

USE OF DIAGNOSTIC TOOLS TO ENHANCE ENTERPRISE UNDERSTANDING OF PROBLEMS AND STIMULATE SUSTAINABLE ADOPTION OF COMMERCIALLY DRIVEN SOLUTIONS: THE CASE OF THE NIGERIAN AGRICULTURAL ENTERPRISE CURRICULUM (NAEC)



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5 April 2019

Use of Diagnostic Tools to Enhance Enterprise Understanding of Problems and Stimulate Sustainable Adoption of Commercially Driven Solutions: The Case of the Nigerian Agricultural Enterprise Curriculum (NAEC)

After over four years of adapting the Nigerian Agricultural Enterprise Curriculum (NAEC) for training of smallholder farmers and entrepreneurs in the Niger Delta, MADE II Programme documented the experiences for wider dissemination to stakeholders. A learning event was held in Asaba (Delta State) on 2nd April 2019 to validate and consolidate the lessons. The learning event brought together government representatives, private sector service providers, veterinary experts, similar donor programmes and local NGOs to share MADE's and its implementing partners' experiences and knowledge generated from implementation of the NAEC. This paper provides a summary of the programme's experiences with using NAEC as a diagnostic and capacity enhancement tool for service providers and smallholders. From MADE's experience, NAEC is a resourceful tool that can be used to strengthen Nigeria's agribusiness sector and pave the way for poverty eradication.

Background to MADE II Programme

Market Development in the Niger Delta (MADE), being 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 affect the lives and livelihoods of target beneficiary groups. These 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. With respect to Edo State, the programme seeks to promote alternative sources of income that can deter youth and women from attempting a risky migration that may result in them becoming victims of human trafficking. The second phase of the programme is focusing on increasing its impact on the four states with the greatest challenge to stability in the Niger Delta, namely Delta, Bayelsa, Rivers and Akwa Ibom States as well as Edo.

Evolution of the Nigerian Agricultural Enterprise Curriculum

Most farmers lack adequate skills to run their economic activities profitably. They are also unable to diagnose and resolve problems preventing them from doing so. The Agricultural Enterprise Curriculum (AEC) was first promoted by the DFID-funded PrOpCom and USAID-funded Maximizing Agricultural Revenue in Key Enterprises and Targeted States (MARKETS). The NAEC was designed to address enterprise development capacity gaps by training smallholder farmers to employ a commercial approach to farming activities rather than using traditional subsistence farming practices.

NAEC is an interactive curriculum that empowers smallholder farmers to take a market-driven, commercial approach to their farming activities. Rooted in experiential learning methodology, the curriculum uses simulations, structured discussions, participatory exercises and peer-learning techniques and brings real-life experience and opportunity to the training room. MADE has identified the Nigerian Agricultural Enterprise Curriculum (NAEC) as a key tool to help market players we target to learn better management practices that will help them achieve success in their businesses.

NAEC training aims to enhance understanding and awareness of basic business concepts and market conditions that affect profit and productivity. It also introduced practical methods and techniques for planning, income projection, risk assessment, monitoring operating cost, debt management, savings and profit maximization, and highlighted the importance of good financial management (including cash flow), record keeping and market analysis. Finally, it provided participants with tools to formulate individual action plans to implement what they learned.

¹ Agricultural Enterprise Curriculum (AEC) https://www.makingcents.com/agricultureenterprisecurriculum

The original NAEC courses were developed primarily for cereals crops as this was piloted in the northern part of the country. It was later adapted for agricultural retailers and aquaculture enterprises to address poor enterprise performance among service providers and farmers. Training of Trainers were organized with a focus on Agricultural Development Programmes (ADPs) as the main delivery agents. The first phase of both PropCom and MARKETS sponsored the training of about 20,000 smallholder farmers, paying ADP staff to deliver the training. Unfortunately, because it was sponsored training, most of the trainers stopped delivering it after the two projects closed out and the tool became dormant.

In 2012, the Foundation for Partnership Initiatives in the Niger Delta (PIND) re-introduced the NAEC to address business management skills in the Aquaculture Sector. They worked with MARKETS and Making Cents International to modify the course, making it appropriate to aquaculture and then setting about designing a business model for turning it into a profitable training product which would be affordably priced so that farmers could pay for it. With these modifications in place, the first set of trainers were taught how to sell the product.

MADE worked with PIND to apply the NAEC in aquaculture and later mainstreamed some aspects of NAEC in its service providers model to reach smallholder farmers. MADE's initial adoption of the NAEC tool was to develop the enterprise skills of its Aquaculture Service Providers. A first set of 12 Master Aquaculture Service Providers (MASPs) received the NAEC training in 2014. Next, the MASPs developed a network of 36 knowledgeable Aquaculture Service Providers (ASPs). MASPs and ASPs have been actively selling pond management training (PMT), NAEC and other embedded aquaculture services in various locations across the Niger Delta. The fisheries sector outreach from inception of MADE I in 2013 to end of March 2019 is close to 16,000.



"I learned about the Nigeria Agricultural Enterprise Curriculum (NAEC) when a team of MADE staff visited Akure. They took notice of my interest in agribusinesses and selected me for training. In 2016, I participated in a NAEC Train the Trainer workshop organised by MADE. After the training, I started stepping down the practice as we were taught to do. We trained several farmers; introduced them to a range of improved knowledge using the NAEC and taught them better ways of managing their farms. Each of these interactive training ran for two days."

-Habeeb Abdulkadir, Ondo State

Initially MADE provided cost-shared financial support to the master trainers that trained the first batch of farmers. The training then incentivized other farmers to see the value of the course and then demand the training services of the MASPs. It also gave farmers the opportunity to sell the training by word of mouth to other farmers.

NAEC was basically like a master's in business administration (MBA) course designed for farmers and service providers to help them understand how to build and run their farms and services from a business-oriented perspective.

Adaptation of NAEC in the Poultry Intervention

The curriculum is found to be very adaptive. Its experiential learning nature allows for adaptation to locally appropriate practices, behaviours and value chains. NAEC trainees adopt and adapt lessons learned from these activities and apply them to their farming businesses. The lessons learned can be implemented immediately upon completion of the course - resulting in improved productivity and increased income.

Following success with application of NAEC in fisheries, MADE began adapting NAEC for poultry. MADE collaborated with PIND² in 2018 to facilitate a NAEC Train the Trainer exercise from February 28 to March 3. MADE collaborated with MARKETS II and Making Cents to develop the NAEC for Poultry course in late 2016 and introduced it in 2017. MADE and PIND, through a step-down approach trained 19 poultry service providers as NAEC trainers for poultry and aquaculture, integrating NAEC as a core product in their commercial activities. The service providers have benefitted from the curriculum and strengthened their enterprise skills; and they are expanding their client base and offering NAEC training as part of the range of services they provide to farmers.

MADE's flagship intervention in the poultry sector involved improving access to poultry health information and products driven by veterinary pharmaceutical companies through the development of last mile retail channels consisting of knowledgeable village level dealers (VLDs)and village level vaccinators (VLVs) that would ensure accessibility and availability of poultry health information and products. However, attrition of the last mile retailers was a significant challenge. In 2016, MADE wanted to introduce sustainable training services to reach poultry farmers to help them to break the cycle of poverty by exposing them to proper business management practices, so that they would be better developed to i) run their agricultural activities as viable businesses; ii) increase their productivity and income, and iii) be able also to influence the market ensuring that they run their enterprises profitably.

"In some cases, I offered modules for free to build farmers' awareness of their problems and the value of the tool, so that they can come asking for a full training which they will then pay for." **Habeeb Abdulkadir, AgriTech Global Consult**

To further expand and strengthen the value proposition of the village level dealers, MADE supported the adaptation of the NAEC to suit poultry enterprises. The poultry curriculum was a result of the collaborative effort (earlier mentioned) of MADE and MARKETS II. Making Cents International was then contracted to offer technical support and to produce the adapted curriculum.

A group comprising 29 business development service providers (BDSPs), representatives of veterinary pharmaceutical companies, lead farmers, agro-dealers, community-based organisations, poultry associations and project staff participated in the interactive "Train the trainer" workshop in 2016. In the first year, 15 NAEC trainers provided NAEC training to 625 poultry farmers in eight local government areas across six states.

In November 2017, MADE programme organized a series of three 'Train the Trainer' workshops (identified as phase II) on NAEC for Poultry. Seventy service providers (village level dealers) got trained in a set of three step-down trainings. This increased the number of trained NAEC Poultry Service Providers to 100 who could provide the training in a commercially profitable manner to smallholder farmers and increase their understanding and awareness of basic business concepts and market conditions that affect profit and productivity. In a bid to further scale up the provision of NAEC to poultry farmers, NAEC has also been integrated into the company led farmers' engagements in local communities, reaching over 5,000 poultry farmers.

The knowledge gained from undergoing the NAEC training provided these service providers/VLDs and farmers the required skills to grow their businesses and increase profitability and productivity. The NAEC training, which provides enterprise knowledge and skills is believed to contribute toward reduction in the attrition rate of last mile retailers – the operating village level dealers. The poultry and aquaculture trained service providers have benefitted from the curriculum and strengthened their enterprise skills. They are now expanding their client base and offering NAEC training as part of the range of services they provide to farmers in addition to vaccination services and poultry products.

² https://pindfoundation.org/training-of-trainers-workshop-for-farmers-in-the-niger-delta/

In Rivers State, Jennifer and her team have trained 400 poultry farmers. Also, Jennifer's Team has got a grant fund opportunity to teach 100 Ogoni women on Aquaculture using the NAEC, and she says it was her proposal for the NAEC tool that made the funds possible. Although she is not a MADE trainer in Aquaculture, Jennifer says she has been able to network with Aquaculture NAEC trainers from MADE to come and provide the relevant support. Jennifer also shared how the NAEC training has changed her approach to training. She noted that the NAEC is an applied training that helps trainees understand how to use the training and identify their problems. During the training she discussed and demonstrated the importance of record keeping skills. "You don't have to have all the records in your head, but you can know where the document is, or know who is keeping it, so that, at a short interval when it is needed, you can quickly call for it. A poultry farmer, for instance, should know the number of birds he or she has, the mortality and other records" says Jennifer Christopher, Team Leader, Bridge of Hope

Typical NAEC Training

A typical NAEC training takes the trainee through the complete business cycle of a value chain, while complementing other agricultural training packages which may guide the recipients through the technical bits. For instance, fish farmers take part in pond management training demo that covers the technical aspect of fish farming. The resource person generally provides a well presented hands-on practical calendar and guide that illustrates the activities of a typical farming season such that farmers can see the contribution quality decision making can make in their agribusiness performance.

The trainees learn principles such as the benefits of planning early, when to get their inputs, when to attend relevant trainings (for instance, in Aquaculture - on the water management system, getting the right stock, fish pond management, etc.) separating personal plans from domestic plans, acquisition and management of funds/loan facilities and the advantages of processing farm produce before sales.

Learners engage in role-playing, simulation, and other exercises to practice business concepts, experiment, take risks and use creative problem-solving techniques. These processes help them understand farm business cycles, record keeping, planning, purchasing decisions, group membership, monitoring, costing, basic cash flow, assessing costs and benefits, and savings and credit. The training has a fundamentally simple logic: after training, farmers would know how to keep records; by keeping records they would see where they were making or losing money; from this knowledge they would learn how, by changing their practices on the purchase and use of quality inputs, they could earn more money. The challenge has been how to deliver this on a commercially sustainable basis. The next section shows how this challenge has been addressed.

MADE's Application of the NAEC Tool

Before the MADE intervention, farmers and entrepreneurs often lacked basic planning skills and evaluation and analysis tools to run their activities commercially, understand and diagnose the problems they encountered and being able to solve them. This condition did not support the effective growth of their farms and enterprises. They often approached farming solely for subsistence without the knowledge and application of business principles, concepts or information about market conditions. This resulted in a lack of solid decision-making concerning economic and technical aspects needed to maximize their productivity, income and profits. It also led to low productivity and low margins across the value chain.

Understanding their weaknesses and how they can make more money if they change their approaches is a critical skill set for farmers and agro service providers to improve their production, grow their incomes and sustain development. MADE adopted NAEC to strengthen the provision of useful farming management practices information to micro and small-scale farmers in the Niger Delta to improve farming, aquaculture and poultry management processes and increase farmers' income by increasing access to high-quality information.



Prior to participation in NAEC training, when I make sales, immediately, I spend the money, I was not able to save money... Later, I decided to apply the knowledge I gained – I found some suppliers of day-old-chicks. I would go to them, get the birds and sell to my clients. Shortly, I convinced my clients to start buying feed, drugs and vaccines from me and they all agreed. I began to keep records of my activities and transactions. I also ventured into vaccination. My knowledge of NAEC paid off. I want as many youths as possible to know about NAEC so that they can learn enterprise knowledge specially to help them become self-reliant and stop saying that there is no job in Nigeria. I do not know what I would have been doing by now If I were not involved in this intervention." Blessing David, a Vaccinator in Owo, Ondo State

MADE supports lead firms and service providers to extend innovative solutions to small scale farmers' problems and challenges. Therefore, increasing the awareness of business deficiencies by the small holder farmers through the application of NAEC would build demand for products from the lead firms. Strengthening the capacities of service providers to sell the training to smallholder farmers and introduce a range of good practices, new knowledge and technology to improve their enterprise, will consequently stimulate demand for agricultural products sold by lead firms.

The major challenge in the sale of NAEC as a standalone product is that smallholder farmers are reluctant and unwilling to pay for training. This is primarily because they do not understand and appreciate the value of the tool. However, once they understood the weaknesses in their businesses and the value of the tool, smallholder farmers eagerly demand for the training. So, MADE is encouraging service providers to sell the training as part of a bundled service along with other services and inputs. Other identified challenges include an inadequate number of trainers, albeit low awareness on the part of farmers. NAEC stakeholders also note a lack of certification as a challenge, suggesting that trained personnel and farmers ought to have testimonial documents for further facilitation of their respective businesses.

The Value of NAEC from the Perspective of Service Providers

In a learning event held in April 2019 aimed at validating, disseminating and consolidating learning on NAEC implementation thus far, MADE partners shared their first-hand accounts of their experience implementing NAEC. They explained how NAEC has improved their knowledge, skills and abilities regarding record keeping, increasing profits, expanding their service offerings and networking with potential clients.

The interactive discussions revealed that NAEC has indeed added value to date by exposing critical lessons and facilitating increased yield and revenue. Participants shared that NAEC's value add included:

- Enhancing and increasing enterprise skills among farmers
- Helping farmers become self-reliant in their businesses
- Giving farmers a good structure and overview of their farming cycle
- Effective feed management leading to better yield and increased profit margin
- Better preparation for the real experience and expectation in the farming cycle through NAEC simulations
- Exposing farmers to increased techniques across the cycle
- Exposing farmers to the practicality of commercialising their business
- Helping farmers grow from subsistence to commercial farming
- Teaching farmers to keep better records of their businesses and identify the need for proper planning and networking

Lessons Learned from NAEC Implementation

MADE and its implementing partners learned a series of lessons in the course of adopting and adapting the curriculum for both the fisheries and poultry value chains. Some of the lessons include the following:

The NAEC is an adaptive tool: Not only did MADE adapt the NAEC tool for the aquaculture value chain, the programme later adapted it for use in the poultry sector. Bearing in mind that the curriculum was initially

introduced in the country to support cereal crops farmers and service providers, it has been adopted through a collaborative effort of MADE and its partners (PIND and MARKETS) for use in the Aquaculture Sector, and then adapted to the Poultry Sector.

For maximum impact, there is need for a critical mass of trainers. After a pool of trainers in poultry NAEC was increased to 29, MADE had 625 people after a year, but achieved 5,000 outreaches when it increased the pool of trainers to 100. The average number of farmers reached by service providers increased from the initial 21 to 50.

Training farmers and service providers using the NAEC offers them a diagnostic tool that is critical to improving their enterprise skills: Service providers and farmers who undergo NAEC training say that the tool enables them to understand their problem and find solutions to them. They use NAEC as a diagnostic tool to detect the cause of their problems, where they need improvement, and how to resolve their challenges. The tool guides them to plan, report their business activities appropriately, get soft loans from the Banks and determine when they are profitable. Service providers are now demonstrating the willingness to drive the market, get additional incomes by selling the pieces of training as they progressively increase their scale of operations and provide advisory support to their clients. MADE is encouraging service providers who stand as change agents to continue to sell the training to farmers and other entrepreneurs who may need the skills to improve their production and income.

Selling pieces of training as embedded/ bundled service strengthens awareness and creates higher demand for agricultural services and inputs: Service providers adopted the model to offer the training as an embedded service; bundled together with other services and goods sold to farmers since farmers' willingness to pay for training services as a standalone is very low. Through this approach, service providers are creating awareness about other services offered by them, leading to customers' stickiness. This improves the reputation of the service providers as reliable advisory supports/assistants. Some service providers are providing NAEC as part of the bundle of services to their clients at a fee in cash or kind (poultry, fish, tubers of yams, plantain). Others are providing the training as a differentiator to set them apart from competitors to gain farmers' patronage.

Flexible delivery of trainings can lead to increased demand: Practical recommendations for increased success in training delivery by NAEC partners captured at the NAEC learning event in April 2019 included i) adapting the length and time of training sessions to suit the attitudes of the territorial adult to education; ii) using other communication forms to reach yet inaccessible farmers (such as 30-minute radio-based phone in programmes); and iii) using community telecommunication technologies to further expose NAEC to many other farmers.

Creating awareness and showing the value in one's goods and services are critical success factors: Some of the service providers extend the pieces of training as a means of creating awareness to inform farmers and entrepreneurs about the value of NAEC and to expose them to their current business model's problems. This in turn sensitises their targets to come looking for the training. Farmers and entrepreneurs find more value in the NAEC tool as they gain deeper understanding of the content. Although all recipients may not always follow the content of the NAEC to the same degree or at the same time, over time, those who continue to refer to their kits and engage in selling the pieces of training seem to begin to place higher value on it. They demonstrate that they have gained more benefits from the lessons they learned. Some service providers are observing that because they spent the time after the training to study their kits, they have been able to become better managers, improve their planning, production, and profit and this has contributed to the increase in the success rate of these micro enterprises.

Participants from the NAEC learning event held in April 2019, confirmed the importance of continuing to raise awareness on NAEC's benefits. They suggested advocacy using media, town hall meetings and other group meetings to disseminate information about the value proposition of NAEC to farmers and continued sharing of success stories by beneficiaries. It was also suggested that forming partnerships with stakeholders (such as the Bank of Agriculture, veterinary associations, corporative and microfinance banks, etc.) could help encourage uptake. Finally, trainers taking ownership of the MADE developed platforms was identified as a way for relevant opportunities for spreading NAEC stories and benefits.

Certification is an important incentive: Service Providers who are extending training to farmers and entrepreneurs demand for certification considering the quality of the tool and value that the training delivers to beneficiaries. Certification will also go a long way to present the responsibility as an aspirational opportunity for agribusiness development for those in the sector.

Stakeholder engagement can shape good design of any intervention: We learned that NAEC training has been spread to a large extent because service providers and co-facilitators working with MADE have taken the knowledge to the

communities after being trained. They continue to work hard to see that they communicate the values to other players who have not participated in NAEC training. MADE has continued to encourage the sale of the training by service providers and co-facilitators as an incentive to keep driving the market and sustaining the initiative. During the learning event, some of the attendees – agribusiness practitioners suggested that subsequent interventions should seek to engage with them, to understand more about the conditions within the sectors before implementing interventions and initiatives. This, they said would provide more local information to implementers.

Partners' Voices for NAEC

"NAEC addresses issues of marketing, linkages, etc. Every business has its secrets, and NAEC is one of the number one recipe to success in agribusiness. It tells you how many people are coming to your place; how many customers do you have? What is your profit? It shows us the market and why we need to control the prices. When I am teaching people the NAEC, I show them the market. Concerning the farming cycle, although a typical NAEC document provides a twelve-month period, which can be adapted suitably for the four or three-months cycle involved in raring poultry/ birds which go for three months and the fishery which is four months." Mr. Momoh MD AquaGreen Integrated, Secretary to Catfish Farmers Association of Nigeria, and the National Treasure for the Catfish Farmers Association of Nigeria, and CEO of Momoh Farms Limited.

"NAEC training has helped with market penetration". Jomadana, (Seyi Ilesanmi) Input distributor

"The NAEC training has helped my poultry trainee farmers begin to think as entrepreneurs; they register their businesses and develop effective systems to manage their businesses. So far, about 850 of MADE farmers have been trained under our auspices.

Recently, I sold the NAEC initiative to a fast-growing national faith-based Agri-initiative on rice and poultry farming called Redeem Agricultural Project (REAP). They bought into it, and participants at the training have not only developed adequate plans but have also gone ahead to implement their initiatives that they attributed to the lessons learned from the NAEC." Yinka Akinpelu, GSI Tech, Ondo State.

"We worked as a team, and I stepped down the training to three of my team members. We are now four who can train farmers; we have trained in five locations in Akwa-Ibom, reaching about 200 farmers." Comfort Onyaga, CLICE Foundation

"I started as a vaccinator, and I also provided advisory supported and sales of day-old chicks. After I received the NAEC training, I returned and replicated across Akwa Ibom, Uyo, Abak, Ikomo and Ikot Ekpene. I have trained roughly 500 to 600 persons; they love the training and are very grateful for it. Even commercial farmers find the training to be beneficial. In a few occasions, I trained a maximum number of 100 to 120 farmers at the same time.

I developed a book I call "Poultry Programme" to help my clients keep their records. I usually tabulate the pages of the plan to show the column for dates, the volume of drugs, feeds, mortality and remarks daily.

So that at the end of the day they will be able to know the number of inputs and supplies that they have administered to the birds and the mortality rate over a given phase of life cycle. This record can help farmers understand what happens throughout raring periods of birds and help them make improved findings and decisions. I develop this programme for my clients according to the batches and phases of poultry growth. I sell each booklet for 250 Naira only, and I have sold a lot of copies." Edidiong Job, Eddyvosen Enterprises, Akwa Ibom

NAEC training helps a farmer to improve poultry management and make more money

Isaac Etah, from Isoko North in Delta State is a poultry farmer. He started keeping birds in 2013 and stocked his pen twice every year in January and August. Before his engagement with the Market Development in the Niger Delta (MADE) programme - funded by the UK Department for International Development, he had no formal education on poultry keeping.

Isaac ran his poultry activities without keeping records; he could not control his activities properly. He fixed his sales prices without knowing market values and how much he spent to raise a bird. So, he did not make a good profit.

In mid-2017, Isaac got an invitation to attend an NAEC training organised by MADE in partnership with Agri-Project Concept International at Ozoro. Dr Onyinye, a retail partner to APCI, facilitated the training targeting poultry farmers. It was an excellent opportunity for Isaac.

"During the training, I found out the things that I was not doing right in my farm. I did not know about farm planning, proper record keeping, purchasing decisions, making analysis and basic biosecurity measures. I had issues with underpricing because I did not know how much it cost me to rear one chicken from day-old size to table weight. So, my profit was quite low" Isaac said.

Isaac's purpose for the poultry business was to get additional money. Although he made little profit, he didn't know how to increase it.

"The NAEC training showed me that I could make more profit with better management. On-farm planning I learnt to take a holistic view, make financial projections, and see my likely costs before taking financial decisions at the start of every business cycle. On proper record keeping, I understood that every cost or expense, no matter how small should get documented with dates. In decisions for purchases, I learned that it is important to know what to buy, when, where and how much, and for bio-security, I understood that if I get my bio-security right, I will reduce both production cost and mortality. Then, on market analysis, I gained the value of gathering information on current prices of inputs in the market; and all these would make my profit to increase".

Isaac adopted these lessons and started another batch of birds in the last quarter of 2017. By keeping proper records, he determined that it costs him NGN2,000 to rear up a bird from DOC to table weight. So, he sold each at NGN5,000, making a profit of NGN3,000 per chicken. "In December 2017, I sold out 100 birds at an average price of NGN5,000. I restocked another 100 chicks which I planned to sell off at Easter. Now, I keep a day to day record of every financial activity in my farm" he said.