



INTERNATIONAL YEAR OF
PLANT HEALTH

2020

Vegetative planting Material



Many of CARDI's priority crops are established using true seeds e.g. hot pepper, corn, beans and pumpkin. However, some of these priority crops are best propagated using other parts of the plant; i.e. stem, root and/or leaf cuttings as well as plant suckers (vegetative planting material). These crops include: cassava, sweet potato, dasheen and banana. Advantages of using various vegetative planting material types are:

- The guarantee of a plant being produced or increased survival of plants in the field; some crops produce many true seeds that are not viable.
- Shorter time for plants to be established; some true seeds have slower germination times
- Plants produced have the same desired traits (e.g. productivity, fruit size, colour, drought tolerance and pest resistance) as the parent plant
- Plants tend to develop, mature and produce faster from vegetative planting material like stem cuttings.

Despite these advantages, vegetative production system lacks the commercial organization and quality standards of the well-established seed industries. To address this, farmers often replant their next crop using material from the previous crop. However, this is risky as use of diseased or pest infested plant parts can negatively affect the health and productivity of the crop being grown.

CARDI has promoted the increased access and use of clean, healthy vegetative planting material like sweet potato and dasheen among farmers through: research; establishment of in-field germplasm banks; field demonstration plots and training. Where possible, CARDI has also partnered with local tissue culture laboratories in select countries to facilitate the storage and preservation of select varieties/accessions of plants present in the field germplasm plots. Vegetative planting material is also distributed for some commodities (see Table below). Over 260 farmers in 8 countries benefitted in 2019.

| Crop | Planting material |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-------------------------------|---|---|---|---|---|--|---|---|---|---|
| Sweet potato | Stem/ Vine cutting (slips) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Cassava | Stem cuttings (stakes) | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Plantain | Suckers | | | | | | | | ✓ | | ✓ |
| Bluggoe (Macaboo) | Suckers | | | | | | | | | | |
| Banana | Suckers | | | | | | | | | | |
| Guinea grass (animal feed) | Stem cuttings | ✓ | | | | | | | ✓ | | |
| Mulberry (animal feed) | Stem cuttings | ✓ | ✓ | ✓ | | | | ✓ | | | |

*Germplasm maintained by CARDI, distribution done in collaboration with the Ministries of Agriculture and other Agencies
 + Germplasm distributed through the Ministry of Agriculture and/ or satellite farmers

For further information, contact your local CARDI office www.cardi.org