

*“Making the DIFFerence”*  
DEER INDUSTRY FOCUS FARMS PROJECT

## Central Regions Focus Farm

### “Weaning and beyond”

Tim Aitken and Lucy Robertshawe  
“The Steyning”  
Makaroro Road  
Tikokino

17 February 2010

Principal Local Sponsor:



## Programme

- 10.00 am Smoko at Tikokino hall
- 10.30am Introduction: Mike Holdaway, Chairman Community Group
- 10.35 am NAIT and EID: Tony Pearse- DFA/DINZ position and progress  
Zee Tag and Gallagher demonstration-  
Kim Barfoote, Zee Tags and Colin Ranby, Gallagher Group
- 11.15 am Puberty in deer: Dr Geoff Asher, AgResearch Invermay
- 11.45 am Weaning whys and wherefores: Richard Hilson and Tim Aitken
- 12.45 pm Lunch at Hall: \$10.00 to Tikokino School for boxed lunch + drink
- 1.30 pm Drive to The Steyning for farm update session...
- Venison Outlook: Gerard Hickey, Firstlight, Principal Sponsor
- Farmax Update: Pete Swinburn, Farmax
- Farm Update: Tim Aitken and Richard Hilson- again
- 2010 Cropping: Dereck Ferguson, Agricom- with Tim again

**Please feel free to ask plenty of questions and participate in discussion.**

- 3.30-4.00pm Adjourn to Tikokino pub for session on bullshitting about deer and practice skills for the Deer Industry Conference Field Day in May!

# **NAIT PROGRESS: DINZ and NZDFA position and next steps**

**Tony Pearce, Producer Manager, February 2010**

A NAIT information document is available on line at [www.nait.org](http://www.nait.org) by request from the DINZ office.

## **Recent events**

- 1) Cabinet has supported Minister of Agriculture's recommendation (Jan 26) that NZ proceed to a mandatory implementation of NAIT (National Animal Identification and Tracing)
- 2) The Government will develop and fully fund a new property data base "*Farms on Line*" that includes all current farms (AgriBase) and an estimated 75000 life style blocks
- 3) **Key points on farm**
  - Based entirely on a Low Frequency RFID tag system, used to individually identify cattle and deer from birth to slaughter (or death)
  - Legislation has been introduced to replace current ID law and make it mandatory for all farmed cattle to be in the scheme from mid to late 2011
  - Deer will follow 12 months after that date
  - Any cattle or deer moved from a property after the scheme becomes mandatory will be required to be NAIT compliant.
  - NAIT is designed to allow other species to be added in the future at that level of tracing (individual /herd/ property) needed to manage the market or biosecurity risk of that species
  - The NAIT RFID tag is an approved tag from three manufacturers (ZeeTags, Leader tags & Allflex International), is ordered as before like AHB tags and has been approved as an official AHB secondary tag for used from 2010 for both cattle and deer
  - You can use the tags now and upload information for NAIT when the legislation requirements are completed
- 4) **Practicalities:** (essentially negotiated by the NZDFA) Once compulsory:
  - Weaners will be required to be NAIT tagged and reported to NAIT by 6 months of age (Cattle as well)
  - From some time in late 2012, farmers will have 36 months to RFID NAIT tag all capital stock on farm (cattle as well)
  - It is intended eventually, with 2013 as a target, to have as a bare minimum a dual single tag scheme for both NAIT and the AHB with only one RFID tag. It is however accepted that most farmers will still require a visual tag for ease of management. Combination visual/RFID tags may be approved if they don't increase tag loss rate
- 5) **What you have to do:** (Cattle dairy and deer farmers)
  - Register your property with Farms Online (including lifestyle properties) and keep information up to date (Person in Charge, contact details)
  - Ensure tagging requirements are met
  - Advise NAIT when tags are "live" (ie: in the ear pre-6 months of age)
  - If sending animals direct to slaughter or a sale yard you need do nothing else except fill out the current ASD form (NZFSA and AHB requirement). The processor or sale yard company will advise NAIT of receipt and fate
  - Companies will be obliged in legislation to record and advise tag numbers at slaughter or sale
  - You have to advise NAIT of any two legged transactions you undertake- private or agent-initiated sales from property to property (ie: whether sending or receiving with property information, individual animal ID's and date of movement)
  - Confirm with NAIT the date when animals are received from sale yards
  - Pay NAIT levies as regulated
  - You do this in one of three ways:

- Secure internet facility
- Through a NAIT approved third party provider
- On the phone at cost via a 0900 number

## **8) Administration costs and cost implications**

- Core costs of NAIT up to \$7.02M in capital development and up to \$8.07M operating expenditure
- Government has agreed to fully fund the capital cost and cover the majority of up-front operational funding during the development period
- Dairy NZ, MWNZ and DINZ will provide funding during the delivery phase. The Deer industry will provide 2% of the estimated \$0.8M required
- Annual operating costs will be an estimated \$6M pa. Industry will provide 35% and Government 65% via a levy base with farmers able to be levied through a number of possible systems (tag levy, slaughter levy or production basis) yet to be decided
- For the next two years a NAIT Stake Holder Reference Group drawn from all parties in the current NAIT partnership will oversee governance of the legislation development and delivery phase (like the AHB representatives committee)
- The Stake Holder Reference Group will establish the industry owned operating entity (MWNZ, Dairy NZ, DINZ) and appoint a skills-based Board to the operating entity, charged with the delivery of the operating system.
- Nominations for directors are being called for at present.

## **9) NZDFA and DINZ Perspectives**

- Keen to work with tag manufacturers in supporting the development of a lower cost RFID- based Direct to slaughter tag to reduce cost for 75% plus of deer taking one trip only in a lifetime.
- Seeks assurances that administration will strip out extra costs and duplication and maintain system in its simplest and most practical cost effective form
- Believe with a robust whole of life traceability system in place the potential in the market must be realised with the development and return of some advantage and premium to producers
- Remain concerned that in the transition phase deer and cattle farmers are being asked to invest significantly in extra tag costs, time involved in careful placement of the tags which will be challenging in adult stock, time in registering properties and animals on line and being subject to the imposition of yet another levy.

- Tony Pearce, DINZ

# Achieving 95% in-calf rate for R2 hinds

Geoff Asher, Invermay

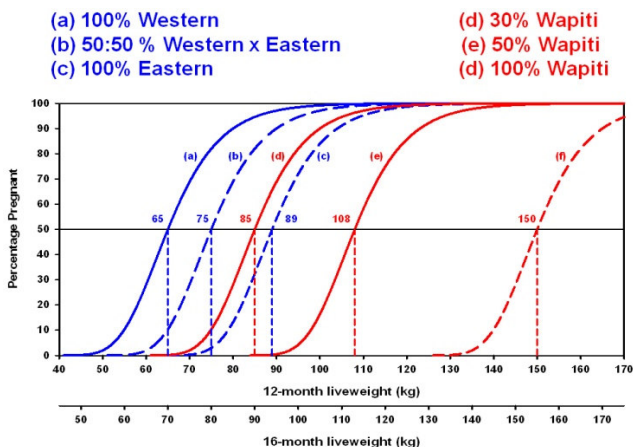
The national average scan pregnancy rate for R2 hinds is 80-85%. Failure of 15-20% of R2 hinds to calve represents significant wastage for the industry. The average figures mask huge variation between farms (<40% - >95%), but the fact that some farmers consistently achieve high pregnancy rates tells us that we can all do it.

**Q. What is the primary cause of the problem?**

**A. The primary cause appears to be puberty failure (ie. failure to ovulate at 16 months of age). This is related to insufficient body weight attainment for hinds to reach puberty**

## The body weight effect.

“The 70% Rule” is generally applied to red deer based on early studies on Scottish red deer hinds: R2 hinds must reach at least 70% of their ultimate mature body weight to reach puberty. However, our deer are of mixed genotypes (ie: composites), each with different mature body mass. This strongly influences puberty weight thresholds...the larger the genotype; the higher the live-weight threshold. This is shown in the graph below for various genotypes and composites (this is based on actual NZ data for all genotypes except 100% Wapiti, for which little data exist). It is important to remember that threshold weights indicate the point at which puberty is reached in 50% of the population...targets for average herd weights for 95% pregnancy rates are somewhat higher than threshold weight, as indicated in the table below.

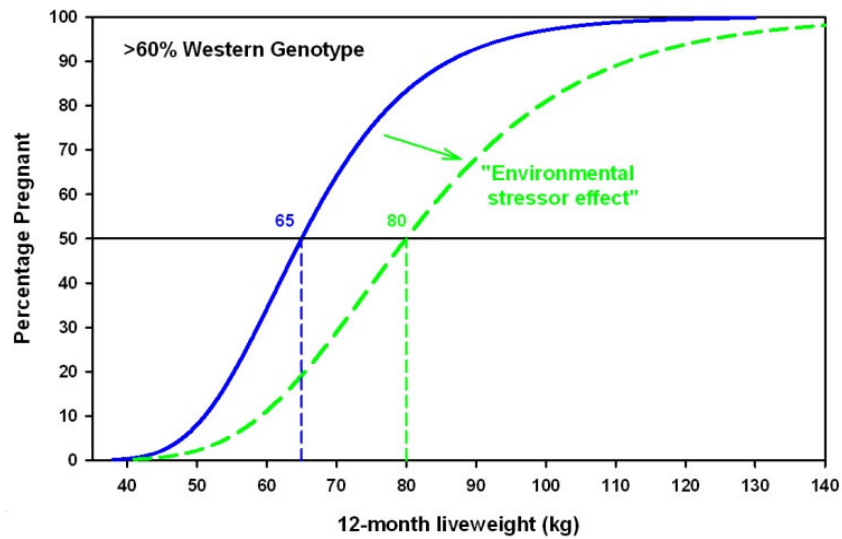


### 12-month live-weight targets

100% Western	85kg
50:50 West/East	95kg
100% Eastern	110kg

**Note:** These targets are average weights of R<sub>2</sub> hinds in the herd in December/January (12 months), and are set 20-30kg higher than the 50% threshold weights for each genotype.

**However:** Poor growth as weaners may increase thresholds and overall targets for each genotype. There is growing evidence that growth checks early in life can change the “70% rule”, forcing hinds to attain a greater proportion of their ultimate body mass in order to enter puberty as R2’s. This concept is shown in the figure below for one composite genotype (60% Western, 30% Eastern and 10% Wapiti)...and is termed the “Environmental Stressor Effect”. We are currently doing further studies on this effect, as it has major implications for management of future replacement hinds.



**Message:**

Optimise growth of future breeding stock from birth onwards. Low weaning weights may severely impact on scan pregnancy rates irrespective of how well they subsequently grow. Puberty is a fragile process and hinds will delay it if things are not quite right in their world!

Other stressors around the time of puberty may also negatively impact on pregnancy rates. Always minimise stress in young breeding hinds. This relates to such factors as avoiding mixing with aggressive older hinds over mating, or using younger, less aggressive sires.

Also remember that R2 hinds initiate ovulatory cycles about 2 weeks later than adult hinds, and stag removal after the rut is usually delayed by 2-3 weeks for young hinds to compensate for the late start...very early stag removal could result in some R2 hinds failing to be mated at their first ovulation.

- Dr Geoff Asher, Invermay

# Central Regions DIFF Focus Farm

Tim Aitken and Lucy Robertshawe, “The Steyning”, Tikokino

What to do with all the grass?

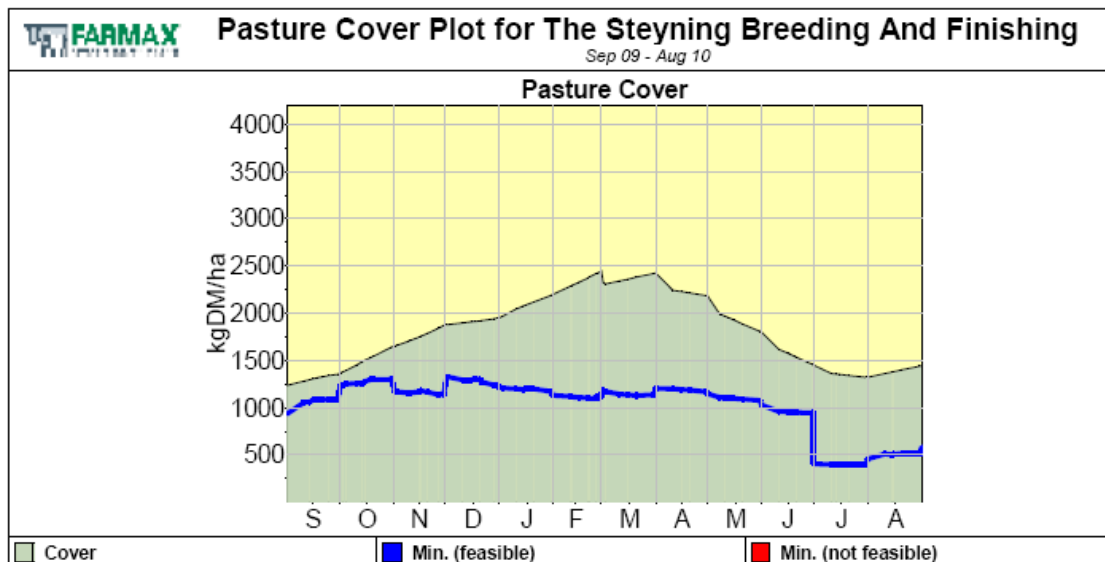
- **an average Spring**
- **but... rain in the Summer!**

How did the spring go?

- Consistent growth rates enabled Tim and Lucy to meet target covers and stock performance. Result - a solid financial performance through two difficult years
  - Silage and hay made on time
  - Lucerne baled all spring
  - Crops in on time
  - Good growth rates on all stock
  - Hinds set stocked on good covers

What was the result?

- Quality, quality, quality
  - The farm was maintained in good quality pasture, setting up a good platform for the autumn
  - Stocking rate was maintained through winter at 10.5su/ha
  - 85% of Bulls slaughtered by January at 295kgCW
  -



*Green area is pasture cover – blue line indicates minimum cover to achieve targets*

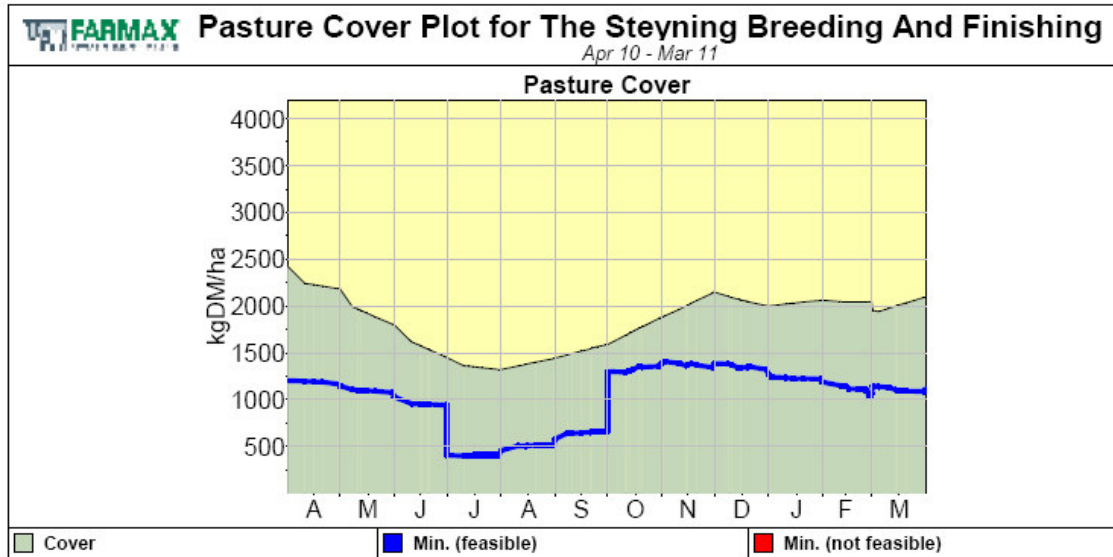
What is the autumn plan?

- Objective is to maintain pasture quality and animal performance
  - Continue to cut Lucerne either for sale or for weaners
  - Oats crop established in February
  - All stock on high residual and good LWG

- Plan to increase Bull LWG into winter to utilise the extra grass

What will winter bring?

- Fodder beet in place for 120 of second cut of fawns
- Oats to be established for 50 R2 Bulls
- 380 MA hinds on self feeding silage
- 58% of winter stock on grass
- Spring surplus utilised



*Green area is pasture cover – blue line indicates minimum cover to achieve targets*

- Peter Swinburn, Farmax

## The Steyning Farm Summary

### Land Resource

Farm Area:

98ha	Flat
70ha	Low easy contoured hill country
80ha	Medium contoured hill country
30ha	Easy contoured north facing hill
7.6ha	DoC Reserve
31.4ha	Lanes, Yards, Wetlands, Shelterbelts etc
<b>317ha</b>	<b>Total</b>

Labour: Tim and Lucy

Rainfall: approx 1100 to 1300mm

Soils: Kapua and Raumati silt loam,

Fertility pH 5.8 to 6.3 and Olsen P levels 9 to 20  
Predominantly used RPR based fertilizers.

Phosphate Retention ranges from 95% on the flats to 38% on the Hills.

52 main paddocks

Water pumped from spring and reticulated to 33 troughs and main dwelling, rest of farm springs, streams and dams

### Livestock

Deer policy: 620 head breeding hinds producing replacements.

Weaning Late February

Yearling stags slaughtered (65% slaughtered Sept/Oct/Nov)  
Balance in autumn or second winter

Surplus in-fawn R2 hinds sold live

Cattle Policy: Bulls traded as required to maintain feed quality

Sheep policy: there is no need for a sheep policy!

## Stock Numbers

30-Jun-09

30-Jun-10

	<u>Class</u>	<u>Number</u>	<u>Su</u>	<u>Total</u>	<u>Number</u>	<u>Su</u>	<u>Total</u>
<b>Cattle</b>	R2 Bulls	<b>133</b>	4.0	532	<b>147</b>	4.0	588
	Total Beef	<b>133</b>		532	<b>133</b>		133
<b>Horses</b>	Horses	<b>17</b>	7.0	119	<b>15</b>	7.0	105
<b>Deer</b>	R1 Hinds	<b>261</b>	1.5	392	<b>271</b>	1.5	407
	R2 Hinds	<b>136</b>	2.0	272	<b>120</b>	2.0	240
	MA Hinds	<b>469</b>	2.2	1032	<b>495</b>	2.2	1089
	R1 Stags	<b>263</b>	1.7	447	<b>274</b>	1.7	466
	R2 Stags	<b>23</b>	2.1	48	<b>15</b>	2.1	32
	Sire Stags	<b>12</b>	3.0	36	<b>15</b>	3.0	45
	Total Deer	<b>1164</b>			<b>1249</b>		
	Total stock units wintered			<b>2878</b>			<b>3079</b>
	Effective area		281 ha			281 ha	
	su/ha wintered		10.2			11.0	

Based on DIFF's new Standard Stock units for deer

## **Tagging 2010**

- Fawns tagged in sire groups in early January.
- Overall fawning disappointing at 90%: MA were 91.5% (not including B11 mated group), B11 mated MA were 88% and first fawners 78%
- Let down by first fawners and AI back up hinds at 77%. This is the second year with a poor result from back up hinds- put down to the paddock choice as they were 56% last year.
- Overall result with back up hinds was 94.4%, which is very good
- Hind/fawn pairs identified for the first time, using spotting scope and patience.

## **Mating 2010**

- 20 spikers retained for mating duties 2010. Average weight 1 Dec 124 kg (113-142).
- 59 other spikers still on farm, primarily due to spike growth rather than bodyweight.
  
- 120 R2 hinds retained (170 retained in 2008- overmated due to johnes).
- R2 hinds retained. Average weight 1 Dec 89 kg (81-106 kg).
- No wapiti or johnes group hinds retained so less to pick from. About 4 kg lighter than normal.
  
- 150 hinds to be artificially inseminated.
- Other MA hinds to be naturally mated by three year stags in single sire groups 1:50 and back up second week April.
- New stag (son of Megamilian) purchased from Wilkins Farming- 12 month EBV 21.3 kg and highest eye muscle area available. Top priced stag at that sale. He will be mating AI-bred hinds in 2010.

## **Slaughter stock**

- Stags were about 8 kg ahead on Farmax figures (compare with yearling hinds).
- 15 wapiti hinds killed so far (to make up a line of 30) killed out at 53.1 kg. Reds in same line were 51.8 kg. Note that top reds have been retained for breeding though.
- Average carcass weight of spring-kill deer was 54 kg. Limited by spike development in stags and had to kill a bit lighter than desirable.
- Killed 20 spikers on 8 February at 66.8 kg.

## **Weights Red (AI and natural mating) and Wapiti**

- Weights at beginning September (end of winter)...  
21% of males killed early September (if keepers included as big enough to have gone).

AI Reds on crop	88.7 – were 78 in June (117 g/d)
NM Reds on crop	86.9
Waps on crop	88.0 – were 73.5 in June (159 g/d)
AI red stags and NM backup	84.8 (51-104 kg)
Wap stags NM total mob	81.4 (46-112 kg)
AI Reds kill out	61.1%
NM Reds kill out	59.2%
Wap kill out	60.4%

Slight advantage to DIL deer in all areas.

Wapiti let down by tail end and variation in size- reflecting their genes and gene mix?  
 Biggest wapiti bigger than biggest AI yearling in September.  
 No further stag comparisons as Wapiti killed in spring as planned.

- R2 hind weights December...

Mating mob	Weight Dec 09	
AI hinds	87.3	↘
AI back up	80.3	→ Av. AI and back up 85.4
BFP stag	83.4	
CIRD stag	83.7	
SERD stag	86.8	
Spiker	82.2	
Wapiti	85.4	
Johnes	79.4	cf. JML data

### Silage conserved

- Huge amount of silage cut- stack overflowing (approx 500 wet tonnes) and last 2.5 ha went into hay instead. A common HB problem right now with the best spring in absolutely ages.

### Cropping

- 2 hectares fodder beet planted for R1 deer in winter.
- Estimated yield about 30 DMt/ha

### New deer shed

- Purchased 12x18 metre shed- to be built part way down the drive with access to all deer lanes. Internal design yet to be decided.
- Gallagher EID system in use in old shed and fawns all have Zee EID tags.