

**REPORT OF THE SECTORAL COMMITTEE ON AGRICULTURE, ANIMAL
INDUSTRY AND FISHERIES ON THE OVERSIGHT VISIT TO MUSUBI FARM,
MAYUGE DISTRICT**

OFFICE OF THE CLERK TO PARLIAMENT
PARLIAMENT BUILDING
KAMPALA-UGANDA

February, 2020

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REPORT OF THE COMMITTEE ON AGRICULTURE, ANIMAL INDUSTRY AND FISHERIES ON THE VISIT TO MASUBI AVOCADO FARM IN MAYUGE DISTRICT

1.0 INTRODUCTION

During the 15th Sitting of the 2nd Meeting of the 4th Session held on 11th December 2019, the Rt. Hon. Speaker, directed the Committee on Agriculture, Animal Industry and Fisheries to visit the Musubi Avocado Farm in Mayuge District to learn best practices in Avocado farming.

The Committee undertook the familiarization visit on 6th February, 2020.

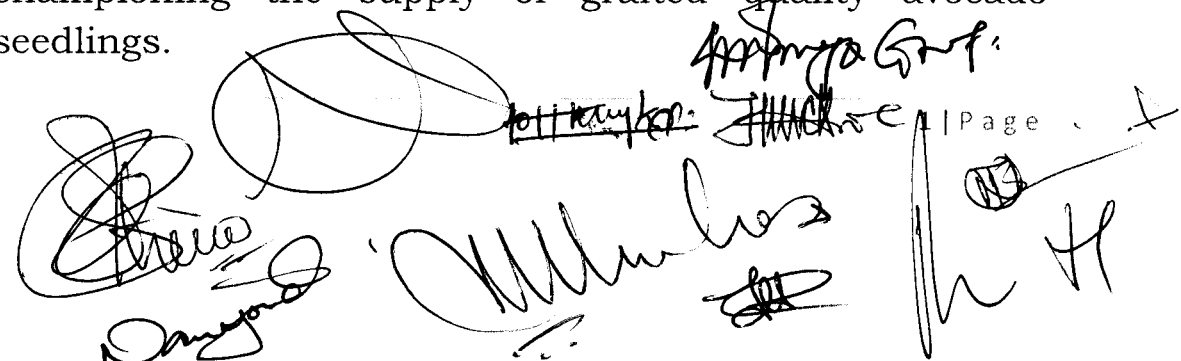
During the visit the Committee held a meeting that was attended by the following:

- 1) The managers of Musubi Farm.
- 2) The Area Member of Parliament
- 3) District Councilors
- 4) Sub County Councilors

The Committee also conducted a guided tour of the Musubi Avocado Nurseries and farm.

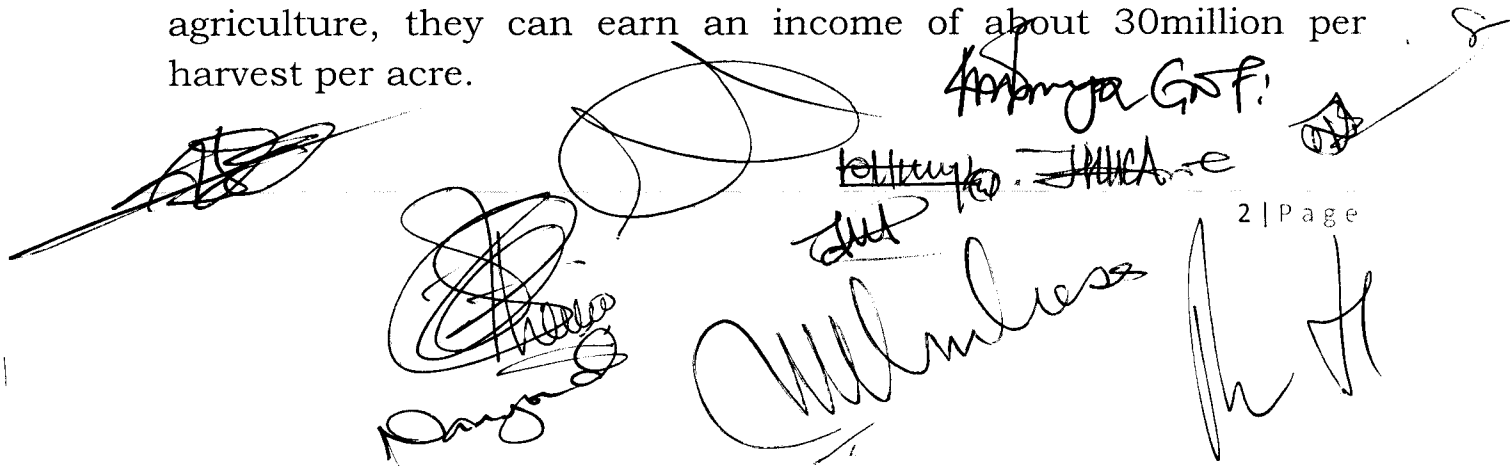
2.0 BACKGROUND:

1. Musubi Farm is a private agricultural enterprise located in Bukabooli Sub County in Mayuge District.
2. Musubi Farm is implementing a Hass Avocado Value Chain Development Project with a core mandate of:
 - (i) Supporting the Uganda Hass Avocado Industry by championing the supply of grafted quality avocado seedlings.



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- (ii) Engaging in commercially viable growing of the crop; and
 - (iii) Value addition through the production of avocado oil for the export market.
3. The farm sits on 2,500 acres of land; of which, 1,600 acres are used for sugar cane growing while 400 acres are used for avocado growing. The projection in the next two years is to have covered 1,600 acres of land of Hass avocado. They are currently uprooting part of the sugarcane to prepare the land for avocado, 120 acres of land is already cleared. By 2025 they will be done with the 2,500 acres.
 4. When the farm was opened in 2009, it was used for maize growing, but they did not make any profits; one acre of maize yielded 4million UGX. They then changed to water melon then to sugar cane farming, but the returns were very minimal. On one acre of land, the farm was earning about 6million Uganda shillings.
 5. The Hass avocado growing was piloted by Musubi Farm in 2018. The project was commissioned by the Rt. Hon. Speaker, Hon. Kadaga Rebecca Alitwala.
 6. The farm employees 350 staff out of which 150 are permanent workers while 700 are casual employees.
 7. The proprietors of the Hass Avocado project benchmarked from Kenya and the studies revealed that Avocado is a high value crop with huge returns. Currently, Kenya is the leading producer of avocado in Africa. But it does not produce on large scale, the avocado is grown on small scale on individual (private) farms. The studies revealed that under normal circumstances with rain fed agriculture, they can earn an income of about 30million per harvest per acre.


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8. The farm operates its own nursery where they graft the Hass avocado. No chemicals are applied on the seedlings while in the nursery, they instead use polythene sleeves when grafting seedlings. The polythene sleeves maintain high humidity around the grafted plant necessary successful connection between the rootstock and the scion. The polythene sleeves are used for 2 ½ months, thereafter the seedlings are left to survive on their own. The seedlings spend six months in the nursery.
9. The grafting ensures the desired variety is connected to the hardy rootstock thereby increasing plant resistance to soil borne diseases, improving yield and increasing its adaptability to different soils.
10. The Nurseries have a capacity of supplying one million high quality seedlings per year. The seedlings produced at the farm are maintained without any agro-chemicals and are sold to out growers to ensure the production of a critical mass of avocados for export and raw materials for processing in the future. One acre of land can accommodate up to 160 plants with a recommended spacing of 5x5 metres between the plants.

Farmers to whom the seedlings are sold have their gardens monitored by the Musubi farm because finally it is the farm that will buy the fruits.
11. The farm carries out soil testing on the land of the intending farmers before they sell the seedlings to them. Currently, the soil testing is carried out in Kenya. They take soil samples to Kenya because Kenya has a well-developed soil testing technology.
12. Hass avocado can survive well under Ugandan weather conditions; it can easily adopt and survive the drought, though it is advisable to irrigate the plants during severe drought. The farm

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uses gravity to irrigate the farm during the dry season. It has a tank of 240,000 litres capacity where water is pumped for irrigation and other use at the farm. During dry spell, they pump water to every tree.

13. Hass Avocado is a high value crop with a lot of demand from Europe and the Middle East. The demand for this Avocado has been growing internationally at 10percent for the last 15 years.
14. It is important to note that Uganda has been relying majorly on food crops as a commercial activity but there are several problems associated with these food crops. For example, when there is a bumper harvest like we one time had with maize, prices go down. Therefore Hass avocado can be a better alternative cash crop.
15. By 2017, the world leading producer of avocado was Mexico. Mexico currently generates income equivalent to 30percent of Uganda's National Budget, yet their avocado industry is not yet 70years old. Therefore it would be advantageous to the country to embrace avocado growing.
16. Within a period of 2 ½ years, a tree will be fully developed, with a recommended height of 1.8 to 2metres. Hass avocado can be differentiated from other types of avocado at three years, one of its most prominent features is that it turns dark purple when ripe.
17. If well maintained, a tree can yield 30kgs every season and there are two seasons in a year. But if the plants are not well cared for, a tree can yield about 17kgs of fruits. Therefore, it is a crop that can change the livelihood of many Ugandans.
18. Every after a harvest, the plants must be pruned and it is a must to have beehives in the farm to enable pollination. One acre needs four bee hives. Musubi Farm has beehives located in

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designated locations where bees are maintained to help in pollinating plants.

19. The life span of the Hass Avocado can stretch to 150 years but at 50 years, trees can be cut down to ensure better yielding trees.

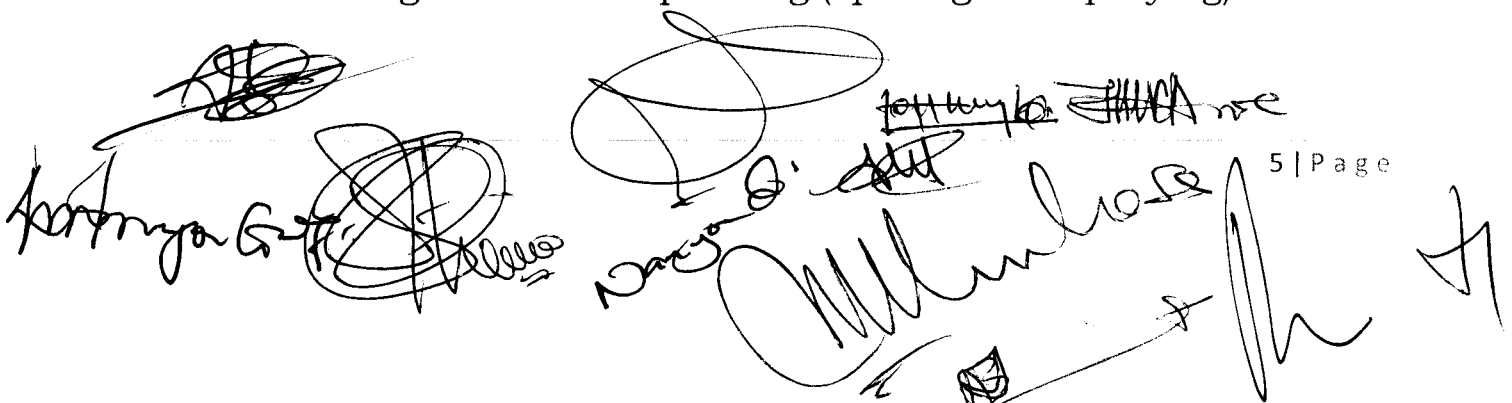
3.0 GENERAL BENEFITS OF THE AVOCADO PLANT:

There are several benefits from the Hass Avocado, these include:

- (i) It has high protein and mineral content. It has 21 food nutrients.
- (ii) Avocados are an essential source of good cholesterol.
- (iii) They are used in cosmetics for example, in the manufacture of facial and hair oil.
- (iv) Economically they are a good source of income for farmers.

4.0 BENEFITS OF THE FARM TO THE COMMUNITY:

- 1) The farm has created jobs to some of the community people who are employed on the farm; both skilled and unskilled employment.
- 2) According to the Management of the farm, some of the people residing near the farm are now involved in avocado growing as out growers. The farm encourages out-growers by giving them seedlings. The nearby communities are also given five (05) free avocado seedlings per household. But farmers are sold seedlings at 8,000 per plant.
- 3) The farm has led to people acquiring both practical and skilled knowledge in avocado planting (spacing and spraying).

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- 4) The community is getting sensitized and more convinced to change from sugar cane growing to avocado growing.
- 5) The management of Musubi Farm helped and constructed a structure for a police station which has accorded security to the community.
- 6) Musubi farm also constructed a water reservoir thereby providing safe water to the community. The farm management also constructed a mosque and feeder roads; although some of these roads need to be worked on better.

5.0 REQUIREMENTS FOR HASS FARMING:

The Committee further learnt the following general requirements for Hass farming:

- (i) Hass avocado grows well in altitudes between 1,000m to 2,000m. The size of the fruit is 250gms to 300gms. The fruit is bigger in cool areas as compared to warm areas.
- (ii) The optimum temperature requirement is 20 to 24 degrees Celsius. Although avocados are fairly resistant to drought, well distributed rainfall is adequate for proper crop development.
- (iii) The plants require well drained soils to avoid root rot. The best soils are sandy or alluvial loams with pH ranging from five to seven.
- (iv) The Hass avocado plants should be planted in rectangular pattern to facilitate inspection, thinning, pruning and harvesting.
- (v) The planting holes should be two feet wide, the holes can be in square or round form and the depth should also be two feet.
- (vi) When planting, two buckets of farmyard manure properly mixed with top soil and an application of 250gm of double

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superphosphate fertilizer and a certified insecticide (Acellemectin and rocket) to fill the planting holes.

- (vii) Planting should be done after the onset of rains. If the rains are not adequate, farmers should irrigate the Hass avocado trees until the first shoots appear.
- (viii) Pruning should start at the planting stage where roots that are too long and do not fit in the planting hole are reduced in size. Pruning should be done before flowering and upon completion of harvesting.
- (ix) Usually Hass avocados flower in October and are mature for picking between June to September. The correct harvesting period should be known because the avocados are harvested raw and ripen off the tree.
- (x) In terms of packaging, Hass Avocado is easy to pack, about 4 of them is 1kg.
- (xi) Ensure weed control and control pests and diseases.

6.0 CHALLENGES:

The Committee was informed that the farm is faced with the following challenges:

1. Impassable roads during the rainy season. Rt. Hon. Speaker and Hon. Members, the Committee suffered the same fate during the visit. The Parliament bus failed to drive on the road because the road was very slippery. We had to get Double Cabin Pick Ups to take Members from the main road to the farm.
2. The farm is desirous to form the Uganda National Avocado Growers Association. This Association will enable certification of only qualified nurseries to supply the seedlings. The Association will also boost production of quality avocados. However, the farm cannot do without the support of Government.

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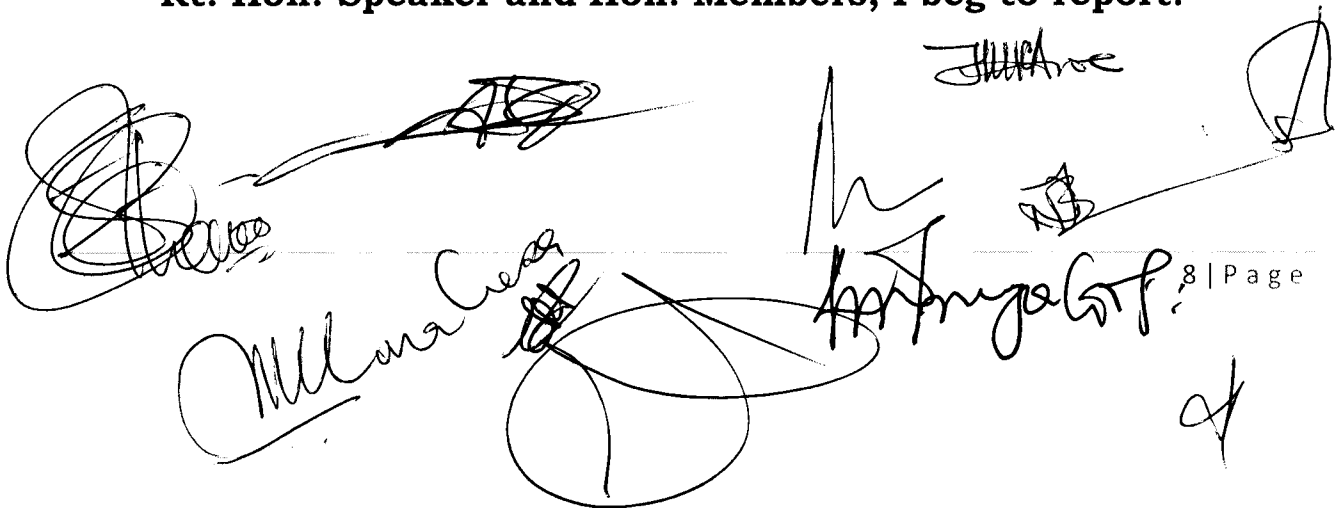
3. The farm is currently trying to acquire international certification but need MAAIF to first certify all their nurseries.

7.0 RECOMMENDATIONS:

The Committee therefore recommends as follows:

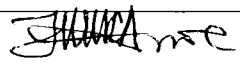

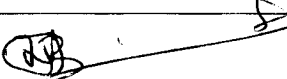
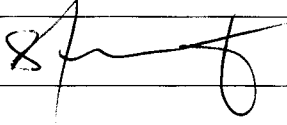
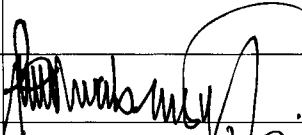
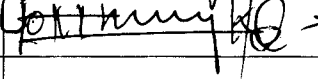
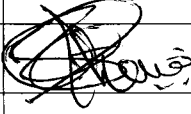
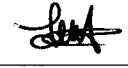
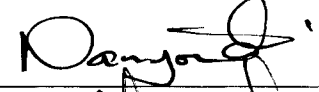
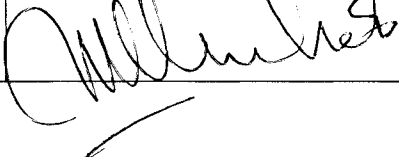
1. Members should interest themselves and their constituents in avocado growing because it has market internationally. The demand for avocado is growing at 13percent per year internationally yet the production is growing at 10percent so there is a gap of 3percent between production and demand.
2. Hass avocado farming is a worthy investment for commercial farmers therefore Avocado growing should be promoted countrywide. Uganda should be part of the avocado growing and exporting countries. Kenya currently is the largest exporter in Africa whereby it gets up to \$100m in foreign exchange.
3. MAAIF should inspect and thereafter certify the farm's nurseries to enable the farm process the international certification.
4. There is need for Government to embrace Avocado growing and even plan to have nucleus farms and demonstration gardens preferably at regional levels.
5. In order to promote avocado growing countrywide, hass avocado seedlings be part of the inputs supplied by NAADS to the farmers.

Rt. Hon. Speaker and Hon. Members, I beg to report.



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NO	NAME	CONSTITUENCY	SIGNATURE
1	Hon. Okori-Moe Janet (Chairperson)	DWR Abim	
2	Hon. Akugizibwe Lawrence (Vice Chairperson)	Mwenge County North	
3	Hon. Birungi Carolyn Nanyondo	Kyamuswa County	
4	Hon. Mbogo Kezekia	Budaka County	
5	Hon. Woboya Vincent	Budadiri County East	
6	Hon. Achia Terence Sodium Nacho	Bokora County	
7	Hon. Bintu Jalia Lukumu	DWR Masindi	
8	Hon. Kakooza Joseph	Buwekula County	
9	Hon. Elotu Cosmas	Dakabela County	
10	Hon. Chemutai Everlyn	DWR Bukwo	
11	Hon. Sekindi Aisha	DWR Kalungu	
12	Hon. Kusasira Peace	DWR Mukono	
13	Hon. Lamwaka Catherine	DWR Omoro	
14	Hon. Rwaburindore B Tarsis	Ibanda Municipality	
15	Hon. Lokwang Hillary	Ik County	
16	Hon. Kitatta Aboud	Bukoto County West	
17	Hon. Othieno Okoth Richard	West Budama Cty North	
18	Hon. Santa Alum Sandra Ogwang	DWR Oyam	
19	Hon. Veronica Nanyondo Namaganda	Bukomansimbi	
20	Hon. Gonahasa Francis Barnabas	Kabweri County	

21	Hon. Muhindo Tonny Harold	Bukonzo East	
22	Hon. Godfrey Watenga	Lutsetse Constituency	<i>Ambruge/GWF:</i>
23	Hon. Kenneth Eitunganane Esiangu	Soroti County	
24	Hon. Christopher Kipterit Akorikimoi	Upe County	
25	Hon. Mukasa Julius Opondo	Bujumba County	
26	Hon. Gen. Ivan Koreta	UPDF	
27	Hon. Aogon Silas	Kumi County <i>Municipality</i>	