GALVmed
Protecting Livestock – Improving Human Lives

Monitoring and Evaluation
Study Cover Sheet
May 2018

Newcastle Disease Vaccine and Poultry Productivity Changes: Mayurbhanj, India

At a glance

Aim of study	A before and after comparison of poultry productivity changes in smallholder households associated with the Mayurbhanj Market Development Newcastle Disease (ND) vaccine distribution field project.
Field study dates	Baseline May/June 2014 Endline October 2015
Location	India (State of Odisha) Mayurbhanj District
Total sample size	Number of surveyed smallholder households in GALVmed Market Development ND intervention project areas: Baseline 421 households Endline 441 households

Study Outputs Available on GALVdox

- Study write up
- Raw data files
- PowerPoint slides for use in presentations
- Peer-reviewed publication in Preventive Veterinary Medicine (2017)

Strategic Context - why did GALVmed undertake this study?

This study assesses data from one of the earlier GALVmed Market Development field projects where commercial ND vaccine supply chains were being introduced to serve smallholder customers. In addition to the ND vaccine; Fowl Pox vaccines, dewormers and improved poultry husbandry practices (relating to feeding and housing) were also introduced to smallholders. The primary project focus, however, lay in ND vaccines since this was considered the primary constraint in smallholder poultry production and the primary market opportunity for the animal health industry.

The project commenced in 2013 in Mayurbhanj District, Odisha State, India. At this time, GALVmed's Market Development team were initiating field projects where the main focus was ND vaccines, but where the strategic context was wider as GALVmed sought to build a better market understanding of the basic smallholder market issues (e.g. to what extent will smallholders realise productivity gains through better animal health inputs, to what extent will they pay the market price for these inputs, to what extent will supply chain actors, such as vaccinators, realise sustainable economic returns from these products).

This Monitoring and Evaluation study focuses on the analysis and interpretation of smallholder data, foremostly aimed at building market understanding for GALVmed and the numerous partners engaging the smallholder animal health market. It is also understood that the data emanating from this (and similar) studies may be of interest to researchers looking to undertake more rigorous impact assessments. Here GALVmed aims to produce useful and robust preliminary data that can point to interesting areas of subsequent research. It is not, however, in GALVmed's remit to undertake these rigorous and costly research studies, but rather to demonstrate the potential to the research community.

Headline Observations

- The Mayurbhanj District surveys were rolled out to smallholders prior to vaccine delivery (baseline) and after 16 months (endline). The questionnaires investigated various parameters including productivity, husbandry practices and income from poultry in the project area.
- Smallholders in the project area experienced significant poultry productivity improvements from the use of the ND vaccine and other animal health products (Table 1).

Outcome	Baseline	Endline
Adoption of ND vaccine	19%	98%
Average household flock size	15	33.5
Average household poultry income	USD 30.90	USD 134.30
Expenditure on poultry-related medicines and vaccines	USD 0.63	USD 2.60
Expenditure on poultry feed	USD 1.61	USD 6.29
Poultry house ownership	15%	42%
ND cited as a major disease responsible for poultry death	81.5%	1.4%

Table 1: *Summary table comparing parameters at baseline and endline.*

- Statistically significant increases were seen in the number of clutches per hen per year, the number of eggs per clutch, the number of chicks hatched per clutch per hen, and the number of poultry raised to maturity.
- There was also an increase in poultry consumption over the life of the project, with a reduction in respondents eating no poultry meat (3% at endline versus 8% at baseline), and more respondents eating poultry at least once or twice a week (7% and 6% more respondents, respectively).

Further Studies

Further field studies will not be undertaken. The outputs from this study will be useful in assisting future impact modelling exercises where the beneficial impact of a portfolio of products will be considered.

Cross Reference: Other Related GALVmed M&E Studies

Study	Relevance
ND Vaccine and Poultry Productivity Changes Studies (Africa/Asia)	These studies are before and after comparisons of poultry productivity in smallholder households associated with GALVmed's Market Development field projects.
ND Vaccine and Husbandry Practices Study (India)	Comparing smallholder poultry husbandry practices between adopters and non-adopters of ND vaccine in India.
Poultry Productivity Studies	The Poultry Productivity Studies are impact / productivity related studies looking to make a direct comparison between ND vaccine adopters and non-adopters.
ND Pilot Project Durability Assessment	This study assessed the long-term commercial viability of the ND vaccine supply chain.