



# ASKBILL: to predict your livestock's future

## A tool to enhance sheep wellbeing and productivity

### Risk prevention for wellbeing and productivity

Effective management of major risks to the wellbeing of sheep and the inputs for profitable production, relies on anticipating future events and accounting for the inter-connected nature of different aspects of the grazing system. The challenges of accurate forecasting and taking into account the interacting components of the grazing system can be greatly assisted by computer analysis.

Conditions such as neonatal mortality, internal parasites, dystocia, weaner ill-thrift and mortality and flystrike cost the sheep industry more than \$1.5 billion per annum through lost production and the direct costs of prevention and treatment (Lane et al. 2015). Effective management of these health challenges relies on prediction and early detection in order to implement preventative actions and timely treatment.

ASKBILL represents a transformational change for the livestock industry. It brings together farm data, weather and industry knowledge to inform analytical models that predict pasture growth, animal performance, flystrike, worm infection and weather stress at the mob and individual sheep level (Figure 1).

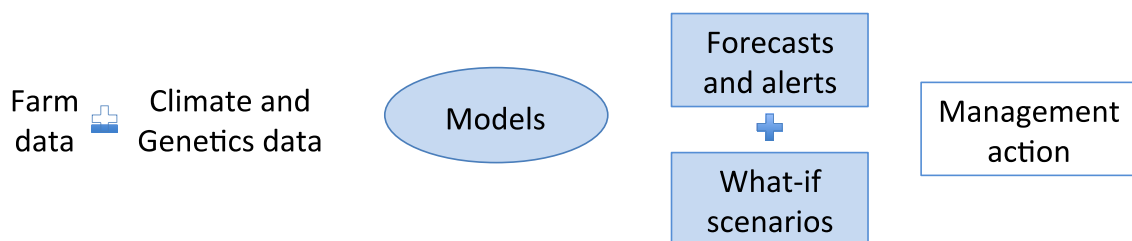


Figure 1: Schematic of the flow of data and information through predictive analytical models that underpin the ASKBILL program to provide alerts and 'what-if' options to assist management decisions.

### How does ASKBILL work?

ASKBILL runs on a series of large computers doing the 'back-room' job of assessing the ever-changing risks and production opportunities. Data automatically downloaded from the Bureau of Meteorology is stored for each 5x5 km grid-point for the main sheep producing regions of Australia. The climate data is stored with data entered for individual farms such as soil-type, pasture information and details of the livestock including their current status, and planned management events such as joining and shearing. There are also plans for incorporating details of the genetic potential of livestock through links with the RamSelect program including inputs from genomic flock profiling and ram team information. Models

running on the computers re-calculate the predictions each day, or on demand, to account for new climate data and any changes in farm information.

ASKBILL has been designed with the end-user in mind. The amount of information that needs to be entered is kept to a minimum. Wherever possible, data is accessed automatically from existing sources such as the Bureau of Meteorology. The program outputs are also easy to interpret to help make better farm management decisions. Predictions are customised to a farm or a Monitored Area and are updated daily in response to climate data and changes to pasture, livestock, management or treatments on the farm. Today's prediction of tomorrow will become yesterday's history as ASKBILL dynamically moves from forecast to recorded events.

ASKBILL uses this information not to tell producers how to run their business, but to provide prompts and alerts, via text and email, whenever the models predict changes in seasonal conditions that could have implications for the wellbeing and productivity of the flock. ASKBILL provides forecasts up to 90 days out for the following information:

- The amount and quality of pasture across a whole farm or for specific areas of particular interest
- Live weight and body condition score for each stock class within the sheep flock
- The level of risk from worms and sheep blowfly
- The risk from extreme cold and heat

## How to get started with ASKBILL?

Access to the program ASKBILL will be available on a trial basis from 22 May 2017. A limited number of trial licences will be available at a cost of \$50 for a six-month period. During this time the Sheep CRC will continue to improve the user interface, in response to feedback from producers and researchers, and the scope of the analytical models. In November 2017 the commercial site will be launched to the public with provision for multiple licences.

**Information on how to get started and interpret the outputs from ASKBILL can be found website ([www.askbill.com.au](http://www.askbill.com.au))** The Sheep CRC will contact users regularly during the trial period for feedback.