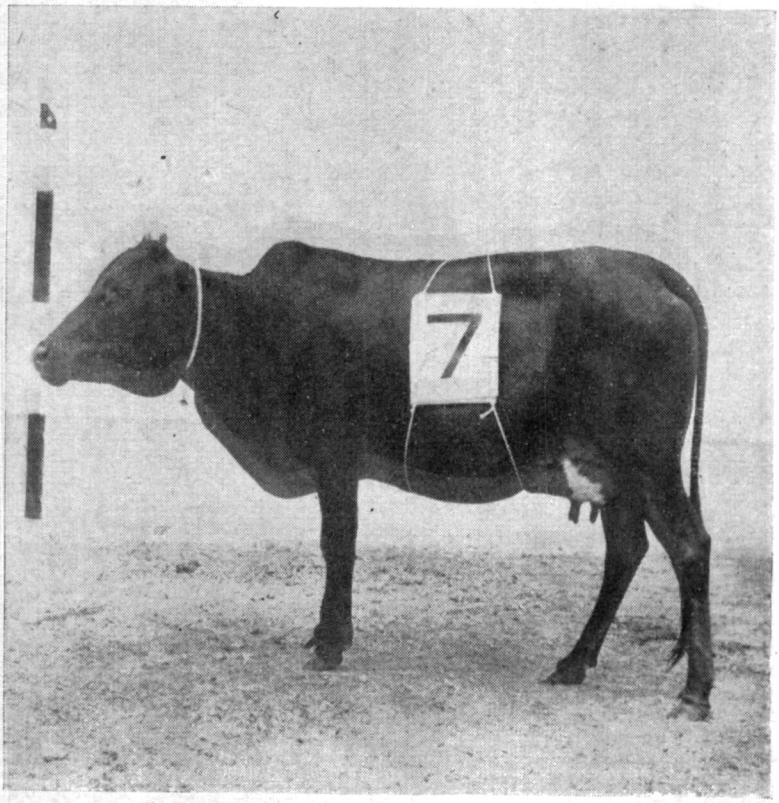

Young Sinhala Cow bred at Bandirippuwa Research Station.

Note : Depth of barrel combined with sturdy legs and upright stance and also development of udder.

CATTLE UNDER COCONUTS

II FEEDING TRIALS WITH INDIGENOUS CATTLE

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Animal Husbandry Officer.

A FEEDING trial was commenced in May, 1952, at Bandirippuwa Research Station to determine the effect of feeding stock with parings poonac at various levels. There were three treatments, viz. :—

A. 3 lbs. parings poonac, plus grazing.

B. 2 lbs. parings poonac, plus grazing.

C. Grazing only.

Each treatment had six animals, chosen at random from the herd, and they were of various ages from two to three years. The standard of management for these eighteen animals was the same. The poonac was fed twice a day, half the amount after morning milking (6.30 a.m.) and other half after the afternoon milking (1.30 p.m.). All animals were put out to graze from 7 a.m. to 5.30 p.m. except for the milking interval at 1.30 p.m. and they were kept in the farmyard manure shed during the night.

Records maintained were those of daily milk yields, body weights, and general health, together with routine history sheets, where the service records and calvings were also recorded.

The animals were weighed once a week during the period of the experiment which lasted two years.

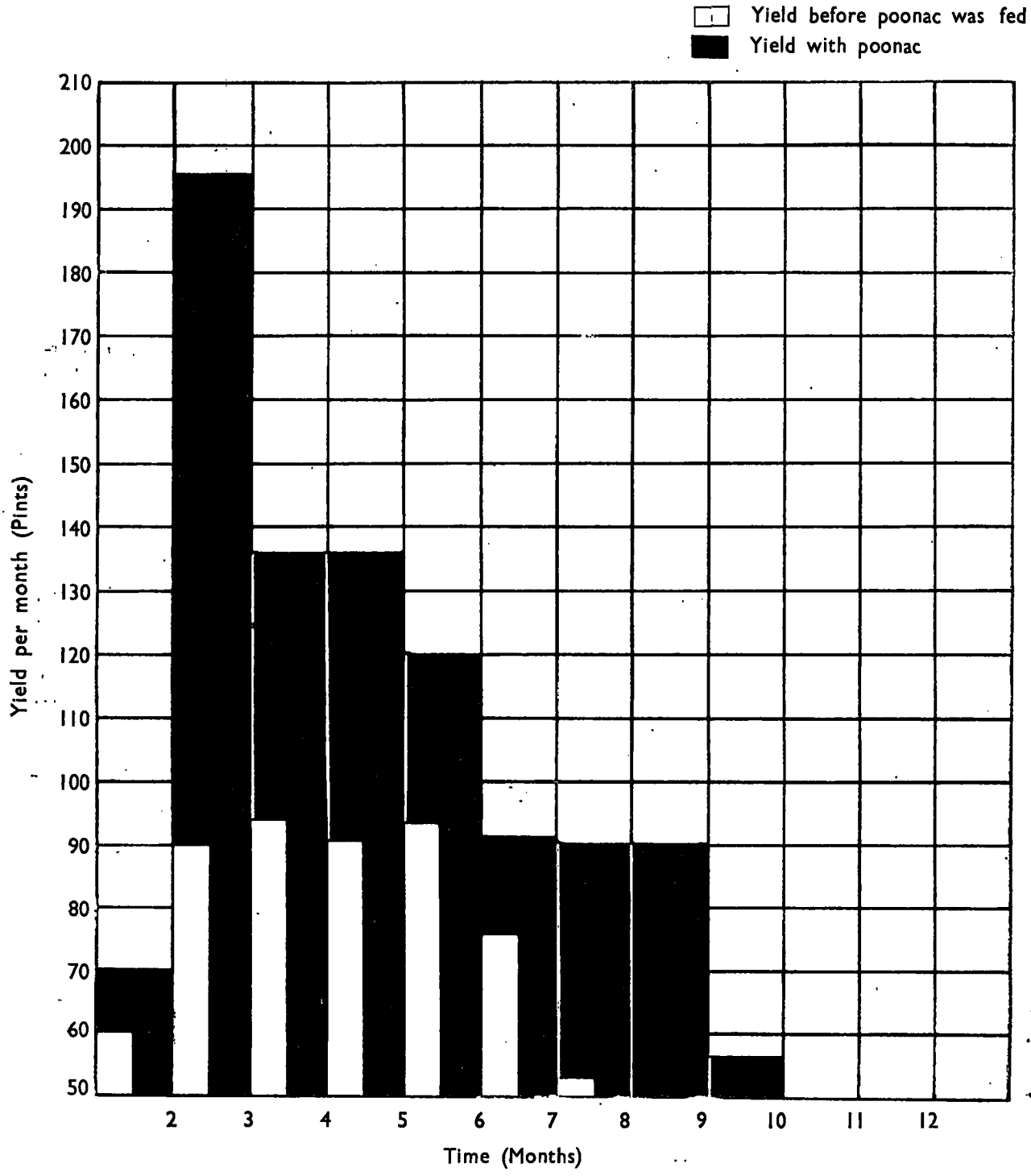
The table below shows the comparative milk yields per lactation for the three groups :—

Table 1

Milk Yields

Group	*Average yield per lactation*	*Highest lactation*	*Lowest lactation*
A	840 pints ..	1,090 pints ..	778 pints
B	695 „ ..	1,020 „ ..	859 „
C	525 . „ ..	616 „ ..	515 „

The next table shows the length of lactation between the three groups expressed as an average. Certain individual cows in Group A gave lactation periods of 10 to 12 months.



Graph showing difference in Milk Yield before and after feeding poonac.

Table 2

Average Length of Lactation

Group	*Months*
A	9·5
B	8·5
C	8·00

Body weights are also different. The group getting 3 lbs. poonac plus grazing, developed an average body weight of 455 lbs. as compared to 365 lbs. for those animals which were only grazed and their condition was superior.

All the cows in Group "C" which got no poonac whatever, were given 2 lbs. of parings poonac once they had finished 2 lactations. It was then noticed that there was a very marked increase in milk yields and in general condition. These increases in yield are shown in Table 3.

Table 3

Improved Yields with Improved Feeding

Cow No.	*Yield without Poonac*	*Yield with Poonac*
3	574 pints ..	412 (4 months only, still milking)
10	521 „ ..	Not yet calved
12	616 „ ..	742 pints
17	588 „ ..	973 „
19	406 „ ..	500 „
21	674 „ ..	774 „

Two other interesting observations made during the trial was that heat periods in those cows that did not get any poonac were very irregular and the dung produced from these animals was richer in nutrients than those receiving poonac. This may be due to the fact that those animals that received poonac had a better balanced diet and thereby had a better metabolism and retained more from their food, than those animals that did not receive poonac.

Another important aspect was the profit that can be derived from these Sinhala-type village animals, when maintained under proper conditions. The economics of better feeding are shewn below :—

Table 4

Profit per Lactation

Cow No. 17.—Before getting poonac : yielded only 588 pints of milk.

588 pints of milk @ -/30 * a pint	Rs.	176·40
Cost of labour for the year .. .. Rs.	31·04	
Cost of rope .. .. „	10·00	41·04
TOTAL NETT PROFIT	Rs.	135·36

* Milk Board Price, Chilaw District—Jan., 1956

The same cow given 2 lbs. of poonac a day yielded 973 pints of milk.

To 973 pints of milk @ -/30 a pint	Rs.	291·90	
Cost of labour for the year	Rs.	31·04	
Cost of rope	„	10·00	
Cost of 6½ cwts. poonac	„	78·00	119·04
TOTAL NETT PROFIT	Rs.		172·86

Cow No. 4 given 3 lbs. of poonac a day yielded 1,090 pints of milk.

1,090 pints of milk @ -/30 per pint	Rs.	327·00	
Cost of labour for the year	Rs.	31·04	
Cost of rope	„	10·00	
Cost of 9¾ cwts. poonac	„	111·00	152·04
TOTAL NETT PROFIT	Rs.		174·96

From the foregoing, it is clear that with an extra expenditure of Rs. 78/- for poonac, a clear profit of Rs. 37/- was obtained and 385 additional pints of milk were produced from this animal.

Remarks and Conclusions

On the coconut estates of Ceylon, there are said to be over a million head of scrub or Sinhala-type cattle which are mostly kept for manuring and for the control of weeds and undergrowth. The generally-accepted view is that these scrub animals are practically useless for the production of milk. They are useless, however, because they are totally neglected and left to fend for themselves, and to find what food they can, where they can. The coarse scrub vegetation on which they can somehow exist is not adequate for the production of milk and a supplementary feed in the form of concentrates, *e.g.* poonac, is required.

These innumerable useless and uncontrolled scrub animals are at present consuming valuable pastures, over-grazing and degrading the mixed vegetation to be found under the coconut palms, and trampling and eroding the top soil. It follows that all the existing scrub animals which are consuming the existing pastures must either be destroyed and replaced with *proved* hybrid animals which can exist and thrive in the hot humid conditions of the Low-Country, live simply on the coarse mixed vegetation under the palms and still produce milk, or else the indigeneous animals must be improved by careful selection and reproduction only from selected animals, by proper management and above all by improved feeding.

Poonac whether in the form of mill or expeller poonac, or parings poonac (derived from the brown skin or testa of the nut) or extracted poonac (Morlac or Xtralac) provide a concentrate which is easily obtained by any coconut small-holder and villager. It has been shewn that a clear profit can be made and more milk can be produced if the selected daily animals are given 2 lbs. of parings poonac per day.

It is possible that even better yields may be obtained by giving the animals fish meal, imported concentrates and special mineral supplements but this is beyond the scope of this article which is intended merely to show that Ceylon can produce more milk simply by feeding the neglected indigeneous stock with poonac or coconut cake. The possibilities of increasing the milk supplies of Ceylon simply by feeding are indeed considerable; what more is to be achieved by judicious selection and culling remains to be seen but some indication is given by the results of an observed milking competition in which Cow No. C.R.I. 27 produced no less than 9 pints a day on two consecutive days.

The selection and breeding up of these animals will be a long patient business but the indications are that the indigenous Sinhala-type animals can be improved to become efficient producers of milk but proper feeding must be the first consideration.