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HUMAN ERROR INVOLVED IN DAIRY COW SUBMISSION TO ARTIFICIAL BREEDING

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INTRODUCTION

All human activity is subject to variation. This paper tries to draw attention to the factors that limit the accuracy of observation of stockmen, and hence seriously reduce the benefits of artificial breeding and its impact on livestock improvement. Boyd (1970) maintained that inadequate oestrus detection and the failure to present cows at the correct time were the main problems limiting the reproductive efficiency of cattle. This is supported by Macmillan (1974) who has described the areas of error which have greatest significance under New Zealand conditions.

HUMAN FACTORS INVOLVED

It is not sufficient to draw a farmer's attention to the nature of the prevalent error or errors. The error may be due to practice which has become habit, or it may be due to a personality trait, degree of motivation, or level of aptitude, which is unalterable. The ways these may be involved in the observational errors are complex.

APTITUDES

- (1) Although *stockmanship* is obviously the most important ingredient for successful artificial breeding, the programme actually requires a number of other areas of high attainment that may not be complementary.
- (2) *Recording* systems are essential. Many farmers will not keep adequate records without some form of assistance or supervision. Some find it impossible to keep meaningful records at all. Records are reliant on practical identification of the herd.
- (3) *General organization* and the construction of and obedience to systems. Drafting of cows for breeding requires a system. It is also dependent upon the concentration of those milking and their recognition of the right cow at the right time.
- (4) *Technical ability*. The correct use of aids and the understanding of the principles involved in breeding management, par-

ticularly in relation to scientific information, is best appreciated by those farmers described as innovators (Gibbs, 1973). However, the writer's experience of the poor results often achieved in breeding management by this category of farmer prompted the observation that acquisition of knowledge is not automatically associated with success.

MOTIVATION

The success of the exercise of any human skill is related very strongly to motivation. Strongest motivation would be present in those farmers whose aim is either to improve the quality of their herds and/or to improve upon the breeding results of previous years. Simple criteria of success are essential in areas (a) that are complex and (b) that have a long-term influence on financial gain. In fact, most farmers who show success at mating management fall into the intrinsically motivated class whose main stimulus is task achievement, rather than the extrinsically motivated where security and financial gain are the chief factors. Because of the intensity of activity in a factory supply herd in the spring, other priorities may conflict with mating management. This again supports the concept of simple, unclouded and strong motivation.

OBJECTIVE

Few farmers seem to recognize the need for a long-term objective. However, lack of objective makes planning meaningless and motivation an exercise of whim.

PERSONALITY

What little work that has been done on this subject (Seabrook, 1973) has indicated that personality traits should be considered when employing farm labour. In the one-man dairy unit the introvert, self-confident person tends to make the best cowman. Personality will influence a farmer's ability to improve techniques independent of aptitudes or level of intelligence. The attitude to observation with or without competence in any or all of the aptitudes mentioned can be listed:

1. Relaxed
2. Haphazard
3. Inconsistent (through distraction)
4. Over-zealous

5. Rigid and over-cautious
6. Somnolent
7. Variable; alternating from one of the above categories to another.

In addition, vigilance must be related to motivation and success to confidence.

VARIATION

A consistent approach is essential to accurate observation, yet is frequently absent from farming temperament. In evidence of this, farmers now and then tend to make decisions that are totally perverse. Although embryonic mortality and resorption will be responsible for some long returns (Macmillan, 1973), there is need to examine the importance of over-keenness, inconsistency and lack of confidence as limiting factors in successful breeding management through causing inadequate oestrus detection.

WAY OF LIFE

Efficient heat detection is strongly related to the number of times during the day and evening a farmer visits the herd in the paddock (Hall and Branton, 1959; Williamson and Morris, 1972). Once this has been pointed out to clients, acceptance will relate to a combination of motivation and the client's way of life.

His recreational needs and standard of living will often strongly compete with farm activity, particularly in the spring when the work load is high. When introducing improvements these must be considered. The farmer should define his objectives and choose his priorities. It is up to advisory and consultative services to maximize production from the aptitudes, motivation and personality traits he offers.

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