Herd improvement Service forges ahead

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Since its establishment three years ago, the Herd Improvement Service has steadily expanded the range of services provided to Western Australian livestock producers. The genetic advancement and improved herd management offered by the service give farmers the ability to use modern technology in the most cost-effective way. There is an increasing realisation amongst farmers that to survive and remain competitive, it is worthwhile to invest in such technology.

The Herd Improvement Service is a statutory corporation which was formed to improve the productivity of the State's livestock enterprises. Most of the organisation's activities have been directed to servicing the dairy and beef cattle industries in the South-West. The service, which is not a part of the Department of Agriculture, has strong links with the Department, especially in the areas of dairy and beef extension, and veterinary services.
Origins

The Herd Improvement Service was established to amalgamate the activities of the Artificial Breeding Board (then based at Harvey) and the Department of Agriculture's Dairy Herd Recording Scheme. The Herd Improvement Service Act was gazetted on October 11, 1984.

Under the provisions of this Act, all assets of the Artificial Breeding Board, except its real estate, were transferred to the Herd Improvement Service. In addition, a special grant to meet transition costs was made from the Dairy Assistance Fund, administered by the Dairy Industry Authority.

All Artificial Breeding Board staff and Dairy Herd Recorders employed by the Department of Agriculture were transferred to the new service. The Herd Improvement Service is run by a five-member Board of Management, which includes three primary producer representatives, one member with special commercial expertise and a chairman who is appointed by the Minister for Agriculture.

Resources

The Herd Improvement Service is based at Bunbury, with offices and laboratories accommodated in the Department of Agriculture building. The Bunbury facilities include a semen distribution centre and bulk liquid nitrogen storage, while the Department of Agriculture provides a herd-recording laboratory for the analysis of milk samples. About 85 per cent of the activities of the herd recording laboratory are devoted to Herd Improvement Service work.

Genetic herd improvement enables milk to be produced more efficiently and this benefits the consumers.
The Department of Agriculture recoups 85 per cent of the laboratory's operating costs from the Herd Improvement Service. The Government is committed to funding five laboratory staff items (totalling $104,000 in 1986-87) until the end of 1989, when it will review this support. The Herd Improvement Service Board aims to make the corporation financially self-sufficient by 1990.

The Herd Improvement Service has a staff of nine, plus the five laboratory staff who are employed by the Department of Agriculture. Apart from the Government support for the laboratory staff, the service's operations are funded by income derived from the sale of goods and services.

**Services**

The Herd Improvement Service provides a range of services to livestock producers to help improve the efficiency of their enterprises.

**Dairy Herd Recording**

The Herd Recording Service provides farmers with an accurate measure of production and milk analysis for individual cows each month. Special meters fitted to the milking machine take samples at the morning and evening milking for each cow in the herd. Most herds are sampled each month but some are sampled every other month.

In most cases, Herd Improvement Service field officers pick up the milk samples and return them to the central testing laboratory. The meters are delivered to the next farm, together with a batch of empty sample bottles.

Within three days of testing, farmers receive a computer print-out showing the production, milk analysis and somatic cell count, which is an indicator of the level of mastitis in a cow's udder, for each cow. The progressive production for that lactation is also shown. In addition, production indexes for milk and fat are calculated, providing an accurate ranking of cows in that herd.

As each cow completes a lactation, the Herd Improvement Service provides a detailed lactation history which updates the lifetime production for that cow. An annual summary provides details of the whole herd's performance during the previous financial year.

The herd recording system is a powerful and useful management tool which is used by more than 55 per cent of the State's dairyfarmers.

Although the remaining 45 per cent do miss out on the information about individual cows, most of them benefit indirectly from the herd recording scheme. More than 90 per cent of dairyfarmers artificially inseminate their cows and they use Australian Breeding Values (ABVs) to select the bulls. The ABVs are calculated from production data generated by herd recording schemes throughout Australia and are a reliable estimate of a bull's genetic merit. During the past decade, the use and commercial acceptance of ABVs has greatly enhanced the rate of genetic improvement in the Australian dairy herd.
The Herd Improvement Service is encouraging all dairy farmers to enrol in the herd recording scheme so they can effectively control mastitis and improve their herd management. Importantly, the additional production data would further improve the reliability of ABVs for bulls.

The fees charged for the Herd Recording Service generally are lower than in other States, however the organisation is moving towards a full cost-recovery fee structure. A recent study of herd recording operations in other States showed that our Herd Improvement Service provides one of the most comprehensive and effective herd recording services. For example, the Western Australian scheme routinely provides individual cow somatic cell counts each month, while in other States this service is either not available or is charged as an additional procedure. The average production for Western Australian herd-recorded cows is 4,817 litres per lactation, compared with 4,334 litres for Tasmania and 3,865 litres for Victoria. The operations of the dairy herd recording scheme are discussed in more detail in Dairy Herd Recording on page 91 of this Journal.

Can-care service

Field officers provide a courier service to regularly replenish on-farm supplies of liquid nitrogen and to service farmers' cryogenic flasks. This service is available to medical practitioners, engineers and others who use liquid nitrogen. The Herd Improvement Service is the only bulk supplier of liquid nitrogen outside the Perth metropolitan area, covering the whole South-West region.

Artificial insemination training courses

Artificial insemination training courses, arranged for groups of five cattle breeders, are conducted on demand throughout the year. For the convenience of participants, and to reduce costs, the courses usually are held on farmers' properties.

Gene-link Scheme

The Gene-link Scheme is a progeny testing scheme initiated by the Herd Improvement Service which allows Western Australian dairy farmers access to semen from the current year's crop of young bulls under test.
Each year, the Service selects 30 young bulls, based on predicted breeding values and which are standing at major artificial breeding centres throughout Australia. Dairy farmers can buy semen from these bulls at a nominal charge, provided that the Herd Improvement Service receives all progeny reports. The data collected enable genetic linkages between artificially bred bulls to be established and the Australian Breeding Values (ABVs) to be calculated with greater reliability. An ABV for a cow is an estimate of a cow's breeding value and hence an expression of her genetic value for breeding replacement dairy cattle.

Gene-link has been received enthusiastically by the State's dairy farmers and we hope to expand the scheme to include some overseas bulls. One hundred farmers are enrolled in this scheme each year and there is a waiting list. The scheme should continue to allow Western Australian farmers to obtain superior genetic material ahead of many of their counterparts in other States.

**Trading activities**

Although the Herd Improvement Service is a semi-government organisation, it operates in a commercial environment and thus must remain financially viable. A range of products is provided, related to livestock breeding and genetic improvement.

**Semen sales**

Dairy and beef semen from artificial breeding centres throughout Australia and several overseas countries are marketed by the Herd Improvement Service. The selection of these bulls increasingly is based on objective production data generated by schemes such as the Australian Dairy Herd Improvement Scheme. The Australian Breeding Values for dairy bulls are calculated, using data supplied by herd recording organisations throughout Australia.

The Herd Improvement Service acts as an agent for marketing semen from several interstate and overseas organisations, giving Western Australian producers a wide selection of genetic material. The service does not operate a bull centre and there is no commercial pressure to promote and sell a particular group of bulls.

In the past few years, Western Australia's dairy farmers have favoured semen from better-quality bulls, despite their higher prices. This is one of the reasons for the consistently superior production obtained by producers in this State.

**Cryogenic containers and related products**

The Herd Improvement Service has been appointed as Australian agents for Statebourne Cryogenics, a British firm specialising in the manufacture of cryogenic vessels, ranging from small transport flasks to large installations designed for hospitals, agriculture, industry, medicine and research institutions. Sales of these products have been encouraging, including one successful tender for the Queensland Government.

**Liquid nitrogen**

Liquid nitrogen is sold to farmers and to other individuals and organisations.

**Artificial breeding requisites**

A range of goods such as gloves, sheaths and lubricants is sold by the Herd Improvement Service at Bunbury, and from field officers and area managers. The range of goods and services provided is under continual review, and new products and services will be introduced whenever the opportunity arises.

**Corporate plan**

In the short time that it has been operating, the Herd Improvement Service has established its corporate identity, and its role in helping to improve the productivity of the State's livestock enterprises. The Board of Management, with the assistance of senior staff, has published a corporate plan which will provide a blueprint for future activity and expansion.