LONG TERM ECONOMIC CONSIDERATION OF PROGENY TESTING PROGRAM In IRANIAN HOLSTEINS

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Introduction

Because animal breeding programs have a long term nature, it is vital to consider factors affecting costs and returns in long-term. Economic efficiency of a conventional progeny testing program considering all effective selection pathways (i e. SS, SD, DS and DD) has been investigated in Iranian Holstein.

Material and Methods

Cost-Benefit Ratio was defined as the ratio of returns to costs. Returns from progeny testing program were divided into two parts including returns from genetic gain and returns from selling culled bulls. Expenses were consisted of quarantine costs, costs of young bulls in waiting period, and cost of bulls after returning to service. All costs and returns discounted to the present value, according to the time when they happen. Generation interval was 6.5, 7.5, 4.22, 4.10 and 3.37 in SS, SD, DS, DD and young bulls (YB), respectively. Economic efficiency estimated implementing gene flow method (Hill, 1974) and according to the number of discounted expression of milk production in different sex-age classes. Continuous selection was considered when economic analysis.

Results

The maximum value of returns was obtained in year 21 when implementing continuous selection (19003432.3 $). profit onset was 3 years after reaching to the maximum return point. Cost-Benefit Ratio was 1.95 for continuous selection.

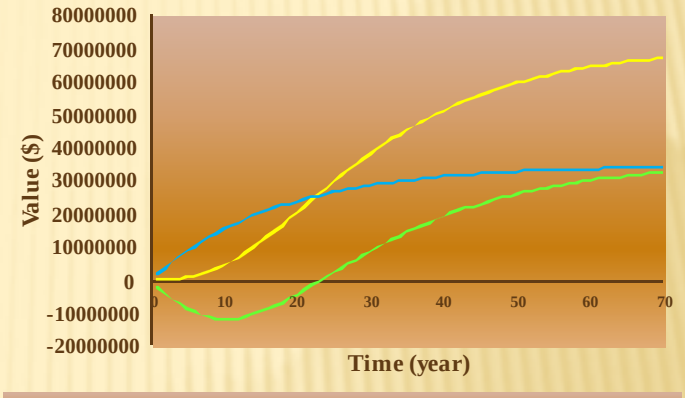

Figure 1. Long term cumulated costs, returns and profits from conventional PT in Iran

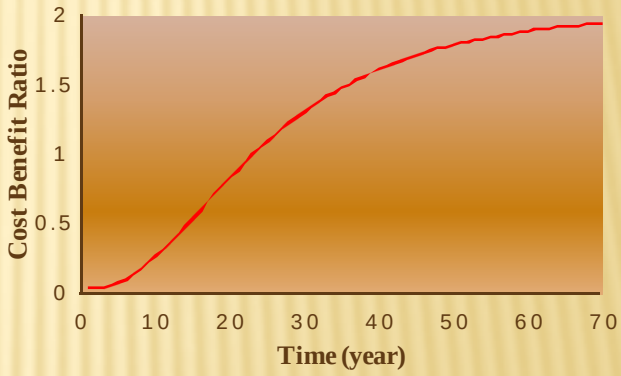

Figure 2. Cost Benefit Ratio of conventional PT in Iran

Conclusion

Large number of age classes, especially in dam pathways, was one of the most important reasons for the late onset of positive profit in Iran.