



NAIT

BARRIERS AND OPPORTUNITIES FOR NEW ZEALAND SHEEP FARMERS



PREPARED FOR THE KELLOGG RURAL LEADERSHIP COURSE 2011

BY RICHARD YOUNG

131 MURNEY ROAD, TAPANUI

EMAIL: richkeri@farmside.co.nz

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1. Executive Summary

New Zealand's agricultural sector is critically important to New Zealand's economic future. For Primary Sector and Economic Growth we must give assurances to our trading partners that New Zealand protein products are safe, healthy and disease free. To do so, Industry along with Government support have formulated an Animal Identification and Tracing System that will bring New Zealand into line with other exporting countries.

NZ's National Animal Identification and Tracing System (NAIT) has been formulated over the period 2004 – 2011. The NAIT system will link people, property and animals. NAIT legislation is currently before parliament with the expected passing of the Bill set down for early 2012. NAIT becomes mandatory for cattle in July 2012 and deer in March 2013. The NAIT Bill allows for the inclusion of other species at a later date.

Much of the apprehension surrounding NAIT for sheep farmers, exists not so much in the concept but in the lack of detail. This is not surprising given that NAIT Ltd has not released any detail to-date, let alone even considered sheep inclusion.

New Zealand's sheep sector is unique:

- Animal populations are significantly larger than any other species
- Progeny for slaughter is on-farm for shorter periods than other species

These unique characteristics expose barriers that would make the implementation of a NAIT system, the same as that for cattle and deer, awkward and costly to implement. Modifications to NAITs present system would alleviate many of these barriers.

Opportunities would exist if a NAIT system for sheep was implemented. Some opportunities could be realised immediately, however opportunities for market access and disease out-break management may not actually be realised until we (god forbid) actually have a food safety issue or an exotic disease out-break.

NAIT may well be the insurance needed to guarantee the continuing viability of sheep farming in New Zealand

2. Introduction

NAIT is New Zealand's chosen system of Animal Identification and Tracing that will link people, property and animals.

NAIT will become mandatory for cattle from 1st July 2012 and deer from 1st March 2013.

NAIT Legislation will allow for the inclusion of other species at later dates. Sheep farmers are becoming increasingly concerned about what NAIT will mean for them.

Objective

1. Identify what sheep farmers see as the main barriers and opportunities, if NAIT is introduced for sheep.
2. Identify the fundamental differences for NAIT with sheep vs NAIT with cattle and deer.
3. Identify sheep farmers' current understanding of what NAIT is and whether they see the inclusion of sheep as likely and positive.

Approach

A survey was carried out, to canvas the thoughts of sheep farmers. Once responses were collected the 3 main responses in relation to barriers/opportunities and fundamental differences were identified. The analysis of results may give some indication as to why NAIT may need to be unique for sheep. In identifying the barriers and opportunities, it may become clear to farmersthat:

- a) NAIT is necessary to protect our reputation in overseas markets.
- b) NAIT will safe-guard our agricultural sector and economy if exotic disease out breaks and/or food safety issues ever occurred.
- c) NAITs benefits will out-weigh costs.

And become clear to NAIT Ltd that:

- a) NAIT for sheep needs to be treated differently to NAIT for cattle and deer.
- b) NAIT for sheep needs to accommodate the fundamental differences that the sheep industry exhibits.
- c) Sheep farmers are totally committed to the protection of their reputation for 'safe food' in our export markets.

3. NAIT - 2004 - 2012

3.1 In the Beginning

The NAIT scheme is an industry led initiative. Begun in 2004, industry recognized the need to meet international biosecurity regimes and approached the government to work together to improve animal tracing in New Zealand.

Following a Foot and Mouth hoax on Waiheke Island in 2005 it was clear that New Zealand needed an enhanced traceability scheme. This hoax, if real, found it next to impossible to track individual disease-carrying livestock. Systems were disconnected, largely manual and too slow. Had this hoax been real, New Zealand agricultural exports could have been blacklisted by international markets. Billions of dollars could have been lost to New Zealand's economy and agricultural industry. This prompted immediate industry action.

A collaborative and jointly funded venture, which included the following parties, was established in 2006. Its main aim was to establish a national animal identification and tracing system – NAIT.

- 1) Crown i.e. MAF as lead and NZ Food Safety Authority
- 2) Dairy NZ
- 3) Dairy Company Association (DCANZ)
- 4) Meat and Wool (now Beef+Lamb NZ)
- 5) Meat Industry Association of NZ
- 6) Federated Farmers
- 7) Deer Industry NZ

Recognizing these issues and the impact they would have on the NZ economy and NZ agricultural sector, the NZ agricultural industry approached the Government with a business case in November 2009. In December 2009 the Government agreed to fund the development of a mandatory national animal identification scheme for cattle and deer.

'A conservative cost benefit analysis in 2009 showed a net benefit to the NZ economy of \$141 million over 15 years for implementing the NAIT scheme.

Table 3: Quantitative costs and benefits of NAIT and FarmsOnLine (over 15 years)

	Base case \$m	Minimum \$m	Maximum \$m
Quantified Benefits (% of total benefit)			
Biosecurity efficiency and effectiveness – reduced costs of response activity and mitigate flow-on impacts (10.6%)	29.0	25.8	45.5
Biosecurity reputation in the beef market – avoidance of loss from loss of access to key markets (35.6%)	98.0	61.2	158.2
Market response to traceability – maintain access to premium high-value beef markets (44.1%)	121.4	23.4	217.6
On-farm cost offset – savings on reading and recording on-farm of animals (8.7%)	23.8	23.8	23.8
Other quantified FarmsOnLine benefits (2.1%)	6.1	6.1	6.1
Present value of Total Benefits	275.2	137.2	448.0
Quantified Costs (% of total costs)			
NAIT development and operating costs (33.7%) shared between Crown 35% and industry 65% (Budget 2008 Appropriation)	57.6	43.5	57.6
On-farm costs – additional industry tagging and data upload costs (50.3%)	85.9	66.2	111.9
Processors & Intermediaries costs – industry infrastructure setup and ongoing operating costs (7.2%)	12.3	5.3	12.8
FOL development and operating costs (9.4%) borne by Crown	16.0	16.0	16.0
Present value of Total Costs	170.7	130.6	197.1

The property data held by FarmsOnLine will be freely accessed and re-used by NAIT, reducing costs for the NAIT system as property would otherwise have to be built into its design and maintained by the NAIT parties. This 'free' data-reuse benefit for NAIT is therefore a true NAIT benefit and is not double-counted in the combined NAIT and FarmsOnLine cost benefit analysis. Assuming that NAIT uses FarmsOnLine property data, the Net Present Value of the NAIT system alone is \$141.3 million over 15 years, with an internal rate of return of 32.4 percent and a benefit to cost ratio of 1.81:1.¹

Industry agreed that without NAIT there are risks of losing market share and/or value during an outbreak of a disease. The benefits to farmers and the economy of implementing NAIT far outweigh the costs.

¹ NAIT Regulatory Impact Statement December 2009

3.2 The Bill – The First Reading

The NAIT Bill was first introduced to Parliament on 9/12/2010 with its first reading on 14/12/2010. On its first reading the Hon David Carter (Minister of Agriculture) stated the intention to move that the Bill be considered by the Primary Production Select Committee. The Primary Production Select Committee received 16 submissions on the bill and heard 10 oral submissions. They reported back on the Bill on 13/7/2011. Recommendations were for minor amendments and the Bill could go before Parliament for its second reading.

Recommendations included

1. Change to commencement date as scheme now unable to meet original time frame of November 2011. Amendment sets 1 July 2012 as the mandatory date for tagging cattle. Other obligations e.g. registering locations and movements become mandatory by no later than 1 November 2012.
2. All obligations for deer will apply from 1 March 2013.
3. Amendments making the Bill more user friendly and removing unnecessary compliance costs were made (refer appendix 1)

3.3 The Bill – The Second Reading

The NAIT Bill's second reading occurred on the 6th of September 2011.

Key points associated with the second reading as put forward by Hon David Carter were

- *The primary Production Committee received 16 submissions on the bill and heard 10 oral submissions.*
- *For economic growth it is critical to maintain our reputations as world leaders in the production of top quality animal products .To do this we must improve the information we hold on livestock, including their life history and location, so that we can give assurances to our trade partners that NZ product is healthy and disease free.*
- *NAIT scheme will reduce reliance on paper based systems when decisions are needed quickly.*
- *NAIT scheme can support improved productivity and on farm management.*

In support of the Bill, Labour's Dr Ashraf Choudhary commented, "*key exporting countries around the world already have animal identification and tracing schemes in their systems. We are the ones that have actually been slack.*"

He also noted "*This identification will start with cattle and deer because as we get into the system we have to ensure we start with animals that are easily traceable. Of course the next step will be to go to sheep in future years, but because of the numbers—30 million sheep—it will not be easy or cheap*"

The NAIT Bill on its second reading received cross-party support in parliamentary debate which bodes well for the NAIT Bill being passed.

The NAIT Bill was set down to be passed into law in October 2011, however due to unforeseen circumstances this has been delayed. It is expected that the bill will be passed in early 2012.

3.4 The Legislation

The NAIT Bill consists of six parts – purpose, governance, obligations of participants, information and enforcement, as well as the day to day running of the programme.

A quick overview of each part is as follows:

Part 1: Purpose

The purpose of this Act is to establish an animal identification and tracing system that:

1. Provides for rapid and accurate tracing of individual or groups of NAIT animals from birth to death or live export;
2. Provides information on the current location and movement history of individual ,or groups of, NAIT animals;
3. Improves biosecurity management;
4. Manages risks to human health arising from residues in food, food –borne diseases, and diseases that are transmissible between animals and humans; and
5. Supports improved animal productivity, market assurances, and trading requirements.

Part 2: Governance

NAIT Limited or other entity to act as NAIT organisation for specified period

(1) NAIT Limited must perform the functions and duties, and exercise the powers, of the NAIT organisation specified in this Act or regulations made under this Act for the period.

(a) beginning with the commencement of this section; and

(b) ending on the date specified with the designation of an entity as the NAIT organisation under section 8.

The NAIT Bill authorizes NAIT LTD to issue standards, policies and rules necessary for the operation of the NAIT scheme.

Part 3: Obligations of persons participating in NAIT scheme

Overview

Key obligations

This Part provides for the key obligations of persons in day to day charge of NAIT animals.

Those obligations are (without limitation) to—

- (a) register as a PICA with the NAIT organisation; and
- (b) register with the NAIT organisation, as a NAIT location, any location where NAIT animals are to be kept or held; and
- (c) identify a NAIT animal with a NAIT device and register the animal with the NAIT organisation; and
- (d) declare the movement of NAIT animals from 1 NAIT location to another; and
- (e) declare the compliance of NAIT animals with NAIT requirements; and
- (f) declare the death, loss, or intended export of NAIT animals; and
- (g) provide correct and up-to-date information to the NAIT organisation as required by or under this Act.

These obligations apply to every PICA—

- (a) to the extent that they are applicable in particular circumstances; and
- (b) unless a matter qualifies for an exemption under regulations made for that purpose under this Act.

There are also obligations for owners or nominated representatives of owners to register sale-yards and meat processing facilities (must be registered as PICA's). Manufacturers of animal identification devices also have obligations under Part 3 of the NAIT Bill.

Part 4: NAIT Information System

Establishment and management

(1) The NAIT organisation must maintain the NAIT information system.

(2) The NAIT organisation must appoint a NAIT information system administrator to manage access to the NAIT information system.

Purposes of holding core data

Core data is held in the NAIT information system for the following purposes:

- (a) to enable the NAIT organisation, a NAIT officer, or a NAIT authorised person to exercise their powers and carry out their functions and duties;
- (b) to assist other persons with duties under this Act to carry out their duties;
- (c) to facilitate the purposes of the Animal Products Act 1999, Biosecurity Act 1993, Commodity Levies Act 1990, Primary Products Marketing Act 1953, and any other enactment relating to animals or animal health;
- (d) to facilitate the purposes of the Animal Products Act 1999, the Biosecurity Act 1993, and any other enactment relating to animals or animal health:

- (e) to respond to the following human health issues:
 - (i) food residues associated with animals:
 - (ii) food-borne diseases associated with animals:
 - (iii) diseases transferable between animals and humans:
- (f) to provide data supporting productivity, market assurance and trading requirements:
- (g) to respond to natural disasters or requests from emergency services when rapid access to data on animals and people is needed to manage risks to life and welfare:
- (h) to provide statistical data for policy development and related advice about the industries to which this Act applies:
- (i) to enable the NAIT organisation to publish general agricultural statistics under section 49:
- (j) to provide data to enable a potential purchaser of a NAIT animal to trace the history of the animal over its life.

The NAIT database will store information about each animal's individual RFID number, its location, and the contact details of its Person in Charge of Animals (PICA). The database will meet animal tracing requirements for New Zealand.

At present data is held on several databases, it is hoped that the "FarmsOnLine" database will bring all the relevant data together.

FarmsOnline is a government-owned database that brings together existing information about the ownership and management of all rural properties, land use, stock and crops. The integrity of the NAIT scheme relies on being able to identify the property on which the animals are located. Where possible, this information will be sourced from FarmsOnLine and confirmed during the NAIT registration process.

NAIT's information system will be known as FarmsOnLine.

[Part 5: Compliance and enforcement, immunities, cost recovery, regulation-making powers, and transitional, repeal, and amendment provisions.](#)

Part 5 is an exhaustive part to the Bill which gives much detail to the finer aspects to administering the day to day running of NAIT.
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3.5 NAIT Ltd

The NAIT Bill authorises NAIT Ltd. to issue standards, policies and rules necessary for the operation of the NAIT scheme.

NAIT Ltd. was established in April 2010.

NAIT Ltd. shareholders are as follows-

1. Dairy NZ - 53.5%
2. Beef+Lamb NZ - 44.5%
3. Deer Industry NZ - 2%

NAIT's shareholders appointed an initial Board of Directors on the recommendation of the Stakeholders Reference Group.

The members of the Board are listed on the following page.

NAIT's Board of Directors



Ted Coats: Chairman

Ted is a dairy farmer from the Waikato with wide dairy sector interests and experience. He has been involved in dairy-related governance positions for many years and was elected Chairman of the inaugural NAIT Ltd Board in April 2010. Ted also holds board positions with the Livestock Improvement Corporation (LIC), New Zealand Animal Evaluation Limited, and the Animal Health Board (AHB). He has been a director for both Dairy Insight and DairyNZ, and was a National Councillor for Matamata and served as DairyNZ's appointee to the AHB's Representatives' Committee. Ted was overall winner of the 1998 Environment Waikato Farm Environment Award and led the national judging team for the Ballance Farm Environmental Awards.



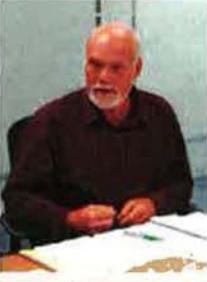
Jeff Grant: Director

Jeff is a deer and sheep farmer with extensive primary sector experience in leadership, governance and the political process. Jeff is currently a director of the Animal Health Board (AHB), Southland Building Society Bank and Finance Now Limited. Jeff is also chairman for Wool Grower Holdings and Massey and Lincoln University's Pfx Trust, and is a trustee for the Agricultural and Marketing Research Trust. Jeff has served as chairman for many primary organisations including the Primary Industry Council, Meat Research and Development Council, New Zealand Meat Board and Meat and Wool New Zealand. In addition, he has also held directorships with the New Zealand Meat Board, Meat and Wool New Zealand, Invest South, PGG Wrightson and Landcorp. Jeff was a Member of Parliament from 1987–1993, and held the position of Senior Whip from 1990–1993.



Lesley Campbell: Director

Lesley has more than 20 years experience in the primary production sector. Lesley brings to NAIT her vast experience working with government agencies and ministers, and her ability to lead change and manage diverse and complex industry stakeholder interests. Lesley is currently the Chief Executive of the Commercial Fisheries Services Limited (FishServe). She is also a director of FINNZ, a subsidiary consulting company of FishServe. Lesley's areas of expertise include strategic and business planning, budgeting, cost recovery processes, policy development and preparation of legislation, and converting legislation into operational systems.



Lindsay Burton: Director

Lindsay is a veterinarian who has been involved with the dairy industry for many years, in particular with artificial breeding and research. Lindsay has been a key participant in NAIT since 2005 and was Chairman of the NAIT Technical Advisory Group before the NAIT Board was elected in 2010. Lindsay is currently the Risk Management Programme Manager for Fonterra. He is also chairman of the Johnes Disease Research Science Group, a director of the New Zealand Johnes Disease Research Consortium, reviewer of the New Zealand National Pest Management Strategy for Bovine Tuberculosis, and an advisor on national biosecurity, disease surveillance and incursion management issues and programmes to the Dairy Companies Association New Zealand and DairyNZ. Lindsay has also held leadership positions with the New Zealand Dairy Board and Livestock Improvement Corporation.



Steve Wakefield: Director

Steve is an accountant and has extensive experience in many areas of accounting, auditing, and business consulting, including large-scale information systems and technology planning and implementation projects. Steve is currently Managing Partner of the Deloitte Christchurch office and has been with Deloitte for more than 30 years in New Zealand, Britain and the United States. He also leads their Consulting Services. Steve specialises in business process improvement, and governance and direction of major IT and change programmes. Steve has experience working with clients in a wide variety of industries and business sectors including Lincoln University, the Christchurch City Council, Gough Group, Synlait Milk, Fletcher Building and PGG Wrightson. Steve's experience as a board member includes the Court Theatre, Canterbury Cricket, Youth Hostel Association NZ and Fendalton School.

3.6 Stakeholder Reference Group

NAIT's Stakeholder Reference Group (SRG) provides an industry link between its shareholders and the Board of Directors.

The SRG is made up of nine Industry representatives, plus an independent chairman.

Key role and functions of the SRG:

- Advising and making recommendations to the NAIT Board (and MAF) on operational policy and strategy matters in relation to NAIT.
- Monitoring the progress of the programme of work required to establish NAIT.
- Making recommendations to the shareholders regarding individuals to be appointed or removed as directors on the NAIT Board.
- Advising the shareholders regarding the remuneration of the NAIT Board.
- Advising and making recommendations to the NAIT Board on strategic decisions or material changes to the NAIT scheme.

Members

The current SRG members (listed alphabetically after the chair) are:

- Ian Corney - Independent Chairman
- Andrew Fox - Beef + Lamb New Zealand
- Chris Mawson - New Zealand Food Safety Authority (NZFSA, MAF)
- Anders Crofoot - Federated Farmers (FF)
- Kevin Old - Dairy Companies Association of New Zealand (DCANZ)
- Mark O'Connor - Deer Industry New Zealand (DINZ)
- Michael Spaans - DairyNZ
- David Hayes - Ministry of Agriculture & Forestry (MAF)
- Tim Ritchie - Meat Industry Association (MIA)
- Doug Cartridge - New Zealand Stock & Station Agents Association

4. Survey Results

NAIT - Barriers and Opportunities for NZ Sheep Farmers

50 survey forms were sent out to sheep farmers mainly in the Otago and Southland regions. 22 forms were returned and a further 6 surveys were conducted over the phone or in person with people who had received the original survey. The 3 main responses were taken into consideration for questions 6, 7 and 8.

Q1- are you aware of the present NAIT legislation before Parliament?

Yes – 24 responses

No – 4 responses

86% aware of NAIT legislation before Parliament.

Q2 – Are you aware of the details of this legislation?

Yes – 19 responses

No – 9 responses

68% aware of the details of legislation.

Q3 – Are you aware of the mandatory obligations coming into place for cattle (Nov 2011) and Deer (March 2013)?

Yes - 26 responses

No – 2 responses

93% aware of mandatory obligations for cattle and deer.

Q4 – Are you aware that NAIT legislation allows for the addition of other species (e.g. sheep, goats etc) at a later date?

Yes - 23 responses

No – 5 responses

82% aware that NAIT legislation allows for the addition of other species at a later date.

Q5 – Given that NAIT legislation may at some time include sheep do you see this as?

- A. Likely Yes – 23 responses
 No – 5 responses
 82% see the inclusion of sheep as likely
- B. Positive Yes – 12 responses
 No –16 responses
 42% see the inclusion of sheep as positive

Q6 – Do you see any fundamental differences with NAIT for sheep and NAIT for cattle and deer?

- Number of animals. (93%)
- Time animals are on farm leading up to slaughter. (79%)
- No risk of TB, BSE or BVD in sheep. (75%)

Q7 – What do you as a sheep farmer see as the main barriers for a NAIT type system if implemented for sheep?

- Cost – both on farm costs associated with tagging etc and the added cost to farmers of having to front up to administer a NAIT type system.(100%)
- Logistics of having to tag animals given the numbers and scope in some cases. (78%)
- Will NAIT increase farm gate returns or is it just more compliance. (57%)

Q8 – What do you see as the main opportunities for a NAIT type system if implemented for sheep?

- Production and farm management improvements gained from the use of EID technology. (68%)
- Ability to better manage and minimize the effects of a Foot & Mouth outbreak or Food safety issues. (68%)
- Improved market access due to better traceability and systems in line or better than other sheep meat exporters. (50%)

5 Analysis of Survey Results

In this section I will attempt to analyse, reason and explain the results collected. At the conclusion of this process I will attempt to formulate a framework for a NAIT system in sheep that is aligned with the uniqueness of our sheep industry and the concerns sheep farmers have about NAIT.

Questions 1-4 were designed to give an understanding of sheep farmers' awareness of NAIT and the NAIT legislation.

Questions 1 and 2

86% of respondents indicated they are aware of the NAIT legislation before Parliament. 68% of respondents are aware of the details of this legislation - this figure was expected to be less than that of Question 1, however I find this figure to be relatively high given the detail of the legislation. I would assume that not near that percentage of respondents (68%) are aware of the detail of the legislation but in fact this figure would better indicate their awareness of how this legislation may impact on their farming operations. In hindsight, question 2 is poorly worded.

Question 3

In Q3, 93% of respondents were aware of the mandatory obligations coming into place for cattle and deer (dates for cattle now changed). Many respondents also have cattle and/or deer as part of their operations and NAIT Ltd has promoted these mandatory requirements extensively. This level of high awareness will please NAIT and reflects the effectiveness of NAIT's advertising.

Question 4

In Q4, 82% of respondents were aware that other species such as sheep may join NAIT at a later date. It is not surprising that a high percentage of sheep farmers are aware of this, many articles in relation to why sheep have been excluded from NAIT in the first instance have been written in farming papers, manufacturers of tags and stock handling equipment have been vocal on the fact that they think sheep will join NAIT sooner than later. Some meat processors have also voiced their support for NAIT to include sheep.

Question 5

82% of sheep farmers believe that NAIT will at some time include sheep. This result aligns itself with NAIT's findings in 2009 that 80% of farmers believe animal traceability will become mandatory in NZ at some stage. In the same NAIT study they found that 58% of farmers supported mandatory traceability. In this survey 42% view NAIT legislation as a positive move for sheep farmers.

Given that no specific detail has been put forward by NAIT Ltd on the inclusion of sheep, I surmise that sheep farmers are wary of a NAIT system the same as is being implemented for cattle and deer. It is my view that sheep farmers are generally supportive of improved sheep identification and traceability, the apprehension lies in the detail of a NAIT system for sheep.

Question 6

Three main fundamental differences with NAIT for sheep and NAIT for cattle and deer were identified:

A) NUMBER OF ANIMALS.

*"This identification will start with cattle and deer because as we get into the system we have to ensure we start with animals that are easily traceable. Of course the next step will be to go to sheep in future years, but because of the numbers—30 million sheep—it will not be easy or cheap."*²

Sheep Numbers at 30 June 2010³

21.7 million	Breeding ewes
10.8 million	Ewe hoggets, dry ewes, wethers, rams
32.5 million	Sheep wintered

P= provisional

²Drashrafchoudry debate parliament second reading

³Compendium of farm facts 35th edition.

21.7 million breeding ewes will produce 26.4 million lambs (121.5% lambing percentage⁴).

These figures indicate that if a mandatory tagging of all animals was implemented (as in NAIT for cattle and deer) at a specific date, that an initial tagging of 32.5 million sheep wintered would be needed. Add to this the 26.4 million and we would need to be tagging a total of 58.9 million animals in the first season.

If we now compare these figures with those of cattle and deer:

Farmed Deer Numbers at 30 June 2010 p

<i>Breeding Hinds</i>	<i>569,100</i>	<i>569,100</i>
<i>Weaners</i>	<i>432,516</i>	<i>432,516</i>
<i>Other deer</i>	<i>148,000</i>	<i>148,000</i>
<i>Progeny (90% fawning)</i>		<i>512,190</i>
<i>Total Deer</i>	<i>1,149,616</i>	<i>1,661,806</i>

⁴ Beef & Lamb NZ Economic Service
Livestock Improvement Corp Ltd

Dairy and Beef Cattle at 30 June 2010 p

	Beef	Dairy	Progeny	Total
Beef Breeding cows and heifers	1.1 million			1.1 million
Progeny(85 % Calving)			0.935 million	.935 million
Beef Fattening Cattle	2.8 million			2.8 million
Dairy cows and heifers(in calf)		4.6 million		4.6 million
Progeny(85% calving)			3.91 million	3.91 million
Other Dairy Cattle includes dries and breeding bulls		1.4 million		1.4 million
<u>total</u>	<u>3.9 million.</u>	<u>6.0 million</u>	<u>4.85 million</u>	<u>14.75 million</u>

It is clear to see that with sheep NAIT would be dealing with substantially more animals, in fact if we include all progeny, 359% more.

Total sheep and progeny	58.9 million
Divide by	
Total cattle, deer and progeny	<u>16.41million</u>
 Equates to	 <u>359%</u>

SUMMARY

Thus it is established that a fundamental difference does exist. This difference in species numbers makes any NAIT scheme for sheep more complex to implement and more expensive to implement and administer.

B) TIME ANIMALS ARE ON FARM LEADING UP TO SLAUGHTER.

It has been identified that when commenting on the above that we are focusing on the progeny of our breeding stock. It is also important to highlight slaughter because only two respondents actually sold lambs as stores. In their instance lambs are actually on farm for a far shorter time than if they were to slaughter their stock. This does ask questions as to how we identify and trace the movement of store stock.

Lamb slaughter in the majority of situations would commence at weaning, that is about 75 to 90 days after birth. Final slaughter of progeny may take up to a year to complete depending on farming operation and breed. Each sheep farm will be unique and have its own mean slaughter date, for this example I will use my own which is March 21, take my mean lambing date of Sept 25, therefore my average age at slaughter is 176 days. 176 days equates to 25 weeks or approx 6.2 months.

Cattle slaughter normally occurs between 16 months and 2 ½ years of age. Let's assume an average age at slaughter of 22 months.

Deer slaughter normally occurs between 9 months and 15 months of age. Let's assume an average age at slaughter of 13 months.

SUMMARY

We can see from the above data that a lamb is on farm for a far shorter period of time than a fattening cattle beast or young deer. The exception to this would be bobby calves however under NAIT calves for slaughter less than 30 days of age only require a meat processors slaughter tag.

C) NO RISK OF TB OR BSE IN SHEEP.

It is true that sheep are not at risk from TB or BSE. Is this a fundamental difference however? The fundamental difference I suspect lies in the disease. BSE has a long incubation period of between “30 months and 8 years”⁵, it is a fatal neurodegenerative disease effecting cattle. TB usually takes months to develop and infections can remain dormant for years, present testing methods expose infected animals often before any clinical signs appear. TB affects both cattle and deer.

FMD is a viral disease that effects cloven hoofed animals, its incubation period is between 2 and 12 days, short compared to BSE and TB. Transmission of the disease occurs in several ways including close contact between animals, movement on forage and vehicles that have been in contact with infection, airborne infection is also possible.

Sheep are at risk from Foot & Mouth disease as are cattle, deer and pigs. It has been argued that the lack of inclusion of other species in NAIT would seriously compromise the usefulness of NAIT in contributing to any future effort to eradicate FMD from New Zealand.

Beef and Lamb NZ argue that the Farms-on-Line data base developed by MAF biosecurity will hold data on the location of livestock farms, together with the details of the owner or occupier of these properties that may fall within the disease-control zones. It is the information about the location of farms where at-risk species are or are not located that is of primary importance for responses to FMD.

NAIT is likely to considerably assist with the ongoing management of endemic disease (e.g. TB in cattle and deer) and provide a much reduced entry cost for any future coordinated initiatives to control or eradicate other diseases (e.g. BVD - currently the subject of eradication projects in other countries).

⁵ Wikipedia BSE

The following extract from Beef and Lambs submission on NAIT gives a good explanation as to how NAIT may work differently for different diseases.

Lifetime tracing records for individual animals are very valuable for long incubation period and diseases such as BSE or for similarly 'invisible' food safety issues associated with residues but they are of little operational value for the control of fast moving diseases such as FMD.

There are two reasons for this:

- Most importantly, this is because veterinary field investigation of the source and onwards transmission of infection, known as tracing, must consider a host of other risk movements onto and off farms, in addition to the animal movements that would be recorded by NAIT, for example feed deliveries, milk tanker collection etc. These investigations will always require farmer interviews that also capture details of any recent animal movements, rendering movement records held by NAIT redundant.
- Animal movement records will not be captured in NAIT in 'real-time', i.e. there will be a time-lag between movements occurring, the submission of data and subsequent processing before the data can be used, likely to equal several days at least – the limitations of this for the control of a fast moving disease like FMD are obvious.

3.8 Accordingly, B+LNZ submits that data on the location of livestock farms, rather than individual animals, as will be supplied by NAIT and FoL working in concert will substantially improve FMD surveillance and response capability. Bringing other species into NAIT is unlikely to improve this significantly. This view is supported by technical experts from MAFBNZ⁶.

SUMMARY

BSE and TB do not affect sheep, this is fact. However, FMD and 'invisible' food safety issues associated with residues do affect sheep. It is my view that there is a difference with NAIT for sheep and NAIT for cattle and deer in relation to the fact that sheep are not affected by BSE and TB, whether this is a fundamental difference I'm not sure. All are diseases that would have a major impact on both our economy and our agricultural sector. NAIT in both cases will aid in the control and eradication of an outbreak and prove particularly valuable in demonstrating freedom from disease once eradication has occurred.

⁶ Beef and Lamb Submission to Primary Production Select Committee 10 Feb 2011

Question 7 – Barriers

A) COST

Concerns viewed here were - the cost of administering a NAIT system and the cost involved on farm in the tagging, managing and data entry in regard to NAIT.

MAF Biosecurity (Regulatory impact statement Dec 2009) list costs relating to NAIT:

- **NAIT system** – the development and operating costs of the core system, which is sensitive to vendor pricing;
- **On-farm costs** – the costs of tagging animals and uploading information to NAIT. This is sensitive to reading and tagging infrastructure cost. The marginal tag cost for NAIT, however, has fallen from \$3.90 to \$2.25 since 2004, with competition among manufacturers leading to an expectation of ongoing price reductions;
- **Processors and intermediaries costs** – the infrastructure set up and ongoing operating costs to read animals at sale yards, stock and station agents and by meat processors; and
- **FarmsOnLine system** – the developing and operating costs of FarmsOnLine.

1.1 Costs involved in administering NAIT

- Once the NAIT scheme is up and running, (for cattle and deer), annual operating costs will be funded by a mixture of Crown funding (35%) and new levy contribution (65%). The costs that need to be recovered are estimated at \$7 million in the first year. ***
- NAIT proposes levies on tags and /or slaughter for cattle and through DINZ for deer.
- Estimates indicate \$7 million needs to be recovered in the first year (35% government funding - \$2.45 million and 65% industry funded - \$ 4.55 million).
- Thus \$4.55 million will need to be funded via levy payment.
- Taking cattle and deer population figures from Q6 part A (not including progeny) of beef cattle 3.9 million, dairy cattle 6 million and deer 1.15 million (total 11.05 million).
- \$4.55 million in levies required from 11.05 million animals equates to a levy on capital stock of \$0.41 per animal. In this scenario the only way to easily collect this figure would be to include the levy in tag costs.
- If the levy is to be collected at slaughter these figures will need to be based on progeny figures. Collecting at slaughter seems to be difficult for the dairy industry in particular, in many instances calves are on-sold at 3-4 days of age, some go on the bobby truck and some are euthanized.
- If we assume a similar levy figure for sheep of \$0.41 and a capital stock figure of 32.5million animals, this would generate a total levy of \$13.33 million.

Will \$13.33 million from the sheep sector be enough to fund NAIT for sheep?

I do not know the answer to this, what I do know is that a levy of this nature on top of on-farm costs associated with tagging etc will stretch many farmers budgets. With no guarantee of recovering these costs via improved market returns many farmers may only see this as another compliance cost.

1.2 On Farm Costs

NAIT in its Regulatory Impact Statement 30 November 2009 estimates the cost to farmers (cattle and deer) to be:

- a) marginal cost RFID tagging at \$2-\$3 per animal, less cost direct to slaughter tags 84c which are no longer needed.
- b) Cost of recording onto NAIT is estimated at 29c per animal
- c) The additional on farm cost of individual animal traceability per head per annum of \$1 – this includes tagging, reading tags, reporting to NAIT and associated technology
- d) Not included are the optional costs of purchasing RFID readers that NAIT estimate at \$1000 to \$2300.

The Weighted Average All Classes Sheep and Beef Farm⁷ carries

- 2788 sheep (includes breeding ewes ,hoggets& rams)
- 298 beef cattle
- 31 deer
- 4001 total stock units

Using the All Classes Sheep and Beef Farm, the added cost of NAIT for sheep is demonstrated by the table on the following page.

Assumptions:

- The use of EID tags as is mandatory for cattle and deer
- 2050 sheep @121.5% lambing⁸ = 2490 lambs (2050 breeding ewes assumes total sheep of 2788 less 697 hoggets unmated (25 %) less rams 41)
- The cost of tags @ \$3 /tag – based on the average price between Zeetag @ \$2.56/tag and Allflex @ \$3.43 / tag.
- No allowance for a possible NAIT levy has been included.

⁷ Beef & Lamb- Sheep and Beef New Season Outlook 2011-2012

⁸ Beef & Lamb – Compendium of farm facts 35th addition

Cost of NAIT – Weighted All Classes – Sheep Only

	<u>Cost of Tags</u> @ 3/Tag	<u>Additional Costs</u> @ \$1/Animal ⁹	<u>Recording Costs</u> @ 0.29 ¹⁰	Total
<u>Capital Stock</u>				
2788 animals	\$8,364	\$2,788	\$808.52	\$11,960.52
<u>Progeny</u>				
2490 animals	\$7,470	\$2,490	\$722.10	\$10,682.10
				\$22,642.62

* Note – Additional Farm Costs include tagging, reading tags, reporting to NAIT & associated technology costs on farm.

This costing does not take into consideration the purchase of EID reading equipment. To gain maximum on-farm productivity gains this equipment is essential. Present day costs of EID reading equipment range from \$2500 to & \$4000 depending on capabilities of existing weighing systems and specifications of new equipment.

⁹ MAF Biosecurity Regulatory Impact Stmt Dec 2009.

¹⁰ MAF Biosecurity Regulatory Impact Stmt Dec 2009.

Beef and Lamb Economic service estimate Farm Profit for 2010-2011 year for the ' All Classes average farm as used in this example to be \$114200¹¹ (before drawings, tax, debt repayment and capital purchases). Take the costs associated with NAIT from this figure:

Revised Farm Profit with NAITs inclusion

	Capital Stock	Progeny	Capital Stock and Progeny
Farm Profit	\$114,200	\$114,200	\$114,200
NAIT Expenses	\$11,960.52	\$10,682.10	\$22,642.62
Revised Farm Profit	\$102,239.48	\$103,517.90	\$91,557.38

It should be noted that Farm profit figures for the 2010-2011 year do reflect record lamb prices as well as very good wool prices. This has not always been the case.

SUMMARY

NAIT’s financial impact on sheep operations will be substantial if we adopt a ‘same as’ mandatory implementation policy as that of cattle and deer. If strong commodity prices continue, the impact will not be as hard felt as it would have been in previous years. This however is not a sound reason to implement any such NAIT scheme. I see a gradual phasing in of tagging over six to eight years as one way of lowering the financial impact on sheep farmers. By tagging progeny each year, in time, all animals will become tagged.

The use of tags, other than EID, is another way of lessening the financial impact. Is it necessary to use EID technology to trace and identify animals? Some farmers will choose to use EID to maximize on farm productivity gains. Other farmers do not wish to use this technology for differing reasons. A tag in each animal indicating a visual ID and farm identification number may be sufficient to meet NAIT requirements. The costs of such tags would be considerably less (less than \$1) thus lowering the financial impact of NAIT on farmers’ returns. Welsh tracing systems allow lambs less than 12 months of age, intended for slaughter, to be tagged with single non-electronic identifiers.

¹¹ Beef & Lamb- Sheep and Beef New Season Outlook 2011-2012

B) LOGISTICS OF TAGGING ALL ANIMALS

The task of tagging all animals on farm will take a reasonable amount of time working on the assumption of tagging 3 animals per minute you will tag 180 animals per hour. Let us assume mustering of animals takes 4 hours per thousand animals.

2000 animals – 11.1 hours + 8 hours = 19.1 hours

3000 animals – 16.6 hours + 12 hours = 28.6 hours

5000 animals – 27.7 hours + 20 hours = 47.7 hours

The tagging of capital stock will be a time consuming process, however this only needs to be completed once. Tagging at tailing/docking takes time but does not unduly slow down the process. In our own case this year, applying EID tags meant another labor unit but with little effect on the daily tally of lambs tailed. If using a tailing contractor the estimated increase in costs equates to 15c/ lamb in our local area.

Taking into consideration the time consuming process of tagging capital stock, a phasing in of a NAIT system seems sensible.

SUMMARY

If NAIT for sheep is adopted in the same way as NAIT for cattle and deer, management on farm will be challenged. It is not only the logistics of tagging a far greater number of animals but also the logistics of managing those animals in relation to recording movements, deaths, etc of individual animals. Sheep farms are not all flat and in some cases dead animals may well not even be found let alone disposed of.

C) WILL NAIT INCREASE FARM GATE RETURNS OR IS IT JUST MORE COMPLIANCE?

The NAIT Bill when stating its Purpose says “Establish an animal identification and tracing system that supports improved animal productivity, market assurances and trading requirements”.

Federated Farmers state in its submission to the Primary Production Select Committee:
1.2 It is the view of the Federation that a national, compulsory NAIT scheme is not needed in New Zealand at this time. The imposition of such a scheme on farmers would simply load more costs, without any commensurate reward, onto an already struggling sector and further erode the competitiveness of New Zealand pastoral industries that are responsible for generating so much of the country’s wealth.

1.3 The Federation does however support the development of commercial, voluntary traceability systems with price signals from processors (and markets) driving stock procurement.

Beef and Lamb NZ state in its submission:

2.6 Improvements to existing systems are needed to provide assurances in the international marketplace that livestock products from New Zealand meet the highest standards of traceability that are now expected by many of our large customers overseas.

2.7 The profitability of beef farming in New Zealand is heavily dependent upon export receipts earned in premium markets such as the USA, Northern Asia and the European Union. In the latter two of these markets, very stringent traceability requirements are applied to domestic production. Without the improvements to New Zealand systems anticipated from

NAIT, our product is at risk of not being considered 'equivalent' from a traceability perspective, thereby posing a risk to access to these markets.

2.8 Furthermore, New Zealand produce competes in these high-value premium markets with beef from the EU, Australia, Canada and the MERCOSUR countries, where considerable improvements in animal identification and tracing have occurred in recent years. Without

NAIT, New Zealand product may be considered by some customers to be qualitatively inferior to these competing products.

2.9 In this context, NAIT may be viewed as analogous to insurance that our livestock product exports will continue to be eligible for, and subject to consumer demand in, premium markets overseas.

Yes, NAIT is more compliance and additional cost if it becomes mandatory for sheep farmers. On the flip side, the potential loss from not having a credible form of animal identification and traceability may be greater. This becomes an even greater risk as marketers of lamb attempt to position lamb as niche and premium, where the customer is more likely to be affluent and well educated thus having a better understanding around issues regarding food safety.

A study titled "Valuing Traceability of Imported Beef in Korea"¹² found that subjects were willing to pay a significant premium for imported beef with traceability.

It said: "subjects were willing to pay a 50% premium for imported beef with traceability when provided with positive information only on the new traceability system"

This study (although specific to beef and a reaction to BSE outbreaks) does indicate that if disease outbreaks scare our consumers, increased traceability will be a good insurance cover to safeguard our returns on exported protein if not improving them.

Andy Fox – Director Beef & Lamb stated: "NAIT is a type of insurance scheme, you don't actually make income out of insurance, it only actually pays for itself when you have an event that causes you to draw on your insurance"¹³

¹² Australian Journal of Agricultural and Resource Economics V55 issue3

¹³ Beef & Lambs submission to the Primary Production Select Committee

In an email to Steve Mclean- Agricultural Manager at Marks & Spencer UK, I asked the following questions:

1. Are the assurance programs implemented by our processors at present giving you enough confidence in NZ food safety?

[SJM: Yes – we regularly review the content of our suppliers' assurance programs and sometimes ask for additional requirements to protect the M&S brand – in recent years we've found that our NZ suppliers keep a close watch on European assurance needs.]

2. Would a standardized system for NZ sheep meat better serve your requirements?

[SJM: Having a National assurance scheme would be sensible – though we'd probably still require M&S additional requirements as part of our points of difference marketing strategy.]

3. Are consumers demanding a more stringent form of product identification and traceability?

[SJM: No].

4. Are they prepared to pay a premium for greater traceability?

[SJM: No – they take it as a given.]

5. Is it true that consumers perceive that the use of EID tagging will improve the quality and consistency of NZ sheep meat? (a comment made by my sister who lives in London)?

[SJM: No – it may be that in non own brand retailing there is an argument but our consumers believe that M&S will have taken the appropriate action to protect their interests even if sometimes they don't know what the actions are.]

6. Are New Zealand's standards as far as animal identification and traceability falling behind that of the UK and our other competitors?

[SJM: I don't believe so]

The answers received in the above email give us some insight in to what our consumers think. SJM believes that consumers are not willing to pay a premium for greater traceability - they take it as given. However, I wonder if this answer would be the same if NZ did have a disease outbreak or Food Safety issues. It is also interesting to note that SJM does not believe NZ is falling behind the UK and our competitors in animal identification and traceability standards.

SUMMARY

- Yes – NAIT is more compliance.
- Yes – NAIT will increase on farm costs considerably if we adopt a mandatory scheme for sheep along the same lines as NAIT’s mandatory scheme for cattle and deer.
- At present Meat Processors Assurance programs are satisfying overseas sheep-meat retailers and consumers. Would this be the case if a disease outbreak or food safety issue surfaced in NZ? I think not.
- NAIT for sheep may well be away of securing market access and returns if a disease outbreak or food safety issue did surface. Premiums for our products may well be realized if we can guarantee our products integrity over that of our competitors.
- Short term costs associated with NAIT may well seem insignificant, if the long term benefits of our ‘NAIT insurance’ protects and maintains our brand and demand for our brand in premium protein market overseas.

Question 8 - OPPORTUNITIES.

A) ON FARM BENEFITS OF E.I.D

“Although not included in the business case prepared to support cabinet and industry approval of NAIT, B+LNZ believes that the NAIT system will support a variety of on-farm benefits, largely stemming from enhanced analysis, improved genetic selection and stock management made achievable from widespread use of electronic identification and data management.”¹⁴

The benefits NAIT will give, in this instance, relates to the use of EID tags. EID tags alone will not add any on farm benefits. To capture the benefits associated with using EID tags the use of EID reading equipment and software is required. This will allow data to be captured and analysis of that data. We also must remember that the more data that is collected the greater the benefit will be.

EID technology allows farmers to identify individual animals as well as groups of animals, track and monitor their performance and record treatments.

The ability to individually identify animals and record performance allows farmers to make decisions in such areas as:

- Culling poor performing ewes.
- Selecting superior genetics/bloodlines from breeding flock.
- Selecting superior animals for chosen traits.
- Fibre diameter measurement.
- Determine whether animal health treatments are giving a return on investment.

The ability to identify groups of animals allows farmers to make decisions in such areas as:

- Forage options.
- Weight data so as to meet carcass weight targets.
- Bloodline and genetic data so as to improve carcass configuration in line with market signals(data from meat processors x-ray, via-scan technologies also needed).
- Vaccine and parasite control history with relevant with-holding periods.

¹⁴ Beef and Lamb Submission to Primary Production Select Committee 10 Feb 2011

Other benefits may include:

- Less paperwork or transcription required thus improving ease, speed and accuracy of data collection.
- Direct transfer of data to PC and management software reducing time spent transcribing collected data.
- Quick access to accurate information.

Companies producing and selling EID equipment are quick to point out the many benefits of EID technologies. It is often promoted as the 'major breakthrough' that will revolutionize our farming enterprises. The adoption of EID technology requires farmers to weigh, record and analyze results more often. EID tagging is only an opportunity for farmers who want to continuously improve their farming system and ensure long term business survival.

EID tagging and recording will give on-farm benefits that will result in increased animal performance hence improved profits. To maximize these benefits however, I believe a main system administrator and data base needs to be developed. This will enable the collection of more data which in turn will generate more information for use on farm.

It is important that timely, accurate, and meaningful reports are generated giving farmers the ability to make strategic management decisions on time so as to maximize production and profit. A database and system that allows the sharing of information, enables farmers to benchmark themselves against others, identify best practice methods, transfer ideas and commercially test new ideas. This is essential in capturing the full benefits from EID tagging. Organisations are presently developing databases and systems that will allow information transfer and the generation of reports to allow timely on farm decision making. Farm IQ are attempting to create a demand driven integrated value chain for red meat that delivers sustainable benefits for all participants. Farm IQ is a \$151 million investment over 7 years funded 40% from the Primary Growth Partnership and 60% by industry.

NAIT legislation allows for the holding of core data for the following purposes:

(f) to provide data supporting productivity, market assurance, and trading requirements:¹⁵

Section (f) indicates that NAIT will hold core data to support productivity. Why do NAIT Ltd need to develop systems that are already being developed? It must be possible to link the databases giving farmers maximum utilization of EID and NAIT the information required on animal location and movements. Data entry would only be required once in this scenario.

¹⁵ National Animal Identification and Tracing Bill

SUMMARY

- EID tagging alone will not revolutionize farming enterprises
- EID tagging and the associated weighings and recordings are not for every farmer.
- On farm production and profits will improve with the use of EID. How much they will improve depends on what data is captured and how that data is used.
- A main database that allows farmers to share information, benchmark, identify best practice and commercially test new ideas is essential in maximizing production and profit from EID.
- Advantages exist in the linking of the NAIT Database to existing databases specifically designed to maximize EID tagging benefits. Farmers will be able to utilize full EID benefit and NAIT will obtain required identification and movement information, all with a single data entry.

B) ABILITY TO BETTER MANAGE AND MINIMIZE THE EFFECTS OF A FOOT & MOUTH OUTBREAK OR FOOD SAFETY ISSUES. (68%)

Conflicting views exist as to what degree NAIT will aid in managing an outbreak of Foot & Mouth Disease. (FMD)

Federated Farmers argue that for the “NAIT scheme to prove effective as a bio-security control measure it would need to include all at risk animals.”¹⁶ Given NZ’s substantial feral goat, pig and deer populations and the remote location of these animals it will be impossible to ever include all at risk animals. The fact that a proportion of these animals live in remote locations does isolate them to some extent, however many do live in close vicinity of farmed livestock. Feral animal populations do offer a vehicle for an undetected spread of FMD (as has been identified with badgers in the UK).

Beef and Lamb argue that “lifetime tracing records for individual animals are of little operational value for the control of fast moving diseases such as FMD. (As explained Q6 part 3). It is the information about a farms location and where at risk species are or are not located that is of primary importance for responses to FMD. The FarmsOnline rural property database will provide geospatial data on livestock species not included in NAIT hence it is incorrect to suggest that a huge gap in FMD readiness and response capability exists.”¹⁷

¹⁶ Federated Farmers submission on NAIT Bill 2010

¹⁷ Beef and Lamb Submission on NAIT Bill 2010

“NAIT will make NZ more efficient at managing exotic disease outbreaks, therefore reducing their economic and personal impact. For example NAIT will enable potentially infected cattle and deer to be traced quicker. It will also enable the establishment of bio-security ‘compartments’ or ‘regions’ as defined by the OIE (World Organization for Animal Health).”¹⁸

NAIT will potentially offer improved ways to manage a FMD outbreak. The ability to quickly isolate at risk areas, and to some extent animals, will aid in stopping the spread. The ability to trace animal movements in and out of at risk regions in the days prior to may slow and halt the spread. For NAIT to be effective in managing an outbreak it must have up-to-date information in real-time. Feral animal populations offer a challenge, however populations within or close to at risk regions may need to be culled as a form of response.

If a FMD outbreak occurred, an effective response that quickly controls and eradicates the disease will give our consumers confidence that NZ systems work, and that disease control and food safety are of paramount importance to us. This will guarantee market confidence in NZ produce will remain at high levels, minimising any economic impact such an outbreak may have on our Agricultural export sector and the NZ economy.

SUMMARY

A NAIT system encompassing all farmed, cloven-hoofed species, will offer a more robust argument to our consumers, that we can manage a FMD outbreak or Food Safety issues. The fact that this may only be their perception and not in fact a reality, does not matter if our market access is maintained. The ability to maintain our existing markets and give consumers confidence that our produce is safe and disease free is the only way to minimize the economic impact of a FMD outbreak or Food Safety Issue . Unfortunately the economic impact on infected farms will be huge but by safeguarding our markets it will give affected farmers the confidence to rebuild flocks and continue farming livestock.

¹⁸ NAIT Stage 2 Business Case Volume 6.2 Dec 2009

C) IMPROVED MARKET ACCESS DUE TO BETTER TRACEABILITY AND SYSTEMS IN LINE OR BETTER THAN OTHER SHEEP MEAT EXPORTERS.(50%)

A range of animal identification and tracing systems have been set up around the world. These are outlined in the following tables.¹⁹

Table 1: Animal Identification and Tracing Systems – Summary by Country

ATTRIBUTE	Great Britain	Australia	Canada	Netherlands	Switzerland	USA	Japan	S. Korea	Argentina	Brazil	Current NZ
System name	CTS (Cattle Tracing System)	NLIS	CCIP Canadian Cattle Identification Programme	I&R (Identificatie & Registratie)	Identitas	National Animal Identification System (NAIS)	Cattle Traceability Law	BTS South Korean Beef Traceability System	Argentina Animal Health Information System - Sistema de Gestion Sanitaria (SGS)	ERAS (formerly SISBOV)	Various
Organisation (administrator)	British Cattle Movement Service (BCMS part of Defra)	Meat & Livestock Australia	Cattle Identification Agency	LNV (MAFF equivalent)	Identitas Ltd	Veterinary Services (VS) – a division of the Animal & Plant Health Inspection Service (APHIS), US Dept of Agriculture (USDA)	National Livestock Breeding Centre	Ministry of Agriculture and Forestry	Agency of Argentine Government	Ministry of Agriculture, Husbandry and Supply (MAPA)	AHB, LIC, MAF
Date commenced	1998	2002?	2002	1992	1999	Conception in 2002 and framework for implementation in 2004.	2003	2004 (9 selected enterprises)	Compulsory identification of cattle calves introduced September 2007 – aim is for all cattle to be individually tagged by 2017.	2002	1999 (for Tb)
Drivers for Establishment	BSE control and restore consumer confidence in beef	Residue tracing, biosecurity, enhance market access	BSE and closure of US Market for live animals and meat products	Disease control, FMD and EU requirements	BSE control and restore consumer confidence in beef	Potential rise of an outbreak of a foreign or domestic animal disease.	BSE, food safety	Consumer food safety concerns, BSE, FMD, agri-residues	Several phases of foot & mouth disease over past two decades.	Control of FMD, market access to EU.	Tb management, production management (dairy)
Mandatory	Yes	Yes	Yes	Yes	Yes	NAIS implementation moving through initial voluntary participation period under phased-in plan towards full programme implementation and aiming for eventual mandatory participation.	Yes	From 2009	Yes – for cattle calves from September 2007.	Initially only for export certified holdings / animals. Unclear about the rest of the industry.	Yes for Tb, otherwise voluntary

¹⁹Review of Selected Cattle Identification & Tracing Systems (MAF Bio-security NZ Feb 2009)

ATTRIBUTE	Great Britain	Australia	Canada	Netherlands	Switzerland	USA	Japan	S. Korea	Argentina	Brazil	Current NZ
Cattle	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Deer	No	No	No (velvet)	No	No	Yes	No	No	No	No	Yes
Other species (country framework)	Most livestock species require mob-level movement recording at the local authority level	Sheep - pigs actively considered	Yes, under development	No	Unknown	Yes - intention to cover majority of production livestock species.	Unknown	Agricultural products, pilot programme	Not as yet	No	No (except ASDs)
Cattle Individual ID	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes for calves from 09/07	Yes	Derived (herd no, lam ID)
Type of identifier (ear unless specified)	Visual, RFID optional	RFID	Barcodes (phase out); RFID	Visual and barcode	Visual and barcode; considering RFID	Pilot studies confirm RFID to be technology to deliver NAIS requirements; RFID optional.	Barcodes (DNA samples of carcasses kept)	Barcode, considering RFID	Unknown	Requires some form of identification (various options); RFID optional.	Barcodes; RFID in voluntary schemes
Animal Registration required	Yes	Yes	Yes	Yes	Yes	Yes - currently voluntary	Yes	Yes in pilot, anticipated		Yes	Tag registers on purchase
Animal Registration (when)	with 30 days of birth	When moved	Prior to leaving herd of origin	Within 3 days of birth	Within 3 days of birth	Yes - currently voluntary	Newborn calves	Within 2 weeks birth	Cattle calves from birth	Unknown	When moved >30 days old
Animal Registration (who)	Producer	Salesyard, slaughter premises	Producer	Producer	Keeper	Producer - by individual animal or by group if moved through production chain by group.		Household	Producer	Certifying company on behalf of keepers	Farmer/producer
Property registration	Yes through Rural Payments agency allocated CPH number	Yes (States)	Under development	Yes - UBN numbers	Yes - AGIS	Yes - currently voluntary	No	Yes, National Agricultural Products Quality Management Service	Not specified in available reference documents.	Yes - actions carried out by private 'certifier' companies	No (individual schemes run own identifiers for properties)
Movements recorded electronically	Paper telephone and electronic data submission	Yes	No (bookend system)	Yes	Yes	Yes	Yes	Yes	Not specified in available reference documents.	Yes	No
Movements recorded other	Yes	Yes	No	Telephone - no paper	Paper and telephone	No	No	No	Not specified in available reference	Unknown	Yes, paper ASD

We can see from these tables that Australia and Brazil have highlighted 'enhancing market access' as a driver for implementing an animal identification and tracing system. Also of interest is the fact that Great Britain, Australia, Canada, USA and S.Korea are considering or are implementing systems to include other species. Great Britain and Australia have now included sheep in their systems.

For now, it appears as far as sheep are concerned, that present assurance programs administered by meat processors are meeting customers need. In some instances customers may require extra assurances to satisfy consumer demands e.g. organics.

Marks and Spencers Agricultural Manager Steve Mclean was asked.

- Are New Zealand's standards as far as animal identification and traceability falling behind that of the UK and our other competitors?
- **[SJM: I don't believe so]**

NAIT for sheep may well enhance market access in some instances; whether it would improve market access is debatable.

Many of the emerging markets for sheep meat seem to be in Asia. China and South Korea have both experienced major FMD outbreaks since 2010 mainly in their Hog herds.

Rabobank note “According to retailers and other industry players, there has been only a modest negative reaction from consumers in response to the current outbreak of FMD. This is a welcome change from disease outbreaks of the past, as South Korean consumers have tended to reduce consumption significantly in the wake of such outbreaks. The more subdued response this time around is likely due to a combination of factors:

1. Consumers seem to have developed a certain level of tolerance for FMD incidents after experiencing a number of outbreaks over the past decade.
2. Rapid action taken by the South Korean Government in response to the outbreak, including working with the media to reassure consumers that exposure to FMD is not a human health risk.”²⁰

In relation to market access Rabobank state “Countries that do not have FMD- free status and are looking to gain access to the South Korean market – Brazil being one example – could also find progress slow. The South Korean government may face public pressure to limit the chances of another outbreak by maintaining their existing sanitary restrictions (which do not permit fresh meat imports from countries without FMD-free status)”

Summary

Meat processors, Farm Assurance Programs, are offering retailers and consumers enough information and assurances to satisfy their requirements in regard to traceability and food safety. A NAIT system for sheep may well offer retailers and consumers greater guarantees of traceability but at present there seems to be little demand for such a mechanism. With other exporting countries offering National Identification and Tracing Systems, e.g. Australia (NLIS) this may not be the case in the long term.

NAIT for sheep may well enhance market access but our present FMD-free status may in fact be the catalyst for improved market access especially into developing markets in Asia.

In the event of a FMD outbreak or food safety issue arising in NZ, this possibly will change. NAIT for sheep may well give retailers and consumers confidence in our traceability systems, and restore certainty that NZ sheepmeat is safe. SafeNZ sheepmeat will enhance market access.

²⁰Rabobank - Impact on FMD Outbreak in China and South Korea

6. Conclusion

NAIT, as designed for cattle and deer, is not necessarily the right tool to introduce for sheep. The fundamental differences of flock size and time to slaughter means a 'one-fits-all' approach from NAIT will encounter firm sheep farmer resistance.

Meat Processor Farm Assurance Programmes are presently offering retailers and customers adequate assurances of traceability and food safety.

A NAIT system for sheep will:

1. Give trading partners increased confidence that New Zealand can successfully manage and eradicate FMD out-breaks or food safety issues.
2. Align our systems more with competing exporters, in particular Australia.
3. Allow market access channels to remain open if FMD or a food safety issue ever arose in New Zealand.

Pressure to implement a NAIT system for sheep is not being generated by our trading partners, however to safeguard the reputation and authenticity of our protein products a more robust form of national animal identification and tracing is required.

Modifications to the current NAIT scheme will make any introduction for sheep more acceptable to farmers.

Any NAIT system for sheep should attempt to:

1. Lower on-farm costs
2. Link databases so as not to require double data entry
3. Simplify tagging and recording requirements

In doing this a NAIT system for sheep may be developed that is mutually beneficial to all concerned parties.

7. Recommendations

1. Mandatory system that includes all farmed cloven hoofed species.(sheep , goats, pigs)
2. Capital stock tagging and progeny tagging to be treated independently.
3. That NAIT, Farmers, Meat Processors and other interested parties work together to develop a system that satisfies the needs of all. NAIT should simplify systems not make them more complex.
4. Greater emphasis on groups of animals rather than individual animals.

Possible Model for NAIT Tagging in Sheep

Capital Stock

- I. Phasing in over 6-8 years. Replacement lambs only required to be tagged each year from year 1, in time all capital stock will be tagged.
- II. EID tagging would be preferred for capital stock however it would not be essential. EID would make the tracing of capital stock movements between farms easier to manage.
- III. The option of a visual tag indicating farm and animal ID may need investigation; in this case a further tag (post breeder tag) would need to be used if animal movements occurred.
- IV. Development of technology that would allow instant data transfer e.g. smart phone would be advantageous on farm.
- V. Linking of databases that would give farmers the opportunity to maximize the use of EID technology while only entering data once

Progeny

- I. EID tagging for farmers who wish to gain productivity gains associated with EID.
- II. Slaughter tag for all other progeny that will be slaughtered less than 12 months of age.
- III. The sale and movement of store stock will require stock reconciliations to be lodged with NAIT, indicating number and new location of animals. Animals will need to be tagged before slaughter buy new owner. This system will better manage present food safety authority requirements.
- IV. As in iv and v above

Acknowledgements

- Chris Wellington- Policy Advisor- NAIT Ltd
- Greg McSkimming –General Manager Farm Systems -Farm IQ Ltd
- Gary Fordyce –Field Rep- Silver Fern Farms Ltd
- Steve McLean- Agricultural Manager –Marks & Spencer UK
- Waikoikoi Farm Discussion Group

APPENDIX 1

National Animal Identification and Tracing Bill

Government Bill

As reported from the Primary Production Committee

Commentary

Recommendation

The Primary Production Committee has examined the National Animal Identification and Tracing Bill and recommends that it be passed with the amendments shown.

Introduction

This bill seeks to establish a national animal identification and tracing (NAIT) system. The system would allow the rapid and accurate tracing of animals from birth to death or live export; provide information on the location and movement history of animals; improve biosecurity management; help manage risks to human health associated with animals; and help improve animal productivity, provide market assurances, and support compliance with trading requirements.

Implementation issues

The bill would permit the NAIT organisation, in the course of administering the system, to issue standards under which it would approve

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National Animal Identification and Tracing Bill Commentary

identification systems, setting out requirements for identification devices and their operation. We are aware of concern that the initial implementation of the system might mandate the use of devices that transmit and receive the NAIT information over low-frequency radio waves, rather than ultra-high-frequency devices, which are increasingly being used on farms for other purposes.

We were advised that low-frequency technology has been proven to work in all stages of the supply chain, while ultra-high-frequency technology, used on many farms, is still being developed. Each technology has advantages and disadvantages.

We were advised that the requirements of the bill are technology-neutral and designed to allow for transitions to different technologies. A system that initially requires low-frequency tags could be extended or converted with the development of tags that transmit in both frequency bands, or of dual readers, so that animals could be tagged with either kind.

This commentary focuses on the main amendments we recommend and does not address minor technical amendments.

Commencement

We recommend amending clause 2 to provide for a commencement

date for the purpose of mandatory identification of cattle with a NAIT device of 1 July 2012, a commencement date for other obligations and exemptions of 1 November 2012, and an earlier commencement date for any of the other obligations and exemptions to be fixed by Order in Council. We also recommend amending clause 2 to provide that Schedule 1, in relation to a species listed in Schedule 1, comes into force on 1 March 2013, or earlier by Order in Council.

These amendments are intended to cater for the timely implementation of the NAIT system, while providing some flexibility in the event of certain expected delays to parts of the implementation.

Governance

We recommend amending clause 7(1) to reflect practical arrangements which have already been made; NAIT Limited would become the NAIT organisation for a period of time until the governance structure for the new NAIT organisation could be put in place. We recommend amending clause 7(2) to allow the dissolution of NAIT Limited

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National Animal Identification and Tracing Bill 3

before the new permanent NAIT organisation is appointed, if this should be necessary to establish the long-term governance arrangements.

We recommend inserting new clause 7(3) to provide that before the Minister appoints another entity to replace NAIT Limited, there must be consultation with the persons likely to be substantially affected or their representatives.

We recommend amending clause 8 to include matters that the Minister would need to be satisfied about before approving the establishment of the permanent NAIT organisation. We also recommend amending clause 8 to allow the Minister to delay appointing the permanent NAIT organisation if the Minister is not satisfied of such matters, and to have NAIT Limited to continue as an interim organisation.

We recommend amending clause 9 to allow the Minister the option of revoking the designation of the NAIT organisation, and appointing one or more persons to perform any or all of the organisation's functions or duties. Clause 9 as drafted would allow the Minister to make an appointment, but only for a specified duration; we consider that providing the additional option would allow the Minister to address a wider range of circumstances. The amendments would also require consultation with persons likely to be substantially affected by the proposed appointments, or with their representatives.

We recommend amending clause 14 by inserting new subclause (4A) to deem any consultation undertaken by NAIT Limited before the legislation comes into force to be consultation as would be required by the legislation.

Obligation to declare NAIT compliance

We recommend deleting clause 32. The clause as drafted would require a person in charge of animals who consigns a NAIT animal to another location to provide a declaration that the animals are properly tagged and registered in compliance with NAIT requirements.

We consider this requirement an unnecessary addition to the overall compliance burden imposed by the bill.

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National Animal Identification and Tracing Bill Commentary

NAIT information system

We recommend amending clause 46 to set out more clearly both the processes for applying for access to data, and the categories of data to which each kind of applicant could have access.

Compliance and enforcement

We recommend deleting Part 5 of the bill (clauses 52 to 151), and (at the beginning of Part 6) reinserting clauses 54 to 56 as new clauses 151A to 151C and inserting new clause 151D, and reinserting clauses 53 and 57 to 151 as new Schedule 1A. This anticipates the enactment of the Search and Surveillance Bill currently before the House, and would facilitate an amendment to the provisions that are proposed to form Schedule 1A, to align the provisions of the two pieces of legislation once they are both in force.

We recommend amending clause 110(1) (which would become clause 55(1) of new Schedule 1A) to make it clear that a search warrant would be required in order to exercise the power to detain and search that this clause would provide for.

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Appendix

Committee process

The National Animal Identification and Tracing Bill was referred to the committee on 14 December 2010. The closing date for submissions was 10 February 2011. We received and considered 16 submissions from interested groups and individuals. We heard 10 submissions. We received advice from the Ministry of Agriculture and Forestry. The Regulations Review Committee reported to the committee on the powers contained in clauses 2, 157, 158, 163, and 164.

Committee membership

Shane Ardern (Chairperson)
Hon Jim Anderton
Brendon Burns (to 9 February 2011)
Dr Ashraf Choudhary
Hon Craig Foss
Sandra Goudie
Colin King
Moana Mackey (from 9 February 2011)
Hon Damien O'Connor