Success Story
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Intervention of KVK in Animal Husbandry Results Increased Farm Income and Livelihood of North and Middle Andaman Farmers

Knowledge level and the production cost associated with the technology plays a vital role in adoption of technology by the farmers. This is more evident with small and marginal farmers with small land holdings and poor resources in the region of North and Middle Andaman. These farmers are always not ready to invest more in enterprises fearing the risk associated. Hence, farmer's friendly technology with low investment and environment friendly technology find place for implementation and are successful in this region. Climate of North and Middle Andaman district is tropical humid with annual rainfall upto 3300mm. Due to incessant rain and unpredictable weather, farmers grow paddy in kharif and vegetable and pulses in rabi season in low land and plantation crops in hilly land. Most of the farmers rear livestock for consumption in home and additional income to family, and also as insurance in situation of crop loss. Lack of knowledge, unavailability of improved breed, high cost of livestock feed and non-availability, improper health management, and unpredictable weather conditions are some of the factors responsible for slow pace of growth in animal

husbandry in the region. Keeping in view the challenges faced by farming community suitable low cost intervention by the Krishi Vigyan Kendra like backyard rural poultry farming, day old chicks production using mini-hatching units, improved pig farming practices, supplementation of chelated mineral mixture in dairy ration, and deworming in goat were adopted by the farmers and significantly increased income of farmers.

INTRODUCTION

In North and Middle Andaman islands agriculture and allied sector is the main source of livelihood for most of the farmers. The island is subject to both the south west and north east monsoon. As a result, the region receives higher rain fall of upto 3300 mm for 7-8 months, which is usually followed by dry spell of 4-5 months annually. Unpredictable weather condition and poor marketing facilities in this region makes agriculture prone to losses. Hence, livestock is one of the important options for the farmers to overcome crop loss, which serve to insulate the farmers by providing additional family income. Large numbers of farmers in the region are engaged in backyard poultry farming of local desi chickens and ducks. Numbers of landless farmers are also rearing goat and pigs. In the recent years, this region has also witnessed increase in the dairy farming activities with the starting of new milk marketing channels by A&N administration through procurement of milk at village level under the Rastriya Krishi Vikas Yojna (RKVY) funded project.

In this region, the farmer's faces difficulty in obtaining improved breed and quality day old chickens for backyard farming. Further, in pig farming, the problems like high cost of pig feed, housing and high mortality of piglets are the major causes of low productivity. Most of the farmers are unaware about the need for balancing dairy cattle ration for higher productivity. In order to address these location specific issues, suitable technical interventions were made by KVK at farmer's field in seven selected villages namely Govindpur, Basantipur, Profullyanagar, Dharampur, Kamlapur, Jaipur, T. V. Kulum under Mayabunder Tehsil of North and Middle Andaman district. The successful interventions are presented below:

BACKYARD FARMING OF VANARAJA

The majority of poultry farmers in the region own desi birds, which survive on scavenging with no or very less supplemental feeding with the paddy or broken rice. These birds are utilised by the farmers for consumption in home and surplus if any, were sold in local market. In this region, chicken biryani is prepared particularly from desi chicken, is an important food item served in almost all the celebrations. As a result the demand of desi chickens is high in festive seasons. But, the productivity of these desi birds is low and thus the supply usually fall short during the festivals. Hence, the KVK introduced Vanaraja birds to improve rural poultry production.

Table 1. Impact of KVK intervention

Name of intervention/ Demonstration	Purpose	Benefit Cost ratio	No. of farmers benefitted
Backyard farming of Vanraja birds	Demonstrate recommended package and practices on Vanraja	2.88 compared to local check 1.87	34
Mini hatching units	Production of day old duckling / chick	1.63/1.76 compared to local check 1.16	25
Improved pig farming practices	Clean pork production	2.90 compared to local check 2.19	14
Supplementation of chelated mineral mixture	Augment milk production	2.16 compared to local check 1.83	15
Deworming in goats	Improvement of local goat	1.83 compared to local check 1.49	35

Under the programme, two hundred twenty five day old vanaraja chicks were procured from Department of Animal Husbandry and Veterinary Services, North and Middle Andaman, and supplied to farmers in four different villages. Through training and field visits demonstrated method for low cost brooding, nursery management of day old vanraja chickens, low cost feeding, housing, and vaccination. In this programme, the KVK supplied 27 number of Vanraja day old chickens to Shri. Manobendra Halder, and Shri. Ashok Sarkar, and provided all the technical guidance. During the period of demonstration, Vanaraja chickens gained an average weight in the range 1.33 kg in 16th week with an overall mortality of 12.6 %

1(a) Low cost brooding of Vanaraja chickens by Shri. Manobenra Halder

1(b) Make shift house constructed by Shri. Ashok Sarkar

Figure 1. Activities showing Backyard farming of Vanaraja birds at Farmers Field

compared to traditional practice in which the average weight gain and mortality rate of chickens were in the range of 0.9 kg and 44.4 %, respectively. Krishi Vigyan Kendra also organised a field day to demonstrate the backyard farming of vanaraja birds, which also helped in dissemination of the technology. As a result more and more farmers have adopted backyard farming of vanaraja birds which increased production, productivity and family income.

MINI HATCHING UNITS

The farmers in the region practice natural incubation of fertile chicken/ duck eggs through brooding desi hens for propagation. Further, brooding hens are not available all the time, thus the farmer were unable to produce the day old chicken/duckling throughout the year and is a major production constraint. In this programme, mini-egg hatching unit was installed at Krishi Vigyan Kendra, North and Middle Andaman with the assistance of NABARD funded project for demonstration purpose. A community based approach was used for the operation of this incubator under the supervision of Krishi Vigyan Kendra and day old chicks so produced were supplied to the participating farmers. In this demonstration, the fertile duck eggs were incubated for setting at temperature of 99.5 °F and relative humidity of 58-62 percent and kept on automatic turning mode for the period of twenty five days. After that the eggs were transferred to hatching trays and kept at temperature of 98.5 °F and 66-72 percent relative humidity without turning. Under this, 52 percent and 86 percent hatchability was recorded from incubated fertile eggs of ducks and chickens, respectively. A total of 22 incubation cycles were completed and 675 day old birds comprising 290 duckling and 400 day old Desi chicks were produced and supplied to the farmers by the KVK.

Success of this intervention at KVK motivated the farmers for adoption of this farmer's friendly technology. Shri. Krishna Bacchar from Basantipur village draws his motivation from the KVK success story and purchased a variant of mini-hatching units (300 egg capacity) for production and supply of day old chickens. He produces and sells the DOC country birds @Rs. 40- 45/ birds and earns profit of Rs. 8000/ - Rs. to 10000/- per months from the sale of DOCs. Similarly, Shri. Manimohan Roy from Kamlapur village has also purchased the incubator and now operating it on its own. As a result of this intervention, farmers are no longer dependent on the govt. department and commercial firm for supply of day old chickens. This intervention helped farmers in getting the DOCs at affordable cost.

2(a) Hatching of fertile duck eggs at KVK

2(b) Shri. Manimohan Roy operating the machine

Figure 2. Production of Day Old Ducklings/ Chicks using Mini-Egg Hatching Unit

IMPROVED PIG FARMING

In North and Middle Andaman, there is a good demand for pork, due to this more number of farmers are engaged in backyard pig farming, but these farmers do not opt for pig breeding as the mortality of piglet is high in pre-weaning stage. Thus, the demand for weaned piglets for rearing purpose is very high. Krishi Vigyan Kendra conducted training in the villages for improved pig farming and organised demonstration and field days for awareness among farmers.

3(a) Shri. Mohan Roy providing feed to the growing pigs

3(b) New born piglets separated from the sow to avoid crushing

Figure 3. Improved pig farming practices

Under this program, the KVK supplied 14 numbers of one month old cross bred piglets to eight farmers from Composite Pig Farm, Webi, Department of Animal Husbandry and Veterinary Services. Farmers were also motivated to construct low cost housing with proper ventilation/ drainage. Farmers were advised regarding the importance of de-worming and preparation of low cost feed using locally available ingredients like colocasia, rice bran, broken rice, fish meal, and coconut cake. In this demonstration, cross bred piglets attained an average body weight of about 60 kg in six months over the local check (non-descript) 37 kg. Technical guidance was also provided at the farrowing time and afterwards for care and management of piglets. Shri. Birsa Hasa and Shri Bijoy Roy were benefitted in this programme and in the second year produced 19 and 21 piglets per annum per sow, respectively, which were sold @ Rs. 2500/ piglet. Now, these farmers are selling the weaned piglets to other farmers for rearing purpose, thus helping other farmers in obtaining the piglets for backyard farming.

CHELATED MINERAL MIXTURE

Under the Sansad Adarsh Gram, and Mera Gaon Mera Gaurav (MGMG) scheme, Government of India, the KVK conducted demonstration on supplementation of chelated mineral mixture in the ration of dairy cattle. As the dairy cattle are maintained mostly on grazing, the lactating cattle usually suffer from the deficiency of micro and macro minerals leading to decreased production and infertility. In this demonstration, the farmers were advised to supplement the ration of dairy cattle with chelated mineral mixture @ 35 g/day and supplied chelated mineral mixture (Bestmin gold forte) to the selected progressive farmer's. Shri. Sukhlal Baral, Shri. Gaurango Dutta and others adopted the technology and started supplementing the ration of dairy cattle with chelated mineral mixture. After supplementation of chelated mineral mixture the farmers observed quantitative and qualitative changes in milk. The farmers noted improved milk lactometer reading from 21.2 to 25.7 and daily milk yield increased from 2.9 l/day to 3.4 l/day. The technology also helped in reducing the incidence of repeat breeding in dairy cattle. As a result, number of farmers accepted this technology and the technology become widespread in the area, thus leading to substantial increase in milk yield.

4(a) Shri. Gaurango Dutta supplementing chelated mineral mix in the dairy ration

4(b) Shri. Sukhlal Baral monitoring daily milk yield

Figure 4. Supplementation of chelated mineral mixture

DEWORMING

Black Bengal goat and Malabari goat were introduced in Andaman and Nicobar islands for promotion of agriculture and allied sector. With time these breeds adapted to the local conditions. In this island, reduced growth rate, parasitic infection, indiscriminate breeding, and shortage of grazing land are some of the constraints of goat farming. In order to overcome this, KVK carried out demonstration on deworming in goat, and supervised the growth and performance of local goats under the All India Coordinated Research Project. During the course of this demonstration, administered Albomar powder (Micronised) @ 100 mg/ kg body weight to 3 months old kids, and recorded the data on change in body weight of goats after 3 months. Animal health camp were also organised for deworming in goat and vitamin supplements were provided. Farmers were also advised to breed the goats after attainment of mature body weight and age. The goat administered with Albomar gained the body wt. of 9.6 kg at 6 months as compared to local check 7.9 kg at 6 months. Adoption of these scientific goat farming practices resulted in improvement in local goat production.

5(a) Field staff recording the weight of goat

5(b) Farmers participation in the programme

Figure 5. Deworming in goat

CONCLUSION

The study showed that backyard farming of vanraja chicken and "Mini- hatching units" were helped the farmers in reducing the cost of chicken production and making the farmers self-dependent. While, technologies like balanced dairy ration, improved pig farming, deworming in goat are important for livestock health and sustainable production. Adoptions of these technologies among the farmers were contributed significantly in higher family income and livelihood of farmers.