Feed efficiency: The driving force behind sustainable beef production

The Australian red meat industry has set a target to be carbon neutral by 2030 (CN30). This means that by 2030, the industry aims to make no net release of greenhouse gas (GHG) emissions into the atmosphere. A key driver to help achieve this goal will be improvements in the feed efficiency of beef cattle, which has the potential to increase producer profitability, while simultaneously lowering the environmental footprint of beef production. Feed efficiency is a measure of how much saleable product is being produced for each unit of feed consumed. The most common measurement of feed efficiency is feed conversion ratio (FCR), which is the ratio of feed intake to live-weight gain (Source: UF Animal Sciences).

Limousins are extremely well placed to support the beef industry achieve this CN30 goal due to their high feed efficiency. The unique advantage that the F94L gene provides in dressing percentage, through increased muscling, means that animals can be killed at lower liveweights than other cattle targeting the same carcase weights. This attribute puts Limousins in the box seat. Animals with the F94L gene also deposit less fat which is extremely energy intensive to lay down. Therefore, animals with the F94L gene have more energy to utilise to build muscle and grow at the same net feed intake, increasing their feed efficiency.

Limousin progeny with the F94L gene can be killed at younger ages compared to other breeds, therefore the amount of methane these younger animals release over their lifetime is also lower. The combination of reduced methane output and feed intake causes animals with the F94L mutation to be more efficient and have a lower lifecycle carbon footprint.

The supply of more sustainably produced beef also has the potential to increase public perceptions of how red meat is produced, increasing the industry's social license to operate, and consequently demand for red meat. This is becoming increasingly important as alternatives to red meat such as plant based proteins increase in their popularity. It is also highly likely that more efficiently produced red meat will be able to receive premiums for being more sustainable in future. For example, the major supermarkets may drive demand for carbon neutral products.

As the cattle industry moves towards this CN30 goal, the high feed efficiency advantage that the Limousin F94L gene provides, will be a key in marketing the breed into the future.

BREEDPLAN produces two Net Feed Intake EBVs relating to feed efficiency, however, these aren't currently in use by the Australian Limousin breed, nor are they commonly used by other breeds in Australia. Interested Limousin breeders should contact BREEDPLAN for assistance if these EBVs are of interest.

Georgia Pugh, neXtgen Agri