Digital innovations to develop monitoring indicators for infertility issues in dairy animals

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Introduction

- India is leading in total milk production with **230 million tons in 2022-23**. However, dairy productivity is exceptionally low with **1777 kg per lactation**.
- Poor reproductive performance including late onset of heat, long inter-calving period, repeat breeding and infertility are some of reasons for low productivity.

Challenges

Lack of proper data and information regarding production and reproduction details of small holder dairy farming system in developing countries.

Materials and Methods

- The study has been conducted in villages of Coimbatore and Erode districts of South India.
- **NITARA**, digital app has been used to capture reproductive performance as mentioned below:

30	2258	479
Villages	Dairy animals	Small farmers

Results

Species	Calf (%)	Heifer (%)	Milking (%)	Dry (%)	Bull (%)	Total
Cow	465 (21.9)	493 (23.2)	981 (46.2)	103 (4.8)	81 (3.9)	2123
Buffalo	36 (26.6)	46 (34.1)	40 (29.6)	11 (8.1)	2 (1.6)	135

In the herd structure, cows were more in milking stage than buffaloes indicate late onset of heat and anestrous cases in buffaloes.

Species	No of inseminated	No of Repeat Breeding (%)
Cow	384	68 (17.7)
Buffalo	20	5 (20)
Total	404	73 (18)

18% of 404 dairy animals were found repeat breeding (**with >3 times inseminated**) and **not pregnant.**

Species	Pregnant		Not pregnant	
>2years age	Numbers	%	Numbers	%
Cow	404	27.7	1053	72.3
Buffalo	18	19.8	73	80.2

Only **28% of cows** and **20% of buffaloes** were pregnant among adult animals.

No of months after calving	No of animals not inseminated (%)
<3	89 (42)
3-5	52 (25)
6-12	63 (30)
>12	3 (1)
Total	207

15% of heifers not inseminated even after **30 months** age and **31% of milking animals** not inseminated even after **6 months** of calving.

Conclusion

- Digital innovations for capturing details of productive and reproductive data is important for evidence-based interventions to improve livestock productivity in small holder farming.

- Extension agents and service providers can use of these data for improving their services.

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