FAST FACTS

- Meeting target market specifications is critical to receive the best price per kilogram
- Weight (kg) and P8 fat (mm) are major beef market specifications
- Studies show the rate of non-compliance for weight and P8 fat specifications can be over 20%
- With relatively few inputs including expected growth rate, it is possible for producers to predict future liveweight and P8 fat of their animals using BeefSpecs
- Producers can use BeefSpecs to assist in making management decisions, for example manipulating growth rate, to assist in meeting target market specifications

Failure to meet market specifications represents a significant cost to the Australian beef industry. For each market, correct carcass weight and P8 fat is critical for compliance. This fact sheet describes the opportunity for producers to use BeefSpecs, a simple real-time computer-based fat calculator to assist in making on-farm animal management decisions to improve target market compliance.

The importance of meeting market specifications

Beef producers continually make management decisions that impact on both the capacity of their cattle to meet market specifications and the profitability of their beef businesses. Up to 25% of Australian cattle fail to meet targets for hot standard carcase weight (HSCW) and fat specifications, at a cost of between $15 and $30 a head, depending on the target market.

The BeefSpecs approach

BeefSpecs is based on the assumption that an animal of a given type has a defined body composition (fat and lean) when it is treated in a certain manner (management) and is achieving a certain growth rate (performance).

BeefSpecs combines the predictive powers of animal growth and compositional models with information relating to animal growth and fatness in response to changes in the production environment to calculate final liveweight and predict P8 fat. BeefSpecs has the ability to be highly functional across a wide range of production environments. In addition, BeefSpecs requires relatively few animal inputs that are practically feasible for producers to collect on-farm.

BeefSpecs predicts the final liveweight, P8 fat (mm) and HSCW (given a dressing percentage) at the end of a feeding period, for example at slaughter, based on inputs for three areas; Animal Type, Management and Performance.

- Animal Type is described by frame score, sex and breed content (British, European, Bos indicus)
- Management describes HGP implant status (Yes or No), HGP type (androgen or oestrogen), time of implanting relative to the start of the feeding period (days) and feed type (grass or grain)
- Performance is based on growth rate (kg/day), time on feed (days), dressing percentage, initial weight (kg) and initial P8 fat (mm).

“The overall aim of BeefSpecs has been to assist beef producers in making production decisions that assists them to manage their cattle to better meet market specifications for domestic and international markets”

Bill McKiernan, Research Leader

Running BeefSpecs

BeefSpecs is computer based tool with three input screens: “Animal Type”, “Management” and “Performance”. Screen shots over page demonstrate the inputs required to run the BeefSpecs calculator. On the right-hand side of each screen is the liveweight, P8 fat and HSCW...
predictions. The RUN button needs to be pressed each time changes are made to the inputs, but because the model runs in real-time it can be used quickly and easily used in cattle yards given the right technology.

In screen 1, “Animal Type,” the inputs are: frame score (estimated or measured), sex (heifer or steer) and breed type composition (actual or estimated using a graphic display). The graphic display provides a representation of how animals may look given a certain breed type composition. By moving the cursor within the bounds of the breed type triangle the animal image will morph between three breed types: European, British and Bos indicus. Comparing the animal image to cattle producers see in front of them will enable breed type composition to be captured for input into BeefSpecs.

In screen 2, “Management,” the inputs are: feed type (grain or grass) and HGP use (yes or no).

In screen 3, “Performance,” the inputs are: expected growth rate (based on producers past experience with the feed available), expected days on feed, expected dressing percentage, initial liveweight and initial P8 fat.

On the right hand side of each screen capture, the results section reports predicted final liveweight (kg), P8 fat (mm) and HSCW. Predictions are recalculated following changes in inputs by pressing the RUN button. For example it is possible to change the days on feed in the example shown from 120 to 90, press RUN and attain an updated prediction for final liveweight, P8 fat and HSCW.

Summary

BeefSpecs is designed to assist beef producers make production decisions that allow them to manage their cattle to better meet market specifications. Knowing predicted final liveweight and P8 fat will assist producers implement on farm strategies to achieve a desired product for meeting market specifications with the type of cattle they currently have. In addition, BeefSpecs allows producers to investigate the impacts of long term management changes in animal type (e.g. breed type, frame score) on performance and end market compliance.

A version of BeefSpecs can be obtained by attending a BeefSpecs course run by various state agencies or soon from the NSW DPI website (http://www.dpi.nsw.gov.au).