



**MARKET
DEVELOPMENT
IN THE NIGER DELTA**



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“DEVELOPING COMMERCIAL MODELS FOR PROMOTING SMALL SCALE ANIMAL HUSBANDRY: LESSONS FROM MADE ”

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1.0 Introduction

Livestock production accounts for about 6% of Gross Domestic Product¹. Chicken and small ruminants (sheep and goat) form an important economic and ecological function in the agricultural systems in most rural communities. They are mainly kept for immediate cash source especially when things go tough. They are a good source of meat, eggs, wool and manure, and sometimes kept as savings or for risk distribution. They significantly contribute to the socio-economic life of many rural, peri-urban and urban poor households as they provide income, animal protein and intangible benefits including cultural and ceremonial purposes.

In the Niger Delta, at least 3 million households keep poultry. By MADE's analysis, the average flock size is 24 for traditional breeds which accounts for 70% of poultry produced in the Niger Delta; flock size for broilers and layers are 117 and 355 respectively. Poultry is primarily reared to meet households' nutritional needs, to be used as gifts, or a source of extra income during emergencies or financial hardship, and as a business. Farmers need a relatively small amount of capital to start a poultry farm. The production cycle for hybrid broilers by commercial farmers is short at six to eight weeks, so money is not tied up over a long period. Poultry meat and eggs are considered staple foods in the Niger Delta. Meat from poultry is popular, as chickens are cheaper than other livestock.

Similarly, the sheep and goats population in Nigeria was estimated to be 38 million and 57.3 million respectively in 2011. The greater proportion of these animals are however, largely concentrated in the North than in the South. Sheep and goats are one of the major contributors of animal proteins for human consumption in Nigeria. It is ranked as the second most important suppliers of meat protein to the population after cattle and they contribute about 35% of the total animal meat production in Nigeria.

Small scale poultry and small ruminant farmers in the Niger Delta are often sparsely distributed, and the commercial distribution channel was centred to service commercial farms which are often in clusters and near commercial cities, reaching them would involve the development of last mile actors domiciled in local communities.

Veterinary pharmaceutical companies and livestock feed companies do not view small scale farmers (poultry keepers, small ruminant) as viable business prospects for private veterinary services due to their individually small flock size and low purchasing power. They were oblivious of the largely untapped market that lies in servicing small-scale poultry and small ruminant farmers' primarily because no reliable data was available to the companies at the time on this segment of the market. MADE had shared with the companies information on the sheer size of this market (estimated at 70% of local domestic production of livestock). This is a viable untapped market for the companies. MADE helped the companies discover that a sizeable market does exist and can be served profitably. Edo state consumes approximately 2,000 goats daily serviced by small ruminant farmers in and outside the state. This presents a hugely untapped market for feed companies.

2.0 Background to MADE's Poultry and Feed Finishing Interventions

Market Development in the Niger Delta (MADE), funded by DFID, seeks to reduce poverty and conflict in the Niger Delta region through developing rural agricultural markets and other sectors that impact poor people. The programme has been addressing underlying systemic constraints that adversely

¹ <https://www.nationsencyclopedia.com/Africa/Nigeria-ANIMAL-HUSBANDRY.html#ixzz68EFbmDQh>

affect the lives and livelihoods of target beneficiary groups. The constraints, which limit productivity of smallholder farmers and processors relate to technical and business skill gaps, access to improved technology and business linkages.

MADE I (September 2013 – February 2018) surpassed its target in achieving a 15% income increase for 150,000 people in the Niger Delta area across five value chains: Agricultural Input, Cassava, Palm Oil, Poultry and Fisheries. Building on the success of MADE I, DFID approved a costed extension for additional two years (March 2018 – February 2020) with additional target of 155,000 smallholder farmers and entrepreneurs experiencing increased incomes. It is expected that 30,000 of those with increased incomes will be poor low-skilled youths and women from Edo State that are susceptible to human trafficking. For Edo State, the programme in its second phase seeks to promote alternative sources of income that can deter youth and women from attempting a risky migration that may result in becoming victims of human trafficking. The programme's second phase is also focused on increasing its impact in five frontline states with the greatest instability challenge in the Niger Delta, namely, Delta, Bayelsa, Rivers, Akwa Ibom States and Edo States.

In the poultry and feed finishing interventions, MADE sought to address constraints around lack of access to quality inputs such as vaccines, poor access to veterinary services and lack of information on best poultry and small ruminant practices among smallholder farmers in the Niger Delta. An analysis of both sectors revealed these constraints in depth:

- a. Poor public extension services and expensive private extension services limits the access small poultry farmers have to vaccination services against the New Castle Disease (NCD) which affects poultry and Peste des Petiti Ruminant (PPR) virus which affects small ruminants. This results in poor animal husbandry practices by small holder farmers who do not have knowledge or access to services that can reduce their animal mortality from these diseases.
- b. Farmers often lack basic planning skills, evaluation and analysis tools to support the functioning and growth of their farms. This results in poorly run farms as farmers do not keep track of their expenses, thus not able to properly calculate their profitability and access the much-needed finance from banks.
- c. Poultry and ruminant inputs such as feed, drugs and vaccines often come in large packs making them unaffordable for small poultry and ruminant farmers. The result is that they depend on traditional methods of feeding their livestock, mostly allowing the animals to free-range which further increases their risk of diseases.

3.0 Developing Commercial Models for Promoting Small Scale Animal Husbandry

Given the challenges confronting small holder poultry and small ruminant farmers in the Niger Delta, MADE implemented market systems development interventions aimed at extending the supply of poultry and small ruminant inputs example drugs and vaccines, improved breeds and information on best management practices as well as enterprise knowledge to smallholder farmers across the Niger Delta in an affordable, pro-poor manner.

MADE facilitated access to and availability of vaccines to smallholder farmers in rural Niger Delta (against Newcastle Disease among other common poultry diseases including coccidiosis, E-coli, Fowl Pox, and Infectious Bursal Disease etc.) working through veterinary pharmaceutical companies such as Zygonis and Turner Wright to develop, test and scale up new distribution channels through

commercial service provision models known as Village Level Dealers (VLDs) and Village Level Vaccinators (VLVs).

In its second phase, MADE also initiated an intervention targeted at creating and strengthening intermediate brooding enterprise (mother units²) to improve access to affordable improved breeds³.

Poultry represents one of the primary sources of nutrition for households however the production cost and eventual yield per bird creates a challenge for rural households who often must choose between the high yield high cost broiler birds and low cost, low yield traditional/local birds – and they often produce the low cost local/traditional birds that do not provide sufficient nutrition for the households. Local birds typically have low productivity, long lead times to table weight of up to a year and low achievable table weight of 0.8 -1.2 kg. They are also characterized by lower laying rates - average of 40 eggs from achievement of table weight to consumption. They are however hardy, less fatty, good brooders, and are preferred by some consumers for their taste. Exotic breeds such as broilers and layers on the other hand require intensive rearing system which requires good technical expertise and heavy financial investment from the farmers.

The financial requirement for production of broilers often leads households into opting for the local birds that can free range and are resistant to diseases. Across the Niger Delta, many households keep traditional low yielding poultry breeds as micro-level income generating assets. Nonetheless, these breeds are highly susceptible to diseases which results in high mortality rates and loss of income.

To address the need for higher yield birds with lower production/husbandry requirements, several hybrids have been attempted. Noiler birds are a high yield, low input (HYLI) breed of chicken patented by Amo Farms Sieberer Hatcher to address the challenges of poor protein nutrition and food insecurity in rural communities that traditionally raise birds as a primary source of nutrition. Noiler requires semi intensive husbandry care to rear them to table weight and it survives on low feed rations primarily consisting of locally available food materials. Noilers are hardy and resistant to common diseases; Noilers only require specialized husbandry practices for the 1st six weeks of life and these are usually offered by brooding facilities referred to as Mother Units. The development of mother units is required to ensure availability and accessibility to these improved breeds that are suitable for improving household nutrition.

MADE sought to improve access by supporting the creation and capacity strengthening of Mother Units to improve supply and availability of improved chicken breed (Noiler) to improve income - generating activities by households and smallholder farmers as well as ensure availability of protein requirement for poor households.

In the livestock sector under the feed finishing intervention, MADE worked with a feed company, Animal Care Services Konsult to develop a feed finishing technique that encourages small ruminant farmers to feed-finish their goats and get it ready for the market within 45 days of adopting improved practices. MADE facilitated the introduction of this feed finishing model that entails intensive system

² Mother Units are specialized poultry brooding facilities that provide husbandry services to ensure growth and low mortality of these birds during the most vulnerable period of their life cycle which is primarily from the day-old chick stage to 6 weeks. After the age of 6 weeks, the birds are sold to small scale poultry farmers to be reared to table weight.

³ These breeds are cross breed of indigenous and exotic birds with combined benefits of higher table weight / meat on bone when compared to indigenous breeds while been hardier than exotic breeds, thrive on low quality feeds and can be reared in semi intensive conditions

of fattening ruminants aged between one and a half to two years for rapid weight gain through a combination of ruminant concentrates, good husbandry and veterinary attention.

The intervention addressed constraints in the small ruminant livestock sector which was characterized by the general lack of knowledge on modern practices resulting in poor feeding techniques, inadequate supply of feed and water, non-availability of shelter, poor veterinary attention, poor extension support services and non-utilization of supplementary nutrient requirement for faster growth. To address these constraints, Animal Care, through MADE's nudge, saw the need to develop their distribution channels and MADE supported them to initiate a distribution model where identified Paravets from the Ministry of Agriculture were trained as commercial service extension providers specifically targeting small scale ruminant farmers.

MADE facilitated a new knowledge-service driven business model by aligning appropriate incentives to livestock feed millers, paravets and local distributors of inputs to reach smallholder ruminant farmers in Edo and Delta States. This ensured the supply of feed supplements, vaccines and the accompanying best practices to achieve desired results of getting small ruminants like goats and sheep ready for markets faster, thus increasing smallholder farmers' income.

4.0 Lessons Learned from Implementing Commercial Models for Promoting Small Scale Animal Husbandry

- 1. A clear value proposition for serving smallholder farmers must align with the firm's commercial interests with their business, financial and technical capacity to deliver the business model.*

Interventions stand the risk of failing or detracting from its intended results if programmes do not engage partners on the basis of their will and strength. The programme identified and engaged Animal Care having seen their capacity and knowledge in the feed production industry in Nigeria. They had industry experience and had the right motivations for wanting to establish their feed production line in the Niger Delta, a step the company had hitherto never considered except for a few distribution and retail outlets scattered around the region. Through their engagement, the programme has exposed over 6,000 farmers (64% women) to improved feed finishing techniques within six months of piloting the intervention with an adoption ratio of 49%. However, while the engagement with Animal Care as a private sector partner worked out well, working with the public sector presented some challenges. The programme set out to engage the State Ministry of Agriculture to provide vaccination services to small ruminant farmers against the Peste des Petit Ruminant (PPR) virus, a highly contagious disease affecting small ruminants and leading to their high mortality. In Northern Nigeria, these services are provided by the government as part of their public extension services to farmers. The attempt to involve the State Ministry of Agriculture proved abortive; the programme did not have much success trying to get government to take up this responsibility. It has been observed that mortality rate of small ruminants is discouraging lots of farmers from adopting the business at full scale, given the risk of this periodic disease which could possibly wipe out a farmer's flock. Unlike the poultry sector where veterinary pharmaceutical companies are working actively to address the problem of Newcastle Disease and other identified diseases affecting poultry birds, the small ruminant industry presents a unique market opportunity for these pharmaceutical companies to explore.

2. Delivery channels must be profitable to the service providers and adapted to the profile and demography of the clients.

When targeting smallholder farmers, it is important to take into consideration the profile and demography of beneficiaries. In the feed finishing intervention, the programme found that rate of adoption of the improved feed finishing techniques largely depended on demography and financial capacity of clients. This implies that uptake by farmers in rural suburbs was quite slow given their subsistence farming practice where they kept a few free-ranging goats, and did not have the financial ability to adopt the practice at scale. On the contrary, the fast paced peri-urban and urban population had clients who were more ready to adopt the practices, investing more in expanding their stocking capacity when exposed to the benefits of feed finishing. The challenge then was how to get the smallholders in the rural areas, who remain the major targets of the MADE programme, to adopt the improved feed finishing techniques to increase their incomes.

A direct response to this was that the feed company agents encouraged farmers in these regions to form themselves into clusters to harness their resources collectively in setting up feed finishing homesteads where they can access feed at a discount and make it easier for the paravets to provide services to them as a group. Smallholder farmers are now adopting this approach. Isiuwa community in Ovia North Local Government Area got their small ruminant farmers into clusters and set up a homestead for their goats. They are now practicing the feed finishing improved techniques, accessing the services of para-vets who are guiding them on the improved feeding regime for their ruminants and providing necessary inputs and information services. Other groups are also seeing the benefits in coming together to access feed and services from input companies collectively. A cooperative in Okpella community in Edo State is setting up their homestead as they've seen the need to come together to access feed and services at discounted rates. The Edo Exporters Cluster has invested in a small ruminant ranch, which they are using as demonstration site to demonstrate the benefits of the feed finishing model. This is opening up opportunities for other feed companies to recognize and adopt feed finishing intervention as part of their production and distribution channels. Clearly, when value proposition is aligned with clientele's demography and profile, market systems interventions gain faster traction that way.

3. Projects must be learning and adaptive to develop the right business models to reach scale

It is often not surprising that projects may develop plans for interventions but on getting to the field, the team is confronted with realities which calls for a moment to reflect, learn and adapt. MADE implemented a pilot in 2015 with AgricProject Concept International (ACI) over a 4-month period in Imo State to provide vaccination services to smallholder farmers. The pilot targeted reaching 1,667 households with flock size of 15 birds per household, but managed to reach only 78 households. High attrition rate of vaccinators (at 90%) was a major reason for the poor pilot outcome. The reason was that vaccination service was seen not to be very profitable as a standalone business. Gross revenue per VLV was NGN2, 400 per month, so vaccinators dropped out. The opportunity cost was too low for them to continue.

Although the pilot missed its targets, it helped the programme to learn valuable lessons about the ideal profiles of the vaccinators. The question then was how best to reduce attrition rate of vaccinators and create demand for vaccination services by smallholder farmers. The programme had to think differently. It saw the need to redesign implementations that take into cognizance its partners' organizational strength and market trends.

As follow up from a consultative and experience sharing meeting with industry stakeholders including VPCs, the programme changed its approach from advising the VPCs on strategies and delivery approach to asking the VPCs to propose how they would solve the challenges of servicing the small-scale poultry farmers in the Niger Delta within a commercial value proposition. Two additional players emerged from this process – Zygosis and Turner Wright - which brought some changes to the intervention delivery approach:

- a) Changed the target from traditional backyard poultry (averaging 15 birds per household) to small-scale poultry farmers of flock sizes of up to 400 regardless of the bird type. This broadened the

- range of chickens vaccinated from traditional to include all bird types and increased the number of birds to be vaccinated in each household, potentially increasing the revenue of the village level vaccinators.
- b) Changed the focus of the intervention from addressing the problems of just Newcastle disease to other diseases affecting birds and creating distribution channels for agro vet companies to serve small scale poultry farmers with increased access to poultry inputs and basic veterinary services including vaccination. This increased the product flow through the channels created and significantly increased vaccinator profit.

The three poultry lead firms brought industry knowledge to the implementation process while trying to establish commercially viable models to develop their distribution channels but their willingness and readiness to adapt and respond to learning is what made the big difference. The learning here is further explored below:

Learning about profitable models: Zygosis and ACI proposed and implemented an entrepreneurship model, the Village Level Vaccinator (VLV), where the vaccinators were independent entrepreneurs who were resident within the target smallholder poultry producing clusters (village level vaccinators – VLVs). This kept the cost low but increased the potential risk for the vaccinators which could lead to a high attrition rate. Turner Wright on the other hand proposed and implemented a vaccination model where the vaccinators were salaried staff. It did this because it wanted to ensure the quality of the services rendered by the vaccinators. The vaccinators were kitted and seen as an extension of the company. All three companies saw the need to focus more attention on the vaccinator profile, but they soon observed that vaccination service was only profitable as a side business and not as a sole business. Two very important adaptations were made:

- a. Turner Wright changed their employee model to the franchise (entrepreneur) model used by Zygosis and ACI, after realising that the revenue to the company was not adequate to cover the cost of maintaining the vaccinators as employees
- b. The service provision model also evolved from village level vaccinator (VLV) to village level dealer (VLD) to aptly capture the range of services needed by smallholders, beyond the initially focused vaccination. This enhanced profitability of the model so that it attracted more entrants. Some of the successful village level vaccinators expanded their range of products and services to include sales of feeds, day old chicks, poultry equipment, debeaking etc. thereby increasing their profitability. On the basis of their entrepreneurial drive, the upgraded VLVs essentially evolved into Village Level Dealers, recruiting their own vaccinators in the process. Branding and kitting of the VLDs was also a key factor in the acceptance of the village level dealers by the farmers. A vaccinator kitted in a lab coat got more farmers' trust and more vaccination business.

Learning about untapped markets: Despite the initial differences in approach, the lead firms quickly realized that there was a very high population of small poultry farmers that were not being served; they had been unaware of these before going out to the rural areas to promote vaccinations with MADE. This enhanced their value proposition. They saw a significant market opportunity for small packed poultry health products (vaccines and drugs) which targeted the full range of small holder poultry farmers, including those with flock sizes up to 1,000 who previously had been underserved.

Project learning and adaptation – changing the target demography: The feedback on company interest and value propositions made the programme expand the demographic target from households with flock size of less than 200 birds to households with up to 400 birds, while the input companies provided services to all farmers domiciled in the community regardless of the size of their

flock. The programme had kept the intervention focused on smaller sized flocks, as 97% of beneficiary households surveyed by the programme had flock sizes of 1 to 400 birds.

4. Stimulating commercial demand for basic veterinary services requires embedding knowledge of good livestock management practices and enterprise development into service delivery

Access to knowledge and inputs (human and material) were constraints identified as affecting the growth of the small-scale animal husbandry sector. The expectation that things should be given free and the belief that traditional birds are resistant to diseases was a major issue confronting the company's ability to stimulate demand for inputs and services to enhance production and added value to the smallholders at the beginning. Accessing veterinary and feed finishing services was not common among smallholder farmers, partly because the farmers (especially farmers that keep local breeds) see mortality and low weight as normal problems, but also because farmers perceived local breeds to be more resistant to disease than hybrids. But though they may be resistant, they still record high mortalities to pest and diseases, and they are often disease reservoir that affect other animals. Local breeds can record additional weight gain if fed properly.

One of the critical success factors in the livestock and feed finishing interventions was the development of farmer engagement activities such as farmers fora, radio jingles, IEC materials and engagement with community groups to provide small-scale ruminant and poultry farmers with inputs such as feeds, vaccines and drugs and information on best practices. This stimulated demand for basic veterinary services which helped farmers manage mortality and increase their productivity. Working with lead firms whose incentive it is to develop the VLD and para-vet models enabled the successes now recorded in this sector despite the challenges posed by the volatile environment under coverage.

There was also the need to continue to build the capacity for para-vets to be able to handle health challenges of farmers' livestock. Most farmers, after knowing of the benefits, were very ready to adopt good livestock keeping practices. Animal Care began to provide technical training to the active para-vets to now be able to recognize and attend to health concerns such as diarrhea, cough and simple illnesses that could lead to dehydration and death in small ruminants. This increased their suite of service and improved their capacity to deliver. Farmers who have been exposed through training to the profitability of engaging and adopting new practices and seeing the contrast between traditional and improved methods have now shifted their practices: before, they held livestock for long periods for grazing, but have now shifted to feed finishing and selling livestock in just five weeks. They can then repeat the cycle more times, increasing their profitability.

In addition, the programme found that animal husbandry farmers often had limited information not just on good farming practices but also business principles such as planning, record keeping, stock management etc. To broaden the support market and increase its capacities to deliver value adding services, MADE supported the the agro vet companies to promote understanding of the commercial benefits of integrating an enterprise development, the Nigerian Agricultural Enterprise Curriculum (NAEC) training into their village level dealers training curriculum as part of their business strategy. The NAEC training helped the Village Level Vaccinators/Dealers to improve their business performance, thus increasing the number of farmers with not just increased access to essential veterinary services and products but broadened knowledge on enterprise management. This further

helped to stimulate demand for inputs and services as farmers increasingly saw the need to develop their business enterprises to be able to access more opportunities in future.

5. Engaging women organisations is key to increasing outreach to women

Women play significant roles in the value chain as producers, wholesalers / retailers, processors and as big buyers of animal products but they often are not properly integrated due to barriers of cultural limitations and norms. Engaging women business organisations is critical to increasing outreach to women. 90% of small poultry farmers with flock size of less than 50 are women, while 45% of small-scale poultry farmers with up to 400 birds are women. On the feed finishing intervention from baseline studies conducted by MADE, only 28% of women own livestock but they are mostly involved in providing care for the animals either on a paid or free conditions. The reason is that some cultures frown at women owning property of worth. Ruminants was seen as a store of value and most times a measure of a man's worth and status in society so many women are not seen to invest in livestock business especially at a large scale but they are very prominent in the market as buyers and sellers of feed finished products. At some of the initial trainings that MADE facilitated with the lead, women's attendance was often very poor. If women were strongly present on the demand side, it made more sense to purposely target them on the supply side (largely regarded as the men's domain). If more women got into the feed finishing business as both producers and marketers, they stood a chance of making more money than when they restricted their roles to just marketing on the demand side. In response, MADE with its partner, Animal Care identified and worked with women membership organizations such as QBWA (a women BMO) and Women in the New Nigeria (WINN) to mobilise more women to participate in the activities such as farmers fora, and to support the agro vet companies to mainstream women in their outreach activities, for example, ensuring that time fixed for events was suitable to women's schedule given their traditional roles as wives and mothers. This strategy worked! Within a few months of their engagement, women's participation in training and demo activities began to increase. As at Quarters I and II of MADE II, outreach to women stood at between 43 – 50% but following the engagement of women BMOs to reach more women, a significant increase to 64% has been recorded.

Within this time too, MADE integrated feed finishing as one of the discussion topics in its reviewed Gender Talk Guide (GTG), a discussion manual developed by MADE to provide guidelines for the facilitation of discussions among women and men to share ideas on how to address the socio-cultural barriers that hinder women and other marginalized groups from actively participating in economic activities and other livelihoods empowerment programmes, particularly agricultural value chains. The BMOs could then use this as a mobilization strategy and gender inclusion tool to get more women into the business of small ruminant farming. The results continue to show an upward trend in outreach to women while also combining efforts to strengthen adoption which, however, is a result of several different factors.

6. In developing the distribution network, it is important to take into consideration the local context

...Dealing with the challenge of poor infrastructure and bulk-breaking of products

Poor cold storage facilities make it challenging to preserve drugs and vaccines that had to be kept at a narrow range of temperature to maintain their viability. Using thermos tolerant vaccines which can stay outside of the cold chain has allowed vaccines to reach farmers in areas with limited infrastructural support. Developing local market actors and supporting them with target-based incentives such as fridges and generators ensured the availability of inputs in local communities with poor cold chain.

Once the lead firms understood the potential of selling small vaccine dose vials to small holder poultry farmers, the lead firms began autonomous investments to secure appropriately packaged thermo-stable small dose vials which exclusively targeted poor farmers with small flock sizes (i.e. 100, 200, and 500 dose vials). Turner wright has invested in bulk breaking four of its products (Piper vet, Lay wright, Embaceryl and Vita Wright) from 1,000mg /500mg to 30g targeted at farmers with flock sizes of less than 50 birds. This is evidence of additional private sector investment in serving MADE's target beneficiaries.

Through feedback, Animal Care has continued to improve on their feed quality and resized packaging from not just 25kg bags but 5kg bags (a first of their product lines) in response to smallholder farmers seeking to buy ruminant feed. On seeing this huge potential market and volume of sales possible, Animal Care which had before this time concentrated on marketing only poultry feed within the Niger Delta region has now established a production line to cater to ruminant livestock feed. Again, to increase their ability to reach small scale farmers, Animal Care reduced their minimum quantity order from 30 tonnes in their established poultry feeds distributor network to 1 tonne in their ruminant feed distribution.

Para-vets have adopted the use of easier to handle inputs such as tablets for deworming of livestock or as antibiotics such that they reduce dependence on vet Doctors who may not be available in local communities. This has enabled these para-vets to be able to provide and meet the health needs of farmers' livestock in local communities and villages. It is important therefore, to think of the local context when seeking ways to develop a product distribution network. Failure to do this implies availability of products and services that are not suited to farmer needs and location peculiarities.

7. Diversifying service delivery across sectors increases profitability for support market actors, providing more incentives to deliver services to farmers

Households sometimes keep multiple types of livestock whether it is poultry, fish, small ruminant or cattle. Over time, it has been observed that service providers in a bid to also increase its profits provide these services across value chains and sectors thus diversifying their service offering and clientele than if they just focused on servicing one sector thus causing a strong mobility by service providers across all the sectors. Evidently, it was the thinking behind this that caused the village level vaccinator (VLV) model to evolve into the Village Level Dealer (VLD) with further programme experience showing service providers who started providing services in poultry and have now extended to fisheries, and vice versa. This is a valuable lesson for other service providers looking to increase their income by providing suites of services across sectors

8. For a relatively new concept as the feed finishing model, the importance of quality training must not be underestimated

When introducing new improved farming practices to farmers, it is important that quality time is spent providing adequate training to all market actors. MADE facilitated the process for Animal Care to train paravets on how to provide induction services (deworming, nutrient-based supplements, etc.) to small ruminant farmers, but these trainings were compressed into just a few hours which was very little time to have the paravets adequately prepared to meet the challenges of servicing poor smallholder farmers with small ruminants. Seeing that this did not work well, the programme adapted to ensure that a robust training package which went beyond the 'classroom' was delivered by Animal Care to the paravets and from paravets to farmers. Refresher trainings are conducted on a continuous basis and paravets are building relationships with the farmers in such a way that it is stimulating demand for their services unlike when paravets had to run one-off trainings to farmers. Today, the paravets and farmers are finding more value in the symbiotic relationship they have

created over time. Feed finishing practice is relatively new. Not many traditional small ruminant keepers have this knowledge, therefore, adequate resources invested in training and retraining with a combination of other support services will go a long way to promote adoption and increase scale.

9. Leveraging Aggregation to facilitate access to markets

Aggregation or bulking of products and services are effective ways to enable service providers and small-scale poultry/small ruminant farmers' access markets for their services and birds/goats. Service providers achieved greater profitability by aggregating farmers' birds for vaccination services and other range of products such as feeds, drugs, debeaking, etc. This is also being tried out for enabling farmers access markets for their feed finished goats and birds

Accessing markets has been seen to be a determinant factor to farmers adoption of new practices. They are often more ready to accept change when there are guaranteed off take markets. This is evident from the fattening program introduced to farmers. As a result of promoting aggregation, there is wider adoption of business models. Aggregation is proving the efficacy of leveraging one person or a group to reach many other farmers or beneficiaries at scale.

5.0 Conclusion

In the Niger Delta, poultry and small ruminants such as goats and sheep are primarily reared to meet households' nutritional needs or to be used as gifts, or a source of income during emergencies or financial hardship. Particularly for goats and sheep, not many farmers in the region treat it as a business like it is in the North and for the few who do, poor knowledge on improved practices for poultry and small ruminant keeping and limited access to health products prevent them from seeing the commercial viability in running the business. More so, small scale poultry and small ruminant farmers in the Niger Delta are often sparsely distributed, and the commercial distribution channel was not strategic enough to reach them, as most veterinary pharmaceutical companies and feed companies did not see small-scale farmers as viable business prospects.

MADE helped the companies discover that a sizeable market does exist and can be served profitably. A number of key lessons emerged from this process of linking private sector companies and service providers to smallholder poultry and small ruminant farmers. The importance of identifying and working with the right partners, targeting beneficiaries based on their profile and demography and adapting to stern realities in the field were some of the lessons explored in this learning document. It is hoped that private sector companies interested in animal husbandry interventions and local organisations and service providers within the space will gain some insights from MADE's experience to design and implement commercially viable models in livestock production and markets.

