



Healthy and contented sheep

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Agenda

- An overall perspective
 - financial impact of animal health
- Focus on management to limit disease
 - Nutrition
 - Strategic treatments
 - Monitoring
 - Genetics
- Less reliance on chemicals
- Prevention: Be proactive not reactive!





Impact of animal health

- Animal health*
 - 7% of enterprise costs
 - 3% of total farm cost
 - Cutting health costs has minimal impact profit
- The difference in cost between good and bad management is small
- The difference in income between good and bad management can be massive
- Major issues (wheat sheep zone)+

- Worms	\$2.40/head
Flystrike	\$2.82/head
- Lice	\$1.05/head
 Weaner death rates 	\$0.52/head

^{*} Victorian benchmarking data

⁺ MLA cost of disease report





Nutritional management: know your targets

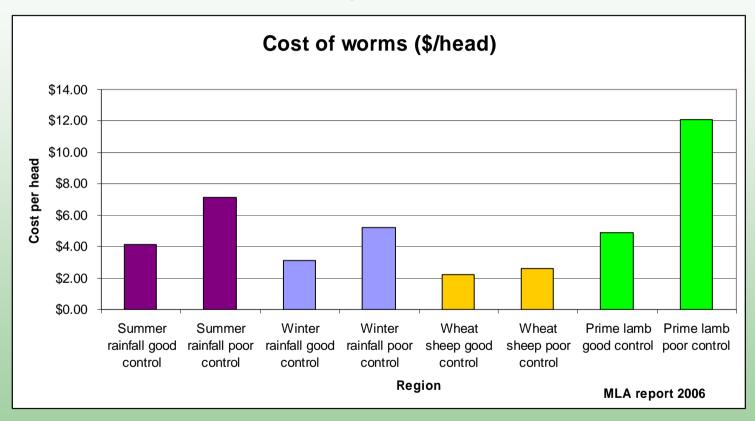
Adult weight (kg)	birth	Weaning pasture dry	Autumn break	Late winter	Mating/ pasture dry
45	4	20	22.5	27	34-36
50	4.5	22.5	25	30	37-40
55	5	27	27	33	41-44
70	5.5	31.5	35.5	42	52-56
% of adult	8-9%	45%	50%	60%	75-80%

- Poor animal health is an impediment to running a high profit flock
 - Lower body condition: lower conception rates and lamb survival
 - Lower growth rates: less value and fail to meet specifications
 - Lower lamb growth: weaner illthrift and higher death rates
 - Increase disease risk





Worms have a major financial impact



- 80-90% of loss associated with lower production
- Lower liveweight and yield ~ 2 kg carcase weight
- Higher death rate and lower fertility
- Lower fleece values





Don't rely on drenching: worm control is about management

Strategic drenching

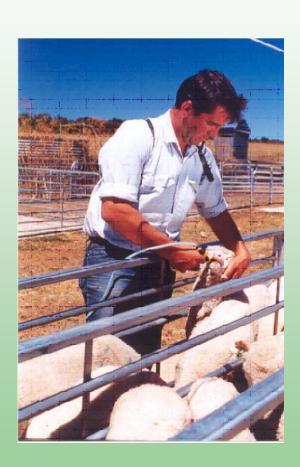
- Weaning drench ü
- First summer drench (?)
- Additional drenching: monitor WEC's
 - Second summer
 - Prelambing
 - weaners

Monitoring

- Estimated that 5% of local producers monitor WEC's
- When to drench
- Significant issues emerged in 2010 with wet summer
- Drench resistance every 3-4 years

Grazing management

- Provide high risk young sheep with safe pastures at weaning
 - · Crop stubble, new pasture best
 - · Cattle for at least 4 months
 - Adult dry sheep higher risk
- Provide second safe pasture
 - · In high risk situations
 - Prepare 6 months ahead







Managing drench resistance

Drench resistance is widespread

– White (BZ): >90%

– Clear (Levamisole): >80%+

Combinations >60%+

– ML's mectins30-80% of farms



 < 10% of producers know their drench resistance status





How important is drench resistance?

	Drench efficacy		
	100%	85%	65%
Scouring in winter (%)	20	46	59
Deaths (%)	2	5	7
Compared with 100% drench:			
- lower wool weight (%)	-	2.1	10.6
- lower body weight (%)	-	0.8	10.1
- lower fleece value	-	\$1.98	\$3.30
- lower sale value	-	\$2.24	\$7.72
- Cost of resistance		\$4.22	\$11.02

Median commodity prices – 10 years Besier et al. Proc ASVS, 1995





Management of resistance

- Know your resistance status
- Quarantine drenching
 - triple combination minimum ML/white/clear
- Minimise drench frequency
 - Base on WEC monitoring
 - Sustained release preferably avoid in low risk regions
- Dose rate
 - Weigh sheep and set dose rate accordingly
 - Large frame ewes > 90 kg!
- Rotate effective drenches
 - Seek advice
 - Use narrow spectrum drenches with barbers pole (i.e. Clear plus Nap)
- Manage worm larvae on pasture and in sheep
 - Refugia (leave small proportion <5% undrenched stubbles etc)





Lice control

- Widespread issues are emerging
 - More trading
 - Movement away from self replacing flocks
- Lice resistance
 - SP's widespread for many years
 - IGR's field observations rapidly increasing
 - OP's rare
- Lice eradication
 - Application critical
 - Effective chemicals
 - Avenge
 - OP dipping,
- Quarantine





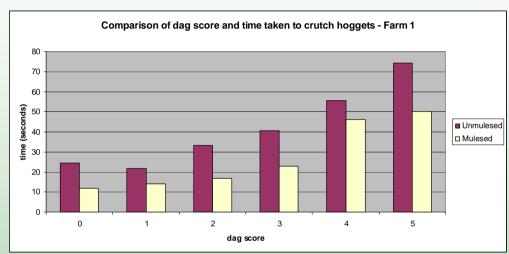
Source: NSW I&I





Flystrike management

- Management of unmulesed sheep
 - Recent surveys wide variety of responses
 - Greater reliance on jetting
 - Additional crutching
- Cost of managing unmulesed sheep
 - Up to \$2.00+/sheep
 - Extra crutching and pre shearing clean up
 - Additional jetting
 - Reducing wrinkle score from 3 to 2 will reduce breech strike
 - Intradermals research continuing

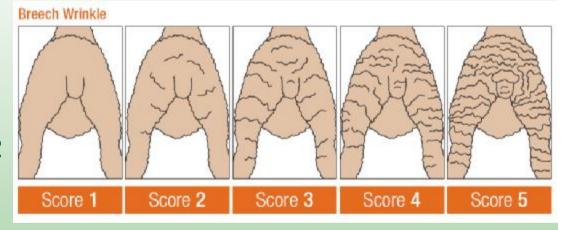




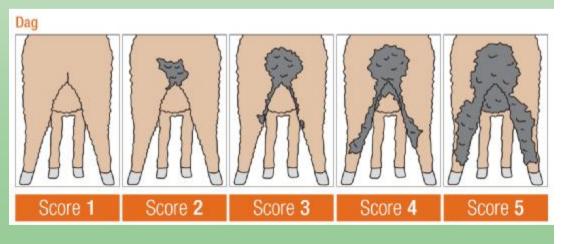
MELBOURNE Long term management: Genetics



- Worm egg count
 - Lower worm egg counts
 - Less drenching
- Breech wrinkle
 - Reduce below score 2
 - Reduce breech strike



- Dag score
 - Independent of WEC







Long term management: Genetics

- Include as part of your selection criteria
- Slow progress but cumulative gains
- Most progress dependant on ram supplier
- Must balance important economic traits
 - Meat production traits
 - Wool production traits
 - Incorporate in selection index

SHEEP GENETICS



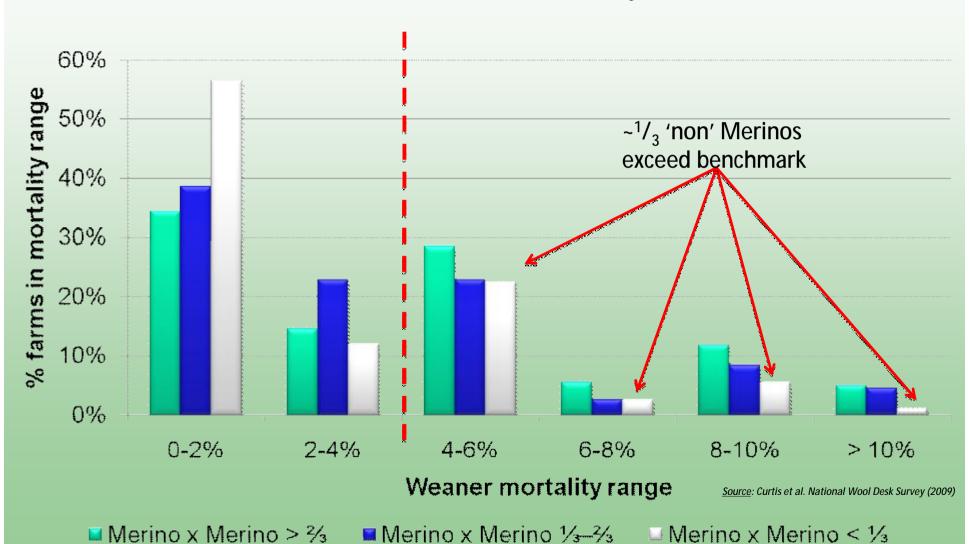








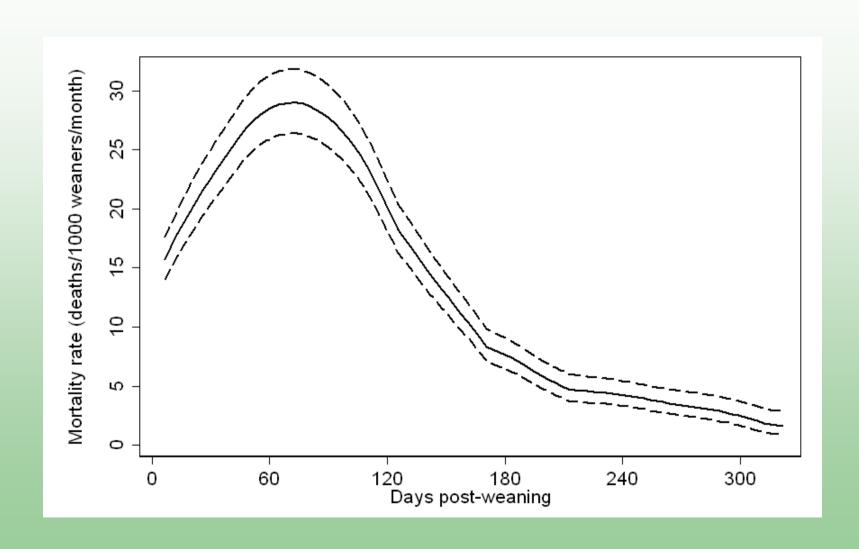
40% of farms exceed 4% mortality benchmark





Weaner deaths: Critical first 3 months after weaning

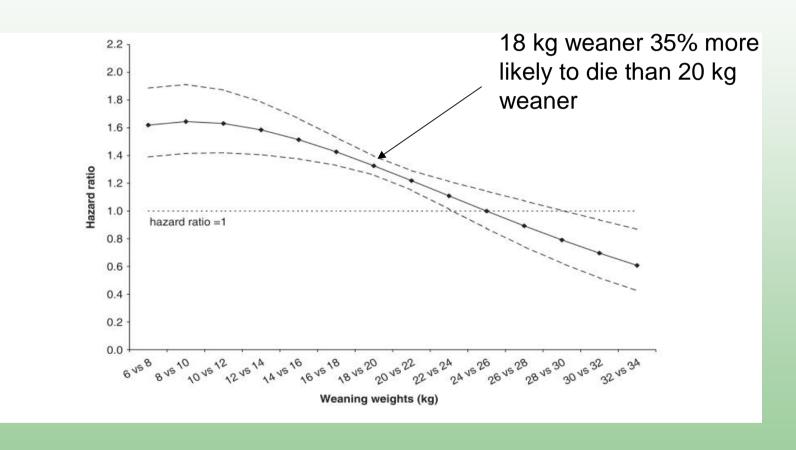








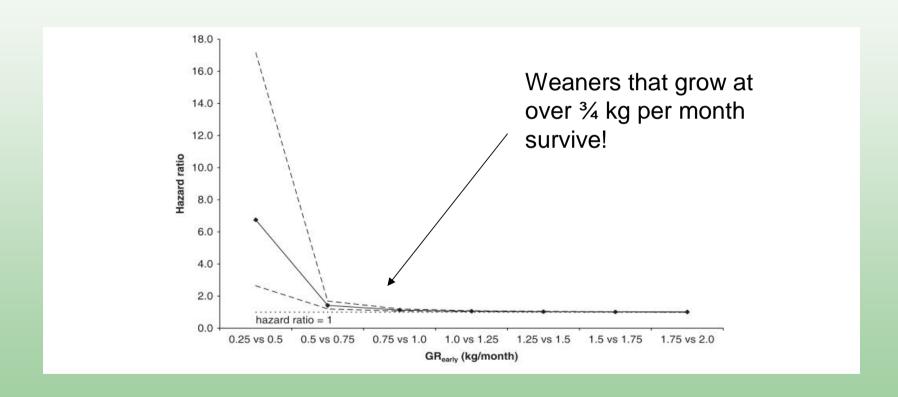
Effect of Bodyweight on Survival







Effect of Average Growth Rate on Survival







Biosecurity: Keep important diseases out

- Drench resistance
- Lice
- OJD
- Footrot
- Ovine brucellosis

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- Assess the disease risk: sheep health statement
- Drench new arrivals with a triple combination drench
 - WEC plus fluke
- Run new sheep in quarantine over spring
- Invest in secure boundary fences





Sign posts

- Making More From Sheep
 - Module 11 Healthy and contented sheep
- Wormboss
- Liceboss
- Flyboss
- MLA and I & I websites
- Your network of advisers







Key points

- Animal health issues have a major impact on profitability
- Change management to an integrated approach
 - Better nutrition
 - Strategic use of chemicals
 - Don't rely on chemicals
 - Monitor
 - Implement improved management systems and genetic improvement
- **Opportunity** manage the cost of important endemic diseases approximately \$7.00/head