunch prior to day*

- 12.30pm Carbon & Farming – What is the State of Play?**
- Carbon Footprint on Whiterock
- Clayton Wallwork Manager, Carbon Farming Group
- 1.00pm Property Tour**

Late Summer Hind Management

Practical Environmental Management on Deer Farms
- Otago Regional Council & ECAN Nicola McGrouther
& Judith Earl-Goulet
- 3.00pm Afternoon Tea**
- 3.30pm Woolshed Presentation:**
Financial Budget Update Ross & Sally Stevens, Nicky Hyslop
Market Update Murray Behrent, Alliance Group Ltd.
- 4.30pm Finish** Refreshments kindly provided by South Canterbury Toyota

In the spirit of the OCCUPATION, HEALTH AND SAFETY ACT the Owners have taken all reasonable care in making your visit to the property as safe as possible, they clearly point out, you enter the property at your own risk.

The Owners will accept no responsibility for any incident or injury to any person or property that takes place while you are visiting the property.
Ross & Sally Stevens

Deer Farm:		Other:	
24 paddocks	185 ha	10 paddocks	66 ha
4 down blocks	71 ha	3 down blocks	50 ha
7 hill blocks	<u>584</u> ha	9 hill blocks	<u>386</u> ha
	840 ha		502 ha

TOTAL 1342 ha

Access: Laneway through deer farm. Grass/dirt tracks

1.2. Fertiliser History:

1.5 T/ha of Lime applied pre-development

All brassica crops sown with 250kg/ha of DAP + Bo (not applied with seed)

All new grass paddocks sown down with 200kg/ha of Crop 20

Recent Annual fertiliser policy includes use of Ammonium Sulphate

1.3. Soil Tests:

Gorge:

Test		pH	P	S	OS	Na	Ex:Al	Trend
Gorge Terrace	24-Oct-02	5.7	30	20	3	3	-	Up
Top Terrace	6-Aug-08	5.8	40	5	-	4	-	Up
Gorge Hill	24-Oct-02	5.7	10	2	1	4	-	Down

Back Facing Hill Block

Test		pH	P	S	OS	Na	Ex:Al	Trend
Dog Trial	14-Aug-09	6.6	16	7	-	1	-	
Middle Block Transect 3	3-Apr-09	5.6	13	9	-	4	1.9	
Middle Block	14-Aug-09	6.6	16	7	-	1	-	
Andy's New Grass	3-Apr-09	5.5	15	15	-	3	2.9	Down
TV Block	5-Sep-06	5.5	17	8	-	4	-	Down

Bottom of the Hill Block

Test		pH	P	S	OS	Na	Ex:Al	Trend
House	23-Aug-07	6	18	9	-	5	-	
Little Tussock	6-Aug-08	5.9	21	7	-	2	1.2	Holding
Red Tussock	5-Sep-06	5.8	27	13	-	4	-	Up
Middle	6-Aug-08	5.6	18	10	-	4	4.8	Holding
Round Hill	14-Aug-09	6.3	30	15	-	2	-	Holding

Deer Fenced Flats Block

Test		pH	P	S	OS	Na	Ex:Al	Trend
Bull	14-Aug-09	6	47	7	-	2	-	
Calf	14-Aug-09	5.8	63	9	-	2	-	
Coal Hill	14-Aug-09	5.9	49	10	8	2	-	
Thar	14-Aug-09	6.1	38	10	-	2	-	
Fawn	14-Aug-09	6	40	14	8	5	-	Holding
Bottom Swamp	14-Aug-09	5.6	38	14	-	2	-	
Beehive	14-Aug-09	5.4	49	7	4	2	-	Holding
Sally's	5-Sep-06	6	48	14	-	4	-	Holding
Table Top	14-Aug-09	6.1	46	7	-	10	2	Holding
Long	6-Aug-08	5.8	21	5	-	2	-	Down

Non Deer Fenced Flats Block

Test		pH	P	S	OS	Na	Ex:Al	Trend
No1 Flats	6-Aug-08	5.6	22	4	-	2	4.8	Down

- Focus continues to be Nitrogen, Calcium and Sulphate, as identified to be most limiting nutrients.

- Note soil test taken from No1 Flats was 6 inch. Exchangeable Aluminium was relatively high at this depth.

2.0. STOCK NUMBERS & PRODUCTIVITY:

Opening Numbers for Yr Ending:	2006	2007	2008	2009	2010	Long Term Target: Scenario 1
DEER:						
Hinds	734	761	778	848	900	1100
R2 Hinds	110	152	265	159	180	220
R1 Hinds	188	360	342	389	430	400
Velveting Stags						
R2 Stags	23	3	39	29	14	20
R1 Stags	196	360	341	401	430	400
Herd Sires	24	27	33	32	44	50
DEER STOCK UNITS	2367	2972	3269	3333	3578	3994
% of Total SU	33%	42%	46%	51%	57%	60%
Productivity kg product	16196	26120	38812	35190	40852	54612
Ewes	2285	2032	2061	856		
Ewe Hoggets	584	728	598	383		
Ram/Wether Hoggets						
Rams	42	38	33	35		
SHEEP STOCK UNITS	2319	2062	2087	884	0	0
% of Total SU	32%	29%	29%	14%	0%	0%
Productivity kg product	45048	12377	59837	43307	0	
Breeding Cows	226	207	206	231	241	240
R2 Heifers	49	50	49	60	50	50
R1 Heifers	70	70	50	100	70	60
R2 Steers	5					
R1 Steers	119	34		18	130	140
Sire Bulls	9	10	6	8	8	6
CATTLE STOCK UNITS	2560	2045	1766.5	2295	2669	2651
% of Total SU	35%	29%	25%	35%	43%	40%
Productivity kg product	55635	32930	25175	30770	47765	44490
TOTAL STOCK UNITS	7246	7079	7123	6512	6247	6645

3.0. DEER POLICY:

“MORE CALVES, HEAVIER AND EARLIER”

- ½ the hinds go to a terminal sire (Wapiti) ➤ ½ the hinds to a Red Stag
- An AI program in Autumn 2006 using Eastern semen from Deer Improvement resulted in 40 weaners with 50% Eastern genetics. The 20 spiker stags were put over R2 Red hinds in 2008 to produce 25% Eastern progeny from first fawning hinds. 10 of these two year old stags were mated with mixed age hinds in Autumn 2009.
- The initial comparison of growth rates of the Eastern weaner stags vs Red or Wapiti Stags looks positive. We need to be confident that the Eastern cross Hinds still maintain a moderate mature hind weight and type (body fat) suitable for hard hill country.
- Aim to maximise number of hinds to terminal sire.
- Increase fawning %
- Increase weaner weight at weaning
- Increase weaner autumn, winter, spring liveweight gains.

3.1. Deer Performance & Targets:

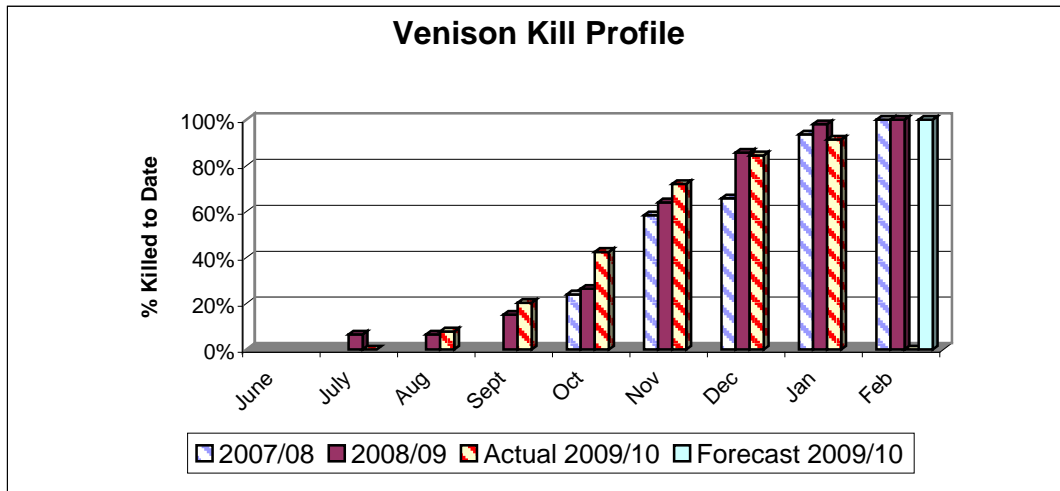
Focus Farm Objectives:

	Pre Focus Farm	2007/08	2008/09	2009/10	Target
Scanning %		98%	96% MA Hinds 90% First Fawners	96% MA Hinds 94% First Fawners*	
Fawning %	85%	91% MA Hinds 73% First Fawners 88% Overall	93% MA Hinds 93% First Fawners		90%
Survival to Sale					85%
Weaner kgLW 10 th March	56 kgLW	56 kgLW	~54kgLW		70 kgLW
Hind Efficiency *					58.5%
Weaner LWG: Autumn Winter Spring		185gms/day Stags 157gms/day Hinds 100gms/day Stags 286gms/day Stags 182gms/day Hinds	150gms/day Stags 157gms/day Hinds 160gms/day Stags 58gms/day Hinds 400gms/day Stags 220gms/day Hinds		300 gms/day 100 gms/day 400 gms/day
	385gms/day Stags from MA 208gms/day Stags from R2 276gms/day AI Hinds 185gms/day MA - Hinds				

Av Venison Carcass	54kgCW	54.2kgCW 2007	53.6kgCW 2008		+10%
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* Hind Liveweight at Weaning / Weaner Liveweight at Weaning

3.2. Venison Kill Profile 2009



Venison Kill Profile:				
	2007/08	2008/09	Actual 2009/10	Forecast 2009/10
June				
July			7%	0%
Aug			7%	8%
Sept			15%	20%
Oct	24%		26%	43%
Nov	58%		64%	72%
Dec	66%		86%	85%
Jan	94%		98%	91%
Feb	100%	100%	0%	100%
Total	409	568	585	
Av kgCW	54.2	53.6	54.2	
Av \$/hd	\$347	\$478	\$444	
Av \$/kg	\$6.4	\$8.9	\$8.2	
Total gms/day	240	249	na	

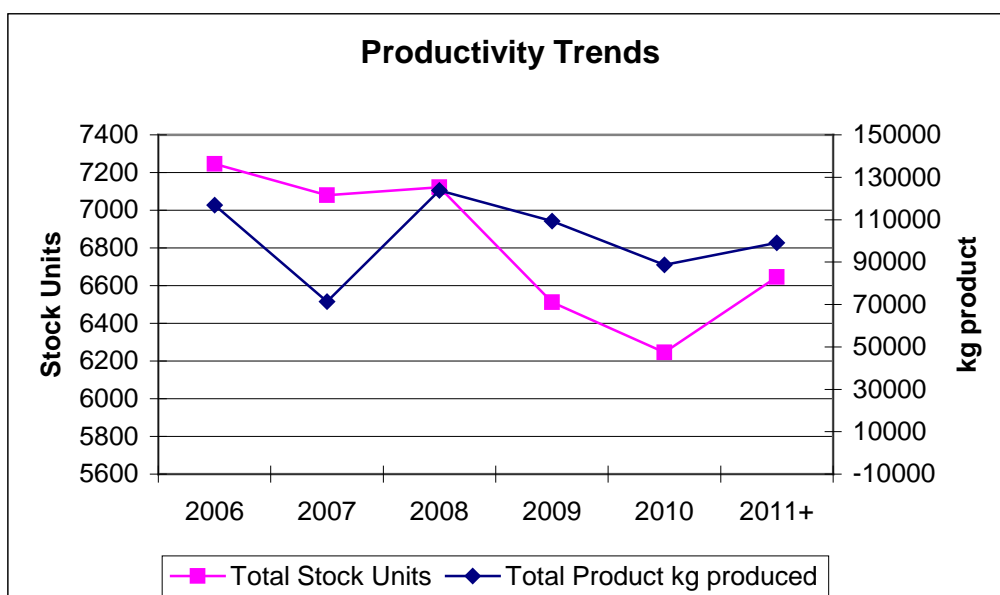
3.3. Deer Block Expansion

Costs to Proposed Deer Expansion:

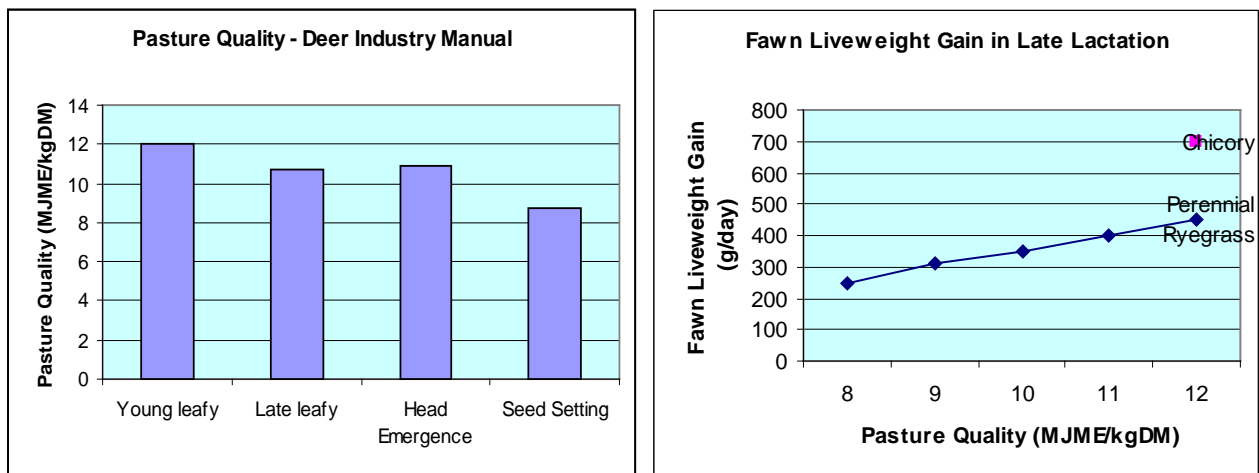
Stock:	Ha		Hind Nos	
RiverFence & DogTrial		105		100
Stock Capital	No		\$/hd	Total
Hinds Required		100	480	\$48,000
	Net Stock Capital			\$48,000
Fencing:	m		\$/m	Total
RiverFence & DogTrial		3100	14	\$43,400
Pdks		1500	14	\$21,000
Water Supply				\$20,000
	Total Capital			\$132,400
Cost Benefit	SU		\$/SU Gross*	Total
Increase in Deer Stock Units		231	\$90.0	\$20,790
	Total Increase in Net Income			\$20,790
	Return on Capital			16%

* \$/SU is Net Return Before Cost of Capital based on \$7.5/kg venison medium term outlook
Is mid point return between finishing and selling weaners as capital includes fencing paddocks

- In reality Ross and Sally are looking to increase overall hind numbers by 200head this year, however 100head of those hinds should be attributed to the deer fencing completed in 2008.
- There are real savings in winter feed from deer fencing this block. It is a warm sunny face where hinds winter really well (proven in 2009) taking the pressure of winter feed reserves on the colder side of the property. This has not been taken account of in the financial workings.
- There may still be further opportunities to lift hind numbers again as overall stock units are significantly lower than previous years HOWEVER it is production and the bottom line we are chasing NOT stock units.

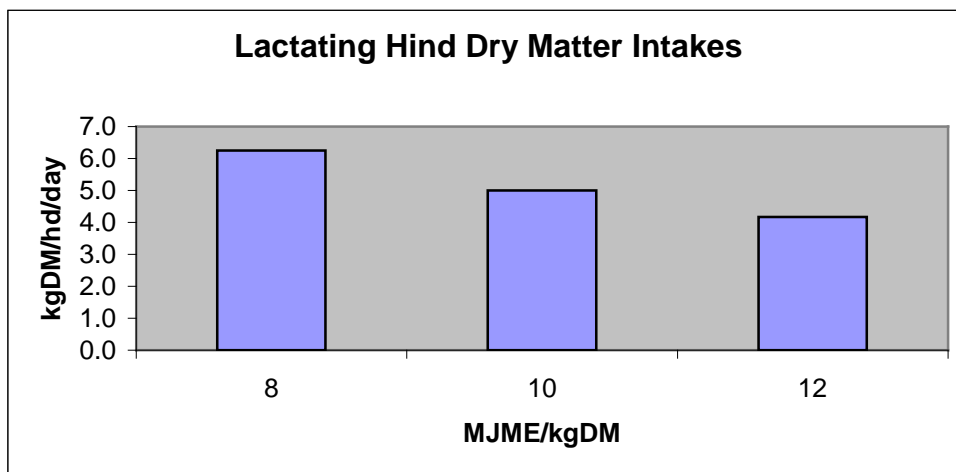


3.4. Late Summer Hind Management



Source of Above: *Deer Master-AgResearch, Invermay (Stevens, et al. 1999)*

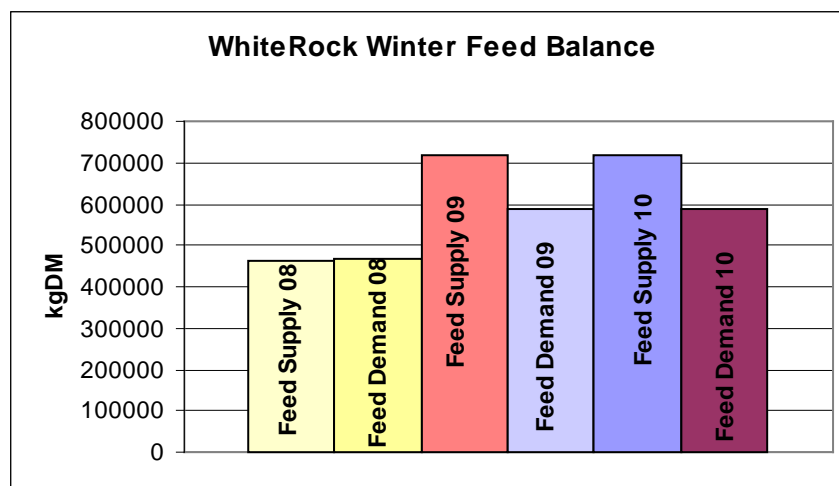
- In late summer on hill country it is difficult to control feed quality which will impact on fawn liveweight gains and weaning weights.
- Introducing species (clover, chicory, plantain) that have a higher feed quality will provide hinds with an alternative to ryegrass/browntop that will be dropping off in feed quality in late summer.
 - Clover and plantain can be successfully oversown on hill country.
 - Specialist chicory/red clover and/or brassica forage crops sown on lower country for hinds and fawns to graze in late summer can be a valuable source of high quality feed.
- Controlling feed in the autumn with breeding cows will assist in providing better quality feed for hinds to fawn onto in the spring/early summer.



- A lactating hind has to eat 50% more feed when feed quality drops from 12 to 8 MJME/kgDM.

4.0. FEED BUDGET WINTER 2010:

WINTER FEED BUDGET		Start	Finish	Total Days		
		1/05/2010	1/10/2010	153		
Grass Growth						
Month	Days	Grass Ha	Growth (kgDM/ha/day)		Total	
May	30	160	10		48000	
June	30	160	5		24000	
July	30	160	0		0	
August	30	160	0		0	
Sept	30	160	10		48000	
Total Grass Growth					120000 kgDM	
WINTER SUPPLEMENTS						
Supplements	Units	kgDM/unit	OR m3	kgWet	% DM	Total
Kale/Rape	32	6000				192000
Fodder Beet	6	16000				96000
Rape/Grass	30	1600				48000
Ryecorn	12	2000				24000 On River Terrace
Balage	580	300				174000
Peavine	150	300				45000
Grain						20000
Total Supplements						599000 kgDM
Change in Cover						
Start Cover	Finish	Cover Available	Ha Grass		Total	
1200	1200	0	163		0 kgDM	
TOTAL FEED SUPPLY					719000 kgDM	
FEED DEMAND						
Stock Class	Period	Numbers	Days	kgDM/hd/day	Total	
R2 Heifers						
R2 Hinds	Late June Or	200	100	2	40000	
MA Hinds	Silage on Hil	800	30	1	24000 Rye/Straw/Silage	
MA Hinds	Late Winter	800	45	2	72000	
Weaner Deer	All winter	860	153	1.8	236844	
Weaner Cattle	All winter	200	153	7	214200	
TOTAL DEMAND						587044 kgDM
FEED BALANCE						
Total Feed Supply						719000
Total Feed Demand						587044
Surplus/Deficit						131956



BUDGET 2010**WHITEROCK STATION**

PHYSICAL DATA	Opening SU	Closing SU	% Change	Breeding	MA	R2	Deaths %
BEEF	2568	2566	-0.08	Calving	90%	86%	
DEER	3592	3606	1.35	Fawning	88%	85%	
SHEEP	66		-100.00		Venison		Beef
	6226	6172	-0.32	Av \$/kg	\$7.1		\$2.9

EXPENDITURE**REVENUE**

	\$	\$/su		\$	\$/su
ANIMAL HEALTH	\$21,444		\$3.4 SHEEP	\$2,600	\$39.4
STOCKFEED PURCHASED	\$47,454		\$7.6 SHEEP ADJUSTMENT	-\$8,670	-\$131.4
OTHER STOCK EXPENSES	\$6,100		\$1.0 TOTAL SHEEP REVENUE	-\$6,070	-\$92.0
FEED CONSERVATION	\$17,500		\$2.8 DEER	\$315,512	\$87.8
CONTRACTING	\$600		\$0.1 DEER ADJUSTMENT	\$2,608	\$0.7
CARTAGE	\$3,350		\$0.5 VELVET	\$12,000	\$3.3
FERTILISER & LIME	\$46,840		\$7.5 TOTAL DEER REVENUE	\$330,120	\$91.9
SEEDS & TREATMENT	\$18,000		\$2.9 BEEF	\$135,285	\$52.7
SACKS & SEED DRESSING			\$0.0 BEEF ADJUSTMENT	\$1,635	\$0.6
WEED & PEST CONTROL	\$17,800		\$2.9 TOTAL BEEF REVENUE	\$136,920	\$53.3
REPAIRS & MAINTENANCE	\$12,000		\$1.9 Supplementary Business		
VEHICLE EXPENSES	\$19,574		\$3.1		
ELECTRICITY	\$4,800		\$0.8		
OTHER WORKING EXPS			\$0.0		
ADMINISTRATION	\$9,988		\$1.6		
STANDING CHARGES	\$13,256		\$2.1		
STANDARD FARM EXPENSES	\$238,706		\$38.3 GROSS FARM REVENUE	\$460,970	\$74.0
E.B.I.T.*	\$222,264		\$35.7		
WAGES OF MANAGEMENT	\$55,000				
ECONOMIC FARM SURPLUS	\$167,264		\$26.9		

* Earnings Before Interest Drawings & Tax

	2006	2007	2008	2009	2010	Long Term Target: Scenario 1
Total Stock Units	7246	7079	7123	6512	6247	6645
Total Product kg produced	116879	71427	123824	109267	88617	99102
Gross Stock Return	\$350,302	\$313,642	\$398,916	\$508,846	\$460,970	\$542,198
Farm Working Expenses	\$197,378	\$204,665	\$255,011	\$211,386	\$238,706	\$247,292
Actual E.B.I.T.	\$152,924	\$108,977	\$143,905	\$297,460	\$222,264	\$294,906
Income \$/kg produced	\$3.0	\$4.4	\$3.2	\$4.7	\$5.2	\$5.5
Farm Working Expenses \$/kg	\$1.7	\$2.9	\$2.1	\$1.9	\$2.7	\$2.5
Actual E.B.I.T. \$/kg produced	\$1.3	\$1.5	\$1.2	\$2.7	\$2.5	\$3.0
Adj Gross Stock Return *	\$442,030	\$336,907	\$570,716	\$503,953	\$449,685	\$543,060
Adj Gross Stock Return \$/kg *	\$3.8	\$4.7	\$4.6	\$4.0	\$5.1	\$5.5
Farm Working Expenses \$/kg	\$1.7	\$2.9	\$2.1	\$1.9	\$2.7	\$2.5
E.B.I.T. *	\$2.1	\$1.9	\$2.5	\$2.1	\$2.4	\$3.0

* Using Static Prices for Sheep (\$3.4/kg), Beef (\$3/kg), Venison (\$7.5/kg) Across Years