

# MERINO WORLD

NEWSLETTER OF THE WORLD FEDERATION OF MERINO BREEDERS

ISSUE 11

June 2009

## President's Message

**Having** just returned from France where I met with the organising committee, I can report that plans in place for the 8<sup>th</sup> World Merino Conference are very impressive, and a brief outline is shown on pages 4 and 5.

The pre-conference tour to Spain and Portugal starting on 24 April and the post-conference tour through Germany and Romania, will include farm visits and unique attractions not normally available to the general public.

Rambouillet itself is spectacular and an ideal location for our gathering. It is the home of the original flock delivered from Spain by Napoleon to Louis XVI in 1786, and the descendants of these sheep which have had no introduction of outside genetics will be on display. Full details with a variety of options from which to choose can be obtained from the internet [www.merinoscope2010.fr](http://www.merinoscope2010.fr)

I sincerely thank all those in France who have worked hard in preparing such a diverse programme and for spending time to show me some of the historic sights.

France receives more visitors each year than any other country in the world. It is the home of fine wine and gastronomic delights as well as the centre of fine fashion. The 8<sup>th</sup> World Merino Conference provides the opportunity of a lifetime to see its iconic landmarks and witness first hand the origins of Merino sheep.

On leaving France I stopped in South Africa to promote the World Merino Conference and attended the National Woolgrowers Conference in Port Elizabeth, with around 350 woolgrowers registered.

A visit to the mountain Kingdom of Lesotho was most interesting - a small country with 1.6 million good quality Merino sheep. Mr Lefu Lehloba, manager of Lesotho National Wool & Mohair Growers Association said the country's main income is derived from wool, meat and mohair goats, with the main genetic base coming from South Africa. No other breed of sheep other than Merino is allowed to enter the Kingdom.



**Manager of the Bergerie flock, Antoine Brimboeuf; WFMB president, Glen Keamy; Yves Chabert, Secretary-General of the 8th World Merino Conference; and Christine Lang, Deputy Director of the Bergerie Nationale during Glen's visit to the Bergerie in May.**

I am delighted to announce that this week I have received a communication from Mr Lehloba in which he indicates the wish of his association to become a member of the World Federation of Merino Breeders. I look forward to officially welcoming them to the WFMB in Rambouillet.

During my terms as President I have endeavoured to visit as many member countries as possible and the support and hospitality extended to me has always been generous and welcoming. It is clear in my observations that the dedicated and skilled stud and commercial breeders around the world have made obvious genetic gains in our Merino industry.

*(Continued on page 2)*

## MERINO WORLD

Newsletter of The World Federation of Merino Breeders

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The opinions expressed in contributed copy in this newsletter are those of the contributor, not necessarily the Federation.

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**AUSTRALIA**  
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**FRANCE**  
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For news and information on  
Australian Wool Innovation  
[www.wool.com.au](http://www.wool.com.au)

## Australia's 2008 Supreme Ram

For the second consecutive year, a ram from F S Falkiner & Sons at Deniliquin in the Riverina region of NSW has won Australia's supreme exhibit title at the Rabobank National Merino Sheep Show.

The 2007 winner was from their Wanganella stud and in 2008, Boonoke took out the title with a ram that had already secured the supreme award at both the Australian Sheep Show in Bendigo and the Hay Sheep Show.



**Boonoke 6.124, the 2008 Rabobank Australian Supreme Merino ram from F S Falkiner & Son's Boonoke stud, Deniliquin NSW.**

At the Dubbo fixture, the ram, Boonoke 6.124, was sashed reserve grand champion ram to Boonoke 6.134, but at the discretion of the stud's management and as permitted under the competition's rules, the reserve grand champion was substituted as the NSW State finalist to contest the national title, also judged at the Dubbo event.

Coming through from the 6-tooth medium wool class, the new Rabobank Australian Supreme Merino ram measured 20.5-micron with a CV of 12.2 and 99.6 CF.

The Boonoke win gives NSW its sixth Australian Supreme title in the fourteen years of the national competition. Other state finalists this year were Kolindale, Wickepin, Western Australia; Rock Bank, Victoria Valley, Victoria; Mount Ascot, Mitchell, Queensland; and North Ashrose, Gulnare South Australia.

## President's Message

*(Continued from page 1)*

The challenge of breeding Merinos in such different environments is always there and the opportunity to share experiences with like-minded people and learn from each other in France should not be missed.

Remember, anyone involved in all areas of agriculture is invited to attend, not only Merino breeders. The adaptability of the Merino in being able to produce quality wool, reproduction of lambs and quality meat never ceases to amaze. The Merino surely rates as the most unique sheep breed in the world.

You will be aware that under the constitution my presidency terminates at the WFMB meeting on 4 May, which provides an opening for member countries to nominate a candidate. With today's modern email and communication facilities, the location of a president's residency should not pose any problems.

I have enjoyed my role and count myself fortunate to have met so many great people through the Federation. I hope you all continue to flourish until we meet again in France, 2010.

**Glen Keamy**  
**President WFMB**  
**June 2009**



# New President of Australian Breeders

A fourth generation Merino breeder from the State of South Australia (SA) has been elected president of the Australian Association of Stud Merino Breeders (AASMB).

Tom Ashby of North Ashrose Merino and Poll Merino studs, Gulnare, SA, was unanimously endorsed to lead the federal association which represents the six state Stud Merino associations and through them, Australia's registered Merino stud breeders.

He succeeds Will Roberts, Victoria Downs, Morven, Queensland, whose three-year term concluded at the association's AGM, held in April.

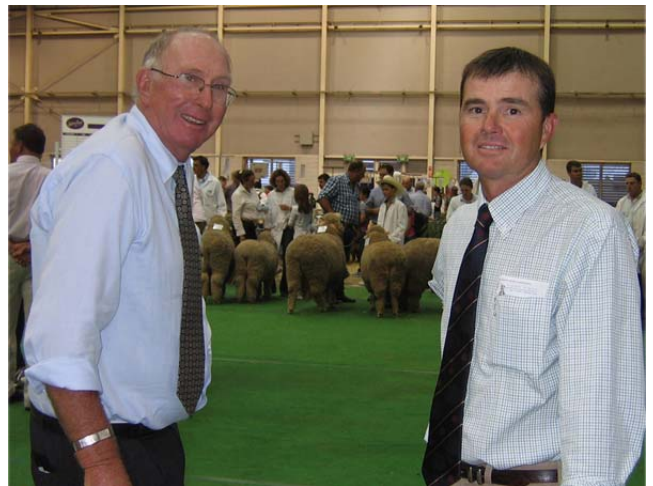
Mr Ashby is a co-principal of the North Ashrose studs which he founded in 1996 with his father, Graham and brother, Matthew by transfer of a half share of the Ashrose studs, established in 1910 and 1957 respectively.

He is a former president of the South Australian Stud Merino Breeders Association and has been vice-president of the AASMB for the past three years. Mr Ashby is also a councillor of the Royal Adelaide Show and a panellist on the 2009 WoolPoll.

During his presidency, Mr Ashby said that he is looking forward to increased communication opportunities with commercial woolgrowers. "I believe that it is important that those who are breeding the genetics of the industry stay in close touch with our clients, the commercial breeders.

"We are all looking for improved wool prices but we must also emphasise on a worldwide basis that breeding of the Merino provides a sustainable and renewable food and fibre source."

To this end, Mr Ashby said that he looks forward to leading the Australian delegation on next year's trade mission to Europe which is aimed at increasing the promotion of the Australian Merino. The European mission is being timed to also include the 8th World Merino Conference in Rambouillet, France.



The new president of the Australian Association of Stud Merino Breeders, Tom Ashby (right) with vice-president, Robert Lindsay, at this year's Sydney Royal Easter Show.

Mr Ashby also said that a further focus of his association would be to identify and monitor opportunities for stud breeders to be at the forefront of climate, water and ecological issues.

He said, "In its 50<sup>th</sup> anniversary year, the AASMSB continues to strive to meet the needs of its members and to ensure that the genetic requirements of commercial woolgrowers continue to be met."

Current president of the NSW Stud Merino Breeders' Association, Robert Lindsay, is the AASMB's new vice-president/treasurer and Carol King, executive director of the Australian Merino Centre through which the association is administered, was re-elected secretary.

Further information: Tom Ashby, President, Australian Association of Stud Merino Breeders, email - ashby@activ8.net.au

## The Australian Association of Stud Merino Breeders - 50 Years Young -

In 2009 the Australian Association of Stud Merino Breeders (AASMB) celebrates its 50th anniversary since foundation in June 1959.

The association's inception was driven by what was seen as an urgent need for the formation of a body to represent stud Merino breeders on a national level and by the considerable increase in the numbers of members of the associations in Victoria, South Australia and Western Australia. Until the early 1950s, NSW studs had dominated as far as numbers of breeders, numbers of sheep owned and also the number of rams sold.

The AASMB's council comprises up to two members from each State association and the president.

At the inaugural meeting, George Falkiner of Haddon Rig stud, Warren, NSW was elected president and Ralph Storey undertook the role of secretary.

The association also had as a prime objective the production of the Australian Stud Merino Flock Register, previously handled by the NSW Sheepbreeders Association (NSWSA).

The AASMB is officially regarded as the body which speaks on behalf of all registered stud Merino breeders in Australia and part of its charter is to make representa-

tions to Governments on behalf of members on a range of issues that affect them.

It is sometimes necessary to defend breeders' rights in such areas as flock health standards, animal welfare and other issues. There is also liaison with statutory authorities and scientific and research organisations as well as stock agents and various other sectors of the industry. An overall responsibility is to ensure that the genetic requirements of commercial woolgrowers continue to be met.

The secretariat is operated from The Australian Merino Centre in Sydney, NSW, which also serves as the headquarters of the NSW Stud Merino Breeders' Association (formerly NSWSA) and the World Federation of Merino Breeders under the current directorship of Mrs Carol King.

For information on the AASMB, the six State associations and Australian Merino studs visit the

**AASMB WEB SITE**  
[www.merinos.com.au](http://www.merinos.com.au)



# 8th World Merino Conference

## Rambouillet, France - 2010



### HIGHLIGHTS

Saturday 24 April - Saturday 1 May  
Optional PRE-CONFERENCE TOUR (south-east France-Spain-Portugal)

Sat/Sun 1 & 2 May

**Annual Wool Arts Festival.** This is an annual international event bringing together artists and designers who use wool in their work - fashion design, jewellery, weaving, furniture, objets d'art etc. This event will last all week.

Monday 3 May

**Merinoscope**, Bergerie Nationale

Tuesday 4 May

**8th World Merino Conference Day 1**  
General Assembly of the W.F.M.B.  
Gala Dinner

Wednesday 5 May

**8th World Merino Conference Day 2**

Thursday 6 May - programme to be advised

Friday 7 May - Friday 14 May

Optional POST-CONFERENCE TOUR (eastern France-Germany-Rumania)

### REGISTRATION

Information, Conference Registration, Tour Bookings  
[www.merinoscope2010.fr](http://www.merinoscope2010.fr)

Australian and New Zealand Conference Registration and Tour Bookings to Peter Lloyd or Barbara Le Masle, Quadrant Australia.  
Email [barbara.lemasle@quadrantaustralia.com](mailto:barbara.lemasle@quadrantaustralia.com)

### POSTER EXHIBITS

An exhibition of 100 posters (80cm x 120cm) will be available for the use of specialists wishing to present their work. Texts to be submitted to the Scientific Committee.

Visit [www.merinoscope2010.fr](http://www.merinoscope2010.fr)

## TOURS

### Pre-Conference (France-Spain-Portugal)

24 April to 1 May

#### Saturday 24 April

From Gare de Lyon (train station), Paris, by train to Aix en Provence; tour this city of art; dinner and overnight in Aix.

#### Sunday 25 April

Visit Merino d'Arles stock-breeding flock in the Domaine des Aulnes in Saint Martin de Crau; house of transhumance; presentation of activities and current programmes. The Crau dry plain; the Coussouls trackway. Visit Domaine du Merle; Merino d'Arles genetic research station. Evening of entertainment at the Domaine des Aulnes. Overnight in Aix.

#### Monday 26 April

Day in Camargue National Park; visit a "manade" (bulls, horses); visit Merino sheep farm of Favoulane; travel through Arles; dinner and overnight in Aix.

#### Tuesday 27 April

Marseille - Seville (Spain). Flight or train from Marseille to Seville via Madrid. Flamenco evening. Overnight Seville.

#### Wednesday 28 April

Spanish Merino Day. Discover the Extremadura region, the cradle of the Merino. Special competition of Merino in Zafra, Rambouillet's twin city. Professional visits to farms between Zafra, Caceres and Badajoz. Overnight in Badajoz.

#### Thursday 29 April

Visit selection centre for the Merino in Badajoz; Sheep research centre of the Junta d'Extremadura; visit Evora; also a Portugese Black Merino farm. Dinner at the sheep exhibit of Ovibeja and overnight in Beja.

#### Friday 30 April

Sheep exhibit in Ovibeja; White Merino farm; then to Lisbon and typical dinner with Fado music; overnight in Lisbon.

#### Saturday 1 May

Morning free in Lisbon then flight to Paris; coach to Rambouillet.

### Post-Conference (France-Germany-Rumania)

7 May to 14 May

#### Friday 7 May

Train to Nancy; visit Stanislas Square and Agricultural High School; breed selection flock for East Merino sheep; to Preny and the Simon Frères farm; visit Metz and reception by Council General. Overnight in Metz.

#### Saturday 8 May

Merino flock of the Ecoprogramme de la Cote de Delme; visit farm of J Remillon in Guebling with presentation of rams from several farms; travel to Strasbourg; reception in the European Parliament; tour city and overnight in Strasbourg.

#### Sunday 9 May

Visit northern Alsace or Black Forest and travel to Germany; visit the Merino Competition in Dettelbach; evening with stock breeders and overnight in Wurzburg.

#### Monday 10 May

To Stettbach, Bavaria; farm visits for Merinolandschaf breed in Deggingen - environmental sustainability and direct meat sales; stock breeders evening in a vineyard. Overnight in Stuttgart.

#### Tuesday 11 May

From Stuttgart to Frankfurt and fly to Bucarest (Rumania); by bus to Constanza via the Black Sea; tour city of Constanza. Stay overnight.

#### Wednesday 12 May

Stockbreeding Sheep and Goat Research Institute in Palas and several Merino breeds; reception; overnight Constanza.

#### Thursday 13 May

The Cosr Ion and C Droanca Farm with 3000 Merinos; Agro-farm in Fetesti, 1500 ewes and integrated slaughterhouse; the Black Sea coast; dinner in Bucarest and overnight.

#### Friday 14 May

Flight to Paris

## MERINOSCOPE SHOW DAY

### MONDAY 3 MAY

This information day and demonstrations are organised around a dozen technical displays dedicated to sheep. The criteria of innovation, research and sustainable development in regard to sheep breeding are central themes. The history of this privileged site will be evident everywhere with its combination of tradition and modernity.

#### 1 - The Merinos of Rambouillet

There will be ten rams and forty ewes on display at this historic site - the sheep-fold (Bergerie) of the Napoleonic period built at the beginning of the 19th century (1803).

These animals were imported from Spain at the request of King Louis XVI in 1786. The herd of the Bergerie Nationale, preserved as a closed flock since its arrival, today includes 40 rams and 150 ewes. These animals are direct descendants of those which made their way from Spain and were then sent throughout the world to create new fine wool breeds. The Merino of Rambouillet bears witness to the interest of genetics and the conservation of biodiversity.

**1A** - Merinos of Rambouillet outdoor display.

**1B** - Merino of Rambouillet and other types kept at the Bergerie Nationale (Ile de France and Romane).

#### 2 - Electronic Identification

Demonstrations of use of methods of electronic identification and management of flocks. Central information display of the professional organisations of French breeding.

#### 3 - Shearing of Merino and Sorting of Wool

Four-stand shearing platform with 4 shearers from the ATM and 4 from Spain, Australia and New Zealand. Shearing of Merino ewes of Rambouillet and 200 Merino d'Arles ewes from Provence. Fleece sorting and classification.

#### 4 - Merino Breeds

Exhibition of Merino d'Arles, Merino Précoce, Est à Laine Merinos and Merino breeds, Ile de France and Berrichon du Cher, all displayed in the majestic buildings on the Napoleonic farm.

#### 5 - French Breeds

Exhibition of reproductive animals of 12 French breeds grown for milking or butchering.

#### 6 - Wools of Europe

Presentation of the wool production of fifty sheep breeds of Europe and their wool products. For each breed there will be photographs, greasy wool samples and a product made from this wool.

#### 7 - Leather and skins

Live display around work with lamb skins and the skill of a cutter in a glove factory. Presentation of gloves, leather working and tools.

#### 8 - Genetics and reproduction

French work on genomics, techniques of reproduction and in particular those implemented for artificial insemination. Historic role of the Bergerie Nationale and current training of the insemination technicians.

#### 9 - Meats

Demonstrations of cutting of lamb carcasses and culinary preparation of meats. Tastings, promotion of French lamb.

#### 10 - Dogs for control and protection of herds

Demonstration of the breeding techniques, training and use of various dog breeds in flock control.

#### 11 - Museum of the Merino of Rambouillet

History of the arrival of the flock, its evolution, the world diffusion of the breed and current management of the herd.

#### 12 - Exhibition "Merinos and Town of Rambouillet"

History of the relationship that has existed between the town of Rambouillet and the Bergerie Nationale, before, during and after the arrival of the Merinos, described through texts, poster displays and objets d'art.

## CONFERENCE PROGRAMME

### TUESDAY 4 MAY

- Welcome by Mr Gerard Larcher, President of the French Senate, Mayor of Rambouillet
- Opening by Mr Nicolas Sarkozy, President of the French Republic or his representative
- Mrs Christine Boutin, Minister for Housing, First Vice-President of the Council General of the Yvelines Department
- Mr Jean Paul Huchon, President of the Ile de France region
- Mr Pierre Bedier, President of the Council General of the Yvelines Department
- Mr Glen Keamy, President of the World Federation of Merino Breeders

#### Session 1 – The Merino and Sheep Production

- Merino sheep and their arrival in Rambouillet, 1701-1787
- Influence and expansion of Merino sheep in France from 1787 to the present day
- Merino sheep in Spain.
- Sheep breeding in Europe and France.

#### Session 2 – Genetics of sheep breeding

- Genetics of adaptive traits in sheep; behaviour, resistance to disease; reproduction for genetic improvement, artificial insemination and adaptation to environment and markets
- French programme of genetic improvement and modern reproduction methods. Application to scrapie.
- Genetic research
- Conservation of rare breeds and genetic diversity

#### Poster Session

### General Assembly of the World Federation of Merino Breeders

#### Gala Dinner

### WEDNESDAY 5 MAY

#### Session 3 – Merino sheep and sustainable development

- Breeding methods and systems at work; predator control
- Management of space:
  - Northern Europe – flora and fauna
  - Mediterranean Europe - the Arles Merino, land-scapes, fire etc
- Rambouillet Merino in the USA
- Patagonian Merinos
- Animal welfare: new rules and practices
  - European regulations and future prospects
  - Animal welfare in Europe
  - Sheep transport by road, sea

#### Session 4 – Merino sheep: a quality product for the future

- Wool quality for production
- User's expectations, especially for high-quality, ready-to-wear and designer clothes
- The woollens industry in Europe
- Working with woollens in French regions - micro-structures
- The Arles Merino Antique sheep
- New non-apparel woollen textile techniques
- Wool economy in Europe
- Mutton: quality and economy in the European Union

#### Closing Session

Optional night out in Paris



# Unravelling Wool Yellowing

Scientists expect to identify why wool 'yellows' when exposed to sunlight for extended periods of time, and the role played by genetics, environments and trace minerals.

While wool has many valued qualities that are superior to other textile fibres, its intrinsic cream colour and tendency to yellow in sunlight are impediments to the production of bright white and pastel shades, which are so in-demand by the modern consumer. Investigations being conducted under the Australian Sheep Cooperative Research Centre's (CRC) post-graduate research programme aim to resolve the biological mystery and the consequent marketing issue.

Based at the CSIRO's Materials and Science and Engineering Division, Belmont, Victoria, Lee King says it makes sense to understand why wool yellows in the first instance. "Fluorescent whitening agents can be applied to initially improve the colour - however, they also cause significant yellowing of the wool upon exposure to sunlight.

"The inability to produce bright white photostable wool products prevents it from being the fibre of choice for important market niches such as baby wear, fashion knitwear and leisurewear."

In technical terms, wool yellowing involves the production of free-radicals which are generated as wool absorbs light. These radicals react with the protein to yield yellow compounds and their production is significantly increased in the presence of trace metals - particularly copper, iron and manganese.

Ms King explains that trace metals are always present in wool and are not removed during processing. They are bound within wool protein during fibre formation in the follicle and possibly via absorption from the environment. Their concentration in wool is expected to be related to the genetics, diet and the environment of the sheep.

"To understand how we might manage this costly problem, we'll source wool from the eight CRC Information Nucleus flocks spread across Australia which represent different genetic backgrounds and bloodlines, environments and soil types.

"Samples will be scoured, the colour measured and then rigorously cleaned. Trace metal contents, wool colour, fleece physical properties and genetic data will be evaluated. This will then provide insight into the genetics and biochemical mechanisms associated with wool colour and yellowing," she said.

Sheep CRC Postgraduate co-coordinator, Dr Graham Gardner, says this research is one example of the Sheep CRC's scholarship programme to investigate key production issues and train tomorrow's scientists.

"Post graduates are linked to CRC research programmes, with their projects contributing to the goals and outcomes of the CRC, which are to transform wool, meat and the sheep that produce them, and to improve sheep enterprise profitability, sustainability and business appeal."

## Rams sold for Export from Australia

### 2008

Prices shown in Australian Dollars

#### Dubbo 28 August

\$4000	2
\$3000	2
\$14,000	1
\$6000	1
= 6	Uruguay
\$20,000	1
= 1	Semen only
\$5,000	1
= 1	Argentina

#### Adelaide 12 September

\$5000	2
\$11,500	1
\$6000	2
\$15,000	1
\$17,000	1
= 7	Argentina

**Total sold 2008** 15

+ semen donors 11

### 2009

To date

#### Armidale 4 February

(special DAFFA approval)

\$3100	5
\$14,000	1
= 6	Uruguay



During their travels in Australia, Uruguayan sheep men, Gustavo Peinado of Montevideo and Manuel Corrga, Estancia Ibirapita, Barbeieri, are pictured at Condobolin Agricultural Show with Ray and Russell Jones of Darrivell stud, Trundle, NSW.

Uruguayan buyers Manuel Corrga and Gustavo Peinado (on left) with Landmark agent, Angus Carter, Walcha NSW and vendor, Matthew Coddington, Roseville Park stud, Dubbo, NSW, with the Roseville Park ram they bought at the 2008 National Ram Sale in Dubbo for \$AU14,000,

# Argentina Merino Report 2008

## 60th Anniversary Year (1948 - 2008)

The last year has been characterised by widespread drought throughout the whole country under the La Niña effect and a cold stream until January 2009 on the South Atlantic Ocean. The world financial crisis since August has pushed down wool prices as with all commodities on the international markets.

Argentina does not have a livestock and agricultural policy or free market prices (wool, crops, meat, milk, flour and oil), which affects all ranch and farm production with a reduction in area and volume. In addition we have export taxes at different levels, up to 35 per cent for soybean, and in March there was a farm mobilisation against the 50pc proposed by the National administration which was finally rejected by Congress.

Sheep stock have failed with official mortality figures in Chubut Province being 800,000 although private estimates put this figure at close to one million. Rio Negro Province is in the same situation. The Farmers Federations in both provinces have together pushed the Government to obtain immediate financial assistance to maintain jobs and loans at low interest rates. The eruption of a Chilean volcano covered many properties and stock between Esquel and Bariloche in ash, diminishing crop production and wool yield.

Breeders in Argentina want to eliminate wool export taxes (10pc for raw wool and 5pc for washed wool). The wool clip has fallen by 5,000.000 kilograms with many breeders cutting only 2.5 to 3.2 kilograms per sheep when the average was 4 kilograms in the central driest area. Ranchers with less than 3.000 sheep received a subsidy of US\$3,000 from the provincial authorities. Many of them have only two options - to close the gate or to accept a loan from the bank to continue for one more year.



**The Grand Champion Merino Ram and Grand Champion Poll Merino Ram of the 2008 Comodoro Rivadavia, both from Los Manantiales stud with judge, Tom Ashby of North Ashrose stud, Australia in the middle between chief stewards, George Scott and Patrick Jamieson.**

Silvio Conrad is a young stud breeder with a property in Las Chapas, Chubut, where rains in 2007 were only 47mm and 58mm in 2008, instead of the average of 140mm. He has reduced his flock by 50pc to 1,400 ewes because his lambing rate was 1,200 lambs in 2006, 80 in 2007 and 60 in 2008.

Our sheep breeders are affected firstly by the international crisis and higher production and labour costs but also as each year fewer young ones want to remain on the family properties. They prefer to receive an unemployment subsidy, start working in other industries, or be government employees.

The Viedma/Patagones Show was postponed, but Trelew, Comodoro Rivadavia and Esquel Shows all sold their exhibition rams at relatively good prices. All these show and sale results are on our website: [www.Merino.org.ar](http://www.Merino.org.ar)

*(Continued on page 8)*



**Entries in the 4-tooth Merino class at the 2008 Comodoro Rivadavia.**



# The Argentine Breeders

(Continued from page 7)

With INTA and the support of the Provincial Agriculture authorities of Chubut, Rio Negro and Santa Cruz and with great interest from more than 60 people in each area we have conducted our 14th Merino Classer Journey.

The Merino association has increased the number of breeders involved in the "Pure Merino and Pure Registered Merino" programme with more than 80,000 ewes classed visually and with information obtained through the Provino Index compiled annually by Jack Mueller PhD.

The Merino association also has on hand the "Argentine Pedigree Flock", new software which is the first on sheep in Argentina and which covers the 2008 lambing season.

With confiscated profits, drought conditions and world recession we have a huge job to do as citizens and Merino breeders during 2009!

**Alejandro P Duhart**  
**Argentine Merino Breeders**  
**Buenos Aires, February 2009**

## The International Year of Natural Fibres

The International Year of Natural Fibres was launched at the headquarters of the Food and Agriculture Organisation (FAO) in Rome on 22 January with a view to focussing world attention on the role that natural fibres play in contributing to food security and poverty alleviation.

With natural fibre industries employing millions of people worldwide and contributing to a greener planet, the objectives of this project are to:

- raise awareness and stimulate demand for natural fibres
- promote the efficiency and sustainability of the natural fibre industries
- encourage appropriate policy responses from governments to the problems faced by natural fibre industries
- foster an effective and enduring international partnership among the various natural industries

Natural fibres may be defined as "those renewable fibres from plants or animals which can be easily transformed into a yarn for textiles." Animal fibres are largely those which cover mammals such as sheep, goats and rabbits, but include also the cocoon of the silk-worm. Vegetable fibres are derived from the stem, leaf or seed of various plants.

Close to 30 million tonnes of natural fibres are produced annually in the world of which cotton is dominant with 20 million tonnes, wool and jute each with around 2 to 3 million followed by a number of others. Wool is the most sustainable, safe and eco-friendly fibre and contributes to healthier and safer living.

Wool is also a planet-friendly fibre. It is an annually renewable natural resource, biodegrades without harming the planet and is easily recyclable. Wool means natural, non-flammable, hypoallergenic, air-filtering, UV protective, moisture-absorbent, sound-absorbent, and healthy. And it looks good too!

For further information or to become involved in the International Year of Natural Fibres, visit [www.naturalfibres2009.org](http://www.naturalfibres2009.org)

# The US Industry

## Research Papers On-Line

The 20th anniversary of the American Sheep Industry Association (ASI) was marked by a record attendance at its annual convention in January in San Diego.

During a symposium run in conjunction with the convention, a number of research findings were presented on breeding objectives, nutritional strategies, pasture management, enhanced techniques of artificial insemination, effective parasite control and enhancing the competitiveness of wool.

These papers and further research projects are available on the USDA's website where a 72-page book of proceedings can be downloaded or viewed on [www.sheepusa.org](http://www.sheepusa.org) (Menu: Research & Technology).

## Marching in Wool

A current bright spot for the US wool market is the military. Between changing the colours of uniforms to an additional emphasis on dress uniforms, the military business has increased considerably over the last five years and it is purchasing a large quantity of wools in the 19 to 22 micron range.

## The US Wool Market

In the US, as in all other countries, there is uncertainty in the wool market. The international financial crisis has caused great fluctuation in the value of currencies and since much of the wool worldwide is purchased in US currency, wool buyers seem slower to purchase wools until currencies are more stable and additional orders from retail and apparel manufacturers are committed. The lower worldwide raw wool production however does help offset some of the downturn in purchasing.

## Sheep Producers flock to Washington

Sheep producer leaders from 23 American states recently visited Capitol Hill to present the interests of the American sheep industry. US senators and representatives were visited during the American Sheep Industry Association's (ASI) annual trip to Washington, DC.

Continued funding for the US Department of Agriculture's Wildlife Services agency was a priority as producers met with their respective congressional offices. The industry needs the support of the federal agency to continue to share the responsibility of damage control with state and local government, landowners and operators.

Other topics of discussion included the codification of the sheepherder legislation, expanded research on the transmission of disease between bighorn sheep and domestic sheep, and the passage of the Foot and Mouth Disease Prevention Act.

"There are a lot of new faces in Washington and this trip was a great opportunity for the industry to educate the new congressmen on the top sheep concerns," states Bob Benson, co-chair of the ASI Legislative Action Council and Indiana sheep producer. "Issues throughout the industry vary depending on location and size; however, many things remain consistent across all operations, such as attacks on livestock production waged by animal rights groups."



# Focus on South Africa

## BLUP and the Merino Breeder

by Prof. Gert Erasmus, Albertinia, South Africa

Merino breeders tried to circumvent this problem with, *inter alia* control flock tests, group breeding schemes, progeny tests and veld ram clubs. The problem was completely solved just more than twenty years ago with the introduction of BLUP. If BLUP is carried out correctly and there are strict scientifically based rules and regulations, it can be a very accurate (best) method of comparing animals over different environments. Not only production and reproduction performance, but also visual assessment, using the method of linear type scoring can be included. It is, in all aspects, what Prof. De Lange refers to as "precision breeding".

Some managerial aspects need to be highlighted to afford this "precision breeding". Firstly, parentage must be recorded. BLUP utilises all genetic relationships among animals to predict breeding values. Interesting to note is that no data are ever discarded, since more data, even from dead animals, increase accuracy. It stands to reason that there should also be genetic ties among contemporary groups, meaning that some animals should have progeny in different contemporary groups. If there are no genetic links, groups cannot be compared. Secondly ALL animals (even culls) should be measured and scored. BLUP needs all available information to increase accuracy. Thirdly, measurements should be taken at the best age determined by research and all prior managerial practices, like e.g non-shearing, adhered to. "Precision breeding" requires precision inputs.

BLUP is the Best Linear Unbiased prediction of an animal's breeding value – in other words how it will breed relative to all animals in an analysis. This analysis ideally involves

*Performance testing on its own has serious limitations in the genetic improvement of livestock. Animals can, for instance, only be compared within a contemporary group where all non-genetic factors, such as climate, sex, management and age are identical.*

the entire breed in a country, or even in the world. Apart from being extremely accurate, BLUP obviously affords another major advantage in that the "effective population size" is vastly increased. A breeder can then select the best animals he can afford to satisfy his needs from the entire breed. Dr Jan Hofmeyr put it so aptly: "There is an effectiveness in numbers in animal breeding operations, which is seldom equalled by breeding skill". For breeders willing to go the whole hog, there is also the wonderful prize of a global market. Our first aim should obviously be a whole breed national analysis. A global analysis is, however, not so far fetched. The Hereford breed is, in fact, on the verge of implementing one. Breeders need not be concerned about the fact that there are different types within a breed. These can be accommodated by including so called genetic groups in the analysis.

Notwithstanding all these obvious advantages, breeders seem reluctant to participate, What could the reason be? The answer is undoubtedly fear. Not so much fear that they will be doing the wrong thing, but fear that they will be unmasked and lose their status as top breeders. This is a world wide phenomenon and not restricted to Merino breeders. SA Merino breeders are, in fact, by and large progressive and open

minded. There are, however, those that are doing well without much effort and are happy in their comfort zone. Best of luck to them, but rest assured that it won't last forever.

When Prof. De Lange introduced BLUP into South Africa from the USA more than twenty years ago, he and his students were more than excited and even identified two breeds that would take the lead in its application, since they had both full performance records and genetic ties. Alas, they were not really interested, since for them performance testing was compulsory and showing was prohibited. They considered themselves therefore as already being on a scientific high. This left breed societies such as Merino SA to come to the fore in the application of BLUP. They should not be too concerned about the relatively low current participation. To force breeders to participate has proved to be ineffective. What is important is that the participation is generally enthusiastic, genuine and directed at the future. This is all that matters. ■



# Birth Coats

## Quantifying the relationship between birth coat score and wool traits in Merino sheep

by W J Olivier & A C Greyling, South Africa

### Introduction

The birth coat of a Merino lamb can range from fine fibres and short tight curls to a coarse covering dominated by long, coarse protruding halo hairs). It is established from pre-natal primary fibres and a proportion of secondary fibres and is replaced after birth with the hogget fleece through the maturing of the remaining secondary fibres. Olivier et al (1994) stated that hairier lambs are culled in practice in an attempt to reduce fibre diameter, change in fibre diameter with an increase in age and the so called coarse edge (percentage of fibre above 30  $\mu\text{m}$ ).

Birth coat type is reported to be highly heritable ranging from 0.65 to 0.70 (Schinckel, 1955; Ponzoni et al, 1997; Cloete et al, 2003; Kemper et al, 2003). These authors also reported moderate positive and negative correlations with other wool traits. Ponzoni concluded that birth coat type as an early selection criterion in Australian Merino sheep is limited despite the high heritabilities reported in the literature. However, Olivier reported that selection against hairy birth coats will probably decrease coefficient of variation of fibre diameter and coarse edge. Kemper indicated that decreasing fibre diameter will also subsequently lead to a decrease in birth coat score in fine wool Merinos.

Most of the results in the literature were obtained from medium wool Merinos. The aim of this study was therefore to quantify the relationship between birth coat score and wool traits in a fine wool Merino stud.

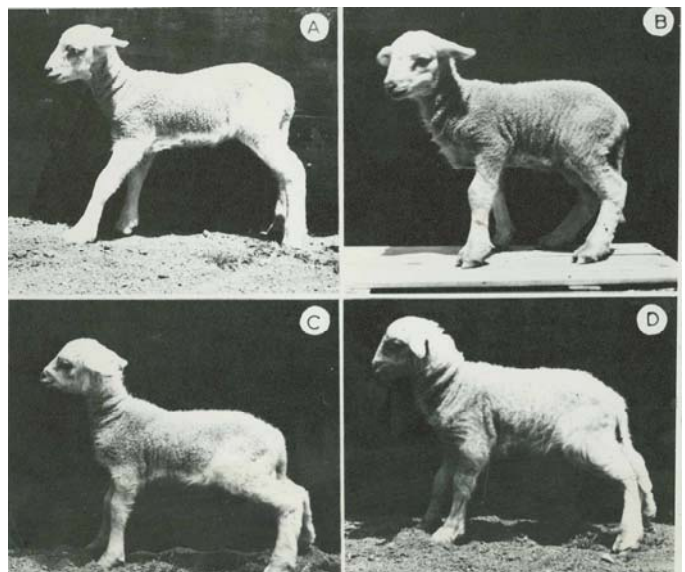
### Material and methods

The Cradock Fine Wool Merino stud was established in 1988. Ewes were bought from Merino farmers with the finest clips throughout South Africa and four fine wool rams were imported from Australia. Data collected on ram and ewe hoggets born within this stud from 1988 to 2003 were used for the analyses. The number of records, means and standard deviations of the respective traits are summarised in Table 1.

**Table 1.** Data description of the different traits

	Number of records (n)	Mean	Standard deviation
Birth coat	4242	1.95	0.81
Clean fleece weight (kg)	5389	4.39	1.02
Mean fibre diameter ( $\mu\text{m}$ )	5412	19.26	1.51
Staple length (mm)	5412	102.72	15.61
Clean yield (%)	5026	67.78	6.45
Number of crimps	5014	14.20	2.38
Duerden	5014	99.42	9.41
Coefficient of variation (%)	3777	17.20	2.13
Comfort factor (%)	3780	99.39	1.01
Wool quality	5460	30.61	8.30
Variation over the fleece	5460	36.86	6.94

The traits included in the analysis were birth coat type, clean fleece weight, mean fibre diameter, staple length, clean yield, number of crimps, Duerden, coefficient of variation of fibre diameter and comfort factor, as well as the subjective traits wool quality and variation over the fleece that were assessed on a linear scale from 1 to 50 (Olivier et al. 1987). Birth coat type was assessed on a scale of 1 to 4 with 1 (A) being woolly and 4 (D) being hairy as illustrated in **Figure 1**. Birth coat was recorded since 1992, while coefficient of variation of fibre diameter and comfort factor was recorded since 1993.



The means and standard deviations for the respective traits were obtained with the PROC MEANS-procedure of SAS and significance levels for the fixed effects were obtained with the PDIFF-option under the PROC GLM-procedure of SAS (Littell et al). The effects tested included year of birth, sex, age of dam, rearing status, line (fine or strong wool), as well as the two way interactions between year and sex, year/line and sex/line. The age of the animals (linear regression) at the different traits was also tested for significance. Only significant effects were included in the final model for each trait. The estimation of the genetic parameters and breeding values was done with ASREML (Gilmour et al, 2002).

### Results and discussion

The direct heritabilities, maternal heritabilities, maternal permanent environment effect and the correlation between the direct and maternal genetic effects are presented in Table 2. The  $h^2$  for clean fleece weight, fibre diameter, staple length, clean yield, coefficient of variation of fibre diameter, wool quality and variation over the fleece falls within the range of  $h^2$  reported by Groenewald, Safari et al. The values obtained in this study for birth coat are lower than the values reported by Schinckel, Ponzoni, Cloete, Kemper et al. No comparable values could be found for the  $h^2$  of DD and comfort factor. The high heritability of comfort factor can most probably be ascribed to the lack of variation within this trait.



(Continued from page 10)

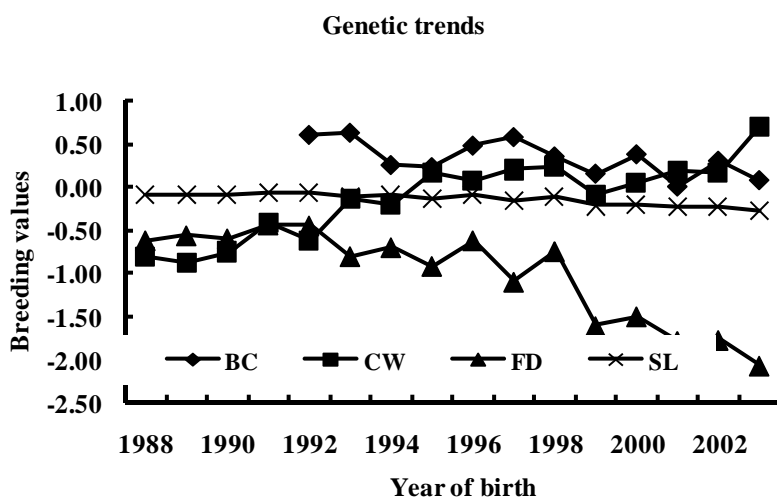
**Table 2.** The direct heritability ( $h^2$ ), maternal heritability ( $m^2$ ), maternal permanent environment effect ( $c^2$ ) and correlation between direct and maternal genetic effects ( $r_{am}$ ) for the respective traits ( $\pm$  s.e.)

	$h^2$	$c^2$	$m^2$	$r_{am}$
Birth coat	0.45 $\pm$ 0.04	0.06 $\pm$ 0.02	0.03 $\pm$ 0.02	
Clean fleece weight (kg)	0.54 $\pm$ 0.05		0.09 $\pm$ 0.02	0.29 $\pm$ 0.14
Mean fibre diameter ( $\mu$ m)	0.73 $\pm$ 0.03	0.04 $\pm$ 0.01		
Staple length (mm)	0.47 $\pm$ 0.03			
Clean yield (%)	0.70 $\pm$ 0.03			
Number of crimps	0.49 $\pm$ 0.04	0.07 $\pm$ 0.02		
Duerden	0.63 $\pm$ 0.07	0.02 $\pm$ 0.01	0.02 $\pm$ 0.02	-0.50 $\pm$ 0.24
Coefficient of variation (%)	0.61 $\pm$ 0.04			
Comfort factor (%)	0.91 $\pm$ 0.02			
Wool quality	0.54 $\pm$ 0.03			
Variation over the fleece	0.38 $\pm$ 0.03			

The genetic and phenotypic correlations between birth coat type and the other wool traits are presented in Table 3. The correlations between birth coat and clean fleece weight, fibre diameter, staple length and clean yield are in the same order as correlations reported in the literature (Ponzoni et al, 1997; Kemper et al, 2003). The correlations between birth coat and coefficient of variation of fibre diameter fall within the values reported by Ponzoni et al 1997; Kemper et al, 2003.

It is evident from Table 3 that the correlations between birth coat and fibre diameter and clean yield indicate that a decrease in birth coat would have a positive effect on these traits through decreasing fibre diameter and improving clean yield. Clean fleece weight and staple length will tend to decrease and the number of crimps tends to increase with a woollier birth coat. Despite the positive correlations between birth coat and fibre diameter and clean yield, the fact that the correlations between birth coat and the economic important traits are low suggests that direct selection for these traits is still the best option and that culling on birth coat will not necessarily lead to an improvement in these traits.

**Figure 2.** Genetic trends for birth coat type (BC), clean fleece weight (CW), fibre diameter (FD) and staple length (SL)



The slightly higher correlations between birth coat and coefficient of variation of fibre diameter, comfort factor, wool quality and variation over the fleece suggest that selecting woollier lambs could help to decrease coefficient of variation of fibre diameter and variation over the fleece and to increase comfort factor and wool quality.

**Table 3.** Genetic and phenotypic correlations between birth coat and the other wool traits ( $\pm$ s.e.)

	$r_g$	$r_p$
Birth coat		
Clean fleece weight (kg)	0.07 $\pm$ 0.07	0.09 $\pm$ 0.02
Mean fibre diameter ( $\mu$ m)	0.10 $\pm$ 0.07	0.05 $\pm$ 0.02
Staple length (mm)	0.09 $\pm$ 0.07	0.05 $\pm$ 0.02
Clean yield (%)	-0.13 $\pm$ 0.06	-0.03 $\pm$ 0.02
Number of crimps	-0.14 $\pm$ 0.07	-0.07 $\pm$ 0.02
Duerden	-0.02 $\pm$ 0.07	-0.02 $\pm$ 0.02
Coefficient of variation (%)	0.27 $\pm$ 0.06	0.19 $\pm$ 0.02
Comfort factor (%)	-0.34 $\pm$ 0.06	-0.19 $\pm$ 0.02
Wool quality	-0.20 $\pm$ 0.07	-0.11 $\pm$ 0.02
Variation over the fleece	-0.20 $\pm$ 0.08	-0.13 $\pm$ 0.02

$r_g$  – genetic correlations;  $r_p$  – phenotypic correlations

### Conclusion

It can be concluded from this study that culling of hairier lambs would not necessarily lead to a decrease in fibre diameter or a change in the other economically important traits. Therefore, direct selection for these traits is still the best option. However, selecting animals at selection age that were woollier at birth could assist the selection process of identifying animals that will tend to have lower coefficient of variation of fibre diameter and less fibres over 30  $\mu$ m (comfort factor), as well as better wool quality and less variation over the fleece.

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### Currency Conversion as at 30 June 2009

1.00 Australian Dollar (AUD) =

2.97 Argentine Peso (ARS)

0.56 Euro (EUR)

158.37 Hungarian Forint (HUF)

1.24 New Zealand Dollar (NZD)

24.64 Russian Rouble (RUB)

6.46 South African Rand (ZAR)

17.89 Uruguayan Peso (UYU)

0.79 US Dollar (USD)

5.37 Chinese Yuan (CNY)