

*Original Research***Availability, Approachability and Extent of Use of Breeding Services Delivered by State Department of Animal Husbandry (SDAH) in Murrah Breeding Tract of Haryana****Rekha Yadav*¹, Hema Tripathi², Parveen Kumar³, and Nukala Ramesh¹**

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Abstract

Present study was conducted following ex-post facto and exploratory research design with objective to explore the effectiveness in term of availability, approachability and extent of use of breeding services by interviewing 240 buffalo owners personally, selected with the help of twelve (12) GVH from two districts in Haryana. The availability and extent of use of different type of breeding services was measured on three point continuum viz. Always, Sometimes and Never and approachability by asking directly to the respondents under Yes or No category. Study revealed that availability, approachability and extent of use of artificial insemination service were the maximum as compared to pregnancy diagnosis and treatment services. Among all the breeding services extension services were the least available, approached, and used by the buffalo owners.

Key words: Availability, Approachability, Breeding Services, Extent of use and State Department of Animal Husbandry (SDAH)

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Introduction

Government of India (GOI) has started various programmes related to scientific breeding of animals. Many stakeholders are indulged in providing breeding services including private sector, breeding organizations, NGOs and public sector. Among all stakeholders, contribution of state department of animal husbandry as public sector (SDAH) is at the top (CALPI, 2008; Ravikumar *et al.*, 2007, Kathiravan, 2012 and Shweta,

2014). SDAH provides services through fixed model of veterinary hospital/dispensary/sub-centre nodal structure at the ground level (Kathiravan, 2012). The services viz. breeding, veterinary care and diagnostic facility, prophylactic measure and veterinary extension, but primary focus is on diagnosis/ treatment of animals and breeding services for which it has a clear mandate (Chander *et al.*, 2010). SDAH Haryana is providing breeding services comprising artificial insemination, pregnancy diagnosis, treatment of various reproductive problems and extension activities through vast network of 1018 veterinary hospitals and 1814 veterinary dispensary (DAHD, 2019). To maintain the quality breeding service, department ensure round the clock availability of semen straw and liquid nitrogen, well-equipped semen laboratory, sperm centre. SDAH, Haryana is playing an instrumental role in delivery of animal breeding services to enhance the efficiency in dairying. Though department is providing breeding services since long period but no empirical and comprehensive evaluation was carried out to know the availability, approachability and extent of use of these services by the farmers in Haryana. Keeping in view, the present study was designed with the objective of studying the availability, approachability and extent of use of the breeding services provided by state department of animal Husbandry (SDAH) in Murrah breeding tract of Haryana.

Materials and Methods

The present study was carried out following ex-post facto and exploratory research design in Murrah breeding tract of Haryana comprising seven districts. Amongst these, two districts; Hisar and Jind were selected purposively for the study because of familiarity of the researcher with the local language, customs and culture that helped in building up rapport with the respondents. From each of the selected districts, three Government Veterinary Hospitals (GVH) that had achieved maximum target of AI named as locale II and another three GVH that could achieve minimum targets of AI during 2015-16 named as locale I. A list of buffalo owners, who had been benefited of some kind breeding services during the last three year (2014-17) were obtained and 20 buffalo owners were selected randomly from twelve GVH. Thus, 240 respondents (120 from locale I and 120 from locale II) were selected and data were collected by personal interview and observation. The availability and extent of use of different type of breeding services was measured on three-point continuum viz. Always, Sometimes and Never with respective score of 3, 2, 1 and later ranked according to the mean score obtained by the respondents and statistically analysed by chi-square test. Approachability was measured by asking directly to the respondents under Yes or No category and results were expressed in frequency and percent.

Results and Discussion

Availability of Different Breeding Services

A perusal of Table 1 reveals that required semen was always available at veterinary hospital revealed by 94.6 percent respondents. Semen availability was not a problem in studied area because of regular supply and storage facility of semen from SDAH to all GVH and GVD.

Table further revealed the availability of AI services at doorstep for which 93.3 percent respondents and for availability of AI services at Government Veterinary Hospitals (GVH) 98.8 percent of sampled respondents agreed with the statement. It shows the punctuality, commitment of veterinarian from Haryana who were providing the services to farmers at GVH as well as at their home according to convenience of farmers in a timely and efficient manner. Channappagouda, *et al.*, (2016) however found different findings in Karnataka wherein non-availability of AI and PD services at their doorstep was perceived as major constraint by the respondents. Table further shows no significant difference between respondents of two locales with respect to availability of required semen, availability of AI services at doorstep and availability of AI services at GVH. This indicates that AI service was almost same in both the locales.

Another parameter of availability of pregnancy diagnosis service was studied at doorstep and at GVH. Perusal of Table revealed that overall majority of the respondents (92.1 percent) reported that P. D. services were always available at doorstep and 98.8 percent respondents asserted the always availability of P. D. service at GVH. Chi square test revealed no significant difference between respondents of two locales with respect to availability of P. D. service at doorstep and at GVH. The reason of this may be the availability of adequate and well-trained staff in veterinary institution that might lead to coverage of more area under their jurisdiction. Another reason may be the availability of one veterinary institution either GVH or GVD to cover at least three villages. However, Jain (2016) reported that SDAH personnel in Rajasthan were not able to provide service at doorstep of the farmers because of inadequate veterinary staff and SDAH personnel had to cover more distance for providing the service in area of their jurisdiction.

Treatment services for reproductive disorders was studied under four subheads including availability of required medicines at GVH, availability of required facilities at GVH, availability of treatment facilities at door step as well as availability of treatment services at GVH. Data in Table (1) points out that 85.1 percent of respondents felt that required medicine for treatment of reproductive problems was 'sometime' available at GVH and more than 13 percent reported that medicines were always available. According to them most of the time, they had to purchase required medicine, reason being limited supply of medicine at GVH from SDAH. Earlier studies as conducted by Channappagouda, *et al.*, (2016) and Channappagouda, and Sasidhar (2018) also reported that majority of farmers and veterinarians in Karnataka state asserted inadequate supply of quality medicines to veterinary institutions and lack of proper diagnostic facilities.

Table 1: Availability of different breeding services delivered by SDAH in selected locales

Services	Locale I (N=120)			Locale II (N=120)			Pooled (N=240)			Statistical value
1. Artificial Insemination service	Extent of availability									
	Always	Sometime	Never	Always	Sometime	Never	Always	Sometime	Never	
i. Required semen for AI	111(92.5)	9(7.5)	-	116 (96.7)	4 (3.3)	-	227(94.6)	13(5.4)	-	χ^2 value: 5.613 ^{NS}
ii. AI service at door step	113(94.2)	7(5.8)	-	111(92.5)	8(6.7)	1(0.8)	224(93.3)	15(6.2)	1(0.4)	χ^2 value: 1.471 ^{NS}
iii. AI service at GVH	119(99.2)	1(0.8)	-	118(98.3)	2(1.7)	-	237(98.8)	3(1.2)	-	χ^2 value: 1.391 ^{NS}
2. Pregnancy diagnosis service										
i. PD service at door step	110(91.7)	10(8.3)	-	111(92.5)	8(6.7)	1(0.8)	221(92.1)	18(7.5)	1(0.4)	χ^2 value: 1.614 ^{NS}
ii. PD service at GVH	117(97.5)	3(2.5)	-	120(100.0)	-	-	237(98.8)	3(1.2)	-	χ^2 value: 4.197 ^{NS}
3. Treatment service										
i. Required medicines at GVH	11(9.2)	99(82.5)	10(8.3)	14(11.7)	100(83.3)	6(5.0)	25(10.4)	199(82.9)	16(6.7)	χ^2 value: 1.365 ^{NS}
ii. Required facilities/ infrastructure at GVH	107(89.2)	12(10.0)	1(0.8)	107(89.2)	13(10.8)	-	214(89.2)	25(10.4)	1(0.4)	χ^2 value: 1.426 ^{NS}
iii. Treatment service at door step	106(88.3)	13(10.9)	1(0.8)	99(82.5)	21(17.5)	-	205(85.4)	34(14.2)	1(0.4)	χ^2 value: 3.525 ^{NS}
iv. Treatment service at GVH	119(99.2)	1(0.8)	-	117(97.5)	3(2.5)	-	236(98.3)	4(1.7)	-	χ^2 value: 1.063 ^{NS}
4. Extension services										
i. Health/ infertility camps	68 (56.7)	5 (4.2)	47 (39.1)	73 (60.8)	2 (1.7)	45 (37.5)	141 (58.8)	7 (2.9)	92 (38.3)	χ^2 value: 3.413 ^{NS}
ii. Distribution of literature	15 (12.5)	38 (31.7)	67 (55.8)	14 (11.7)	45 (37.5)	61 (50.8)	29 (12.1)	83 (34.6)	128 (53.3)	χ^2 value: 1.710 ^{NS}

Figure in parenthesis indicate percent



Further it is found that the required facilities for treatment of reproductive problems were adequately and always available revealed by 91 percent respondents. The reason being that veterinary institution in Haryana state are well equipped and required materials are also available for treating the reproductive problems. Similarly, treatment facilities were always available at doorstep by SDAH personnel reported by 88.3 percent respondents. According to an overwhelming majority of respondents (97.9 percent), services for treatment at GVH were always available to their animals at veterinary hospitals. Thus, different breeding services are available in the selected locales of the study. Better interaction among livestock farmers and SDAH personnel was also observed during data collection. Most of the livestock farmers had contact number of SDAH personnel and call the veterinarian on mobile or carry them to their home on their personal vehicle for getting the service whenever is needed. No significance difference was found between respondents of two locales with respect to availability of various parameters of treatment services.

Availability of Extension service was measured against health/ infertility camps and distribution of literature by the SDAH personnel to the farmers. Majority of respondents (58.8 percent) reported that SDAH personnel were regular in organising the health/ infertility camps followed by 38.3 percent who denied for getting the services of health/ infertility camps organised by SDAH personnel. Generally, medicines were distributed to each veterinary institution for arranging the infertility camp. More than half of the respondents (53.3 percent) reported that literature was never distributed to farmers by SDAH personnel. However 34.6 percent also reported that sometime SDAH personnel distribute the extension literature to the visiting farmers. Reason for reporting sometime or never distribution of literature may be that during infertility camp priority is set to treat the animals, thus, lack of interest of veterinarian to conduct extension activities and shortage of funds may be reason for such response. Chi square test revealed no significant differences were found between respondents of two locales with respect to conducting extension activities i.e. organising infertility camps and distribution of literature in camp. Neeraj and Kumar (2018) reported inadequate extension related materials distributed to free of cost for conducting extension education programmes in rural areas was the most serious problems in Jammu and Kashmir district. Finding is supported by Ravi Kumar (2005) who reported that veterinary functionaries are expected to perform multifarious activities in which extension is one and there is insufficient supply of extension content to the hospitals, lack of facilities for doing extension camps in villages, inadequate distribution of leaflet to the farmers, inadequate budget allotment for the provision of extension services. Chipeta (2002), Chander and Rathod (2013) reported that animal husbandry extension is one among the most poorly funded components because Department of Animal Husbandry Dairying and Fisheries (DAHDF) commits less than 10 percent of its budget.

Mean Score and Ranking of the Various Breeding Services Available To the Farmers

Table 2 reveals that availability of artificial insemination service and pregnancy diagnosis services secured rank first with mean score of 2.95 in each case followed by availability of treatment service (rank II) and extension service (rank III) with mean score of 2.69 and 1.90 respectively. It shows the priority of the state department is to provide AI and PD services through veterinary hospitals followed by treatment services. Organising camps and distribution of literature was the least service available to livestock owners.

Table 2: Mean score and rank with respect to availability of different breeding services

Services	Locale I (N=120)		Locale II (N=120)		Pooled (N=240)	
	Mean score	Rank	Mean score	Rank	Mean score	Rank
1. Artificial Insemination service	2.95	I	2.96	I	2.95	I
2. Pregnancy diagnosis service	2.95	I	2.96	I	2.95	I
3. Treatment service	2.69	II	2.69	II	2.69	II
4. Extension service	1.87	III	1.92	III	1.90	III

Approachability to Different Breeding Services

Irrespective of locales, cent percent respondents revealed that AI services were easily approachable for their animals (Table 3). An overwhelming majority of respondents (95.4 percent) also revealed for PD, treatment (88.8 percent) and extension services (88.3 percent).

Thus, approachability to various breeding services by a livestock farmer in studied area was not a problem. Thus better approachability to breeding services of the SDAH definitely help the farmers to practice more scientific and profitable livestock farming

Table 3: Approachability of different breeding services delivered by SDAH in selected locales

Services	Locale I (N=120)		Locale II (N=120)		Pooled (N=240)	
	Approachable	Non Approachable	Approachable	Non Approachable	Approachable	Non Approachable
Artificial insemination service	120 (100.0)	-	120 (100.0)	-	240 (100.0)	-
Pregnancy diagnosis service	113(94.2)	7(5.8)	116(96.7)	4(3.3)	229(95.4)	11(4.6)
Treatment services	108 (90.0)	12 (10.0)	105 (87.5)	15 (12.5)	21 (88.8)	27 (11.3)
Extension services	99 (82.5)	21(17.5)	113 (94.2)	7(5.8)	212(88.3)	28 (11.7)

Figure in parenthesis indicate percent

Extent of Use of Different Breeding Services

Table 4 revealed that an overwhelming majority of respondents (94.6 percent) were always using AI service and rest 5.4 percent respondents sometime used this service. Sometime using the AI service here indicates that respondents switched over to natural service due to poor result of AI and their animals were not getting pregnant in spite of repeated AI. Reason for more adoption of AI service may be the more awareness about advantages of AI services of the respondents and larger livestock holding, getting required semen timely at nominal charges.

Table 4: Extent of Use of different breeding services in both the locales revealed by the respondents

Services	Locale I (N=120)			Locale II (N=120)			Pooled (N=240)			Statistical value
	Extent of Use									
	Always	Sometime	Never	Always	Sometime	Never	Always	Sometime	Never	
Artificial Insemination service	112(93.3)	8(6.7)	-	115(95.8)	5(4.2)	-	227(94.6)	13(5.4)	-	χ^2 value: -0.732 ^{NS}
Pregnancy Diagnosis service	56(46.7)	46(38.3)	18(15.0)	61(50.8)	45(37.5)	14(11.7)	117(48.8)	91(37.9)	32(13.3)	χ^2 value: -0.725 ^{NS}
Treatment service	21(17.5)	77(64.2)	22(18.3)	28(23.3)	62 (51.7)	30(25.0)	49(20.4)	139 (58.0)	52(21.6)	χ^2 value: 1.567 ^{NS}
Extension service	19(15.8)	74(61.7)	27(22.5)	24(20.0)	62(51.7)	34(28.3)	43(17.9)	136(56.7)	61(25.4)	χ^2 value: 0.675 ^{NS}

Figure in parenthesis indicate percent

Moreover, service providers were also timely and easily accessible. Chi- square test reveals no statistically significance differences between respondents of two locales with respect to extent of use of artificial insemination services. Earlier study conducted by Rathod, *et al.*, (2017) reported that reason of more adoption of AI service in northern states were nominal or low charges for AI, availability of human resource for performing AI and timely availability of service.

Table further revealed that 48.8 percent respondents reported that they always used the P. D. services, 37.9 percent reported for some time and 13.3 percent never used the service of P. D. being delivered by SDAH personnel. No significant difference was found between respondents of two locales for the extent of use of P. D. service. Extent of use of pregnancy diagnosis was less as compare to artificial insemination service by the respondents. Farmers believe that tempering with animal lead to decrease in fertility and take their animals for P. D. only when they had any doubt regarding pregnancy of animals. Sarita, *et al.* (2017) also reported that majority buffalo farmers in Murrah tract of Haryana had misconception that P. D. is harmful to animals. Regarding use of treatment service for reproductive disorder, 58.0 percent sometime visit and consult for their animals followed by 20.4 percent respondents who had always used this service. Nearly 22 percent respondents had never used this service because their animals never suffered for any reproductive problem as revealed by them.

Mean Score and Rank With Respect To Extent of Use of Different Breeding Services

A cursory look to Table 5 reveals that artificial insemination service secured first rank with mean score of 2.95 followed by use of pregnancy diagnosis service (2.35), treatment service (1.98) and use of extension services (1.93) by the respondents.

Table 5: Mean score and rank with respect to extent of use of different breeding services

Services	Locale I (N=120)		Locale II (N=120)		Pooled (N=240)	
	Mean Score	Rank	Mean Score	Rank	Mean Score	Rank
Artificial Insemination service	2.93	I	2.96	I	2.95	I
Pregnancy Diagnosis service	2.32	II	2.39	II	2.35	II
Treatment service	1.99	IV	1.98	IV	1.98	IV
Extension service	1.93	III	1.92	III	1.93	III

Conclusion

SDAH is doing better in providing artificial insemination, pregnancy diagnosis and treatment services to the farmers but regarding availability of extension services results were not encouraging and extent of use of extension services by farmers was also quiet disappointing. So, there is need to motivate SDAH personnel to conduct need based extension activities regarding breeding of animals and also, there is need to spend more funds by SDAH on extension activities. This would enhance awareness and knowledge of farmers and consequently enhance livestock productivity and income.

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