Jumpstarting orange-fleshed sweetpotato in West Africa through diversified markets – is accelerating towards outcomes ...

Prepared by
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Various OFSP processed products

H.E. Mr. Kofi and Mrs. Nane Annan’s 3rd visit to Ghana, 15 Aug 2016

7th Sweetpotato for Profit and Health Initiative Meeting
7 – 8 October 2016
Addis Ababa, Ethiopia
Outline

- Introduction
- Progress & Achievement
- What remains to be done in the last 6 months
- Exit Strategy

Multiplication - drip irrigation; Burkina Faso

Dry season production under irrigation; Ghana

Retailers at Bobo market, Burkina Faso

O-Meals – School Feeding, Nigeria
Sustainable and inclusive market-driven approaches for orange-fleshed sweetpotato (OFSP) to increase incomes, and improve health through consumption of vitamin A rich OFSP, especially in women and children in Ghana, Nigeria and Burkina Faso.

PROJECT OUTCOMES

1. Formal and informal diversified OFSP market opportunities developed in pilot areas in Ghana, Nigeria, and Burkina Faso.
2. Viable QDPM seed system in target areas capable of expansion in response to increased demand.
3. Households, including women and children, in target areas have increased vitamin A consumption from OFSP.
4. Commercial sweetpotato planting material and OFSP producers, including women, increase income through participation in OFSP value chains.
Where are we working in West Africa? and How do we achieve our target? – establish strong partnerships

Key NARS Partners
- Ghana: Council for Scientific and Industrial Research (CSIR)-Crops Research Institute, CSIR-Savanna Agricultural Research Institute, Ministry of Food and Agriculture, Ghana Health Service, University for Development Studies, Kwanu-Nkrumah University of Science and Technology
- Nigeria: Federal Ministry of Agriculture and Rural Development, National Root Crops Research Institute, Agricultural Development Programmes, Federal University of Agriculture Abeokuta, Offa Polytechnic, Bayen University Kano, Osun Elementary School Feeding and Health Programme
- Burkina Faso: Institut de l’Environnement et de Recherches Agricoles, Centre Agricole Polyvalent Matourkou, Directions Provinciales de l’Agriculture, de l’Hydraulique et des Ressources Halietiques
- Benin: Institut National de Recherches Agricoles du Benin

Key NGO Partners
- Ghana: iDE-Ghana, Association of Church Based Development Projects, Catholic Relief Service, Partnership for Child Development (PCD), Farm Radio International (FRI)
- Nigeria: Helen Keller International, PCD
- Burkina Faso: iDE-Burkina Faso
- Benin: Børnefonden

CGIAR and Other Regional Partners
- Alliance for a Green Revolution in Africa, CGIAR Research Program on Dryland Systems, CGIAR Research Program on Integrated Systems for the HumidTropics

Numbers under country names indicate households to benefit by 2020

Key to Sites
- Sweetpotato for Health and Wealth in Nigeria
- CGIAR Research Program on Dryland Systems and HumidTropics
- Jumpstarting OFSP in West Africa through Diversified Markets
  - Breaking Postharvest Bottlenecks
  - Institutes offering Training of Trainers Course
  - Enhancing the Nutrient-rich Yambean
  - Sweetpotato Breeding Programs
  - Phenotyping under Genomic Tools Project
  - Primary sites (All trial stages, crossing, laboratory, etc.)
  - Secondary sites (multilocational and on-farm trials)
An integrated approach: public and private sector partnership to match into the four jumpstarting OFSP project outcomes

We are working toward:
The first and second Year of the project implementation, what did we need?

1. Linkage of seed system and breeding program
2. Elements required for functioning seed systems for its sustainability
Overview the household numbers (direct or indirect) benefited from the orange-fleshed sweetpotato vitamin A powerhouse in Ghana, Nigeria and Burkina Faso: April 2014 through July 2016 (to be continued …)

<table>
<thead>
<tr>
<th>Indicator variables</th>
<th>Year 1 (4 April 2014-31 March 2015)</th>
<th>Year 2 (1 April 2015-31 March 2016)</th>
<th>Year 3 (1 April 2016-31 July, 2016)</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ghana</td>
<td>Nigeria</td>
<td>Burkina</td>
<td>Ghana</td>
</tr>
<tr>
<td>Households reached with OFSP vines</td>
<td>2,466</td>
<td>6,334</td>
<td>784</td>
<td>2,461</td>
</tr>
<tr>
<td>No of people reached¹</td>
<td>12,577</td>
<td>19,860</td>
<td>9,953</td>
<td>13,238</td>
</tr>
<tr>
<td>No of Pregnant Women Reached²</td>
<td>390</td>
<td>834</td>
<td>4,412</td>
<td>5,081</td>
</tr>
<tr>
<td>No of Breastfeeding Women Reached²</td>
<td>641</td>
<td>1,013</td>
<td>2,674</td>
<td>-</td>
</tr>
</tbody>
</table>

1. Direct and indirect estimates of people reached.
2. Direct and indirect estimates of women reached.
## Continued table

<table>
<thead>
<tr>
<th>Indicator variables</th>
<th>Year 1 (4 April 2014-31 March 2015)</th>
<th>Year 2 (1 April 2015-31 March 2016)</th>
<th>Year 3 (1 April 2016-31 July, 2016)</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pregnant, breastfeeding and/or lactating women through Ghana Health Service intervention</td>
<td>direct</td>
<td>%</td>
<td>% F</td>
<td>direct</td>
</tr>
<tr>
<td>No of women reached</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DVMs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>16,074</td>
<td>28,041</td>
<td>784</td>
<td>19,500</td>
</tr>
</tbody>
</table>
Jumpstarting year 3 areas of focus (period: 1 April 2016 to 31 March 2017):

- Strengthen seed system (QDPM) implementation: on-going activities

- Expanding and documenting formal and informal markets for fresh roots and processed products, i.e. bread is one of the most promising product (Ghana, Nigeria)

- Solidify M+E systems

- Solidifying and expanding partnerships to reach more than one million households by 2020
  
  This will be explained more by Dr. Souleimane Adekambi, our M&E specialist

- Continuing learning from Ghana Health Service intervention: Willingness to pay
- School Feeding Pilot project in Ghana

This will be presented by Mr. Joseph Nchor – Implementing Partner: ACDEP
To do so, relying on the 3 main common tools:

**AWP, FVs & MRs**

- **Annual Work Plan revised**, including who is responsible for what and time frames,
To do so, relying on the 3 main common tools: **AWP, FVs & MRs**

- JS project Monitoring, Learning and Evaluation Plan **developed**, including who is responsible for what and time frames
To do so, relying on the 3 main common tools: **AWP, FVs & MRs**

- Training of EAs on the use of Android mobile tablets for DVMs & market data collection using ODK (**OPEN DATA TOOLKITS**), extend to OFSP root producers.
In Ghana
In Burkina
In Nigeria
To do so, relying on the 3 main common tools: AWP, FVs & MRs

- **Field Visits**, as a purpose of validation of reported information – at any time & to any of the 3 countries,
To do so, relying on the 3 main common tools: AWP, FVs & MRs

- Monthly (semi-annual & annual) Reports, as a self-assessment of the performance of the project,
### Year 3 Beneficiaries (Up to date)

<table>
<thead>
<tr>
<th>No</th>
<th>Indicator Variables</th>
<th>Ghana</th>
<th>Nigeria</th>
<th>Burkina</th>
<th>Total (Up-to-date)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Total</td>
<td>Male</td>
</tr>
<tr>
<td>1</td>
<td>Households reached with OFSP vines</td>
<td>1,050</td>
<td>2,312</td>
<td>3,362</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>Number of people reached*</td>
<td>3404</td>
<td>777</td>
<td>4,181</td>
<td>4506</td>
</tr>
<tr>
<td>3</td>
<td>Number of Pregnant Women Reached**</td>
<td>2,000</td>
<td>2,000</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>Number Of Breastfeeding Women Reached**</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>Women without distinction of being pregnant, breastfeeding and/or lactating</td>
<td>4,745</td>
<td>4,745</td>
<td>133</td>
<td>133</td>
</tr>
<tr>
<td>6</td>
<td>DVMs</td>
<td>15</td>
<td>15</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>4,469</td>
<td>9,834</td>
<td>14,303</td>
<td>4,514</td>
</tr>
</tbody>
</table>

**Notes:**
- OFSP:0.5 kg/ha
- Number of people reached: Total number of people reached with the intervention.
- Number of Pregnant Women Reached: Total number of pregnant women reached.
- Number of Breastfeeding Women Reached: Total number of breastfeeding women reached.
- Women without distinction of being pregnant, breastfeeding and/or lactating: Total number of women reached without distinction.
Quick Main Midline Results
**Household Introduction to OFSP**

**Sampling approach:**
- Selection of the respondents was limited to the project targeted zones (2 regions in GH & 5 communities in BF)
- Focus on two categories of farmers: Direct Beneficiaries (Treated) and Non Beneficiaries (Control)
- Ghana (Treated & Control 144, respectively) & Burkina (Treated 144 and Control 107)
- DVMs are also interviewed (but results not presented here)

### Ghana

<table>
<thead>
<tr>
<th></th>
<th>C (N=144)</th>
<th>T (N=144)</th>
<th>Overall (N=288)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ever Heard Of OFSP</td>
<td>89%</td>
<td>100%</td>
<td>94%</td>
</tr>
<tr>
<td>Main information sources</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project’s Partners</td>
<td>40%</td>
<td>99%</td>
<td>82%</td>
</tr>
<tr>
<td>1st time OSFP planted (2015)</td>
<td>90%</td>
<td>81%</td>
<td>83%</td>
</tr>
</tbody>
</table>

### Burkina

<table>
<thead>
<tr>
<th></th>
<th>C (N=144)</th>
<th>T (N=107)</th>
<th>Overall (N=251)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ever Heard Of OFSP</td>
<td>91%</td>
<td>100%</td>
<td>95%</td>
</tr>
<tr>
<td>Main information sources</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project’s Partners</td>
<td>27.40 %</td>
<td>69.20 %</td>
<td>46.20%</td>
</tr>
<tr>
<td>1st time OSFP planted (2015)</td>
<td>80.80 %</td>
<td>90.60 %</td>
<td>87.80%</td>
</tr>
</tbody>
</table>
### Gross margin of vine production in Ghana & Burkina Faso

#### Ghana

<table>
<thead>
<tr>
<th>OFSP vine plot size (Ha)</th>
<th>0.9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total production cost per acre (USD/Ha)</td>
<td>65.83</td>
</tr>
<tr>
<td>Gross margin of vine production per acre (USD/Ha)</td>
<td>243.49</td>
</tr>
</tbody>
</table>

#### Burkina

<table>
<thead>
<tr>
<th>OFSP vine plot size (Ha)</th>
<th>0.52</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total production cost per hectare (USD/ hectare)</td>
<td>325.20</td>
</tr>
<tr>
<td>Gross margin of vine production per acre (USD/Ha)</td>
<td>591.16</td>
</tr>
</tbody>
</table>
### Ghana:

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<th>Overall (N=288)</th>
</tr>
</thead>
<tbody>
<tr>
<td>%Producing OFSP</td>
<td>15%</td>
<td>38%</td>
<td>26%</td>
</tr>
<tr>
<td>OFSP plot size (Ha)</td>
<td>1.82</td>
<td>2.01</td>
<td>1.95</td>
</tr>
<tr>
<td>% of OFSP to total areas under SP</td>
<td>71%</td>
<td>86%</td>
<td>81%</td>
</tr>
<tr>
<td>% of purchased vines value out of the total vine value</td>
<td>45%</td>
<td>39%</td>
<td>41%</td>
</tr>
<tr>
<td>% vines costs from total production cost</td>
<td>56%</td>
<td>49%</td>
<td>51%</td>
</tr>
<tr>
<td>Yield (Kg/Ha)</td>
<td>960.11</td>
<td>734.48</td>
<td>799.79</td>
</tr>
<tr>
<td>Gross Margin (USD/Ha)</td>
<td>118.27</td>
<td>37.96</td>
<td>61.21</td>
</tr>
</tbody>
</table>

### Burkina:

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<th>T (N=107)</th>
<th>Overall (N=251)</th>
</tr>
</thead>
<tbody>
<tr>
<td>%Producing OFSP</td>
<td>13%</td>
<td>49%</td>
<td>28%</td>
</tr>
<tr>
<td>OFSP plot size (Ha)</td>
<td>0.44</td>
<td>0.49</td>
<td>0.47</td>
</tr>
<tr>
<td>% of OFSP to total areas under SP</td>
<td>5%</td>
<td>17%</td>
<td>10%</td>
</tr>
<tr>
<td>% of purchased vines value out of the total vine value</td>
<td>16%</td>
<td>3%</td>
<td>7%</td>
</tr>
<tr>
<td>% vines costs from total production cost</td>
<td>36%</td>
<td>44%</td>
<td>42%</td>
</tr>
<tr>
<td>Yield (Kg/Ha)</td>
<td>2,811.11</td>
<td>4,140.93</td>
<td>3,778.25</td>
</tr>
<tr>
<td>Gross Margin (USD/Ha)</td>
<td>99.97</td>
<td>683.83</td>
<td>527.59</td>
</tr>
</tbody>
</table>
School Feeding Program in Nigeria

- By mid-2015, 17 elementary schools in Osun State, with over 8,000 pupils receiving an OFSP meal once a week

- 1,910 students in 13 Osun State schools receive OFSP bread once a week

- In September, 2016, 100 additional schools around the state, with the possibility of further increase → 10 tons of OFSP required to feed 41,216 students weekly
Next plans

Among others....

- Conducting endline surveys of producers, DVMs
- Assessing contribution of GHS to OFSP consumption
- Analyzing Cost-Benefits of OFSP incorporation into Bread and contribution to OFSP root production
GHANA HEALTH SERVICE INTERVENTION
OC 3: Households, including women and children, in target areas have increased vit A consumption from OFSP

- Low consumption of OFSP
  - CHANGE BEGINS!!
  - Stakeholders: GHS, DOA, NGOs
    - Identifying farming communities with health care

- Stakeholders: GHS, DOA, NGOs
  - Integrating OFSP into health programs
    - Stakeholders: GHS, CIP

- Stakeholders: GHS, CSIR-SARI, DOA, NGOs
  - Access to clean OFSP materials (vines and roots)

- Voucher system and Willingness to pay for materials (vines and roots)

- Market creation

- Stakeholders: GHS, CSIR-SARI, DOA, NGOs
  - Increasing consumption of OFSP

DESIGNED CHANGE
Activities

- Train staff of CHPS to incorporate OFSP into Infant & Young Child Feeding counseling
- Train health volunteers and community health nurses on OFSP counseling
- Cooking demos and training of pregnant and lactating mothers on recipes
- Community sensitization durbars on OFSP nutrition
- Training pregnant women, lactating mothers on OFSP nutrition and utilization
- Voucher system to disseminate vines/roots to pregnant and lactating mother
OFSP-School feeding pilot started in June 2016 in 2 basic schools under the GSFP to achieve the ff outcomes:

1. *Feeding school children with vit A-rich OFSP diets will improve child nutrition and combat VAD*

2. *OFSP School Feeding will increase market opportunities for local root producers and vines multipliers*
The implementation Process

Farmers see incentive and produce roots all-year

Institutional stakeholders planning meetings

Baseline Survey + design of M&E tools

Sensitization of schools on nutritional benefits

Monitoring & backstopping, feedback, scale up planning

Farmers-Caterers meetings; supplying roots

Project launch durbar: stakeholders/communities’ sensitization

Training of cooks on nutritious menus
Roots Production
Achievements so far

- 800 pupils fed once each with nutritious but cheap OFSP diets
- 13 producers supplied 6,925kg of fresh roots (uninterrupted) to caterers valued at US$1,212
- Strong producer-caterer linkage established:
  - potential structured market for producers
  - to increase production & consumption
Feeding on OFSP menu
Lessons and way forward

• School feeding has demonstrated a potential stable market for roots
• Producers can best capture the opportunity by all-year production with good storage practices
• Schools reported a higher attendance on OFSP feeding days, showing acceptability
• Plans to scale from pilot program
EXIT STRATEGIES:
Strategies for OFSP expansion and scaling intervention in Ghana, Burkina Faso and Nigeria

1. **Do not exit** and seek extension for Jumpstarting Phase 2 or other follow on project.

2. **Exit:**
   2.2. Determine the most successes of intervention which was piloted in the last three years to be scaled out or scaled in; prepare some concept notes and seek a number of respected donors for funding activities through a project or two
   2.3. Partners have their capacities to carry on through their own investment on project.

For example:
- **In Burkina Faso:** NAFASO seed company now supplies QDPM OFSP to Min of Agric and NGOs
- OFSP fresh market value change now runs on his own.
- **In Nigeria:** school feeding continues for expansion within Osun State and Nationally.
- **In Ghana:** OFSP value continues through bakeries, school feeding and Ghana Health Services investment
- Value chains actors and partners continue on their own
  → we have planned a meeting among the core IPs in the beginning of Nov 2016
THANK YOU VERY MUCH FOR YOUR ATTENTION!

ACKNOWLEDGEMENT

- The Bill & Melinda Gates Foundation
- Governments and farmers and marketers

From
The West Africa Team