

The Cicerone Project Inc.
PO Box 1593, ARMIDALE NSW 2350
Phone 02 6778 3871 Fax 02 6778 3872
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ABN 15 314 685 367

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Summary of the Field results for the Footrot Trial Phase II

During the spring and summer of 1999 the first phase of the Producer Initiated Research and Development (PIRD) and WoolMark funded Footrot trial took place. Our results were published in the April 2000 issue of the Cicerone Newsletter (number 6).

The sheep from this phase of the trial were over-wintered in their plots in Armidale. The two virulent strains, white and green ear tags, were removed from the trial on welfare grounds. We kept the red ear-tags (field benign, lab benign, benign control), the orange ear-tags (clean control), the pink, blue and purple 'test' strains. These sheep were drenched and shorn in their plots and foot baths of disinfectant were used by dogs and people whenever they entered and left a plot.

During this time it was finally agreed that the sheep should go to a different climatic area and see what happened with these 'odd' strains of footrot. We have had great support from John Seaman, Program Leader, Flock Health in NSW Agriculture and he was instrumental in finding a suitable site at Toogong in the Molong Rural Lands Protection Board (RLPB).

On 1st September the sheep were transported to Toogong for Phase II of the work. To ensure no cross-contamination occurred, each animal was physically carried onto the truck and they were transported in separate straw covered pens according to ear-tag colour. At Toogong they were individually carried off the truck to keep the footrot strains apart and then placed in separate plots.

A new local set of virulents were included in Phase II of the trial and new clean monitor sheep were added.

The plots in Toogong were very lush with plenty of white clover, sub clover and lucerne. A wet spring continued to ensure ideal conditions for the development and transmission of footrot.

The sheep were footscored each week by Footrot Advisory officers from the local RLPB and other nearby Boards who were interested in the results. This took place from their arrival in September to the middle of December.

The results are shown in the following graph. Footscores 3A, 3B and 3C do not translate well onto graphs, so the following conversion was used (as in the presentation of the Phase I results)

Footscore 1 = Graph score 1

Footscore 2	= Graph score 2
Footscore 3A	= Graph score 3
Footscore 3B	= Graph score 4
Footscore 3C	= Graph score 5
Footscore 4	= Graph score 6
Footscore 5	= Graph score 7

A Field Day was held for RLPB advisory officers, local producers and Cicerone members on Friday 10th November. On this day the animals with the virulent strain were footpared and treated to keep flies out of their feet. On the graph the marked drop in the virulent footscores indicates this time. The general trend downwards indicates the start of the drying off period in the pasture.

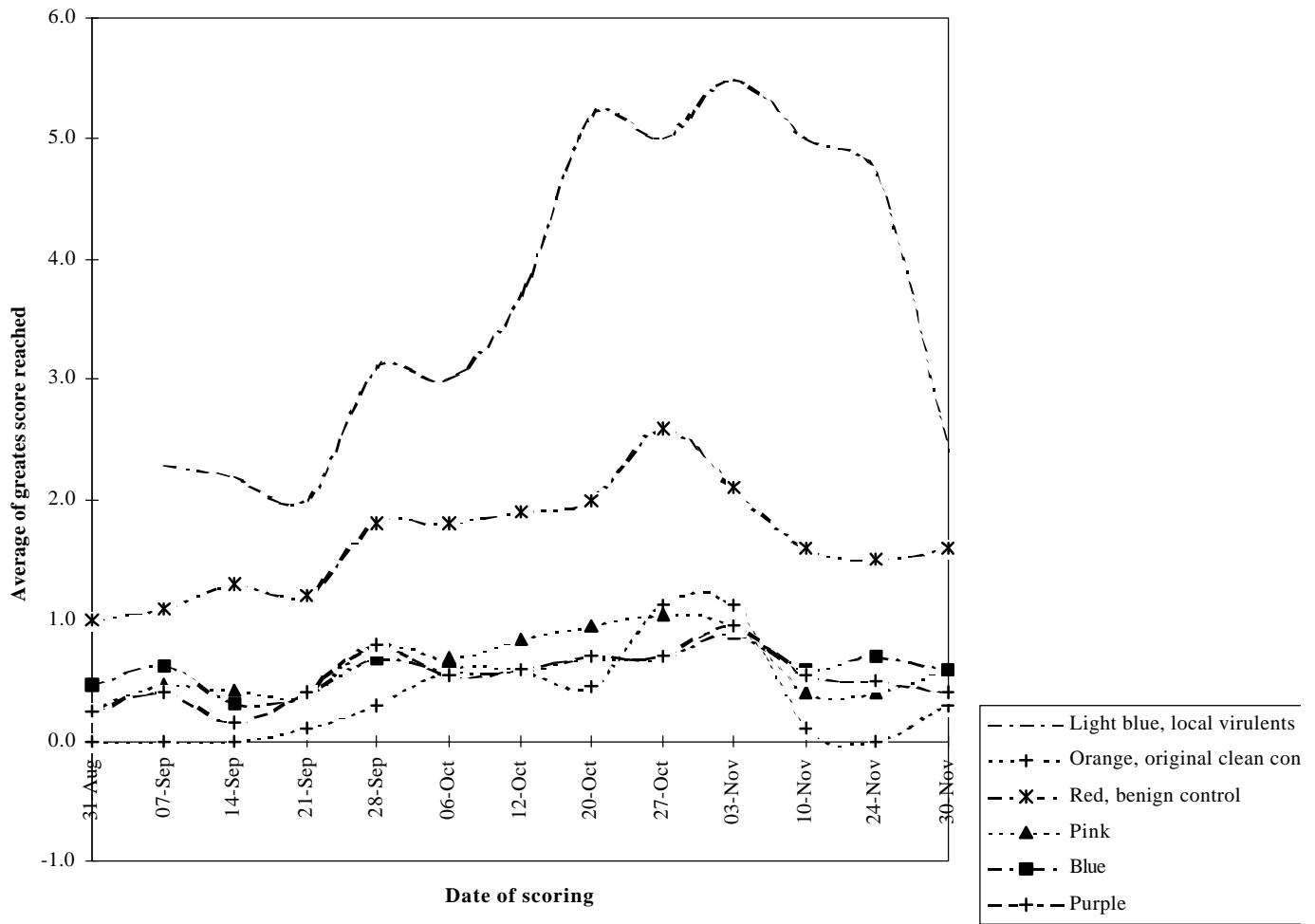
However the results still show that the three 'test' strains of pink, blue and purple ear-tags remained behaving in a benign fashion, despite the lush conditions they did not 'break out' into full blown virulent footrot. This backs up the findings from Phase I of the trial.

Dr. Brian Cheetham of the Department of Molecular and Cellular Biology at the University of New England (UNE) will be doing his DNA analysis on swabs taken from these sheep and we keenly await his results.

The sheep have now all been given injections of antibiotics and will be foot-bathed and then transported to the Elizabeth McArthur Agricultural Institute where Dr Richard Whittington of NSW Agriculture will be doing blood tests and antibody work on them.

We are most grateful to the funding from Producer Initiated Research and Development (PIRD) and WoolMark which allowed us to do this work.

Weekly footscores with different strains of footrot (Molong, Phase 2)



Farmlet Grazing Management comparison

Our draft guidelines for the running of the farmlets are close to becoming completed as we work through a full year, so differences in treatments/ management will be formalised.

In July three paddocks in Farmlet A were direct drilled with improved pasture seed and fertiliser. Superphosphate and clover seed was spread on one third each of Farmlets B and C and the remainder of Farmlet A. Farmlet C has 16 paddocks and we will use electric wires for further subdivision to intensify grazing pressure.

Winter 2000 was a difficult time as we had an unusual drought in the Armidale area. Many of our ewes are old and we had to hand feed lupins for several weeks during winter. This was compounded by the direct drilling which meant three paddocks were unavailable to Farmlet A.

We have continued to run some cattle on each of the Farmlets as part of the grazing trial as many local producers have a joint cattle and sheep enterprise. They are on agistment, equal number on each farmlet. They were fed oats as a supplement over winter.

In November our ewes and rams were tested by local vet Rob Franklin for MN 1 status for OJD and the results are due in 12 - 24 weeks. At this time a group of monitor ewes were ear tagged, fat scored and weighed and this will occur bi-monthly from now on.

Also in November all our lambs were marked and mulesed. They were weighed and given a vaccination. They are part of a CSL trial to see the effects of B12 as an addition to the vaccine. They then received eight inches of rain over the next few days! Lambs will be weighed monthly from now on.

Regular faecal egg testing is part of the management strategy and drenching is only done if warranted by the test results. This is being supervised by Board member Betty Hall of Elders.

In February our ewes will be heavily culled, with the aim being to go finer in our wool and to remove any broad wool or broken mouthed ewes. We are likely to cut our numbers back substantially at this time and will end up with a quality flock.

Pasture has been assessed and will be compared with previous assessments. UNE Agronomy student are part of this work as well as getting Pro Graze assessments and an accurate farm-wide assessment from Col Mulchay, a farm consultant with intimate knowledge of the land.

We have joined the Harnham Landcare Group and hope to plant trees along our boundary road to provide windbreaks for the ewes. We also hope to plant some windbreak trees within the farmlets.

This trial is finally coming together after much planning along the way. Stock movement records and time allocations per farmlet are a reality so each farmlet can have grazing days and full costings allocated appropriately. We will be having a Field Day early next year so you can catch up with our progress.

Trial of South African Meat sheep breeds

A flock of 250 Merino ewes were inseminated with semen from 9 rams representing 5 different breeds of South African sheep: Afrikaner, Damara, White Dorper, Dohne Merino and South African Meat Merino. The first three are 'fat-tailed' breeds and the latter two are wool/meat breeds.

Border Leicester rams were used as the back up to the AI program.

Ewes were separated into the lamb-sire-line for lambing. Lambs were born from 25th September onwards. Some lambs were tagged and birth weights were collected. All ewes and their lambs were boxed as one mob within two weeks of lambing. All the lambs were weighed and retagged at marking on 7th November and again on December 6th and will be again at weaning. This data will be available for Lamb Plan.

Ewes, especially those with Damara lambs, were visually checked (following a method advised by Queensland DPI) for possible fleece contamination and will be again at weaning.

A Field Day, the *Meat Market Makeover*, was held on Monday October 16th at the Armidale Golf Club. Five ewes with their lambs from each of the five breeds, and two poddy lambs were on display. Speakers included Matthew Young from Agriculture WA and Dan Cloonan from Queensland DPI where most of the research into these sheep has occurred.

Other speakers included Bob Retallick of Lenards Meats on retailing of red meat, Bob Gaden of NSW Agriculture on reinventing beef for today's consumer, and Mark Taylor of Mandalong Meats on his success supplying grain fed lamb to customers such as Qantas.

This day was organised in conjunction with a group of third year Rural Extension students from the University of New England as part of their assessment. It is a vital part of learning how to organise and run seminars for the students and is another example of the co-operation between Cicerone and UNE.

Breed	Birth Weight (both sexes)	Marking wt female	Marking wt male	1 month later (both sexes)
Weights recorded in kg.				
Afrikaner	3.2	10.2	12.1	15.7
Damara	3.8	11.1	12.4	16.1
White Dorper	4.1	11.5	13.1	17.3
Dohne merino	4.3	11.5	13.1	16.8
SAMM	3.9	11.5	12.4	16.9
Border Leicester (younger)		Both sexes 9.6		14.9

In late October CSIRO ran their Fine Wool Symposium at Chiswick and Cicerone were invited to have a display there. Part of the display included the SAM sheep trial and, surprisingly, it generated much interest amongst symposium participants.

In Late November the Executive Officer enjoyed a 'working holiday' to Western Australia where she visited a number of South African Meat sheep studs including the home of the Afrikaner sire used in our AI program.

In WA the Damara are referred to as 'boat' sheep and the ram lambs are aimed at the live sheep trade to the Middle East. This breed is preferred as they have the fat tail, horns and coloured skin desired by that market.

One of the largest exporters is located in South Australia although WA is the main state of export. Dealing direct with the exporters rather than using an agent seemed to be the preferred method of marketing.

The Dorper, both white and black, is being purchased by both Woolworths and Coles for the domestic lamb market in Western Australia. This appeared to be the sheep undergoing a 'boom' in interest. One stud visited was in the middle of a day of embryo transfers with a vet from South Africa over to do the work with embryos he had brought. He advised that the current South African outbreak of foot and mouth disease with the accompanying quarantine restrictions, was having a huge impact on this business.

The Afrikaner is a special breed with only one stud in Australia. When WA Agriculture officials first went to South Africa to investigate the potential of fat-tailed sheep for use in Australia, their first choice was the Afrikaner. For some reason they were unable to obtain any, so they brought in the Awassi, their third choice. However Bronte Gardner of Kojonup has subsequently been able to bring in pure Afrikaners.

This breed has a soft white skin and the shiny covering is a non contaminant for wool. Bronte advised that they are used as teasers in Merino flocks in South Africa and their presence causes a 17% increase in lamb numbers.

The tail of this breed is quite amazing as it is enormous and hangs down behind before curling up at the end. It truly is a fat tail, much more so than the other breeds. Rams have to be brought up with tailed ewes so they learn how to cope. Two lots of lambs per year are usual and the male lambs are active from 12 weeks of age.

Bronte is using Afrikaner rams over Merino x Damara ewes selected for colour and horn to produce a coloured sheep with the highly sought after fat-tail.

In the following photograph, the ram at the front is the sire of our lambs. Just look at those tails!

