

## 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](http://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/>

## AN INHERITED BLINDNESS (CATARACT) IN CATTLE

A. H. CARTER\*

A PUREBRED Friesian bull, partially blind and showing some corneal opacity, was reported to have sired a large but uncertain proportion of blind calves in an unrelated dairy herd. The bull, brought to Ruakura for study, was mated to a number of identical twin (predominantly Jersey) cows over two years. Of 61 resulting calves 52 per cent. were born with defective eyes, being partially or completely blind. The incidence of the abnormality appeared independent of sex or of genotype of the dam, the findings being compatible with simple autosomal dominant inheritance. A current gene mutation was inferred from the absence of any history of the defect in the pedigree of the bull, who himself had shown the fault at an early age.

Clinical manifestations varied from total cataract through partial cataract or cloudy cornea to complete corneal opacity accompanied by enlargement of the eye. Post-mortem examination revealed lens abnormality in both eyes of all affected calves. The lens, opaque in all cases, was frequently displaced and evidenced partial or complete disintegration and absorption, apparently following initial rupture of the posterior capsule. Other effects noted included dilatation of the pupil, internal haemorrhage with some fibrin formation and umbrella-like detachment of the retina (including one eye of the bull). Post-mortem eye measurements indicated general enlargement of the eyeball, most extreme with complete corneal opacity.

Some variation in expression of the characteristic was noted both between eyes in the same individual and between full sibs. In some cases total cataract at birth gave way to partial blindness only following disintegration or displacement of the lens. The condition is appropriately defined as developmental cataract, lenticular opacity being presumed the primary effect. It is semi-lethal in character, surviving animals having either no lens or a non-functional lens residue, with consequent impaired vision. The case is of interest in showing dominant inheritance as opposed to most reported sublethal characters, including hereditary cataract, in cattle.

\*Ruakura Animal Research Station, Hamilton.