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Briefing note on the beef industry

Mitigating the environmental impact of cattle and sheep: animal genetics and farmers' readiness for uptake

Dr Ann Bruce

Sheep and beef farmers around the UK were interviewed to find out if they would adopt a range of technologies to reduce methane emissions.* Beef farmers produced a diverse range of outputs including environmental management as well as food production. Farmers worked in a range of different environments and are influenced by a variety of values.

"We could easily double, treble the size of the farm now, and farm it a lot harder, but that's not what we want to do."

Commercial beef farmer in high conservation value area

"I think you either go for minimum input or you go for maximum output, but when you start mixing the two you've got a problem, so we're in the minimum input bracket."

Beef farmer selling direct to consumers

Reducing methane production from beef cattle

Farmers interviewed found it difficult to accept the assertion that methane produced by cattle is a major contributor to global warming.

"Mother Nature, whatever that is, wouldn't have created a system that was going to destroy itself so frankly, I'm one of those that's extremely sceptical about the methane argument."

Commercial beef farmer



"The methane part of it especially, I just don't understand it, it's so confusing. You hear so many different points of view you don't know what to believe."

Hill sheep and beef farmer

ends because there is a lot of money at stake with them." Beef farmer

Dairy farmers are important producers of beef yet they saw milk production as their core business. Encouraging schemes to enable dairy farmers to use high EBV beef bulls, with easy calving scores, for cross-breeding could yield methane dividends.

Using genetics

Many, but not all, beef farmers already use Estimated Breeding Values (EBVs) to select replacement animals. Lack of trust in on-farm measures of performance was a barrier to using EBVs for others, as was the perception that slower growing animals produce better meat quality.

"I'm not 100% sure that EBVs can't be manipulated, I think there will be people that do manipulate them for their own

"My main concern here is getting cows in calf, I couldn't care really whether they're sky blue or pink when they come out, so long as those cows get in calf and calve in our allotted time period and we've got a reasonably saleable calf, it doesn't really worry me too much. The calf money is the cream on the top of the milk cheque basically anyway..... If I could



find a breed that was more fertile than another breed then we'd probably use that." Dairy farmer talking about beef-cross calves from the dairy herd

"The very bottom end [of the bulls] will go into the dairy herd." Pedigree beef farmer

Pedigree beef herds tend to be small, selling 3-4 bulls at a time, so there is limited choice in EBV for bull purchasers buying direct from farm.

Beef Value Chain

The beef value chain often fails to communicate market requirements clearly, particularly between store producers and finishers, and pedigree breeders and commercial producers. Initiatives such as producer groups could help focus the value chain better and improve efficiency.

"I just take what you can get. You don't really get a great choice. Actually buying it in a market, you've no idea what the father is anyway, all you get's their age and two minutes to decide." Organic beef and sheep farmer purchasing store animals

Some interviewees raised questions as to the effectiveness of the EUROP carcase grading scheme in rewarding the most 'efficient' animals but the grading scheme was perceived to be difficult to change.

*Research study details:

42 in-depth interviews were conducted between Sept 2010-March 2011, of which 30 were with farmers and 12 with people working in the broader industry. Farms were located from the South of



There was widespread recognition that animals in auction sales were likely to be overfed and would not necessarily perform well in the field.

"I don't really like going to sales because that animal could be fed for the sale, so I'm looking for an animal which has got good figures, which has done it off its own back, not out the bucket."

Pedigree heritage breed beef and sheep farmer

"We've found over the years that people are pushing the cattle too hard for sale purposes, so actually to bring them back to... This is a fairly raw environment here for a bull, it's not kindergarten territory so

we then have too much work to harden off the bulls and to get them down, and we've actually lost a bull courtesy of doing that." Hill beef farmer



England to the North of Scotland and included organic and conventional, upland and lowland, specialist breeders as well as commercial producers and producers selling liveweight, deadweight

and direct to consumers. 26 farmers produced beef animals, four from dairy herds.

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