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Profitable animal husbandry by Thud guidance of KVK Tapi in tribal dominated village

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ABSTRACT : Mineral mixture feeding along with urea treated paddy straw can decipher nutrition related tribulations and could be very beneficial to cattle for enhanced production and facsimile ability. Hence, the technology of feeding animal with mineral mixture along with urea treated fodder needs to be demonstrated to the rural farmers of Tapi district. The farming situation of low milk production in H.F Cow was identified by Participatory Rural Appraisal method (PRA), in tribal dominated Tapi district of Gujarat state. Three treatments were tested in two blocks including 45 H.F. Cows within three years, *i.e.* 2009- 2011. Among all the three treatments, Treatment-3 (T_3) was found beneficial in terms of milk production (kg/day), Milk production per unit, Net return (Profit) in Rs./HF Cow and also got higher benefit cost ration (BCR). The feeding method of urea treated paddy straw along with mineral mixture has to be implemented in a large scale for better growth and production of livestock. The successful insinuation of these machinery in Tribal dominated village is only due to exhaustive efforts made by KVK Tapi for effective TOT through Trainings, FLDs, OFTs and other extension activities to change the mindset of the orthodox tribal community through good rapport building and constant follow up of the given expertise.

KEY WORDS : Animal husbandry, Mineral mixture feeding

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INTRODUCTION

Animal husbandry had always played a leading role in sustainable lively hood among rural farmers. Many efforts are made by central and state government organization toward profitable and triumph bursting animal husbandry of villagers. KVK, Vyara had played a guiding force and role model act for the scientific, profitable, successful as well as effective animal husbandry in villages of Tapi district. In general, the milk yield of crossbred cow (H.F.) is found to be higher as compared to non descripting cattle. Here is the narrative detail about success story of Vanskui village in the animal husbandry field. A success story of village Vanskui regarding success full intervention of KVK scientists for resultant dairying. Animal owners of Tapi district are maintaining their buffaloes mainly on paddy straw and other locally available grasses which generally have low nutritional elements and also lack of knowledge regarding breeding, feeding and management practices.

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Genesis of the problem:

The traditional farmers are keeping the Surati buffaloes for milk yield. Surati buffalos have average milk yield of 4.184 liter per day. The farmers are maintaining their livestock mostly on dry paddy fodder and few green fodders which is available at fleeting time during monsoon. In dry months of the year (summer), cattle and buffalo animal keeping for milk yield is becoming a problematic issue due to more care, high cost and comparatively less compensation. The KVK scientists of KVK Tapi had adopted a village Vanskui for dairying development and diagnosed the root cause of the said problem. The KVK Tapi has created an intensive effort for successful dairying in this village by sound breeding, feeding and management practices edification to the tribal farmers.

Intensive efforts made by KVK, Tapi:

Krishi Vigyan Kendra, Navsari Agricultural University instituted at Vyara , Di-Tapi in the state of Gujarat is playing a

major role in rural farmer upliftment in case of Para agriculture /allied sectors like animal husbandry with the expert guide of subject mater specialist of respective field. The main aim is to get higher profit from livestock through dairying. The village Vanskui belongs to Vyara Taluka, Di-Tapi is one of the adopted villages of the Krishi Vigyan Kendra for overall development of the tribal farming community. Dairy sector is one of the major means of employment in this village. Numerous extension activities like off campus trainings at the doorstep of farmers house, on Campus trainings at KVK , diagnostic visits related with animal health problems, Scientists visit to the livestock owners house, frequent telephonic guidance about scientific animal husbandry were made by the KVK. Beyond these so many feet fall of farmers to KVK for solution of animal husbandry problems were occurred. Due to all these efforts, huge progress in terms of awareness about scientific and profitable animal husbandry was achieved.

MATERIALS AND METHODS

The glimpses regarding efforts by KVK made for the

Table A: Trainings conducted for animal husbandry

Sr. No.	Type of the training	Topic of the training	Thematic area	No. of beneficiaries	Type of the participants
1.	Off campus	Importance of AI to improve pedigree	Animal breeding management	54	Practicing farmers
2.	Off campus	Pre-monsoon care in dairy animals	Dairy management	34	Practicing farmers
3.	On campus	Animal important infectious diseases and their prevention and control	Disease management	26	Rural youth
4.	Off campus	Housing of animals	Dairy management	27	Rural youth
5.	On campus	Vaccination and its importance	Animal health management	33	Practicing farmers
6.	On campus	Pre-monsoon care in dairy animals	Disease management	34	Practicing farmers
7.	On campus	Important infectious diseases and their prevention and control	Disease management	26	Rural youth
		Total	7	234	

Table B: Scientist visit to farmers including diagnostic visits

Sr. No.	Purpose of the visit	No. of beneficiaries
	Guidance about metabolic diseases in animal	15
1.	Guidance about anoestrus in cattle	15
2.	Guidance about measures for blood in milk of buffalo	12
3.	Guidance about lameness in H.F. cow	22
4.	Guidance about dermatitis in buffalo	31
5.	Guidance about anorexia and pain over mouth	62
6.	Guidance about tick infestation	44
7.	Guidance about mastitis	
	Total	201

Table C: Telephonic information to farmers

Information about different problems and remedies regarding animal science related problems to the villagers	Total 68 telephonic messages to the villagers were from KVK scientists

Table D: Front line demonstration and on farm testing

Sr. No.	Thematic area	Title	Objective	Impact/ follow-up
On farm testing (5 in numbers)	Management of milch animal (milk production)	Low milk production of cow	To refine the feeding practices and to test the effect of urea treated fodder and mineral mixture feeding	Farmers had started to adopt the technologies with refinement
Front line demonstration (15 in numbers)	Nutrition management	Urea treatment to paddy straw Mineral mixture feeding	To demonstrate the practice of mineral mixture feeding and urea treatment to paddy straw	Livestock owners were encouraged through demonstration to perform the technologies at their own houses

Vanskui Village in relation to animal husbandry were given in nut shell.

Apart from these, many extension activities like Krishi Mahotsav, FLDs and OFTs follow-up, night meetings, exposures, exhibitions seminars, shibirs, monitoring and evaluation were also conducted.

RESULTS AND DISCUSSION

Previously, farmers were keeping nondescript cattle and buffalos for milk production purpose. They were encouraged to keep the animal having good genetic potentialities and economically sustainable animals like cross bred cows with proven records. The benefits of keeping Cross bred HF cows in terms of higher milk yield were made understood. The farmers purchased HF cows with the financial aid from Sumul Dairy. It was resulted in better milk yield from the animals. Because, they have started getting 7.350 liter milk yield /animal as compared to 2.200 litre milk yield /animal from the nondescript animals (234% increased). Benefit of the cross breeding genetic vigour of Holstein Friesian (HF) cow could be available to farmers (Table 1, 2 and 3).

HF cross bred cow is comparatively less resistant to the external parasites (ticks and flies). The farmers of the aforesaid village were advised the protective and curative measures against external parasitic infestation. The animal owners were skilled about the hygienic practices like daily cleaning of byre and grooming of the animal. The aforesaid efforts had resulted in lower tick infestation to the HF cow. Again this lowered tick infestation has resulted in protection against hemoprotozool diseases which are transmitted by ticks.

The use and benefit of deworming were taught to the farmers by KVK experts. This has resulted in low calf mortality and reduction in the age of puberty.

Horizontal and vertical spread:

The feeding technologies of mineral mixture (50/g/day/ animal) were practiced to the farmers. The animal owners have adopted the new technology of urea treated fodder. Knowledge and adaptation of frontline demonstration of feeding technology have resulted in horizontal spread from one farmer to another. The whole villagers had adopted the same. The demand from neighboring villages to adopt their villages by KVK is emerged out. It is the biggest achievements made by effective TOT through KVK scientists.Again the farmers have also shown keen interest to follow-up the technology for their younger generation. Many livestock owners having such skilled to perform urea treatment that they have also taught to other farmers, too.

Conclusion:

This success story can inject an inspiration to the other livestock owners. The study has acknowledged the knowledge level of the livestock farmers towards sound breeding, feeding and management practices edification to the tribal farmers. Among all the three treatment, Treatment 3 (T_3) was found beneficial in terms of Milk production (kg/day), Milk production per unit, Net return (Profit) in Rs./HF Cow, benefit cost ration (BCR). The same was also reported by Bhoyar *et al.* (2010). The feeding method of urea treated paddy straw along with mineral mixture has to be implemented in a large scale for better

Table 1: Methodology of the on farm trial

	Treatments	No. of animals	Duration	Procedure
T_1	Only paddy straw feeding without urea treatment	5	40 days	6-8 kg/day paddy straw feeding
T_2	Urea treatment to fodders	5	40 days	6-8 kg /day urea treated paddy straw feeding
T_3	Urea treatment to fodders + Mineral mixture	5	40 days	6-8 kg /day urea treated paddy straw feeding + 35 g mineral mixture/ day feeding

Table 2: Results of the on farm trial

Parameters	Treatments	Data on the parameter	Results of assess-ment	Feedback from the farmer
		Average milk production (kg/day)		
Milk production	T_1	5.9	Paddy straw with urea treatment	Increased milk production after
	T_2	6.7	+ Mineral mixture (35 of mineral	urea treated paddy straw and
	T_3	7.2	mixture feeding daily)	mineral mixture feeding

Table 3: Economics of on farm trial

Technology assessed	Average production per unit (l)	Average net return (Profit) in Rs./HF cow	IBC ratio
T_1 - Farmers practice (Paddy straw without urea treatment)	5.9	15	1:1.16
T_2 - Paddy straw with urea treatment	6.7	29.2	1:1.30
T_3- Paddy straw with urea treatment + Mineral mixture (35 g daily)	7.2	32.6	1:1.34

growth and production of livestock.

Implications:

Mineral mixture feeding along with urea treated paddy straw can solve nutrition related problems and could be very beneficial to cattle for enhanced production and reproduction ability. Hence, the technology of feeding animal with mineral mixture along with urea treated fodder needs to be demonstrated to the rural farmers of Tapi district. Effective development requires identification of local needs and opportunities. Gopal *et al.* (2010) reported the same results. Looking to the success of the same, different organizations of the region applied different methods, ranging from top down to more participatory ones, and depending on felt needs arising from system changes in time and space. The feeding method of urea treated paddy straw along with mineral mixture has to be implemented in a large scale for better growth and production of livestock.

This success story can inject an inspiration to the other livestock owners. The study has acknowledged the knowledge level of the livestock farmers towards sound breeding, feeding and management practices edification to the tribal farmers. This story can be guideline for other extension worker to implement this way of extension technology for their clients on LMP. On this foundation the extension personnel may locate clients for training and also those who can be used as counselors to other farmers. The study is also useful for effective propagation of the dairying in other regions for eco friendly and sustainable agricultural development.

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