YIIFSWA-II Leadership, Partnership, and Collaboration in 2019

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1. Introduction
2. Leadership and Partnership of YIIFSWA-II
   1.1 Annual Progress Review and Planning
   1.2 Partnership and Collaboration
   1.3 Assistance from the Senior Program Officer
   1.4 Support and backstopping to partners
   1.5 Administrative and Financial Management
3. Key milestones achieved in 2019
4. Other Achievements
5. Production Research on Aeroponics System
6. Challenges and lessons learned in 2019
7. Conclusion and way forward
Objectives of YIIFSWA-II

1- Empower smallholder ware yam producers with the seed of improved varieties for increased productivity resulting in increased income,

2- Develop a functional, and sustainable seed system that delivers sufficient quantities of high quality seed of improved varieties to farmers at the right time and at prices that encourage adoption,

3- Raise the awareness of the economic impact of the yam sector for increased investment and prioritization from national, regional and international programs as well as private sector; and

4- Empower women to profitably participate in the commercial yam seed value chain within the context of the appropriate socio-cultural system.
Our vision of success

• YIIFSWA-II project planned a 30% increase in the productivity of yam cultivation for at least 320,000 smallholder yam farmers in six states of Nigeria and two regions of Ghana.

• The expected impact from implementation of YIIFSWA-II over the next five years will be improved livelihoods of at least 1.6 million people who depend directly on the yam value chain.
2- Leadership and Partnership of YIIFSWA-II
The third Annual Review and Planning Meeting of YIIFSWA-II was held 25 to 28 February 2019 at Alisa Hotel in Accra, Ghana.

The meeting organized by IITA was attended by all the project partners including Context/Sahel, NASC, NRCRI, NACGRAB, CSIR/CRI, CSIR/SARI, PPRSD and the private seed companies Da Allgreen, Biocrops Biotechnology, Nwabudo Agro Seeds, PS Nutraceuticals and Strategic Seed Nigeria, Hikma Agro Services, Fosuah Food Chain; Iribov Ghana and Savanna Yam Exchange.
Other events during the 3rd YIIFSWA-II Meeting

1- Annual Workshop Dinner

2- Visit of Iribov Ghana at Sogakope on 28 Feb 2019.
1. Internal Management meetings
   1.1 Weekly meeting (41 in 2019)
   1.2 Monthly meeting (4 in 2019)
   1.3 Quarterly meeting (2 in 2019)
   1.4 Technical meetings (many and based on need)

2. External meetings with project partners
   2.1 Technical meetings CRI, NRCRI, SARI & Seed Co etc.
   2.2 Skype and phone calls (Seed Co., Public partners, Context)
   2.3 Monitoring and backstopping visits to all partners and collaborators in Nigeria and Ghana
In 2019 we visited the following partners:

- 4 Biocrops Biotechnology Ltd
- 3 PS Nutraceuticals International
- 3 Nwabudo Agro Seeds Ltd
- 3 NRCRI, Umudike
- 2 CSIR/CRI, Kumasi
- 1 CSIR/SARI, Tamale
- 1 Da-Allgreen Seeds Ltd
- 1 Strategic Seeds Nigeria Ltd
- 1 NACGRAB
- 1 NASC
- 1 PPRSD
- 1 Iribov Ghana
- 1 Fosuah Food Chain
- 1 Hikma Agro Services
Partnership and Collaboration

• Reforecasting of the budget based on discussion between the Senior Program Officer, Context Managing Director and the Project Leader to enhance the capacity of Seed Co.

• Approval of YIIFSWA-II Technical and Financial reports by the Foundation in May 2019

• Partnership agreement/amendment with budget were signed only after agreed workplan with each partner

• Collaboration with yam projects and programs (AfricaYam; IITA Yam Breeding etc.)

• Financial support to the National Yam producers Association

• Partnership with IITA-GoSeed with technical backstopping and financial support from YIIFSWA-II

• Good collaboration with CRP RTB CC2.1
Collaboration with RTB CC.2.1

Annual Meeting of the RTB/CC2.1 at IITA-Ibadan from 14 to 16 March 2019

Visit of YIIIFSWA-II facilities at IITA-Ibadan by Context on 15 March 2019
### Partnership and Collaboration

**Delay of Signature of amendment for Nigeria**

<table>
<thead>
<tr>
<th>Company</th>
<th>Signature of Amendment 2019</th>
<th>Date of first instalment</th>
<th>Date of 2\textsuperscript{nd} instalment</th>
<th>Total of budget paid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Da Allgreen</td>
<td>10\textsuperscript{th} June 2019</td>
<td>4\textsuperscript{th} July 2019</td>
<td>1\textsuperscript{st} Nov 2019</td>
<td>100%</td>
</tr>
<tr>
<td>Biocrops</td>
<td>3\textsuperscript{rd} June 2019</td>
<td>4\textsuperscript{th} July 2019</td>
<td>1\textsuperscript{st} Nov 2019</td>
<td>100%</td>
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<tr>
<td>PS Nutrac</td>
<td>17\textsuperscript{th} June 2019</td>
<td>4\textsuperscript{th} July 2019</td>
<td>1\textsuperscript{st} Nov 2019</td>
<td>100%</td>
</tr>
<tr>
<td>Nwabudo</td>
<td>26 June 2019</td>
<td>4\textsuperscript{th} July 2019</td>
<td>-</td>
<td>50%</td>
</tr>
<tr>
<td>Strategic Seeds</td>
<td>14\textsuperscript{th} June 2019</td>
<td>4\textsuperscript{th} July 2019</td>
<td>1\textsuperscript{st} Nov 2019</td>
<td>100%</td>
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<tr>
<td>Context</td>
<td>23\textsuperscript{rd} July 2019</td>
<td>26\textsuperscript{th} July 2019</td>
<td>27\textsuperscript{th} Sept 2019</td>
<td>100%</td>
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<tr>
<td>NACGRAB</td>
<td>19\textsuperscript{th} June 2019</td>
<td>4\textsuperscript{th} July 2019</td>
<td>1\textsuperscript{st} Nov 2019</td>
<td>100%</td>
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<tr>
<td>NASC</td>
<td>6\textsuperscript{th} June 2019</td>
<td>10\textsuperscript{th} July 2019</td>
<td>1\textsuperscript{st} Nov 2019</td>
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<tr>
<td>NRCRI</td>
<td>20\textsuperscript{th} June 2019</td>
<td>10\textsuperscript{th} July 2019</td>
<td>24\textsuperscript{th} Oct 2019</td>
<td>100%</td>
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## Delay of Signature of amendment for Ghana

<table>
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<td><strong>Delay of Signature of amendment for Ghana</strong></td>
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<th>Total of budget paid</th>
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<tr>
<td>CRI</td>
<td>17th May 2019</td>
<td>10th June 2019</td>
<td>1st Nov 2019</td>
<td>100%</td>
</tr>
<tr>
<td>PPRSD</td>
<td>27th May 2019</td>
<td>10th June 2019</td>
<td>1st Nov 2019</td>
<td>100%</td>
</tr>
<tr>
<td>SARI</td>
<td>11th July 2019</td>
<td></td>
<td>1st Nov 2019</td>
<td>100%</td>
</tr>
<tr>
<td>HIKMA</td>
<td>4th July 2019</td>
<td>17th July 2019</td>
<td>22nd Aug 2019</td>
<td>100%</td>
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<tr>
<td>IRIBOV Ghana</td>
<td>7th August 2019</td>
<td>16th Aug. 2019</td>
<td>1st Nov 2019</td>
<td>100%</td>
</tr>
<tr>
<td>Fosuah Foods Chain</td>
<td>8th July 2019</td>
<td>11th July 2019</td>
<td>26 July 2019</td>
<td>50%</td>
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</table>
Liaison with the Donor

17 June, 2019

Lauren Good
Senior Program Officer
BMGF
P.O. Box 23350,
Seattle, WA 98102-3706
United States.

Dear Lauren,

BMGF/IITA - Yam Improvement for Incomes and Food Security in West Africa,
Phase II (OPP1159088)

This is to acknowledge with many thanks the receipt of US$3,515,211.00 into IITA
Citibank account in New York on 17 May, 2019. This represents third payment due to
IITA in respect of above agreement.

Please note that 2% CG System cost of US$70,304.22 was deducted at source by CG
Fund Office.

With many thanks.

Yours sincerely,

Shalewa Sholola
Director of Finance

cc: Dr. Norbert Maroya
    Project Development & Administration Unit

http://yifiiswa.iita.org/
Support from Senior Program Officer

• Permanent assistance of the Senior Program Officer Lauren Good through regular monthly Skype call

• There were no call in February (annual meeting in Accra) and September (visit of the SPO in Nigeria). For the year 2019 a total of 09 Monthly meetings (the meeting of July was held with Context and PDAU)

• One jointly field visits with the Senior Program Officer on 17th to 20th September in Nigeria
## INITIAL YIIFSWA-II PROJECT BUDGET

<table>
<thead>
<tr>
<th></th>
<th>Total Budget</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
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<td>IITA</td>
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<td>2,420,152.03</td>
<td>3,784,749.38</td>
<td>2,242,222.83</td>
<td>1,502,801.17</td>
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<td>Context</td>
<td>2,431,814.41</td>
<td>723,532.86</td>
<td>675,900.85</td>
<td>475,831.75</td>
<td>286,677.38</td>
<td>269,871.57</td>
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<tr>
<td>SARI</td>
<td>132,728.41</td>
<td>1,136.36</td>
<td>2,386.36</td>
<td>110,105.68</td>
<td>19,100.00</td>
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<tr>
<td>CRI</td>
<td>350,005.95</td>
<td>55,080.35</td>
<td>62,629.37</td>
<td>177,950.84</td>
<td>40,785.38</td>
<td>13,560.00</td>
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<tr>
<td>PPRSD</td>
<td>248,192.75</td>
<td>4,914.39</td>
<td>8,580.11</td>
<td>188,298.24</td>
<td>46,400.00</td>
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<tr>
<td>NACGRAB</td>
<td>74,112.45</td>
<td>2,573.34</td>
<td>2,702.01</td>
<td>29,237.11</td>
<td>26,400.00</td>
<td>13,200.00</td>
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<tr>
<td>NASC</td>
<td>342,068.39</td>
<td>12,967.10</td>
<td>23,767.10</td>
<td>247,534.20</td>
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<td>NRCRI</td>
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<td>47,772.58</td>
<td>57,102.21</td>
<td>161,959.32</td>
<td>39,024.28</td>
<td>13,200.00</td>
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<tr>
<td>SEED CO. NIGERIA</td>
<td>541,000.00</td>
<td>-</td>
<td>30,000.00</td>
<td>320,500.00</td>
<td>190,500.00</td>
<td>-</td>
</tr>
<tr>
<td>SEED CO. GHANA</td>
<td>120,850.00</td>
<td>-</td>
<td>15,000.00</td>
<td>71,250.00</td>
<td>34,600.00</td>
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</table>

http://yiifswa.iita.org/
### Planned YIIFSWA-II Budget for 2020

<table>
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<tr>
<th>Category</th>
<th>Amount</th>
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<tbody>
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<td>Personnel</td>
<td>854,075.69</td>
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<tr>
<td>Travel</td>
<td>110,341.34</td>
</tr>
<tr>
<td>Consultants</td>
<td>156,977.50</td>
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<tr>
<td>Capital Equipment</td>
<td>-</td>
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<tr>
<td>Other Direct Costs</td>
<td>148,520.82</td>
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<tr>
<td>Sub-awards</td>
<td>734,407.01</td>
</tr>
<tr>
<td>TOTAL DIRECT COST</td>
<td>2,004,322.35</td>
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<tr>
<td>Indirect Cost</td>
<td>219,863.58</td>
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<tr>
<td>TOTAL BUDGET</td>
<td>2,224,185.93</td>
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**Financial Management**

**EXECUTED PARTNERS BUDGET BY END OF 2019**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Context</td>
<td>2,431,814</td>
<td>888,884</td>
<td>627,073.12</td>
<td>382,684</td>
<td>1,898,641</td>
<td>78%</td>
</tr>
<tr>
<td>SARI</td>
<td>132,728</td>
<td>80,791</td>
<td>49,911.00</td>
<td>8,514</td>
<td>139,216</td>
<td>105%</td>
</tr>
<tr>
<td>CRI</td>
<td>350,006</td>
<td>55,170</td>
<td>62,869.00</td>
<td>176,578</td>
<td>294,617</td>
<td>84%</td>
</tr>
<tr>
<td>PPRSD</td>
<td>248,193</td>
<td>3,730</td>
<td>9,670.00</td>
<td>80,887</td>
<td>94,287</td>
<td>38%</td>
</tr>
<tr>
<td>NACGRAB</td>
<td>74,112</td>
<td>15,816</td>
<td>15,919.59</td>
<td>29,219</td>
<td>60,954</td>
<td>82%</td>
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<tr>
<td>NASC</td>
<td>342,068</td>
<td>9,742</td>
<td>5,945.31</td>
<td>129,288</td>
<td>165,998</td>
<td>49%</td>
</tr>
<tr>
<td>NRCRI</td>
<td>319,058</td>
<td>47,812</td>
<td>54,277.01</td>
<td>135,750</td>
<td>237,844</td>
<td>75%</td>
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<tr>
<td>SEED CO. NIGERIA</td>
<td>541,000</td>
<td>-</td>
<td>122,377.44</td>
<td>267,370</td>
<td>368,538</td>
<td>68%</td>
</tr>
<tr>
<td>SEED CO. GHANA</td>
<td>120,850</td>
<td>-</td>
<td>-</td>
<td>130,860</td>
<td>130,860</td>
<td>108%</td>
</tr>
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</table>
YIIFSWA-II audited by BMGF in 2019

• YIIFSWA-II project received financial auditors from BMGF in 2019. A team of four auditors spent two weeks in hotels at Ibadan to scrutinize our financial documentations and some of the technical reports.

• No movement for two weeks
• Provide all documents requested up to satisfaction
• Some information requested from partners interventions could not be fully answered. They then asked the followings
  • What measures do you have in place to verify that information provided by partners are correct both technically and financially?
  • Finance team was advised to organize audit to all the partners’ organizations involved in YIIFSWA-II to face some question from the donors.
3- Key milestones achieved in 2019
Supports to partners in Nigeria and Ghana

- Empowerment of the regulatory bodies (NASC in Nigeria and PPRSD in Ghana) for Seed yam quality control and certification through seed tracker and equipment and materials for diagnostic
- Ware yam production demonstrations using good agronomy practices
- Empowerment of women seed yam producers
- Empowerment of the National Agricultural Research Institutes with solar panel and TIBs for breeder seed Production
- Strengthening capacity of seed companies of Nigeria equipped with solar panel and standard powerhouse with chiller for Aeroponics
Strengthening of the private seed companies with standard AS power-house and solar panel production capacity

Private seed companies

Nigeria

Biocrops Biotechnology Co Ltd
Da-Allgreen Seeds Ltd
PS Nutraceuticals Int. Ltd
Nwabudo Agro Seed Ltd
Strategic Seeds Nigeria Ltd
Other Achievements
Support to Osode Agric Farm at Iseyin, Oyo state

Private youth trained in December 2018 on AS management together with IITA Youth Agripreneurs. Start the establishment in March 2019. Finished with No assistance the AS and bought plantlets from NACGRAB to start the running. Osode Agric Farm is registered with NASC as seed yam producer.

In November, When facing heat challenge, We assisted with schiller
Osode Agric Farm at Iseyin, Oyo (January 2020)
Support to Former President Obasanjo farm

Visit of Former President Obasanjo at IITA
Support to the former President Obasanjo farm
4-Production Research on Aeroponics System
• Seed yam production using single vine seedlings under rainfed conditions

• Rooting and survival variability among single-node vine cuttings from top, middle and bottom of mother plant in Aeroponics system (AS)
Survival single node vine from different position

- Asiedu
- Kpamyo

Variety

Position
- BOTTOM
- MIDDLE
- TOP

Yam seedlings growing under rainfed conditions
Average seed yam tuber weight of Kpamyo from 2016 to 2018 under irrigation

<table>
<thead>
<tr>
<th>Weight Range</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;1000 g</td>
<td>1420</td>
</tr>
<tr>
<td>500-999 g</td>
<td>681</td>
</tr>
<tr>
<td>301-499 g</td>
<td>376</td>
</tr>
<tr>
<td>300-150 g</td>
<td>206.5</td>
</tr>
<tr>
<td>50-149 g</td>
<td>80.3</td>
</tr>
<tr>
<td>below 50 g</td>
<td>19.5</td>
</tr>
</tbody>
</table>
# Average seed yam tuber weight from single-node seedlings from top, middle and bottom under rainfed

<table>
<thead>
<tr>
<th>Weight Range</th>
<th>Top</th>
<th>Middle</th>
<th>Bottom</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;1000 g</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>500-999 g</td>
<td>630</td>
<td>725</td>
<td></td>
</tr>
<tr>
<td>301-499 g</td>
<td>366</td>
<td>347</td>
<td>322</td>
</tr>
<tr>
<td>300-150 g</td>
<td>211</td>
<td>209</td>
<td></td>
</tr>
<tr>
<td>50-149 g</td>
<td>91</td>
<td>84</td>
<td>85</td>
</tr>
<tr>
<td>below 50 g</td>
<td>23</td>
<td>20</td>
<td>19</td>
</tr>
</tbody>
</table>

The bar chart illustrates the distribution of yam tuber weights from single-node seedlings from top, middle, and bottom under rainfed conditions. The data shows a higher percentage of tubers weighing between 301-499 g in the middle and bottom sections compared to the top section.
Average percentage weight per seed size

AVERAGE PERCENTAGE TOTAL SEED YAM TUBERS WEIGHT PER SIZE
OF KPAMYO UNDER IRRIGATION FROM 2016 TO 2018

- [>1000 g]: 28%
- [500-999g]: 34%
- [301-499 g]: 16%
- [300-150 g]: 12%
- [50-149 g]: 8%
- below 50 g: 2%
Seedlings of Kpamyo under rainfed

Percentage total seed yam weight per size of Kpamyo with seedlings origin under rainfed

- Top:
  - [>1000 g]: 6%
  - [500-999g]: 23%
  - [301-499 g]: 20%
  - [300-150 g]: 25%
  - [50-149 g]: 47%
  - below 50 g: 43%

- Middle:
  - [>1000 g]: 4%
  - [500-999g]: 14%
  - [301-499 g]: 22%
  - [300-150 g]: 31%
  - [50-149 g]: 20%
  - below 50 g: 6%

- Bottom:
  - [>1000 g]: 0%
  - [500-999g]: 2%
  - [301-499 g]: 4%
  - [300-150 g]: 25%
  - [50-149 g]: 17%
  - below 50 g: 20%

2/20/2020

4th Annual Review and planning meeting

http://yiifswa.iita.org/
Seed yam tuber storage for control of dormancy using Gibberellic Acid

- Two yam varieties Kpamyo and Asiedu fully covered) and a third variety (Swaswa) partially covered.
- Two environmental conditions *ambient* and *in AC room*
- Six categories of seed yam size: >1,000g; [501-999g]; [301-499g]; [150 – 300]; [50-149] and <50g
- Five concentrations of Gibberellic per liter. The treatments are: 300mg/l; 200mg/l; 150mg/l; 100mg/l; 50mg/l and 0mg/l.
- Three replications
- Monthly data collection on number of tuber sprouted
Seed yam tuber storage for control of dormancy

Treatments in the ambient condition

Treatments in AC cold room
Seed yam tuber storage for control of dormancy

300 mg/l of GA3

0 mg/l of GA3
Standard AS screenhouse

- Height: 5m;
- Wide: 8m and
- Length 30m
- Two ceilings
- Anti aphid net

Nutrient solution cooling system
5- Challenges and lessons learned in 2019
Administrative and technical Challenges

• Delay in finalizing the annual agreement and work plan (advance some amount to start some activities early)

• We are yet to receive some technical and financial reports from partners.

• Poor performance of the Go-No Go milestone in 2019 because the AS is not fully running (IITA will give a second chance to each partner to achieve the Go No Go Milestone in 2020 by backstop the day to day management of the AS, retraining of the AS technical staff)

• Heat inside the existing screenhouse (industrial fans with extractors experimentation is ongoing at IITA-Ibadan)
Challenges related to YIIFSWA-II

Here is a video broadcasted on a Ghana television informing the world that the Aeroponics system is developed by Crops Research Institute. There was no word on YIIFSWA or YIIFSWA-II project and nothing on IITA the grantee.
6- Conclusion and way forward
1. YIIFSWA-II has strengthening the technical capacity of the public and private partners in Nigeria and Ghana to produce Early Generation Seeds (EGS) of high quality and to assure effective control of Quality.

2. We have now demonstrated that you don’t need absolutely an irrigation system to use vine seedlings for seed yam production in rainfall condition. Seed yam of high quality can be produced on rainfed conditions. One needs to plan seriously knowing the followings:
   1. The period of full establishment of rainfall (May-June)
   2. The single note vines are cut around 4 months after planting in AS;
   3. The single node vine will spend 6 weeks in the nursery for good rooting before transplanting in the field for tuber production.
Acknowledgements

- Bill & Melinda Gates Foundation (BMGF) for the financial support for YIIFSWA-II Project

- Thank to all who have contributed in one way or another for successful capacity strengthening of national partners in Nigeria and Ghana

- YIIFSWA-II - information are available at http://yiifswa.iita.org/
Support to the former President Obasanjo farm