



Case Study

Strengthening Desi Backyard Poultry Systems through systematic improvement in management practices and healthcare services...

Desi Backyard poultry (BYP) based production systems generate small but useful incomes, especially for women in rural areas. However, its potential as a livelihood activity is not fully realized. This can be attributed largely to a lack of systematic understanding of the losses which occur in absence of good management practices. Desi Backyard Poultry systems face serious challenges with respect to bird mortality which leads to sluggish, even negative population growth.

The experience of BYP farmers in Chinnamulagada village (Manyam district, Andhra Pradesh) is a case in point of the transformative potential that can be achieved through systematic interventions around (i) improving health care services for BYP and (ii) facilitating adoption of good management practices.

In a span of less than 8 months, the BYP rearing households in Chinnamulagada were able to cut down their losses (due to bird mortality) by almost 95% and as a result triple their assets (flock-size)!!

Strengthening Desi Backyard Poultry in Chinnamulagada

Farmers in Chinnamulagada used to rear a few Desi poultry birds each. However, their flock-size did not increase beyond a certain limit due to high mortality of birds. Main causes of high mortality in BYP were frequent disease outbreaks and predation. The resulting loss led to very low to null returns from rearing BYP. In absence of vaccination services, outbreaks of diseases such as Ranikhet, Fowl Pox often resulted in wiping away entire flocks within a short span of 2-3 days. Besides, the farmers did not have suitable night shelters which led to high incidence of bird mortality/loss due to predation and theft.

Other factors responsible for stagnant growth in bird population and incomes from BYP included (i) difficulty in replacing dead/lost birds, in absence of local breed farms assuring regular supply of chicks, (ii) lack of good management practices around handling eggs, hatching etc.

In order to address these issues, farmers in Chinnamulagada village were supported to establish night-shelters for BYP as part of the HDFC Bank Parivartan^[1] FDRP project implemented by WASSAN in that region. One of the women farmers had also received support from ITDA^[2] - Seethampeta to establish a Breed Farm Unit (refer to illustrations below). Additionally, all BYP rearing households were motivated to form a Common Interest Group (CIG) and contribute a fixed sum in the CIG every month. The money was used to deploy one of the BYP rearing women from the village as a vaccinator, thus ensuring timely and affordable vaccination for birds as per the local disease calendar.

[1] In total, the HDFC BANK PARIVARTAN FDRP project has supported 400 night shelters and 4 breed farms in Manyam District, Andhra Pradesh
 [2] Integrated Tribal Development Agency



Desi Birds Breed Farm



Households



CIG Poultry Fund



Vaccinators

FOUR PILLARS OF THE DESI BYP PRODUCTION SYSTEM

- [A] **Good management practices at household level:** Adopting improved practices such as night shelters, regular vaccination, deworming and feed supplementation so that households can maintain 10 hen units throughout the year and earn decent livelihoods through sale of birds.
- [B] **Vaccination Services:** Building capacity of local women to provide vaccination services, each one serving 50-100 households on a per visit charge basis.
- [C] **Breed Farm Enterprise:** Support local Breed farm enterprise which produces approximately 1000 chicks every year. These breed farms supply chicks, growers etc. to other BYP farmers in the vicinity, besides earning decent income from sale of adult birds. Each breed farm (spread across 0.5 acre approximately) entrepreneur can earn anywhere between Rs. 60000 to Rs. 1.5 lac per annum from sale of birds-adults, growers, chicks and fruits, vegetables.
- [D] **Poultry Fund:** Common Interest Groups consisting of all BYP farmers contribute towards a common fund that is used to pay the community vaccinator for her services.

Systematic improvement in health care services and adoption of good management practices for BYP systems



Community speaks

(A lesson in the power of participatory processes)

During a recent village meeting with the community^[3], a participatory assessment exercise was carried out to assess the outcomes of the interventions (as mentioned above) and their effect on the BYP production system in the village. The participants included 17 farmers (out of the 25) who had been supported with night shelters, vaccination services and breed farm unit. The meeting was facilitated by WASSAN Field staff.

The exercise proved to be a valuable lesson in conducting participatory evaluation/impact assessment together with the community in an open, systematic and efficient manner. The community was initiated into a discussion with the help of a visual tool – mapping households in their village and nudged by the facilitator(s) from time to time. The discussion was facilitated in the following manner:



Participants were asked to:

- [1] Draw their village map (residential area), identify the households who received support for building night shelter (mention initials of names)
- [2] Next, they had to identify their respective households in the map
- [3] They were posed with four questions – a) flock size in their respective household (before intervention), b) average mortality -no of birds that died in a year per household (before intervention), c) average mortality -no of birds that died per household in a year (post intervention), d) average flock size in their respective household (post intervention)
- [4] Next, the group was nudged to estimate loss – multiplying annual bird mortality figure into assumed average value / bird in money terms.
- [5] Finally, the participants were asked about the change (if any) in household consumption of desi poultry pre and post intervention.



In order to further validate the findings of the participatory exercise, the field team collected data on the same aspects in a nearby non-intervention (or control) village- Yathamguda, immediately after the field exercise in Chinnamulagada.

Case of Chinnamulagada

(Comparison between pre and post scenario in intervention village, also vis-à-vis non-intervention or control village)

The table - 1 below captures responses of meeting participants as well as BYP rearing households from Yathamguda village (control village) against key assessment indicators – flock size, annual bird mortality, corresponding monetary loss due to mortality, change in household consumption patterns etc. It presents a comparison between intervention and non-intervention scenarios.

Table –1: Community response on status of Desi BYP

| Key assessment indicator | Chinnamulaga Village | | Yathamguda Village |
|---|----------------------|-----------------------|--------------------------|
| | Pre-intervention | Post-intervention (●) | Non-intervention village |
| Total no of respondents (No.) | 17 | 17 | 10 |
| Avg. flock strength per household (No.) | - | 11 | 4 |
| Annual Bird mortality in the village (No.) | 102 | 5 | 273 |
| Annual loss in income from Desi BYP due to mortality (Rs.) | 40,800 | 2000 | 1,09,200 |
| Average annual Bird mortality in the village/HH (No.) | 7 | 0 | 27 |
| Average annual income loss / HH due to bird mortality (Rs.) | 2,400 | 118 | 10,920 |
| Farmers consuming Desi Birds (No.) | 2 | 10 | - |
| Average annual consumption of Desi birds/HH (No.) | 1 | 4 | - |

(●) Post intervention data for Chinnamulagada village was reported for a period of 8 months (as the intervention was 8 months old)

102

Pre-intervention
(Chinnamulagada)

5

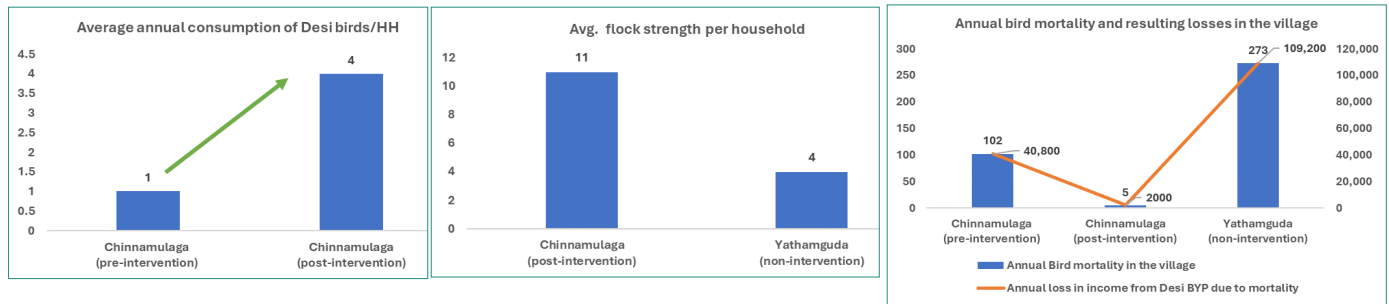
Post-intervention
(Chinnamulagada)

273

Non-intervention
(Yathamguda)

Annual Bird Mortality

[3] The meeting was part of the visit by Senior team members of HDFC Bank CSR Parivartan



Analyzing Community Responses

Provision of night shelters and access to regular vaccination has resulted in a 360-degree transformation in the Desi BYP economy in Chinnamulagada village.

Looking at data captured through community responses in *Table*, one can sufficiently conclude that the intervention led to (a)

- drastic reduction in bird mortality rate
- corresponding reduction in monetary losses
- marked increase in flock size
- consumption of Desi birds at the household level.

Annual bird mortality came down from 102 birds to 5 birds after introduction of improved management practices (night shelters) and vaccination services – **a 95% reduction in a course of 8 months!**

In pre-intervention Chinnamulagada the corresponding economic loss from bird mortality was Rs. 40,000, which came down to Rs. 2,000 after the intervention.

Yathamguda (non-intervention village) continued to witness high bird mortality, comparable to pre-intervention Chinnamulagada- 273 birds died in a year, amounting to a monetary loss of approximately Rs. 1.09 lac

Taking average flock size per household for Yathamguda (non-intervention) as a proxy for pre-intervention flock size in Chinnamulaga, the flock size per household almost tripled – from 4 to 11 birds in post intervention Chinnamulagada.

This increase in flock size or asset correspond to Rs. 2800 per household in money terms (assuming sales price/bird as Rs. 400).

Also, there was marked improvement in household consumption of Desi BYP post intervention- average 4 birds in a year from 1 bird during pre-intervention period. Also, the percentage of households consuming Desi BYP increased from 12 % to 59 % in Chinnamulagada.

Conclusion

The transformation in Chinnamulagada village exemplifies how simple yet systematic improvement in Desi Poultry systems can have a transformative impact by way of fostering resilience and improving farmer incomes. Their relevance becomes even more pronounced in case of special ecosystems like arid, semi-arid, forest fringes etc.

Based on our experience over last 7 years with Desi BYP systems, we want to make a strong case for future Policy and program design (BYP based livelihoods) to co-opt the following design and implementation aspects:

- Engaging Self Help Group (SHG) or Common Interest Groups (CIG), as they ensure better management of poultry against illness and morbidity;
- Working with locally established and reputed non-profit rural development organizations helps in implementation of projects;
- Forging collaboration between Gram Panchayats, Development organizations, local breeding farms, Department of Animal Husbandry (DoAH), and tribal welfare organizations (in tribal areas);
- Supporting Desi Poultry Breed Farm Enterprise spread over half acre with fenced boundary, housing 50 hen units. These farms supply desi bird chicks, as and when required, at reasonable rates to about 100 households across 4-5 villages in the vicinity;
- Localized and paid preventive healthcare, through local youth and women as poultry health workers to help with vaccination;
- Enabling and backstopping these community vaccinators through training and ensuring consistent supply of thermos-stable vaccines for common diseases (this system of supply and provisioning for vaccination costs can be anchored by local community- based organizations)
- Promote community-managed insurance of birds for protecting households against risks and to assure asset replacement. ■

Acknowledgement with thanks

The content, photos and design of the case study was prepared by the team at WASSAN.

For further queries related to the Desi BYP model, and the ongoing HDFC FDRP project in Manyam district of A.P., **please reach out to:** Mr. J.V. Jaya Prakash, Program Manager - Watershed Support Services and Activities Network (WASSAN) | Email: jayaprakash@wassan.org