



DEER INDUSTRY NEW ZEALAND



SOUTH CANTERBURY FOCUS FARM LOCAL FIELD DAY 27TH AUGUST 12.30PM 4 Wheel Drives Please

“MORE CALVES, HEAVIER AND EARLIER”

Programme 12.30pm: Assemble and bring some lunch, - tea & coffee provided

1.00pm -4.30pm

Welcome & Introductions

Nicky Hyslop Ross & Sally Stevens

Management Season Update

Property Tour

Deer Block

- Scanning Results
- Weaner Kill Profile & Growth Rates
- Management Looking Forward

River Flats

- Use of flats for Silage, Cattle Grazing.
- Self Feed Silage Pit Opportunities

Woolshed Discussion:

Dryland Pasture Options

**Derrick Moot, Lincoln University
John Wallace, PGGWrightson**

Group Discussion:

- Strategies for Increasing Winter Feed Supply eg. Whole Grain Silage
- Questions/issues to be covered at Nov field day on Animal Health.
- Other topics to be covered during the three year program.

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
Nicky Hyslop*

| | | | |
|---------------|---------------|----------------|---------------|
| Deer Farm: | | Other: | |
| 24 paddocks | 185 ha | 10 paddocks | 66 ha |
| 4 down blocks | 71 ha | 3 downs 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

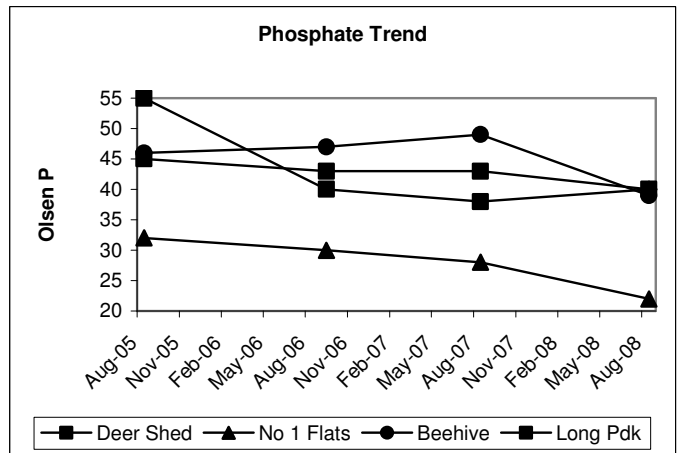
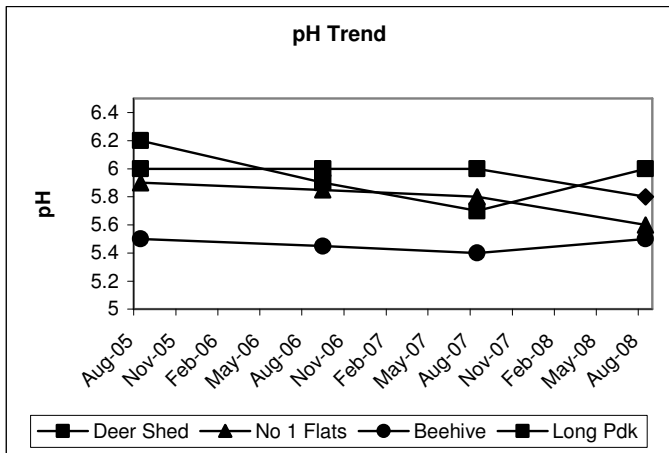
Recent Annual fertiliser policy includes use of Ammonium Sulphate

1.3. Soil Tests (sample of soil tests):

Whiterock Farming Partnership

| <u>Name</u> | <u>Test Date</u> | <u>pH</u> | <u>OlsenP</u> | <u>S Sulph</u> | <u>Al</u> |
|----------------|------------------|-----------|---------------|----------------|-----------|
| Deer Shed | 23/08/2007 | 5.7 | 43 | 14 | |
| Deer Shed | 11/08/2008 | 6 | 40 | 10 | |
| No 1 Flats | 23/08/2007 | 5.8 | 28 | 3 | |
| No 1 Flats | 11/08/2008 | 5.6 | 22 | 4 | 4.8 |
| Beehive | 23/08/2007 | 5.5 | 46 | 5 | |
| Beehive | 5/09/2006 | 5.4 | 49 | 11 | |
| Beehive | 11/08/2008 | 5.5 | 39 | 7 | |
| Long Pdk | 11/08/2008 | 5.8 | 40 | 5 | |
| TV Block | 5/09/2006 | 5.5 | 17 | 8 | |
| Table Top | 5/09/2006 | 6 | 46 | 10 | |
| Little Tussock | 5/09/2006 | 6 | 25 | 11 | |
| Little Tussock | 11/08/2008 | 5.9 | 21 | 7 | 1.2 |
| Sallys | 5/09/2006 | 6 | 48 | 14 | |
| Peel Tussock | 5/09/2006 | 5.8 | 27 | 13 | |
| Middle Pdk | 11/08/2008 | 5.6 | 18 | 10 | |
| Bottom Terrace | 5/09/2006 | 5.9 | 16 | 9 | |
| Andys | 11/08/2008 | 5.5 | 30 | 10 | 2.6 |
| Coal Hill | 23/08/2005 | 5.7 | 43 | 13 | |
| Top Terrace | 11/08/2008 | 5.8 | 21 | 5 | |

1.4. Soil Test Trends of pH and Phosphate:



2.0. CURRENT STOCK NUMBERS:

| | 2005 | 2006 | 2007 | 2008 | Target |
|---------------------------|-------------|-------------|---------------|-------------|-------------|
| Hinds | 734 | 761 | 762 | 1020 | 1400 |
| R2 Hinds | 110 | 152 | 142 | | |
| R1 Hinds | 188 | 360 | 342 | 400 | 400 |
| Velveting Stags | | | | | |
| R2 Stags | 23 | 3 | 39 | 29 | 20 |
| R1 Stags | 196 | 360 | 341 | 400 | 400 |
| Herd Sires | 24 | 27 | 33 | 32 | 50 |
| DEER STOCK UNITS | 2367 | 2972 | 2991 | 3374 | 4154 |
| | 33% | 42% | 44% | 49% | 58% |
| Ewes | 2285 | 2032 | 2061 | 1300 | 1000 |
| Ewe Hoggets | 584 | 728 | 598 | | |
| Ram/Wether Hoggets | | | | | |
| Rams | 42 | 38 | 33 | | |
| SHEEP STOCK UNITS | 2319 | 2062 | 2087 | 1300 | 1000 |
| | 32% | 29% | 30% | 19% | 14% |
| Breeding Cows | 226 | 207 | 206 | 229 | 200 |
| R2 Heifers | 49 | 50 | 49 | 60 | 50 |
| R1 Heifers | 70 | 70 | 50 | 100 | 50 |
| R2 Steers | 5 | | | | |
| R1 Steers | 119 | 34 | | 20 | 50 |
| Sire Bulls | 9 | 10 | 6 | 6 | 6 |
| CATTLE STOCK UNITS | 2560 | 2045 | 1766.5 | 2280 | 1961 |
| | 35% | 29% | 26% | 33% | 28% |
| TOTAL STOCK UNITS | 7246 | 7079 | 6845 | 6954 | 7115 |
| Stock Units Per Ha | 5.6 | 5.4 | 5.3 | 5.3 | 5.5 |

3.1. 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 last year using Eastern semen from Deer Improvement resulted in 40 weaners with 50% Eastern genetics. The 20 spiker stags will be put over R2 Red hinds this year to produce 25% Eastern progeny which will be monitored for performance.
- 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.

3.2. Deer Performance & Targets:

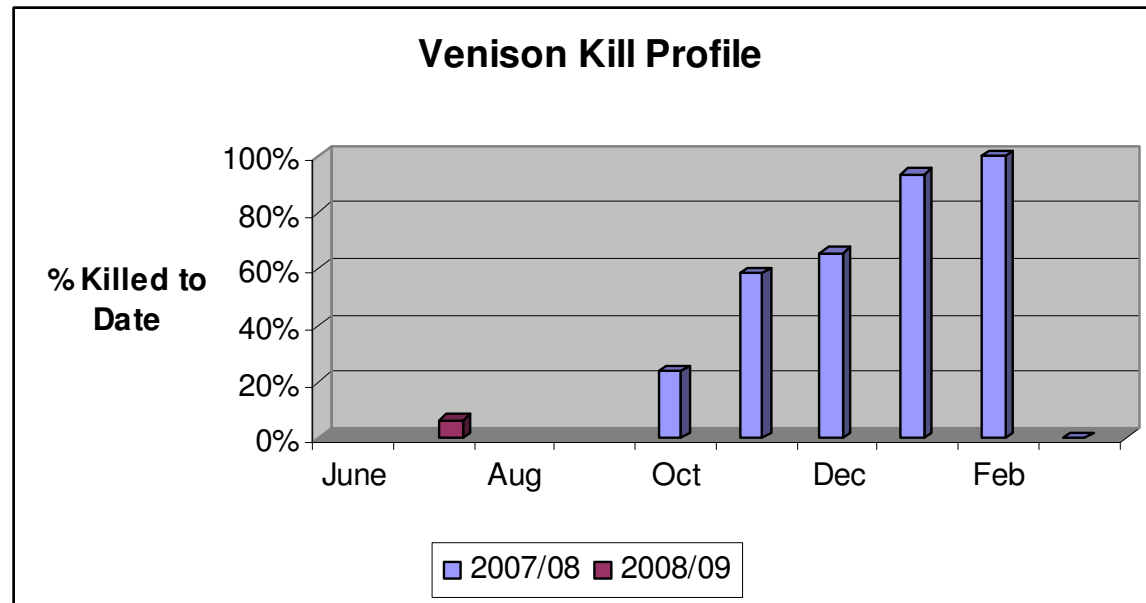
| | 2007/08 | 2007/08 | 2008/09 | Target |
|---------------------------------------|---|--|------------------|-------------|
| Scanning % | | 98% | 96% MA 90% R2 | |
| Fawning % | 85% | 91% MA 73% R2 | | 90% |
| Weaner kgLW 10 th March | 56 kgLW | 56 kgLW | | 70 kgLW |
| Hind Efficiency * | | | | 58.5% |
| Weaner LWG (gms/day) Autumn | | 190gms Wap X 173gms Red Stag 103gms Red Hind | | 300 gms/day |
| Winter | | 30-60gms Wap X 30gms Reds | | 100 gms/day |
| Spring | 385gms Stags - MAH 208gms Stags - R2H 276gms Hinds - East 185gms Hinds - MAH | | | 400 gms/day |
| Av Venison Carcass Weight | 54.2kgCW | | | +10% |

* Hind Liveweight at Weaning / Weaner Liveweight at Weaning

3.2. Weaner Growth Rates

| | 5-Mar-08 | 6-Apr-08 | LWG (gms/day) | 9-May-08 | LWG (gms/day) | 4-Jul-08 | LWG (gms/day) | 22-Aug-08 | LWG (gms/day) | Comments |
|-------------------------|----------|----------|------------------|----------|------------------|----------|------------------|-----------|------------------|--------------------------|
| Wap X Stags - 30 Tagged | 68.8 | 74.9 | 191 | 81.2 | 191 | 87 | 109 | | | 34 killed prime @ 56kgCW |
| Wap X Hinds - 30 Tagged | 66.1 | 72.0 | 184 | 78.2 | 188 | 82 | 73 | | | 3 killed prime @ 55kgCW |
| Red Stags - 30 Tagged | 52.2 | 58.4 | 194 | 64.1 | 173 | | | 67 | 30 | On kale + peavine |
| Red Hinds - 30 Tagged | 49.7 | 54.6 | 153 | 58.0 | 103 | | | 62 | 35 | On swedes + peavine |
| Wap X Stags Mob Av | 64 | | | | | 80 | 128 | 80 | 12 | All weaners received |
| Wap X Hinds Mob Av | 60 | | | | | 75 | 123 | 74 | -24 | Cydetin Pour-On in Aug |

3.3. Venison Kill Profile 2008



4.0. Other Stock Performance:

4.1. Cattle Performance:

- Angus herd
- Progeny kept for Five Star Beef finishing.
- Grazed on hill and deer farm paddocks.
- Maximise calving %
- Maximise weaning LW

| | Scanning % | Calving % | Weaning LW |
|-----------------|------------|-----------|------------|
| Historic | | 90% | 220kgLW |
| 2007/08 | | 90% | 220kgLW |
| 2008/09 | 96% | | |
| Target | 98% | 95% | 240kgLW |

- Cow numbers are up from 250hd to 289hd this winter as a result of dropping ewe numbers and a poor autumn in-calf heifer price.
- Medium term objective is to drop cow numbers back to 250hd as hind numbers increase.
- Decision to sell all weaners but replacement heifers in mid August, to allow weaner cattle to stay on winter feed crop until late September.

4.2. Sheep Policy & Performance:

- Romney/Texel Crossbred flock
- Typically lambs sold store
- Ewe hoggets grazed off farm on sharefarm agreement.
- Aim to maximise lambing %
- Aim to maximise lamb weaning LW
- Graze on dry steep exposed hill country (outside deer farm).

4.2.1. 2008 Scanning Results

| | Tup kgLW | Drys | Single | Twin | Total Ewes | Scan % | Losses ? | Lambing %? |
|-------------|----------|------------|--------------|--------------|------------|----------------------------|----------|-------------|
| 2008 | 56 | 94 7.7% | 714 58.1% | 420 34.2% | 1228 | 127% 2.3* | 15% | 108% |

* Scanning Indice = Scanning % / kgLW at Tupping

| | Scanning % | Lambing % | Weaning LW | Death % |
|-----------------|-------------|-----------|------------|-------------------|
| Historic | 150% | 120% | 26kgLW | 8-10% |
| 200708 Progress | 150% | 115% | 25kgLW | 8-10% |
| 200809 | 127% | | | 6% to date |
| Target | 150% | 125% | 28kgLW | |

- Breeding ewe numbers reduced from 2000 head to 1300 head, with the medium term objective to replace stock numbers with breeding hinds.
- Poor scanning result a direct impact of a high percentage (35%) of light 2ths in the flock. 2ths returned home at 50kgLW in February.

5.0. SPRING LAND USE CHALLENGE:

| Farm Area | 230 ha | | 164ha within deer farm | | Comments |
|-----------------------------|-----------------------------|------------|------------------------|------------|--|
| | October | November | December | January | |
| Growth Rates (kgDM/hd/day) | 35 | 40 | 25 | 15 | |
| Ha Required for: | | | | | |
| Weaners (800hd) | 57 | 35 | 32 | 40 | Eating 2.5kgDM/hd/day, 60% sold by December |
| MA Stags (50hd) | 6 | 5 | 8 | 13 | |
| Calves (120hd) | 34 | 30 | 48 | 80 | |
| First Calvers (50hd) | 17 | | | | On Hill from November |
| Kale/Swedes | 46 | 46 | 46 | 46 | 24ha every year going in and 24ha out |
| Goliath Rape | | | 15.5 | 15.5 | |
| New Grass | 24 | 24 | 24 | | New Grass grazed in January |
| Whole Grain Silage ? | 10 | 10 | 10 | 10 | Could be sown in Autumn and Grazed over Winter |
| Total Area Committed | 194 | 150 | 184 | 205 | |
| Available for Silage | 36 | 80 | 47 | | |
| Estimated Silage: | | | | | |
| Whole Crop Silage | 10 ha | | | | |
| | 10000 kgDM Yield | | | | |
| Grass Silage | 46 ha | | | | |
| | 60 days locked up | | | | |
| | 40 av growth rates | | | | |
| | 2400 kgDM Yield | | | | |
| | 210400 kgDM of total Silage | | | | |

6.0. WINTER FEED OPTIONS:

| Winter Feed Comparison | Silage Made On Farm | | Winter Feed Kale OR Swedes |
|---|---|--|--|
| | Whole Crop Barley | Grass Silage | |
| Direct Costs \$ / Ha | \$1,591 | \$645 | \$1,141 |
| Yield kgDM / Ha | 10000 | 3500 | 10000 |
| Direct Costs c/kgDM | 15.9c | 16.1 | 11.4 |
| Direct Costs c/MJME * | 1.4c | 1.5c | 1.0c |
| Total Feed Required (kgDM): 500 Hinds x 60 days x 2kgDM/hd/day | 60000 | 60000 | 60000 |
| Ha Required | 6.0 | 17.1 | 6.0 |
| Typical Feed Quality: | | | |
| % DM | 38% | 35% | 15% |
| MJME / kgDM * | 11.2 | 10.5 | 11.7 |
| Protein | 12.4 | 14.6 | 14 |
| Other Factors: | Out for ~120 days | Out for 6-8 weeks | Out for 12 months |
| | High yield means small area taken out relative to grass silage | Large area taken out in spring Protein levels higher than whole crop cereal | Includes 15% Hay fed with Kale crop High quality crop grown on small area Only available over winter |
| | Can take as green chop OR whole crop Keep straw length short | | |
| | Can store for long periods | Can store for long periods | |
| Indirect Costs: | | | |
| Feeding Out Opportunity | 6.0c 4.8c | 6.0c 4.8c | 1.5c 6c |
| | Option to self feed | Option to self feed | |
| Sensitivity: | +/- 1000kgDM/ha | +/- 0.8c/kgDM | +/- 1.0c/kgDM |

Setting up a self-feed silage pit – Key Points

By David Stevens, AgResearch Invermay.

Choosing a site

- Well drained.
- Sufficient size for the mob – 0.5 to 2 ha per hundred.
- Assess the need or ability to feed off both ends to maximise the utility of the pit.
- Access for filling.
- Access to the face for feeding.
- Ability to recover site for use at other times of the year (by oversowing or natural recovery).
- Shelter and sun.
- Relationship to water ways/potential to mitigate (ponding areas or wetlands, bunds to keep water away from creeks).
- Regional council requirements.

Designing the pit

- 40-60 hinds per m of face.
- Cater for mobs of up to 700.
- Face length may depend on the amount of stand-off space – less stand-off space will need more face length for all hinds to get a good feed.
- Pit face no more than 2.2 m high, sides (if present to be lower than stack height to allow for drainage off the cover.
- Good firm dry base to allow eating silage to the ground and minimise wastage.
- Barriers – pipe at 220mm centres (wider for wap x), base to extend into feeding area so that the hinds stand on it and lessen likelihood of movement. Make small enough to move with crowbar rather than tractor to minimise damage and effort
- Sides may just be fences around a bun stack, but make sure the barriers go fence to fence

Feeding

- Aim for high quality silage as the hinds will stay on it longer and use less.
- Allow 800 kg wet silage per hind, or up to 1000 kg (1 T) if silage poor quality for a 100 day winter. That is about as long as hinds will want to stay on silage.
- Get silage as dry as possible as long as can roll it well.
- Uncover only enough feed for 2 or 3 days at a time.
- Clean out the rubbish as required to make shifting easy. Don't force the hinds to clean up bad silage.
- Check regularly, especially at the start and towards the ends of the season, should be shifting the barriers every 2-4 days. Slower than this then the silage

8.0. SELF FEED SILAGE PIT – CASE STUDY PEEL FOREST ESTATE

Peel Forest Estate Self Feed Silage:

2007

| Supply | | | | |
|--------------------------|------|---------|-----------------|----------------------|
| Est Silage Used Tonnes | % DM | Kale Ha | Yield (kgDM/ha) | Total kgDM Available |
| 70 | 35% | 8 | 12000 | 120500 |
| 2007 Total Supply | | | | 120500 kgDM |

2008

| Supply Pit 1 | | | | |
|--------------------------|------|-----------|-----------------|----------------------|
| Est Silage Used Tonnes | % DM | Swedes Ha | Yield (kgDM/ha) | Total kgDM Available |
| 130 | 35% | 6 | 13000 | 120900 |
| 2008 Total Supply | | | | 120900 kgDM |

| Supply Pit 2 | | | | |
|--------------------------|------|-----------|-----------------|----------------------|
| Est Silage Used Tonnes | % DM | Swedes Ha | Yield (kgDM/ha) | Total kgDM Available |
| 118 | 35% | 5 | 11000 | 96300 |
| 2008 Total Supply | | | | 96300 kgDM |

2007

| Demand | | | | |
|--------------------------|------------|--------------------|------------|--------------------|
| Stock Type | Number | Demand kgDM/hd/day | Days | Total kgDM |
| MA Hinds | 420 | 2 | 115 | 96600 |
| Steers | 34 | 8 | 85 | 23120 |
| 2007 Total Demand | | | | 119720 kgDM |

2008

| Demand Pit 1 | | | | |
|--------------------------|------------|--------------------|-----------|--------------------|
| Stock Type | Number | Demand kgDM/hd/day | Days | Total kgDM |
| MA Hinds | 640 | 2 | 93 | 119040 |
| 2008 Total Demand | | | | 119040 kgDM |

| Demand Pit 2 | | | | |
|--------------------------|------------|--------------------|-----------|-------------------|
| Stock Type | Number | Demand kgDM/hd/day | Days | Total kgDM |
| MA Hinds | 298 | 2 | 86 | 51256 |
| MA/R2 Stags | 118 | 4 | 86 | 40592 |
| 2008 Total Demand | | | | 91848 kgDM |

9.0. WINTER FEED BUDGET – PHOTO FINISH

| WINTER FEED BUDGET | | Start | Finish | Total Days | | |
|---------------------------|--------------|-----------|------------------|-------------|------|----------------------------------|
| | | 1/05/2008 | 1/10/2008 | 153 | | |
| WINTER SUPPLEMENTS | | | | | | |
| Supplements | Units | kgDM/unit | OR m3 | kgWet | % DM | Total |
| Kale | 32 | 6000 | | | | 192000 |
| Rape/Grass | 11 | 4000 | | | | 44000 |
| Swedes | 4 | 8000 | | | | 32000 |
| Tama/River Fl. | 20 | 1500 | | | | 30000 |
| Andy's | 14 | 1000 | | | | 14000 |
| Silage | On Hand | | to 2ths, calves, | | | 100000 100% of silage |
| Straw | 70 | 250 | | | | 17500 |
| Peavine | 70 | 350 | | | | 24500 |
| Grain | | | | | | 10000 |
| Total Supplements | | | | | | 464000 kgDM |
| TOTAL FEED SUPPLY | | | | | | 464000 kgDM |
| FEED DEMAND | | | | | | |
| Stock Class | Period | Numbers | Days | kgDM/hd/day | | Total |
| 2ths | Post-Scan | 450 | 40 | 40 | 1.2 | 21600 4ha Kale: Fawn Pdk |
| Twin Ewes | Post-Scan | 650 | 50 | 50 | 1.5 | 48750 7ha Kale: House/Laneway |
| MA Hinds | Late Winter | 600 | 60 | 60 | 2 | 72000 10ha Kale: R Tussock/Fa |
| Weaner Deer | June/July/Au | 800 | 115 | 115 | 2 | 184000 Cole/Rock Hill Kale & 4ha |
| Weaner Cattle | May/June/Ju | 120 | 123 | 123 | 6 | 88560 11ha of Turnips/Rape + T |
| Weaner Cattle | Aug/Sept | 50 | 30 | 30 | 6 | 9000 11ha of Turnips/Rape + T |
| R2 Heifers | | 60 | 30 | 30 | 8 | 14400 |
| Stags | | 50 | 120 | 120 | 5 | 30000 |
| TOTAL DEMAND | | | | | | 468310 kgDM |
| FEED BALANCE | | | | | | |
| Total Feed Supply | | | | | | 464000 |
| Total Feed Demand | | | | | | 468310 |
| Surplus/Deficit | | | | | | -4310 |