



Minutes of the 16th National Mango Roundtable

Tuesday 26th November, 2019

Miklin Hotel, East Legon – Accra

1.0 Introduction and conference framework

The National Mango Roundtable, convened by FAGE and funded by GIZ-MOAP, is a platform for major stakeholders within the mango value chain all over the mango producing areas in Ghana to discuss sector-specific issues. The 16th edition of the roundtable followed the previous emergency meeting also held at Miklin Hotel, to review a draft dossier on mango regulations from PPRSD. This was in response to EU's request for Ghana to submit a list of protocols to facilitate the export of Fruitfly-free mangoes. Presentations that formed part of the agenda for the final roundtable of 2019 included Mango Benchmark Study on Production Systems (*a comparison of 4 African countries*); Development of a Sustainable Intervention for the Mango BBS Disease; Plans of Processing Companies for the Minor Mango Season.

Farmers from the various mango-producing associations in Ghana participated, as there were representatives from Dangme West Mango Farmers' Association (DAMFA), Manya Krobo Mango Farmers' Association (MKMFA), Wenchi & Kintampo Mango Farmers Association, Yilo Krobo Mango Farmers' Association (YKMFA), VVCCU, and PAMPEAG. Government representatives from Ministry of Trade and Industry (MOTI) and PPRSD-MOFA, attended alongside input dealers, exporters, financial institutions (ADB), academia (UG and KNUST) and processors (HPW) among others.

2.0 Opening Remarks

Mr. Frederick Ayeh, 2nd Vice President of FAGE, opened the final mango roundtable for 2019. After welcoming participants, he listed the activities FAGE had carried out in the mango sector for the year prior to the event as follows: 14th Mango Roundtable (in March), Ghana Mango Week (July), 15th 'emergency' Mango Roundtable for EU dossier on mango (with PPRSD in August). The FAGE Vice President urged mango business owners to take charge of their affairs diligently in order to thrive.

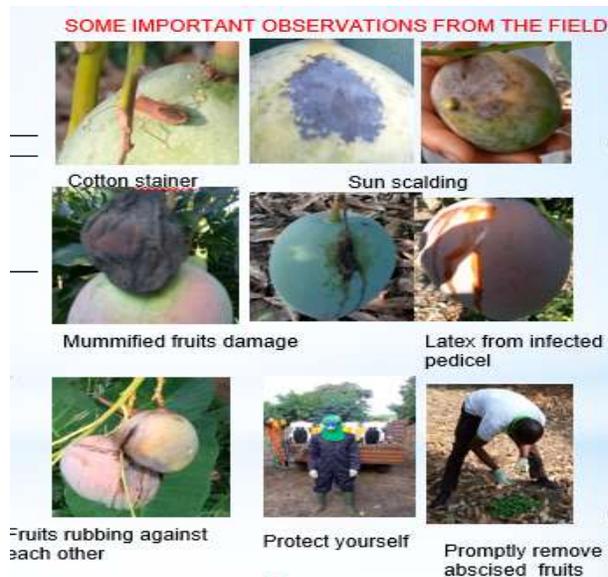
3.0 Presentations

3.1 Development of a Sustainable Intervention for BBS Management - Presentation by Dr. Joseph Honger (University of Ghana)

Key Highlights

3.1.1 Managing the mango Bacterial Black Spot disease requires the use of an integrated control method that includes preventive, cultural and chemical control methods.

Fig.1 Observations during the research



- 3.1.2 For the research, an integrated control in which good agronomic practices were held constant, and several copper-based fungicides, which were applied either singly or in combination with BION (Acibenzolar S-methyl), were evaluated for their effect against the causal agent of the disease and the disease incidence and severity in the field.

- 3.1.3 Selected fungicides were initially evaluated in the laboratory to determine whether they can kill the bacterium or not, namely: Curenox, Cuprous super, Cuprofix disperse, Yellow gold, Funguran and Nordox.

- 3.1.4 Curenox, Cuprous super and

Nordox produced effective results.

- 3.1.5 Copper-based fungicides are not systemic fungicides hence weekly spraying is recommended. However, for cost management, a biweekly spraying regime should be adopted.
- 3.1.6 Important Observations from the Field
 - Presence of the cotton stainer, boring holes into the mango fruit
 - Sun scalding or burns on the fruit; Mummified fruits damage; Latex from infected pedicel
 - NB: When two fruits rub against each other, the likelihood of losing both fruits to BBS is high.
- 3.1.7 Ten Cardinal Points of BBS Control
 - Maintain farm hygiene including good weed control throughout the production period
 - Select copper based fungicide with not more than 5 g/l application rate.
 - Control the cotton stainer
 - Select fungicides with lower rates but good control ability.
 - Prune off fruit pedicles of previous season and do not allow these to cause scratches on the fruit



- As much as possible prevent two fruits from rubbing against each other. If possible, remove some fruits
 - Remove mummified fruits and sun scalded fruits from the tree canopy
 - Addition of a systemic fungicide could help to prevent rapid fruit abscission
 - Harvest fruits as soon as they mature
 - Protecting yourself during pesticide application is key to the success of the program
- 3.1.8 Comments
 - Farmers **MUST** stick to the rates or percentages recommended by the copper-based fungicide manufacturers. Spraying higher volumes could be dangerous.
 - Applying copper early is to minimize the bacteria load on the tree as much as possible before fruits set.
 - Spray Copper at lower rates with boom sprayers for good results
 - BION is not yet a registered chemical in Ghana hence it is advisable to use it only in trials.
 - The Roundtable should invite EPA to confirm the list of registered chemicals for mangoes.

3.2 Mango Cost of Production Benchmark Study - Presentation by Barry Clausen (Sense)

Key Highlights

Project Goals

- To provide a detailed economic analysis of the cost of production of mango in Ghana and profitability per ha and per Kg of fresh mango.
- To provide an analysis of how they are different from other countries, being Ivory Coast, Senegal and South Africa
- To answer the following research questions:
 - Why is the farm gate price for mango so much higher compared to neighboring countries?
 - If the cost of production are higher, what are the main causes?
 - Why do farmers complain of the cost of BBS control measures?
 - Why are fresh exports so low?
- To provide recommendations for mango farmers in Ghana



Fig.2 Goals of the study

- 3.2.1 Ghana is the only country that produces mangoes that produce mangoes in humid climate.



- 3.2.2 Ghana produces a lot of Keitt. Meanwhile, producing much Kent could put the county in the same export window as Ivory Coast. Keitt grows big and sometimes too big for exports so eventually farmers end up serving the local market instead.
- 3.2.3 Some Factors limiting Ghana's export market include:
 - Quality - The EU market is strict on pests and diseases, which makes it difficult for a country like Ghana struggling with management of BBS, Anthracnose, Fruitfly etc. They therefore pay little to cover their risks of buying infested fruits.
 - High prices on the fresh local market
- 3.2.4 Ghanaian labour prices are considerably high. Although not as high as in South Africa but commercial farmers in South Africa get high yields to compliment the high costs unlike Ghana.

Key differences between Ghana and other producers

Ghana is the only country in this study:

- where mango is produced in humid coastal areas
- where Keitt is the dominant variety.
- where in some regions (South Volta) there are 2 seasons on the same tree
- where an intensive farming system with high investment in inputs is used on a low-density orchard that is not supported by irrigation.
- There is hardly a lucrative export market
- Where the local fresh market price in the high season is much lower (1Ghc) than processing grade (1,5 to 1,6 GhC).

Yields in Ghana sit somewhere in-between low input models in Senegal and Ivory Coast (and Mali and Burkina Faso for that matter) that reach about 5 tons/ ha and the intensive systems of South Africa and Senegal that achieve 15-22 tons.

More professional Ghanaian farmers by comparison obtain about 7 – 12,5 tons per ha, with the average being definitely below 10tons per ha.

Fig. 3 Differences between Ghana and other African countries

Conclusions and recommendations

1. Look into effect of irrigation
2. Can we introduce/ promote Kent? Debunking myths with facts...
3. Find other tropical humid regions that farm mango to see what we can learn
4. Are there other areas better suited to expansion?
5. What has been the experience with high density planting? Can we promote this?
6. Research if there is not too little fertilizer used
7. Understand why so little mango is exported
8. Research if good agricultural practices are carried out in the right way
9. Understand how we can improve marketing of fruit domestically
10. Understand better the potential of minor season
11. Improve quality of trees supplied

Fig. 4 Conclusions and recommendations of study

- 3.2.5 Comments
 - Reasons why most farmers in Ghana avoid Kent: Generally, it is difficult to induce flowering in Kent unlike Keitt, which is much easier to induce and flowers on its own. In addition, where Keitt gives two (2) seasons, Kent could only give one (1).
 - Leaf analysis should be considered

3.3 Comments / Remarks from PPRSD - by Prudence Attipoe

- 3.3.1 EU have accepted the dossier of mango submitted by Ghana
- 3.3.2 Outcomes from the Lebanon audit
 - Issues were raised on sanitation hence requires stepping up.
 - Timing of insecticide application: Due to improper timing, some farms had stone weevils in their fruits.
 - Ban of some insecticides in Lebanon: a list will be shared in due time with PPRSD on some banned insecticides.
- 3.3.3 Regulations / Plans for next season
 - Once inspection commences, any farm that does not go by the protocols for mango production will be failed at the 1st stage.
 - Inspection will be carried out in four (4) stages.
 - Non-certified farms cannot sell to processors
 - Creation of pest-free areas will help create other market opportunities for Ghana. Surveillance is however required to know the densities and the low prevalent areas for pest infestation.
 - Land inspection to be carried out by the PPRSD on potential new farms as buffer zones are required for certification.



- Geo-coordinates of farms to be taken. This will be used to calculate yields per farm to prevent outsourcing fruits from non-certified farms for exports. This will be coordinated with the traceability process.
- Securing hot vapour treatment for the fruitfly menace

3.4 Plans for the Minor Season 2020 - Presentation by Veronika Hofer (HPW Fresh & Dry)

Key Highlights

- 3.4.1 Minor Season 2020 starts from December 2019 and ends around February 2020
- 3.4.2 Within this period, HPW expect to increase the volumes of processed mangoes from 2120 (metric tons) MT as recorded in 2019 to 4000 MT (minimum target). This is according to their daily and weekly processing capacities of 70MT and 500MT respectively.

Fig.5 HPW's processing plan for minor season 2020 in figures



- 3.4.3 Fruit Quality Required:
 - Brix (Kent) > 8.5
 - Brix (Keitt) > 7.5
 - Internal color > 0.3
 - Fruitfly - Seed weevil - Shocks <10%

3.5 UNIDO (West Africa Competitiveness) WACOMP Project - Presentation by Frank Kwesi

Key Highlights

- 3.5.1 The WACOMP project is funded by the EU with the aim of building competitiveness for exports in the fruits (mango and pineapple), cassava and cosmetic value chains in Ghana. The implementing agency is UNIDO with the Ministry of Trade and Industry, the government coordinating agency.

- 3.5.2 For a duration of 48 months, the project is for the benefit of stakeholders (producers, product associations, cooperatives, enterprises etc.) within these value chains.
- 3.5.3 The project’s overall objective is to strengthen the export competitiveness of the Ghanaian economy through enhanced value added, low carbon, sustainable production and processing as well as an increased access to regional and international markets.
- 3.5.4 The WACOMP Project hinges on 5Cs for competitiveness: Coordinate, Compete, Conform, Connect, and Credit.



Fig. 6 The five C's for competitiveness (UNIDO - WACOMP)

- 3.5.5 A workshop on the matching grant scheme is slated for December 18, 2019. The Dangme West Mango Farmers Association (DAMFA) will also benefit from a Global GAP V5.2 training within the same month

4.0 Closing Remarks

In her closing remarks, the convener, Marjorie Quist Abdin mentioned that funding be sought going forward to cater for mango activities outside the Roundtable in order to have the 4 quarterly meetings per annum (the target of the mango roundtable). She encouraged participants to direct FAGE in identifying other sources of funding. The FAGE Vice President mentioned that despite having only two main roundtables in 2019, BBS had been a key issue for discussion enabling farmers to tackle the disease on their farms. The annual Mango Week held in July 2019 became the watershed from which interest in the mango value chain grew. The publicity put mango on the map and new investors, to her knowledge, have set up mango farms. Moreover, there had been increased public sector engagement in the course of the year. In addition, UNIDO, IPD have also reached out to FAGE on projects. GSA, PTB-Calidena were also institutions that FAGE and the Roundtable collaborated with during the year. Furthermore, with the inclusion of mango in the tree crops for the Tree Authority Bill, the formation of a National



Mango Growers Association was prudent. The launch, which occurred in Sunyani elected an Interim Management Committee and outlined criteria for membership, she emphasized.

Projecting into 2020, the convener mentioned training programs with Green Label and on chemicals, more contacts with investors, finance and research as areas / activities to look forward to. Finally, Mrs. Abdin updated the roundtable on a decision made by the Mango Week Committee to have a fixed date for the annual Mango Week celebration such that it becomes an international festival in future. The 2020 edition will hold around 9th July, she concluded.

5.0 Participants List

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