Vol-1

Interventions and Advisory Services by Certified Livestock Advisors

- Success Stories

National Institute of Agricultural Extension Management (MANAGE)
(An Autonomous Organization of Ministry of Agriculture & Farmers Welfare, Govt. of India)

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Vol - I

Centre for Sustainable Agriculture & Climate Change and Adaptation
National Institute of Agricultural extension Management (MANAGE)
(An organization of Ministry of Agriculture and Farmers' Welfare, Govt. of India)
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Interventions and Advisory Services by Certified Livestock Advisors - Success Stories (Vol – 1)

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Edition: 2021.

Citation: Balasubramani, N. and Sadalaxmi, A. (2021). **Interventions and Advisory Services by Certified Livestock Advisors - Success Stories (Vol – 1)** Hyderabad: National Institute of Agricultural Extension Management (MANAGE).

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Published for Dr.P.Chandra Shekara, Director General, National Institute of Agricultural Extension Management (MANAGE), Hyderabad, India by Dr. Srinivasacharyulu Attaluri, Program Officer, MANAGE and printed at MANAGE, Hyderabad as publication.

Content

Foreword

The diverse and complex nature of Indian agriculture demands professional advisory services from the extension system. The growing need of advisory services necessitates adequate number of competent extension professionals with updated technical knowledge on various specializations. In view of this, MANAGE has launched an innovative program titled "Certified Farm /Livestock Advisor" during 2017 to develop a cadre of Farm/Livestock Advisors among the public and private extension functionaries to improve their technical knowledge and expertise.

I am happy to note that, as part of Module-III, the trainees of Certified Livestock Advisors were conducted On-Farm Trials, disseminated the recent technologies learnt during the Certified Livestock Advisor program, and helped the farmers in addressing their field level problems. Due to their extension advisory services many success stories have been created in the areas of Backyard Poultry, Goatry and Dairy farming at farmers' field and farmers were benefitted out of their interventions in terms of bridging the technological gap, introduction of new varieties/breeds, adoption of innovative technologies, self-employment for rural youth, increased income, enhanced food and nutritional security and also facilitated in empowerment and entrepreneurship development. The success stories created by the Certified Livestock Advisors may be useful for other extension functionaries and farmers for replication and upscaling.

I congratulate all the Certified Livestock Advisors for promoting and documenting the success stories of the farmers who have benefitted due to their interventions and advisory services. I also congratulate Dr. N. Balasubramani, Director (CSA&CCA), Principal Coordinator (CFA/CLA) and Mrs. A. Sadalaxmi, Consultant (CFA/CLA) for compilation and bringing out in the form of book. I hope the book will be a source of inspiration for other Certified Livestock Advisors for promoting many such success stories in the field.

Date: 12.10.2021
Hyderabad

(P. Chandra Shekara)
Director General

Backyard farming of Vanraja fowl for enhancing rural poultry production and income
A case study

Rationale of Intervention

Backyard poultry production is an old-age profession of rural families of India. It is the most potent source for subsidiary incomes for landless and poor farmers. It is an enterprise with low initial investment but higher economic returns, and it can easily be managed by women, children, and the elderly members of the households. In the Andaman and Nicobar Islands, the total backyard poultry population is 7.79 lacs, out of which 1.25 lacs belong to improved varieties. It has been noted that about 89% of rural livestock households rear poultry. A large proportion of these rural households rear desi non-descript birds with low production potential, and these birds are usually cared by women and children. For rural women, it serves as a nutritious source of food for the family and important source of immediate cash income to meet household expenditure. Rural households do not have much knowledge about different aspects of poultry management. Hence, sufficient knowledge on backyard poultry is required.

Interventions made

The Certified Livestock Advisor (Poultry) **Dr. Shardul Vikramlal** has organized training on "General care and management of Vanaraja birds under backyard poultry farming" for twenty- four numbers of backyard poultry farmers in the Dukenagar village, North and Middle Andaman. The training equipped the backyard chicken farmers with the requisite information and skill on scientific practices in backyard poultry farming. In order to showcase the different technologies related to scientific practices in backyard farming, he also conducted a demonstration on "Backyard farming of Vanaraja birds" at farmer's field (Table. 1). As part of the demonstration, fifty Vanaraja day old chicks were supplied to two progressive farmers belonging to two different self-help groups among the participants. During the period of demonstration, field visits, veterinary aid and media coverage were also employed to facilitate the stakeholders' adoption of scientific backyard poultry farming practices. After successful nursery rearing of the birds upto 4 weeks by the selected progressive farmers, the birds were distributed among the members of SHG group for rearing under free range.

Table 1. Best practices demonstrated at the farmer's field.

S.No.	Technology	Purpose	Source of Technology
1.	Artificial incubation using Mini-hatching Machine	Sustainable supply of DOC/ Scale up of operation.	ICAR-CIARI, Port Blair
2.	Low cost brooding	Higher survival rate	ICAR-DPR, Hyderabad
3.	Balanced feed preparation using locally available ingredient	Higher growth and sustainable production	ICAR-DPR, Hyderabad
4.	Vaccination	Prevention of infectious diseases	Department of AH & VS
5.	Deworming	Reduce worm load	ICAR-CIARI, Port Blair

Outcome:

The participants got sensitised and were convinced, learnt the skills and gained knowledge through training program (Fig. 1). The data on performance of the Vanaraja birds during the demonstration tenure is presented in Table 2. The body weight of Vanaraja birds reared by following scientific management practices was found 577.28 g at 8th week compared to Vanaraja birds reared with farmers practice (282.57 g) without aid of demonstration. Overall, the mortality rate was less under the demonstration period compared to the local method of rearing. The benefit cost ratios for the demonstration was also observed to be higher (2.18) compared to local method of rearing (1.30). Due to the continuous technical backstopping and extension interventions of the Certified Livestock Advisor (Poultry) **Dr. Shardul Vikramlal**, a higher adoption level of best practices among the poultry rearers was observed as indicated in the table 2.

Table 2. Performance of demonstration on Backyard farming of Vanaraja birds.

Variables	**Vanraja Birds**	
	Farmers practice	**Low cost balanced feed***
Weight at 4th week (gm.)	170.71	239.28
Weight at 8th week (gm.)	282.57	577.28
Mortality (percent)	38.14	17.28
FCR	-	3.37
Benefit cost ratio	1.30	2.18

*Low cost balanced feed prepared using Broken rice (25 parts), Maize (25 parts), Rice Bran (20 parts), Groundnut cake (10 parts), Coconut cake (10 parts), Fish meal (08 parts), Mineral Mixture (1part) and salt (1 part).

.

Promotion of success story and field trials conducted by

Dr. Shardul Vikramlal SMS, KVK, Nimbudera, ICAR-CIARI Andaman
Email id: shardullal84@gmail.com, Phone No: 9531801728

Technical support of CLA in high-tech goat village programme of Kerala
A success story of Amballur

Upon request from NABARD, Dr. Giggin, Assistant Professor (Animal Husbandry) of Krishi Vigyan Kendra Thrissur who is a Certified Livestock Advisor (Goats) has evaluated the 'Aadu Gramam' (goat village) scheme initiated as a part of 'Susthira Puthukkad' programme which failed to sustain in the long run.

After assessing the reasons for failure of the programme, NABARD proposed a new programme under the Umbrella Programme on Natural Resource Management (UPNRM). Technical vetting of the proposed project was done by Dr. Giggin and he suggested key inputs to convert the project to suit the climatic conditions and socio-economic culture of the locality. "Technical guidance of the project was done by ICAR- Krishi Vigyan Kendra, Thrissur, and the project was implemented by Amballur Service Co-operative Bank with the monitoring and support from NABARD".

Salient features of the project

In the initial proposed model of Integrated Farming System, the unit area considered was 25 cents per individual, which worked out to 1 acre per Joint Liability Group (JLG) of 4 members. 5 does and 1 buck for one family, which is integrated with fodder in 3 cents of land- border crop, turmeric in 10 cents of land, 50 bananas in 5 cents of land, vegetables and pulses as intercrop and water harvesting for recharging of wells/water bodies. The breed of choice for the project was Malabari, which is the most prominent indigenous breed of Kerala.

The intervention of Thrissur Krishi Vigyan Kendra reformulated the project into a true Joint Liability Group (JLG) approach. The features such as Participatory Group approach, Integrated Farming System, High tech goat sheds, Hands-on Skill Training and Performance Improvement Trainings, Goat Manure Value Addition, Goat Urine Sale, Goat Market and Front Line Demonstrations in the area were added to the project.

Poultry rearing under the goat shed

Cattle rearing under the goat shed

Turmeric cultivation

Banana cultivation

Vegetable cultivation

Fodder cultivation

Trainings conducted by Dr. Giggin

Goat market arranged by Amballur SCB

Interventions by Dr. Giggin T, CLA:

As part of CLA project, Dr. Giggin .T has conducted a comparative evaluation of hygiene related health issues in goats reared on plastic and wooden slatted floors in the same area.

The Certified Livestock Advisor (Goats) Dr. Giggin. T was actively involved since the inception of Aadugramam project. After completing the training from Central Institute of Research on Goats (CIRG) as part of Module-II, the latest trends in scientific goat rearing were implemented in the project area. The goat sheds for the project was custom designed by CLA (Goats), Dr. Giggin T who owns a patent (2015) for modern goat cages. The shed was designed in elevated cage style to ensure safety from predators and climatic stress. The cage had a floor size of 24 ft. X 16 ft. and was divided into small cubicles intended for pregnant does, breeding buck, goats with kids at milk etc. The shed's major features include automatic drinking facility, fixed slanted sheets and channel system under the shed to collect urine and manure, a ramp with enough slope for the goats to enter the elevated shed, and GI roofs. The most important speciality is that high quality plastic slat floor is used for flooring instead of wooden planks to ensure a dry and moisture-free resting place for goats.

Modern goat shed (24 ft X 16 ft)

Inside the shed (Partitions for kids and pregnant does can be seen

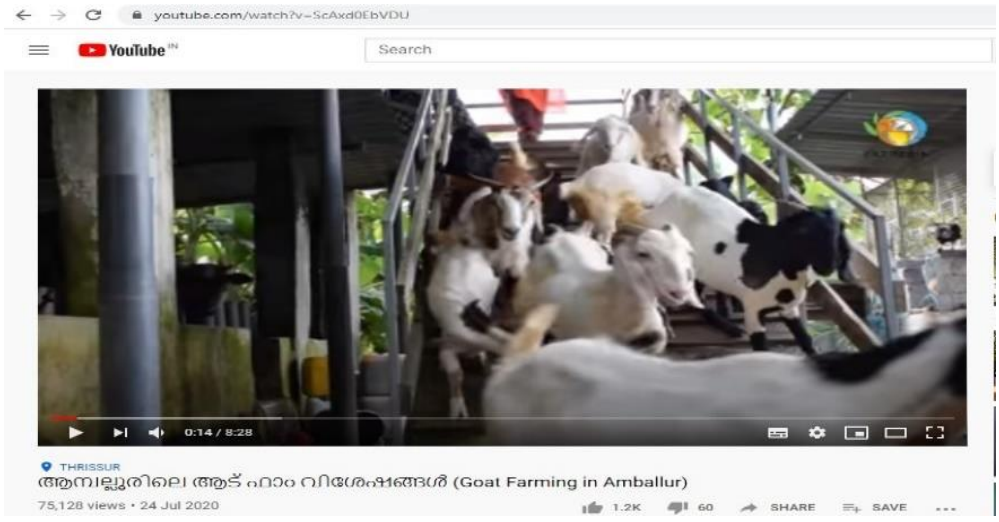
Goats on plastic slat floors

Veterinary technician examines the goats

Automatic drinker which was set inside the sheds

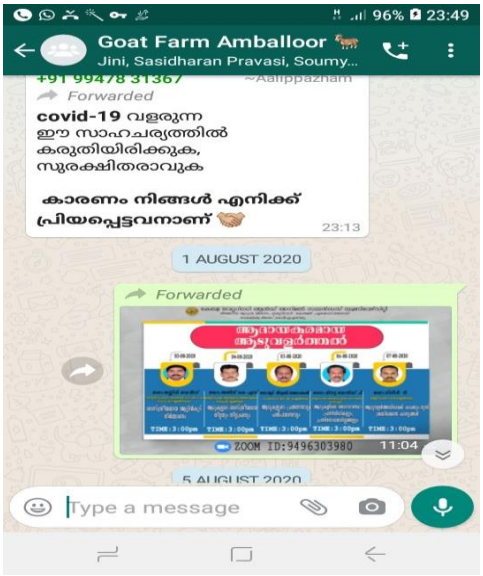
The faecal examination for endoparasites made a routine practice. The farmers were helped with assistance for advanced diagnostic and therapeutic facilities at college of Veterinary and Animal Sciences, Kerala Veterinary and Animal Sciences University (KVASU), where CLA is associated as part of his study.

A success story of one farmer was documented as a YouTube video with the guidance of CLA by an agricultural YouTube channel and telecasted in the social media platform. The Amballur, Service Cooperative Bank (SCB) is making a video documentation of the success story of the project for which the CLA gave guidance.



YouTube video about the project (more than 75000 views so far)
https://www.youtube.com/watch?v=ScAxd0EbVDU

Another documentary of 20 minutes was prepared by the Amballur Service Cooperative Bankwith inputs from the CLA.



WhatsApp group for the farmers

During the lockdown, since the physical presence became difficult, the new farmers who joined the project were helped with the purchase of parent stock by identifying the breed through WhatsApp images and videos. Existing and prospective farmers from the area were given chance to participate in online training classes conducted by the various Extension agencies where the CLA was the trainer. Also those who needed were provided with the classes still available on social media as Facebook videos by CLA.

The Value addition unit of goat manure production was established under the guidance of CLA and started functioning since June this year. The manure is marketing under the brand name “Ajamruthum”.

Powdered goat manure cover

Goat manure powdering unit

Employment generation through goat manure production unit

CLA (Goats) motivated to sell urine to Oushadhi, a Government of Kerala enterprise which produces Ayurveda medicines.

Urine collection

Goat urine collected for sale in jars

Another value addition trial was done by making traditional Ayurveda medicine using goat meat called “Ajamaamsa rasayanam”. It is a well-known traditional Ayurvedic formulation available in herbal ghee or jam form. ‘Ajamamsa’ is a Sanskrit word that translates to ‘goat meat’ which is the chief ingredient of this rasayanam. It is a non-vegetarian Ayurvedic medicine which is very effective in treating several disorders like loss of strength, hemiplegia, etc. It is used as a mass gain tonic which boosts strength. After the success of trial, the Amballur Service Co-operative Bank is now in the process of getting licence for production it in a commercial way.

Aja maamsa rasayanam trial sale packets

The Front Line Demonstration (FLD) on complete feed of KVASU for growing goat kids of 3-6 months by KVK Thrissur (2019-20) was formulated by the CLA and implemented by his follower in KVK under CLA's guidance. The FLD was a success and the kids under demonstration shown an average daily gain (ADG) of 100g of body weight during the demonstration period. The success stories hit the newspapers in local language.

ആട് ജീവനോപാധിയാവും, ഉടൻ

ആടുതീറ്റ പരീക്ഷിച്ച ആടുകളിലൊന്ന്

News in local daily about the result of FLD on complete starter feed for kids

After this successful demonstration, the Amballur SCB is now planning to establish a biomass pellet feed production unit for goats under the CLA's guidance. It is proposed that the feed will be formulated with the help of Department of Animal Nutrition of Kerala Veterinary and Animal Sciences University (KVASU) using Moringa, Glyricidia, agricultural crop residues and local shrubs as the major fodder ingredients.

FLD on CIRG's hexagonal goat feeder

FLD on Moringa cultivation as fodder

The FLD on CIRG's hexagonal goat feeder by KVK Thrissur (2019-20) was also formulated by the CLA and implemented by his follower in KVK under CLA's guidance. The farmer participant recorded satisfaction with the feeder.

Technical expertise for the success story by

Dr. Giggin. T, Assistant Professor, KAU, Thrissur, Kerala
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Duckery adds a feather in Miss Vevohulu Churhah's cap

Miss Vevohulu Churhah hails from an agricultural family at Rukizu Colony, Pfutsero. District Phek, Nagaland. She spent her early childhood assisting her mother in doing agricultural field for growing field crops & vegetables. She has graduated in the field of arts & literature and working as an accountant in a private school. She decided to venture out with a dream of becoming a successful agripreneur. She set up a piggery unit with 9 breeding sows and a boar jointly with a friend of hers with the little financial resources. A freak of fate, all her pigs were wiped out by an epidemic of classical swine fever. In January 2018, she approached Dr Debojyoti Borkotoky, SMS-Animal science, KVK-Phek and Certified Livestock Advisor-Poultry for guidance & technical assistance. In March 2018, she undertook a duckery project with 200 ducklings, Khaki Campbell from KVK after attending a scientific duck farming training organized by the KVK-Phek.

The 100 duckling were provided under NABARD sponsored programme being implemented by the KVK and the rest were her own investment. With counsel on proper feeding, housing, and health care, the duck matured and started laying late August 2018 that paved a way of generating income for her.In 2018 the duckery project earned her Rs. 56,000.00/-. The eggs are sold out like hot cakes @ Rs 10/- as fresh chicken and duck eggs are not available in that region. The eggs find a regular space in the tiffin of the school goers in the locality. Still continuing with the enterprise, she has a plan to further expand the enterprise considering the demand. She was also trained in proper cleaning, grading and packaging of eggs to get premium prices in the market.

A low-cost poly house was also provided to her to grow offseason vegetables such as tomato and Kingchilli which also earned her Rs. 2,500/- in the previous year. With the money earned, she started a livestock feed, supplement, and chick supply outlet at Pfutsero town. With the successful business, she engages two youths as her employees. Presentable and attractive 6 fresh & graded egg duck packs are available in her outlet. She quotes, "*It was a great experience to work in the shadow of a livestock advisor to achieve desired growth in an optimum time scale*"

Miss Vevohulu Churhah, Rukizu Colony Pfutsero in her duck farm

Marketing of duck eggs in 6 eggs pack following cleaning and grading

Miss Vevohulu Churhah at her livestock feed and supplement outlet at Pfutsero town

Success story promoted and documented by

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Transforming from traditional poultry farming to scientific farming –The Journey of Ms Gitarani Barman

The Poultry industry is presently one of the fastest growing sectors and has an immense contribution to the Indian economy. The sector offers ample scope of income and employment to millions of farmers and others engaged in its allied activities. Chicken meat and eggs are important and rich sources of protein, vitamins and minerals for household nutritional security. Chicken is the most widely accepted meat in India and the country ranks 3rd and 5th in the world in poultry egg and meat production respectively. According to the National Sample Survey (NSS) report on livestock possession, the land-less, marginal and small scale farmers which constitute about 90% of the 107 million agricultural house-holds in India keep about 85% of the poultry stock of the country. Further, 70 percent of the world's poor depend on livestock as a component of their rural livelihood, and majority of those families are poultry rearers.

Backyard poultry production in villages is still the primary source of animal protein and supplementary income for rural people. Hence, the growth of backyard poultry farming can contribute to enhance nutritional security and poverty reduction in the country. Backyard poultry production is a low input or no input business and is characterized by an indigenous night shelter system, a scavenging system with little supplementary feeding and natural hatching of chicks, poor productivity of birds, local marketing, and no healthcare practice. A unit can be started with as few as two chickens to a large flock. Feed costs are also negligible in the system due to better utilization of agricultural by-products and leftover feed and grains.

In Assam, though religious taboos were present earlier in different parts and poultry rearing was not adopted at all levels, now with the onset of education and unemployment problems, people have started accepting poultry rearing and this can be seen in the improved outcome which is visible in the Livestock and Poultry Census, 2019. It is evident from the census report that the total poultry has increased by 16.81% with 851.81 million birds during 2019. Backyard poultry has increased by 45.78% and total backyard poultry is 317.07 Million in 2019. Commercial poultry has increased by 4.5%, with a total of 534.74 million birds.

Out of all the improvements that the backyard poultry system has been able to bring about in the lives of the rural people, the success story of Ms. Gitarani Barman, can be highlighted. She is an educated girl of Singimari area of Sualkuchi Development Block in the Kamrup district of Assam. She has taken up backyard poultry as a source of secondary income for her family. Her father and brother are involved in agriculture and she decided to rear about 5 local chickens in her house about 2 years ago. So she bought 4 females and 1 male at around 1 month of age and started rearing them using the normal conventional method of backyard system of rearing.

On commencement of the laying of the eggs by the birds she used to keep few eggs for house hold consumption, she started brooding with the remaining eggs and thereby the chickens in her house has increased. She then started selling a few grown-up chickens for Rs 300 and a few eggs for Rs 10 per egg. The additional income of Rs 1500-2000 per month without much effort or investment has encouraged her to continue and expand the back yard poultry.

The chickens were fed home kitchen garbage, cooked rice, rice grains, and in addition to scavenging. During the night time the chicken used to stay in a small wooden shelter, which was built with nominal amount. This is how, she was maintaining 10 – 15 birds at a time with traditional management and low investment.

As part of Module III, CLA (Poultry), Dr. Sarbani Bora, has conducted an awareness program in the Singimari village about scientific rearing of backyard poultry. The field work of Dr. Sarbani Bora has created an interest and motivated Ms. Gitarani Barman to convert her traditional back yard poultry to scientific rearing. As Ms. Gitarani Barman was had some experience and knowledge regarding traditional poultry rearing, the scientific knowledge and technology imparted by the CLA candidate has kindled her interest in scientific rearing to enhance her income and livelihood. Hence, she has purchased 20 nos. of local birds from near- by market, vaccinated the flocks as suggested by Dr. Sarbani Bora, created an additional wooden shelter to accommodate the newly purchased birds maintained clean environment and the biosecurity measures.

The CLA (Poultry) has motivated her to adopt all the scientific knowledge and technologies, including de-worming and occasional use of mineral supplements which helped her to keep the flock away from diseases and to gain good body weight of the birds. As per the CLA's intervention she has started feeding the birds in the evening before entering the night shelter instead of feeding ad libitum in the morning, which has helped the birds to do enough scavenging during the day. The adoption of scientific rearing helped her to sell more numbers of eggs and earn extra income. She expressed jubilantly that she could purchase fans and other house hold items with the additional income earned from the scientific rearing of poultry birds.

Ms. Gitarani Barman has expressed her gratitude to Certified Livestock Advisor Dr. Sarbani Bora for imparting technical knowledge and enhancing the income level. Further, she has indicated that some of her friends and neighbours are also interested in keeping backyard poultry with scientific management.




Local grown up chicken in Ms Gitarani Barman's house

Night shelters constructed for the chicken

Ms Gitarani Barman interacting with CLA at the end of the awareness programme.

The success story has promoted and documented by

Dr Sarbani Bora, Veterinary Officer, Animal Husbandry and Veterinary Department Govt. of Assam. Email: drsar16dec@gmail.com Phone No: 9957574480.

Backyard Poultry Farming and Women Empowerment in Garo Hills of Meghalaya

Background

Egg and poultry meat production in North-East is largely dependent on backyard farming with indigenous chicken breed. The genetic potential of these local chickens for egg and meat production is very poor with annual egg production of 45-50 eggs per hen and low body weight gain. This is one of the main reasons for the poor productivity of backyard farming or rural poultry farming. There is a huge gap between demand and supply. As the backyard farming is low cost and self- sustaining farming system which is least dependent on external inputs, only by introducing suitable chicken varieties having more growth rates and egg production than Desi birds will improve the productivity of backyard poultry.

There are many improved chicken varieties with dual purpose producing more eggs and meat than local birds. They are relatively resistant to various poultry diseases, thrive well on locally available feed resources, and are good scavengers. Vanaraja, Srinidhi and Kuroiler are among them which are suitable for climatic condition of Garo Hills (already trial was done by KVK). Backyard poultry farming with these improved varieties has the potential to bridge the protein supply gap and to improve the livelihood of the tribal farmers of the region.

Role of Certified Livestock Advisor in implementation of the KVK interventions

Chicks of Srinidhi were provided to the members of the one women's Self Help Group (SHG) (10 members) in AmindaRangsa Village of West Garo Hills district for rearing in backyard system as subsidiary income-generating activity. Twenty number of chicks were provided to each member of the group. AmindaRangsa village was adopted by the KVK, West Garo Hills as a model village for "Doubling Farmers' Income (DFI) by 2022". Srinidhi is a dual purpose poultry producing more eggs and meats than local birds. As part of Module-III, CLA (Poultry) Dr.Sagarika Borah as part of KVK activities, has conducted various awareness and capacity building programmes to disseminate the learnings she has gained during Module-II of the CLA program in the adopted village.

Srinidhi birds in the backyard system performed well at the farmer's field. Birds were reared in backyard / free-range system with the provision of night shelter. Houses were constructed with locally available materials, such as bamboo and wood. Birds were released early in the morning and left for scavenging in the surroundings of the house, gardens, fields etc., from where they fulfill their requirement of feed. During scavenging, the birds generally fed on kitchen waste, earthworms, insects, green grasses, leafy vegetables, seeds etc. In addition to scavenging, women offered broken rice and boiled rice to their birds. CLA (Poultry) Dr. Sagarika Borah, working as technical officer in ICAR- KVK, Sangsanggre has conducted training programmes for the members of the group on all management aspects of poultry farming, including disease control measures, deworming and regular vaccination.

Output and outcome

The average body weight gain by Srinidhi poultry at 8 weeks and 20 weeks was recorded as 805g and 1.90 kg respectively, whereas body weight gain of local chicks in 40 weeks was 2.8 kg, which is increased by 107% compared to local chickens. The annual egg production by Srinidhi bird is 128 nos /year/bird, whereas the egg production in the case of local chickens is only 42 nos /year/bird. The average egg weight of Srinidhi is 52g which is 62.5% more than the egg weight of local birds. The eggs were used for family consumption and rests were sold at @Rs 10/egg. Unwanted male birds were culled at 20 weeks of age with average body weight of 2.0 kg and sold at @ Rs250/kg live bird. The average annual net income received by individual women was Rs 14,868/-. These women were able to generate income for their household purposes. Other farmers in the village were motivated by CLA (Poultry) to rear Srinidhi birds. Based on the success the neighbouring farmers approached KVK to get chicks.

The Study shows that majority (84.44%) of the backyard poultry keepers in West Garo Hills (WGH) district were middle-aged women, and they played a significant role in backyard poultry production that contributes towards their family's subsistence. These women are being encouraged, through capacity building programmes to increase their efficiency in poultry farming. CLA (Poultry) has implemented backyard poultry farming with different improved poultry varieties like Vanaraja, Srinidhi and Kuroiler birds and provided the chicks to the women of different villages of the district of West Garo Hills as part the KVK activity.

Garo Women with their Srinidhi birds

Success story promoted by

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Phone No: 9436316425,8787303105

Opportunities for improved livelihood and nutritional security with Kamrupa Poultry breed

Backyard poultry farming has been very popular in Sikkim. It is mostly practised by women as an aid for income generation and livelihood security. But, rural farmers rear Desi type of chicken with low egg (50-60eggs/year) and meat production in backyard system. For improving the rural poultry farming, Krishi Vigyan Kendra, West Sikkim has introduced 500 Kamrupa birds in the year 2018-19, covering five beneficiaries in Naku Chumpong Village of West Sikkim as a part of On Farm Trials (OFT).

Intervention

Krishi Vigyan Kendra, West Sikkim conducted an On Farm Trial on "Introduction of Newly developed Poultry Breed, Kamrupa" at Naku Chumpong, West Sikkim during the year 2018-19. The Breed was introduced to promote the Backyard Poultry Farming. These improved birds can be reared in both intensive and free ranging systems. Birds can be reared for egg production in small numbers (10-20) in free range conditions with local feeds. Before starting the trial, farmers of the Naku Chumpong were trained and made aware of improved chicken breed by Dr. Lhaki Doma Bhutia, SMS Animal Science and CLA (Poultry) program organized by MANAGE in collaboration with ICAR – Directorate of Poultry Research, Hyderabad, Telangana.

As per the methodology, Brooding, Housing, Feeding, Vaccination and Deworming of chicks were done. Chicks were reared for 4 weeks at demo farm and during this period, vaccination of Ranikhet Diseases was done at 7 days and Infectious Bursal Disease (IBD) at 18 days old respectively. 500 birds of 6 weeks old were distributed to farmers, and they were reared in traditional system with local available feeds by the farmers. Different parameters, like monthly body weight gain, egg production, and disease incidence, were monitored at regular interval.

Results:

The performance and adaptability of Kamrupa birds is presented below in Table: 1 which clearly shows that Kamrupa perform far much better than Desi birds.

Parameters	Technology	Farmer Practice
Body Weight at 60 days (gm)	800-950	450-500
Body Weight at 150 days old (kgs)	2-2.5	1-1.5
Age at first egg(days)	137-146	155-160
wt. of egg (gm) at 40 weeks	50-54	45-50
Egg colour	Brown	Brown
Egg production/month	14-20	5-8
Survivability (%)	98	96

During the trial period, Dr. Lhaki Doma Bhutia, SMS Animal Science and CLA (Poultry) of KVK, West Sikkim has conducted various activities such as awareness programme on Backyard Poultry farm with improved breed of chicken, importance of hygiene and sanitation in farm, demonstrations of poultry house construction using locally available materials, vaccination of birds, and formulation of poultry ration.

Farmers have shown high acceptability of the Kamrupa birds. After demonstrations and on seeing the performance of the birds the farmers could observe the advantages of the rearing these birds, such as high egg laying capacity, long shank, colourful plumage, and hardiness like local birds, higher weight gain over the local birds and better performance even with poor quality diet. The farmers were highly motivated with the performance of the birds and the demand for Kamrupa birds is very high.

Success story documented by

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Community involvement of women in Backyard Poultry-A role model

This is the story of the women of Barampur Village under Pachim Mangaldai block of Darrang district, Assam. These determined ladies were updated their backyard poultry practice with scientific technology like maintaining hygiene, suitable poultry house, balance feeding and also by replacing their flock with high yielding Low Input Technology (LIT) birds. Now, they are successfully doing it and enjoying the job.

Rationale for intervention

- Assam, being a state where the majority of the population is non-vegetarian, there is a huge demand for eggs and poultry in the form of meat.
- Backyard poultry farming is an age-old practice in rural areas of Assam, which can contribute to a great extent in terms of egg and meat production.
- Backyard poultry rearing involves low investment and serves as an important ally for poverty alleviation.
- Poultry rearing can enhance household food security and contribute to poverty reduction through the provision of food, income and employment
- Significant scope for 'productivity' to increase in most small holders households.
- Urban households' exhibits high willingness to pay for local, traditionally raised poultry and livestock products and varieties.
- Accessing market participation by small holders which otherwise is generally plagues by high access costs and information failure.
- The female rearers/ beneficiaries will be benefitted by a short interval between investment and earnings, which makes backyard poultry rearing an attractive and low risk option.

Interventions made by CLA

As a part of field work for Module III, **Dr. Rupa Bharali,**Veterinary Officer, National Livestock Mission(NLM) and CLA (Poultry), visited many villages of Darrang district. During her visit, CLA interacted with the women regarding their backyard poultry and understood that most of these women were already practicing poultry farming in a very small scale in their backyard, but they lack scientific knowledge.

As a CLA on Poultry, disseminated scientific knowledge of backyard poultry production and also helped them to double their income and ultimately to make them economically independent. She also conducted door-to-door training on Backyard Poultry farming to the rural women and prepared leaflet on backyard poultry farming in regional language (Assamese) and distributed to needy rural women and also prepared some videos for better understanding of the subject.

Outcome

Dr. Rupa Bharali, Veterinary Officer, National Livestock Mission (NLM) and CLA (Poultry) got very positive feedback of the above-mentioned extension works. Many women have shown interest for scientific method of backyard poultry rearing. They were ready to utilize their savings on backyard poultry rearing in order to increase their income.

These determined women have adopted all the updated practices for backyard poultry rearing which was learned during the training programme and prepared their poultry house with all the necessary arrangements. Each woman has received a minimum of 30 nos. of high-yielding variety of Low Input Technology (LIT) birds for their backyard.

They brought day-old chicks of LIT bird and kept them for brooding in a Mother Unit, established in the village itself for the purpose of brooding of day-old chicks up to 14 days of age prior to distribution. Thus, they managed the quality chicks at a low cost by community purchasing.

With the interventions of CLA (Poultry) and technical support, the rural women have utilized their savings in Poultry Rearing and benefitted with a decent income.

Training program on Backyard Poultry Rearing at Chamuwapara, Darrang




LIT chicks distribution




Poultry houses after getting training on Backyard Poultry rearing

৩। লেটেৰীয়া পাত যেনে – চজিনা পাত, পুনী আদি অধিক প্ৰটিনযুক্ত প্ৰাকৃতিক আহাৰ যোগান ধৰি কম খৰছত উচ্চমানৰ কণী আৰু মাংস উৎপাদন কৰিব পাৰি।
৪। প্ৰথম চাৰি সপ্তাহ লৈকে পোৱালীবোৰক অলপ অলপ চিক মেচ্ ফিদ (Pre-starter Chick Mesh feed) দিব লাগে। দৈনিক প্ৰতিটো পোৱালক গড়ে ১০ - ১৫ গ্ৰাম খাদ্য দিব লাগে। পৰিষ্কাৰ খোৱা পানী যোগান অতি দৰকাৰী।
৫। ন· সপ্তাহৰ পৰা বিশ সপ্তাহলৈকে ইহঁতক গ্ৰ·ৱাৰ মেচ্ ফিদ (Grower Mesh Feed) দিব লাগে, লগতে মুকলিকৈ চৰিবলৈ দিব লাগে। দৈনিক প্ৰতিটো পোৱালক গড়ে ৩০- ৬০ গ্ৰাম খাদ্য দিব লাগে। পৰিষ্কাৰ খোৱা পানী যোগান অতি দৰকাৰী। লেটেৰীয়া ঘাঁহ, বন, পাত, ঘৰুৱা পেলনীয়া খাদ্য, মাটিত থকা পোক পৰুৱা আদিবোৰ খাই প্ৰাকৃতিকভাৱে পুষ্টি যোগান লব পাৰে, সেইয়ে মুকলিকৈ চৰিবলৈ দিব লাগে।
৬। কণী পাৰিবলৈ আৰম্ভ হ'লে (২১ সপ্তাহৰ পৰা) ইহঁতক লেয়াৰ মেচ্ ফিদ (Layer Mesh feed) দিব লাগে আৰু মুকলিকৈ চৰিব দিব লাগে। এইখিনি সময়ত খাদ্য যোগান অলপ নিয়ন্ত্ৰণত ৰাখিব লাগে যাতে ইহঁতৰ ওজন বেছি নাবাঢ়ে। ওজন বাঢ়িলে কণীৰ উৎপাদন কমি যায়।

কেইটামান কুকুৰাৰ উৎপাদন ক্ষমতা

বিৱৰণ	বনৰাজা	কামৰূপা	গ্ৰামপ্ৰিয়া	শ্ৰীনিধি
১। দেহৰ ওজন – ৬ সপ্তাহ বয়সত	৬৫০ – ৭৫০ গ্ৰা	৫০০ – ৬০০ গ্ৰা	৪০০ – ৫০০ গ্ৰা	৬০০ – ৬৫০ গ্ৰা
২। প্ৰথম কণী পৰা সময়ত কুকুৰাৰ বয়স	৫ মাহ	৫ মাহ	৫ মাহ	৫ মাহ
৩। ৭২ সপ্তাহলৈ মুঠ কণী উৎপাদন	১১০ টা	১১৬ – ১৮০ টা	১৬০ – ১৮০ টা	১৪০ – ১৫০ টা
৪। কণীৰ ৰং	মুগা বৰণৰ	মুগা বৰণৰ	মুগা বৰণৰ	মুগা বৰণৰ
৫। ২৮ সপ্তাহ বয়সৰ পৰা কণীৰ ওজন	৪৮ – ৫০ গ্ৰা	৪৫ – ৪৮ গ্ৰা	৪৯ - ৫২ গ্ৰা	৪৮ – ৫০ গ্ৰা
৬। ৪০ সপ্তাহ বয়সত পৰা কণীৰ ওজন	৫২ – ৫৮ গ্ৰা	৫০ - ৫২গ্ৰা	৫৭ – ৫৮ গ্ৰা	৫২ – ৫৫ গ্ৰা
৭। ৰোগ প্ৰতিৰোধ ক্ষমতা	বেছি	বেছি	বেছি	বেছি
৮। মাংসৰ সোৱাদ	থলুৱা কুকুৰাৰ নিচিনা	থলুৱা কুকুৰাৰ নিচিনা	থলুৱা কুকুৰাৰ নিচিনা	থলুৱা কুকুৰাৰ নিচিনা
৯। খাব পৰা মাংসৰ পৰিমাণ	৬৫-৭০%	৬৫-৭০%	৬৫-৭০%	৬৫-৭০%
১০। ৬ সপ্তাহ লৈ জীয়াই থকা ক্ষমতা	৯৮ %	৯৫%	৯৬%	৯৫%
১১। বিশেষ ক্ষমতা	কণী + মাংস উৎপাদন	কণী + মাংস উৎপাদন	কণী উৎপাদন	কণী + মাংস উৎপাদন

কুকুৰাৰ স্বাস্থ্যৰ যতন: এই কুকুৰাৰ ৰোগ প্ৰতিৰোধ ক্ষমতা অধিক যদিও সাৱধানতা প্ৰয়োজন আছে। তাৰবাবে টিকাকৰণ অতি প্ৰধান দায়িত্ব। দিবলগীয়া টিকাৰ তালিকাখন তলত দিয়া হ'ল।

	বয়স	টিকাৰ নাম	পৰিমান আৰু দিয়াৰ প্ৰক্ৰিয়া
১।	জন্মৰ পৰা ৭ দিনৰ ভিতৰত	ৰাণীক্ষেত(F/লাচোটা)	১-২ টোপাল চকু/নাকত
২।	১২-১৪ দিনৰ ভিতৰত	গাম্বৰো(জীৱিত)	১-২ টোপাল চকু/নাকত
৩।	২৮-৩০ দিনৰ ভিতৰত	ৰাণীক্ষেত(F/লাচোটা) বুষ্টাৰ	১-২ টোপাল চকু/নাকত
৪।	৬ সপ্তাহত	বসন্ত (জীৱিত)	পাখিৰ ছালত খোচ মাৰি
৫।	৮সপ্তাহত	ৰাণীক্ষেত(আৰ২বি)	ছালৰ তলত/মাংসত ০.৫ মিঃ লিঃ
৬।	১২সপ্তাহত	গাম্বৰো(জীৱিত)বুষ্টাৰ	ছালৰ তলত/মাংসত ০.৫ মিঃ লিঃ
৭।	১৬ সপ্তাহত	ৰাণীক্ষেত(আৰ২বি)	ছালৰ তলত/মাংসত ০.৫ মিঃ লিঃ

বিশেষ উপদেশ - কুকুৰাজাকটোৰ বেমাৰ হ'লে নিজেই ঔষধ নিদিব। ওচৰৰ পশু চিকিৎসালয়ক অথবা কোনো পশু চিকিৎসক এজনক যোগাযোগ কৰিব।

Published by : Dr. Rupa Bharali, V. O. (M), Darrang & Coordinator, NLM in the interest of public benefit for the program of Certified Livestock Advisor on Poultry, Module – III under guidance of ICAR - Directorate of Poultry Research, Rajendranagar Hyderabad and MANAGE, Hyderabad

Leaflet on backyard poultry farming in regional language (Assamese)

Extension activities and technical support by

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Goat farming an effective means of livelihood

This is the story of Mr. Devi Dayal, who used to sell toys on the roadside to earn his livelihood. Being a migrant and illiterate, he had neither land for agriculture nor the proper knowledge to do any job. Having a large family of seven members, there was a lot of pressure on Mr. Devi Dayal to meet the needs of the family. His financial situation worsened in the lockdown of Covid-19 when the income from selling toys became negligible. In the meantime, he came in contact with Dr. Sarvesh Gupta, Veterinary Officer, Kangra and Certified Livestock Advisor (Goats). CLA (Goats) advised to take up goat rearing so that he could meet the needs of his family to some extent. He further informed that, goat rearing requires less space as compared to rearing other animals like buffalo and cows, i.e., in the place where one can rear a buffalo, five to seven goats can be reared comfortably.

Goats can be taken for grazing in the open space, i.e. for feeding, so the cost of feeding them is very low. Most of the goat breeds are able to adapt comfortably to any environment, whether it is hot or cold. That's why they rarely get sick. When sickness is less, the cost of treatment is less. This migrant belonging to Kalka district of Haryana state, impressed by the characteristics of goat rearing and bought a pregnant goat of Beetle breed for Rs 25,000/- which was capable of giving four litres of milk. Apart from this, he bought two other goats. To buy it, he borrowed money and made a goat shed out of a plastic tarpaulin. Everyone was surprised to hear the price of this goat and the milk production capacity. Mr. Devi Dayal has kept the price of kids born from Beetle breed goat at around Rs. 8000/- and their sales have been booked in advance. Today his family drinks nutritious milk and sells the excess milk to people suffering from chronic diseases in the village. From this business, he got additional income and his family also has got nutritious food and this is the reason that he is now in regular contact with Dr. Sarvesh Gupta, Veterinary Officer, Kangra and Certified Livestock Advisor (Goats). He has bought chicks under the Backyard Poultry Farming Scheme, so that his family can get much desired protein supplements in the shape of egg and poultry meat. The dream of this migrant is that the illiteracy which has stopped his progress should not become a hindrance in the way of his children and perhaps the extra income from goat and poultry farming is capable of making the future of his children.

This migrant labourer has proven the saying of the Mahatma Gandhi, the Father of our Nation, “Goat is poor man’s cow” and more importantly, it has inspired many other villagers to follow. There is a need to convert the small successes of goat farming into a mass movement so that the poor farmers can be rescued from the difficult situations. In future, Mr. Devi Dayal wants to do this on a large scale so that his income can increase and he can make it a reality.

Toy Shop of Mr. Devi Dayal

CLA in conversation with Mr. Devi Dayal

Beetle breed goat

One month old lambs

Success Story promoted by

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Self-employment for rural youth through broiler farming

Mr. Raunak Namdeo (31yr) from village Mukanwara, Block Jabalpur, District Jabalpur, has completed his B.E. (electronics). He started his career with a job in private organization in New Delhi. He resigned job after one year and returned back to village, as he has not satisfied with his work. He contacted Dr.Pramod Sharma, Programme Assistant (Veterinary) and Certified Livestock Advisor (Poultry), KVK, Jabalpur to explore the scope in agriculture and related fields to start an enterprise.

Rationale for intervention

His father had a commercial broiler farm and later closed the farm about 5 years ago due to losses incurred because of several disease occurrences and management problems. After interacting with Dr. Pramod Sharma, CLA (Poultry), he wanted to restart broiler farming in scientific manner along with good management practices.

Interventions made by CLA

Mr. Raunak Namdeo's farm was initially visited by CLA (Poultry), who evaluated every part of the farm from a management and disease standpoint, and discovered that there are other broiler farms nearby, as well as people and labour coming to his farm without any foot dip or other sanitization. This could be the source of the poultry's infection. Apart from that, CLA (Poultry) went to the laboratory and examined the water supply. Dr. Pramod Sharma, advised him not to allow any other people or workers from surrounding poultry farms to enter. Similarly, CLA (Poultry) also advised him to use mandatorily a foot bath or foot dip at the poultry farm's entry point for all visitors who are entering the farm. He further advised to use Water sanitization through chlorination, suitable acidifier and adoption of strict vaccination schedule for prevention of disease which had previously not been followed.

Outcome

Mr. Raunak Namdeo followed all the suggestions as advised by CLA (Poultry) at his poultry farm and maintained good hygienic conditions. He found that the diseases were not occurred with the standard scientific management practices. The capacity of farm is 10,000 broilers. The growing period for one batch of bird is around 1.5 months. Calculating from that, 6 batches of broiler poultry can be reared in a year time.

Total birds reared in one year = 10,000 x 6 = 60,000

Total saleable birds/ year = 57,000 (conside ring 5% mortality)

Calculated profit/ bird = Rs .10/-

Total profit in one year = 57,000 x 10 = Rs.5,70,000/-

Technical advice provided and success story promoted by

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Contract Broiler Farming: A Success story of Mr.Malkit from Ambala dist. of Haryana

Mr.Malkit, 30 years old from Sherpur Salkhani village of Barara, District Ambala, Haryana, has completed senior secondary education and was struggling for work. With his 4 acres of land, he could not earn well for his joint family of 5 members, so he was thinking to start some new venture besides their traditional farming of wheat and rice. Meanwhile, in 2019, he approached KVK Tepla, Ambala and came to know about various enterprises under the ARYA project like poultry, piggery, nursery, vermi - compost and mushroom farming, and he decided to take training on poultry farming.

Starting of Venture

After completing his training and receiving proper guidance from Dr. Naveen Saini, SMS (Animal Science), Nodal Officer of Arya project at KVK, Tepla and Certified Livestock Advisor (Poultry), he started contract (With Suguna pvt. Ltd.) Poultry farming with 2500 broiler birds as he wanted to start the business without taking any risk, with the company providing maximum facilities such as like chicks, vaccine, medicines, feed etc, and he has to manage the farm for maximum profit. He increased his profit gradually by good scientific management keeping regular touch with CLA (Poultry). As a progressive farmer he keeps himself updated by participating in various departmental events. He keeps record of almost everything at his farm.

Interventions made by CLA

Mr.Malkit had undergone training at KVK Ambala under ARYA project in 2019 and he regularly received advisory and other technical support from Dr. Naveen Saini, SMS, KVK Tepla and CLA (poultry). Meanwhile, when a problem of scouring occurred at his farm which was causing low production as well as mortality in chicks. The CLA (Poultry) has conducted an On Farm Trial (OFT) of Dietary Electrolyte Balancing with supplementation of Dietary Cation-Anion Balance (DCAD) Plus diet and Sodium bicarbonate which resulted in decreased scouring problem as well as decreased mortality. Further, he advised Mr. Malkit not to allow any other people or labour from nearby poultry

farms to enter, and to use foot bath or foot dip at the entry point of poultry farm compulsory practice for all those who are entering in the farm. Water sanitization through chlorination and suitable acidifier were also suggested to him, apart from adoption of a strict vaccination schedule for the broilers to prevent diseases.The technical and timely advice has benefitted Mr. Malkit.

Outcome

Scientific management practices and good hygienic conditions by Mr. Malkit resulted in fewer disease incidents and mortality in his farm and thereby, he is earning a decent income and finds himself capable of running his family well. The capacity of farm is 2500 broilers. The growing period for one batch of bird is around 40 days. Accordingly on an average, he could rear 7 batches/lots of broiler poultry in a year.

Total birds reared in one year = 2500 x 7 = 17,500 birds.

Total salable birds/ year = 17,029 (considering 3% mortality)

Total salable birds weight (Kg) = 17,029 x 2 = 34,058 kg (Avg bird weight= 2kg)

As per contract, he is getting average profit/ kg = Rs. 7/-

Average total profit in one year = 34,058 x 7 = Rs.2,38,406/-

The success story of Mr. Malkit was covered in local dailies to motivate other entrepreneurs and other farmers to take up such entrepreneurial activities in the rural areas to increase the income and create employment opportunities.

उत्साह

2019 में शुरू किया था मुर्गी पालन का काम, बोले- लॉकडाउन में भी नहीं आई दिक्कत

मुर्गी फार्मिंग से महीने में 40 हजार कमा रहे मलकीत सिंह

राकेश बनवाल

अंबाला सिटी। गांव शेरपुर सुलखनी के मलकीत सिंह कांट्रेक्ट मुर्गी फार्मिंग कर प्रति माह 40 हजार रुपये कमा रहे हैं। 2019 में शुरू किया गया उनका यह प्रोजेक्ट उनकी आमदनी का बहुत अच्छा जरिया बन गया है।

मलकीत सिंह ने बताया कि आर्य प्रोजक्ट के तहत वर्ष 2019 में कृषि विज्ञान केंद्र, तेपला से उन्होंने मुर्गी-पालन में प्रशिक्षण प्राप्त किया और केंद्र के तकनीकी सहयोग और चबरोन नस्ल की मुर्गियों से पोल्ट्री फार्म अपना व्यवसाय शुरू किया। अन्य मुर्गी-पालकों से भी विचार-विमर्श करके उन्हें हैदराबाद की एक कंपनी सुगना प्राइवेट कंपनी से बात की और उनके साथ कांट्रेक्ट किया। जिसमें उन्हें 2500 मुर्गियों की यूनिट से 40 हजार रुपये प्रति माह की दर से आमदनी तय हुई। उन्होंने बताया कि कंपनी की तरफ से चूजे प्रदान करवाए जाते हैं और लगभग 40 दिन के होने पर कंपनी मुर्गियों को अपने लेवल पर बेच देती है। वहीं, जब मार्केट में अधिक कीमत होती है तो बोनस भी कंपनी की ओर से दिया जाता है। -संवाद

पोल्ट्री फार्म का दौरा करते कृषि विशेषज्ञ। संवाद

एक साल में कमाया तीन लाख रुपये का मुनाफा

मलकीत सिंह ने बताया कि मुर्गियों का रख-रखाव, फीड और बीमारी का सारा खर्च कंपनी का होता है। लगभग एक लाख रुपये का खर्च निकालने के बाद लगभग पौने चार लाख के करीब मुनाफा हुआ है। वहीं लॉकडाउन के समय भी कोई दिक्कत नहीं आई क्योंकि कंपनी की तरफ से फिक्स 40 हजार रुपये मिलते रहते थे जिससे कि यूनिट का खर्च आसानी से चलता रहा। केविके के पशु विशेषज्ञ डॉ. नवीन सैनी ने बताया कि मलकीत सिंह की यूनिट पर समयानुसार टीकाकरण करवाया जाता है व समय समय पर तकनीकी सलाह दी जाती है। केविके में आयोजित होने वाले मुर्गी-पालन प्रशिक्षण के दौरान भी मलकीत से मास्टर ट्रेनर के रूप में युवाओं से रूबरू करवाया जाता है और साथ ही यूनिट पर दौरा करवाकर रख-रखाव के बारे में जानकारी दी जाती है।

Success Story of Mr.Malkit published in newspaper

Success story documented by

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Sustainable income through the rearing of improved poultry breeds

Situation: Mrs Ranju Deka, Kumarpara village of Darrang District, was a poultry farmer who had 10 numbers. of local breed chicks on her farm. She was struggling to earn livelihood as poultry was her sole source of income. Each and every household of that locality has a minimum of ten to twenty (10-20) numbers of local chicks. The village has a great scope for developing poultry as a business entity. But the local breeds are not profitable due to high mortality, lower weight gain and less egg laying capacity.

Response

Field trials of Certified Livestock Advisor (CLA) on Poultry Module III have been conducted from January to August'2020 to the villagers of Darrang district. Depending upon the problems faced by the poultry farmers, CLA (Poultry) has tried to solve their problems by providing scientific technical knowledge through regular training, improved breed of poultry and facilitated in increasing their income.

The poultry farmers of Kumarpara village reared local variety of birds. Dr. Yesmina Ahmed, Coordinator of National Livestock Mission (NLM) and CLA (Poultry), demonstrated the new breeds of poultry like Banaraja, kamrupa etc.She also demonstrated their production performance and described the difference between the common rural bird and new variety breed. Furthermore, she also educated the poultry farmers how they can increase their production performance with new breed by scientific poultry management.

Situation -Mrs Ranju Deka, and few other farmers in the village, were interested to adopt the new poultry breeds. Dr. Yesmina Ahmed, Coordinator of National Livestock Mission (NLM) and Certified Livestock Advisor (Poultry), communicated with them regarding the availability of new breeds in the poultry farm at the College of Veterinary Science, Khanapara. Based on her advice, Mrs. Mrs Ranju deka and her neighbors, brought one and half month old **kamrupa breeds** from the College farm. The birds were reared under CLA (Poultry) guidance and noticed that health condition of the birds was good. CLA (Poultry) has suggested them the alternative feed to lower the cost of the feed and concentrated ration to the bird for better performance. CLA (Poultry) also conducted training on vaccination and deworming. Mrs Ranju Deka, and other farmers have adopted all the technologies suggested by the CLA (Poultry) and benefited from this new breed and technology.

Result: Mrs Ranju Deka, started selling eggs to neighbouring women farmers for the purpose of hatching and replication. She sold around 90 nos. of eggs for the purpose of hatching @ Rs. 12 and male birds @ Rs. 600-800/bird depending on the size.

Evidence: Mrs Ranju deka informed that the rearing of improved breeds gives a sustainable income by lowering mortality rate, disease occurrence, and increasing egg laying and quick weight gain capacity. The success of Backyard Poultry rearing with improved breed has increased her confidence and many other women beneficiaries have come forward.

Success story documented by

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Scientific Goat Farming – Transition in the life of farmers in Kangra District Himachal Pradesh

Situation and background

Livestock farming system in the western Himalayas, especially the "Changer" area of district Kangra are complex and generally based on traditional socio-economic considerations, mainly guided by available feed resources. "Changer" belongs to Pahari dialect, denoting a rough mountainous region with scarcity of water. Agriculture and livestock rearing are the main source for livelihood for the people. Agriculture is dependent on the monsoon (rain fed agriculture), which is erratic and unpredictable. Small ruminants (Goats) are essential components of the mixed farming system in these regions.

Sh Sanjeev Kumar Rana resident of Jagni village, 25 Kilometers from Development Block Kangra in District Kangra, started rearing milch animals 20 years ago. At that time, he had only nondescript buffalo. The Maximum area of this region is unirrigated and dependent on rain. Being a small village, there are not ample employment opportunities. In the prevailing topographic and agro-climatic condition of the area under Block Kangra of District Kangra, Sh. Sanjeev Kumar Rana has performed exceptionally well as a livestock farmer and was able to integrate it well with vegetable cultivation and forestry for increasing his profits. It is one of the best examples of using integrated farming with goat as its mainstay.

Goat produce meat, milk, fibre, and manure. They are less prone to toxic effects of shrubs e.g., Lantana camara and sustain well on shrubs and bushes. Further Goats play an important role in income generation, employment generation, and improving household nutrition in this region. Housing requirements and management problems are less with goats. Woman and children essentially look after the herding, feeding, and heath care of goats.

Goats are being reared predominantly by the landless and marginal farmers, and to a lesser extent by small farmers too, as a means of livelihood. Goats make a significant contribution to the subsistence of small holders and landless rural poor of this region. The traditional goat husbandry system operates with the rearing of non-descript goat species in small numbers. There are also farmers who exclusively rear goats, with a flock size of 10 to 35 goats, but rarely adopt modern practices for better production.

Due to lack of awareness among the farmers, goats die of diseases and many of the animals do not reach desired growth because of parasitic infestations. The awareness camps under National Livestock Mission (Goat farming) have come as a boon for these most deserving poor farmers and also provided an opportunity for the Veterinarians to implement the scientific goat husbandry practices among the farmers.

As part of National Livestock Mission (Goat Farming), Dr Sarvesh Kumar, Veterinary Officer and CLA (Goats) has made special efforts for mass awareness and mass deworming by organizing camps to 100 beneficiaries at the farmers' door step. Automatic drenching guns and automatic injectors were used for better drug delivery, which highlighted the scientific advancement in

goat husbandry in village level field work. Audiovisual documentaries and power-point lectures were presented to bring more impact while delivering lectures. The lectures highlighted various points of scientific goat husbandry viz., Adoption of improved breeds of goats; Beetal goats for crossbreeding and culling of old stock; FAMCHA anemia detection card in small ruminants for timely deworming; Regular use of dewormers; Strict adherence to vaccination schedules; measures for ectoparasitic control; feeding of concentrate and mineral mixtures; Plantation of Napier spp and Setaria spp root slips to develop grassland; Castration of undesirable buck and also to avoid in-breeding.

These technologies have transformed the life of farmers. Mr. Ravinder Parihar, who is one of the beneficiaries of the scheme, indicated that "CLA (Goats) from Animal Husbandry Department has done a miracle in my life, I am very much grateful to them for providing me with all sorts of goat development programme services at my doorstep".

Outcome of the project/ program

1. Improved breeding efficiency of bucks
2. High rate of twins among does
3. Improved weight gain and sexual maturity
4. Sale of good quality bucks and does to other goat farmers

Extension and advisory services provided by Dr. Sarvesh Kumar, Veterinary Officer and CLA (Goats)

Audiovisual documentary viewing using projector

Indigenous goat rearing in the region

Beneficiaries during an awareness camp

Deworming by means of automatic drenching guns

The ATMA camp at Jagni where farmers were taught through powerpoint presentations using Projectors

Capacity building camp under ATMA Kangra Block where Sanjeev got motivated to take goatry as vocation

Sanjeev with Beetal Goat

Sanjeev, a daily wage worker, is helped by his wife and other family members in taking care of livestock

Use of goat manure for production of vegetables

Organic vegetables being grown by Sanjeev using goat manure

Success story documented by

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Continuous learning for a path of development – A Success Case of Shree Narayan Dairy Farm

Shree Narayan dairy farm in Shili Gujrat was established in 2008 by Shri Sharad Rai Maharaj. Although ambitious with his goals, his efforts were failing him. He started with humble beginning with few cows, and there was decline in production as well as reproduction. Although efforts were made by him at his personal level, he could not succeeded much.

The curiosity of Shri Sharad Rai Maharaj had led him to Punjab, where he could see many dairy farms running successfully in the harsh variations in the tropical climate. Although he had bigger and more progressive plans for his dairy, there was no one to guide him in establishing a scientific dairy farm. At this juncture, Dr. Shailender Srivastava, who has completed Certified Livestock Advisor program (CLA) on Cattle specialization and doing freelance consultancy on dairy, met Shri Sharad Rai Maharaj.

After listening to the history of this farm, he could easily deduce that the farmers in Gujrat needed to adapt to the growing needs of dairy as well as accept and adapt to the challenges posed by improved germplasm of the new cows. The history of Shree Narayan dairy farm dairy farm led the CLA to work on the following parameters to make the farm a success in the coming years.

Breeding

The major challenge for new farmers and entrepreneurs is the lack of understanding of the genetics of cows. They have to assess their animals in terms of purity, production and reproduction and then select animals with desired genomic traits in order to advance the farm. Following protocol was established to succeed in terms of breed at Shree Narayan dairy farm:

- The farmer has to realize that they have to keep using the better breed. Local semen, once used, intentionally or un-intentionally, will hamper the progress.
- Imported genomics semen was procured, preserved and has been used successfully at this farm. This farm possesses elite Canadian HF-cross animals. A well-maintained record book is frequently updated whenever semen was used.
- The animals purchased at the beginning of revival at this farm were analysed for their pedigree history. After complete evaluation, the animals were accepted. Since animals were purchased from a proper breeder farm, up-gradation in terms of breeding was comparatively easy.
- As a CLA (Cattle), he advised the dairy owner to cross more pure Gir cows available in Gujarat with HF. Since the cross varieties yield a maximum of 36 litres of milk with a fat % of 5.5 and a very good endurance in high heat and humid conditions. With the help of Semen companies, it was tried in 3 animals with Genomic sex semen, resulted in pregnancy in all three cows.

- The CLA candidate has developed a template for proper record maintenance easily, and the record maintenance was made as a priority at the dairy farm. Before every insemination, straw details are preserved to maintain future pedigree records and other reproductive aspects as management interventions

GR HF Cross

Elite Heifer

Cross breed cow

GIR cow for breeding

Feeding

Before the intervention of CLA, feeding was done in a traditional manner with 400g of feed for every litre of milk. Wheat straw and low-quality fodder by-products were fed on a regular basis. Green fodder was seasonal and silage was never a priority. After his visit to Punjab, the owner of this farm was acquainted with ration formulation and customized diets for every category of farm. Based on the advice of the CLA, Total Mixed Ration (TMR) formulations, quality and quantity of milk was improved, but there was a lot to be done to make sure that animals received green fodder/forage on a regular basis.

It was challenging to make the farmer understand that silage could be the backbone of his farm production. Dr. Shailender Srivastava has arranged a few trips for the dairy farmer in Punjab as an exposure visit to learn the silage-making practices. Commercially, bale silages are also available, but it is always economical to make silage especially corn silage. Accordingly, Shri Sharad Rai Maharaj has been convinced about the advice of the CLA and started growing maize as well as procuring the maize to make silage under the supervision of CLA.

In terms of green fodder, CLA has advised the farmer to grow Rye grass and Lucerne (20 to 22% crude protein on dry matter basis). The high-yielding variety of seeds were obtained from Punjab. As a result of the newly introduced green fodder, milk production has increased from 460 to 880 litres at one stage.

Under the supervision of the CLA, priority has been given to rear calves. The Following things were made mandatory for efficient calf rearing at Shree Narayan dairy farm:

- Colostrum was fed to calves within 1st two hours of birth with the help of a bottle in a neck-upwards position.
- It was made sure that calves receive at least 5 litres of colostrum within 6 hours of their birth.
- Deworming protocol was performed by CLA which focusses on removal of all endo-parasites within the first 3 months of calf.
- Calf rearing has been advised in cages for least infection and to attain maximum weight. Calf starter provided with adequate protein, energy for optimum growth. Anti-coccidials, mineral vitamin and superior toxin binders have also been added at recommended doses for better growth.
- Proper milk feeding (at least 4-5 Litres per calf per day) has been done as suggested by CLA. As a result, the weaning age was 75days and calves have attained at least 100 kg of weight at weaning.

C 1: 1 Kg (birth weight) i 1
C 2: 1 Kg (birth weight) 1

Elite heifers with TMR wagon

Faster calf growth

Housing

The farm has been constructed with a modern design, but animals have not been properly grouped. After the intervention of CLA the animals have been grouped properly. The following changes have been made in the housing to combat heat stress which is essential at least for a period of 4 months during the summer.

- Modern technology-equipped fans which supply air to the animals upto 60 ft at a speed of 2.5 meters per second to waive of their excess body heat.

- Proper combination of water sprinklers and fans has helped the animals to dissipate their excess body heat and relive stress. At extreme THI (Temperature humidity Index), proper fan and sprinkler combination help animals to take adequate dry matter.

Management

Due to the joint efforts of CLA and the dairy owner, the dairy farmer has realized that a successful dairy has the following goals and performance criteria. All of these criteria were achieved with 90% success rate.

- Calf a year from cow. This has become possible by maintaining nutrition, management and health status of cows, all being achieved with our joint efforts.

- Proper calf rearing programme is helping heifers to attain a body weight of 320 kg at 14 months. Heifers calve within 23-25 months at this farm.
- Animals do not utilize more than 2.5 average numbers of AI straws per animal for their conception.
- Metabolic disorders were nearly zero after adopting transition management protocols, in contrast to the last year's prevalence, which was approximately 7% in previous years prevalence.
- Mastitis prevalence is near to zero every month.

Due to less availability of labour at this place, milking parlour became a necessity. This farm is equipped with all basic amenities for a successful farming, but the main driving force behind the smooth working of this farm is the fact that one needs to keep learning and implementing the latest modifications in terms of nutrition and management.

The dairy farmer has 60 cows, 35 heifers and a calf of near to pure HF and 5 buffaloes. The milk production is 800 litres in peak season. 56 animals are pregnant out of 60. All the criteria for a successful dairy farming are being met at this farm.

CLA interacting with Shri.Narayan Dairy Farm Owner

HF cross Calf from Genomic semen

Success story documented by

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600 Chick scheme of Animal Husbandry with technical support of Certified Livestock Advisor (Poultry)

600 Chick Scheme of Animal Husbandry

The Department of Animal Husbandry of Himachal Pradesh designed 600 Chick Scheme for "Special Central Assistance (SCA) to Scheduled Castes Sub Plan (SCSP)" with the objective of improving the income and nutrition of poor schedule caste households. Under this scheme, benefits had been provided to the BPL families belonging to schedule caste categories. Subsidy has been given to the beneficiaries for providing 600 day old chicks, feeders, drinkers, and feed for initial feeding. Chicks in the batch of 150 (no), starter and finisher feed had been provided to beneficiaries in 4 shifts in the gap of every 3 months.

Success Story of Yan Singh

Sh. Yan Singh is a resident of Barmaadi village (Sainj Dist Kullu) and is a daily wage labourer. His family was facing hardship as Sh.Yan Singh had met a horrific accident and was completely unable to work as wage labour for his livelihood. During that time, Dr. Randhir Singh, Veterinary Officer and CLA (Poultry) and his team encouraged him to be a part of 600 Chick Scheme of Animal Husbandry, Himachal Pradesh and provided all the information related to scheme to him. He has shown a keen interest in the scheme and attended 7 days training on poultry farming at Poultry Farm Sundernagar (Mandi) as suggested by the CLA. He constructed a pucca (permanent) well-ventilated (good cross ventilation facility) shed (200 square feet) with adequate lighting facilities with the initial financial help given by the Department before arrival of hatch. Later a hatch of 150 day old chicks as well as 10 feeders, 10 waterers, and 10 bags (45 kg each) of starter and finisher feed have been provided to the beneficiary.

Day Old Chicks

10 Days old chicks

45 days old birds

50 Days old birds

Dr. Randhir Singh, Veterinary Officer and CLA (Poultry), has provided all the technical support and made regular visit to his shed and to get a feedback about the various interventions. He informed that 600 chick scheme and technical advice of the CLA (Poultry) has provided great financial support to his family. Out of150 chicks, only 10 birds died. So mortality rate was only 6.6%. As all the birds were broilers, their immunity and growth rate were also good. According to him, at the age of 3 months, the average body weight of birds was about 2.5 to 3 Kg. These birds were sold locally at price of 100/ kg i.e. Rs.200-250 per bird.

So the net income from selling the birds is as follow:

- Total Birds provided: 150 birds
- Mortality: 10 birds

  Total birds left= 140
- Total no of birds sold= 140
- At the age of approximately 3 months, price of one bird (approx 2.5 kg) = Rs 200
  - Price of 140 birds= 140×200 = Rs 28,000/-

  Approximate expenditure in feed and electricity= Rs 5,000+500= Rs. 5,500/-
  - Net profit= Rs 28,000-5,500=22,500 in one shift.
  - Total Profit in four shifts = Rs 90,000/-\

The income from poultry has encouraged Sh. Yan Singh to adopt poultry rearing as profession in the future. He wants to re-invest the profits and expand the farm operations. The successful execution of scheme by Sh. Yan Singh has drawn the attention of other resident families that were previously unaware of this low input farming.

Technical advice provided by

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Sustainable goat farming with Osmanabadi goats

BACKGROUND:

Mrs. Junku Pereira is a progressive woman goat farmer, maintaining twenty-seven Osmanabadi goats at her goat farm in Thivim village, Pernem Taluka of North Goa. Before starting of the Osmanabadi goat farm, she had undergone five days training on "Scientific Goat Farming" at ICAR –KVK North Goa.

During the training KVK arranged theoretical and practical lectures on scientific housing, feeding, breeding and health care management, and one exposure visit to a goat farm near Dharbandoda, South Goa. From this training, Mrs Junku Pereira got all the information regarding goat farming and marketing of the goats.

She purchased 15 female and five male Osmanabadi goats from Latur District of Maharashtra, which is a home tract of Osmanabadi goats, in December 2019. Before that, she constructed low-cost raised platform goat shed by using locally available resources like coconut flanks for slatted floor. She also planted CO-5 perennial fodder in half acre and started hydrophonic unit producing 60-100 kilos of hydroponic green fodder per day to solve the problem of green fodder.

In addition to this Mrs. Junku Pereira is also buying goat feed ingredients and dry fodder from the market. To make goat farming more profitable she is drying goat manure and packing in one kilo plastic pouches and selling to nearby apartments in the same town. She is also cultivating her own organic vegetables using some goat manure. This in turn saved money as she was not buying vegetables from market. She practiced all the scientific practices of goat farming i.e. feeding, breeding, housing, health care management and marketing (selling her goats on the basis of body weight with a premium rate).

Interventions made by Certified Livestock Advisor:

ICAR –KVK North Goa conducted five days of certified training on "Scientific Goat Farming" and gave all the basic information required to start goat farming.

As a part of Certified Livestock Advisor programme, **Dr.Udharwar Sanjaykumar Vithalrao** working as SMS (Animal Science) at ICAR –KVK North Goa has conducted five days certified training on "Scientific goat farming". The training covered all the basic information required to start goat farming and helped the farm women in the areas of selection of breeding stock, construction of scientific goat shed, setting up of hydroponic fodder and preparation of concentrated feed, primary aid etc., He also supplied CO-5 hybrid Napier fodder slips and advised cultivation practices. He has undertaken regular visits to Mrs. Junku Pereira's goat farm for the treatment of sick animals, demonstrated deworming, vaccination in goats, provided timely advice on marketing of goats and tried to solve many problems related to goat farming through phone and WhatsApp. Scientific Management of Goats was promoted through training, frontline demonstrations and field days.

Horizontal Spread

The intervention had a high impact. As a result, seven neighboring farmers have started scientific goat farming after seeing the profit gained by Mrs. Junku Pereira.

IMPACT OF ECONOMIC GAINS

Mrs. Junku Pereira started selling surplus male goats of 10 months to one year old whose body weight is around 28-30 kilos and earned a gross profit of around Rs.12,000/- per buck. She is selling goats on the basis on live body weight @ Rs.400/- per kilo.

During the lockdown period, she sold a total of seven males (from December 2019 to January 2021), and got a gross profit of Rs. 78,500/-. She has spent a total of Rs. 38,500/- towards purchase of dry fodder, concentrate feed, and medication. Thus, she earned net profit of Rs.40,000/- from the sale of male goats. In addition to this, a total of 8 female goats added in the herd worth of Rs.96,000/-.

In Goa, there is a high demand for goat manure. As per the advice of Dr.Udharwar Sanjaykumar Vithalrao SMS and CLA (Goats), she is packaging dry manure in one kilo pouches and selling it to nearby residents at Rs.15/kg. She earned an amount of Rs.24,000/-from the sale of manure last year. Overall, a net profit of Rs. 64,000/-was made by Mrs. Junku Pereira by the sale of bucks and manure from 20 goats in the first year. Since the goats gave one kid in the first year and will give twins in the next kidding, hence, expected profits will be higher in the ensuing years. Besides its economic benefits, it has also created employment opportunities for family labour.

GLIMPSES OF SUCCESS

Success story promoted and documented by

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