

KEGGFARMS

Leveraging Traditional Indian Rural Practices and Existing Capabilities to Enhance Livelihoods

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Introduction



Meet Anjali Maiti from 24, South Paraganas, West Bengal. She is a middle aged woman who is the sole bread winner of her household comprising a bed-ridden husband and aged father-in-law. She lives in a single room kutchra hut which she shares with 50 Kuroilers! Kuroiler rearing contributes to almost 50% of her income and she gives it credit for ensuring that they have enough to eat. Since she started keeping Kuroilers, her belief in herself has increased, her social standing has improved and she is confident that her Kuroiler-based livelihood will

generate enough income even if her husband does not contribute. In her words “*Kuroiler Nahin To Jeevan Nahin*”.

Anjali’s story above aptly summarises the impact of Keggfarms’ promoted Village Bird called kuroiler in alleviating chronic poverty among the poorest of the poor by ensuring stability of income. While this is a poultry-based intervention, it derives inspiration from the belief that sustainable development is possible only by upgrading existing systems, through acceptable, manageable and affordable inputs within the capabilities of rural households. An approach that calls for adoption of practices that they cannot, in practical terms, understand or financially afford, is not likely to achieve significant and lasting results. Hence since the early 1990’s, Keggfarms is working very closely with the community, across 13 states, to provide them a high-yielding, low-cost village bird at their doorstep thereby converting a non-remunerative traditional poultry rearing activity into a means of additional and sustainable income.

Background

About Keggfarms

Established in 1967, Keggfarms is one of India's oldest poultry-centric organisations. It was set up with the intention to make a fundamental contribution to the development of poultry in India. This was translated into action by pioneering India's first Genetic Breeding Program of high yielding stock. Keggfarms was among the first companies, not only in India, but anywhere in the developing world to develop this with demonstrable results. As a result of Keggfarms' intervention, though way back in the 70's, India today stands as the only country outside the developed world, which is self-sufficient and self-reliant in high-yielding poultry and is able to compete favourably with the very best in the world. Therefore, this industry has developed on the basis of a concept that was pioneered and validated by Keggfarms.

Advent of 1990's: globalisation altered the poultry industry scenario

Things were running smoothly - Keggfarms was growing fast, respected, honoured and well-regarded - until 1991 happened. India opened up to globalisation and became ready to receive foreign investments. From a self-reliant, self-sufficient closed economy, we were suddenly exposed to global competition, and all business organisations were caught unawares.

To survive, every industry was left with primarily two choices: a) meet the global competitors, who came with the advantages of technology, a great international brand name and far deeper pockets, head on, OR b) to integrate, assimilate and become a part of the global interplay by partnering with the global players. From Keggfarms' point of view, no matter how good the stocks were, they were too small to take on global competition. Joining hands with much larger global players would result in a partnership of unequals and would have killed Keggfarms' identity which had been so proudly built over the last twenty plus years. Hence this too was not a plausible option. The dilemma remained "What was to be done?"

Village poultry: an ignored opportunity

There had to be a third option. On probing deeper, the leadership at Keggfarms realised that the Poultry Revolution in India was all about big farms, industrial farms, and large farms. It required being close to the big markets because that's where they were of use. Village Poultry was about low production as it was consumed locally. Schemes sponsored by the Government and International Development Agencies sought to introduce some kind of watered down model of Industrial Poultry into the

village environment, which was rather unsuited to reality of rural India. Even today, whilst there has been much success in commercial poultry production and the industry has grown by leaps and bounds over the last two decades, backyard poultry has neither received much attention by researchers or commercial participants, nor has the public sector made any significant breakthrough.



Industrial Poultry

Chicken is a genetic mechanism that yields highest quantity of eggs or meat at the best feed conversion ratio in the least possible time.

Profit- Sale proceeds less cost of feed, medicine, labour, power etc.

Provides occupational opportunities and sizeable incomes

Two different varieties of birds, one for eggs and the other for meat.

Host of complex viral/bacterial diseases

Village Poultry

Chicken is a natural bio converter of no cost household agricultural and natural waste into eggs and meat

Profit- Total sales proceeds

Household activity involving women, yielding supplementary incomes in their hands

The same one type of bird for both eggs and meat

Low disease incidence- Primarily Newcastle

For Bottom of the Pyramid

It is worth noting that women who grew poultry in the villages were at the very bottom of the economic and social pyramid. The more affluent villagers usually owned cattle and it was the poorest and often the lower castes, landless labour, tribals and other marginalised classes that were unable to own cattle of their own; thereby resorting to less capital intensive Village Poultry Farming.

Traditionally practiced by a number of rural households

Government statistics suggested that there were close to 300, 00,000 (three crore) households in rural India raising poultry traditionally. Assuming a household of 6 persons per household, it translates into 1800, 00,000 (18 crore) people in India, who, in one way or the other are associated with rural poultry.

Additionally, it was an age-old women centric traditional activity but of very little financial significance.

KEGGFARMS niche: Linking business with pro-poor development through traditional practice of village poultry

Motivated by the possibility of being able to establish a niche for themselves, Keggfarms continued to study the Village Poultry Industry. The more they explored it, the more they found it exciting and challenging. Initially it was perceived purely as a business activity.

However the discovery of possible social impacts through this activity led to the emergence of a greater purpose. It no longer remained just a task but became a mission and a cause. **From a pure business-oriented entity, in the early 1990's Keggfarms re-established itself, this time as a social enterprise.** The aim was to devise a pro-poor, rural-specific business model, which could potentially convert the poorly remunerative traditional poultry into a significant and sustainable livelihood opportunity.

Challenges as a business

- There was no successful precedent in this area, only a long list of failures, and this heightened the risk inherent in such an untested mission.
- The resource limitations of Keggfarms were a significant constraint.
- Keeping the organization motivated enough to sustain this adventure through uncharted waters was in itself a huge task
- The venture had no guidebooks to refer to and much of what is found in research papers was not particularly relevant.

"Keggfarms have the experience of breeding in India since 1970; we have options; we have the experience of seeing India, and we know this country. We know poultry. Can we use our skills, experience, facilities -all that we have- and turn it around to a sector where we could create a niche for us; our own identity; where we could probably get away from this huge international interest? May be not, may be yes, we'll see!"

**Mr Vinod S Kapur,
Chairman, Keggfarms**

Challenges as a technical model

- Genetic Development of a hardy village-specific poultry that could deliver significant gain in production in hostile and resource-poor foraging village conditions
- Creation of a Cost Effective Delivery System of 'Started' chicks to the doorstep of households in remote villages, even in very small numbers
- Devise a System to minimize Early Chick Mortality and provide modicum of immunization.

Despite the seeming absurdity of the mission, the leadership at Keggfarms strongly believed in the worthiness of this mission. This is what provided organisation-wide energy and inspiration to take the challenges head-on. And what followed, as they say, is history.

The Kuroiler model: innovations to convert an incidental women centric activity into a remunerative household activity

Inventing kuroiler: Product innovation through appropriate technology

Having decided to venture into rural markets, the next step was to have a product that would sell itself in Indian villages. Keggfarms was formally recognized by the Department of Science and Technology as an RandD Centre, and it developed a rural specific multi-coloured dual purpose bird through selective and controlled crossing of high yielding indigenised poultry germ-plasm. Branded as KUROILER, it is not only capable of thriving in harsh village conditions but also produces 140-150 eggs and attains the body weight of well over 3 Kgs by principally scavenging on village household agricultural and natural waste. This bird enabled the village households to achieve almost 4 times higher production both in terms of Eggs and Meat than the non-descript poultry stock and yet essentially needed similar sustenance. In addition, it ensured that the bird retained its colour, agility and disease resistance abilities.



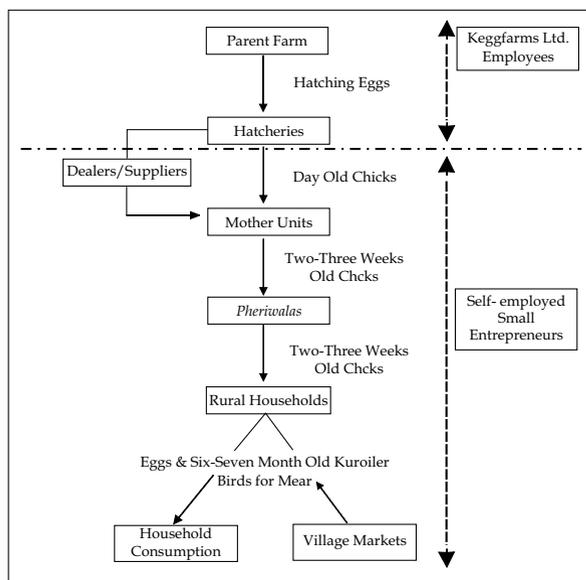
Table 1: Comparative Features Between A Non-descript Bird and Kuroiler

FEATURES	Non-Descript Desi Bird	Kuroiler
Colour	Multi-coloured	Multi-coloured
Egg Production in field conditions	40 Eggs	150 Eggs
Egg production commences	32 weeks	24 weeks
Body weight potential.	1 Kg. - 1.1 Kg.	3.5-4Kg.
Feeding	Household, agricultural waste;	Household, agricultural waste
Housing	Rudimentary shelter	Rudimentary shelter
Potential Income`	Marginal	Substantial

Innovative distribution channel involving community members through voluntary interdependence of all Stakeholders

The biggest innovation was the development of the delivery chain. The system effectively enabled gains of modern science and technology to percolate down to remote village households at the very bottom of the pyramid. This was achieved by adapting the traditional practice of village vending to be extended to Kuroilers and creation of Mother Units in locations which were practical to reach from the centres of Keggfarms production and were accessible to the vendors. The various players in the delivery chain and their key responsibility are enumerated below:

Figure 1: Kuroiler value chain



The various players in the delivery chain and their key responsibility are enumerated below:

The supplier/ dealer: This person is involved in identifying potential mother unit (MU) owners to take up chick rearing and coach the

existing MU owners to produce quality chicks (2-4 weeks old). He/she also manages demand and supply at the MU level; keeping track of the demand and ensuring supply of DOCs (Day Old Chicks) via the Keggfarms' field representatives. Where relevant, he also communicates availability of ready chicks to the pheriwalas. He is also the source for technical advice.

Mother Unit: The Mother Units purchases DOCs from the dealer/supplier and rears them for an initial period of two weeks. In some areas, the MU retained the chicks for upto 4 weeks and herein quality brooding management ensures that healthy chicks reach the households. Vaccination is also taken care of here.

Pheriwalas: Pheriwalas purchase the chicks (10 days onwards) from the Mother Units and sell them to the farmer households. The Pheriwalas is the sole agent in the chain interacting directly with the farmer households and addresses any complaints/problems with health of the birds, mortality etc. S/he provides inputs to rearers based on dialogue with the dealer for technical backstopping or seeks guidance from medical storeowners. A pheriwalas is free to purchase chicks from any mother unit and is not assigned one particular MU owner.

Key impacts: poverty alleviation, women empowerment and food security

Keggfarms is the only organization, anywhere in the world, that successfully addresses the rural poultry market in significant numbers on a commercially sustainable basis.

While the figures tell the story of more and more people growing Kuroilers, how the activity become an economic activity is another story in itself.

Box 1: Key Kuroiler Impact Figures

Number of Poor Households Reached	: One Million
Number of States Reached	: 13
Additional Income Generated	: INR 450 million
Number of Micro entrepreneurs established	: 5000

Keggfarms has experienced sustained growth in demand. This continuing increase in Kuroiler placements, now approximately 20 million per year on a cash basis by rural households and small farmers, without any aid is the ultimate measure of benefits that the rural households and small farmers are reaping from this stock when compared to self-generated non-descript local poultry stock. Competition has also started emulating the Keggfarms

Model. A whole new economic activity has emerged which did not exist till it was started by Keggfarms. The key outcomes are as follows:

Contributing to household income: Rearing the hardy Kuroiler bird is seen as a viable option to earn an income. Since the investment is low and the returns higher, it has been within the reach of most to make the investment.

Gender Empowerment: Since Village Poultry is mainly a women-centric activity; increased remunerative capacity through Kuroilers improved the financial and social standing of women. It also helped them provide significant inputs for family education, health and welfare.

Providing livelihoods: Dealers, Mother Units, Vendors and Small Farmers emerged as micro-entrepreneurs located in rural or peri-urban India thereby stimulating the local economy.

Nutrition and food security: Ready availability of eggs and chicken meat for which the village population is otherwise dependent on expensive retail outlets in the city significantly aids provision of nutrition.

Environmental effect: Kuroiler is used as a bio-converter not because it's a chicken but because it has the ability to convert rubbish into food. There exists no parallel example in the whole world of such a bio-converter.

Validation of impact by external parties

The Keggfarms intervention has been studied and reported upon both by National and International agencies.

The Govt of India, Department of Animal Husbandry and Dairying, set up a committee headed by a senior technocrat from NABARD to study the rural poultry scenario with a view to include this sector in the venture capital fund of the department in the Tenth Five Year Plan. The study revealed that Kuroiler farming in the traditional style was being extensively practiced in villages with substantial benefits to rural stakeholders. NABARD presented bankable and venture capital funding for Kuroiler farming projects in rural areas. In 2009, a joint venture of FAO and NDDDB (SAPPLPP) studied the impact of the Keggfarms model of Kuroiler farming in rural India. Results indicated that very substantial benefits were accruing to rural stakeholders.

Enabling factors

The key factors which have been instrumental in making the KUROILER MODEL a significant success can be enumerated as follows:

a) Creating solutions to suit the environment: Village specific product based on traditionally practised systems and setting up a strong delivery chain

The industrial poultry model tried to take an urban concept developed in developed nations and adapt it to the village environment. It was not focussed on creating solutions that were suited to the environment and its requirements. Keggfarms, however, approached the issue bottom up. The Keggfarms Model is not a modified version of something implemented in the West. It is totally rooted in Indian 'cultural roots' with 'culture' Indian systems, and the Indian way of life. It focussed on upgrading the existing systems through acceptable, manageable and affordable inputs within the capabilities of the existing village poultry rearers.

The R&D was done to develop a highly village specific poultry bird to deliver significant gain in productive performance in hostile, resource-poor villages in foraging conditions, exactly like the traditional birds did. It was a product that would sell itself in the Indian villages. The second solution was the innovative delivery chain developed by the company. This chain facilitates a commodity serving the poorest in a financially sustainable manner without the support of any external agency.

b) Sustained conviction in the concept backed by risk taking courage and ability

Turning from a business enterprise to a social enterprise was a total change in direction for Keggfarms. It meant completely phasing out its industrial products and switching to Kuroiler. It meant changing the production system, its geographic locations, and markets—almost everything. The company shrank to 50% of its size, before starting to grow again. Key decisions were required to be taken as it was almost like turning a huge ship by a complete 180 degrees. The company withstood all financial deficits, for as long as it took. Suppliers were taken into confidence and extra credit gained from them. Some fixed assets also had to be sold off. It took twelve years to structure and achieve financial sustainability. It took twelve years of undeterred conviction, national pride, and self-confidence to turn the story around.

c) Inspirational leadership

Sustained employee morale was another key factor that ensured this transition for Keggfarms. The change was ushered in gradually and in a local context. There were no behind the doors decisions and each employee was taken into confidence. Secondly there were no dismissals or retrenchments. Thus, regular communication, no behind the door decisions and involvement of key staff in drafting the strategy were the main pillars to keeping the company together. Most importantly, it was the affirmation of confidence from the leadership, a positive attitude and a never-say-die spirit which instilled faith among the employees and ensured sustained levels of personal motivation.

Sustainability and replicability

The Kuroiler practice showcased how the private sector can create a viable business model; build rural market acumen and doorstep delivery mechanisms in a sustainable manner by utilising the traditional knowhow of women. The key elements which make this model sustainable are as follows:

- **Right technology to create a product:** the product was an upgrade over the existing available product in the villages and not a completely new product. The resultant product was a dual purpose bird which was as hardy as a local village bird but still produced many more eggs and grew faster than desi(local) birds. In addition, it ensured that the bird retained its colour, agility and disease- resistance abilities.
- **Interdependence of agents in the delivery chain:** each link in the delivery chain depends upon the other. This inter-dependence of agents is the key to its sustained viability. This has been made possible because the guiding principle behind setting up this system is that there must be 'profit for all' so that it remains meaningful for the local community to engage in.
- **Working within the rearers resource base:** rearers valued the kuroiler business because of low rearing costs and the fact that the enterprise fitted well within their limited resource base, social hierarchies, anxieties and gender-based household dynamics. These elements have been critical for ensuring the sustainability of this initiative.
- **Pro-poor approach:** the model reaches out to some of the poorest households in rural india where livelihood options are very limited and village poultry is a critical livestock asset. By ensuring valuable additions to the bird and door-step delivery mechanism, the model ensures sustained interest among the poor to keep kuroilers. The model has also demonstrated its impact on ground by increasing food security and income .

Kuroiler can be used extensively across India, other Asian countries and Africa for production of eggs and chicken meat by village households in the traditional no cost manner. These chickens convert the agricultural and natural household waste to eggs and chicken meat than the local birds, far more efficiently.

Going forward, Keggfarms is looking at extending the model in international markets. They would provide the basic product material but the total solutions will have to be modified in each country depending upon their native systems and practices to reach their local populations.

Box 3: Successful Experiments to Replicate the Kuroiler Model:

- a) A trial conducted under supervision of Arizona State University and Uganda with replicated multi location trials in Uganda, proved conclusively that Kuroiler had the potential of yielding almost 3.5 times higher income than the local birds.
- b) Keggfarms is now exporting Kuroiler Hatching eggs to Ugandan Government and will supply Kuroiler Parent Stock, so that they can produce Hatching eggs locally. Likewise in Burundi.
- c) Ethiopia has reported huge success and total acceptance of the Kuroiler by village households
- d) Indian and State Governments have adopted the Kuroiler model for promotion of village poultry

Awards and accolades

Today, Kuroiler is an acknowledged tool for poverty alleviation, food security and women empowerment for rural India and even overseas. Over the last few years it has been a proud recipient of various awards and accolades as follows:

- Marico - Business World Innovations Award by Dr. Mashelkar in 2006
- EMPI - Indian Express Award for viable poultry culture micro-entrepreneurship by Dr. APJ Abdul Kalam, former President of India
- CII recognition for Keggfarms' social contribution and innovation at CII Innovation Summit, Bangalore and CII Leadership Summit Delhi, 2006, 2007 and 2008
- Invited to the United Nations to address G-77 representatives to share the journey of Keggfarms

In conclusion

Despite the growth in GDP, about 250 million rural households in India still live on less than US \$1 per day. The role of pro-poor development and participation oriented projects in eliminating poverty cannot be debated enough. The Poultry sector has been no exception and the Poultry Revolution of the 1990's only sought to introduce some kind of watered-down model of Industrial Poultry into the village environment, which was out of touch with rural ground reality.

Having pioneered genetic breeding of high quality poultry stocks for the Indian environment as early as 1972, Keggfarms set out to devise a pro-poor, rural-specific business model around poultry. This led to focussed interventions in village poultry; especially since it is a wide-spread, traditional, women-centric activity carried on across an estimated 30 million rural poor households in India. The challenge thus far had really

been its non-remunerative nature as it remained a household activity. The Kuroiler Model, through its innovative product and delivery mechanism helped convert this household activity into a means of sustainable livelihood.

The Keggfarms' story is more than that of a poultry organisation, of creating a product which is in line with the practices, values, attitudes and capabilities of traditional rural population. It is a great example of the fact that it is only through aligning the mind-set to the realities of the situation that situation-specific answers emerge.

India has always been a land of traditions and a land of opportunity. The Keggfarms story is about leveraging these traditions and opportunities to develop India-inspired alternative route to sustainable growth in the country. Going forward, it might merit exploring this approach of leveraging Indian tradition for sustainable livelihoods at a national level. This can be done through key academia, policy makers, society influencers, community based organisations and other like-minded organisations spreading the word via their work on inclusive growth.

If it is being recognized the world over, it is time we sat up, proud of our ethnicity, and acknowledge its impact towards sustainable development

Mother unit



Pheriwala



Natural environment

Village haat



Upscaled product



Happy faces

