

Success Story under RKVY Project Use of Sexed Sorted Semen in Cows in U.P.



Submitted by

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1. **Title: Use of Sexed Sorted Semen in Cows.**
2. **Category: Animal Husbandry (additional income through producing 90% female progenies).**
3. **Challenges:**

Challenge/problem/issue or opportunity: About 70% human populations in rural areas of Uttar Pradesh are engaged in agriculture and animal husbandry activities. The maximum populations of indigenous cows in state are genetically inferior and their productivity is lower than the states like Punjab and Haryana. These animals are not maintained scientifically by rural farmers. Presently, the male calves are not using in ploughing due to mechanization. The low productive cows with male calves are grazing the farmers' cultivated crops and losses the production. The use of sexed sorted semen in cows through artificial insemination (A.I.) is an alternative for reduce the number of males and increasing number of genetically superior females. The use of sexed sorted semen practices in livestock is economically beneficial for farmers'. These emphasizes the need to develop new strategy for sustain the livestock production system.

Gap existing that required that specific intervention?

The number of inferior cows in state is higher. The genetic improvement in these cows through conventional semen is required more time and generation. However, the use of sexed sorted semen in A.I. is suitable to produce more superior progenies in least period but the cost of sexed sorted semen is much higher than the conventional semen.

What is at stake for a person, community or other group of people?

This project was implemented by Uttar Pradesh Livestock Development Board (UPLDB), Lucknow as pilot basis in Lakhimpur Kheeri, Barabanki and Etawah districts of Uttar Pradesh. The use of sexed sorted semen of exotic cattle breeds like Holstein Friesian and Jersey in this programme. The animals of all communities of concerned districts were included in this programme, which was fulfilling the standard of operational guidelines of the project.

4. **Initiative:**

The sexed sorted semen is a valuable germplasm for faster growth of herds. This germplasm was first time introduced in state through U.P.L.D.B. as pilot project under funding of R.K.V.Y. The sperm concentration as well as motility of sexed sorted semen is lower than the conventional semen. Keeping it in view the following facilities were generated under this scheme in concerned districts (Barabanki, Lakhimpur Kheeri & Etawah) for achievement of maximum conception rate.

- (a) Provided 35 liter capacity cryo-containers for semen storage and 3 liter capacity cryo-containers for mobility at farmers' doors to coverage maximum A.I.
- (b) Regular supply of Liquid Nitrogen to maintain the viability of valuable sexed sorted semen upto Veterinary Hospitals/A.I. Centres.
- (c) One day refresher training for Veterinary Officers and A.I workers were conducted in respective three districts with purpose of semen handling, semen storage, proper thawing and use of semen in artificial insemination.
- (d) Coverage every Veterinary Hospitals/A.I. Centres with new A.I. kit including all things, which is required in A.I. activity.

(e) Ear tagging was mandatory in each cow for proper recording and monitoring under this scheme.

The use of sexed sorted semen in cows of selected districts has been possible through fully involvement of staffs of U.P. Animal Husbandry Department. The A.I. charges were free for encourage the farmers cooperation in this programme. The extension activities for awareness in farmers' were made through distribution of booklets. The animals considered in this scheme were mostly cross-breds. Most of the cross-bred cows' body size was large, female genital organs was free from infection and milk production was also higher. The sexed sorted semen of H.F and Jersey breeds were supplied by BAIF, Pune through MOU. The financial assistance was made by R.K.V.Y. during year 2015-16 and 2016-17 for sustain the project.

5. Key result/insight/interesting fact:

Results in use of sexed sorted semen scheme have been indicated that more than 90% superior female progenies were born till date and A.I, P.D & Calving is continue under this scheme. The overall conception rate including three districts was 30 percent. The growth performance of sexed sorted semen born progenies is better than the conventional semen born progenies. The cost of superior female progenies will be higher during their lactation stages. These progenies will attain lactation stage after completion of 2 years age. During that time farmers will be benefitted by higher milk production. The infrastructure assets of A.I. at Veterinary Hospitals/A.I Centres of U.P. Animal Husbandry Department were developed under this project. These assets will be useful in future for A.I activity in the concern districts. Use of sexed sorted semen is an alternative for farmers' to gradual reduce number of male progenies in long term.

6. Impact:

The potential impact of this project has been presented additional income of farmers through producing more females. The use of sexed sorted semen in A.I will be beneficial for faster increment in herd size. Result of pilot project is the base for extensive use of sexed sorted semen in U.P. state due to higher demand of farmers.

S.No.	Activity	Impact
1	Refresher Training	Update the knowledge of Veterinary Officers/ A.I. workers
2	Infrastructure assets development	Increase the efficiency of A.I. workers Improve delivery system at farmers' door
3	Use of sexed sorted semen	Produce more than 90% superior female progenies Awareness of farmers for acceptance of sexed sorted semen use in A.I programme Encouragement in farmers' for livestock improvement Generate additional income of farmers through milk or progenies sale An alternative to reduce male progenies.

7. Lessons Learned:

Results of this project are most encouraging to continue the programme extensively in the state. However, at this time we can say that is scientifically manage to female progenies by farmers' for achieve their maximum production during lactation stage. The actual economic viable result will be obtained during calving of such progenies. Moreover, it should be emphasized the potential success on basis of number of female progenies born, which is demand of farmers' at present scenario in livestock production system. The sexed sorted semen of indigenious breeds will be used extensively in whole state as phase wise from year 2018-19.

8. Supporting Quotes and Images:

The introduction of new technology as sexed sorted semen use in A.I. programme has been represented by images of female progenies born in three districts. This is a innovative work in animal husbandry sector and source of additional income of livestock keepers.

9. Additional information:

Additional relevant information, such as:

1. List of project supported the work-
 - Chief Veterinary Officers and Veterinary Officers supported for implementation of scheme
 - Financial assistance by R.K.V.Y.
 - Sexed sorted semen supply from BAIF, Pune through MOU.
2. Supporting materials- Photographs of female progenies.
3. Contact person for this story (name, position, email address)
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10. Checklist

S.No	Question to consider	Yes	No
1.	Is the story interesting to the target audience of the project/activity report?	Yes	
2.	Does the story explain what new insights the project brings? What is the main lesson learned from this story? Does the story describe a key insight on what works and what doesn't and something that future project could build on	Yes	
3	Does the story describe the outcomes the project produced and the people who are benefitting? What changes-in skills, knowledge, attitude, practice, or policy-has the project brought, and who is	Yes	

	benefitting from these changes?		
4	Does the story make a compelling point that people will remember? Does the story show how the project makes a difference to improving livelihoods and lessening poverty?	Yes	
5	Does the story provide an interesting fact that people will remember? For example, how much yields increased, how many hectares of land could become more productive from this innovation or technology?	Yes	
6	Does the story explain what kind of impact this innovation or technology could have if scaled up?	Yes	
7	Does the story show which partners contributed and how?	Yes	
8	Does the story include quotes from stakeholders or beneficiaries?		No
9	Have I provided links to other media (journal articles, website news, newsletter, blogs, annual reports of other Programme/ project) that also feature this story?		No
10	Have I provided the contact details of people who can provide more information?		No