



# Progeny testing - Research & Development

Stephen Mathew

## Introduction

**K**erala state has transformed around 70 percent of its local cattle into crossbreds of exotic breeds like Jersey, Brown Swiss and Holstein-Friesian. As a result there has been a seven fold increase in the milk yield over the past decades. The credit goes to the sincere work done by the state Animal Husbandry department, KLD board and the dairy development department. The current lactation performance of crossbreds (1700 kg. per cow) is not enough to make dairy farming self-sustainable and it is far below the envisaged milk production of 2500 kg per lactation per cow by 2000 AD. Therefore it is necessary to formulate cattle breeding strategies based on sound research outcomes by competent animal breeders.

## ICAR Field Progeny Testing Scheme.

### Genesis of the programme:

The Kerala Agricultural University (KAU) started a progeny-testing research programme in 1986, with the objective of developing a methodology suitable under the field conditions of Kerala for the selection of breeding bulls based on the performance of the

daughters. This scheme funded by the Indian Council of Agricultural Research, was implemented through the 10 A.I centers of the state Animal Husbandry department (AHD) with the full cooperation of the KLD Board. This programme continued up to 1991. By the time ICAR launched a co-coordinated research programme with the objective of proving the best bulls based on multi-location study with the simultaneous objective of increasing the genetic potential for milk yield of the existing crossbred cows reared by the farmers. Appreciating the work done by KAU in this regard ICAR did not think twice to identify KAU as one among the three units, others being Bharathiya Agro-Industries Foundation (BAIF) and Punjab Agricultural University (PAU), for the implementation of this prestigious project. It is a matter of pride that out of the 22 agricultural universities KAU was identified as one of the two agricultural universities by the ICAR to undertake this massive developmental research scheme (Cattle Breeding Policy for Kerala, 1994; 5.14.1). Therefore the **field progeny-testing (FPT)** project that is being currently implemented by KAU has emerged from the earlier programme. The comparison of the performance of bulls under different agro-climatic condition is also an important objective. For testing bulls under different environment, BAIF, Pune, operating in central India represented the rain fed tropical semi-arid environment and PAU operating in the north represented the subtropical semiarid irrigated ecosystem while KAU the high rainfall tropical environment.

The three participating units were brought under the umbrella of Project Directorate on Cattle (PDC) instituted by the ICAR with a mandate to plan, coordinate and monitor cattle breeding research in the country. Only those bulls born to the elite/proven bulls and cows having a standard lactation yield of 4500 kg and a fat percentage of not less than 3.5 were included in the testing programme. These genetically superior bulls were selected from the Frieswal project of ICAR at military dairy farm Meerut, PAU and BAIF. All participating units including KAU can

*Dr. Stephen Mathew*  
*MVSc, PhD*  
Associate professor &  
Principal Investigator,  
ICAR field progeny  
testing Scheme,  
Center for Advanced  
Studies in Animal Genetics  
and Breeding,  
Veterinary college, Kerala  
Agricultural University





contribute the bulls provided the unit has the bulls with minimum standard. These bulls are identified by the scientists from the participating units and Project Directorate on cattle and the necessary health certificates from the competent authority are made mandatory for bulls getting entry into this national bull testing programme. The semen quality is tested in Govt. of India approved laboratory.

#### **Mode of implementation of the programme**

Like the previous scheme, this programme was also implemented with the whole-hearted cooperation of AHD and KLD Board setting a good example for others how harmoniously the development departments like AHD and KLD Board and the research institutions like KAU can co-operate for the benefits of the farmers in the state. Everybody participated in the project benefited. The semen of the high pedigreed genetically superior test bulls were supplied to the AHD from the scheme free of cost and liquid nitrogen was supplied by the KLD Board for which the cost was paid from the scheme. This healthy, meaningful and mutually beneficial alliance continued till the end of 1996.

#### **Test results**

In the second phase of the scheme 49 bulls of four batches have been sampled and another batch consisting of 19 bulls is under sampling. The performances of the progeny of three batches of bulls are available and information on the progenies of the fourth set is accruing. The overall average first lactation milk yield of progenies of 34 bulls spread over three batches were 2061 kg. The milk yield of their contemporaries in different parities was only 1714 kg demonstrating a superiority of 400 kg in the first lactation itself by the daughters born to the test bulls. The superiority of daughters in second lactation is likely to be 700 kg. if the increase from first to second lactation is taken as 15%. The overall age at first calving of the progenies was found to be 35.6 months compared to the state average of 40.5 months.

#### **Current position of the scheme**

The scheme became very popular among dairy farmers of Thrissur district. The quality of progeny produced and their lactation performance attracted attention of dairy farmers not only in Thrissur district

but also adjoining districts of Palakkad and Ernakulam. Unfortunately, in 1996 November, the then Director of AHD thought it is high time to withdraw its cooperation in running this field oriented research programme stating the reason that the use of semen of the project had exceeded the target both in time and quantity of semen. The objection raised by KLDB was that the storage of semen from KAU scheme accuses more damages to the containers.

Since then, for the past five years, KAU had been making all efforts to regain the cooperation the Government departments explaining the need for the continuance of this scheme for the benefit of the farmers. None of the correspondence received any positive reply. Meanwhile MILMA came forward to cooperate with KAU by offering its network to implement the project. MILMA after signing MoU with KAU had to withdraw its support for unknown reasons. But at last in April 2002 KAU received a letter from the secretary to Government (AH) that the proposal of the KAU for permission to restart the field progeny testing programme through the state department cannot be considered as the programme neither serve any purpose nor beneficial to the state. Having failed in securing cooperation of the state department in continuing the project, the KAU is left with no options other than using its freedom to go in for other alternatives.

#### **Need for continuance of the scheme**

The scheme is fully financed by the ICAR should be continued due to the following reasons.

1. The research by an unbiased organization with qualified and competent scientists is necessary for formulating and modifying the breeding policy of the state. It may be remembered that the decision to eliminate the Brown Swiss breed from the population was taken based on the research finding of KAU.
2. The farmers are benefited from the improvement of the genetic potential for the milk yield of their cows reared.
3. The scheme will fetch a financial assistance to the tune of nearly one Crore rupees in the 10<sup>th</sup> plan from ICAR to the University / state which is already facing financial crisis.
4. It provides employment to 25 persons without





any financial liability to the state.

5. Discontinuing the scheme by KAU without giving complete research results will affect further future financial support to the KAU, a situation that KAU / State can never think of.

Therefore the discontinuation of this scheme is against the interest of the nation, interest of the state and interest of the farmers.

#### **Certain allegations and replies**

##### **1. This scheme is against the breeding policy**

No, it is in line with the breeding policy. Breeding policy clearly proposes (Section 6.1.1) that only Jersey or Holstein- Friesian will be used as exotic donor breeds. The section 6.1.2. proposes that level of exotic inheritance be limited around 50%. In the scheme KAU is using crossbred bulls of the approved exotic breed HF with exotic blood level of around 50%. More over the research need not be in line with the policy as the research is for formulating or revising the policy. But KLD Board still supplies semen of bulls with the exotic component of Brown Swiss and AHD is using it in farmers herds which is not allowed in the breeding policy.

##### **2. In the scheme, semen from BAIF, a private agency is being used!**

BAIF is not a private company. It is a self-sustaining non-governmental organization at Pune, instituted by Mani Bhai Desai a true disciple of Mahatma Gandhiji. The scheme is using BAIF semen because it is a participating unit identified by ICAR along with PAU and KAU. As already mentioned, KAU can also supply semen to the scheme for testing under different environment, if the bulls with stipulated standards are available. Besides semen from BAIF, semen from PAU and Frieswal project are also in use under the scheme.

##### **3. It is not useful to the state.**

This statement is not true. The performance of progenies reared by the farmers of the scheme will reveal the usefulness to the state. The apex body of the agricultural research in India, the ICAR had found it useful to the nation.

##### **3. Why do you want to continue the research facing so much resistance?**

For any good cause there will be some opposition. The opposition is from very few persons and that is

not the general opinion of the entire organization or department. The professional body of Veterinarians, the Indian Veterinary Association has unanimously passed a resolution for the continued cooperation of AHD for the field progeny-testing scheme.

##### **4. Why not KAU undertake the scheme in its own farms?**

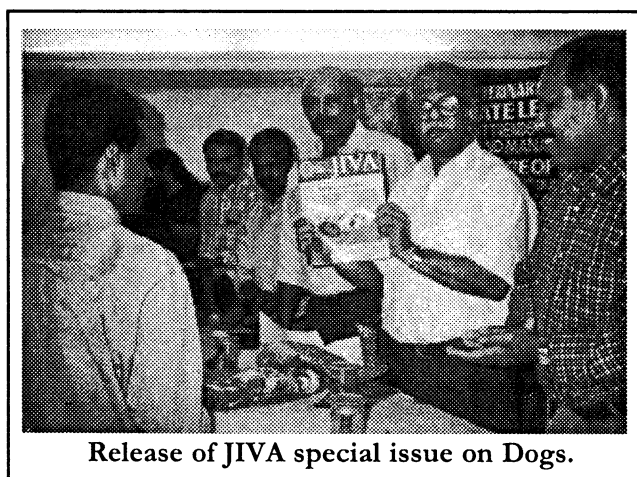
The semen from the scheme is used in KAU farms. But it is a field-testing programme and it should be implemented under field conditions and not exclusively in university farms.

#### **Counter questions**

Why KAU alone is obstructed from using the semen supplied by ICAR for a national research when other states welcome it with open arms? Thousands of farmers in Kerala are using semen bought from other states to impregnate their cows? What does it reveal?

#### **Conclusion**

Animal Husbandry Department, KLD Board and KAU are all part of the Government with well-defined roles and all are working with the aim of increasing the dairy cattle productivity of the state committed to the cause of the farmers. The KAU is vested with the primary responsibility to do research and provide technology support for the sustainable development of the agricultural economy of the state besides providing trained personnel for the purpose. KAU is bound to provide right kind of advice based on sound research. This is the time farmers are facing innumerable problems due to economic recession. Let us unite for the cause of the farmers in the state.



**Release of JIVA special issue on Dogs.**

