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Nallapati Sai Anjana
Assistant Professor (JC), Department of Veterinary & Animal Husbandry Extension Education, Hassan Veterinary College, Tirupati, Andhra Pradesh, India

B Subrahmanyeswari
Professor and Head, Department of Veterinary & A.H Extension Education, NTR CVSc, Gannavaram, Sri Venkateswara Veterinary University, Tirupati, Andhra Pradesh, India

Jagadeeswary V
Associate Professor and Head, Department of Veterinary & A.H Extension Education, Sri Venkateswara Veterinary University, Tirupati, Andhra Pradesh, India

Triveni G
Associate Professor, Department of Veterinary & A.H Extension Education, Sri Venkateswara Veterinary University, Tirupati, Andhra Pradesh, India

Lavanya M
Assistant Professor (JC), Department of Livestock Production and Management, Hassan Veterinary college, Tirupati, Andhra Pradesh, India

R Vinoo
Professor and Head, Department of Animal Genetics and Breeding, NTR CVSc, Gannavaram, Sri Venkateswara Veterinary University, Tirupati, Andhra Pradesh, India

Corresponding Author:
Nallapati Sai Anjana
Assistant Professor (JC), Department of Veterinary & Animal Husbandry Extension Education, Hassan Veterinary College, Tirupati, Andhra Pradesh, India

Socio-Economic profile and knowledge assessment among the veterinarians on sex sorted semen technology

Nallapati Sai Anjana, B Subrahmanyeswari, Jagadeeswary V, Triveni G, Lavanya M and R Vinoo

Abstract
A study was carried out among the Veterinarians of Andhra Pradesh with the specific objective to study the socio-economic profile and knowledge level with regard to sex sorted semen technology. An ex-post-facto exploratory research study was employed for the study. It was found that majority of the veterinarians (70%) in the study area had medium level of knowledge towards sex sorted semen technology. This might be due to variations in socio-economic characteristics of the respondents across the study area. The study concludes that the knowledge level of veterinarians depends on their socio-economic characteristics and also plays a significant role in effective diffusion and adoption of the new innovative technology i.e., sex sorted semen technology among the farming community.

Keywords: Andhra Pradesh, dairy farmers, sex sorted semen technology, socio-economic characteristics, veterinarians

Introduction
India ranks first among the world's milk producing nations since 1998 and with total livestock population holding 535.78 million as per 20th livestock census, 2019. This sustained growth is mainly because of various advanced reproductive technology programmes undertaken by Government of India and dairy development organizations from past few decades and is made available to farmers to increase milk production and profitability of dairy farming. The trends showing increase in productivity of dairy animals is mainly attributed to advancements and adoption of modern dairy technologies in which sex sorted semen is the one that is widely disseminating new innovative technology taken for the study. Johnson and Ruttan (1997) [4] also found these advanced reproductive technologies as the most significant factor contributing to farm productivity in the livestock sector. Sex sorted semen technology is the process of inseminating with desired calf sex semen.
Adoption of these technologies usually be influenced by socio- economic characteristics and knowledge level of Dairy farmers. In a similar way, Veterinarians do possess responsibility in acquainting the knowledge regarding these production enhancing reproductive technologies like sex sorted semen technology and hence their knowledge levels been assessed in addition to socio-economic characteristics.

Materials and Methods
Stratified random sampling method was followed for the selection of the respondents. All the three administrative zones of Andhra Pradesh (Andhra Pradesh Wikipedia) were selected for the study and from the three zones together, a total of 120 veterinarians (Fig.1) in areas where the sexed semen distribution took place with confidence level (90%) and Margin of error (10%). The efforts were made to select an equal number of respondents from the three Zones of Andhra Pradesh. The data was collected through interview as well as mailed questionnaire responses from veterinarians. Appropriate statistical procedures like frequency, percentage, mean and standard deviation were employed to analyze and interpret the data.
To study the socio-economic characteristics of the Veterinarians; schedule on Age, Gender,

Educational qualification, Experience at various levels, Trainings received was prepared and grouped into different categories based on class intervals, mean and standard deviation mentioned in table 1.

The knowledge level of veterinarians was also assessed by a schedule consisting of 15 individual items. Thus, an individual could get a maximum score of 15 and minimum score of 0 based on knowledge about sex sorted semen technology. The respondents were grouped into three categories mentioned in table 2 based on mean and standard deviation.

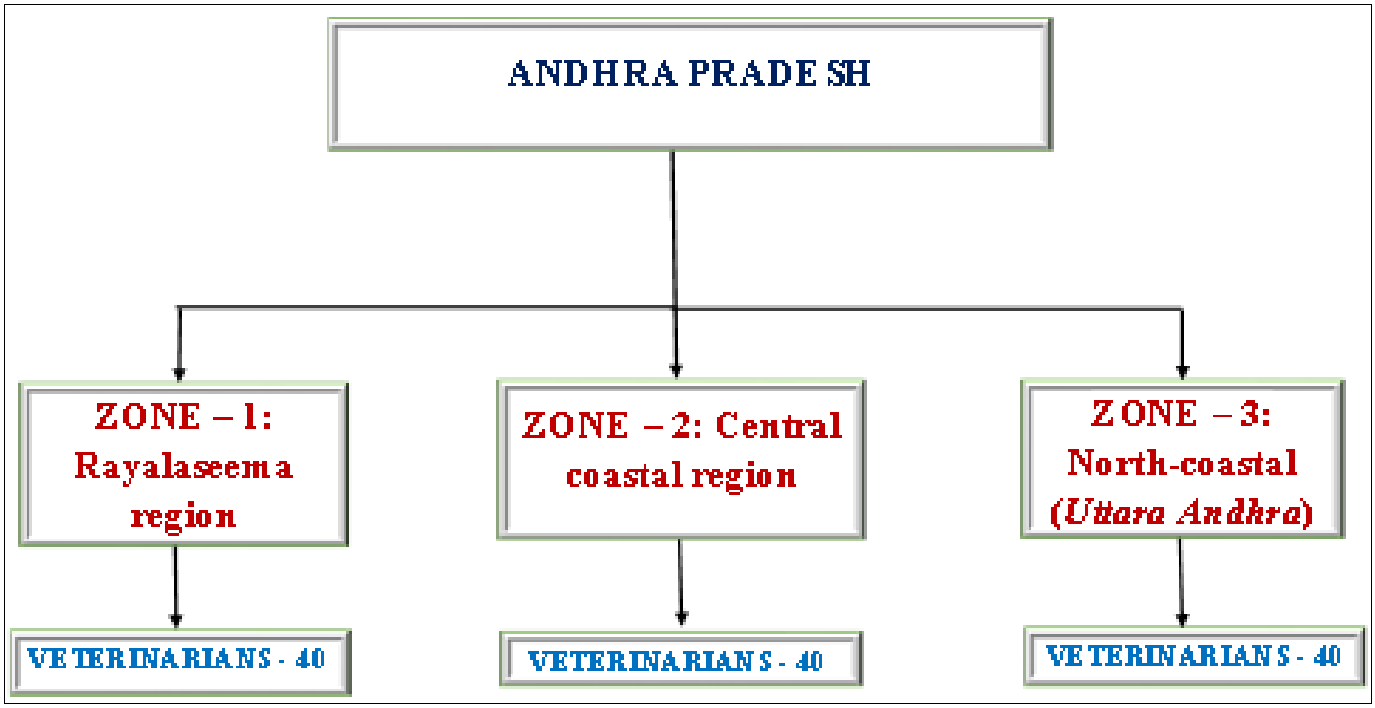

Fig 1: Selection of veterinarians for the study

Results

Socio- economic profile and knowledge assessment of Veterinarians

Table 1 depicts that majority of the veterinarians in the study area belonged to old age group (Harisha *et al.* 2015) [3] and were male (Deepa Narayana 2015) [2]. Most of the veterinarians were with graduation and working as veterinary assistant surgeons at veterinary dispensaries (Naidu 2017) [5]. The study also indicated that, majority of the respondents had medium level of work experience and knowledge (Naidu 2017, Sabapara *et al.* 2016, Seth P *et al.* 2017 and Venkata Deekshit 2015) [5, 6, 7, 8] as depicted in table 2. The study also revealed that majority of the veterinarians did not receive trainings on sex sorted semen technology.

Table 1: Socio- economic profile of veterinarians (N=120)

Variables	Categories	Frequency (%)	Mean ± S. D
Age	Young age (25-35)	42 (35.00%)	15.78 ± 9.45
	Middle age (36-46)	29 (24.17%)	
	Old age (47-57)	49 (40.83%)	
Gender	Male	90 (75.00%)	
	Female	30 (25.00%)	
Educational qualification	B.V. Sc & A.H	69 (57.50%)	
	M.V. Sc	49 (40.83%)	
	Ph. D	02 (01.67%)	
Experience	Low (<7 Years)	33 (20.00%)	
	Medium (7-25)	52 (43.33%)	
	High (>25 Years)	35 (29.17%)	
Trainings received	Trainings not received	80 (66.67%)	
	Trainings received	40 (33.33%)	

Table 2: Distribution of veterinarians according to their level of knowledge

S. No	Category	Veterinarians (N=120) Frequency (%)	
Knowledge (Score range)	Low level (<11.62)	15 (12.50%)	12.98±1.36
	Medium level (11.62-14.34)	84 (70.00%)	
	High level (>14.34)	21 (17.50%)	

Table 3: Knowledge profile

Statements	Veterinarians (N=120)		(%)
1. From sex sorted semen technology, successful results can be obtained in both heifers and the lactating animals.	Yes	84	70.00
	No	36	30.00
2. Use of sex sorted semen reduces the incidence of dystocia and still birth.	Yes	25	20.83
	No	95	79.17
3. Sex sorted semen more suitable in case of any animal irrespective of their origin (Exotic/Indigenous/Cross breeds).	Yes	67	55.83
	No	53	44.17
4. The organization that produced sex sorted semen for the first time in India is BAIF.	Yes	38	31.67
	No	82	68.33
5. Sex sorted semen technology produces low concentration of sperms in semen.	Yes	70	58.33
	No	50	41.67
6. Low concentration of sperm dosage in sex sorted semen hinders fertility rate	Yes	56	46.67
	No	64	53.33
7. Sex sorted semen technology has a huge impact on large scale dairy farms.	Yes	100	83.33
	No	20	16.67
8. The sex sorted semen technology has an accuracy of 90 percent in producing female calf.	Yes	100	83.33
	No	20	16.67
9. Sex sorted semen technology can be efficiently used for progeny testing.	Yes	90	75.00
	No	30	25.00
10. Sex sorted semen is more beneficial in case of closed herd where we have to keep diseases away.	Yes	78	65.00
	No	42	35.00
11. Sex sorted semen technology requires excellent and careful dairy animal management for obtaining higher farm efficiency.	Yes	100	83.33
	No	20	16.67
12. Conception rate with conventional semen is more than sex sorted semen.	Yes	75	62.50
	No	45	37.50
13. Awareness of the sex sorted semen technology among the policy makers and farmers is scanty.	Yes	114	95.00
	No	06	05.00
14. When using sex sorted semen on animals, management strategies like healthy cycling females with good body condition score, extreme care taken during thawing and handling, inseminating within heat period of animal gives excellent results.	Yes	110	91.67
	No	10	08.33
15. The most accurate method of sperm sorting technology used for sex sorted semen Flow cytometry/cell sorting.	Yes	70	58.33
	No	50	41.67

Discussion

1. Field veterinarians in the study area were willing to learn about advanced reproductive technologies like sex sorted semen technology as most of them are having medium level of work experience and are middle aged with under graduation level of education (BVSc).
2. It is appreciable that women veterinarians could represent one fourth of the respondents and still need to be made aware and acknowledged.
3. It is appreciable that veterinarians possessed medium to high levels of knowledge. This is an indication of interest and focus of veterinarians in updating their knowledge by making use of available information sources.
4. Further, SDAH has to put more efforts in training all the veterinarians to serve the farming community in time to enhance livestock production.

Conclusion

Periodical trainings and workshop sessions can be organized at various levels in order to update the knowledge of Veterinarians regarding the advanced technologies so that they can enlighten the Dairy farmers about its advantages as the study reveals medium level of knowledge is on more percentage in the study area among the Veterinarians.

- Awareness needs to be still made available to dairy farmers by the veterinarians on sex sorted semen technology by focussing on advantages.

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Conflict of Interest

I did not face any issue during my research work in all aspects. As the research topic is very new and interesting no chance of conflict been given chance.

References

1. Andhra Pradesh Wikipedia (https://en.wikipedia.org/wiki/Andhra_Pradesh).
2. Deepa Narayana M, Sivvala R, Jamuna Rani B. Role and constraints of women in dairying growth towards women empowerment. International Journal of Scientific Research. 2015;4(1):452-454.
3. Harisha M, Satyanarayan K, Jagadeeswary V, Latisha Achoth, Rajeswari YB, Nagaraj CS. Socioeconomic and Psychological Profile of Dairy Farmers of Kolar and Chikkaballapur District of Karnataka. Frontier J. Vet. Anim. Sci. 2015;4(2):152-156.
4. Johnson NL, Ruttan VW. The Diffusion of Livestock Breeding Technology in the US: Observations on the Relationship between Technical Change and Industry Structure. Journal of Agribusiness. 1997;15(1):19-35.
5. Naidu Baadireddy S. Status of Organic Dairy Farming-An Exploratory Study in Andhra Pradesh (Doctoral Dissertation, Sri Venkateswara Veterinary University Tirupati-517 502. (AP) India); c2017.
6. Sabapara GP, Fulsoundar AB, Kharadi VB. Profile of dairy farmers and relationship with adoption of improved

dairy husbandry practices in southern Gujarat, India. Livestock Research International. 2016;4(1):36-40.
7. Seth P, Chander M, Kumari S, Das B. Caste and Societal Movement towards Adoption of Cross Breeding Technology in Piggery: A case of 'T&D 'Pig Breed in Eastern India; c2017.
8. Venkata V. A study on perception of livestock farmers on service delivery systems in Andhra Pradesh (doctoral dissertation, Sri Venkateswara veterinary university, Tirupati–517 502, AP); c2015.