

Activity report.

Household/farmers selection for the On-farm Chicken Performance Testing (OCPT) in Lindi and Kilimanjaro regions in Tanzania.

31st March- 19th April 2023.



INTRODUCTION.

The Tropical Poultry Genetic Solution (TPGS) has proposed implementing various technologies, practices, and value chain-related activities in Tanzania from 2023 to 2024. Most activities are implemented with the Tanzanian Livestock Research Institute (TALIRI) as an implementing partner.

The main activities planned for Tanzania include: **Identification and promotion of productive and tropically adapted poultry breeds**; improvement of the local chicken populations and development of sire lines, development of crossbred combinations using improved indigenous lines; identification of candidate genes and markers associated with tropical adaptability, production, and resilience traits, development of a set of genomic and precision breeding tools to accelerate long-term genetic gains; identify national technical capacity gaps on poultry development and development of a roadmap; formulation of context-specific, women and youth focused capacity building programs; identification and communication interventions to support national efforts towards improving policy and regulatory frameworks; conducting meta-analysis on type, volume, nutrient content, and geospatial dimensions of non-conventional feed resources; identification of scalable non-conventional feed resource-based feed formula and corresponding business models and piloting in a gender aware manner; assessment of type, efficacy, and delivery mode of existing vaccines; nutrition-sensitive interventions at the smallholder level and egg supplementation in school feeding programs; assessment of smallholder farmers' preference and their willingness to pay for integrated improved chicken packages; strengthening of poultry innovation platforms and operationalizing

Tropical Poultry Platform (TROP); establishment of monitoring and learning framework, and tracking and documenting program output indicators.

The objectives of this activity were to Identify and select the households through holding community meetings, remind them of criteria (as was shared in advance) and allow for the household meeting criteria to self-select and then a random selection to get the 36 households per village. Identify and select enumerators (energetic youth graduate from Vet and/or para-vet courses) and inspect the brooding units in both regions.

Selection of the Household for the OCPT.

This activity was conducted from 1st to 18th April 2023 in Lindi and Kilimanjaro regions, covering 12 villages in both regions (6 villages from each region). The selection protocol guided this exercise. For the household, the criteria (below) and during the community meetings, the community was made aware of the specific objective of the TPGS and OCPT and what they should contribute and expect from this research (Below second right box).

Summary criteria for household participation in the on-farm study:

- Chicken-keeping experience for at least two years.
- Currently keeps not more than 50 adult chickens (this criterion is included mainly to avoid mixing of eggs during eggs data collection and not to compromise farmers' ability to provide supplementary feed and other resources)
- Willingness to accept on a chance basis a flock of 25, 50 or 75 birds of a randomly selected strain (only one strain of one of the three flock sizes will be assigned per household)
- Commitment to provide night shelter at a minimum
- Commitment to provide supplemental feeding apart from scavenging
- Willingness to take part in TPGS-related discussions;
- As part of the data collection, allow identification (tagging), vaccination, and treatment of introduced and existing birds
- Willingness to participate for a minimum of 72 Weeks in data

The community was informed of the following during community meetings.

- Objectives of the SAPLING/TPGS on-farm chicken performance testing (e.g. contributions to income, household nutrition, employment)
- Benefits to on-farm participating households and risks associated with the test (e.g., performance can be lower than existing flocks, and the animals may require higher resources in terms of feed and health management). The details of the risks are outlined in Consent Form (*to be attached*).
- Random distribution of one of the three chicken strains to household
- The numbers of birds/flock sizes to be assigned randomly to a household
- Activities that will be undertaken – the need for cooperating with enumerators weekly during data collection and monitoring



During the community meetings, the criteria and the objectives of the TPGS and OCPT were explained to the participants and in all meetings, the participants were okay with the criteria except one highlighted (*Currently keeps not more than 50 adult chicks*), they asked to consider even those who keep very few as they have sold most of their chicken to buy food. Also, when explained about the objectives of the exercise, they proposed that the number of birds/flock size to be assigned to a household **should not be random as people should keep the size they are able and can manage**. With the comments from the participants, a twist to the selection protocol was inevitable and then we went with the clustering of households as per their ability to keep the chicken (self-selection based on flock size) and then random selection within each cluster.

Selection in Lindi region.

The first village was Nyengedi in Mtama-Lindi district on 03rd April 2023. More than 300 community members (95% women and 5% men) participated in this meeting. After the explanation of the objectives and criteria, the first selection started by screening those who currently don't have chicken houses (almost 50% of the entire group) and from this group, we screened again those who are willing and have resources to construct the chicken houses, about 55% of the group (counting 87) were willing and we have their names and contacts. With the group which meets the criteria, we clustered them into three groups based on their ability to keep a certain flock size and then a simple random selection was conducted to get the 12 households. Those with criteria that could not be selected were placed on the reserve list. The same approach was used in other villages of Nyangao and Mahiwa on 04th April 2023 in the same district and also the same approach was used in Ruangwa district in Nandagala, Nachingwea and Nangumbu villages. In Nachingwea village, a total of 130 (over 90% women) participated in the meeting, out of them, 45 members (about 35%) don't have a chicken house and can not manage to construct a chicken house (automatically lost eligibility to participate), Also only 39 members (about 30%) had at least between 5 to 50 chicken and the rest did not have chicken but were willing to keep and were keeping, they sold all of their chicken to buy food and also to cover agriculture related costs (as it is a cultivation season). In Nangumbu villages (Nangumbu A and B), a total of 430 people (Over 98% women) participated in the selection meeting. Also, about 50% of the participants didn't have a chicken house and then lost the eligibility of being selected. In Nandagala, a total of 241 (about 95% women) people participated in the selection meeting. A total of 137 (about 57%) did not have a chicken house which eliminated them from being selected for this research. Only 104 were eligible and participated in the selection according to the category they can manage.

(List of selected reserves attached annexed 1). A summary of selected and summary per villages in Lindi.

| S/N | District | Village | Flock size | Selected | Reserved |
|-----|-------------|------------|------------|----------|----------|
| 1 | Mtama-Lindi | Nyengedi | 25 | 12 | 45 |
| | | | 50 | 12 | 4 |
| | | | 75 | 12 | 0 |
| | | Nyangao | 25 | 12 | 25 |
| | | | 50 | 12 | 0 |
| | | | 75 | 12 | 2 |
| | | Mahiwa | 25 | 12 | 10 |
| | | | 50 | 12 | 16 |
| | | | 75 | 11 | 0 |
| 2 | Ruangwa | Nangumbu | 25 | 12 | 38 |
| | | | 50 | 12 | 14 |
| | | | 75 | 12 | 3 |
| | | Nachingwea | 25 | 12 | 27 |
| | | | 50 | 12 | 8 |
| | | | 75 | 12 | 10 |
| | | Nandagala | 25 | 12 | 14 |
| | | | 50 | 12 | 2 |
| | | | 75 | 12 | 0 |

Selection in Kilimanjaro region.

This activity was conducted from 12th to 19th April 2023 in two districts of Hai and Siha. It covered three villages in the Hai district (Kyeri, Isuki and Nshara) and 3 villages (Koboko, Magadini and Melari) in the Shiha district.

Selection in Kyerii village. A total of 107 people participated in the selection meeting, and only 5 of them (about 5%) were very old, didn't have a chicken house and they confessed to not being able to take care of the chicken and then lost eligibility to participate. The rest 102 participates in the selection according to the category of their ability (25, 50 and 75). In Isuki, 70 people (about 89% women) participated in the meeting despite the heavy rainfall that day and, In Nshara, a total of 69 people (about 92% women) participated in the selection meeting. All participants had chicken houses and become eligible for selection, on the issue of the current flock they keep, 10 of them (14%) had 50+ chickens, only 4 people had a flock of 40 chickens, 5 people had 30 chickens, 17 people (24%) had

a flock of 20 and 18 people 26%) had a flock of 10 chickens and 7 people (about 10%) had flock between 1 to 5 chicken.

In Siha district, three villages of Magadini, Merali and Koboko were involved in the selection. In Magadini village, a total of 87 people attended, and almost 95% met the criteria for selection. On the current flock size they keep, only 12 people (about 14%) are currently keeping 50+ chickens and the majority of them (20 which is about 21%) are keeping 10 chickens.

(as per the below summary table and attached list of selected and reserved)

| S/N | District | Village | Flock size | Selected | Reserved |
|-----|----------|----------|------------|----------|----------|
| 1 | Hai | Kyeeri | 25 | 12 | 48 |
| | | | 50 | 12 | 15 |
| | | | 75 | 12 | 2 |
| | | Isuki | 25 | 12 | 24 |
| | | | 50 | 12 | 5 |
| | | | 75 | 12 | 1 |
| | | Nshara | 25 | 12 | 25 |
| | | | 50 | 12 | 5 |
| | | | 75 | 12 | 1 |
| 2 | Siha | Magadini | 25 | 12 | 13 |
| | | | 50 | 12 | 4 |
| | | | 75 | 12 | 0 |
| | | Merali | 25 | 12 | 16 |
| | | | 50 | 12 | 7 |
| | | | 75 | 12 | 2 |
| | | Koboko | 25 | 12 | 7 |
| | | | 50 | 12 | 3 |
| | | | 75 | 12 | 0 |

Inspection of brooding units in both Lindi and Kilimanjaro regions

Visits to brooding units.

We successfully managed to visit SAPLING (former WiB) chicken vendors and inspected their brooding units with their capacities. We considered space and ventilation to assign specific numbers per unit. We considered 8 chicks per square meter.



Visits to inspect the brooding units in Lindi and Kilimanjaro

The below table shows in detail.

| Vendors and their brooding units' capacities. | | | | | |
|--|---|------------------|---|----------|-------------|
| S/N | NAME | Location | Brooding unit | Capacity | Total |
| 1 | Zuhura Mkalimoto & Anjelina Chipote | Mtama - Lindi | 1 | 500 | 1500 |
| | | | 2 | 1000 | |
| 2 | Martha Komba | Ruangwa | 1 | 500 | 800 |
| | | | 2 | 300 | |
| 3 | Ashura Mchachuka | Ruangwa | 1 (poor ventilation) | 0 | 0 |
| Total capacity of vendors for Lindi | | | | | 2300 |
| 4 | Monica Lema | Hai | 4 units with 84 Sqm | 700 | |
| 5 | Marietha Kavishe | Hai | 2 units (both rejected as first is a residential rooms and second no vents) | 0 | |
| 6 | Brendaa Urassa | Hai | 1 unity with 66 Sqm | 550 | |
| 7 | Anande Munisy | Hai | 2 units with 50 Sqm | 400 | |
| 8 | Chausiku Bundara | Hai | 1 Unity with 8 sqm | 60 | |
| 9 | Zena Mayoka | Hai | 2 units with 26 sqm | 200 | |
| 10 | Cecilia Munishi | Hai | 1 unity with 87 sqm | 700 | |
| 11 | Rayna Mrema | Siha | 1 unity with 13 sqm | 100 | |

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| | | | | | |
|-----------------------|------------------|------|---------------------|-------------|---------------|
| 12 | Happy Kihundwa | Siha | 1 unity with 14 sqm | 100 | |
| 13 | Restituta Maro | Siha | 1 unity with 25 sqm | 200 | |
| 14 | Paulina Sanginga | Siha | 2 units with 13 sqm | 100 | |
| 15 | Happy Massawe | Siha | 3 units with 45sqm | 350 | |
| Tota; for Kilimanjaro | | | | 3460 | 7556 16272 |

With the above table, it means we still need to consider other partners in carrying out the brooding exercise. Preferably the one with the experience and facilities to accommodate this big number of chicks at once.

Selection of enumerators.

We managed to select 4 enumerators from each of the research areas (3 main and one reserve), we conducted interviews with all 9 interested candidates and we selected the most suitable based on the following criteria.

- i. Demonstrated technical capacity in animal health and husbandry sector.
- ii. Currently residing within the research area
- iii. Currently volunteering at their district level.

The list below shows selected candidates from each district.

| Selected Enumerators | | | | |
|----------------------|---------------|--------------------------------|---|--|
| S/N | District | Name | Qualification | Remarks |
| 1 | Mtama - Lindi | FRANK KASBERT | BSC.GENERAL AGRICULTURE | Demonstrated work experience and maturity. |
| 2 | | HAPPYNESS JAMES MWAMBALANGANIA | DIPLOMA IN GENERAL AGRICULTURE | Currently volunteering at the district, and she is providing service up to Mahiwa village. |
| 3 | | AFIDHU SELEMANI KALONGO | CERTIFICATE IN GENERAL AGRICULTURE | Have experience in working with projects, have his own motorcycle and is very confident. |
| 4 | | KASPAR CHINGUILE | DIPLOMA IN ANIMAL HEALTH AND PRODUCTION | Demonstrated good technical skills and currently volunteering at the District level. Nyangao ward. |
| 5 | Siha | CHRISTOFA GOTFRID MATUWETA | DIPLOMA IN ANIMAL HEALTH AND PRODUCTION | Currently volunteering extension service at District. Can ride motorcycle and bicycle. Can use a smartphone. |

| | | | | |
|----|---------|------------------------|---|---|
| 6 | | LAURENT J MKEMANGWA | DIPLOMA IN ANIMAL HEALTH AND PRODUCTION | Demonstrated good experience in extension services provision, can ride a motorcycle and can use tablets. |
| 7 | | ALFA BAKARI SHEMHINA | CERTIFICATE IN ANIMAL HEALTH AND PRODUCTION | Technically very good. Volunteering at the district and can ride a motorcycle. |
| 8 | | SWIDEDRIDA PAULI KESSY | CERTIFICATE IN GENERAL AGRICULTURE | Currently volunteering at the district and with experience in chicken as she is keeping Sasso |
| 9 | Hai | JUMANNE CHALRLES SAID | DIPLOMA IN ANIMAL HEALTH AND PRODUCTION | Technically good, use motorcycle and own it. Have a smartphone and have used VIA track data collection tool |
| 10 | | FRANK NZWALINDILI | DIPLOMA IN ANIMAL HEALTH AND PRODUCTION | Technically good, use motorcycle and own it. Have experience with data collection through ADGG |
| 11 | | MKIRA JUNGU MASIGE | DIPLOMA IN GENERAL AGRICULTURE | Technically very good, currently volunteer at the District level and she is very confident |
| 12 | | CHRISTINA SEKO MASAWA | DIPLOMA IN ANIMAL HEALTH AND PRODUCTION | She is volunteering at an Agrovet. She is Confident. Can also be good for TPGS and can ride bicycles |
| 13 | Ruangwa | BEATRICE AKIRWE MBISE | DIPLOMA IN ANIMAL HEALTH AND PRODUCTION | She has worked with a water company. She is technically Good. She believes in self-employment |
| 14 | | MUSTAFA SAIDI HAMISI | DIPLOMA IN ANIMAL HEALTH AND PRODUCTION | He is Good from Mtama Lindi |
| 15 | | NAIKABU TUROTO SALTIEL | DIPLOMA IN ANIMAL HEALTH AND PRODUCTION | She is good. From Kilimanjaro |
| 16 | | JOYNESS DANIEL MTINGE | DIPLOMA IN ANIMAL HEALTH AND PRODUCTION | She is good. From Kilimanjaro |

