AWARENESS OF LIVESTOCK OWNERS REGARDING INFERTILITY IN BOVINES

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ABSTRACT

The agro-based Indian economy provides livelihood to most of the 74% of our rural population. More than 60% of the livestock owners have an average holding size of 0.39 hec. are engaged in agriculture are either landless, or marginal & small farmers, for whom the animal agriculture is the main source of sustenance. Nearly 80% of the total agricultural workforce i.e., about 300 million people is involved in livestock rearing & majority of these are below the poverty line and produce nearly 80% of the milk with holdings of 1-3 Cattle's / Buffaloes whereas medium to large herds around large towns/cities & government breeding farms constitute only a small proportion of the total bovine milk production.

This study was conducted in five blocks of Agra district of Uttar Pradesh viz., Etmadpur, Fatehpur sikri, Pinahat, Bah & Jaitpurkalan with 100 respondants for the study. The data collection was carried out on a structured interview schedule from randomly selected livestock owners regarding their awareness regarding infertility for a number of factors viz. Nutrition, Heat detection, Timings of artificial insemination & management practices

Key Words: Livestock, Bovines, Infertility, Nutrition, Heat detection, Artificial Insemination.

INTRODUCTION

Indian economy is agro-based and the agrarian sector provides livelihood to most of the 74% of our rural population. More than 60% of the workers engaged in agriculture are either landless, or marginal & small farmers having an average holding size of 0.39 hec., for whom the animal agriculture is the main source of sustenance. About 80% of the total agricultural workforce of about 300 million people is involved in livestock rearing & majority of these are below the poverty line. The total value of current output of livestock sector is estimated at Rs. 90,000 crores which is about 8% of the India's & GDP.

In India nearly 80% of the milk is produced by weaker sections of the society, i.e., landless labourers, marginal & small farmers with holdings of 1-3 Cattle's / Buffaloes and medium to large herds around large towns/ cities & government breeding farms constitute only a small proportion of the total bovine population. It is therefore necessary to reach these millions of small holders with developed technologies for infertility problems i.e., one of major stumbling block in the growth of rural dairy enterprise.

METHODOLOGY

Keeping the above factors in view, a study was conducted in five blocks of Agra district of Uttar Pradesh. The selected five blocks were Etmadpur, Fatehpur sikri, Pinahat, Bah & Jaitpurkalan. Two villages were selected from each block thus comprising a total of 10 villages. From each village 10 respondents were randomly selected thus comprising a total of 100 respondants for the study. The data collection was carried out on a structured interview schedule. These five blocks were purposively selected since World Bank aided "Diversified Agriculture Support Project" is functioning through state animal husbandry department with the help of non-government organization. The livestock owners were selected randomly from two villages of each block. Each livestock owner was interviewed regarding awareness for infertility in bovines. Awareness regarding infertility was studied for a number of factors viz. Nutrition, Heat detection, Timings of artificial insemination & management practices.

RESULTS & DISCUSSION

Distribution of Livestock Owners According to Age–Initially, five age group levels viz., 20-30 years, 30-40 years, 40-50 years, 50-60 years and above 60 years were taken.

Table 1. Distribution of Livestock owners on the basis of Age

Awareness Regarding Infertility	Age wise group (in years)					Total
	20-30	30-40	40-50	50-60	60 & Above	
Yes	4(80%)	31(64%)	22(81%)	20(91%)	7(78%)	84
No	1(20%)	6(16%)	5(19%)	2(9%)	2(22%)	16
Total	5(100%)	37(100%)	27(100%)	22(100%)	9(100%)	100

The table-1 reveals that nearly 84% of livestock

1.,2.&3. Veterinary officers, Agra & Chattisgarh.

owners have awareness regarding infertility in bovines whereas 16% lack it. Similarly if was found that awareness of livestock owners regarding infertility in bovines was highest in livestock owners of age groups of 50-60 years followed by age groups of 30-40 years followed by 40-50 years which may be due to the fact that livestock owners have increased their awareness level owing to his increased experience while dealing with a number of cases in their lifetime.

Distribution of Livestock Owners According to Education–Initially, seven educational levels viz., illiterate, can sign only, primary school, Vth pass, VIIIth pass, metric & intermediate and graduate and above were formulated. Then the data collected from the livestock owners were distributed into these categories and their awareness regarding infertility in bovines was assessed in Table No.-2

Table 2. Distribution of Livestock According to Education

Awareness Regarding Infertility	Educational Level							Total
	Illi.	Can sign	Pri. level	V^{th} pass	$VIII^{th}$ pass	Matric & intermediate	Graduate above	
Yes	4 (80%)	3 (67%)	21 (84%)	41 (92%)	10 (84%)	4 (80%)	3 (60%)	85
No	1 (20%)	1 (33%)	4 (16%)	4 (8%)	2 (16%)	1 (20%)	2 (40%)	15
Total	5 (100%)	3 (100%)	25 (100%)	45 (100%)	12 (100%)	5 (100%)	5 (100%)	100

The data in table no.-2 reveals that awareness of livestock owners regarding infertility in bovines was highest (92%) average Vth pass livestock owners followed by livestock owners who had passed primary school & VIIIth pass, i.e. 84% respectively, followed by livestock owners who are illiterate, matric & intermediate i.e. 80% respectively. This reveals that livestock owners with less educational qualification are more engaged in agricultural practices and have more information regarding infertility and other aspects of daily routine problems of livestock since being more in contact with animal husbandry.

Awareness of Livestock Owners Regarding Infertility in Bovines–Initially, one hundred livestock owners were selected randomly from two villages of five blocks i.e., Etmadpur, Fatehpur Sikri, Pinahat, Bah & Jaitpurkalan . Each livestock owner was interviewed regarding awareness for infertility in bovines for a number of factors viz. Nutrition, Heat detection, Timings of artificial insemination & management practices.

The data in Table-3 shows that awareness regarding regular feeding of greens & concentrates in proper proportion among a number of livestock owners is maximum (78%) followed by timely examination of reproductive organs (77%), followed by observing animals for symptoms of pregnancy after A.I. (72%), followed by caring of animals at the time of parturition (70%). This shows that livestock owners are interested in regular parturitions since if may not affect their regular production & it indirectly controls missed heats, repeat breeding & other anoestrus problems.

The data also indicates that livestock owners make simultaneous treatment of reproductive insufficiencies (48%) which shows that owing to the economic loss they check missed heats in animals, which automatically checks the problem of infertility and repeat breeding & to maintain production output they prefer timely treatment of any reproductive insufficiencies.

The data further shows that livestock owners have medium level awareness for a number of factors viz., AI performed 90-120 days after parturition (42%), AI performed during mid heat (34%), timely vaccination (34%), timely deworming (34%), ensuring cleanliness of animal sheds, utensils & workers (28%), drying of cows 2 months before parturition (28%), parturition at clean place (28%), Cows & Buffaloes came in heat after a interval of 21 days (27%).

The data further indicates that livestock owners lack awareness for a number of important factors viz., regular feeding of mineral mixture (18%), malnutrition may leads to repeat breeding & chronic anoestrus (12%) & record keeping of estrus, AI, pregnancy etc (02%). Bharkad et al have also reported similar findings. That management and nutritional causes are the most important factors responsible for anoestrus in 23.18%, 37.91%, 20.72% and 38.30% in cow heifers, cows, buffaloes heifers and buffaloes, respectively. While Kutty *et al.* Reported nutritional deficiencies as the most important factor for anoestrus and managemental factors as well influence anoestrus conditions.

Table 3. Awareness of Livestock owners regarding Infertility in Bovines.

Sr. No.	Animal Husbandry Practice	Awareness percent of Livestock owners
1.	**Nutrition**	
	i. Malnutrition leads to chronic anoestrus	12%
	ii. Malnutrition leads to chronic repeat breeding	12%
	iii. Feeding of greens & concentrates in proportion	78%
	iv. Regular feeding of mineral mixture	18%
	v. Hygienic drinking water	27%
2.	**Heat detection**	
	i. Timely examination of reproductive organs.	77%
	ii. Observation of signs of heat of animals	53%
	iii. Simultaneous treatment of reproductive insufficiency	48%
3.	**Timings of artificial insemination**	
	i. AI performed 90-120 days after parturition.	42%
	ii. AI performed during mid heat.	34%
	iii. Cow/Buffaloes come in heat after a regular interval of 21 days.	27%
4.	**Management Practices**	
	i. Pregnancy diagnosis on 60-90 days after AI.	65%
	ii. Observing animals for symptoms of pregnancy after AI.	72%
	iii. Taking care of animals of the time of parturition.	70%
	iv. Parturition at clean place.	28%
	v. Drying cows 2 months before parturition.	28%
	vi. Timely vaccination.	34%
	vii. Timely deworming.	34%
	viii. Ensure cleanliness of animal sheds/utensils & workers.	28%
	ix. Record keeping of estrus, AI, pregnancy etc.	02%

CONCLUSION

Since reproduction has a great influence on the economy of dairy farming. Hence, keeping the above study in consideration it is suggested that successful conception must be taken as a routine affair the check the problems of infertility & thereafter repeat breeding i.e., the major stumbling block in the growth of dairy enterprise. Secondly the farmers must be trained for the causes of infertility as well as for the precautionary measures to be under taken to check infertility problems in their animals.

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