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SHEEP THRIFT PROBLEMS UNDER IRRIGATION

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Although stock numbers increased rapidly in the first 5 years of the Morven-Glenavy irrigation scheme, their performance was disappointing. This was related to the many interacting factors of stock and pasture management brought about by the introduction of irrigation.

The locality and the development programmes have been described by McKnight *et al.* (1978), who also discuss specific stock health problems.

In planning for irrigation a farmer must understand the engineering aspects and the consequent changes in fencing, drainage access, shelter and building layout. He also needs specialized information on the management of stock and pasture under irrigation and how these differ from those of dryland farming.

Up to 35 man-hours per hectare are needed for physical development, and unless extra labour is employed or routine work delegated, the essential aspects of stock and pasture management can be neglected. One of the most important of these is subdivision for grazing control, and this is often delayed by lack of labour and finance.

As stock policies change from annual ewe purchase to replacement breeding, knowledge of hogget rearing and the rotational grazing of young stock becomes important. Good two-tooth development leads to good lambing performance, and this demands adequate pasture and the control of internal parasites. It is here that management deficiencies were most evident as the massive input for physical development occupied the farmers' attention.

Specific health problems arose, lamb ill-thrift occurring from 1974-5. The region has had a history of cobalt deficiency in stock, and pasture levels of Cu, Zn, P and S have at times been low, although it has been difficult to correlate pasture mineral levels with lamb growth. Internal parasites, particularly *Nematodirus* and *Ostertagia*, became a major problem with pathogenic burdens re-establishing within 21 days of anthelmintic treatment.

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These difficulties have been attacked on a multi-disciplinary basis in which veterinarians and extension officers have worked with farmers towards a solution. Improved stock performance has come with a rational programming of development in which stock and pasture factors have been given more prominence and have moved in step with the engineering aspects of the scheme. Cobalt deficiencies have been corrected. Both liveweight gains and lambing percentages have improved.

REFERENCE

- McKnight, L. J.; Oliver, J. R.; Gumbrell, R. C., 1978. *Proc. N.Z. Vet. Ass. Sheep Soc. 8th Seminar*: 4.