GALVmed
Protecting Livestock – Improving Human Lives

# Newcastle Disease - The business of poultry protection


In rural India and Nepal, opportunities for women to contribute to household income are scarce. However, one asset most women do have access to is backyard poultry. Families typically keep five to ten chickens, which scavenge for scraps and insects and provide a boost to household diets or income, through the sale and consumption of eggs and meat. Expanding or intensifying informal livestock rearing activities such as backyard poultry rearing is frequently advocated as a way out of poverty for rural families. But to achieve that goal, households in India and Nepal first need an affordable way to protect their birds from a widespread and highly contagious killer – Newcastle Disease (ND).

According to Peetambar Kushwaha of the Global Alliance for Veterinary Medicines (GALVmed), ND is the biggest challenge for backyard poultry production in rural and peri-urban areas, killing 80-90% of backyard chickens every year when outbreaks of the highly pathogenic strain occur. Vaccines against the disease have been available from urban veterinary stockists for many years, but are manufactured and sold in doses to meet the needs of large broiler and layer farms with thousands of birds. The vaccines are therefore beyond the reach of the backyard poultry keeper, both geographically and financially, and government campaigns for village-level vaccination, often erratic, have rarely provided adequate protection.

## Appropriate and effective vaccination

GALVmed's approach to tackling the problem involves a dual approach: a partnership with India-based vaccine manufacturer, Hester Biosciences Limited, enables the production and commercial distribution of a thermo-tolerant (i.e. heat tolerant) ND vaccine. This is important in order for the vaccine to be suitable for use in remote rural areas where transport is slow and electricity supplies are scarce and interrupted. A second feature was the production and distribution of the thermo-tolerant vaccine in much smaller doses more appropriate for the number of birds kept by backyard poultry keepers.

Ensuring widespread use of the vaccine is the next part of GALVmed's strategy. Three pilot projects, completed in 2012, proved highly successful in setting up a sustainable business model for vaccination. Rural vaccinators are recruited and trained, and are able to obtain the vaccine from local veterinary


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drug retailers who, informed by the project, are usually quick to appreciate the business case for stocking it. This approach is now being scaled up to serve around 300,000 farming households in six districts of Nepal and four districts in two Indian states. Over the next two and a half years, around 5 million households in three states of India will be covered through a much larger upscaling project.

Nepal and India, an intense two years of work has seen vaccinators recruited and trained, the vaccine supply system set up and up to four rounds of vaccination completed in some areas. Two GALVmed partner organisations, Heifer International and Helen Keller International, have been responsible for the field-level implementation in Nepal. They report good results, both in terms poultry health and the satisfaction of farmers and vaccinators with the system.

Fattepur village, on the outskirts of the city of Nepalgunj in south-western Nepal, is one site being targeted for ND control. The village is close to a forest area and has a high proportion of indigenous and marginalised people living on very low incomes. Heifer Nepal, having been working to support holistic community development in Fattepur, partnered with GALVmed to introduce ND vaccination for backyard poultry. Members of the Sayapatri women's self-help group, for example, have been trained in housing, feeding and sanitation for poultry, and have had their birds vaccinated by a local animal health worker, trained by the NGO. A nearby 'agrovet' has begun to stock the vaccine, and both ND vaccination and treatment for internal parasites are now regular practices in the village. As a result, the average number of birds owned per household has increased by 3.8 times (from 5.4 to 21), and egg production over the year has increased fivefold. Average yearly earnings from sales of eggs and birds have risen from around US$48 to nearly $180 per household. This is also significant in increasing the status of the women within their families and communities.

## A profitable, sustainable model

Key to the success of the system is that it makes financial sense for the vaccinators. During the pilot phase, GALVmed found that an animal health worker needed to earn INR 5000 ($80) per month from vaccinations and other services for their business to succeed. If too many people are trained in one area, individual vaccinators are unable to earn enough money and give up. When setting up new vaccination projects, partners are therefore asked to consider factors such as the size of the target area, the number of birds and how far a vaccinator can travel in a day, in order to gauge potential earnings.

When asked about challenges, Kushwaha is more concerned about the commitment of villagers than vaccinators. "Initially, farmers are very enthusiastic about getting their birds vaccinated because their birds are dying," he says. "But after five or six months, if they don't see the disease, they become reluctant to vaccinate again. And if they don't, the disease returns." As a result, a major component of the ND control programme is to convince poultry keepers to vaccinate their birds regularly – ideally once every three months – or risk losing them. Video documentaries to help raise awareness have been produced in three languages and are shown in villages using portable video systems. These are backed up by discussion sessions, posters including murals and, in some parts of Nepal, FM radio.

GALVmed's long-term aim is to establish a sustainable system for vaccination, based on three elements: a steady supply of vaccine in appropriate dosages and quality; a cadre of vaccinators who are trained to carry out regular rounds of vaccination; and farming population that understands the need for regular vaccination. "Once we get that done," says Kushwaha, "the system will run itself on a business model. Vaccine producers and retailers can make money from increased sales. Vaccinators can make money from their work, and farmers can make money from their birds."


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