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WEST AFRICA TRADE AND INVESTMENT HUB

MANGO VALUE CHAIN INTERVENTIONS
IDENTIFIED FOR FY2017 IN BURKINA FASO,
GHANA, SENEGAL, AND THE REPUBLIC OF
CÔTE D'IVOIRE – OCTOBER 17, 2016

MISSION REPORT 10

Contract No.: AID-624-C-13-00002-00

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ACRONYMS

ACA	African Cashew Alliance
AFD	Agence Française De Développement
ANADER	Agence National de Appuis au Développent Rural
ARECA	Agence de regulation du Cotton et Anacard
AREXMA	Association Regional des Producteurs et Exportateurs de Mangues de
RCI	Republic of Cotre d'Ivoire
APEMAB	Associations Professionnels des Exportateurs des Mangues (Burkina Faso)
APROMA B	Associations Professionnels des Producteurs des Mangues (Burkina Faso)
ARMAO	Alliance Régionale de la Mangues d'Afrique de l'Ouest
BDS	Business development services
BNO	Bio Niayes Organisation
CASA	Cajou des Savane SN
CFA	Cooperative Fruitiere d'Agboville
CFAHS	Coopérative Fédérative des Acteurs de l'Horticulture au Sénégal
CIR	Cadre Intégré renforcé
CK	Cashew Kernel
COLEACP	Europe-Arica-Caribbean-Pacific Liaison Commette (Comité de liaison Europe-Afrique-Caraïbes-Pacifique)
DWMFA	Dangme West Association of Mango Farms (Ghana)
DPV	Département de Protection des Végétaux
ECOWAS	Economic Community of West African States
FAN-TIC	Transformations et commercialisation des fruits et Légumes, Formation et Consultations
FAF	Financial Access Facilitateurs
FIRCA	Fonds Interprofessionnel pour la Recherche et Conseil Agricole
FY	Fiscal year
GIZ	Deutsche Gesellschaftfür Internationale Zusammenarbeit
GRASP	Global G.A.P. Risk Assessment & Social Practices
Ha	Hectare
HACCP	Hazard Analysis and Critical Control Point
IFS	International Food Standards
JAS	Japanese Agricultural Standard
IPM	integrated pest management
LOC	Letter of collaboration
ME	Middle East

MENA	Middle East and North Africa
MOU	Memorandum of understanding
MT	Metric Tons
MVCA	Mango Value Chain Advisor
MCVS	Mango Value Chain Specialist
MVCS-G	Mango Value Chain Specialist - Ghana
MVCS-B	Mango Value Chain Specialist - Burkina Faso
MVCWG	Mango Value Chain Working Group
NOP	National Organic Program
OBAMSI	Organisation des Producteurs et exportateurs de bananes, d'ananas, de Mangues et autres fruits de Côte d'Ivoire
OCAB	Organisation Centrale des Producteurs - exportateurs d'Ananas et de Bananes
PIC	Présidentiel Investment Council
PTRAMAB	Professionnelles de transformation des mangues (Burkina Faso
SDP	Strategic development plan
SINTF	Société Industrielle De Transformation des Fruits
RCI	Republic of Côte d'Ivoire
RONGEAD	Réseau d'ong Européennes sur le commerce, l'Agroalimentaire, l'environnement et le Développement (know more commonly as "Commerce International et Développement Durable")
TOR	Terms of reference
TOT	Training of trainers
VCDA	Value Chain Development Adviser
UEMOA	Union Economique et Monétaire Ouest Africaine
VC	Value Chain

EXECUTIVE SUMMARY

BACKGROUND

This report is based on a mission to Ghana, Senegal, Burkina Faso, and the Republic of Côte d'Ivoire (RCI) from July 27 to September 7, 2016 for the West Africa Trade and Investment Hub (Trade Hub). The objective of this mission was to participate at the FY 2017 work planning sessions in Accra and thereafter to identify opportunities for continued Trade Hub interventions in Ghana, Burkina Faso, Senegal and RCI within the framework of a FY 2017 work plan for the mango value chain. The mission was carried out by the Mango Value Chain Advisor (MVCA) in collaboration with Mango Value Chain Specialists (MVCS) in the four countries.

GENERAL OBSERVATIONS

Some of the mission's key observations on the overall approach of interventions in the mango value chain and the performance, trade trends, and future prospects of the mango value chain are as follows:

- **Trade Hub entry into mango value chain development in West Africa:** The Trade Hub entered the mango value chain trade in Ghana, Senegal, Burkina Faso, and RCI by providing technical assistance and access to training in best practices for the production and harvesting of export quality mangoes to the local associations and lead enterprises. These trainings were followed up with training in best packing practices and by facilitating access to international certifications.
- **Emerging opportunities in some countries to export processed mangoes to the U.S. market:** There are opportunities to export to the U.S. for several mango processing enterprises, such as Zena Exotics in Senegal. SINTIF and FANTC in Burkina Faso are already directly linked to U.S. buyers, while some other mango drying companies in Burkina Faso and RCI are exporting to the EU and South Africa, and are interested in seeking support to enter the U.S. market. In Ghana, the high profile companies Blue Skies, HPW, and BOMARTS should be able to export processed fruit products to the U.S. in the near future.
- **Increasing trend toward fresh exports and investments in mango processing:** During the last two years, exports of fresh mangoes increased throughout the region, except for Senegal. During the same period, investments also increased in mango processing, especially for dried mangoes and mango value added products such as juices and pulp. In addition, stakeholders confirm that regional exports of mangoes for processing and local consumption have increased. Significant new investments in the production of mango pulp and dried mangoes were recorded in Senegal, Ghana, Burkina Faso, and RCI.
- **Emergence of lead enterprises in the mango value chain to export fresh and processed mangoes:** In all four countries there are lead enterprises that are playing an increasingly vital role in the mango value chain. Except in Burkina Faso, the role of associations has been limited compared with that played by lead enterprises.
- **Future interventions—partnerships with lead firms and business associations to promote export trade:** The mission observed that practically all the players contacted wish to promote global and regional exports of fresh and processed mangoes, with dried mangoes as

their first priority. To achieve this objective, they need to increase the quality and quantity of mangoes; fresh mangoes need to be sorted, graded, and certified before arriving at the pack houses or processing centers. They also emphasize the need to maintain the phytosanitary conditions of supplies and to have access to information and contacts from new markets including the U.S., EU, ME and South Africa. The processing industry is particularly looking forward to making connections with U.S. markets. Many of the players contacted have confirmed their willingness to work in partnership with the Trade Hub and share the costs of interventions wherever appropriate.

- **Approach to implementation of interventions:** Partner organizations and lead enterprises are responsible for implementing Trade Hub interventions. Interventions will be selected and implemented based on their impact on export-oriented activities, their ability to take advantage of replicable business models for supporting the mango trade, and when possible, their ability to increase exports to U.S. markets. Replicable business models to support firms should be designed to encourage the involvement and commitment of the associations and lead enterprises.

FY 17 MANGO VALUE CHAIN OBJECTIVES AND STRATEGIES

The main objective of the FY 2017 work plan is to increase the regional and global trade of fresh and processed mangoes in Ghana, Côte d'Ivoire, Burkina Faso, and Senegal. The main strategies will be

- Strategy #1: Enhance the service delivery capacity of partner organizations (associations, lead firms, and cooperatives) to provide services to members and suppliers to increase the regional trade and global exports of mangoes (fresh and processed).
- Strategy #2 Support and encourage selected lead processors from each country to develop products in accordance with U.S. regulations and standards to expand exports under the AGOA program (this strategy was added following the work planning work shop)
- Strategy #3: Generate massive interest and promote trade and exports at the regional and global levels (Mango Buzz).
- Strategy #4: Support linkages and collaboration among value chain actors at the regional level to increase the mango trade by 25% among the four target countries.
- Strategy #5: Link new investors to the Trade Hub's access to finance component.

Based on the above strategies, the mission, in consultation with potential partners—mainly the lead enterprises and associations—identified the following opportunities for each country.

GHANA

Ghana's production of mangoes is increasing and expected to exceed 111,000 MT in 2016. However, exports of fresh mangoes remain low: around 2,300 MT in 2014 and 2,655 MT in 2015. Fresh exports for 2016 are expected to be closer to 3,000 MT (subject to confirmation at the end of the season). The export percentage of fresh mangoes in Ghana is around 3% at present.

Considering Trade Hub's FY 17 objectives and building upon the achievements of the present mission, discussions with key players identified several opportunities for intervention:

- i) Create a specific program to support the export of processed products from three leading processors to the U.S. AGOA market through partnership with Blue skies, HPW and BOMART.
- ii) Provide intensive technical follow-up to increase export quality mangoes by Trade Hub supported, GLOBALG.A.P. certified farmers in the Somanya district to supply to lead exporters

and processors through the Akorley pack house. Partner with YKMFA, Blue Skies, HPW, and BOMART (minor season 2016-2017).

- iii) Work with lead processing enterprises—HPW, BOMARTS and Blue skies—to promote value added products for the U.S. market under the AGOA program.
- iv) Provide training of trainer (TOT) support to pack house technical staff—Akorley pack house and two other pack houses.
- v) Facilitate access to organic certification of dried mangoes for export to the U.S. through a lead processor—BOMARTS in collaboration with TACKS farm certified organic
- vi) Partner with HPW to improve the quality of their supplies through field days in Brong Ahafo that provide intensive farmer training on raising mangoes for export—HPW potential exports to AGOA.
- vii) Provide GLOBALG.A.P. training with leading exporters and suppliers in the Brong Ahafo region to improve direct exports to the EU and supplies to HPW, BOMARTS and Blue Skies, in partnership with the Kobbiman and Kintampo export companies.
- viii) Replicate our successful business model: provide intensive technical follow up to increase export quality mangoes by Trade Hub supported GLOBALG.A.P. certified farmers in the Somanya district with DAMFA in partnership with the Akorley pack house, HPW, Blue Skies, and BOMART in the 2017 major season.
- ix) Organize stakeholder consultation symposia to share information and build excitement around the proven approaches to increasing exports—collaboration with key associations and GIZ.

REPUBLIC OF CÔTE D'IVOIRE

The exportable mango production in the country is around 120,000 MT with actual mango exports of 20,475 MT in 2014, 22,769 MT in 2015, and an increase to 32,628 MT in 2016. This means that the 2016 exports increased to 43% of the 2015 exports and represent 25% of exportable production. This export figure as a percentage of production is the highest in the West African mango producing countries.

The proposed opportunities for intervention by Trade Hub in RCI under the FY 2017 work plan are as follows:

- i) Organize a stakeholder symposium, in collaboration with the mango value chain stakeholders.
- ii) Provide support to 13 lead exporters to improve the quality of their supplies by training harvesters in best practices—lead exporters of fresh fruits affiliated with AREXMA. These are lead firms that are exporting fresh mangoes to the EU and other countries.
- iii) Provide follow-up training to skilled technical workers of the 13 lead exporter members of AREXMA.
- iv) Train pack house technicians in best packing practices and general hygiene rules for export packing in pack houses.
- v) Assist lead exporter Nemble Invest in increasing the quality of their supplies through the training of harvesters in best practices.
- vi) Help lead exporter Nembel Invest upgrade their export packing unit by training 210 pack house technicians in best packing practices.
- vii) Partner with two lead mango exporters to increase the number of GLOBALG.A.P. certified farmer suppliers and thereby increase export supplies—Ivoire Agreegae and Tropic Mango.
- viii) Help two lead mango exporters access GRASP certification to increase their available export destinations—participating enterprises Vergers du Bandama and SPEM.
- ix) Facilitate HACCP and ISO 22000 certification by nine mango drying units (With FIRCA) for processed mango exports through South African buyers to the U.S. market.

BURKINA FASO

Out of the total annual production of mangoes in Burkina Faso, approximately 100,000 MT are of exportable quality. The mango sector exports in Burkina demonstrate several characteristics:

- Export as fresh fruit in the past has been less than 5% of the exportable quality production; this may reach 6% (6000 MT) in end of mango season in 2016. (the exact figures were not available at the time of writing this report)
- A larger portion of the mango production, approximately 20,000 MT (20%), is being processed by drying before export.
- Another considerable percentage is exported regionally for processing in Ghana and for retail markets in countries such as Niger.
- The remaining fruit is consumed locally or wasted.

Burkina Faso is the only country in the region where Trade Hub interventions are implemented in the mango value chain that has a formal inter-professional organization of producers, processors, and exporters. The mango producing regions in Burkina Faso are concentrated in the Haut Basin region around Bobo Dioulasso; the stakeholders are interested in establishing this region as mango development cluster.

The proposed Trade Hub mango value chain intervention opportunities for the FY 17 Work plan in Burkina Faso are identified as follows:

- x) Organization of a symposium to facilitate consultation among stakeholders and an exchange of information on markets and contacts for the benefit of the mango value chain actors.
- xi) Support APROMAB in the organization of mango value chain trade fairs to promote contacts and new markets for fresh mangoes and processed mango products.
- xii) Facilitate the access to NOP certification by potential exporters of dried mangoes that already have an organic certificate to enhance exports to the U.S.
- xiii) Facilitate access to HACCAP certification for partner enterprises including the processing companies of Gabana, FAN-TIC, SINTIF, and Rose D'Elart for export of dried mangoes to the U.S. and EU. (FAN-TIC and SINTIF are already exporting dried mangoes to US.)
- xiv) Facilitate access to organic certification for 30 producer members (15 APEMAB and 15 SANLE) in order to increase supplies available for export to organic markets.
- xv) Support certification by GLOBALG.A.P. (DAFANI, Yay-KAB, Faso, Mangoro) to enable the companies to export their mangoes.
- xvi) Train five to ten key technical leaders in the three pack houses on packaging for export, and use them to train the remaining staff during the season. (2 days per enterprise.)
- xvii) Facilitate a training session on techniques to control the maturation of mangoes being sent for processing at the processing centers. Requires two technicians per enterprise grouped for several enterprises. (40 enterprises.)
- xviii) Train ten technicians on the operation and maintenance of tunnel dryers to facilitate the production of quality dried mangoes for export. Technicians are to be selected from enterprises already using tunnel dryers (Sanlé, Rose d'Eclat, UPPFL, Tensya Gouampri).

SENEGAL

The 2016 mango season in Senegal started late by several weeks due to unexpected climatic conditions. This situation was responsible for a drop in production and had a negative impact on the supply available for export. The annual production of exportable quality mangoes in Senegal was estimated to be around

100,000 to 150,000 MT. Some of the players in the value chain estimate that the final total weight of mangoes actually exported could be as low as 10,000 MT. This number is yet to be confirmed.

The following are the key opportunities identified within the scope of Trade Hub for FY 17 in Senegal:

- i) Assist Zena Exotiques in obtaining its organic certification for fruits exported through US AGOA. This enterprise is already exporting value added mangoes and other fruit products to U.S. market.
- ii) Partner with Zena Exotics and Senfresh to train 20 mango collectors and suppliers on best harvesting techniques who will then train 200 to 300 mango producers in selected locations. Zena Exotics an exporter of value added products to the US and EU through AGOA. Senfresh supplies mangoes to exporters, processors, and local markets.
- iii) Train skilled technical workers to provide packaging support to selected exporters: Laure Agro, Establishment HANN, MB Fruits, Tropicaux Mbaye, and Fruits Tropicaux.
- iv) Provide GLOBALG.A.P.V5 Op.I. and organic training to 25 producers for Laure Agro and 45 producers for the ANS company.
- v) Connect suppliers of mangoes with processing units with the help of Cooprofel, Laure Agro, and Senfresh.
- vi) Support lead exporters and their supply networks by providing technical training on flower induction techniques to adjust to climate changes. The main partner will be Hortica Senegal. Participants will come from Hortica Senegal, Cooprofel, Laure Agro, and CADA .ANS Inter export.

OVERVIEW OF RECOMMENDED NEXT STEPS

While specific recommendations for each country were made above, the following summarizes the next steps recommended to accomplish the comprehensive plan:

- i) Finalize the individual country plans by October/November 2016 by MVCSs.
- ii) Arrange a meeting in Accra of all four MVCSs with VCDA and project management to finalize work plans.
- iii) Finalize the TOR /concept papers for each activity and select consultants and trainers.
- iv) Agree on final implementation plan, budget, and implementing mechanisms and partnerships for each country.
- v) Receive bi-weekly updates on the progress of all implementation activities by MVCS in the four countries and report any difficulties, issues, or delays.
- vi) Obtain approval of consultants.
- vii) Sign LOCs and partnership agreements for each country.
- viii) Plan for the implementation of proposed symposia together with TORs and obtain approvals for budgets and organization.
- ix) Finalize the proposed Burkina Faso mango cluster study TOR and implementation plan.
- x) Finalize implementation plans and approvals for each country.
- xi) Finalize planning for M and E data collection.

I. INTRODUCTION

I.1. BACKGROUND

USAID/West Africa’s mission-wide goal is the West-African led advancement of social and economic well-being. This goal is supported by several development objectives, including “broad-based economic growth and resilience advanced through West African partners.” The West Africa Trade and Investment Hub will contribute to this development objective by achieving two critical intermediate results:

- I) Improving the capacity of West Africa’s farmers and firms in targeted regional and global value chains.
- II) Improving the business enabling environment by addressing transport constraints and trade barriers at the region’s corridors and borders.

Trade Hub works through regional private sector associations and regional governmental entities to help channel all partners’ efforts in a way that will address critical constraints to trade competitiveness, capture opportunities to expand trade, demonstrate West Africa’s productive potential to investors, and facilitate greater investment in the region. Its results will include both an increase in 1) regional trade in key agricultural commodities, a critical Feed the Future (FTF) indicator, and in 2) value-added global exports, a targeted indicator for the Africa Competitiveness and Trade Expansion (ACTE) Initiative, which ultimately aims to increase Africa’s share of world trade.

The project provides supports to build the capacity of several key groups of African partners from regional private sector associations and alliances. Stakeholders include the Economic Community of West African States (ECOWAS), the Economic and Monetary Union of West Africa (UEMOA), and the multi-donor funded Transport and Facilitation Observatory, as well as many global development alliances with private sector companies. As Trade Hub works with associations and regional alliances, it will help them serve as leaders in promoting reforms, attracting buyers and investors, and adopting improved practices. Eventually, Trade Hub’s partners are expected to act independently and take on even greater leadership roles.

Trade Hub comprises several components. These include

- Regional staple foods development (livestock and grains)
- Global value chain development (targeted agro-processing and manufactured consumer goods, such as mangoes, cashews, and apparel)
- Finance and investment
- Transport and the trade enabling environment
- Capacity building
- Communications
- Administration and management, including grants administration

I.2. CONTEXT OF THIS ASSIGNMENT

The present assignment comprised a mission to four countries, Ghana, RCI, Burkina Faso, and Senegal, related to the mango value chain work plan of Trade Hub. It was carried out from July 27 to September 7, 2016. The purpose of this assignment was to:

- Assess the current status of activities implemented under the mango value chain work plan in Ghana, RCI, Burkina Faso and Senegal,
- Provide advice to MVCS in the four countries on the implementation of Trade Hub interventions in the mango value chain,
- Participate in the FY 2017 work planning workshop held in Accra, and
- Identify opportunities and plan Trade Hub interventions for FY 2017 in the four countries to support the promotion of the mango trade.

During the 2015 and 2016 mango seasons, Trade Hub’s interventions in Ghana, Burkina Faso, Senegal, and RCI were mainly focused on improving the quality of mangoes produced for global, regional, and local trade as fresh and processed products by working through lead exporting companies and sector associations. These interventions included training in best practices of farm management, harvesting techniques to improve quality production for exports, training technical staff of pack houses exporting mangoes, and facilitation of access to certifications of international standards such as GLOBALG.A.P., HACCEP, and organic certification of lead enterprises and their associated producers in the four countries. Trade Hub’s interventions were made in collaboration with associations and lead enterprises while the major portion of the costs and the administrative organization of events were met by Trade Hub. In FY 17, the role of Trade Hub in the mango value chain will be reoriented to extensively promote the mango trade and, wherever possible, to promote the export of mango products to the U.S. under AGOA opportunities while making changes to its approach toward interventions. These changes will focus interventions on trade promotion by

- Adapting interventions toward the promotion of trade,
- Establishing stronger partnerships in the implementation of interventions with increasing responsibility and ownership by partner lead firms and associations, and
- Focusing on the sustainability of introduced business models.

In line with this approach, Dr. Patrick Nugawela, MVCA, visited RCI, Ghana, Senegal, and Burkina Faso for short missions in the period from July 27 to September 7, 2017. The mission met with Trade Hub management in Accra, MVCSs in each country, and other mango sector stakeholders including partner organizations and lead enterprises in the four countries. A list of people and institutions contacted during this mission is presented in Annex A.

I.3. METHODOLOGY

The MVCA initially participated in the work planning sessions for FY 17 held in Accra from August 1 to August 5 and in the work that followed with the staff of Trade Hub. Following these meetings, the MVCA contributed to the establishment of the initial work plan frameworks and the development of partnership agreement documents, concept papers, technical notes on several issues and topics, and field work progress notes and assisted in the determination of resource requirements for mango value chain interventions in the four countries. In addition, the MVCA held meetings with mango sector stakeholders during 2016 in

- Ghana from August 7th to 14th
- Côte d’Ivoire from August 15th to 20th
- Burkina Faso from August 21st to 30th
- Senegal from August 31th to September 5th
- Ghana from September 6th to 7th for the final briefing

The MVCA in each country was accompanied by the MVCS based in RCI¹, in Senegal², Ghana³ and Burkina Faso⁴. The mission reviewed work plans for the four countries. In the respective countries, the MVCA met with representatives of the mango value chain inter-professional associations, individual value chain players, and individuals working on technical assistance projects already in contact with the Trade Hub through ongoing mango value chain support interventions. The mission visited several sites in Ghana, Burkina Faso and Senegal to meet with the key players and organizations. A list of persons contacted is presented in Annex A.

¹ MVCS Côte d'Ivoire – Coulibaly Moussa

² MVCS Senegal - Mamodu Dabo

³ MVCS Ghana – Pamela Okayre

⁴ MVCS Burkina Faso – Jean Bosco Dibouloni

2. OBSERVATIONS OF THE MISSION AND MANGO VALUE CHAIN OBJECTIVES AND STRATEGIES FOR FY 17 WORK PLAN

2.1. OBSERVATIONS OF THE MISSION

2.1.1. TRADE HUB ENTRY POINTS INTO MANGO VALUE CHAIN DEVELOPMENT IN WEST AFRICA

The entry points for Trade Hub support to the mango value chain trade development programs in Ghana, Senegal, Burkina Faso, and RCI were the associations and lead enterprises through which the Trade Hub provided technical assistance to enable the access to training in best production and harvesting techniques to improve the supply of export quality mangoes. These trainings were followed by training in best packing practices and the facilitation of access to international certifications. (A general note on the different certifications promoted for mango exports is presented in Annex C.) These interventions were identified based on the needs expressed by the lead enterprises and associations of the value chain. Working with the lead enterprises and associations not only provided an entry point to the mango value chain for Trade Hub, but also served as a basis for the establishment of partnerships with the players in the sector. Through this approach, Trade Hub established strong connections and gained credence as a valid technical partner to leading exporters, associations, and other stakeholders.

The global and regional export of fresh or processed mangoes is limited mainly by the unavailability of adequate quantities of high quality mangoes. This is because the mango production in the region operates mainly as a smallholder crop with substandard orchard management practices, poor phytosanitary conditions on the farms, incorrect harvesting techniques, inadequate quality standards, and poor selection, grading, and packing practices. At harvest, a majority of the farmers (with the exception of a few organized farms) sell their production in bulk, without grading or sorting, at any price offered, to intermediary buyers or to agents of exporters or processors without much concern for quality. As a result, the postharvest losses of mangoes in all the countries are very high and can exceed 30% in some countries.

The information collected in the field and discussions held with the players of the value chain confirm that trade in the sector cannot be expanded without first addressing these issues at the production and harvesting level and then at the packaging level. Therefore, Trade Hub, in its first two years of operations, entered into the mango value chain as a facilitator to the providing of training in best practices of production and harvesting and the gaining of certifications to improve the quality of the supply of mangoes.

2.1.2. EMERGING OPPORTUNITIES TO EXPORT PROCESSED MANGOES TO THE U.S. MARKET

Burkina Faso, Senegal, and Ghana have already started exporting processed mango products to the U.S. Market. There is an opportunity for the Trade Hub to support the expansion of exports to the U.S. The companies with immediate potential to access the U.S. market are as follows:

- Ghana: Blue Skies, HPW and BOMARTS
- Burkina Faso: FAN-TIC, SINTIF (dried mango producers)
- Senegal: Zena Exotiques and Agro Fruits

RCI has just started entering the processing industry. There are mango drying companies that have close contacts with South African importers. In 2016, 20MT of dried mangoes were exported to South Africa. These connections can also be used for indirect exports to U.S. through South Africa. The new Ranch de Koba processing enterprise is a potential Trade Hub partner that can be supported to enter the U.S. market.

In Senegal, Zena Exotiques has been exporting value added mango and other fruit products to the U.S. under AGOA agreements. There is an opportunity to increase exports through expansion of its capacity and generation of new contacts.

In Burkina Faso, FAN-TIC already directly exports dried mangoes to the U.S., while SINTIF and two other companies have started exporting to the U.S. through South Africa. In addition, there are several other mango drying companies that are now supplying to South African importers and may have the potential to export to the U.S.

Ghana has three high profile companies – Blue skies, BOMARTS and HPW – that should be able to export processed fruit products to the U.S. in the near future.

2.1.3. INCREASING TRENDS IN FRESH EXPORTS AND INVESTMENTS IN MANGO PROCESSING

Over the last two years, the exports of fresh mangoes have been increasing while at the same time there has been an increase in investments in mango processing, mainly for dried mangoes and mango value added products such as juice and pulp. The fresh mango exports in RCI were increased by 43%, from about 22,769 MT in 2015 to 32,628 MT in 2016. Slight increases in fresh mango exports were also noticed in the other countries except in Senegal where there was a fall in mango production and consequently in exports of fresh mangoes due to adverse weather conditions. In addition, discussions held with the stakeholders confirm that regional exports of mangoes for processing and local consumption are on the increase. Significant new investments were recorded in the production of mango pulp and dried mangoes in Senegal, Ghana, Burkina Faso, and RCI. Large processing facilities for mango pulp are now installed in Senegal and RCI. Seven new mango drying units are established in RCI, and several fresh mango exporters have expressed their intention to establish new mango drying and processing facilities in RCI. Increasing interest for mango processing is also becoming vital to add value to the large proportion of mangoes that are of second and lower qualities.

2.1.4. EMERGENCE OF LEAD ENTERPRISES IN THE MANGO VALUE CHAIN TO EXPORT FRESH AND PROCESSED MANGOES

In all four countries there are lead enterprises that are increasingly playing a vital role in the mango value chain. To a certain extent, the role of associations, except in Burkina Faso, is limited compared with the role played by lead enterprises. Some examples are as follows:

- In Ghana
 - The large processing companies Blue Skies, HPW, and BOMARTS are lead enterprises that purchase a large quantity of locally produced mangoes and that also import mangoes from elsewhere in this region and from Brazil.
 - There are a few exporters of fresh mangoes such as Kobbiman and Kintampo companies
 - The Akorley pack house is expected to play a key role in connecting producers with fresh mango exporters and lead processors.

- In RCI
 - Nembel Invest is a leading exporter of fresh mangoes.
 - More than 15 fresh mango exporters who are members of AREXMA have pack houses in the Korhogo region and are working with hundreds of producers supplying fresh mangoes.
 - A new larger processing factory being built by Ranch De Koba in the Korhogo region will be operational in the near future.

- In Burkina Faso
 - DAFANI in the Oradara region is a leading processor with the capacity to process 5,000 MT annually and which works with several hundred farmers.
 - Ranch de Koba in Bobo Dioulasso is one of the largest fresh mango exporters and a packing center for many other exporters.
 - The enterprises TIMINI and Fruit Teck have direct connections with South African exporters who are the leading buyers of dried mangoes from small companies for export to the EU and U.S.
 - The enterprises FAN-TIC and SINTF are emerging leaders in the export of dried fruits to the U.S. directly and through African companies.
 - Companies such as Gibana, Sanlee Secharge, Rose d'Elart, and Guampri are lead mango drying and exporting companies that have a significant impact on exports.

- In Senegal
 - Safina is a lead producer and an exporter of fresh mangoes.
 - CADA, Hortica Senegal, and Laure Agro are a few lead companies that are important to the export of fresh mangoes and they work with small scale producers.
 - The establishments HANN, MB Fruits, Mbaye, Fruits Tropicaux, and Bourcin are other lead exporters of fresh mangoes.
 - Agro Fruit is a lead company having the capacity to process 10,000 MT of mangoes per year.
 - COPREFEL is a leading producer cooperative with more than 500 members and a supplier of mangoes for export.
 - Zena Enterprise is lead exporter to the U.S. of value added products including mango value added products.

2.1.5. FUTURE INTERVENTIONS – PARTNER WITH LEAD FIRMS AND BUSINESS ASSOCIATIONS TO PROMOTE EXPORT TRADE

The mission observed that practically all the players contacted wish to promote global and regional exports of fresh and processed (mainly dried) mangoes as their first priority. To achieve this objective, they confirm the need to increase the availability of quality mangoes sorted, graded, and, in the case of mangoes for fresh export, certified before arriving at the pack houses or processing centers. They also emphasize the need to maintain phytosanitary conditions and gain access to information and contacts from new markets including the U.S., EU, ME and South Africa. The processing industry is particularly looking forward to making connections with U.S. markets. Many of the players contacted have confirmed their willingness to work in partnership with the Trade Hub and share the costs of interventions wherever appropriate.

Considering the commitment and intention of the value chain players to achieve increased trade through exports, it is important to work with lead enterprises and business associations in the mango value chain to address the current key constraints confronting this sector. These constraints are well known and include poor farm management practices, inappropriate harvesting practices on many farms, poor or no phytosanitary and SPS standards throughout the chain including in production, packing, and processing, inadequate certifications of international standards by all the actors connected to the export trade, and limited access to contacts and information on new markets. Without addressing these issues, any significant increase of the export trade in mangoes to the EU and U.S. will be difficult.

2.1.6. APPROACH TO IMPLEMENTATION OF INTERVENTIONS

Implementation of identified support activities will be the responsibility of the partner organizations or lead enterprises with whom the Trade Hub enters into partnership. Interventions will be selected and implemented based on their impact on export-oriented activities, their ability to take advantage of replicable business models for supporting the mango trade, and when possible, their ability to increase exports to U.S. markets. These models implemented by the partners with the technical assistance of the Trade Hub will be closely monitored, and successes will be documented and shared among partners and countries. The models will be refined and updated based upon field experiences to improve their sustainability and replicability.

2.2 FY 17 MANGO VALUE CHAIN OBJECTIVE AND STRATEGIES

A work planning workshop was held in Accra with the participation of the staff of the Trade Hub in early August 2016. The objectives and strategies for FY 17 mango value chain activities discussed during this workshop are given below.

2.2.1 FY 17 OBJECTIVE

Increase regional and global trade of fresh and processed mangoes in Ghana, Côte d'Ivoire, Burkina Faso and Senegal.

2.2.2 STRATEGIES (WORK PLANNING SESSION AUGUST 2016— ACCRA)

- Strategy #1: Enhance the service delivery capacity of partner organizations (associations, lead firms and cooperatives) to provide services to members and suppliers to increase regional trade and global exports of mangoes (fresh and processed).
- Strategy #2 Support and encourage selected lead processors from each country to develop products in accordance with the regulations and Standards of U.S. to expand exports under AGOA program (this strategy has been added following the work planning workshop in Accra).
- Strategy #3: Generate massive interest and promote trade and exports at the regional and global levels (mango buzz).
- Strategy #4: Support linkages and collaboration among value chain actors at the regional level to increase mango trade by 25% among the four target countries.
- Strategy #5: Link new investors to the Trade Hub's financial access component

3. OPPORTUNITIES FOR FY 2017 IDENTIFIED BY COUNTRY

3.1. GHANA – IDENTIFICATION OF OPPORTUNITIES FOR WORK PLAN FY 2017

3.1.1. OPPORTUNITIES FOR INTERVENTIONS IN FY 2017—GHANA

The analysis of the achievements of FY16 along with input from key players has helped identify opportunities for intervention for Trade Hub FY17. Table I outlines the targeted actions for the minor season starting in December 2016 or January 2017 and the major season starting in mid-2017.

Table I. Opportunities for Trade Hub Interventions in FY17 in Ghana

No	Opportunity for interventions FY 2017	Partner organization/s	Season/Dates
1	Specific program to support exports to U.S. of processed products from 3 leading processors to U.S. _AGOA market. –Participation of U.S. Trade fair and direct market contacts and facilitation of procedures	Blue skies, HPW and BOMART	Major Season
2	Work with lead processing enterprises to promote value added products in U.S. market under AGOA program (participation of trade fairs, market contacts in U.S.)	Blue Skies, BOMARTS, and HPW	Immediate activity to start
3	Intensive technical follow-up to increase export quality mangoes by Trade Hub supported, for 79 GLOBAL G.A.P. certified farmers in Somanya district to supply to lead exporters and processors through Akorley Pack House	YKMFA pack house Akorley, Blue skies, HPW and BOMART	Minor Season: Nov.2016 to Feb. 2017
4	TOT Support pack house technical Staff -	Akorley pack house and 2 other pack Houses	Minor Season; Cascade training in Major Season 2017
5	Support to access organic certification for export of dried mangoes U.S. through a lead processor – BOMARTS	BOMARTS Collaboration with TACKS farm certified organic	Major season 2017
6	Partnership with HPW to improve its quality supplies through field days of intensive farmer training for export in Brong Ahafo -	HPW Potential exports to AGOA W-	Major Season 2017
7	GLOBAL G.A.P. training with leading exporters and suppliers in Brong Ahafo region - Direct exports to EU and supplies to HPW, BOMARTS, and Blue Skies	Kobbiman and Kintampo farmers	2017
8	Replication of business model–intensive technical follow up to increase export quality of mangoes by Trade Hub supported GLOBALG.A.P certified farmers in Somanya district with DAMFA	DAMFA in Somanya District in partnership with Akorley Pack House,	To be ready by the major season 2017

		HPW , Blue Skies and BOMART	
9	Stakeholder consultation symposia to share information and build excitement around the proven approaches to increasing exports	Collaboration with Key associations and GIZ	Mid 2017

3.1.2. SPECIFIC PROGRAM TO SUPPORT EXPORTS OF PROCESSED PRODUCTS TO U.S. UNDER AGOA BY THREE LEADING PROCESSORS

The lead processors HPW and BOMARTS are producing mango value added products of international standards. These include dried mangoes, mixed mango products with pineapples, coconuts, etc. They need to be cleared with import procedures of food products to U.S. and also market information and contacts. They also expressed the interest to participate in food trade fairs in the U.S. To reach the U.S. market, they need to be ensured with adequate quality supplies. Further discussion should be held with these processing companies to establish a package of assistance for them to enter U.S. –AGOA market

3.1.3. INTENSIVE TECHNICAL FOLLOW UP OF BEST PRACTICES BUSINESS MODEL FOR GLOBALG.A.P. FARMERS TO INCREASE QUALITY SUPPLIES TO LEAD FIRMS FOR EXPORTS THROUGH THE PACK HOUSE

Model:

The Trade Hub has developed a model to link GLOBALG.A.P certified farmers (Members Of YKMFA) to produce high quality mangoes – at least 30% of the production to supply to lead exporters and lower grade mangoes, but of a quality (30% to 40% of the production) to lead processors –Blue Skies, HPW and BOMARTS. This model is to be operationalized through the provision of intensive technical support and the facilitation of farmer-exporter/processor linkages. This business model is to be introduced during minor crop season in Ghana from September 2016 to January/February 2017 and replicated by other associations during the 2017 major season. A detailed description of this business model is presented in Annex E.

Partnerships:

The model will be implemented mainly by the farmers’ association, YKMFA, in collaboration with the Akorley pack house, lead exporters and processors, and Trade Hub. The responsibilities of the individual partners are as follows:

- i) **The association**— YKMFA will be responsible for organizing the program, monitoring the program, arranging follow-up and logistics, facilitating farmer meetings, bearing the costs of farmer transport and other expenses, and collecting M&E data.
- ii) **Farmers**— The 79 GLOBALG.A.P certified farmers are responsible for the procurement of their own agro inputs, regular participation in training sessions and field days, strict implementation of advised of best practices, the timely reporting of data, and respecting supply contracts with exporters, processors, and input dealers. They will be responsible to supply Mangoes through the Akorley Pack House to lead exporters and processors.
- iii) **Akorley pack house**— the pack house will facilitate linkages between farmers and exporters. The pack house is responsible for sorting and packaging mangoes for export, providing farmers access to agro-inputs through exporters, acting as a collection center where lower grade

- mangoes can be bulked and sold to processors and retailers for the farmers, and other extension work. (This pack house already has an understanding with a major exporter to supply 400 MT for export for which packing materials have already been delivered to the pack house.)
- iv) **Exporters/processors—Blue skies, HPW and BOMARTS—** the exporters and processors will get involved in buying mangoes from farmers. They may provide advances of agro-inputs to farmers and purchase agreements.
 - v) **Trade Hub—** Trade Hub is responsible for the provision of technical support (i) a specialist on SPS and best practices (20 days) and (ii) three technical assistants (45 man days) to follow up on the application of guidance and advice.

The details of these cost implications are to be worked out in accordance with the cost sharing procedures and conditions accepted by Trade Hub.

- **Sustainability and Replication**

- The pack house can use the supply from the farmers to meet existing orders as well as additional orders from exporters and processors.
- The YKMFA anticipates collecting a service charge from producers on supplies to the pack house which will help build a renewable fund to continue the assistance to farmers
- Operations of the pack house are expected to increase and generate income for pack house operations and maintenance and dividends to YKMFA.
- The implementation of this model can serve as a model for implementation by other associations in Ghana and other countries.

3.1.4. OTHER OPPORTUNITIES IDENTIFIED

During the pilot program, feedback from the stakeholders identified the following areas for Trade Hub to consider for assistance:

- i) Support to improve high quality mango production through farmer trainings to help enterprises in the main production zones reach international standards and gain certifications. This support should include
 - Training and monitoring farmers in best farming practices to increase fresh mango exports from the Brong Ahafo, Volta, and eastern regions.
 - Training of internal auditors for GLOBALG.A.P and HACCP certifications to promote local technical capacity building.
- ii) Support to upgrade operations of other pack houses. This would involve training pack-house workers at Ohumpong Farms and Kobiman Farms in the Brong-Ahafo region.
- iii) Support to access new markets. This would include
 - Promotion of regional mango trade through import/export of fresh mangoes.
 - Access to U.S., EU and regional markets for processing companies including Blue Skies, HPW, BOMARTS Farms.
 - Support exporters' participation in regional and international trade fairs including Fruit Logistica and Bio Fac with FAGE (February 2017), Dubai Logistica (October, 2016/17), and Sweet & Snacks Fair (May 2017).

iv) Support to form national and regional level mango sector platforms. This would include

- Support to create a Regional Alliance of mango sector players and stakeholders,
- Organizing a national buyer-seller meeting and mango days at which buyer seller meetings can take place,

3.2. REPUBLIC OF CÔTE D'IVOIRE (RCI): FY 2017 IDENTIFICATION OF OPPORTUNITIES

3.2.1. LESSONS LEARNED DURING THE 2016 SEASON IN RCI

Some of key lessons learned in the performance of the mango sector are summarized as follows:

- The RCI Government's campaign to control fruit flies in 2016 through the distribution of a fruit flies control insecticide (success Apat) had a very positive impact on producing a flies attack free quality mangoes. This was a main reason for the increase of exports in 2016 to 32,628 MT from the 2015 value of 22,769 MT. (Direction de la Protection des Végétaux du Contrôle ET de la Qualité [DPVCQ]).
- There remains a need to continue support and training to improve the quality of mangoes produced, phytosanitary controls, and harvesting practices, to ensure the organizing, grading, and delivery of mangoes to pack houses under appropriate conditions at the field level to reduce rejects at the pack house, and to transfer know-how to manage farms in order to produce high quality mangoes for exports.
- The short duration of the mango export season in RCI compared to that in other countries in the region compels exporters to select and pack mangoes for export starting in mid-March and continuing through May. Future interventions in the mango value chain should be planned well in advance and pack houses should be supported to allow an increase the maximum number of work shifts. Pack houses should also increase their investments in cold storage facilities to enable them to store larger quantities for export.
- In addition to improving the availability of quality mangoes, there is a need to address the cost competitiveness of the RCI exports of fresh mangoes. Many exporters cite the issue of various taxes on packing materials, which can exceed 20% of the cost of the package, as a barrier to their business.
- While many of the exporters have the main international certifications such as GLOBALG.A.P. other social certifications such as GRASP, Fair Trade, Rainforest, and BRC and individual certifications such as Tesco, organic, and certifications that cater to niche markets will be required to expand exports.
- Considering the large number of exporters having pack houses, RCI is positioned to expand exports globally and regionally. Many exporters express a desire for access to market contacts and increased consultation on strategies and options for accelerated market development for fresh and processed mangoes.

3.2.2 OPPORTUNITIES FOR INTERVENTIONS IN FY 17–RCI

3.2.2.1 Areas of Technical support

Considering the major issues and constraints confronted by the mango value chain in RCI, the experience and lessons learned in 2016, the continuing needs of the mango sector in RCI, and the resources available, the mission identified the following main areas for interventions in FY 2017 to be included in the work plan of Trade Hub:

- i. Organization of a symposium of stake holders, meetings with potential market contacts, and dissemination of information
- ii. Continued training of harvesters and pack house skilled workers using trainers taught during the 2016 season
- iii. Extension of the training of harvesters in best practices of farm management to smallholder cooperatives
- iv. Support to access additional international standards and certifications

The details of the proposed work plan are summarized in the table 2 below.

Table 2: Proposed Interventions in RCI for FY17

#	ACTIVITIES	BENEFICIARIES/PARTNERS	RESULTS EXPECTED
1	Stakeholder Symposium	Mango VC Stakeholders	-Facilitate synergy of interventions, and collaboration and cooperation among stakeholders -Share information among stakeholders -Promote ownership and responsibility of actions implemented to support the VC
2	Support to 13 lead exporters to improve quality supplies through Training of Harvesters on best practices	13 Lead exporters of fresh fruits affiliated to AREXMA (13 Enterprises and 40 participants per enterprise –Total of 520 harvesters)	<ul style="list-style-type: none"> • 520 harvesters trained • 650 pack house technicians trained • Train and certify 120 producers to GLOBALG.A.P. option 2
3	Follow up of training Skilled technical workers of the 13 lead exporters members pf AREXMA	Exporters –AREXMA Members pack house technicians in best packing practices and general hygiene rules in pack houses for export packing (13 Enterprises and 50 participants per enterprise).	<ul style="list-style-type: none"> • Increase export by 25% = US\$ <u>2,721,600</u> • Increase local and regional sale to 30%= US\$ <u>2,721,600</u> • Reduce postharvest losses by 10% <p><u>Estimated revenue to be generated = US\$ 5,443,200</u></p>
4	Lead Exporter Nembel invest to increased quality supplies through training of harvesters on best practices	Lead exporter -Nembel and farmers in collaboration	<ul style="list-style-type: none"> • 75 harvesters trained • 210 pack houses technicians trained
5	Lead exporter –Nembel Invest export packing unit upgraded through training of skilled workers	Nembel Invest –Lead exporter in RCI 210 pack-house technicians in best packing practices and general hygiene rules Trained (Nembel and farmers in collaboration)	<ul style="list-style-type: none"> • Increase export by 25% = US\$ <u>245,280</u> • Increase local and regional sales to 30% = US\$ <u>306,600</u> • Reduce postharvest losses by 10% <p><u>Estimated revenue to be generated = US\$ 551,880</u></p>
6	Partnership with Two lead mango exporters to increase Global G.A.P. certified number of farmer suppliers to increase exports supplies	Enterprises IVOIRE AGREAGE and TROPIC Mango Will facilitate 60 farmers each to access to Global G.A.P certification	Results to be worked out
7	Two lead mango exporters supported to access GRASP. certification to increase exports destinations	Enterprise Vergers du Bandama, Enterprise SPEM	
8	HACCP and ISO 22000 certification –	9 Mango Drying Units (With FIRCA) MANGO PROCESSING UNITS Exporting Through South African Buyers and potential suppliers to U.S. AGOA Market	Increased dried fruit quality Increased dried mango sales by 20%

The details of the above proposed interventions including cost sharing, results expected, and the calendar of events have been prepared by the MVCS in RCI and the draft TOR of the symposium has

been prepared by the value chain specialist at the RCI Trade Hub office. In addition, the details of the concept and TORs for interventions are being prepared by the MVCS.

3.2.3. FACILITATION OF ACCESS TO FINANCE

A number of enterprises/exporters are planning to make new investments in mango processing. These companies are interested to access to financing. The list of these enterprises is given below:

Table 3 List of Enterprise seeking access to financing

#	Enterprise	Access to Finance needs	Contact persons
1	Ivoire Agreeage	Construction of mango drying and pulp production unit.	Houssou Michel mhoussou@ivoireagreeage.com tel. +225-05 89 68 31
2	Majota	Construction of mango drying and Pulp production unit	Emmanuel Gnacadja gnacadjae@gmail.com tel
3	Sodipex	Construction of drying unit	Olivier Bambara eric.bambara@yahoo.fr tel. +225-08207104
4	Ranch de Koba	Extension for a mango drying capacity	Bamba Vazoumana vazoumana@hotmail.com tel. +225-07059764
5	Nembel Invest SA	Increase of mango packing capacity for exports	Victor Nembelessini- Silue Victor.jn@nembel-invest.com Tel. +225-07 38 64 97
6	Coop Gninnangnon	Establishment of cold storage facility	Tuo Nahoua Tel. +225 47054519, +225 55107998 socoopagrigninnangnon@gmail.com

3.2.4. OTHER POTENTIAL AREAS OF OPPORTUNITIES

Mango production and packaging units in RCI are concentrated in the north, mainly in Korhogo, Ferke and Sinématiali, an area known as the mango capital. This region borders the Sikasso mango region of Mali and the Bobo Dioulasso mango region in Burkina Faso. These three regions constitute a mango belt that has the potential to share specific facilities: transportation systems, access to airports for air freighting, and access to electricity, cold room facilities, and other public services. This region can be developed as a growth pole centered on an export and processing oriented mango value chain without excluding other exported horticultural products such as cashews.

In addition, technical assistance is sought by several other players to enhance exports of fresh mangoes directly or to produce quality mangoes to supply to exporters. These include:

- i) Nembel Invest –the leading exporter intends to establish market specific individual certification TESCO NUTURE to export mangoes directly to Tesco supermarket chain in UK,
- ii) Two cooperatives in Korhogo and Ferke region wish to partner with the Trade Hub to access technical assistance to train harvesters on best harvesting practices and to establish supply linkages with lead exporters.

3.3 BURKINA FASO: IDENTIFICATION OF OPPORTUNITIES FY 17 WORK PLAN

3.3.1. OPPORTUNITIES FOR MANGO VALUE CHAIN INTERVENTIONS PROPOSED FOR 2017

The details of the above activities are presented in Table 4 below

Table 4 Proposed activities for FY 2017-Burkina Faso

ACTIVITES PROPOSED for FY 17 for BURKINA FASO				
N°	Activities	Partnership	Time Frame	Comments
1.	Organization of a symposium for consultation among stakeholders and exchange of information on markets and contacts of for the benefit of the mango value chain actors	APROMAB, SNV/CIR, CCIB, APEX, Public sector, Potential buyers	Feb-17	Invitees lists and TOR to be prepared
2.	Support APROMAB for the organization of mango value chain trade fairs to promote contact and new markets for fresh mangoes and processed products	APROMAB and member associations	Jun-17	To be held in Ouagadougou
3.	Facilitate potential exporters of dried mangoes to access certifications of NOP for the enterprises already having an organic certificate to enhance exports to U.S.	Enterprises FAN-TIC, SINTF, COOPAKE, Rose d'Eclart	Oct 2016 –Jan.2017	Preference for U.S. market
4.	Facilitate access to HACCAP certification for partner enterprises of FAN-TIC, SINTF, and SANLE for export of dried mangoes to U.S. and EU	FAN-TIC, SINTF, SANLE, Rose d'Eclart	Déc. 2016- Jan. 2017	Request by the enterprises
5	Facilitate access to organic certification for 30 producer members (15 APEMAB et 15 de SANLE) in 2017 in order to obtain increasing supplies for exports to organic market	APEMAB with Ranch de Koba	Nov.2016, Mars 2017	Increasing demand for organic mangoes
6	Support certification by GLOBAL G.A.P. (DAFANI, Yay-KAB, Faso, Mangoro)to enable the companies to export	DAFANI.SA, Yay-Kab, Faso mangoro	Mars,-May 2017	For exports by Dafani
7	Training of 5 to 10 key technical leaders of the 3 pack houses on packaging for exports and use those to train the remaining staff during the season. (2 days per enterprise.	RANCH KOBA, STGF, FRUITEQ	April –May 2017	
8	Facilitate training session on techniques to control maturation of mangoes for processing at the processing centers. 2 technicians per enterprise grouped for several enterprises. (40 enterprises.)	PTRAMAB/DAFANI	Apr-17	1 day per group of drying units initial training -follow up
9.	Training of 10 technicians on operation and maintenance of tunnel dryers – Selected enterprises already using the Tunnel dryers. (Sanlé, Rose Eclat, UPPFL, Tensya Gouampri) to facilitate production of quality dried mangoes for exports	PTRAMAB/SANLE	May-17	Need expressed –use of consultant

During the meetings, several players contacted requested Trade hub partnership some more areas in order to increase their exports. Some of these are listed below in the table below.

Table 5. Additional opportunities to support mango VC enterprises in Burkina Faso

1.	Participation of selected exporters in international trade fairs –Germany	APROMAB, APEMAB	Jan-17	
2	Support access to finance by enterprises for new investment	List Attached	2017	
3	Support a program for disposal of mango waste in processing factories (Environmental Issue –possible use as compost, animal feed, etc.)	RONGEAD, GEBANA	2017	This is a serious issue for processors
4	Study and a road map for development of cluster centered on mango VC in Haut Basin region	Conseil Régional des Hauts Bassins, SNV/CIR	Jan-17	Possibility of a consultant
5	Support to inter-professional association – APPROMA B for development of a strategic development plan and a road map for sustainability	APROMAB	Jan-17	
6	Support exporting companies in the EU and US to acquire BRC certification	SINTF Enterprise	Jan 2017	

3.3.2. ACCESS TO FINANCE

The mission met with number of enterprises planning to extend their production facilities through new investments for which they are seeking access to finance. The details of are given below.

Table 6 List of enterprises searching for access to finance for new investments

#	Enterprise	Financial needs	Location	Contact	Contact	Email
1	FAN-TIC	Construction of new Storage	Bobo Dioulasso	Dioma Etienne	70261574	diomachrist@hotmail.com
2	SINTF	New Tunnel Drayer	Bobo Dioulasso	Ido Georges	76698223	infosintf@yahoo.fr
3	UFTT	New Tunnel Drayer	Bobo Dioulasso	Ouattara Mamadou	67962289	ptramab@yahoo.fr
4	DAFANISA	Renewal of machineries	Oradara	Sankara Noufou	70008236	sankno27@yahoo.fr
5	GRACE MANGO	Setting a new mango drying unit	Bama	Lamoukri Jean Noel		lamourky@yahoo.fr
6	SANLE	Extension of pack house	Banfora	KONE Yaya	78835900	sanleexportburkina@yahoo.fr

3.3.3. OTHER INTERVENTIONS PROPOSED – MANGO CLUSTER IN HAUT BASIN REGION

During the mission in Burkina Faso, several development partners including mango sector stakeholders expressed the importance of developing a cluster in the Haut Basin region centered on mango value

chain. The present mission had the opportunity of meeting the permanent secretary of the Presidential Investment Council (PIC) who expressed keen interest on following the cluster concept for the region and confirmed that some comments would be sent in writing to elaborate an appropriate TOR. This is an activity that needs to be followed up. A consultancy mission is to be planned for FY17.

3.3.4. TRADE HUB NEW INTERVENTIONS APPROACH FOR FY 17 WORK PLAN

Trade Hub explained their approach of flexibility, partnership and the need to establish a path for sustainability in all interventions in the future to their development partners. The response was very positive from the partners and confirmed their willingness to be responsible for the implementation of activities and also for cost sharing.

3.4. SENEGAL: FY 2017 IDENTIFICATION OF OPPORTUNITIES

3.4.1. OPPORTUNITIES FOR INTERVENTIONS IN FY 17: SENEGAL

3.4.2.1. Opportunities for interventions by Trade hub identified for 2017

The following table summarizes the key opportunities identified within the scope of Trade Hub for FY 17.

Table 7 Proposed areas of interventions in Senegal FY 2017

#	Activities	Partners	Place Locations	Possible dates	Expected Results
1	Support to Access Organique Certification of the business	Zena Exotiques fruits exporting to U.S. AGOA	Dec-17		Facilitate the increase of value added mango products for export to U.S. under AGOA
2	Partnership with Zena Exotics and Senfresh to train its 20 agents of mango collectors and suppliers on best harvesting techniques to train 200 t 300 mango producers in selected locations	Zena Exotics an exporter of Value added products to U.S. and EU Exporter for AGOA And Senfresh company supplying to exporters and processors and local market	Niayes	March April 2017	The two companies will use the trainers to train 200 to 300 farmers in selected locations to supply quality mangoes
3	Training of Skilled technical workers packaging to support selected exporters	Lead exporters = Laure agro, Establishment HANN, MB Fruits, TropicauxMbaye, Fruits Tropicaux.	Niayes	May 2017	Three pack houses about 100 packing staff

4	GLOBALG.A.P.V5 Op.1. and Organic	25 Producers of LAURE AGRO and 45 producers of ANS company	Niayes		70 producers from two enterprises. Increase exports by 25% for each enterprise
5	Support to connect suppliers of mangoes to processing units	Agro fruits Cooprofel Laure Agro	Niayes		Increase of quality supplies for processing for local and export market -
6	Support lead exporters and its supply networks to train technical expertise on flower induction techniques to adjust climate changes in production	Main Partner- Hortica Senegal – Participants to come from Hortica Senegal, Cooprofel Laure Agro, CADA .ANS Inter export	Sindia – Niayes	Nov/ Dec 2016	Selection of 30 trainer producers. 2 days of initial training with follow-up for 30 days during 4 months. Use of Senegalese Consultant This is model to be replicate in country and in the west Africa region

During the mission, there were new investments planed by number of players –mainly exporters who intend to seek access to finance. A list of those is captured in the table below.

Table 8 Enterprises seeking Access To finance

1	Zena Exotics	New investments for: - Mango drying and - Mango Pulp production for exports to U.S. through AGOA		Increase of exported products by 50%
2	Laure Agro	Renewal of packing equipment and 2 nd chain of packing		Increase of exports from 25 MT to 50 MT
3	Senfresh	Establishment of collecting and sorting centers in Dakar and Cassamance		Increase of supplies for export, processing, and up market local sales

3.4.2.2. Other opportunities or support needs

With reference to the discussions held with the Permanent Secretary of the Ministry of Trade in the presence of a representative from the economic growth office of USAID Senegal, a request was made to identify support required to address broader needs address constraints and to promote the growth of the mango value chain specifically in Senegal. The table below captures some of the needs expressed by the players contacted during the mission.

Table 9. Other requirements to promote the mango value chain and its exports in Senegal

Organization of the sector	
1	Facilitate the creation of an inter-professional association for the mango value chain in Senegal.
2	Support producer cooperatives in all three producing regions, Niayes, Sine Saloum, and Cassamance, to adopt a common approach to address constraints and developed formal relationships with exporters, processors, and traders.
3	Support the creation of a West African regional association to jointly address the regional issues: fruit flies and phytosanitary constraints, regional exports, infrastructure, and inter-regional barriers and other policies affecting the value chain.
4	Establish a system to promote the maximum use of regional technical skills, research and development achievements, and the exchange of experience within the region to address the constraints to development of the value chain.
Phytosanitary concerns	
5	Support the national campaign, Fight Against Fruit Flies, and other phytosanitary issues.
6	Operationalize the committee on the Fight Against Fruit Flies.
7	Facilitate the establishment of mango collecting centers in major mango producing areas: Niayes, Sine Saloum, and Cassamance.
Production and trade	
8	Facilitate the establishment of a specialized collection center for organic mangoes in the region of Darou Khoudoss with BNO (Bio Niayes Organization).
9	Support the modernization of packaging centers with hot water treatment for exports of mangoes.
10	Support the training to supply high quality mangoes for retail sales in local market. Support the expansion of the Senfresh model.
11	Facilitate the training of women engaged in the mango trade on best handling practices.
12	Promote high quality mango plant nurseries with the private sector including the introduction of new mango varieties.
13	Support the training of technical teams in best practices of mango orchard management, pruning, flower induction, and harvesting.
14	Investigate possibilities and make appropriate recommendations to address issues of transportation of mangoes from Cassamance.
15	Support the diversification of the global export and regional trade of mangoes. Help develop new export markets.
12	Support the participation of exporters and processors in trade fairs including U.S. and AGOA products.

4. WAY FORWARD-NEXT STEPS

4.1. RECOMMENDATIONS FOR NEXT STEPS

The previous sections have described activities initially identified to be implemented during the 2016/2017 season in all four countries. All or most of the activities have been discussed with the selected partner organizations, which have agreed to partner with the Trade Hub and to share responsibility implementing the respective interventions. Therefore, effective follow up from each country's MVCS and coordination from the MVCS in Accra is key to develop realistic implementation plans in a timely fashion. The MVCSs were present at almost all the meetings when the interventions were discussed. Overall recommendations for next steps are described below.

Table 10 Overall recommendations for implementation of FY 17 work plan - Mango VC

#	Intervention/Activity	Responsibility	Timing	Other Remarks
I.	Finalize the country plans by October –November 2016 by MVCS	MVCS -4 countries and VC Specialist RCI	Mid Oct ,2016	Some initial work already done by MVCSs in each country
II.	Finalize a priority action plan to support potential exporters of processed products to U.S. in 4 countries with lead enterprises indicated in the report	MVCSs	Oct Nov 2016	A list of potential lead enterprises listed in the report above to be contacted
III.	A meeting of all four MVCS in Accra with VCDA and project management in Accra	Dates to arrange by MVCS Accra in consultation with VCDA	October – 2016	Suggested to meet before MVCS Accra go on leave in Mid- October
IV.	Finalize TORs /concept papers for each activity, select consultants and trainers	MVCSs –in consultation with Project Management	Oct –Nov 2016	Based on work plans approved
V.	Agree on final implementation plan and commitment of resources, and implementing mechanisms and partnerships for each country	MVCS in consultation with the project management	Oct –Nov 2016	Approval procedures on work on minor season in Ghana should be completed by end of October
VI.	Bi-weekly updates on the progress of all implementation activities by MVCS in 4 countries and report any difficulties, issues or delays	MVCSs	Bi weekly reports	MVCS Accra to coordinate
VII.	Obtain approval of consultants	MVCS with Project Management	Nov 2016	Approval procedures on Work on Minor season in Ghana should be completed by end of October

VIII.	Signing of LOCs - Partnership agreements with partners in each country	MVCSs		November–Dec 2016 Ghana Minor season in October 2016
IX.	Planning of implementation of proposed symposiums together with TORs and approvals for budget and organization	MVCS in each country VCS specialist in RCI		TOR for Symposium in RCI is being finalized
X.	Finalize proposed Mango Cluster study TOR and implementation in Burkina Faso	J.E. Austin Inc. with MVCS Burkina	Nov-Dec 2016	Initial concept paper done
XI.	Final implementation plans and approvals for each country	MVCS in each country		Implementation dates to be finalized for each country depending on Seasons
XII.	Final planning for M&E data collection	MVCS in each country		with M&E unit

ANNEX A: PERSONS/INSTITUTIONS CONTACTED ON MISSION 10, JULY - SEPTEMBER 2016

Ghana			
No	Institution	Name	Contact details
1	Dangme West Association of Mango Farms –DWAMF	Seth Djanmah President	Sethdjanmah@ymail.com Tel. 0209275654/0244803870
2	DWAMF	Noah Sabutey-	Noahsab14@gmail.com tel. 0242375154
3	YILO KROBO MANGO FARMERS CO-OPERATIVE	President –and ex-president Peter Sackey	posackey@yahoo.com , 0277602546
4	FMSL GH LTD	Davis Korboe –	daviesjorobo@yahoo.com / davies@fmslgh.om , Tel. +233- 244561122,
5	Evelyn Farms	Bassm G. Aoum	bef_farmevelyn1991@yahoo.com Tel : + 233 244375131, /244211370
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9	Kobiman Fams Ltd	NanaKwebena Adjei-mensah Ceo	Tel. +233 244310634 kadjeimensah@gmail.com
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11	Training Consultant	Victor Avah	Email : victoravah@yahoo.co.uk , Tel: 0244507530

	Burkina Faso		
N o.	Institution	Person Contacted	Contact Details
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1	Sunlee Exports (Production and processing)	Kone Yaya	sanleeexportburkina@yahoo.fr , +22620 911631
2	APROMA B , + Grace Mangoes	Jean Noel Lamoukry	lamoukry@yahoo.fr , +228 702526 41 /76111141
3	JAB Dried fruit Products South Africa	Corne Barnard(Not met , But the Person –Son who will follow up)	Tel. 27 (0) 13 747 2161 , +27 (0) 823314531 cornejab@mweb.co.za
4	JAB Dried fruit Products South Africa	Johan Barnard (Farther Whom I met)	Tel . 27(0) 137472161 Web. Jabfruits.co.za
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13	Cold Storage Bobo	Bonnie Moutian-yaykab	m.bonobb@gmail.com Tel. 736262
14	Trade Hub Mango Spécialiste	Dibouloni Jean Bosco	Email. diboulonijeanbosco@yahoo.com , Tel. +226 78033905
15	SINTF-Sociate Industrielle de Transformation de Fruits	Ido Nebnoma Georges -DG	Tel. +226 76 698223/63450304 Email : nebnoma2001@yahoo.fr / infosintf@gmail.com
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	Adiviser–Investments unit President’s Office. Ouagadougou	Edouard Tapsoba	Tel. 226 70896563, Email. edtapsoba@yahoo.com , edkouk@gmail.com

SENEGAL			
1	Ministry of Trade informal Sector, consumption promotion of local products and SMES	Makhtar Lakh= Secretary general	Tel. +221 33 869 29 25 Email: makhtar.lakh@gmail.com
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4	Mango sector consultant	Momodu Dabo(Contacted on Phone)	Email: dabokl@yahoo.ca
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11	Laure Agro –Exporter in Senegal and	Mme Fakhug Rayana -	Senegal.lauresarl@gmail.com

	Côte d'Ivoire		tel. +221 774626210, +221 0990359
	Fruits Tall	Mime Marie Andre Tall	Tel.+221-338604252, fruitales@orange.sn
12	Society Agullo –Senegal (Mango orchard)	Abdul Azize Bezerra	Tel. 776209917 Email. Marcelino1969@gmail.com

RCI			
	Institution	Person Contacted	Contact Details
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2	Ministry of Agriculture DPV	Mr Kosi Ngnissan Assistant Director	ngniss143@gmail.co ngnissan@yahoo.fr
Mangoes VC –Companies and Associations			
3	Cooperative COOP-CA-GNINNANGNON Mango Producers drying –Korogho	Two Nahou Secretary general (Discussed on Phone)	Tel. +225 47054519, +225 55107998 socoopagrinnangnon@gmail.com
AREXMA-Association Régionaux des Producteurs et exportateurs des Mangue			
4	AREXMA	Mr Pascal Nembel –Secretary General	Tel . +225 44628369
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ANNEX B: MISSION PROGRAM

Date	Institution/Meeting
RCI	27 th to 30 th July and
27 th July 2016	Arrival Abidjan
	Meeting with THN staff at Abidjan Office
	Meetings with Nembel Invest, Ivories Agrege ,Enterprise Majuta Interim Committee Sec .General West Africa Mango Alliance
Ghana	
30 th July 2016	Travel to Ghana
31 July Sunday	Accra
1- 5 August	Work planning work shop FY17 –Accra
6-7 August	Accra – work plan related work and preparation for Ghana Meetings
8 August	Meetings and discussions Trade Hub Office
9-14 August	Follow up notes on FY 17 work planning , Meetings with mango producers in Somanya district , Visits to BOMARTS Factories ,Meetings with Akorley pack house Management, meetings with Private exporters , Producers from Brong Ahgfo region , Preparation of concept papers for interventions in Ghana, Regular coordination with MVCS in the 4 countries.
15 August	Travel to RCI-Abidjan
CDI	
16 August	Work at Trade Hub office , Meeting with Nembel ENteprise
17 August	Meetings with AREXMA, OBANCI, OCAB ,Ministry of Agriculture –DPV
18 August	Meetings FIRKA – Report work
19 August	Meetings with Consultants, AREXMA Members and report work
20 August	Work on RCI work plans , TORs etc
21 Sunday , August	Travel to Ouagadougou
Burkina Faso	
21 August	Arrival Ouga
22 August	Rose d'Eclart Mango Drying enterprise –Embassy of Senegal _Visa
23 August	Travel to Bobo
24-26 August	Meetings with APROMA B , APEMAB, PETRAMAB , Ranch de Koba , RONJEAD, Conseil Regional , Rohn ALpes cooperation, Exporters , Mango Dryers
27 August	Travel By road to Ouga
28 August-Sunday	Sunday work on the reports
29 August Monday	Meeting Rose D'Eclart, Investments unit SG presidency Office work at the office
30 August	Work On Burkina report ,
31 Wednesday	Departure to Senegal
Burkina Faso	
31 August	Arrival Dakar
01 Septembre	Meeting –Hortica , Fruits Tall, Visit Mango Orchard Rufiska
2to 4 September	Meetings -
5 th September	Meetings –Senfresh , Zena Enterprise, Agro fruits
5 th September	Travel to Senegal

	Senegal	
6 th	September	Meeting with COP , Meeting work Plan –Mango sector and work on report
7 th	September	Travel to Sri Lanka -
8 th	September	Arrival Sri Lanka
9 th to 13 th	September	Work on the draft I final report

ANNEX C: NOTES ON CERTIFICATIONS GENERALLY APPLICABLE TO THE MANGO VALUE CHAIN

International collective private voluntary standards

Standards			Certification requirements
1.Global G.A.P. It is a compulsory requirement to export mango to comply with good agricultural practices	GRASP	It is an ethics module as a supplement to the standard on the health quality of foods. Grasp or risk assessment on social practices, is a voluntary standard for businesses	The purpose of the Global G.A.P. certification is to establish a standard for 'good Agricultural Practices' It is a pre- farm gate standard. It covers the entire process chain of the mango production. <ul style="list-style-type: none"> Workers safety and working condition Chemical application and food security health quality of foods, the environment aspects of agricultural production Social practices (Grasp)
	Option 1	Certification apply to a single producer with single site or multiple sites	
	Option 2	Smallholders can form a group and obtain a joint certification (option 2) This enable them to lower external certification cost such as impaction and general fees substantially	
2.Fair for life It is a requirement for some of the mango clients in Europe to comply with social and human right standards		The fair for life social & fair trade certification was developed by Bio-foundation for lmo in response to various customers request.	Certification applicants have two options: <ul style="list-style-type: none"> Fair for life- Social responsibility certification Fair trade –Social and fair trade certification The certification requirement is based on <ul style="list-style-type: none"> Food Traceability Basic right of workers Conditions of employment of workers Social responsibility of company and community relation Environmental aspects of activity

Standards			Certification requirements
3.Fair trade (Flo)		It is the widely respected social and	It is a social standard base on 10 principles, which constitute the main

<p>It is a requirement for some of the mango clients in Europe to comply with social, economic and environmental standards</p>		<p>development label. It is organized and structure around three themes</p> <ul style="list-style-type: none"> • Social • economic and • environmental 	<p>requirement for applicants</p> <ul style="list-style-type: none"> • <u>Principle One</u>: Creating Opportunities for Economically Disadvantaged Producers • <u>Principle Two</u>: Transparency and Accountability • <u>Principle Three</u>: Fair Trading Practices • <u>Principle Four</u>: Payment of a Fair Price • <u>Principle Five</u>: Ensuring No Child Labor and Forced Labor • <u>Principle Six</u>: Commitment to Non Discrimination, Gender Equity and Women’s Economic Empowerment and Freedom of Association • <u>Principle Seven</u>: Ensuring Good Working Conditions • <u>Principle Eight</u>: Providing Capacity Building • <u>Principle Nine</u>: Promoting Fair Trade • <u>Principle Ten</u>: Respect for the Environment
<p>4.Rainforest alliance It is a requirement for some of the mango clients in Europe to comply with environmental standards</p>		<p>The rainforest Alliance is an American NGO dedicated to conserving the world’s biodiversity and ensuring decent living conditions by modifying agricultural and business practices and consumer behavior It is a Business to consumer (B to C) private standard</p>	<p>It comprise 10 principles which are the main requirements</p> <ol style="list-style-type: none"> 1- Environmental and social management system 2- Conservation of ecosystems 3- Protection of the flora and fauna 4- Water conservation 5- Fair treatment and good working conditions for employees 6- Health and safety at work 7- Relationships with the local communities 8- Integrated pest management (IPM) 9- Soil management and conservation 10- Integrated waste management

Standards		Certification requirements	
<p>5. Organic agriculture It is a requirement for some of the mango clients in Europe to comply with environmental standards</p>		<p>It is based on certain principles and practices for reducing the impact of agriculture on the environment to a minimum</p>	<p>The requirement mainly include</p> <ul style="list-style-type: none"> • Crop rotation (efficient use of the soil) • Very strict limits on the use of plants production , synthetic fertilizers and inputs • Bann on GMO • Selection of plant that are resistant to diseases and adaptable to the local condition

			•
6. HACCP (hazard analysis and critical control point) Not yet certifiable but give a bonus and lead to ISO 22000 certification		HACCP helps to prevent, as close to 100 percent as possible, harmful contamination in the food supply. It focuses on identifying and preventing hazards from contaminating food	There are 7 principles and 12 steps of implementing the HACCP. Principles 1. Analyze hazards. 2. Identify critical control points 3. Establish preventive measures with critical limits for each control point 4. Establish procedures to monitor the critical control points 5. Establish corrective actions to be taken when monitoring shows that a critical limit has not been met 6. Establish procedures to verify that the system is working properly. 7. Establish effective record keeping to document the HACCP system
7. ISO 22000 It is a requirement for some of the mango clients in Europe to comply with food safety standards		Is a food safety management System that can be applied to any organization in the food chain	Be certified ISO 22000 means customers have putted in place a food safety management system. The pre requisite is that all applicant have to • Maintain an hygienic environment • Maintained a good traceability system • A finished products and food that are safe for human consumption

Standards		Certification requirements	
8.BSCI It is a requirement for some of the mango clients to comply with social health and safety standards		Business Social Compliance Initiative It came into being as a result of the desire of a number of European businesses to harmonize and more coherency among their codes of conduct and verification system	The requirement include Observing of laws Right of freedom of association and collecting bargaining Ban on discrimination Salaries Work on hours Health and safety in the work place Ban on all abusive forms of child labor Ban on all form of forced and compulsory labor Problems linked to the environmental and safety
9.Sa 8000 STANDARD It is a requirement for some of the mango clients to comply with child labor discrimination		It is considered to be the first international reference standard on the rights and respect of the individual at work	Requirements Child labor Forced and compulsory labor Hygiene and safety Freedom and association and right to collective bargaining Discrimination

and human right standards			Disciplinary practices Working hours Remuneration Management system
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INDIVIDUAL PRIVATE VOLUNTARY STANDARDS OF BUSINESSES

Export to European supermarket (Tesco or Marks and spencer)

Standards		Certification requirements
10.Tesco Nature It is a to sell mango to the supermarket Tesco	It is reserved exclusively for Tesco that relates to responsible fruits and vegetable production	The label requirement is : <ul style="list-style-type: none"> • Implement a traceability system • Growing of high quality fruits • Demonstrate his commitment to the protection of animal and the conservation of habitats • Adapt sustainable agriculture • Use fertilizer and other inputs in a rational manner • Ensure that all the employees are treated fairly
11.Field to Fork It is a to sell mango to the supermarket Marks and spencer	It is exclusively for the British retail chain Marks and Spencer	The requirement is to comply with <ul style="list-style-type: none"> • Good agricultural practices • Good Manufacturing/ processing practices • Health, quality environmental stewardship and decent working conditions

GRASP MODULE

GRASP mean GLOBAL .GAP. RISK Assessment on social Practices.

It is a module launch by GLOBAL G.A.P. as a supplement to the standard on the health quality of food. The compliance with the Grasp module can be performed concurrently with the normal health quality Food audit

The GRASP module has 11 control points and is only applied to the GLOBAL G.A.P. certified businesses.

The 11 control points cover the following areas

1. Legal right of employees
2. Communication channels
3. Written labor contracts
4. Legal status of employees
5. Children's right
6. Working Hours
7. Salaries and wages
8. Other social benefits

Furthermore, the Grasp module is only applicable in countries that have developed interpretation guidelines adapted to the local conditions.

Note:

These notes on Certifications are compiled in collaboration with Moussa Coulibaly – MVCS in RC

IFS (International Food Standard)

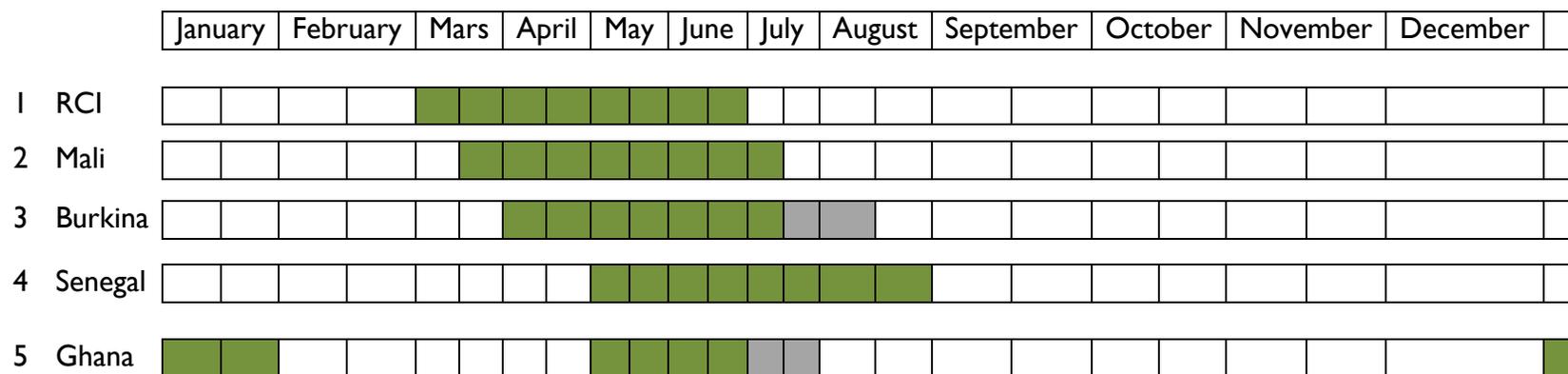
It is a private standard developed by food distributors from Germany, France and Italy. Other Europe country will joint soon, since the confederation of food and drink distributors of the EU is taken the initiative to develop a technical specification of the Standard.

Any primary food producers who want to export to the concern countries have to comply with this standard.

The standard purpose is to

- 1- provide a uniform approach as a basic for evaluating the quality and safety level of suppliers of food product (eg. Mango exporters)
- 2- to work with accredited certification bodies and qualified auditors
- 3- to ensure transparency and cut back on the cost of audit through the entire supply chain.

ANNEX D: MANGO PRODUCTION CALENDAR –RCI, MALI, BURKINA FASO, SENEGAL AND GHANA



ANNEX E: INTENSIVE TECHNICAL FOLLOW-UP OF BEST PRACTICES BUSINESS MODEL FOR GLOBALG.A.P FARMERS TO INCREASE EXPORT SUPPLIES OF MANGOES IN GHANA— PROPOSED

The Trade Hub has developed a replicable business model to that leads to increased supplies of export quality mangoes through intensive technical support to GLOBALG.A.P. certified farmers in the Somanya region in partnership with YKMFA, Akorley pack house, and exporters.

Purpose of the Model

This model was developed to increase the export supply of mangoes by GLOBALG.A.P. certified farmer members of YKMFA (Yelo Krobo Mango Farmers Association) in the Somanya district through the provision of intensive technical support and the facilitation of farmer-exporter linkages. This program aims to allow Trade Hub trained and supported farmers to have at least 30% of their mango production be of export quality and supplied through the Akorley pack house or directly to exporters. In addition, it aims to ensure that 30% to 40% of the production be made available to processors.

This business model is to be introduced during the minor crop season in Ghana from September 2016 to January/February 2017 and replicated by other associations during the 2017 major season.

The Model

Trade Hub facilitated 79 farmers to access GLOBALG.A.P certification in 2016 through YKMFA in the Somanya District. These farmers are being coached to achieve export quality fruits and are expected to extend that knowledge to non-certified farmers who will eventually come on board to be certified with the support of YKMFA. The Somanya district is a main mango producing area in Ghana. The YKMFA continues to support and monitor the progress of the production of quality mangoes by its farmers with the technical assistance of Trade Hub. This support will include technical follow-up guidance and training to these 79 farmer members on the application of best practices to ensure delivery of high quality mangoes mainly for export during the next minor season, October 2016 to Feb 2017. Support activities are implemented under the supervision of a trainer assisted by 3 to 4 technicians visiting 79 farms several times per week for 4 weeks and include the following:

- Facilitation of exporter/processor - farmer linkages. This will include an initial forum in October of farmers and exporters/processors to facilitate supply arrangement negotiations and B to B agreements and a second forum in December sponsored by exporters, the association, and the pack house to confirm agreements.
- Access to information on and monitoring of the correct use of agricultural inputs and controls, SPS control techniques including the control of anthracnose, BBS, and insect pests, and other phytosanitary controls and monitoring traps. (This will be a follow-up to training already completed.)
- Follow-up on training in timely flower induction, proper application flower induction techniques, and retention of flowers, an introduction to the bagging of fruits to protect them from fruit flies (exporters have a preference for protected fruits), correct harvesting techniques, and the organization of the harvest for delivery to the pack house.
- Conduction of farmer field days to facilitate knowledge sharing of GAPs, problem solving, and training of trainer farmers for the Association.
- Facilitation of meetings between buyers and sellers and sales agreements with farmers. The Akorley pack house will be associated with this program, and farmers will be encouraged to supply produce for export through this pack house. Exporters and processors could order mangoes through the pack house.

Responsibilities of Partners

The model will be implemented mainly by the farmers' association, YKMFA, in collaboration with the Akorley pack house, exporters, processors, and Trade Hub. The responsibilities of the individual partners are as follows:

- **The association**—YKMFA will be responsible for organizing the program, monitoring the program, arranging follow-up and logistics, facilitating farmer meetings, bearing the costs of farmer transport and other expenses, and collecting M and E data.
- **Farmers**—the 79 GLOBALG.A.P certified farmers are responsible for the procurement of their own agro inputs (input arrangements can be made through exporters who will have supply contracts), regular participation in training sessions and field days, strict implementation of advised best practices, the timely reporting of data, and respecting supply contracts with exporters, processors, and input dealers. (There is a possibility that farmers will be able to access inputs on credit from the National Farmers and Fisheries Award Winners Association of Ghana (NFFAWAG) through the supply company Chemical as recommended by Davis Korboe, president of the association.) Any farmer who does not comply with the requirements to apply best practices will be excluded from the program.
- **Akorley pack house**—the pack house will facilitate linkages between farmers and exporters. The pack house is responsible for sorting and packaging mangoes for export, providing farmers access to agro-inputs through exporters, acting as a collection center where lower grade mangoes can be bulked and sold to processors and retailers for the farmers, and other extension work. The Akorley pack house is already working with exporters. (This pack house already has an understanding with a major exporter to supply 400 MT for export for which packing materials have already been delivered to the pack house.)
- **Exporters/processors**—the exporters and processors will provide the link from farmer to market. They may provide advances of agro-inputs and purchase agreements to farmers.
- **Trade Hub**—Trade Hub is responsible for the provision of technical support by funding
 - (i) A specialist on SPS and best practices (20 days) (Identified –Victor Avah) who will visit every farm twice during the period of two months and provide advice and training including two field days

(ii) Three technical assistants (45 man days) to follow up on the application of guidance and advice through three visits per farmer over four to five weeks. Each assistant will cover 26 to 27 farmers. (This is subject to approval by Trade Hub or to be discussed with the YKMFA)

The details of these cost implications are to be worked out in accordance with the cost sharing procedures and conditions accepted by Trade Hub.

Expected Impact on Export Supplies

The model anticipates participating farmers being able to supply 30% of their production for export and 40% for processing while minimizing the postharvest losses. The remaining harvest would be sold at local markets. At present, the supply for export is estimated to be much lower than 20% of the production.

Table 4. Estimated Results of the Intensive Technical Training Model Proposed for YKMFA in Ghana

Estimated area of production	Estimated production – MT	Supplies to Exporters of fresh fruits 30%		Supplies to Processors 40%		Total value \$
		MT	Value fob -\$	MT	Value \$	
395 (5HaX79)	3160 MT (8 MT per Ha)	950	950,000	1260	378,000	1,328,000

Sustainability and Replication.

- The pack house can use the supply from the farmers to meet existing orders as well as additional orders from exporters and processors.
- The YKMFA anticipates collecting a service charge from producers on supplies to the pack house which will help build a renewable fund to continue the assistance to farmers and to train trainer farmers.
- Operations of the pack house are expected to increase and generate income for pack house operations and maintenance and for dividends to YKMFA.
- Producers supplying through the pack house should keep records on exports and are expected to pay a minimum service charge to the pack house and to the association (YKMFA) that will generate revenue for both.
- The implementation of this model can serve as a model for implementation by other associations in Ghana and other countries.

Next Steps for the 2016 Minor Season Intervention

1. Prepare a detailed TOR with costs estimated by each partner. (MVCS Ghana with YKMFA)
2. Finalize selection of the technician/trainer and assistants involved. (YKMFA)
3. Determine amounts and formalize agreements for partner contributions. (MVCS with YKMFA)
4. Obtain approval and commitments from Trade Hub and other partners. (Trade Hub)
5. Sign partnership agreements. (YKMFA/Trade Hub)
6. Recruit technicians. (Trade Hub)
7. Put in place logistics arrangements. (YKMFA)
8. Start implementation in October 2016 to run through March 2017. (YKMFA)