Aspects influencing flock profitability

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If EU ewe productivity rose by 0.1 lambs reared per ewe joined, it would increase EU self-sufficiency to 92%. In Ireland, ewe productivity is 1.3 lambs reared per ewe joined. This has not improved in the past 30 years. A number of studies are currently ongoing at Athenry which focus on factors influencing flock productivity and profitability.

Mineral supplementation: Mineral supplementation is a routine practice on many farms that may be unwarranted, particularly in non-deficient areas. According to studies undertaken, some of which formed part of the PhD studies of Walsh Fellow Daniel Hession:
- 66% of sheep farmers supplement with minerals and vitamins.
- Only 35% of farmers who supplement base their decision on veterinary advice or laboratory analysis.
- Supplementing lambs with cobalt post-weaning increased carcase weight by 1.5kg and reduced age at slaughter.
- Supplementing ewes (a high proportion marginal for plasma vitamin B12 status) with cobalt (drenched every two weeks from seven weeks pre-joining to six weeks pre-lambing or bolus at seven weeks pre-joining) had no positive effect on litter size, number of lambs reared per ewe joined or lamb performance. Lamb mortality: Nationally, each 1% decrease in lamb mortality is valued at approximately €2m annually. A number of studies were undertaken as part of the PhD studies of Walsh Fellow Dwayne Shiels. The key findings to-date are as follows:
- 52% of neonatal mortality occurs prior to or at birth.
- The main causes of neonatal mortality are infection (38%) and dystocia (19%), which are potentially preventable.
- 94% of farmers do not scan their ewes so cannot manage them according to litter size in late pregnancy.
- 24% of farmers do not clean or disinfect lambing pens between ewes.
- 9% of farmers use only artificial colostrum when colostrum supplementation was required.

Age at first lambing: The cost of replacement ewes at joining (approximately 18 months) is equivalent to 25% of the value of lamb carcase output that they produce during their lifetime. Results from an on-going long-term study show that:
- Prolific ewe replacements and breeding them as ewe lambs rear at least an extra 2.3 lambs during their lifetime, increasing flock profitability by €26/ewe per year.
- Neither ewe genotype nor age at first lambing impacted on lamb drafting pattern and ewe culling rate.
- All lambs were finished from grazed grass only. Prior to mid-December, mean carcase weight was 21kg.
- Ewe age at first joining (seven or 19 months) had no adverse effect on the performance of lambs from lambings at two to six years of age.
- Lambs born to Belclare X Suffolk ewes had higher daily gain and were drafted for slaughter at a younger age than lambs from predominantly Suffolk genotypes.

EuroSheep and SheepNet: SheepNet is a project involving the EU’s six main sheep-producing countries. Sheepnet produced 218 articles and videos, including 42 articles from five of which were evaluated on-farm and 73 ‘tips and tricks’ on impacting ewe productivity (number of lambs reared per ewe joined), which are available on the SheepNet website (www.sheepnet.network).

EuroSheep follows on from SheepNet and involves eight countries (Ireland, France, Greece, Hungary, Italy, Spain, Turkey and United Kingdom). EuroSheep focuses on improving flock performance and profitability through nutrition and animal health management by exchanging existing scientific and practical knowledge, technologies and best practices among farmers, advisors, consultants, researchers and other stakeholders.

Store lamb finishing systems

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Previous research carried out in Teagasc Athenry has shown a potential to finish hill-bred, male lambs to carcass weights in excess of 18kg, while meeting market muscle and fat score specifications satisfactorily, when finished using ad-lib concentrate diets.

Recently, these studies have moved towards looking at finishing hill-bred store lambs using forage-based diets and finishing lambs to comparatively lighter carcass weights following ad-lib concentrate feeding. A new research project started in 2019 is investigating if using forage crops to finish hill-bred and cross-bred hill store lambs compares to using grass swards or finishing lambs indoors on ad-lib concentrates during the autumn/winter. The results from this experiment will lead to guidelines and targets for using forage crops to finish hill lambs for the industry to use in the future. In 2019, nearly 400 Scottish Blackface lambs were purchased and divided across six different diets, namely: Ad-lib concentrates (indoor), permanent pasture, newly re-seeded pasture, forage rape, kale and hybrid brassica. Just one year’s data has been collected so far and the project will run over the next three years, during which time the results of the various systems will become evident. Studies are also being carried out to establish if it is possible to finish light Scottish Blackface hill lambs to produce market suitable carcasses of 12kg to 16kg. Lambs were purchased directly from hill farms in the west Mayo/Connemara area at weaning time and were housed immediately at an average liveweight of 25kg.

These lambs were slowly built up to ad-lib concentrate intake. Both entire ram lambs and castrate lambs and were used for the studies and were drafted for slaughter once they had a sufficient covering of fat (determined by condition scoring) and reached over 30kg liveweight for castrates and over 31kg liveweight for ram lambs. It took approximately 67 days for ram lambs and 74 days for castrate lambs to finish at light lamb specification, during which time, the lambs consumed approximately 1.15kg DM of concentrates per head per day once eating ad-lib. Average carcase weights for castrates and rams were 14.5kg, with a kill-out percentage of 43.3% and 44.2% respectively. It’s expected that these studies will look further into light lamb systems.