

# GLENHOLM COOPWORTHS



1yo Coopworth Ewe Lamb  
Rearing Twins, October 2007.

## Newsletter October 2007

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## October 2007

With the spring upon us it is certainly crunch time to determine our production for the year. While we have been lucky with recent rainfalls there is no excess moisture in the soil, our harvest this year will depend upon future rainfalls over the next couple of weeks, the positive being, we still have time.

### Hamilton Sheepvention

This year at Sheepvention we had a display of information in the Sheep Genetics marquee in conjunction with the Coopworth Society. An excellent response was received to join our mailing list, those of you that joined this year may remember there was a draw for an Icebreaker Merino jacket. The winner was Peter Mitchell from Horsham, congratulations Peter.

### Multivendor Coopworth Sale

This years Multivendor Coopworth Sale will be held at the Hamilton Showgrounds, 9<sup>th</sup> November starting at 1pm. For the first time we will have rams at this sale, we have selected four rams with exceptional Lambplan figures that are ranked in the top 25% decile of the 2006 drop for the Coopworth \$ index. A total of 60 rams will be sold under the Helmsman system from various registered breeders. Figures for our rams at this sale are detailed below.

Lot	Tag	Sire	Wwt	Milk	Pwwt	Fat	Muscle	Gfw	Nlw	\$Index
29	056	Cairnlea 406 NZ	6.9	0.2	8.9	0.0	-0.2	29	18	130
30	067	Cairlea 406 NZ	6.5	0.1	8.7	0.0	0.5	22	17	130
31	059	Cairnlea 406 NZ	6.3	0.5	8.4	-0.2	-1.0	26	19	128
32	051	Cairnlea 406 NZ	6.4	-0.1	8.2	0.4	0.1	18	17	127
Aust Average	2006	Drop	3.9	0.5	5.9	-0.1	0.1	6	11	119

### Private Ram Sales

We will be offering our rams for private sale from November onwards. All rams are commercially raised in the paddock and will be ready to work off the truck. However if you are providing supplementary feed to your ewes it is best to purchase rams early and introduce them to the same ration to avoid grain poisoning. The majority of rams for sale have been used in our commercial flock in the autumn so they are experienced workers a worthwhile consideration especially if joining to maiden ewes. There is information on page 6 in relation to Lambplan EBVs and the Coopworth \$ index, it should be useful to explain all the terms and traits to allow you to make a more informed choice on the genetics you may be purchasing.

## **Semen Sales**

For those of you using AI in your breeding program we have semen available this year from two of our best rams born in 2006. These two rams were both used in our own stud earlier this year, their lambplan figures are listed on page 4.

## **Thoughts on Ram Selection**

Ram selection will depend on several factors,

Your own breeding objectives

The ewes the rams are to be joined to

Structure of the flock

A producer running a self replacing Coopworth flock may have different priorities to that of another who is breeding 1<sup>st</sup>X Ewes by putting a Coopworth ram over a Merino ewe. The difference being is that the self replacer may put more emphasis on growth and meat traits for the wether portion and fertility for the ewe progeny, weaning and post weaning weight and fertility will be important considerations for ewe progeny to be mated as lambs. The 1<sup>st</sup> X breeder will give thought to fertility, maternal weaning weight and if joining progeny as lambs, growth. We have had positive results joining 1<sup>st</sup> X Coop/Mer as ewe lambs, weight gain is more advanced than that of their traditional 1<sup>st</sup> X counterparts.

Whatever the ewes to be joined it is important to carefully consider the genetic traits that will contribute most to profit. As breeding is a long term work in progress the importance of genetic selection cannot be underestimated. All registered coopworth breeders performance record their flocks with Lambplan and have to comply with guidelines outlined by the Coopworth Society of Australia so genetic gain in their flocks is guaranteed. This gives clients of registered breeders assurance the genetics they invest in each year will contribute positively to their own flock and in turn the profit and loss statement.

## **What is happening at Glenholm**

We are currently in the middle of lambing our stud ewes. We joined in May our original Cleverlie ewes and also their 2006 progeny. All the ewes are lambing down well and we are extremely pleased with the ewe lambs. At lambing we weigh and tag the lambs, at the same time we give the new mother a score on her flight distance, this recognises the ewes protective mothering abilities. This information on dams is available when clients are selecting rams, and it is encouraging to us that in our second lambing in collecting this information that the results are consistent with last years lambing.

Our embryo transfer progeny from two programs were dropped in August and September and are growing well and will use the ram lambs over our commercial ewes next year. The ewe portion will be joined as lambs with a natural mating as it is a good selection tool to identify and retain the most productive ewes in the stud.

The last three pages look at selecting rams using lambplan ASBV's it was produced by Sheep Genetics to explain ASBV's for maternal breeders, hope you find it useful. Also a percentile report on 2006 drop Coopworths and their respective traits.

If you have any queries we are only too happy to discuss your requirements and look forward to meeting you in the future.

Regards

Nick and Sandra McClelland



## Coopworth Animal Listing

Entries: 1 ~ 2 of 2 are shown

Sorted by: Stud Name / Id.

[Hide ASBVs](#) [Show ASBV Acc](#) [Hide Index Values](#)

Selection Criteria: LAMBPLAN Id(s): equals 150062-2006-060055 or 150062-2006-060070,

[Home](#) [ASBV Enquiry](#) [Mating Predictor](#) [Member Enquiry](#) [Sale Catalogues](#) [Semen Catalogues](#)

Name/ID	Maternal Weaning Wt	No. of Lambs Weaned	Post Weaning Scrotal Circ	Yearling Scrotal Circ	Birth Wt	Weaning Wt	Post Weaning Wt	Yearling Wt	Adult Wt	Post Weaning Fat Depth	Post Weaning Eye Muscle Depth	Yearling Fat Depth	Yearling Eye Muscle Depth	Yearling Fibre Diameter	Yearling Fibre CV	Yearling Greasy Fleece Wt	Yearling Clean Fleece Wt	Yearling Staple length	Yearling Staple Strength	Post Weaning WEC	Yearling WEC	Hogget WEC	Coopworth \$Index	SAMM \$Index
<a href="#">GLENHOLM COOPWORTHS-060055</a>	+0.3	<b>+20</b>	+2.0	+2.1	+0.4	<b>+7.0</b>	+9.1	<b>+11.8</b>	<b>+13.6</b>	+0.1	+0.4	-0.5	-0.3	-	-0.8	<b>+34</b>	-	-	-	+34	+13	-4	<b>+134</b>	<b>+152</b>
<a href="#">GLENHOLM COOPWORTHS-060070</a>	+0.7	<b>+18</b>	+1.8	+2.0	+0.5	<b>+6.5</b>	+8.4	<b>+10.8</b>	+12.7	-0.2	+0.2	-0.7	-0.4	-	-1.2	<b>+20</b>	-	-	-	+34	+10	-2	+130	<b>+149</b>
<a href="#">Coopworth Avg. ASBVs for 2006 Born Lambs</a>	0.3	10	1.2	1.2	0.2	3.8	5.8	6.7	8.2	-0.1	0.1	-0.4	-0.1	0.6	-1.5	5	-2	0.6	-0.3	2	-11	-19	119	129

**ASBVs**  
explained



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# Percentile Report

Analysis COOPWORTH Dated 15/10/2007



Animals born in 2006

Band	Bwt kg	Wwt kg	Mwwt kg	Pwwt kg	Pfat mm	Pemd mm	Ywt kg	Yfat mm	Yemd mm	Ygfw %	Yfd u	Pfec %	NLW %	PSC cm	Border\$	Coopworth\$	SAMM	Corriedale\$
0	-0.4	9.5	4.5	18.5	-2.2	3.8	17.3	-2.6	2.9	65	-2.5	-84	29	5.8	150.4	150.4	182.4	150.2
1	-0.2	7.8	2.9	12.9	-1.3	2.3	13.7	-1.7	1.7	27	-2.1	-57	23	4.6	141.6	141.6	183.7	141.8
2	-0.1	7.3	2.6	11.9	-1.2	1.9	12.9	-1.5	1.4	25	-1.5	-51	22	4.1	138.8	138.8	158.8	139.0
3	-0.1	7.0	2.5	11.4	-1.1	1.7	12.4	-1.5	1.2	24	-1.3	-48	20	3.9	136.7	136.7	156.5	138.9
4	-0.1	6.8	2.4	11.0	-1.0	1.6	12.1	-1.4	1.1	23	-1.2	-45	20	3.7	135.4	135.4	154.5	135.5
5	0.0	6.6	2.3	10.7	-0.9	1.5	11.7	-1.3	1.0	22	-1.1	-43	19	3.5	134.4	134.4	153.1	134.5
10	0.0	6.0	1.9	9.5	-0.8	1.2	10.6	-1.2	0.7	19	-0.5	-35	17	3.0	131.1	131.1	147.6	131.2
15	0.1	5.6	1.6	8.7	-0.6	0.9	9.9	-1.0	0.5	17	-0.3	-29	16	2.7	128.6	128.6	144.2	128.7
20	0.1	5.3	1.4	8.1	-0.5	0.7	9.4	-0.9	0.4	15	-0.1	-25	15	2.4	126.8	126.8	141.5	127.0
25	0.1	5.0	1.2	7.6	-0.5	0.6	8.9	-0.8	0.3	14	0.0	-21	14	2.2	125.2	125.2	139.2	125.4
30	0.1	4.7	1.1	7.2	-0.4	0.5	8.5	-0.8	0.2	12	0.3	-18	13	1.9	123.8	123.8	136.9	123.8
35	0.2	4.5	0.9	6.8	-0.3	0.4	8.1	-0.7	0.1	11	0.4	-14	13	1.8	122.4	122.4	134.8	122.6
40	0.2	4.3	0.8	6.4	-0.3	0.2	7.7	-0.6	0.0	9	0.6	-11	12	1.6	121.2	121.2	132.9	121.3
45	0.2	4.1	0.6	6.1	-0.2	0.2	7.4	-0.5	-0.1	8	0.7	-8	11	1.4	120.0	120.0	131.0	120.1
50	0.2	3.9	0.5	5.8	-0.1	0.1	7.1	-0.4	-0.2	6	0.8	-4	10	1.3	118.6	118.6	129.0	118.7
55	0.2	3.7	0.3	5.5	-0.1	0.0	6.7	-0.4	-0.2	5	0.9	0	10	1.2	117.3	117.3	127.0	117.3
60	0.3	3.5	0.2	5.2	0.0	-0.1	6.4	-0.3	-0.3	4	1.0	4	9	1.1	116.0	116.0	125.1	116.1
65	0.3	3.3	0.0	4.8	0.1	-0.2	6.1	-0.2	-0.4	2	1.2	8	8	0.9	114.8	114.8	123.0	114.9
70	0.3	3.1	-0.1	4.5	0.1	-0.2	5.7	-0.1	-0.4	1	1.3	13	8	0.8	113.6	113.6	120.9	113.7
75	0.3	2.9	-0.3	4.1	0.2	-0.3	5.4	0.0	-0.5	-1	1.4	17	7	0.6	112.4	112.4	118.6	112.5
80	0.4	2.6	-0.5	3.8	0.3	-0.5	5.0	0.1	-0.6	-3	1.7	22	6	0.5	111.1	111.1	116.0	111.2
85	0.4	2.3	-0.7	3.4	0.4	-0.6	4.6	0.2	-0.8	-5	1.8	29	5	0.3	109.5	109.5	113.1	109.6
90	0.4	1.8	-0.9	2.9	0.6	-0.8	3.9	0.4	-0.9	-8	2.1	39	4	0.1	107.2	107.2	108.8	107.2
95	0.5	1.1	-1.2	2.0	0.8	-1.1	3.0	0.6	-1.1	-12	2.5	54	3	-0.2	103.1	103.1	102.7	103.1
100	1.0	-3.2	-3.0	-4.4	2.5	-3.4	-5.0	2.7	-3.0	-36	3.6	132	-9	-2.4	82.5	82.5	71.0	82.3



# tips & tools

Genetics: LP.05

## LAMBPLAN for maternal sheep breeders

### What is LAMBPLAN?

LAMBPLAN is Australia's national sheep industry genetic improvement program that has been operating in the lamb industry since 1990. During this time participating maternal sire breeders have made significant improvement in the quality of genetics made available to industry. Commercially important characteristics, such as maternal ability, growth, carcase and fleece traits, are being measured for evaluation by LAMBPLAN.

The information provided on all LAMBPLAN evaluated sheep comes in the form of Estimated Breeding Values (EBVs). LAMBPLAN EBVs rate animals' genetic merit for a number of traits that are important for selecting maternal sires that breed superior prime lamb dams. EBVs are calculated free of non-genetic effects, such as nutrition and management.

LAMBPLAN EBVs are calculated across-flock, thereby benchmarking all evaluated animals. This enables both seedstock and commercial breeders to identify the best genetics available across the breed, not just within an individual flock, to maximise genetic progress towards breeding and marketing objectives.

LAMBPLAN EBVs are the best description of animals' genetic merit for a range of maternal, growth, carcase and wool traits.



### KEY BENEFITS

- Estimated Breeding Values (EBVs) rank animals for their genetic merit enabling breeders to select stock to meet their breeding objectives and increase profit.
- EBVs are available for maternal ability, fertility, growth, carcase, disease resistance and fleece traits enabling effective multi-trait selection.
- Maternal progeny testing has demonstrated a variation in returns of up to \$35 per ewe per year in ewes from superior maternal sires. Selection using EBVs is the most effective way to capture this benefit.

EBVs are an excellent tool for identifying genetically superior animals to maximise genetic improvement in your flock.

By understanding the indexes available, you can utilise the one with the appropriate trait weightings to match your breeding objectives.

### Why use EBVs to select rams?

Astute breeders know that an animal's performance is an expression of both the genes it carries and the nutrition and management it has received. However, it is only genetic performance that can be taken home for flock improvement.

The better an animal's genetic merit can be defined, free of non-genetic influences, the better selection decisions breeders can make. EBVs are an excellent tool to describe genetic merit.

For more information on LAMBPLAN EBVs refer to *An Introduction to LAMBPLAN Tips & Tools, Genetics LP01*.



## What EBVs are available?

- Reproduction EBVs describe an animal's genetic potential for the number of lambs born and weaned. These EBVs are expressed as a percentage.
- Maternal Weight EBVs are a combination of the ewe's ability to provide a better maternal environment and have higher milking potential. The genetic merit of each animal up to weaning is separated into the direct effect of its own genes, expressed as weaning weight, and the effect of its mother's genes.
- Wool Weight EBVs are available at yearling, hogget and adult ages. A positive EBV means a genetically heavier-cutting animal. Both greasy and clean fleece weight EBVs are available.
- Fibre Diameter EBVs describe animals' genes for finer or coarser wool. A negative EBV means a (genetically) finer wool animal. Yearling, hogget and adult Fibre Diameter EBVs are available.
- Wool Quality Trait EBVs describe the genetic variation that exists for Coefficient of Variation of Fibre Diameter, Staple Strength, and Staple Length.
- Faecal Egg Count (FEC) EBVs describe animals' genetic ability to avoid worm burdens. This is a combination of being genetically less likely to pick up worms and also better able to dispose of them.
- Liveweight EBVs indicate the animals' genetic potential for growth. Weight EBVs are available at birth, weaning (100 days), post-weaning (225 days), yearling (360 days), hogget (450 days) and adult (540 days) ages. A positive EBV means the animal is genetically faster growing.
- Fat Depth EBVs provide an estimation of the fat depth of an animal at a constant weight. A negative EBV means a

genetically leaner animal that will produce more lean meat at a constant weight.

- Eye Muscle Depth EBVs describe the animal's genes for eye muscle depth independent of weight. A positive EBV means a genetically heavier-muscled animal that will be higher yielding and have slightly more of its muscle in higher value cuts.
- Structural Trait EBVs rate animals for a range of structural traits; including pastern, hock, face cover and jaw setting.

Within each trait group, measurements can be taken at different stages of the animal's life, for example adult fleece weight records can be monitored and evaluated throughout life.

Changes in EBVs can be tracked over years and genetic trends produced for each trait or selection index (see Figure 1).

This is useful for monitoring genetic progress and finetuning breeding programs.

## EBVs enable effective multi-trait selection

Data collected by LAMBPLAN flocks has enabled calculation of the heritability (how much of the measured performance will be passed on to progeny) of traits and the genetic correlations (relationships) between traits of economic importance.

The ability to accurately select for traits, and knowledge of the effect selection for a trait will have on other traits, is essential to optimise genetic progress. Table 1 shows the heritability of a range of traits and the positive or negative correlations that exist between them.

**Table 1: Heritability and correlations for a range of traits.**

	PWWt	YFAT	YEMD	YGFwt	YFD	YFDCV	YSS	YFEC	NLW
PWWt	0.15	-	-	++	+	-	-	+	+
YFD		0.37	++	-	-	-	+	0	+
YEMD			0.21	+	-	-	+	+	+
YGFwt				0.36	+	+	+	+	+
YFD					0.5	-	++	+	-
YFDCV						0.4	---	+	+
YSS							0.31	+	-
YFEC								0.25	-
NLW									0.04

- / + = low, - - / + + = moderate, - - - / + + + = high

## Market focused selection indexes are available

In addition to EBVs for individual traits LAMBPLAN flocks and their clients have access to a range of selection indexes. An index is a single figure that ranks animals for their suitability to a particular breeding objective. They are calculated by applying weightings to the EBVs and take account of trait heritability and genetic correlations with other traits of interest.

LAMBPLAN indexes have been developed in close consultation with breeders to cover a number of breeding objectives. The development of new modelling software, called LAMBOBJECT, will enhance LAMBPLAN's ability to further refine these indexes and create the option for individual clients to develop personalised indexes which address their specific breeding objectives.

## What indexes are available?

The indexes available are listed below, with a brief explanation of the weightings applied to various traits.

### Carcase Plus

This index has been designed for breeders targeting lamb turnoff within the prime lamb industry. It utilises EBVs for growth, fat and muscle calculated at post-weaning age.

### Dual Purpose index

This index can be applied to all the maternal breeds. It utilises growth, fat and muscle EBVs calculated at yearling age in conjunction with fleece weight and number of lambs weaned.

### Wool and reproduction

Designed to improve both wool and reproductive traits this index is similar in makeup to the Dual Purpose index, however greater emphasis is placed on greasy fleece weight and number of lambs weaned.

### Border \$

This index is specific to Border Leicester breeders and is given as a dollar index value. This index takes into account maternal traits such as weaning weight, number of lambs weaned and maternal weaning weight (milk and mothering ability) as well as yearling weight, fat, muscle and fleece weight measurements.

### Coopworth \$

This index contains the same components as the Border\$ index however different weightings have been customised for the breed.

### Corriedale \$25

Corriedale breeders have identified that they would like some emphasis placed on wool traits as well as prime lamb and reproductive traits. As such this index contains customised weightings on growth, fat, muscle, fleece weight, fibre diameter and number of lambs weaned.

## How to use LAMBPLAN for maternal sires

