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Sheep Improvement Limited (SIL) - the first 10 years

Introductory remarks

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Garrick *et al.* (1992) defined the six major components of performance recording schemes designed for genetic improvement on a national scale as committed buyers, motivated breeders, database, genetic technology, animal breeding research, and extension. The major factor determining the effectiveness of a national scheme is the way that each of these components is matched to industry needs and mutually coordinated (Clarke *et al.*, 1992).

Geenty (2000) stated the aim of Sheep Improvement Limited (SIL) was to facilitate effective genetic improvement across the New Zealand sheep industry. However the existence of genetic evaluation systems does not in itself ensure genetic progress, information must be used when making selection decisions for genetic progress to be achieved. Contributors in this contract session examine the uptake and impact of SIL in the New Zealand and international sheep industries in the decade since its commencement.

Young and Wakelin (2009) review the overall impact of SIL within the New Zealand sheep

industry. Amer (2009) quantifies changes in the rate of genetic progress in the sheep industry since 1990, classifies flocks on the basis of potential rates of genetic gain and discusses the implications of this for industry genetic improvement initiatives.

The establishment of a single national database provides the opportunity for national evaluations to be easily undertaken and Young and Newman (2009) describes the development and growth of SIL-ACE, New Zealand's national evaluation. Although dairy and beef industries routinely perform international genetic evaluations, there have been few international evaluations in sheep. Young *et al.* (2009) describe trans-Tasman genetic evaluations conducted by SIL and Sheep Genetics in Australia.

SIL's responsiveness to industry changes or needs, is demonstrated in changes described by Jopson *et al.* (2009) for genetic evaluation of meat yield. SIL also has a role in research and development of new technologies which offer the means to further increase rates of genetic gain (McEwan *et al.*, 2009).

SIL – progress over a decade

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ABSTRACT

In the 10 years that Sheep Improvement Ltd (SIL) has been operational, the system has continued to develop to meet the needs of breeding flock owners and their ram buying clients. New traits have been added to the evaluation. More flocks are using across-flock evaluations, but there is the opportunity to grow this significantly. The language of SIL is well accepted by industry and offers the most likely path to integration of DNA based genetics into the sheep industry. While a large proportion of rams used by the New Zealand sheep industry come from SIL flocks, a significant section of the industry are still not comfortable with SIL figures when purchasing rams. Greater penetration into the ram buying industry and further into the meat processing industry are challenges for SIL and its collaborators. SIL must maintain and enhance its relevance to industry. This means focused research that addresses key issues and a significant extension effort to increase the proportion of industry that has confidence in using SIL and related technologies.

Keywords: genetic evaluation; SIL; sheep; improvement; across-flock; development; usage; benefits.