

New Zealand Society of Animal Production online archive

This paper is from the New Zealand Society for Animal Production online archive. NZSAP holds a regular annual conference in June or July each year for the presentation of technical and applied topics in animal production. NZSAP plays an important role as a forum fostering research in all areas of animal production including production systems, nutrition, meat science, animal welfare, wool science, animal breeding and genetics.

An invitation is extended to all those involved in the field of animal production to apply for membership of the New Zealand Society of Animal Production at our website www.nzsap.org.nz

[View All Proceedings](#)

[Next Conference](#)

[Join NZSAP](#)

The New Zealand Society of Animal Production in publishing the conference proceedings is engaged in disseminating information, not rendering professional advice or services. The views expressed herein do not necessarily represent the views of the New Zealand Society of Animal Production and the New Zealand Society of Animal Production expressly disclaims any form of liability with respect to anything done or omitted to be done in reliance upon the contents of these proceedings.

This work is licensed under a [Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License](http://creativecommons.org/licenses/by-nc-nd/4.0/).



You are free to:

Share— copy and redistribute the material in any medium or format

Under the following terms:

Attribution — You must give [appropriate credit](#), provide a link to the license, and [indicate if changes were made](#). You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.

NonCommercial — You may not use the material for [commercial purposes](#).

NoDerivatives — If you [remix, transform, or build upon](#) the material, you may not distribute the modified material.

<http://creativecommons.org.nz/licences/licences-explained/>

Summary Only

AUTOTRANSPLANTATION OF ENDOCRINE GLANDS IN SHEEP

D. S. HART

Lincoln College, Canterbury

D. W. BEAVEN, E. A. ESPINER, E. G. PERRY
and G. W. HOLLAND

Princess Margaret Hospital, Christchurch

THIS report indicates the use to which the sheep can be put in the topical field of organ transplantation.

Following the early work of Denton *et al.* (1959) on adrenal transplants in sheep, the technique has been utilized with Merino sheep in New Zealand for the assay of A.C.T.H. (Espiner *et al.*, 1963). For these experiments, Merino ewes of mixed ages have been used and the characteristic dew-lap in these animals allows a suitable jugulo-carotid loop to be fashioned. Preparation of jugulo-carotid loops in Romney sheep is difficult as the adult Romney has no "spare" skin in its neck. However, as nearly 80% of the New Zealand sheep population is of the Romney breed, it seemed desirable that production studies should be carried out on transplanted glands in Romney instead of Merino ewes.

A satisfactory technique for preparation of jugulo-carotid loops was devised using Romney lambs between 3 and 8 weeks of age. At this age, most lambs appear not to "fill" their skin completely and it is possible to make a loop which develops with growth of the lamb. An important factor in technique appears to be to allow the lamb to suckle the mother within an hour of surgery, and this seems to promote a gentle self-manipulative action which reduces post-operative swelling in the loop.

Once the loop has been fashioned in the lamb, the selected endocrine gland can be transplanted at a later date when the animal is adult. If transplantation of the gland is successful, the complementary gland of the pair is removed some six to eight weeks later.

Illustrations detailing the preparation of the loop and transplant and examples of the use of the transplanted gland for assay purposes were given.

REFERENCES

- Denton, D. A.; Goding, J. R.; Wright, R. D., 1959: *Brit. Med. J.*, 2: 441, 522.
Espiner, E. A.; Beaven, D. W.; Hart, D. S., 1963: *J. Endocrin.*, 27: 267.