



## **Enhanced Genetic Evaluations for the Australian Sheep Industries**

### **Routine running and supporting of OVIS**

OVIS is used to produce EBVs for LAMBPLAN and MGS.

Monthly runs of OVIS are performed for approximately 32 breeds. Three combined Terminal Sire, Maternal and Merino group breed analysis are also performed on a fortnightly basis. This also includes monitoring of incoming data, outgoing EBVs and other diagnostic work.

### **Variance Component Estimation**

A large proportion of work is devoted to the estimation of variance components and adjustment factors for the major traits for the major breeds. This analysis is being performed with models that include direct and maternal genetic, direct to maternal correlation and permanent environment due to dam components.

### **Development of Across Breed analyses**

Research to date suggests that across-breed analyses are feasible and desirable for breeders. Research is being conducted to enable this analysis to be performed routinely. This also involves the estimation of appropriate variance components and adjustment factors. The potential for estimation and incorporation of heterosis effects will also be evaluated.

### **Modelling of fertility traits in all breeds**

Alternative models are being investigated to improve the genetic evaluation of the fertility traits in OVIS. This also requires modification of analysis to better incorporate non-naturally mated animals (eg embryo transfer animals etc).

### **Addition of new traits into OVIS**

With results from research, changes in market specification and breeder awareness the need for new traits may become apparent. Where appropriate, new traits are incorporated into OVIS, which involves code manipulation, changes of parameter files, estimation of appropriate variance components and adjustment factors and extensive testing and validation.