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New Longwool Index a Boost To Welsh Breeders

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THE PERFORMANCE and quality of thousands of lambs a year could be significantly improved through the use of a new Longwool sire index to improve Mule ewe carcass quality, without compromising reproductive performance or mothering ability, according to the latest results of project being carried out on behalf of Hybu Cig Cymru, English Beef & Lamb Executive and Quality Meat Scotland.

The Longwool Improvement Project, which is undertaken jointly with Defra, the Institute of Rural Sciences, SAC and ADAS since 1997, has involved the establishment of a Bluefaced Leicester Sire Reference Scheme extending to 13 flocks. These have supplied a total of 45 rams of known genetic merit for carcass quality for mating to 4,500 hill ewes over a three-year period to produce more than 4,800 Scottish and Welsh Mule lambs. Of these, some 2,200 wethers have been slaughtered to provide detailed carcass quality data, while nearly 2,600 ewes are currently being evaluated for their maternal characteristics over a number of lamb crops using the three major terminal sire breeds.

Estimated Breeding Values (EBVs) for the Bluefaced Leicester rams calculated for a range of traits over the initial three years of the project have been combined into a preliminary Longwool index. This has led to significant genetic progress in liveweight gain and muscle depth without a dramatic rise in fat depth. Indeed, the 5% rate of annual index improvement has been similar to that achieved with the Lean Index in terminal sire breeds.

Mule wether lambs from high-indexed Bluefaced Leicester rams have been found to produce carcasses with substantially more lean and less fat in every joint, without being much larger. At the same time, Mule ewes from high-indexed rams have exhibited greater muscle depth, lower fat depth and better face colouration.

Although still underway, the final ewe evaluation phase of the project is confirming that these superior performance and carcass quality characteristics can be transmitted to the slaughter generation without compromising ewe reproductive performance or lamb survival.

Over the coming two years it is planned to incorporate ewe mature weight (which affects flock maintenance costs), litter size and lamb survival alongside the carcass traits into a full maternal sire index for Bluefaced Leicester rams. This will balance the joint requirements of reproductive performance, mothering ability and carcass quality improvement in Mule ewe breeding, allowing sires to be selected for their overall economic value – in £/ewe mated.

“Evidence from the project indicates that the genetic parameters for Carcase traits in Bluefaced Leicester sheep (and their Mule progeny) show considerable similarity with the situation in terminal sire breeds. In other words, there is considerable robustness across breeds,” said Project Leader Professor Haresign, Director and Professor of Agriculture at the Institute of Rural Sciences, University of Wales Aberystwyth. “Given the robustness across breeds that exists for genetic parameters, the information from the Longwool Project on the genetics of carcase and maternal traits and their inter-relationships will provide a spin-off benefit,” said Prof. Haresign.

The Crossbred Project. HCC jointly funds research at ADAS Pwllpeiran on improving the carcase quality of crossbred lambs. It is widely acknowledged that in order to remain competitive, farmers must increase and improve the productivity of their sheep. The Crossbred Project studies whether

- switching to a different breed of sire could offer advantages in increasing kg of lamb produced per ewe;
- through crossing sires with desirable conformation traits, lambs would be nearer market requirement and see a reduction in the number of days to finishing.

The Longwool Improvement Project. The aim of this project is to improve Mule ewe carcase quality- without compromising reproductive performance or mothering ability, through the use of a new Longwool sire index.

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