Successfully Transfering Improved Beef Breeding Technologies in Southern Queensland

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SUMMARY

Adoption of improved breeding technologies for beef cattle has been slow. However, there has been a dramatic rise in the adoption rate of a package of technologies for improved beef cattle breeding in southern Queensland. This increase in adoption has been consistent with the activities of the Queensland Beef Genetic Improvement Program which puts emphasis on training, team building, commitment and an adult education approach to learning. Concurrent with the ground swell of stud breeders joining Breedplan, there has been an increasing interest by commercial producers in additional selection criteria.

The increased use of these technologies has been associated with some minor problems in the effective use of Breedplan as a result of poor interpretation of Estimated Breeding Values (EBV's) and ineffective management groups.

INTRODUCTION

In 1988 the Beef Genetic Improvement Program was launched to package many aspects of genetic selection (Strachan 1990). The current clientele of the Queensland Beef Genetic Improvement Program in southern Queensland are extensive and semi intensive beef producers with stud and/or commercial beef cattle. Geographically the region serviced ranges from 141° to 153° longitude and 26° latitude to the New South Wales border. Previous to 1988 the Queensland Department of Primary Industries provided information to producers on all aspects of selection independently. Whilst the current program provided initial emphasis on Breedplan, its aims have broadened to incorporate many other aspects of selection including reproduction, structural soundness and carcase traits.

The program is carried out by four multidiciplinary district teams, with each member of a team having direct responsibility for his/her immediate area. Each team uses a range of extension methods but has given emphasis to using special interest groups at one or two day forums (Strachan and Rudder 1990).

EXTENSION PHILOSOPHY

One of the initial aims was to visit all known stud breeders within the first six months of the program. Apart from informing this key group about the program the visit enabled the clientele to be segmented into current users, those interested and those not interested in objective selection. From these three groups a target audience was identified and encouraged to attend a forum to undergo a self motivated learning process. The one and two day forums provided a relaxed, safe learning environment giving participants time to reflect on problems and to learn from each other (Knowles 1970). These forums required a registration fee giving participants a financial incentive for learning. A regular newsletter enables communication to producers.

The four teams function with between three and seven members in each district and set short term objectives which are reviewed six monthly. On these occasions activities are planned and team members are provided with the necessary extension and technical skills required to meet the objectives of the program.

RESULTS

In Queensland, adoption of performance recording technologies by beef cattle producers was slow. Figure 1 shows the number of beef producers actively using performance recording through National Beef Recording Scheme fell from 27 herds in 1980 to five herds in 1984. Following the introduction of Breedplan in 1985, the number of herds performance recording in Queensland rose to 80 prior to the launch of the States Beef Genetic Improvement Program in November 1988. By early 1991, registered herds had increased to 254 with the large majority in southern Queensland.

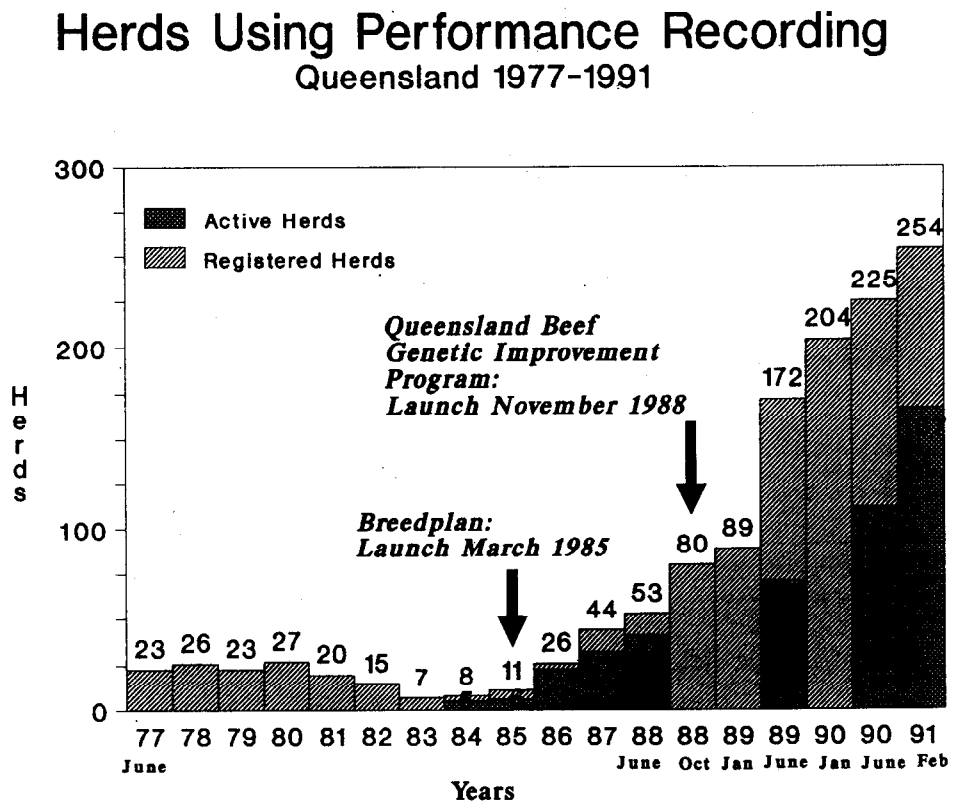

Figure 1

* Registered herds are those herds which have made application to join performance recording.
* Active herds are those herds from which producers submit animal data annually for analysis.

The number of active herds has increased steadily over this period. This increase in active herds shows the 'lag phase' from registering on Breedplan to submitting data and also the necessity for continuous support of breeders to change from awareness to action. Active herds are the real test of the effectiveness of the program. Concurrent with the launch of the Queensland Beef Genetic Improvement Program, the numbers of producers joining Breedplan rose steadily, producer interest increased and those demonstrating no interest declined steadily.

Figure 2 is a progressive record of visits to 310 stud breeders in southern Queensland during the first six months of the program. It shows that the attitude of breeders to performance recording tended to change over time.

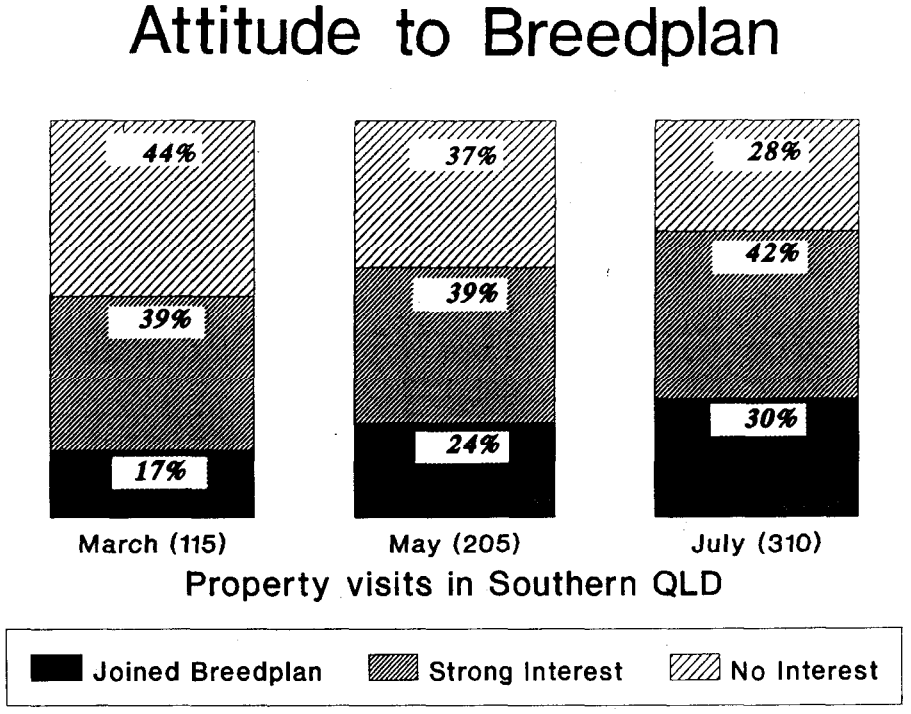

Figure 2

Stud breeders adopting Breedplan or having a positive attitude were encouraged to attend a forum. The response to this feature of the program, Table 1, was very satisfactory and has had a major impact on the number of herds on Breedplan.

The attached Table shows the sites and numbers attending forums from March 1989 to December 1990.

Table 1. Forums held in southern Queensland to December 1990

Overnight forums			One day forums		
Town	**Month/Year**	**Number**	**Town**	**Month/Year**	**Number**
Coolum	March 1989	16	Wandoan	August 1989	27
Dalby	April 1989	27	Goondiwindi	July 1990	12
Gympie	May 1989	29	Miles	July 1990	9
Warwick	October 1989	8	Roma	July 1990	5
Gympie	November 1989	31	Dalby	July 1990	11
Crows Nest	April 1990	35	Kingaroy	August 1990	24
Greenmount	December 1990	30	Goomeri	August 1990	9
		Total 176			Total 97

Consistent with this increase in Breedplan usage, there has been a corresponding rise in the number of studs offering sale bulls with Breedplan data. In 1990 a number of studs provided additional information such as scrotal measurements, semen quality, serving capacity and carcase data. Demand by commercial producers for objective data when selecting bulls has similarly increased.

PROBLEMS ENCOUNTERED

The beef industry is conservative despite economic pressure to change. The more extensive properties with larger paddock sizes and unreliable rainfall require that producers have well planned management groups. Whilst poor seasons can be handled to some extent by link sires, the movement of stock to match available feed supplies is prone to fragment even further the management groups. In addition the movement of breeders into very large paddocks makes detailed accurate recording of animals difficult.

The use of Breedplan does not confer genetic superiority on a breeder's cattle, but the manager is well placed to use EBV's to aid selection of the superior sires. There are currently some users who receive their EBV analysis but do not relate it to the individual animal performance in the field. This has delayed the identification of inaccurate information within some herds with much of the problem stemming from ineffective management groupings. Structure of management groups is often hampered by various weigh dates, calving spread and some breeders preferring to market their animals in similar ages/paddocks as homogenous groups. Producers need regular contact to elucidate these problem areas. Identification of problems within Breedplan data reports necessitates an effective communication system between the adviser and the resource centre at the Animal Business Research Institute. It has been found that the more complex the requirements needed to establish a sound breeding program producing accurate information, then the more difficult the communication process and resultant adoption.

There is also a continued need for all advisory groups both private and government, to be aware of the requirements for effective breeding programs and data collection and have a uniform message for breeders.

REASONS FOR SUCCESS

Butt et al (1990) reported many relationships between sources of information and advice influencing breeders. Consistent with these, the Queensland Beef Genetic Improvement Program has some notable aspects. A key to the success of the program has been the availability of adequate funds to enable the implementation of a professionally planned program. Ongoing training in the technologies and more importantly, a commitment to the technologies and the objectives of the program have been essential. Finally, the identification of special interest groups and their involvement in self motivated learning at one or two day forums has had a major impact on the adoption of new breeding technologies.

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