Enhancing the assessment of maternal ability in sheep

EBLEX-commissioned research will lead to major improvements in the accuracy with which sheep producers can assess the genetic potential of their flocks for maternal ability.

Studies using data for the Lleyn and Dorset breeds identified the need for a better way to assess maternal ability and this updated approach is being rolled out to all breeds recorded by Signet Breeding Services in 2015.

The approach takes the direct and maternal genetic influences on a lamb’s eight-week weight into consideration simultaneously, as well as environmental influences.

The analysis of eight-week weights takes into account:

- The contemporary group in which lambs are reared – incorporating their flock and year of birth, as well as their sex
- The number of lambs being reared by each ewe
- Age of the ewe
- Direct genetic influence on lamb growth rate from sire and dam – this becomes the Eight-Week Weight EBV
- Maternal genetic influence on lamb growth rate from dam – this becomes the Maternal Ability EBV
- Temporary environmental influences on the lamb
- Permanent environmental influences on the dam

The maternal ability EBV is designed to identify breeding lines where ewes express superior performance as mothers in terms of their ability to influence lamb growth rate in early life. Key components of this are their milk production and maternal care.

It is expressed independently of prolificacy, although it does take into account the number of lambs that a ewe is rearing, so that the maternal ability EBVs of ewes producing singles/multiples are not biased in any way. Breeders wishing to change the prolificacy of their flocks are advised to use the Litter Size EBV when making selection decisions.

EBLEX breeding specialist Sam Boon said: “Without access to detailed lamb weight records it is very difficult to assess a ewe’s genetic merit for traits like milk production and maternal care, and virtually impossible when selecting rams. The maternal ability EBV provides producers with a way to assess this commercially important trait. This will help them avoid the purchase of rams whose daughters are likely to express poorer levels of milk production and rear lighter lambs as a result.”

Notes to Editors

Signet Breeding Services is part of EBLEX, the organisation for beef and lamb levy payers in England, which is a division of the Agriculture and Horticulture Development Board (AHDB).
EBLEX exists to enhance the profitability of the English beef and lamb sector. Its aims are:

• to help the beef and lamb supply chain to be more efficient.
• to help the beef and lamb meat industry to add value.

Find out more at http://www.eblex.org.uk/

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