

IMPROVEMENT OF CATTLE—I

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THE breeder engaged in producing the most profitable type of cattle for his purpose, whatever that may be, finds his activities and the methods which he can adopt controlled by various factors. Among the most important of the factors which require his attention are the hereditary qualities of his cattle and the environment in which they are required to live.

Varying weight is given to these two factors by breeders ; at one extreme are those breeders who attach supreme importance to breeding and consider that all their ends can be attained by continued improvement of the inherent qualities by breeding from the highest quality animals available. At the other end of the scale are those who take the pessimistic view that environmental conditions are all important and where these are unfavourable no improvement can be looked for by breeding from high quality animals.

Both schools of thought are right to some extent but neither of them contains the whole truth.

The idea that rapid improvement of the standard of cattle can be obtained by the use of stud bulls of high quality seems to be widely held in Ceylon. Many seem to believe that the whole problem consists in obtaining an adequate supply of improved stud bulls and making their use general throughout the country.

The obvious fallacy in this conception lies in the fact that little is to be gained by improving the inherent qualities of the cattle so long as the environmental conditions are such as to prevent the development and exhibition of these inherent qualities. To illustrate what is meant an extreme case may be taken. One might take a pedigree Friesian cow bred from a long line of high milk yield ancestors and with the inherited qualities necessary to enable her to give an annual yield of say 2,000 gallons of milk.

If such a cow is placed in the environmental conditions under which the village cattle of Ceylon have to exist, far from

giving 2,000 gallons of milk in a year she would certainly die long before a year had passed.

It is obvious that in this case the environment prevented the exhibition of those qualities which had been bred into the cow by the highly skilled breeders and it is apparent that along with improvements in breeding very careful attention must be paid to the conditions under which the animals will be required to live.

The village cattle are an example of cattle which have very successfully adapted themselves to the natural environmental conditions as they exist in Ceylon. The description "natural environmental conditions" is used advisedly as little or no attempt is made in the villages to alter or ameliorate the conditions by artificial means. This successful adaptation of the village cattle to their environment has been attained by generations of exposure to these conditions and is the result of the survival of the fittest. It is successful in the sense that the cattle are able to exist and to reproduce, and maintain their numbers. It may be taken that the present standard of village cattle represents the highest level which can be attained so long as the conditions under which they live remain unaltered and that no improvement can be expected from the introduction of bigger and better stud bulls unless at the same time the environmental conditions can be improved. Future progress will depend upon our ability to improve these conditions.

The most important of the environmental conditions which influence the cattle are food supply and disease.

Under existing conditions it is not far from the truth to say that the food supply available in villages consists almost entirely of such natural pasture grasses and edible shrubs which grow wild on waste lands, jungles, roadsides, etc.

This "natural supply" of food is supplemented in the case of bulls and bullocks used for carting by a supply of poonac and paddy straw. Paddy straw is also very occasionally given to cattle, not used in the cart, during times of drought and flood when the natural food supply fails.

Improvement in the food supply for cattle in villages could be obtained :-

- (a) By reducing the number of cattle.
- (b) By extending the areas available for grazing.

- (c) Improving the quality of the existing grazing areas.
- (d) By growing fodder crops.
- (e) By increased conservation of straw for use during periods of scarcity.
- (f) By increased use of concentrate foods such as poonacs.

Theoretically all these methods of increasing the food supply are possible but in practice not all of them can be used.

No great or rapid reduction in the number of cattle can be looked for on account of lack of a means of disposal of the surplus and because of religious objections. Gradual reduction in the number of the more useless animals may be attained by an increase in the practice of castration of unsuitable bulls and better control of stud bulls.

The outlook as regards extension of existing pasture areas or improvement of their quality is not hopeful at present. Extension of the area can be obtained by clearing jungle areas ; but much expense is necessary following clearing to keep undergrowth in check, to encourage the growth of grasses. This expense is heavy and the resulting pasture by no means good. Areas of jungle are not available in all parts.

So far little success has been obtained in efforts to secure improvement of the quality of pasture in Ceylon.

The growing of fodder crops appears to be the most practicable method available at present. A number of easily grown crops such as Napier, Guinea and Gautemala grasses are available and have proved to be capable of giving very high yield of fodder from a comparatively small area of land.

In many parts of Ceylon an increased supply of paddy straw could be obtained if greater care was exercised in its collection and preservation.

Increased use of concentrates is governed by the economic position of the villager. Concentrates are expensive and their use is justified only when an increased income from the cattle can be obtained.

Benefit to the cattle and indirectly to the owner will follow increased use of concentrates but unless an immediate and visible increased cash income from his cattle can be obtained by the use of concentrates it is unlikely that the average villager will use them.

(To be continued)