**TANZANIA AGRICULTURAL RESEARCH INSTITUTE**

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**3rd Quarter Progress Report from January 1st– March 31st 2024**

**Technology Transfer and Partnership-TARI Mikocheni**

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**1.0 Introduction**

Tanzania Agricultural Research Institute-(TARI-Mikocheni) is one of the 17 research centres under TARI.TARI-Mikocheni mandate is in two-folds, namely conduct and promote research for the development of the coconut sub-sector and promote research and utilization of agricultural biotechnology for socio-economic development in the country.

The centre’s head office is in Dar es Salaam at Mikocheni B, Plot 22 along the Coca Cola Road. It has two sub-stations, namely Chambezi and Mkuranga, where most of the research activities are conducted. The former is located about 55 KM North of Dar es Salaam near Bagamoyo town at latitude S6.520 and longitude E 38.910, while Mkuranga sub-station is located at S 7.120 and Longitude E 39.200, about 50 KM South of Dar es Salaam.

There are two departments: 1) Research and Innovation and 2) Technology Transfer and Partnership. Under these departments there are six subprograms: Crop Research, Natural Resources, Post-harvest Management, Socioeconomics and Marketing; Technology Dissemination, Commercialization and Partnership; and Knowledge Management and Communication Programs.

The Mikocheni centre basically has two research programs, which its mandates are: Coconut and Biotechnology. The coconut program is the main with four (4) research units which include: Agronomy, Disease & Pest Control, Socioeconomics, Post-harvest, and Technology Transfer; the Biotechnology Program accommodate three (3) units Tissue Culture, Molecular Diagnostics and Genetic Engineering Laboratories. All the research activities in each unit in the coconut program are designed to address all agricultural challenges facing the coconut agro-ecological systems which include poor coconut husbandry practices, effect of drought stress, poor soil fertility, incidence and severity of noxious pests, high incidence and damage by the coconut Lethal Disease and planting of low yielding varieties. Other challenges are low expansion, low level of rehabilitation of the area under coconuts, limited value addition/processing and poor marketing. Biotechnology in the centre acts as a tool cut across all crops and supports other research mandate.

1. **Technology Dissemination pathways used by TARI**

Various pathways were used for dissemination of agricultural technologies from research to different stakeholders which includes demonstration plots and the use of hubs (AgriTecH)

**2.1: Technologies disseminated through AgriTecH(s)**

In this reporting time, Agricultural Technology Hubs (AgriTecH) continue to disseminate agricultural technologies as follow: At Mwl Julius Nyerere two (2) technologies were disseminated in which (1) demo plot on Banana tissue culture with varieties of Mzuzu, Kimalindi, Bukoba and Fia 23, (1) demo plot where Coconuts are intercropped with mangoes and oranges, one (1) demo plot at Nzuguni-Dodoma with Coconuts only, (2)two demo plots at Fatma Mwasa-Tabora with coconuts intercropped with Sweet potatoes varieties of X-LUAMBANO and KABODE and one (1) demo plot at Nyakabindi-Shinyanga hub with coconut intercropped with Sorghum varieties of TARISO 1 and TARISO 2.

**Table 1: Technologies disseminated by TARI through AgriTecH(s)**

|  |  |  |
| --- | --- | --- |
| **AgriTecH** | **Crop** | **Variety/technology disseminated** |
| Fatma Mwasa, Tabora | 1. Coconuts and Sweet potatoes | Coconuts (East African Tall) intercropped with sweet potatoes varieties of X-LUAMBANO and KABODE |
| **Total No. technologies disseminated** | **1** |
| Nzuguni, Dodoma | 1.Coconuts | Coconuts (East African Tall) |
| **Total No. technologies disseminated** | **1** |
| Mwl. Julius Nyerere, Morogoro | 1.Banana tissue culture | Banana (Mzuzu, Kimalindi, Bukoba and Fia 23) |
| 2.Coconuts, Mangoes and Oranges | Intercropping with fruit tree crops |
| **Total No. technologies disseminate** | **2** |
| Nyakabindi, Shinyanga | 1.Coconuts and Sorghum | Coconuts (East African Tall) Sorghum varieties of TARISO 1 and TARISO 2. |
| **Total No. technologies disseminated** | **1** |
| **TOTAL** | **Total No. technologies disseminated** | **5** |

**2.2. Stakeholders reached with improved technologies disseminated by TARI Mikocheni**

**2.2.1. Stakeholders reached with improved technologies at Mikocheni Sub-stations**

In this reporting time total number of **167** **Farmers (90 Males and 77 Females**) were reached at Mikocheni sub-stations, where **127Farmers (60 Males and 67Females)** visited Chambezi sub-station and **40 Farmers (30 Males and 10 Females)** visited Mkuranga sub-station requested on buying coconut, mangoes and oranges seedlings, asking different questions concerning management and pest control in coconuts, mangoes and oranges.

**Table 2: Number of stakeholders reached with technologies at Chambezi and Mkuranga sub-stations.**

|  |  |  |
| --- | --- | --- |
| **Place** | **Stakeholders** | **Technologies disseminated** |
| Chambezi | **127 Farmers (60 Males and 67 Females)** | 1. Coconuts intercropped with mangoes and orange to control pests through weaver ants which feed on coreid bugs.  2. Mechanical remover of beetles using hook.  3. Cultural control by cleaning field removing dead logs which are breeding site for beetles.  4. Using of Traps (Pheromones, PVC Pipe and Tin) to trap beetles. |
| Mkuranga | **40 Farmers (30 Males and 10 Females)** | 1. Coconuts intercropped with mangoes and orange to control pests through weaver ants which feed on coreid bugs.  2. Mechanical remover of beetles using hook.  3. Cultural control by cleaning field removing dead logs which are breeding site for beetles.  4. Using of Traps (Pheromones, PVC Pipe and Tin) to trap beetles. |
| **Total number of technologies disseminated** | | **4** |

**3. Knowledge Management and Communication**

**3.1 TARI Website Content management**

**Different information uploaded to TARI website as shown by the table 3 below:**

**Table 3: Type and numbers of information uploaded to TARI website for 3rd Quarter**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Centre** | **Type of information uploaded** | **Number/frequency** | **Remarks/any feedback** | **Challenges** |
| TARI – Mikocheni | News | 0 | - | Lack of facilities including Internet, Camera for taking photos and documentaries, Computer, Scanner, Photocopy machine and Mobile phones |
| Publications | 0 |
| Images/photos | 0 |
| Videos | 0 |
|  |  |

**3.2 Information Education and Communication materials**

Planned number of materials for dissemination in this reporting time were 300 leaflets on coconut, tissue culture and improved vegetables where only 23 leaflets were managed to be disseminated.

**Table 4: Information materials produced and distributed.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Centre** | **Number of print communication materials** | | | | | | | |
| **Posters** | **Signboards** | **Fliers** | **Brochures** | **Banners** | **Wheel covers** | **Leaflets** | **Others specify** |
| TARI – Mikocheni | **-** | **-** | **-** | **-** | **-** | **-** | **23** | **-** |
|  |  |  |  |  |  |  |  |

**4 TARI Visibility**

**4.1 Signboards: Nil**

Preparation of signboards: areas fixed with signboards with uniform format and design across TARI Centres.

**4.2 Mass media prepared by TARI Mikocheni in 3rd Quarter**

In this reporting period, Mass Media planned to air 8 TV while aired 0 TV. Also planned Radio were 8 while aired 0 radio, also Planned 9 newspapers actual released were 0 also Planned social media were 120 while aired social media were 32 as shown on the table 5 below.

**Table 5: Number of TVs, radio, newspapers, and social media produced and disseminated.**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Centre** | **Numbers prepared/hired/made/received** | | | | | | |
| TARI – Mikocheni | **TV** | **Radio** | **Newspapers** | **Social media** | **Short Messages** | **Phone calls** | **Others specify** |
| 0 | 0 | 0 | 32 | 65 | 48 | - |

**5.0 Strengthening Partnerships and Collaboration**

**5.1 Meetings/ conferences/ symposia/ workshops**

One (Male) Budgeting Officer from Social Economy Unit attended a workshop from 24 January to 7 February 2024 in Dodoma. The main focus of the workshop was to train Centers Directors, Managers and Budgeting Officers from each TARI centers on planning and incorporating budget of all centers into Planning and Reporting System (PLANREP).

TARI Mikocheni Centre Manager, Dr. Fred Tairo attended a joint meeting on 20th February 2024 at Kilimo IV Hall in Dodoma. Meeting was aimed at elaborating to Minister of Agriculture, Hon. Hussein Bashe on Feedback Performances from three Institutions of TARI, TOSCI and ASA. Centre Coordinator for Technology Transfer and Partnership (CCTTP), Ms. Vidah Mahava attended a workshop on 22nd to 23rd February 2024 at Slip Way Hotel in Dares salaam. The aim of the workshop was to discuss the National Mangrove Policy and Legal Frameworks study to enrich the user rights management systems in Tanzania. One Female from Technology Transfer and Partnership Unit (TTP), attended a seminar on 28th March 2024 at Julius Nyerere International Convection Centre (JNICC) in Dar es Salaam. Aim of the seminar was to build capacity to government and private sectors on business opportunities from United Kingdom(UK) market for Developing Countries Trading Scheme(UK-DCTS).

Table 6**:** Meetings/ conferences/ symposia/ workshops attended by TARI Staffs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **No** | | **Tittle/themes** | **Dates** | **Venues** | **Partners** | **Type of event (workshop/Meeting** |
| **1.** | | Training centres heads and budgeting officers on planning and incorporating budget on Planning and Reporting System (PLANREP | 24th January to 7th February 2024 | Dodoma HQ, and Jakaya Kikwete Convention Centre | Directors, Managers, and budgeting Officers from all TARI Centres | Workshop |
| 2. | | Reporting Feedback Performance from three Institutes of TARI, TOSCI and ASA. | 20th February 2024 | Kilimo IV Hall | Ministry of Agriculture (MOA), Tanzania Official Seed Certification Institute (TOSCI) and Agricultural Seed Agency (ASA) | Joint Meeting |
| 3. | | Discussing the National Mangrove Policy and Legal Frameworks study to enrich the user rights management systems in Tanzania | 22nd to 23rd February 2024 | Slip Way Hotel | Worldwide Fund for Nature (WWF), Tanzania Forest Services Agency (TFS), Village Natural Resources Committee (VNRC),Beach Management Units(BMUs),Ministry of Livestock and Fisheries(MLF), Tanzania Agricultural Research Institute(TARI),Organization for Community Development(OCODE) | Workshop |
| 4**.** | Business opportunities from United Kingdom (UK) market for Developing Countries Trading Scheme(UK-DCTS). | | 28th March 2024 | Julius Nyerere International Convention Centre (JNICC) | Ministry of Foreign Affairs and East African Cooperation (MFA), Ministry of Industry and Trade Tanzania (MIT),Tanzania Trade Development Authority(TANTRADE),Tanzania Horticultural Association(TAHA),National Microfinance Bank(NMB),Department of Food, Environment and Rural Affairs in UK(Defra) and Tanzania and UK Ambassadors | Seminar |

**5.3. Visitations**

Total number of **44 visitors (36 Males and 8 Females)** stakeholders visited the Centre for different purposes from January to March as shown in Table 7 below.

**Table 7: Visitors visited the centre.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S/No** | **Date of the visit** | **Type of visitors** | **Total number** | **Aim of the visit** |
|  | 03rd January 2024 | A farmer from Kibaha-Pwani | 1 Male | They wanted to buy coconut seedlings |
| A farmer from Pongwe-Zanzibar | 1Male |
| A farmer from Dsm | 1 Male |
|  | 09th January 2024 | Farmers from Mikocheni and Kiluvya-Dsm | 3 Males | They wanted to get education on coconut farming |
|  | 10th January 2024 | Entrepreneur from private company | 1 Male | He wanted to make advertisement on products |
|  | 01st February 2024 | A farmer from Dsm-Ukonga | 1 Male | He wanted to buy coconut seedlings |
|  | 06th February 2024 | Farmers from Dsm | 2 Males | They wanted to get information on the centre activities |
|  | 12rd February 2024 | Representative from JUMACO PROPERTY LIMITED | 1 Male | He wanted to get accesses to advertise on Land ownership from JUMACO COMPANY |
|  | 13rd February 2024 | Farmers from Dsm | 2 Males | They wanted to buy coconut seedlings |
|  | 14th February 2024 | Farmers from Mvomero and Chalinze | 2 Males | They wanted bean seeds and to know about coconut farming |
|  | 21st February 2024 | Individual farmer from Kitunda- Dsm | 1 Female | She wanted to get coconut farming education |
| Scientists from Enson Africa | 2 Males | They provided questionnaires to researchers in order to get information on activities taking place in the Centre |
|  | 22nd February 2024 | Government officers | 2 Males | They wanted to get information from Administration. |
| Farmers from Dsm | 2 Males | They wanted to get coconut farming education and buying coconut seedlings |
|  | 26th February 2024 | Representative from JUMACO PROPERTY LIMITED | 1 Male | He wanted to supply leaflets for Land ownership to Mikocheni workers |
|  | 28th February 2024 | A farmer from Dsm | 1 Male | He wanted coconut seedlings |
|  | 29th February 2024 | A farmer from Nachingwea Mtwara | 1 Male | He wanted to buy coconut seedlings |
|  | 4th  March 2024 | A farmer from Dsm | 2 Males | They wanted to buy coconut seedlings and Banana plants |
|  | 8th March 2024 | A worker from Enson Africa | 1 Male | He wanted to advertise Enson Africa to Mikocheni workers |
| A farmer from Dsm | 1 Male | He wanted to buy coconut seedlings |
|  | 13rd  March 2024 | A reporter from Habari Leo | 1 Male | He wanted to get Information on how to publish coconut article |
| A farmer from Kibaha | 1 Male | He wanted to buy vegetables and he was directed to TARI Tengeru |
|  | 14th March 2024 | A farmer from Mkuranga - Pwani | 1 Male | He wanted information on coconut farming |
|  | 15th March 2024 | A farmer from Dsm-Kitunda | 1 Female | She wanted to buy coconut,orange and Tangerine seedlings |
|  | 18th March 2024 | Workers from Wild Kunduchi hotel | 2 Females | They wanted to advertise on the services provided by Wild Kunduchi Hotel |
|  | 19th March 2024 | A farmer from Goba-Dsm | 1 Male | He wanted to get a soil nutrient test |
|  | 20th March 2024 | A farmer from Bagamoyo -Pwani | 1 Male | He wanted to get Information on coconut farming |
|  | 1 Male | He wanted to get Information on seeds certification procedures |
|  | 22nd March 2024 | A farmer from Dodoma | 1 Female | She wanted to get Information on Coconut Farming |
| A farmer from Missenyi-Kagera | 1 Female | She wanted to buy coconut seedlings |
|  | 26th March 2024 | Farmers from Kinondoni - Dar es Salaam | 2 Males | They wanted Information on Coconut Farming Education |
|  | 27th March 2024 | A farmer from Tabata-Dar es Salaam | 1 Female | She wanted to buy sweet potatoes slips (directed to TARI TUMBI) |
|  | 28th March | Farmers from Bagamoyo- Pwani | 1 Male and 1 Female | They wanted to get Information on coconut farming |

**5.4 Challenges**

* Absence of water to irrigate due to rain absence which hinder coconut productivity and other crops to be intercropped with coconuts.
* Lack of coconuts seedlings for disseminating to coconut farmers/stakeholders.
* Lack of funds for supporting processing of various coconut by products. i.e., Coconut oil, milk, powder, soap etc.
* Farm workers in substations have not yet paid monthly salaries for long time which reduce effectiveness of farm activities.

**5.5 Conclusion and Recommendations**

* Alternative on water supply in substations should be established to solve the water shortage problem in absence of rainfall which reduce coconut productivity.
* Funds should be provided to support nursery practices to increase coconut seedlings to satisfy the needs of coconut growers.
* Due to the need of coconut by products funds should be provided for expanding and rehabilitation of the extracting machines and processing premises.
* Farm workers should be paid monthly salaries on time to meet their demands.