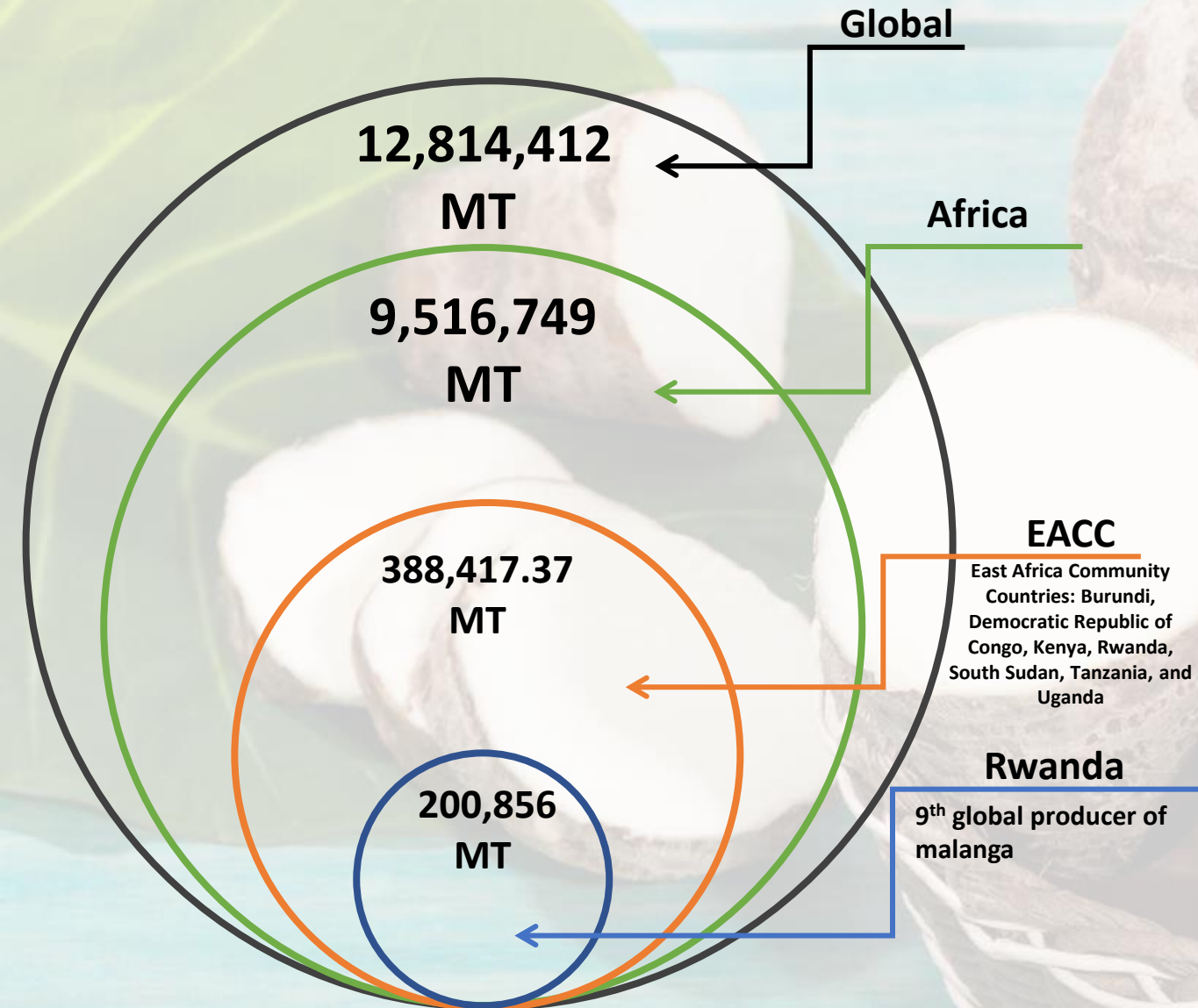


# Malanga Production :

## Rwanda Malanga Commercial Supply Chain demographics for Startup Phase:



**34,000**

MT/Year of Malanga Needed

**6.6**

Average Yield (MT/Hectare)

**5,500**

Number of Hectares Needed

**2**

Planting & Harvesting Seasons (Harvesting: Jan, Feb, May, Jun, and Jul)

**10**

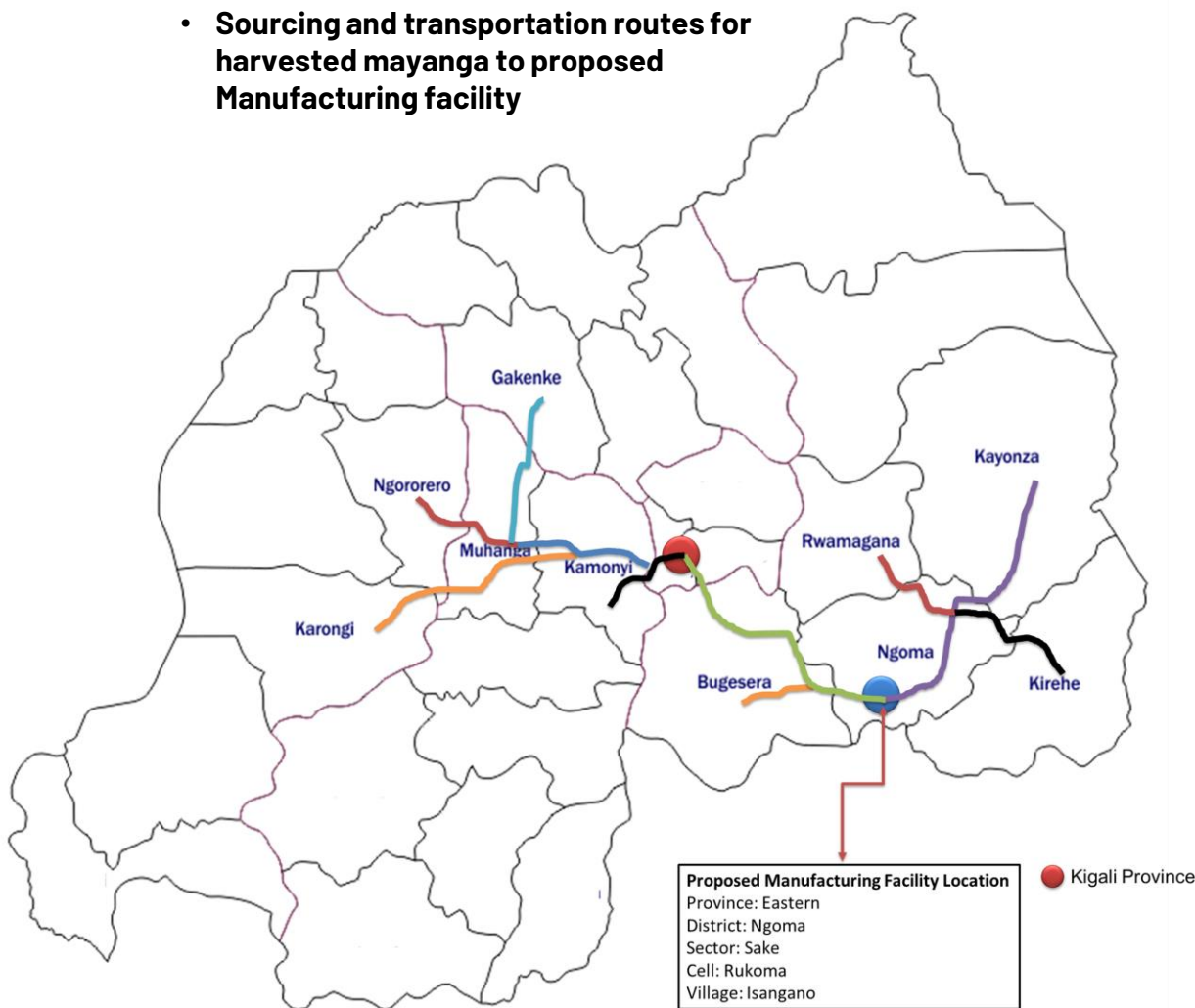
Number of Districts Malanga will be Sourced

**\$3,300,000**

Economic Benefit for Sourcing Districts/Year

# Startup Phase Malanga Sourcing Districts:

- Sourcing and transportation routes for harvested mayanga to proposed Manufacturing facility



## Sourcing:

Province	District
Southern	Muhanga, Kamonyi
Western	Karongi, Ngororero
Northern	Gakenke
Eastern	Rwamagana, Kayonza, Kirehe, Ngoma, Bugesera

## Collection:

Farmers collect and first store mayanga for pickup and transport in vented agricultural crates and bins having a load capacity of 40 lbs., as well as in plastic bulk containers with ventilated walls with a load capacity of 1300 to 1500 lbs.

## Transportation:

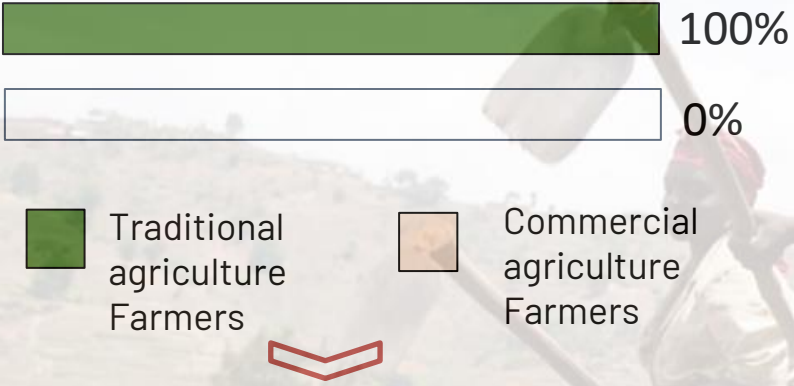
Crates, bins and bulk containers offers an efficient method to protect the harvested mayanga during transportation. Crates, bins and bulk containers will be transported via trailer trucks from their respective Districts to the proposed manufacturing facility. All sourcing Districts are within 4-hours driving distance of manufacturing facility.

## Storage:

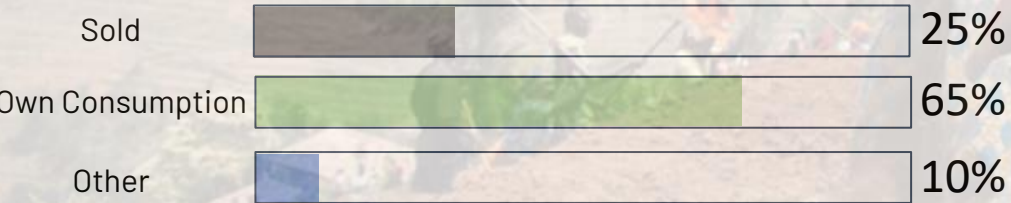
Receiving crates, bins and bulk containers will be stored in the manufacturing facility warehouse as received or processed and stored as a mayanga slurry.

# Startup Phase Malanga Sourcing Districts Demographics:

## Rwanda Malanga Farmers



## Subsistence Malanga Farming



149,000

Number of farmers household cultivating malanga crop

4

Average farmers household size

57

Percent of farmers household that are female

26

Percent farmers household that are 16 to 30 years of age

65

Percent farmers household that are 31 to 65 years of age

<0.5

Hectares under cultivation by 74% of farmers household

17,385

Hectares under cultivation in sourcing Districts

110,000

MT/year of malanga harvested in sourcing Districts

Source: Rwanda NISR\_AHS\_2020 Report; Rwanda NISR\_SAS\_2021 Report

# Muhanga District Malanga Farmers Demographics and Economic Benefit



**149,000**

Number of farmers household cultivating malanga crop

**4**

Average farmers household size

**57**

Percent of farmers household that are female

**26**

Percent farmers household that are 16 to 30 years of age

**65**

Percent farmers household that are 31 to 65 years of age

**<0.5**

Hectares under cultivation by 74% of farmers household

**17,385**

Hectares under cultivation in sourcing Districts

**110,000**

MT/year of malanga harvested in sourcing Districts

**\$110,000**

Total Economic Benefit for District –Phase 1 (0-4 years)

**\$110,000**

Total Economic Benefit for District –Phase 2 (5-7 years)

**\$110,000**

Total Economic Benefit for District –Phase 3 (9-10 years)

# Kamonyi District Malanga Farmers Demographics and Economic Benefit



**149,000**

Number of farmers household cultivating malanga crop

**4**

Average farmers household size

**57**

Percent of farmers household that are female

**26**

Percent farmers household that are 16 to 30 years of age

**65**

Percent farmers household that are 31 to 65 years of age

**<0.5**

Hectares under cultivation by 74% of farmers household

**17,385**

Hectares under cultivation in sourcing Districts

**110,000**

MT/year of malanga harvested in sourcing Districts

**\$110,000**

Total Economic Benefit for District –Phase 1 (0-4 years)

**\$110,000**

Total Economic Benefit for District –Phase 2 (5-7 years)

**\$110,000**

Total Economic Benefit for District –Phase 3 (9-10 years)

# Karongi District Malanga Farmers Demographics and Economic Benefit



**149,000**

Number of farmers household cultivating malanga crop

**4**

Average farmers household size

**57**

Percent of farmers household that are female

**26**

Percent farmers household that are 16 to 30 years of age

**65**

Percent farmers household that are 31 to 65 years of age

**<0.5**

Hectares under cultivation by 74% of farmers household

**17,385**

Hectares under cultivation in sourcing Districts

**110,000**

MT/year of malanga harvested in sourcing Districts

**\$110,000**

Total Economic Benefit for District –Phase 1 (0-4 years)

**\$110,000**

Total Economic Benefit for District –Phase 2 (5-7 years)

**\$110,000**

Total Economic Benefit for District –Phase 3 (9-10 years)

# Ngororero District Malanga Farmers Demographics and Economic Benefit



**149,000**

Number of farmers household cultivating malanga crop

**4**

Average farmers household size

**57**

Percent of farmers household that are female

**26**

Percent farmers household that are 16 to 30 years of age

**65**

Percent farmers household that are 31 to 65 years of age

**<0.5**

Hectares under cultivation by 74% of farmers household

**17,385**

Hectares under cultivation in sourcing Districts

**110,000**

MT/year of malanga harvested in sourcing Districts

**\$110,000**

Total Economic Benefit for District –Phase 1 (0-4 years)

**\$110,000**

Total Economic Benefit for District –Phase 2 (5-7 years)

**\$110,000**

Total Economic Benefit for District –Phase 3 (9-10 years)

# Gakenke District Malanga Farmers Demographics and Economic Benefit



**149,000**

Number of farmers household cultivating malanga crop

**4**

Average farmers household size

**57**

Percent of farmers household that are female

**26**

Percent farmers household that are 16 to 30 years of age

**65**

Percent farmers household that are 31 to 65 years of age

**<0.5**

Hectares under cultivation by 74% of farmers household

**17,385**

Hectares under cultivation in sourcing Districts

**110,000**

MT/year of malanga harvested in sourcing Districts

**\$110,000**

Total Economic Benefit for District –Phase 1 (0-4 years)

**\$110,000**

Total Economic Benefit for District –Phase 2 (5-7 years)

**\$110,000**

Total Economic Benefit for District –Phase 3 (9-10 years)



# Rwamagana District Malanga Farmers Demographics and Economic Benefit



**149,000**

Number of farmers household cultivating malanga crop

**4**

Average farmers household size

**57**

Percent of farmers household that are female

**26**

Percent farmers household that are 16 to 30 years of age

**65**

Percent farmers household that are 31 to 65 years of age

**<0.5**

Hectares under cultivation by 74% of farmers household

**17,385**

Hectares under cultivation in sourcing Districts

**110,000**

MT/year of malanga harvested in sourcing Districts

**\$110,000**

Total Economic Benefit for District –Phase 1 (0-4 years)

**\$110,000**

Total Economic Benefit for District –Phase 2 (5-7 years)

**\$110,000**

Total Economic Benefit for District –Phase 3 (9-10 years)

# Kayonza District Malanga Farmers Demographics and Economic Benefit



**149,000**

Number of farmers household cultivating malanga crop

**4**

Average farmers household size

**57**

Percent of farmers household that are female

**26**

Percent farmers household that are 16 to 30 years of age

**65**

Percent farmers household that are 31 to 65 years of age

**<0.5**

Hectares under cultivation by 74% of farmers household

**17,385**

Hectares under cultivation in sourcing Districts

**110,000**

MT/year of malanga harvested in sourcing Districts

**\$110,000**

Total Economic Benefit for District –Phase 1 (0-4 years)

**\$110,000**

Total Economic Benefit for District –Phase 2 (5-7 years)

**\$110,000**

Total Economic Benefit for District –Phase 3 (9-10 years)

# Kirehe District Malanga Farmers Demographics and Economic Benefit



**149,000**

Number of farmers household cultivating malanga crop

**4**

Average farmers household size

**57**

Percent of farmers household that are female

**26**

Percent farmers household that are 16 to 30 years of age

**65**

Percent farmers household that are 31 to 65 years of age

**<0.5**

Hectares under cultivation by 74% of farmers household

**17,385**

Hectares under cultivation in sourcing Districts

**110,000**

MT/year of malanga harvested in sourcing Districts

**\$110,000**

Total Economic Benefit for District –Phase 1 (0-4 years)

**\$110,000**

Total Economic Benefit for District –Phase 2 (5-7 years)

**\$110,000**

Total Economic Benefit for District –Phase 3 (9-10 years)

# Ngoma District Malanga Farmers Demographics and Economic Benefit



**149,000**

Number of farmers household cultivating malanga crop

**4**

Average farmers household size

**57**

Percent of farmers household that are female

**26**

Percent farmers household that are 16 to 30 years of age

**65**

Percent farmers household that are 31 to 65 years of age

**<0.5**

Hectares under cultivation by 74% of farmers household

**17,385**

Hectares under cultivation in sourcing Districts

**110,000**

MT/year of malanga harvested in sourcing Districts

**\$110,000**

Total Economic Benefit for District –Phase 1 (0-4 years)

**\$110,000**

Total Economic Benefit for District –Phase 2 (5-7 years)

**\$110,000**

Total Economic Benefit for District –Phase 3 (9-10 years)

Source: Rwanda NISR\_AHS\_2020 Report; Rwanda NISR\_SAS\_2021 Report

# Bugesera District Malanga Farmers Demographics and Economic Benefit



**149,000**

**Number of farmers household cultivating malanga crop**

**4**

**Average farmers household size**

**57**

**Percent of farmers household that are female**

**26**

**Percent farmers household that are 16 to 30 years of age**

**65**

**Percent farmers household that are 31 to 65 years of age**

**<0.5**

**Hectares under cultivation by 74% of farmers household**

**17,385**

**Hectares under cultivation in sourcing Districts**

**110,000**

**MT/year of malanga harvested in sourcing Districts**

**\$110,000**

**Total Economic Benefit for District –Phase 1 (0-4 years)**

**\$110,000**

**Total Economic Benefit for District –Phase 2 (5-7 years)**

**\$110,000**

**Total Economic Benefit for District –Phase 3 (9-10 years)**

Source: Rwanda NISR\_AHS\_2020 Report; Rwanda NISR\_SAS\_2021 Report

# Malanga Commercial Supply Chain Strategy for Startup Phase:

