

# 2024 ANIMAL SOURCE FOODS LEARNING EVENT



## EXECUTIVE SUMMARY

## 1.0 INTRODUCTION

The AFS Learning Event was held at the Bingu International Conference Centre (BICC) on 18th and 19th July 2024 under the theme: **Rethinking ASF Programming for Improved Nutrition Outcomes in Malawi**. The event brought together various actors, including government departments, NGOs, donor agencies, development partners, research institutions, universities, community-based organizations, and private sector organizations operating in the ASF value chain in Malawi.

## 2.0 OBJECTIVES

The Learning Event was held with the following objectives in mind:

- ❖ To discuss sustainable practices in production and consumption of animal source foods.
- ❖ To share the learning journey of animal source foods approach to Nutrition.
- ❖ To learn from different institutions about survival rates of livestock, comparison of large and small stock.
- ❖ Learn about successful initiatives done by different institutions and agencies related to animal source foods.

- ❖ To understand why strategies for integrating animal source foods into dietary guidelines and policies have been challenging.

## 3.0 CONTEXT

The event provided a platform for stakeholders to present their initiatives, share successes and obstacles encountered, discuss scientific insights and best practices, analyze strategies for mitigating high mortality rates, examine the impact of environmental and climatic factors, address socioeconomic and cultural factors, evaluate monitoring and evaluation systems, and foster collaboration and partnerships.

## 4.0 THEMATIC LEARNING BREAKAWAY GROUPS AND EXHIBITIONS

During the Learning Event, most of the time was devoted toward exchange of information on best practices, challenges and possible solutions going forward on animal food sources in Malawi. There were two break-away sessions that took time to discuss goats, chickens, fish, insects as animal source foods. In the first break-away room – focus was on goats and chickens while the second break-away room focus was on fish, insects, and others.





Break-away room 1	Presenters
Goats Pass-On	Evangelical Lutheran Development
Goats and Chickens Pass-on	Emmanuel International
Goats and Chickens Pass-on	Akule ndi Thanzi – Feed the Children
Local Chickens	GIZ-FNSP
Chicken pass on	World Vision International
Goats & chicken	Titukulane Project – CARE MALAWI
Break-away room 2	Presenters
Overall picture of aquaculture and fisheries' contribution to nutrition, current implementation successes, challenges, gaps, as well as policy and structures.	Senior deputy director of fisheries Deputy director fisheries Department of Fisheries GIZ-Sustainable Aquatic Foods Project
Grasshoppers value addition Cricket Farming	Nutri-Care
Exhibitors	
GIZ	
FAO	
CARE	
NUTRI-CARE	

## 5.0 COMMON APPROACHES TO LIVESTOCK PRODUCTION

The ASF learning event established some approaches that are used in the production of livestock such as goats and chickens, fish and edible insects:

- GIZ initially implemented a chicken pass on program using exotic breeds, black austrolop in particular but later changed to local chicken to deal with diseases that attacked exotic breeds. The approach later changed to distribution of four chickens per household to increase consumption of meat and eggs while sustaining the stock.
- Emmanuel International and World Food Program focused on goat pass-on program distribution, four to five goats per household in selected communities.
- All approaches are community led from the start to foster ownership and sustainability.
- All production systems aim to address food and nutrition security issues at the household and community levels.
- All approaches emphasize making available a variety of cheap and highly bio-available protein



sources that local communities can easily access.

- All ASF production systems are targeting women of the reproductive age and under-five children as these are vulnerable groups regarding protein, energy malnutrition, iron and zinc deficiency.
- All approaches are environmentally friendly and aim to be self-sustaining. For example, farmers in fish production use droppings from goats and chickens to promote the growth of algae and other planktons that are feed for fish.

- All small livestock, fish and insect production methods currently use locally available resources and innovations to address nutrition challenges faced in their respective communities.
- All production systems use a **care group approach** to reach out to more women and children. For example, in fish and insects production, communities were trained in the production of powder that was used to enrich porridge for children and production of other foods such as doughnuts that are consumed by children, adolescents and adults.
- **Community animal health care workers (CAHW)** were used in all the livestock production systems. All interventions mainstreamed social behavior change, production, consumption, Infant and Young Child Feeding, Water Sanitation and Hygiene, Nutrition, exclusive breast feeding and complementary feeding through **radios programs, community mass awareness campaigns** (drama groups and mobile vans)



## 6.0 COMMON APPROACHES IN LIVESTOCK PROJECTS (CHICKENS AND GOATS)

- Livestock projects involving chickens and goats frequently employed pass-on and non-pass-on strategies.
- In pass-on projects, beneficiaries initially received a specific number of livestock and, in turn, passed on offspring to other community members, fostering a cycle of benefit and growth within the community.
- Non-pass-on projects, on the other hand, provided animals to beneficiaries without the obligation to pass on offspring, focusing on immediate impact and sustainability.
- Community Animal Health Workers (CAHW) played a crucial role in these projects. By training locals to provide basic animal health services. The projects ensured better health and productivity of the livestock.
- Goat fairs, where goats were sourced within the community, were another common approach, promoting local involvement and support. When local goats were unavailable, external suppliers were utilized to meet the demand.



- Collaboration with various stakeholders, including government agencies, NGOs, and private sector partners, enhanced the effectiveness and reach of livestock projects.
- Gender mainstreaming was also emphasized, with a focus on including more women and youth, thereby promoting gender equality and empowerment.
- Nutrition-sensitive mainstreaming integrated nutrition education and practices into livestock projects, and improved the overall health and nutrition of the community. The care group model was used to group community members into groups to facilitate learning and support, enhancing project implementation and sustainability.



## 7.0 UNIQUE APPROACHES FOR FISH PRODUCTION

- Fish farming was done in ponds (aquaculture) for communities that do not have access to the natural water bodies. Fish was also produced in cages that are constructed in the lake in addition to the fish freely surviving in the respective lakes and rivers.
- The trade of ornamental fish (Mbuna), particularly in markets such as China and Denmark, offered economic diversification.
- Selective breeding programs under the Fish Genetic Improvement Programme was adopted



with an aim of improving fish genetics for better growth rates and higher yields.

- The Department of Fisheries emphasized on the production of all-male fish, which have an advantage of growing faster and yielding higher returns. GIZ also promoted the use of innovative fish traps for intermittent harvest, ensures continuous production and income. The fish traps promoted the consumption of smaller fish frequently rather than waiting for the fish to grow to its full size before harvesting and consumption.
- The government of Malawi, through the Department of Fisheries (DoF) and with support from various development partners, puts efforts in implementing the National Aquaculture Strategic Plan II (NASP II), which supports the MIP-1 Aqua Production Targets to achieve 30,000 metric tons by 2030 and 140,000 metric tons by 2063.
- The key initiatives that the government is emphasizing on include establishing mega fish farms, restocking over 100 small water bodies across the country, and introducing cage culture in select areas to increase fish production.
- Additionally, DoF is piloting the use of mobile apps for fisheries and aquaculture data collection, with plans for full adoption following successful validation of these technologies, further modernizing the sector for improved monitoring and management.



## 8.0 UNIQUE APPROACHES FOR INSECT PRODUCTION

- Grasshopper production offered unique environmental benefits, such as reducing greenhouse gas emissions.
- Insects require less feed to produce a kilogram of protein compared to traditional livestock such as cattle, resulting in lower emissions.
- Another unique attribute of insect's production was its ability to engage in carbon trading which allowed insect producers to offset emissions and generate additional income, making insect farming both environmentally and economically beneficial.

## 9.0 COMPARISON OF APPROACHES: INSECTS AND FISH

- Insect and fish production differed significantly in space requirements and purposes.
- Insect farming required relatively small space, making it suitable for urban or space-constrained environments.
- Fish farming often requires larger spaces but can be geared towards ornamental fish production, providing an additional revenue stream.
- Insect production and utilization remains unregulated in Malawi.

the approaches for goats and chicken production systems and projects:

- Both types of projects used the Care Group Model, which emphasized community involvement and support.
- Gender mainstreaming and stakeholder collaboration were also prevalent in both projects.
- Differences were noted in animal sourcing, with some projects sourcing goats through suppliers while others used market-based approaches or goat fairs.
- Variations exist in the implementation of pass-on versus non-pass-on projects, and some projects distribute fewer animals than recommended by animal health department's i.e., four chickens per household of the beneficiary.

## 10.0 COMPARISON OF APPROACHES: GOATS AND CHICKENS

There were notable similarities and differences in



## 11.0 CHALLENGES FACED IN FISH AND EDIBLE INSECT FARMING AND PROJECTS

These challenges affected their potential as sustainable food sources:

- Resource constraints, which limited the ability to scale up innovative interventions.
- Financial and material resources were often insufficient to implement advanced farming techniques and expand operations.
- Cultural and religious barriers played a crucial role, as certain species of fish without scales (the catfish family) and insects (crickets and grasshoppers) are perceived negatively by some communities, affecting their consumption and acceptance.
- Product acceptability was another issue that came up as a challenge, with many consumers hesitant to adopt fish- and insect-based products. This reluctance was compounded by unforeseen disasters such as floods and other climate change impacts, which devastated fishponds and insect habitats.
- The lack of proper and adequate infrastructure further worsened these problems, making it difficult to maintain consistent production levels of both fish and insects.
- Regulatory hurdles induced by the Malawi Bureau of Standards (MBS) also pose significant challenges. Certification processes for new food products on the market are often complex and costly in Malawi, particularly for startups, making it difficult for new entrants to comply with regulations.
- Knowledge gaps existed among community members, extension workers, teachers, and other stakeholders about the nutritional benefits and production techniques of small fish and insects which led to difficulties in the adoption of these food sources.
- Environmental degradation, poor quality fish feed, and fingerlings contributed to reduced productivity and sustainability in fish farming. Theft and predation by animals such as otters and birds added to the challenges, requiring additional measures to protect the stock.



## 12.0 COMMON CHALLENGES IN GOAT AND CHICKEN FARMING

- High mortality rates, particularly in goat pass-on programs, undermined the effectiveness of these initiatives.
- Theft and unauthorized selling of animals were common issues, as is the non-adherence to government standards on proper goat management, such as providing adequate housing and reporting cases to community veterinary assistants.
- Farmers often used livestock as a cushion against hunger, they sold goats and chickens during severe food shortages, particularly in regions like the Lower Shire. This premature selling of



goats before the pass-on phase disrupted the intended program benefits.

- Deforestation was apparent in areas where goats were distributed as the beneficiaries used trees for constructing goat pens (Khola) leading to environmental concerns.
- Inappropriate beneficiary identification led to misallocation of resources. A tendency of bias towards households that are closely related to village heads and other influential people in communities were cited as major draw backs leading to mis-allocation of livestock.
- Outsourcing livestock in situations where local supplies were impossible resulted in high mortality rates due to the animals not being acclimatized to local conditions.
- Livestock, especially chickens, often died shortly after being brought to market due to inadequate care and harsh conditions.
- The scarcity of local chickens and Mikolongwe breeds, coupled with disease attacks such as Newcastle, affected productivity.
- Low numbers of breeding males delayed breeding cycles, and insufficient technical support from Agricultural Veterinary Officers (AVOs) and Community Animal Health Workers (CAHWs) due to staff shortages limit the effectiveness of these programs.

## 13.0 UNIQUE CHALLENGES IN FISH AND EDIBLE INSECT FARMING

- Fish farming faced unique challenges such as the drying up of ponds before harvest, which was mitigated by the adoption of deep pond technology.
- The use of illegal fishing gear was unique to fish interventions and this practice affected sustainable practices.
- Lack of quality fish feed and fingerlings hampered growth and productivity.
- Insect farming, on the other hand, was challenged by seasonal availability, with most insects such as grasshoppers and crickets only being available shortly after the rainy season.

- Lack of breeding stock for insects and domestication issues make it difficult to maintain a steady supply.
- Chemical pollution from pesticide spraying to control insect outbreaks continue to pose a significant risk to insect farming operations.





## 14.0 UNIQUE CHALLENGES IN GOAT AND CHICKEN FARMING

- Cyclone Freddy caused significant livestock losses in both goats and chickens, aggravating the challenges faced by farmers.
- Late distribution of livestock affected performance
- The late distribution of livestock in some programs also affected monitoring and evaluation (M&E) efforts, which made it difficult to assess the program's effectiveness and make timely adjustments.



## 15.0 THE BEST PRACTICES

The Animal Source Foods Learning Event highlighted several best practices across various production systems that contributed to the success of projects involving goats, chickens, fish, and edible insects:

- For goats and chickens, community-led approaches were emphasized from the start to foster ownership and sustainability.
- These projects aimed to address food and nutrition security by providing accessible, bio-available protein sources, targeting vulnerable groups like women of reproductive age and under-five children.
- Environmentally friendly and self-sustaining methods were used, such as utilizing goat and chicken droppings to promote algae and plankton growth for fish feed.
- The care group model was implemented to reach more women and children, enhancing project support and sustainability. Community Animal Health Workers (CAHW) played a crucial role in providing basic animal health services, ensuring better livestock health and productivity.
- Goat fairs and local sourcing promoted community involvement, while collaborating with government agencies, NGOs, and private sector partners, along with gender mainstreaming, improved project effectiveness and empowerment.
- Nutrition-sensitive mainstreaming integrated education and practices to enhance community

health, and the village cluster approach facilitated learning and support.

- For fish production, leveraging aquaculture provided a sustainable protein source, and school-based nutrition education projects educated students about nutrition and supplied protein for school meals.
- Engaging in ornamental fish trading in international markets offered economic diversification.
- The Fish Genetic Improvement Program aimed to enhance fish genetics for better growth rates and yields, producing all-male fish for faster growth and higher returns, and using innovative fish traps for continuous harvest.
- Insect production offered environmental benefits

by reducing greenhouse gas emissions and requiring less feed to produce protein.

- Engaging in carbon trading allowed producers to offset emissions and generate income.
- Insect farming required minimal space, making it suitable for urban environments, and communities were trained to produce insect powder to enrich children's porridge and other foods.
- Across all ASF production systems, a holistic approach ensured interventions considered the full range of benefits and applications.
- Adhering to and harmonizing policies among relevant departments, along with effective stakeholder collaboration, was crucial for coordinated and successful implementation.



## 16.0 GENERAL ISSUES IN LIVESTOCK AND AQUACULTURE INTERVENTIONS

### 16.1 Goats and Chickens

- To optimize livestock interventions, engaging

livestock experts is essential for redesigning and improving existing programs.

- Experts should provide the necessary insights and innovative approaches to enhance productivity and sustainability.



- It is also crucial to adopt a holistic perspective on the purposes of livestock, recognizing their multifaceted roles in communities.
- Livestock should not be restricted to a single purpose; instead, their roles in nutrition, income generation, and cultural practices should all be considered. This requires collaboration with various stakeholders to ensure that all potential benefits of livestock are realized.
- Adherence to established policies is fundamental in guiding livestock interventions. These policies should focus more on the consumption aspect of animal source foods to achieve improved nutrition outcomes in the target populations.
- A review of current policies shows they focus more on the breeding aspect and not consumption.
- Working with different stakeholders, including the Department of Nutrition, the Department of Livestock, and Livestock Health authorities, ensures a coordinated approach.
- Harmonizing policy direction among these departments is vital to provide clear and consistent guidelines for livestock management and development. This coordination helps to address issues such as animal health, nutrition, and the overall sustainability of livestock programs.



## 16.2 Fish and Insects

- Fish and insects should also be viewed through a comprehensive lens. These food sources should not be limited to a single function but rather appreciated for their full range of benefits, including nutrition, income, and environmental sustainability.
- Collaboration with stakeholders across different sectors is essential to maximize these benefits.
- The implementation of voluntary guidelines for small-scale fisheries, as outlined in the 2021 guidelines, is a step in the right direction. Additionally, the development of a National Plan of Action to support these guidelines in Malawi underscores the commitment to sustainable fisheries management.
- The ongoing development and review of the HIV/AIDS and Gender Strategy further highlight the need to address social issues within fish and insect farming communities.
- Working with stakeholders such as the Department of Nutrition, the Department of Fisheries, and the Department of Agricultural Extension Services (DAES) ensures that policies are harmonized and that there is a unified approach to managing fish and insect resources. This collaboration is necessary to address the various challenges and opportunities associated with these food sources effectively.

