

Increased access to Newcastle disease (ND) vaccine, especially the thermo-tolerant I-2 ND, is boosting backyard indigenous poultry farming in Ugunja, a small market town in Siaya County, Kenya – near the Ugandan border. The I-2 ND vaccine, when administered regularly, has reduced significant poultry losses caused by this fatal disease, which can wipe out 80-90% of infected chicken flocks.

Access to the vaccine has been facilitated by, among others, the Global Alliance for Livestock and Veterinary Medicines (GALVmed) – a non-profit company that makes livestock vaccines accessible and affordable to smallholder farmers in Africa and South Asia. GALVmed works through vaccine distributors in Kenya and links them with local agrovet outlets. Vaccinators, government extension agents and farmers can access the vaccine from outlets spread throughout the county. Locally, a vial of 50 doses costs vaccinators Ksh100 (\$0.97), and farmers can purchase a single dose for Ksh2 (US\$ 0.02).

Success stories from smallholder livestock producers

Raymond Sulwe, a recently retired accountant, recalls how ND mostly wiped out entire flocks of indigenous chickens at his home in Hawagaya Village when he was young. However, since December 2016, Sulwe has reared over 100 improved indigenous chickens with superior traits such as fast growth rate and high egg production. During this time, Sulwe has also vaccinated his chickens against ND three times and has not lost a single bird to the disease.

"I have not experienced it [ND] but that's because I've protected them through regular vaccinations," says Sulwe. But he has seen his neighbours struggle with ND, which he attributes to a lack of knowledge on the importance of vaccinations. The increased availability of the ND vaccine has made Sulwe confident about his future in farming. He aims to expand his poultry enterprise to 1,000 birds and tap into Siaya County's rapidly growing market for indigenous chickens.

This rising demand for indigenous chickens in Siaya has made Francis Odiwuor, a freelance consultant and part-time poultry farmer, more vigilant about vaccinating his flock against ND. At his farm in Sirang, Odiwuor currently rears approximately 1,400 birds of improved indigenous breeds including Kenbrew, rainbow rooster and Kuroiler – having started with just 40 in 2010. Through years of vaccinating his chickens, Odiwour learned that ND vaccinations should begin when chicks are just seven days old and continue, every three months, until they are sold. In the last five years, Odiwuor has seen demand for indigenous chicken breeds increase by over 30%, and he makes a 30% profit on his total costs. "They give better margins and are easier to sell in the lower pyramid [to rural people with low incomes] of the market," Odiwuor says.

For George Omondi, a full-time crop and poultry farmer from Manyala Village, access to the I-2 ND vaccine from agrovets like the Hodari shop in Ugunja town, has diminished his concerns during ND outbreaks. Omondi rears 200 indigenous chickens and states, "I vaccinate on schedule against ND, that's why I have never witnessed it, not even among neighbours as most people here vaccinate."

According to Evelyne Otieno, Operations Manager at Hodari Agrovet, increased ND vaccinations in recent years has been due to ongoing aggressive awareness campaigns since 2012, carried out by organisations such as GALVmed and Technoserve (international non-profits that promote business solutions to poverty), and Kenya's Ministry of Agriculture.

Support services for poultry keepers

Hodari Agrovet provides extension support and livestock management advice to their customer base of roughly 2,000 farmers, spanning a 30 km radius. Hodari Agrovet sells much of its I-2 ND vaccine to poultry farmers at twice weekly local markets. According to Dr Julius Owade, Managing Director at Hodari Agrovet, 40% of its products sold are poultry-related due to the dominance of poultry farming by the local community in recent years.

In 2012, Hodari Agrovet sold between 200 and 300 doses of the I-2 ND vaccine weekly. This increased to around 2,500 doses in 2017. Monthly sales of poultry feed have also increased from less than one ton (eight to ten, 70 kg bags) in 2012, to 12 to 15 tons by March 2017. "The population of poultry in this area has grown and our turnover is highest for poultry products," says Otieno.

Due to the economic importance of indigenous poultry farming, rearing methods in the local community have changed. According to Otieno, local chicken farmers used to keep poultry under almost zero input systems with little or no feed supplements and housing, but today farmers build sheds in which to keep their birds and have increased their uptake of improved indigenous breeds and commercial feed.

Hatching eggs from improved indigenous chicken breeds are in high demand and are costly. A tray of 30 eggs that are less than ten days old, and can be incubated for hatching, cost Ksh600 (US \$5.80) whilst eggs for consumption (which are over ten days old and therefore less likely to hatch) cost Ksh300 (US \$2.90). Local hatcheries, with the capacity to hatch over 6,000 chickens, have also sprung up in Ugunja to cope with the increasing demand. "Hatching is another niche for making money here," says Otieno.

Increasing the reach of the vaccine

To keep up with Ugunja's rapidly growing niche of indigenous chicken rearing, Otieno and Owade attended training on how to preserve the vaccine at the right temperature to ensure its efficacy when vaccinating the chickens. The training was facilitated by GALVmed and raised Hodari Agrovet's profile locally. "Farmers insist on getting vaccines from us because of our knowledge on proper handling (of the vaccine)," says Otieno. As a result, in a week, they can sell up to 5,000 doses of livestock vaccines to local customers.

Women traditionally rear chicken in Ugunja and according to Otieno, represent about 65% of I-2 ND vaccine buyers from Hodari Agrovet. The rest are youths, middle aged men and the elderly. The aim of Hodari Agrovet is to purchase a four-wheel drive vehicle with refrigeration capacity, which would enable them to reach more farmers in rural parts of Ugunja to avoid compromising the vaccine. According to Owode, in order to increase the reach of the vaccine, more local vaccinators need to be trained in providing and maintaining ND vaccinations.

Written by James Karuga





