# FINAL REPORT ON THE PROMOTION OF DUTCH POTATO VARIETIES THROUGH FARM LEVEL DEMONSTRATIONS IN UGANDA

*International Fertilizer Development Center (IFDC)*

*Resilient Efficient Agribusiness Chains (REACH-Uganda) Project*

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IFDC

Developing Agriculture From the Ground Up

## TABLE OF CONTENTS



## LIST OF TABLES

## LIST OF FIGURES

## 1.0 INTRODUCTION

Potato is an important food and income security crop in Uganda, most especially in the highland areas. It is also becoming increasingly popular in urban areas mainly in fast-food restaurants. There are quite a number of potato varieties in the country but most of them do not have processing qualities and used mainly for table. Consequently this limits the market and development of potato processing industries which further hinders the development of the potato sector.

To address the above challenges, with support from the Embassy of the Kingdom of the Netherlands (EKN), International Fertilizer Development Center (IFDC)-Uganda in partnership with Dutch Seed Potato companies (HZPC, AGRICO, Den Hartigh, Stet Holland), the Ministry of Agriculture Animal Industry and Fisheries (MAAIF) and National Agricultural Research Organization championed the introduction of Dutch potato varieties sought to be superior in processing qualities. Twenty one varieties were imported into the country and evaluated through National Variety Performance Trials (NVPTs) for three seasons; 2015A, 2015B and 2016A. Also conducted along NVPTS were the Distinctness, Uniformity and Stability (DUS) tests by MAAIF. Subsequently, seven varieties released for commercial use in the country.

To enhance adoption and uptake of the released potato varieties in the country, there was need for popularization of the varieties through farmer participatory demonstration fields in different potato producing regions where NVPTs were done. This activity was implemented by IFDC in partnership with seed companies, NAO, NARO, farmers and district local governments (DLG) in the respective areas. The management of demos was done by IFDC while partners; NARO and DLG extension staff were involved in joint monitoring and dissemination activities.

## 2.0 METHODS AND MATERIALS

### *2.1 Site selection and preparation*

Sites were selected ideal for potato production in the main potato producing regions. Sites having been without potato crop for at least three seasons were selected. Identified sites were prepared a month before for suitability of planting; bush clearing, primary and secondary land cultivation for fine tilth.

### *2.2 Demonstration varieties*

On-farm demonstration fields were established using eight Dutch Potato Varieties and two local check varieties (Table 1) in five major potato producing districts in different agro-ecological areas; Kisoro and Rubanda districts in Southwestern Uganda, Fort Portal-Kabarole in Western Uganda, Kapchorwa and Kween in Elgon region-Eastern Uganda. At each demonstration trial site in each district, three field days attracting different potato stakeholders and actors were conducted.

**Table 1: Potato varieties used under on-farm demonstration trials 2017A season**

| | Variety | Seed Company | Remarks |
|---|---|---|---|
| 1 | Panamera | HZPC | Not officially released in Uganda but in at least two COMESA member countries |
| 2 | Sagitta | HZPC | Officially released in Uganda |
| 3 | Taurus | HZPC | Not officially released in Uganda but in at least two COMESA member countries |
| 4 | Voyager | HZPC | Officially released in Uganda |
| 5 | Arizona | AGRICO | Officially released in Uganda |
| 6 | Markies | AGRICO | Officially released in Uganda |
| 7 | Connect | Den Hartigh | Officially released in Uganda |
| 8 | El Mundo | Stet Holland | Officially released in Uganda |
| 9 | Rwangume | NARO | Local check |
| 10 | Victoria | NARO | Local check |

### *2.3 Demo field size and planting materials*

Plots of 22.5 square meters (6 x 3.75 m) were used for each variety that is; 5 rows of 6 meter length which accommodated 105 tubers of each variety per site. Each demo site therefore covered an area of approximately 700 square meters (0.07 ha or approx. 0.2 acres) including arrays and borders for ten varieties; eight Dutch and two local varieties at a spacing of 75 X 30 cm.

Varieties were planted in two replicates in a Complete Randomized Block Design (CRBD) at each site. A total of 12,000 tubers of eight varieties were delivered from four Dutch Seed Companies, 1,500 tubers per variety for five sites.

### *2.4 Planting and Crop Management*

Planting of demo trial fields was done in the last week of March 2017. Seed potatoes were planted following recommended agronomic practices with N.P.K 17:17:17 fertilizer application rate of 120 kg ha-1. Weeding was done two times across all sites while protection against late blight disease was done on a weekly basis (7 days interval using systemic/curative fungicides (Macozeb 640g/kg+ 80g/kg of metalazyl) alternated with contact and preventive fungicide (Macozeb) while insect pest protection was done using systemic insecticide Dimethoate and abemectin against aphids and leaf miners respectively. Diseases mainly Black leg disease/Soft rots (Erwinia spp) thought to have been seed-borne was managed by rogueing of infected plants mainly with Connect and Voyager varieties.

### *2.5 Promotional activities*

To popularize and promote Dutch potato varieties among value chain actors, different approaches including field days and mass media were used.

#### *2.5.1 Field days and mass media*

Three field days were held at each demo site at different crop stages; flowering, bulking and full maturity during harvesting. National television and local FM radios were used for coverage of the events. The link to the event coverage on NTV is posted below:
https://www.youtube.com/watch?v=MexsTcyvTic

Potato stakeholders and chain actors guided through the demo plots observed and compared different Dutch varieties with local checks as well as crop management practices. Also observed was the performance of the different varieties in terms of disease, pest and drought tolerance and tuber yield. Local potato crisps and french fries were prepared and tasted.

### *2.6 Data recording and analysis*

Harvest data was collected and entered into harvest data sheets. To facilitate comparison between sites, tuber weight was expressed into metric tons per hectare (MT/ha). Harvested tubers were graded into three grades, counted and weighed; Marketable large; >60 mm, Marketable medium size; 30-60mm and Non-marketable size; <30 mm in diameter.

Yield data was analysed using Genstat (Release 11.1) statistical software. Analysis of Variance (ANOVA) was used to generate means which were compared using LSD with the controls.

## 3.0 RESULTS AND DISCUSSION

This section discusses the potato yield components mainly, number of tubers per plant, tuber yield (weight) per plant, as well as total tuber and marketable tuber yield. Also, potato farmers and stakeholders' evaluation and perceptions on Dutch potato varieties are discussed.

### *3.1 Yield performance of Dutch Potato Varieties across different location/sites in Uganda*

All potato tubers harvested were graded and counted into three grades; Small <30 mm, Medium >30-60mm and large >60 mm in diameter. Large and medium grades were combined as marketable while the small grade as non-marketable tubers which could not be sold as either ware or seed.

Results showed that tuber weight performance among varieties and across sites was significantly different (Lsd0.05=<0.001). Tuber weight by sites ranged from 55.4 to 121.8 g/tuber

with mean tuber weight of 87.1 g/tuber. The highest mean tuber weight was observed at Kween (121.8 g/tuber) followed by Kapchorwa, Fort Port Portal, Bukimbiri-Kisoro and Hamurwa-Rubanda. Tuber weight by varieties ranged from 34.8 to 116.7 g/tuber, Sagitta having the highest tuber weight (116.7 g/tuber) followed by Victoria (108.9 g/tuber), Arizona (104.4 g/tuber) and Rwangume being the least (Table 2).

In terms of tuber number per plant and site performance, the average for all sites and varieties was 9 tubers per plant. Although Rwangume variety had the highest number of tubers per plant at all sites (21 tubers /plant) (Table 2), it had the lowest tuber weight (34.8 g) (Fig 1). This implied that despite the high number of tubers per plant, the variety yielded many small tubers which would be a bad attribute in commercial production for supply of processing raw materials. On the other hand, Sagitta and Victoria which had the lowest number of tubers per plant but highest tuber weight (Table 3) which implied that a high proportion of tubers were large size (> 45mm in diameter) tubers.

Results further indicated that both total tuber yield (marketable and non-marketable) and marketable tuber yield varied across sites/locations and varieties. Kween had the highest marketable yield (34.23 MT/ha) followed by Kapchorwa, Fort Portal, Bukimbiri-Kisoro and Hamurwa-Rubanda. Overall, Rwangume variety had the highest marketable tuber yield (31.07 MT/ha), followed by El Mundo, Panamera, Arizona, Voyager, Sagitta, Taurus, Connect and Victoria (Table 4 and Fig.3).

Marketable tuber yield (kg) per plant varied among varieties and across sites and notably ranged from 0.31 to 1.4 kg per plant with a mean yield of 0.6 kg per plant. The highest mean yield per plant was noted at Kween (0.78 Kg/plant) followed by Kapchorwa (0.74 kg/plant), Fort Portal (0.69 kg/plant), Bukimbiri-Kisoro (0.53 kg/plant) and Hamurwa-Rubanda (0.45 kg/plant). By variety across sites, Panamera had the highest marketable tuber yield per plant (0.70 kgs/plant) followed by Rwangume (0.69 kg/plant), with Victoria variety the least (0.52 kg/plant) (Table 5 and Fig.4).

The trend in tuber yield at sites /locations in Southwestern region at Bukimbiri-Kisoro and Hamurwa-Rubanda could have been attributed to drought effect in the region which had no rain after 45 Days after Planting (DAP).

**Table 2: Tuber weight (grams) of ten potato varieties across five sites/locations in Uganda (2017A season)**

| Variety | Arizona | Connect | El Mundo | Markies | Panamera | Rwangume | Sagitta | Taurus | Victoria | Voyager | Mean |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bukimbiri -Kisoro | 84.2 | 60.2 | 47.2 | 60.8 | 61 | 20.8 | 96.6 | 50 | 71.7 | 66.5 | 61.9 |
| Fort Portal -Kabarole | 118.6 | 85.6 | 102.2 | 105.1 | 93.9 | 31.7 | 113 | 77 | 105.2 | 88.4 | 92.07 |
| Hamurwa -Rubanda | 59.9 | 52.1 | 70.5 | 61.3 | 50.6 | 20.6 | 71.5 | 44.4 | 64.3 | 58.4 | 55.36 |
| Kapchorwa -Elgon | 122.3 | 90.3 | 108.1 | 110.2 | 109 | 32.6 | 153.4 | 88.6 | 134.5 | 97 | 104.6 |
| Kween -Elgon | 136.9 | 110.5 | 121.8 | 136.9 | 134.1 | 68.2 | 148.8 | 99.6 | 168.6 | 92.3 | 121.77 |
| Mean | 104.4 | 79.7 | 90 | 94.8 | 89.7 | 34.8 | 116.7 | 71.9 | 108.9 | 80.5 | 87.14 |

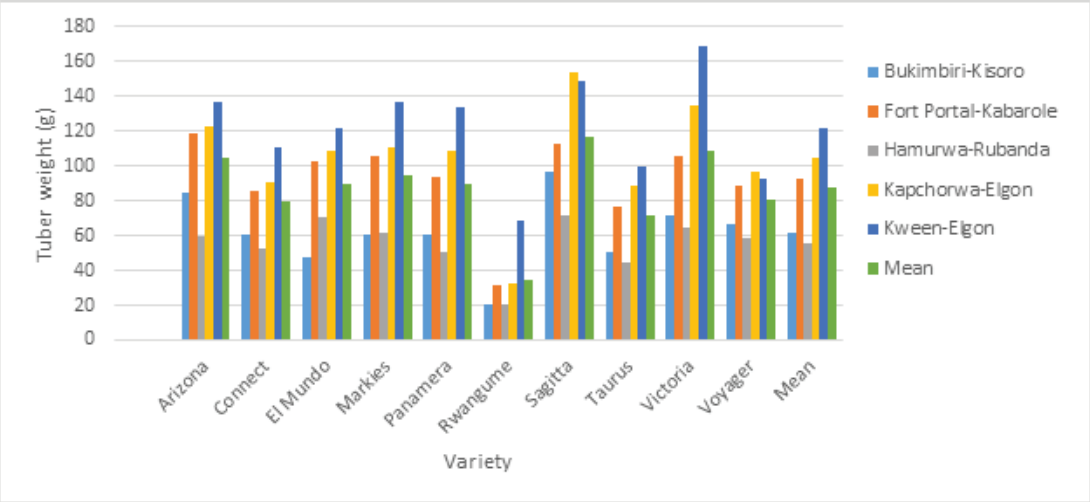


*Figure 1: Comparison of tuber weight (g) of ten potato varieties at different sites in Uganda (2017A season)*

**Table 3: Tuber number per plant of ten potato varieties across five on-farm demo sites in Uganda (2017A)**

| Variety | Arizona | Connect | El Mundo | Markies | Panamera | Rwangume | Sagitta | Taurus | Victoria | Voyager |
|---|---|---|---|---|---|---|---|---|---|---|
| Bukimbiri -Kisoro | 7.7 | 8.77 | 12.38 | 9.37 | 10.17 | 23.84 | 6.21 | 8.94 | 5.82 | 9.13 |
| Fort Portal -Kabarole | 7.55 | 8.38 | 7.35 | 6.93 | 7.62 | 17.59 | 6.49 | 8.71 | 5.93 | 7.28 |
| Hamurwa -Rubanda | 8.08 | 9.18 | 8.93 | 6.85 | 9.74 | 20.34 | 6.68 | 7.98 | 5.9 | 8.86 |
| Kapchorwa -Elgon | 7.34 | 8.26 | 7.73 | 7.01 | 7.29 | 23.06 | 4.8 | 7.13 | 4.54 | 8.28 |
| Kween -Elgon | 5.39 | 6.47 | 6.95 | 6.12 | 7.42 | 21.59 | 4.7 | 8.12 | 4.69 | 9.0 |
| Mean | 7.21 | 8.21 | 8.67 | 7.26 | 8.45 | 21.28 | 5.78 | 8.18 | 5.38 | 8.51 |

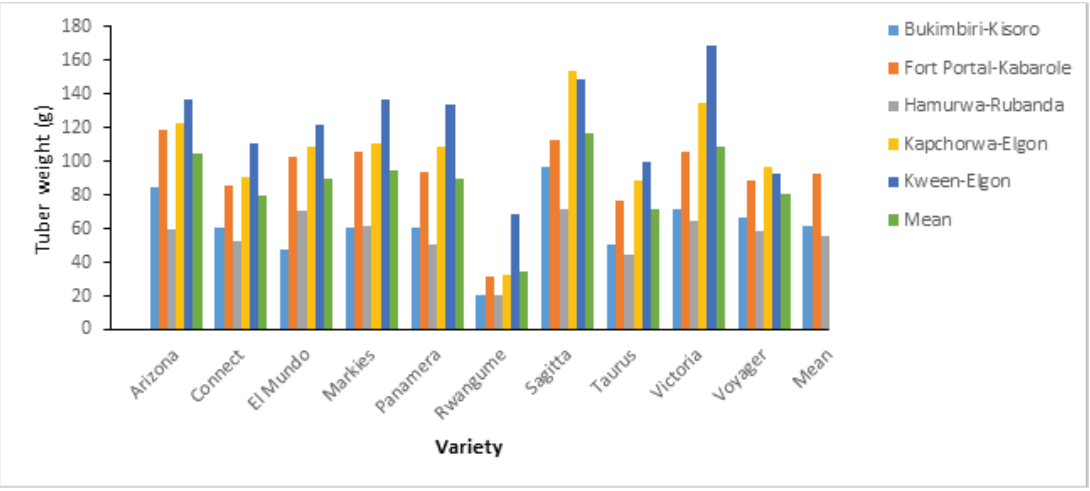


*Figure 2: Comparison of tuber weight (g) for ten potato varieties across five on-farm demos sites in Uganda in 2017A season*

## Table 4: Marketable tuber yield (MT per ha) of ten potato varieties across five sites in Uganda (2017A season

| Site/Variety | Arizona | Connect | El Mundo | Markies | Panamera | Rwangume | Sagitta | Taurus | Victoria | Voyager | Mean |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bukimbiri -Kisoro | 26.78 | 20.89 | 25.78 | 25.11 | 25.44 | 20.11 | 27.51 | 19.56 | 18.33 | 26.89 | 23.64 |
| Fort Portal - Kabarole | 39.44 | 27.67 | 33.04 | 33.33 | 30.22 | 25.33 | 31.24 | 30.22 | 27.56 | 26.11 | 30.42 |
| Hamurwa -Rubanda | 21.78 | 19.84 | 25.36 | 18.64 | 20.16 | 17.44 | 21.38 | 16.18 | 17.11 | 22.04 | 19.99 |
| Kapchorwa -Elgon | 38.67 | 27.56 | 36.44 | 33.29 | 32.89 | 28.89 | 32.67 | 28.44 | 26.89 | 33.11 | 31.89 |
| Kween -Elgon | 23.6 | 29.11 | 31.78 | 31.78 | 42.33 | 63.56 | 26.78 | 36.33 | 21.78 | 35.22 | 34.23 |
| Mean | 30.05 | 25.01 | 30.48 | 28.43 | 30.21 | 31.07 | 27.92 | 26.15 | 22.33 | 28.68 | 28.03 |

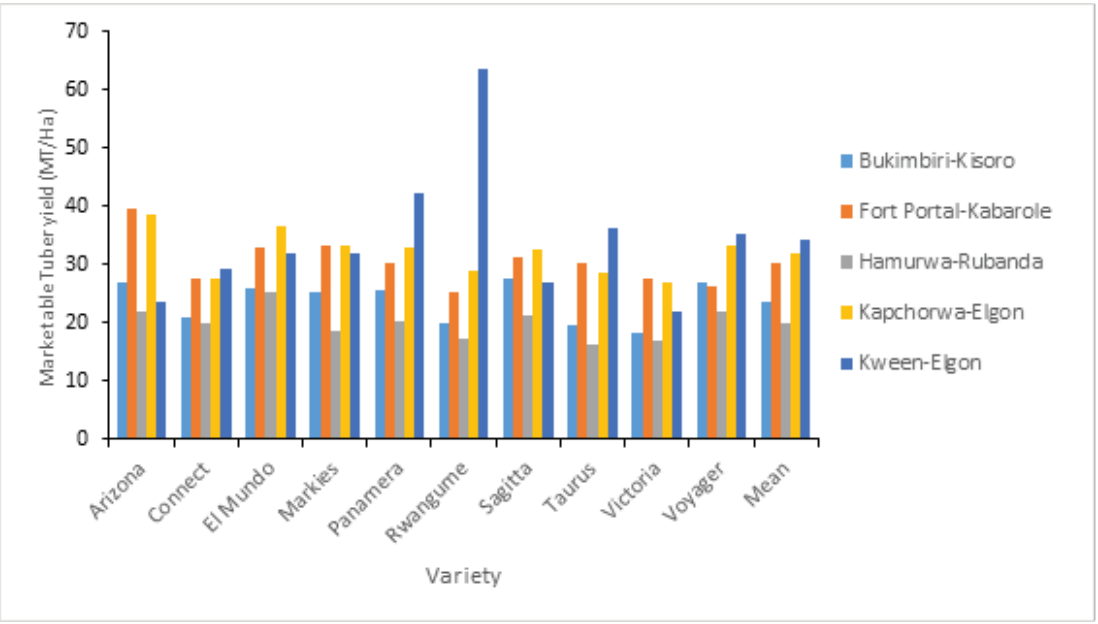


*Figure 3: Comparison of Marketable Tuber Yield Performance (MT/ha) of ten potato varieties at five on-farm demo sites in Uganda*

## Table 5: Marketable tuber yield (kgs) per plant

| Site/Variety | Arizona | Connect | El Mundo | Markies | Panamera | Rwangume | Sagitta | Taurus | Victoria | Voyager | Mean |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bukimbiri -Kisoro | 0.6 | 0.5 | 0.6 | 0.6 | 0.6 | 0.4 | 0.6 | 0.4 | 0.4 | 0.6 | 0.53 |
| Fort Portal -Kabarole | 0.9 | 0.7 | 0.7 | 0.7 | 0.7 | 0.5 | 0.7 | 0.7 | 0.6 | 0.6 | 0.69 |
| Hamurwa -Rubanda | 0.5 | 0.5 | 0.6 | 0.4 | 0.5 | 0.4 | 0.5 | 0.3 | 0.4 | 0.5 | 0.45 |
| Kapchorwa -Elgon | 0.9 | 0.7 | 0.8 | 0.8 | 0.8 | 0.7 | 0.7 | 0.6 | 0.6 | 0.8 | 0.74 |
| Kween -Elgon | 0.6 | 0.7 | 0.7 | 0.7 | 1.0 | 1.4 | 0.6 | 0.8 | 0.6 | 0.8 | 0.78 |
| Mean | 0.68 | 0.61 | 0.68 | 0.63 | 0.70 | 0.69 | 0.63 | 0.57 | 0.52 | 0.66 | 0.64 |

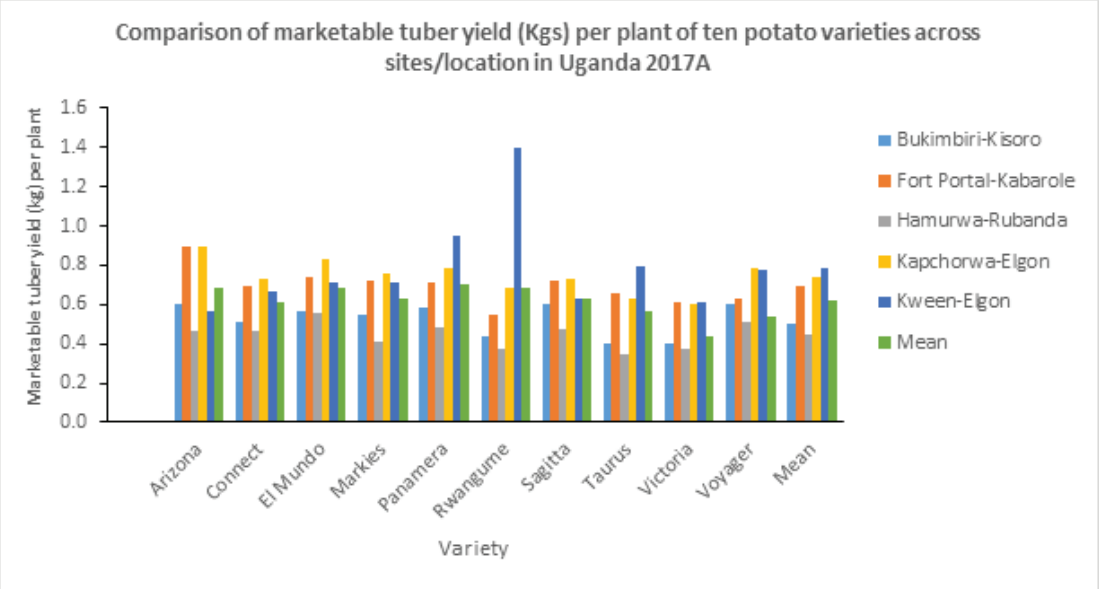


*Figure 4: Comparison of marketable tuber yield (kgs) per plant for ten potato varieties across sites in Uganda 2017A*

### *3.2 Promotional activities*

#### *3.2.1 Field days and Stakeholders' evaluation of varieties*

During the demonstration trials for Dutch potato varieties at farm-level, field days which attracted many potato value chain actors and stakeholders (farmers, local government officials and extensionists) were conducted for the evaluation of varieties as well as variety awareness creation. Three field days were conducted at different crop stages; flowering stage, bulking stage (2-3 weeks to full maturity) and full crop maturity during harvesting. Potato varieties were evaluated and ranked by farmers and stakeholders according to desired and undesired attributes. Over 1300 (763 Males and 591 Females) participants attended the three field days (Table 6).

*Farmers evaluate Dutch Potato varieties during on-farm demo trials in Kapchorwa (July 2017)*

**Table 6: Attendance of participants of field days at on-farm demonstration trials in Uganda**

| Site/Location | Flowering stage | | Bulking stage | | Harvesting stage | | |
|---|---|---|---|---|---|---|---|
| | M | F | M | F | M | F | Total |
| Hamurwa -Rubanda | 41 | 28 | 60 | 82 | 35 | 27 | 273 |
| Bukimbiri -Kisoro | 56 | 40 | 102 | 140 | 52 | 59 | 449 |
| Harugongo -FortPortal | 43 | 8 | 55 | 49 | 50 | 31 | 236 |
| Kapteret -Kapchorwa | 30 | 19 | 74 | 39 | 39 | 21 | 222 |
| Benet -Kween | 46 | 8 | 60 | 12 | 20 | 28 | 174 |
| Total | 216 | 103 | 351 | 322 | 196 | 166 | 1354 |

### *3.2.2 Potato Variety Evaluation by farmers and Stakeholders*

It was noted that some Dutch potato varieties were:

- Early maturing mainly Arizona, Sagitta, Voyager, El Mundo and Connect compared to local checks (Rwangume and Victoria).
- Drought tolerant varieties;Taurus, Panamera, Markies, Voyager and Connect varieties.
- Drought susceptible varieties; Arizona, Sagitta and El Mundo varieties.
- LB disease susceptible varieties; Arizona, Taurus and Voyager.
- LB tolerant varieties; Connect and Panamera

Field day participants evaluated and ranked Dutch potato varieties together with the local checks (Rwangume and Victoria) based on tuber yield, maturity period and tuber characteristics such as number of eyes, eye depth and tuber shape and tuber flesh colour as compared to their ranking during the evaluation done in the process of vegetative growth at flowering stage for plant vigor, disease and pest tolerance and stress tolerance. Rwangume and Victoria varieties which ranked first and second respectively at all sites at flowering stage, ranked least or lowest (9th) while Panamera, El Mundo, Arizona and Voyager ranked the best at bulking stage (Table 7).

At harvesting stage, Sagitta took the first position followed by El Mundo, Markies, Arizona and Voyager among Dutch varieties (Table 8). Rwangume and Victoria varieties which had ranked first and second respectively at all the sites during flowering stage, ranked least or lowest (10th and 8th respectively) due to production of many small tubers while Taurus, a crisping variety with high dry matter (DM) content ranked the second last after Rwangume due to low tuber yield compared to other varieties with low DM content.

**Table 7: Variety evaluation by field day participants at bulking stage at different on-farm trial sites in Uganda (June 2017)**

| Variety | Position Ranking (from best to least; 1=First and most preferred and 10= last and least preferred) | | | | | Mean | Position |
|---|---|---|---|---|---|---|---|
| | Kween | Aharugongo - Fort Portal | Kapchorwa | Hamurwa - Rubanda | Bukimbiri - Kisoro | | |
| Taurus | 5 | 7 | 5 | 6 | 7 | 5 | 5 |
| Rwangume | 1 | 10 | 7 | 10 | 9 | 8 | 9 |
| El Mundo | 3 | 6 | 4 | 1 | 6 | 4 | 2 |
| Arizona | 3 | 5 | 2 | 6 | 5 | 4 | 2 |
| Voyager | 3 | 9 | 5 | 3 | 1 | 4 | 2 |
| Connect | 6 | 2 | 6 | 5 | 4 | 5 | 5 |
| Panamera | 6 | 1 | 2 | 4 | 2 | 3 | 1 |
| Markies | 8 | 3 | 7 | 5 | 8 | 6 | 7 |
| Victoria | 9 | 4 | 9 | 9 | 10 | 8 | 9 |
| Sagitta | 10 | 8 | 1 | 5 | 3 | 6 | 7 |

**Table 8: Variety evaluation for tuber yield and other attributes by harvesting field day participants at four on-farm demonstration trial sites in Uganda (July 2017)**

| Variety | Sites and variety ranks/positions (from best to least; 1=First and most preferred and 10= last and least preferred) | | | | |
|---|---|---|---|---|---|
| | Aharugongo - Fort Portal | Kapchorwa | Hamurwa - Rubanda | Bukimbiri - Kisoro | Mean Position |
| Taurus | 9 | 10 | 9 | 9 | 9 |
| Rwangume | 10 | 8 | 10 | 10 | 10 |
| El Mundo | 5 | 3 | 1 | 4 | 2 |
| Arizona | 1 | 1 | 5 | 6 | 2 |
| Voyager | 8 | 7 | 2 | 2 | 5 |
| Connect | 4 | 6 | 8 | 5 | 7 |
| Panamera | 2 | 5 | 7 | 8 | 6 |
| Markies | 7 | 2 | 2 | 2 | 2 |
| Victoria | 6 | 9 | 6 | 7 | 8 |
| Sagitta | 3 | 4 | 4 | 1 | 1 |

### *3.2.3 Evaluation of potato varieties for consumer uses*

Potato varieties were also evaluated for uses through appearance and palatability of the product for table; crisps and french-fries, based on a scale of 1-5 (1=Poor 5= best product).

Results for table use revealed that varieties Taurus, Voyager, Connect and Rwangume were the best with highest score 4 while Arizona and El Mundo had the least liked with lowest score of 2. On the other hand, varieties Arizona, Voyager and Markies had the best french fries with score

of 4 while Rwangume and Victoria had poor french fries with lowest scores of 1 and 2 respectively (Table 9).

Test for crisps was only done on Taurus and Rwangume varieties, all producing good crisps but the latter with more glittering crisps than the former hence with a higher score of 5. Overall, Taurus, Voyager were the most preferred with score 4.0 followed by Rwangume, Connect, Markies, Panamera, Arizona, Sagitta, El Mundo and Victoria (Table 9).


*French fries from different potato varieties prepared by field day participants at on-farm potato demo trials in Uganda (July 2017)*

**Table 9: Evaluation of potato varieties for suitability of uses (french fries, crisps and table) and consumer needs - Scored on 1-5 scale (1=poor and 5=best)**

| Variety | Uses and scores | | | Mean score |
|---|---|---|---|---|
| | Table | French fries | Crisps | |
| Taurus | 4 | - | 4 | 4.0 |
| Markies | 3 | 3.5 | - | 3.25 |
| Victoria | 3 | 1 | - | 2.0 |
| Panamera | 3 | 3 | - | 3.0 |
| Voyager | 4 | 4 | - | 4.0 |
| Arizona | 2 | 3 | - | 3.0 |
| El Mundo | 2 | 3 | - | 2.5 |
| Connect | 4 | 3 | - | 3.5 |
| Rwangume | 4 | 2 | 5 | 3.7 |
| Sagitta | 3 | 3 | - | 3.0 |

### *3.3 Publicity of demonstration activities and varieties and their seed demand*

To enhance and increase awareness on new Dutch potato varieties among communities, different media were used; particularly local FM radio stations widely listened to by communities for announcements and snap talkshows.

1. Radio announcements for field days were run on Voice of Kigezi (VOK) in Kabale, Voice of Muhabura in Kisoro and Voice of Toro in Fort Portal.
2. During field day events, radio news reporters from VOK and Voice of Kapchorwa had interviews with project leaders and demonstration trial host farmers as well as other participating farmers. VOK radio's *Bomugaiga* (Be Rich) program still broadcasts the event every Saturday from 29th July, 2017 to-date running from 6.00-7.00 p.m.
3. NTV Uganda covered the field harvesting day in Bukimbiri-Kisoro district and the event was broadcast on Wednesday August 2, 2017 during the 7.00 pm and 9.00 pm news bulletins.
4. Daily Monitor news reporter for Sebei region interviewed project leaders and farmers during the field day at Kabenguria-Kapchorwa. A draft article has been shared with IFDC-REACH project, edited and final version sent to the news room for publication.

Exhibitions in Agricultural Shows; the eight Dutch varieties under demo trials were exhibited during the National Agricultural Show at the Source of the Nile in Jinja on 22nd July, 2017. Processing demonstration of crisps and french fries from the varieties was done during the show. A total number of 63 farmers from three districts; Rubanda, Kanungu and Fort Portal-Kabarole expressed request of over 16 MT of seed potato of different Dutch varieties (Appendix 1).

## 4.0 Conclusions and recommendations

Despite the challenges encountered during the implementation of trials, especially the effect of drought in the Southwestern region of the country, varieties performed better compared to the the National Variety Performance Trials (NVPTs). Even varieties Panamera (30.21 MT/ha) and Taurus (26.15 MT/ha) that were not released performed well above NVPT yields (18.3 and 14.6 MT/Ha respectively). Seed deliveries from the Netherlands was done late consequently affecting planting time as opposed to the initial plan of February, 2017. Planting materials for first season should always be in Uganda by first week of February.

Through field days and publicity made during the implementation period, many potato farmers and actors have become aware of the varieties and their uses. The remaining gap is the seed companies' engagement with local partners in the multiplication of seed in the country for subsequent access by farmers.

## PICTORIAL


*Figure 5: Harvesting field day for on-farm potato demo trial for Dutch varieties at Bukimbiri-Kisoro, Southwestern region (July 2017)*


*Figure 6: Farmers' evaluation of Dutch varieties under on-farm demo trial at Hamurwa-Rubanda, Southwestern region (July 2017).*

*Figure 7: Farmers evaluate Dutch Potato varieties in Fort Portal-Western region (July 2017)*

*Figure 8: Harvesting field day at Kabenguria-Kapchorwa, Elgon region (July, 2017)*


*Figure 9: Harvesting at Benet-Kween (August, 2017)*


*Figure 10: Top-bottom: Potato crisps and french fries processed from Taurus and Sagitta varieties respectively by farmers at Hamurwa-Rubanda, Southwestern region during field day (July, 2017)*


*Figure 11: Dutch potato varieties displayed during National Agricultural Show in Jinja (July 2017)*


AGRICO
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