



Protecting Backyard Poultry from Newcastle Disease

Newcastle disease is a highly contagious viral disease, spread via airborne droplets produced by infected birds coughing and by direct contact with their faeces, contaminated feed, implements or clothing. It is the most common disease affecting village and back-yard poultry in developing countries. It affects all types of poultry, especially chickens and turkeys. The virulent strains common in Africa and Asia cause enormous losses, often wiping out all the poultry in a village and surrounding villages.

There is no effective treatment for the disease. Commercial poultry worldwide is usually routinely vaccinated with inactivated or live vaccines which protect birds from clinical disease. Inactivated vaccines are administered by injection. Live vaccines are administered through spray via aerosols, in drinking water or by direct inoculation (drops) into the eye or nostril. This means that they can be delivered to a large number of birds relatively quickly and effectively on commercial poultry farms.

Small-scale poultry keepers

Free-ranging scavenging poultry are the most common form of livestock kept throughout the developing world. For the poorest households they are likely to be the only type of livestock kept; an important source of high-quality protein and essential micro-nutrients, and their most readily saleable asset. Poultry are often owned and managed by women and children for whom they represent an important source of cash income in times of need through the sale of adult birds, chicks or eggs. Newcastle disease is currently one of the most important constraints to village and back-yard poultry production, impacting on household nutritional security and income generation.

In a recent study in Mozambique it was shown that controlling Newcastle disease had the potential to increase incomes derived from poultry by 42%: adoption of additional simple low-cost husbandry measures increased this to 82%¹.

Making Newcastle disease vaccine available to small-scale poultry keepers

Currently very few backyard or village poultry keepers in sub-Saharan Africa or Asia vaccinate their poultry against Newcastle disease or any other diseases – or, indeed, provide any other inputs or management. As a result, although poultry production in these free-ranging systems is almost free, output is very low and losses to predation and disease, especially Newcastle disease, are high. In these conditions almost all eggs are required to maintain the flock and few birds survive to maturity. GALVmed has partnered with various commercial entities and organisation to create a sustainable supply system for quality thermotolerant ND vaccine in appropriate dose presentation and train vaccinators to make available regular service of vaccination to backyard poultry

¹ Luseba, D., Katsande, C., & Kibuuka, E (2011). Market assessment Newcastle Disease vaccines – SADC. Report submitted to GALVmed.

keepers in sub-Saharan Africa and south Asia. In south Asia, GALVmed is partnering with a number of organisations and private companies including; Orissa based NGO Bhodal Milk Producers Cooperative Society (BMPCS), the Society for Upliftment of People with People's Organization and Rural Technology (SUPPORT), Heifer International India and Heifer International Nepal, SAMPARK - Sampark Samaj Sevi Sanstha, Hellen Keller International Nepal and Hester Biosciences Limited. In Africa, GALVmed is working with private distributors and community health care providers to vaccinate chickens especially in Burkina Faso, Cameroon, and Democratic Republic of Congo, Kenya, Tanzania and Uganda. Some of our partners in Africa include; Veto Impact in Burkina Faso; CAPHAVET Cameroon; Centre Agronomique et Vétérinaire Tropical de Kinshasa (CAVTK) in DRC; PHARMAVACS, Chasa - Morogoro in Tanzania; Eram, 3 VVets and Brentec in Uganda; Kenya Veterinary Vaccine Production Institute, Animal Welfare and Public Health (AWARPH) and Sidai in Kenya. GALVmed is also supporting training of vaccinators.

From pilot projects to scaling up production

There has been remarkable progress towards the delivery of Newcastle disease vaccine targeting village poultry keepers. During the Protecting Livestock phase one (PL1), ND pilot projects reached tens of thousands of households. Scale-up during PL2 has seen these pilots grow in scale to reach hundreds of thousands of households. In India, GALVmed has teamed up with Hester Biosciences Limited to vaccinate up to 100 million chickens using the ***thermotolerant LaSota Newcastle disease vaccine***. The vaccination will cover three states of Chhattisgarh, Jharkhand and Odisha which will see over 2000 vaccinators hired and trained to serve farmers. Hester will also create a sustainable distribution network linked with its current network and conduct regular adoption standards periodic sero-monitoring for disease surveillance and measuring impact. This initiative will reach a total of 5 million households and 192 million doses of ND vaccine will be used.

In Uganda, GALVmed is collaborating with Brentec Vaccines International to manufacture and distribute the ***thermotolerant I-2 Newcastle disease vaccine*** which will be sold in 50 doses reconstituted packages thereby addressing the twin problems of cold chain and packaging for smallholder village chicken rearing. Brentec will produce and distribute 20 million doses of the I-2 ND vaccine to realise the vaccination of smallholder chickens in 70,000 household in four districts. In the broad field of small-scale agriculture this represents a phenomenally rapid diffusion and uptake of a new technology and is testament to the inherent value of vaccines. This bodes well for the work of GALVmed.



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