**ANNEX 28 – WORKSHOP TRAININGS REPORT AND PROGRAMME**: Banana data management, fieldbook and Musabase application

**TRAINING REPORT**

**Banana Data Management**

**April 10th- 12th, 2016**

**Venue: IITA-Arusha, Tanzania**

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| ***TITLE/TOPIC*** | *Banana Data Management and Fieldbook application* |
| ***ORGANIZING UNIT/PROJECT*** | IITA Banana Breeding (Arusha Station) under the IITA-led Project: *Improvement of banana for smallholder farmers in the Great Lakes Region of Africa* |
| **DATE AND LOCATION** | 10th to 12th February, IITA Arusha (AVRDC Campus) |
| **RATIONALE OF THE TRAINING** | Ensure research support staff are introduced to and trained in the use of mobile data collection tool (Fieldbook application), breeding management system and trait ontologies. |
| OBJECTIVES | Enhance data management in the Banana breeding program. |
| COURSE OUTLINE/DESCRIPTION | Workshop included some formal presentations as well as field and practical demonstration and training; attendees worked together with each other. See below table |
| **PARTICIPANTS ATTENDED** (please break down by gender, and grouping (country, research centers, community, private professional, civil society, government professional, etc.) | 11 attendants in total (trainees and trainers)  4 female, 7 male;  See table |
| PREREQUISITE | Researchers and agricultural staff at IITA Station in Arusha involved in Banana breeding |
| ***TRAINING LANGUAGE*** | English |
| **LIST OF MATERIALS DISTRIBUTED** | Fieldbook application manual. |
| **TRAINING METHODS APPLIED** (Methods include: lecture, field visit, panel discussion, multimedia presentation, group practice, etc.) | lectures, demonstrations, discussions and lab visits. |
| **EXPECTATIONS EXPRESSED BY THE PARTICIPANTS AT THE BEGINNING OF THE COURSE** | To learn more about data management tools and practices |
| HOW FAR HAVE THE EXPECTATIONS BEEN MET? |  |
| **CHALLENGES/BARRIERS ENCOUNTERED** |  |
| **LESSONS/RECOMMENDATIONS** |  |
| **OVERALL COST OF HOLDING THE TRAINING** | **$300 (cost of travel and accommodation)** |
| ***ATTACHMENT:***   1. List of Participants |  |
|  |
| See below |
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**Participants**

|  |  |  |  |
| --- | --- | --- | --- |
| **NO.** | **NAME** | **ORGANISATION (ROLE)** | **EMAIL** |
| 1 | Hassan Mduma | IITA-Arusha | [h.mduma@cgiar.org](mailto:h.mduma@cgiar.org) |
| 2 | Sifuel Ringo | IITA-Arusha | [Ringojunior45@gmail.com](mailto:Ringojunior45@gmail.com) |
| 3 | Colleen Patrick | IITA-Arusha | [cpmrina@gmail.com](mailto:cpmrina@gmail.com) |
| 4 | Mohamed Mpina | IITA-Arusha | [husseinmpina@yahoo.ie](mailto:husseinmpina@yahoo.ie) |
| 5 | Allan Brown | IITA-Arusha (Resource person / Organiser) | [A.Brown@cgiar.org](mailto:A.Brown@cgiar.org) |
| 6 | Kennedy Jomanga | IITA-Arusha | [kennedyjomanga@gmail.com](mailto:kennedyjomanga@gmail.com) |
| 7 | Trushar Shah | IITA –Nairobi (Resource person) | [Tm.shah@cgiar.org](mailto:Tm.shah@cgiar.org) |
| 8 | Danny Coyne | IITA-Nairobi (Project manager) | [D.coyne@cgiar.org](mailto:D.coyne@cgiar.org) |
| 9 | Scola Ponera | IITA-Arusha (Logistics and administration) | [s.ponera@cgiar.org](mailto:s.ponera@cgiar.org) |
| 10 | Veronica Masswawe | IITA Arusha | [ronee90@gmail.com](mailto:ronee90@gmail.com) |
| 11 | Frola Mjema | IITA-Arusha | [famjema@gmail.com](mailto:famjema@gmail.com) |

**TRAINING REPORT**

**Banana Data Management**

**April 28th, 29th, 2016**

**Venue: Kawanda, Uganda**

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| --- | --- |
| ***TITLE/TOPIC*** | *Banana Data Management and Fieldbook application* |
| ***ORGANIZING UNIT/PROJECT*** | IITA and NARO Banana Breeding (Uganda) under the IITA-led Project: *Improvement of banana for smallholder farmers in the Great Lakes Region of Africa* |
| **DATE AND LOCATION** | 28th and 29th of April 2016, Kawanda, Uganda |
| **RATIONALE OF THE TRAINING** | Ensure research support staff are introduced to and trained in the use of mobile data collection tool (Fieldbook application), Musabase and trait ontologies. |
| OBJECTIVES | Enhance data management in the Banana breeding program. |
| COURSE OUTLINE/DESCRIPTION | Workshop included some formal presentations as well as field and practical demonstration and training; attendees worked together with each other. See below table |
| **PARTICIPANTS ATTENDED** (please break down by gender, and grouping (country, research centers, community, private professional, civil society, government professional, etc.) | 32 attendants in total (trainees and trainers)  13 female, 19 male;  See table |
| PREREQUISITE | Researchers and agricultural staff at IITA and NARO Station in Uganda involved in Banana breeding |
| ***TRAINING LANGUAGE*** | English |
| **LIST OF MATERIALS DISTRIBUTED** | Fieldbook application manual. Musabase presentation |
| **TRAINING METHODS APPLIED** (Methods include: lecture, field visit, panel discussion, multimedia presentation, group practice, etc.) | lectures, demonstrations, discussions and field visit. |
| **EXPECTATIONS EXPRESSED BY THE PARTICIPANTS AT THE BEGINNING OF THE COURSE** | To learn more about data management tools and practices |
| HOW FAR HAVE THE EXPECTATIONS BEEN MET? |  |
| **CHALLENGES/BARRIERS ENCOUNTERED** |  |
| **LESSONS/RECOMMENDATIONS** |  |
| **OVERALL COST OF HOLDING THE TRAINING** |  |
| ***ATTACHMENT:***   1. List of Participants |  |
|  |
| See below |
| Workshop program |
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**PARTICIPANTS**

**From NARO:**

|  |  |  |
| --- | --- | --- |
|  | Name | Title |
| 1 | Jerome Kubiriba | WP1 Leader |
| 2 | Robooni Tumuhimbise | Research Scientist (Organiser) |
| 3 | Reuben Ssali Tendo | Research Scientist |
| 4 | Ivan K. Arinaitwe | PhD student |
| 5 | Allan Waniale | PhD student |
| 6 | Henry Buregyeya | PhD student |
| 7 | Mary Namuddu | Research Assistant |
| 8 | Betty Nyangwire | Research Assistant |
| 9 | Milton Ali | Research Assistant |
| 10 | Juliet Kemigisha | Research Assistant |
| 11 | Naboth Oyesigye | Research Assistant |
| 12 | Betty Namagembe | Research Assistant |
| 13 | Jane Arnaitwe | Research Assistant |
| 14 | Nabulya Gertrude | Research Assistant |
| 15 | Wilson Usher Okurutu | Research Assistant |
| 16 | William Waswa | Technician |
| 17 | Francis Kazigye | Technician |
| 18 | Abias Kushaba | Field Assistant |
| 19 | Andrew Kigundu | Field Assistant |

**From IITA Uganda (Sendusu and Namulonge)**

|  |  |  |
| --- | --- | --- |
|  | Name | Title/responsibility |
| 20 | Brigitte Uwimana | Banana Molecular Breeder (Organiser) |
| 21 | Violet Akech | Research Associate |
| 22 | Michael Batte | Research Associate/PhD Student WP 1 and 3 |
| 23 | Jane Luyiga | TC lab technician |
| 24 | Catherine Nasuuna | Molecular lab technician/ploidy analysis/field data collection |
| 25 | Catherine Olivia | Nursery attendant and field data collection |
| 26 | James Kisaakye | Research associate nematology |
| 27 | John Kanyesigye | Field attendant, data collection Mbarara |
| 28 | Harriet Nabatanzi | Field data collection |
| 29 | Godfrey Kasirye | Pollination, field data collection |

**Resource persons:**

|  |  |  |
| --- | --- | --- |
| 30 | Allan Brown | IITA-Arusha, Banana Breeder (Resource person) |
| 31 | Trushar Shah | IITA-Nairobi, IBP Hub Manager (Resource person) |
| 32 | Guillaume Bouchet | BTI USA, Musabase (Resource person) |

**Banana Data Management**

**April 28th, 29th, 2016**

**Venue: Kawanda, Uganda**

**Training Program**

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| --- | --- | --- |
| **Time** | **Item** | **Facilitator** |
| Thursday, 28/4/2016 |  |  |
| 8:30-9:00 am | Arrival and registration of participants/ facilitators | Annette Magala |
| 9:00-9:30 am | Introductions | All |
| 9:30-9:50 am | Welcome remarks | Jerome K |
| 9:50- 10:50 am | Data collection/entry and processing | Trushar/Allan |
| 10:50-11:20am | Ergonomic break | All |
| 11:20am-12:30pm | Breeding database | Allan |
| 12:30-1:20pm | General discussion | Allan |
| 1:20-2:50 | Lunch break | All |
| 3:00 pm | Field visit | Robooni T. |
|  |  |  |
| Friday, 29/4/2016 |  |  |
| 8:30-10:50 am | Musabase usage | Guillaume |
| 10:50-11:20am | Ergonomic break | All |
| 11:20am-1:00pm | General discussion | Guillaume |
| 1:00-2:00pm | Lunch break | All |
| 2:00-3:00pm | Discussion on harmonization of breeding base and musabase | Allan/ Guillaume |
| 3:00-3:00pm | Closing remarks | Jerome/Brigitte |

**Musabase Workshop**

**Namulonge, RTB Center of Excellence Conference Room**

**September 5th to 7th, 2016**

**List of participants**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Sn | Name | Organization | Position | Day 1: Musabase Interface | Day 2: Musabase: Managing your data | Day 3: Musabase Analyze your data |
| 1 | Akech Violet | IITA | Research Associate | Yes | Yes | Yes |
| 2 | Moses Nyine | IITA | PhD student | Yes | Yes | Yes |
| 3 | Catherine Nassuna | IITA | Research Technician | Yes | Yes | Yes |
| 4 | Brigitte Uwimana | IITA | Postdoc Banana Breeder | Yes | Yes | Yes |
| 5 | Godfrey Kasirye | IITA | Field assistant |  | Yes |  |
| 6 | Frederic Ndabahire | IITA | Field assistant |  | Yes |  |
| 7 | Harriet Nabatanzi | IITA | Field assistant |  | Yes |  |
| 8 | Robert Senteza | IITA | Field assistant |  | Yes |  |
| 9 | Catherine Nakayenga | IITA | Nursery attendant/Data collection |  | Yes |  |
| 10 | Janet Kimunye | IITA | PhD student pathology | Yes | Yes | Yes |
| 11 | Martha Mulongo | IITA | Research technician Nematology | Yes | Yes | Yes |
| 1 | Henry Basheija | NARL | IT officer | Yes | Yes | Yes |
| 2 | Tendo Ssali | NARL |  | Yes | Yes | Yes |
| 3 | Allan Waniale | NARL | PhD student | Yes | Yes | Yes |
| 4 | Mary Namuddu | NARL | Research Assistant | Yes | Yes | Yes |
| 5 | Betty Namagembe | NARL | Technician | Yes | Yes | Yes |
| 6 | Francis Kazigye | NARL | Technician | Yes | Yes | Yes |
| 7 | Wilber Ngabirano | NARL | Field Assistant | Yes | Yes | Yes |
| 8 | William Waswa | NARL | Technician | Yes | Yes | Yes |
| 9 | Betty Nyangwire | NARL | Scientist | Yes | Yes | Yes |
| 10 | Robooni Tumuhimbise | NARL | Scientist | yes | yes | yes |

**Musabase Workshop**

**Namulonge, RTB Center of Excellence Conference Room**

**September 5th to 7th, 2016**

**Agenda**

**Speakers:** Guillaume and Trushar.

**Suggested weeks:**

->IITA Arusha: September 1st-2nd

->IITA Sendusu: Monday 5th to Wednesday 7th

**Venue:** IITA, Ibadan, Nigeria

**General objectives:**

-> *Train attendees in the use Musabase and its breeding management functionalities (data loading, data visualization and analysis)*

*-> Interact on an individual/group basis with breeders and scientist*

**Day 1: Musabase Interface**

**Objectives Day 1:**

Attendees will be able to and access Musabase,log in, navigate the manual, use search tools, make lists, make crosses, and design a trial.

**9:00 *Welcome and Introductions***

**9:30***Intro:* Musabase Overview and Manual

**10:00** *Intro:* Setting up Accounts and Logins

**10:30** ***Break***

**10:45** *Basics:*Trial and Accession Search

**11:00** *Basics:* The Search Wizard and Saving to Lists

**11:30** *Basics:*Working with Lists

**12:00 *Lunch***

**1:30** *Basics:*Adding Accessions

**2:00** *Basics:* Adding Pedigrees

**2:30** *Basics:* Adding Images

**3:00** ***Break***

**3:15***Design Tools:* Creating Crosses

**3:45** *Design Tools:* Designing and Organizing Trials

**4:30** *Design Tools:*Uploading Trials

**5:00** ***Recap and questions***

**Day 2: Musabase: Managing your data**

**Objectives Day 2:**

Attendees will have a good understanding of the trait ontology and will be able to create a phenotyping file to use in their app of choice, collect phenotypes, upload phenotype data, and download phenotype and genotype data.

**9:00** *Phenotyping:* Trait Ontology management and curation

**9:30** *Phenotyping:* Generating Phenotyping Files

**9:45** *Phenotyping:* Phenotyping with Fieldbook–

**12:00** ***Lunch***

**1:30** *Upload:* Uploading Phenotypic Data

**2:00** *Upload:* Uploading Field Trial Coordinates (Field Map)

**2:30** *Upload:* Uploading Trials Designed Outside of Musabase

**3:00** ***Break***

**3:15** *Download:* Exploring Summary Statistics

**3:30** *Download:* Downloading Trial Phenotype Data

**4:00** *Download:* Downloading Genotype Data

**5:00 *Recap and questions***

**Day 3: Musabase: Analyze your data**

**Objectives Day 3 Morning:**

Attendees will be able to conduct trial and genomic selection analysis.

Contact us for troubleshooting, request a new feature, post to the forum.

**9:00** ***Recap and questions from the previous day***

**9:30** Analysis: single trial

**10:00** Analysis: multiple trials

**10:30 *Break***

**10:45** Analysis: Genomic selection with SolGS

**12:00** Communication:Reporting Problems Using the Contact Form

***12:15******Recap and questions***: Discuss Priorities for Further Musabase Development