Appendix II

(1) Procedure for calculating the costs of a breeding plan

(A) Bull purchase price = Rs. 4500.00

After utilization of the bull 10% depreciation rate was charged per annum and the bull was disposed of irrespective of the number of months the bull was housed.

Net cost of the bull = Rs. 4500.00

(B) Bull housing and maintenance cost = Rs. 12 x 30 x No. of months

(C) Cost of semen collection and processing for immediate use:

\[ \frac{N \cdot p \cdot x \cdot 2}{\text{No. of bulls tested}} \times 10 \% \text{ extra} \times x \times 0.33 \]

where,

- \( N \) = Population size,
- \( p \) = Proportion of population mated to young bulls,
- \( 2 \) = No. of inseminations
- \( 0.33 \) = the cost of collection and processing of semen per frozen dose

(D) Semen storage cost:

\[ \frac{N \cdot (1-p) \cdot x \cdot 2}{\text{No. of bulls selected}} \times 10 \% \text{ extra} \times x \times 0.55 \]

where,

- \( 1-p \) = proportion of population mated to proven bulls,
- \( 0.55 \) = the cost of processing, collection and storage \((0.33 + 0.22)\)

Cost of all bulls during first year:

\[ E + S + C + 9 \times \text{No. of bulls tested} \]

...contd.
Cost of semen storage in subsequent years

(10% discount rate per annum)

\[ = \text{No. of doses stored} \times 0.22 \times (\frac{1}{1 + d})^2 \]

\[ + \]

\[ + \]

\[ + \]

\[ \text{No. of doses stored} \times 0.22 \times (\frac{1}{1 + d})^7 \]

where,

0.22 = Cost of semen storage per dose per annum,

d = discount rate

Total cost = E + F

(II) Procedure for calculation return over feed cost

(A) Selling price of milk = Rs. 2.80/kg

(B) Cost of concentrate mixture = Rs. 1.40/kg

For every 3 kg of milk, 1 kg of concentrate mixture was given. The return over feed cost was = Rs. 2.80 - 0.47 = Rs. 2.33