ASSESSMENT OF REPRODUCTIVE DISORDER REMEDIAL PRACTICE (RDRPA) ADOPTION BY DAIRY FARMERS IN UNDULATING PLAIN REGION OF PUNJAB

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ABSTRACT

A study was conducted in the undulating plain region of Punjab to assess the reproductive disorder remedial practice adoption (RDRPA) level of dairy farmers possessing small (1-9 animal), medium (10-30 animal) and large (>30 animal) dairy units. There was significant difference ($p<0.05$) in RDRPA score of small and large dairy farmers. Majority of the dairy farmers had medium RDRPA level, which positively correlated with education, land holding, training, mass media exposure, social participation and extension contacts of farmers. The lack of awareness followed by cost factor were main factor for non-adoption of RDRPA. In brief, there is urgent need for spreading awareness by extension specialists and formulating suitable strategy for enhancing adoption level for curtailing reproductive disorders.

Keywords: Dairy, Disorder, Punjab, Remedial practice, Reproduction

In Punjab, the average milk yield per animal per day in crossbred cattle, nondescript cattle and buffalo is 10.96 Kg, 6.52 Kg and 8.65 Kg, respectively (Animal husbandry sector Vision 2017, Department of Animal husbandry, Punjab). An increase in milk production is directly related with good reproductive efficiency of dairy animals (Emanuelson and Oltenacut, 1998). To curtail losses due to reproductive disorders, various remedial measure are available. But there is poor diffusion and adoption of livestock technologies at field level (Melesse *et al.,* 2013). In this context, a field oriented study was planned to study the reproductive disorder remedial practice adoption (RDRPA) level, so that factors affecting adoption of these practices can be intervened at right time for timely and effective treatment of dairy animals.

The undulating plain region of Punjab consists of districts Gurdaspur and Hoshiarpur. Ten remedial measures were selected and the random data was collected through a pre-structured and pre-tested questionnaire through a personal interview. The respondents (30 farmers in each group) were categorized as small dairy unit with 1-9 animal (SDU), medium dairy unit with 10-30 animal (MDU) and large dairy unit with >30 animal (LDU). The various factors affecting adoption of remedial practices were categorized as unawareness, unavailability, cost factor and complexity of the technology. The farmers adopting or not adopting a particular practice were given score 1 and score 0, respectively. The reproductive disorder remedial practice adoption (RDRPA) score was calculated and the farmers having RDRPA score upto 3, $\geqslant$3-6 and >6 were categorized as low, medium and high RDRPA level. The respondent exposure to each mass media viz. television, radio, newspaper, farm magazines, mobile and internet was calculated as often (score 2), sometimes (score 1), never (score 0) with maximum score given as 12. The social participation in each of the events viz. farmers meetings, field trips, livestock shows, pashu palan mela and Kisan mela was calculated as often (score 2), sometimes (score 1) and never (score 0) with maximum score given as 10. The extension contacts of respondents with any of five change agents viz. veterinary officer, veterinary inspector,

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dairy assistant, officials of Verka or Nestle and Krishi Vigyan Kendra (KVK) or university were measured as often (score 2), sometimes (score 1) and never (score 0) with maximum score given as 10. The data was analyzed using IBM SPSS Statistics for window version 22.0 (IBM Corp., Armonk, NY, United State of America).

According to the demographic profile, the majority farmers of SDU (60%), MDU (53.33%) and LDU (43.33%) were in 31-60 year age group. The education level of a large proportion of farmers of all the three groups was low with overall proportion of illiterates, primary, middle, high school, higher secondary and (post)graduate as 21.1, 20, 22.2, 14.4, 17.8 and 4.4%, respectively. Agriculture was the main occupation (76-83%) in all the three groups. The overall land holding viz. <5 acre, 5-10 acre and >10 acre was 32.22, 43.33 and 24.44%, respectively. The communicational profile parameters viz. extension contact, social participation, mass media exposure in low (<4), medium (4-6) and high score (>6) category were almost similarly distributed (28.9-40%). In fact, around 81% farmers of different groups had not received any training in dairy farming. There was significant difference (p$\leq$0.05) in RDRPA score of SDU (2.53±0.27) and LDU (4.23±0.34) where as the score for MDU was 3.23±0.29. This suggested that RDRPA adoption was more in the LDU than in the SDU.

The RDRPA status indicated that the adoption level of remedial practices for all the three types of dairy units was not up to mark. Unawareness was the main factor for non-adoption of various remedial measures for all the three dairy units. The cost factor also played a significant role with regard to feeding ration to heifer, balanced diet feeding, mineral mixture feeding, comfortable housing, deworming and hormonal or intrauterine treatment. Others have also found that level of adoption was more for zero cost practices as compared to high cost practices (Yadav and Yadav, 1995). Overall, about 15.6% farmers were not adopting hormonal treatment due to unavailability and complexity of technology. However, for intrauterine treatment, about 7.8% farmers were not adopting due to complexity of technology. The education (r=0.542), training (r=0.427), mass media exposure (r=0.512) and social participation (r=0.584) was positively correlated (p<0.01) with RDRPA. In fact, different socio-economic factors like age, education status, occupation, and land holding of farmers affect the level of adoption of dairy animal husbandry practices among farmers (Das, 1997). Similarly, the adoption level of dairy farmers was highly associated with their family education status, dairy farm income, herd size, land holding and social participation (Sarkar, 1981). In brief, dairy farmers of undulating plain region of Punjab had medium RDRPA level. Thus, there is an urgent requirement to communicate and educate farmers about various remedial measures for reproductive disorders and to formulate cost-effective and farmer-friendly technologies for enhanced adoption.

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