



Mr. Joseph Kori Njuguna; Senior Research Officer and Fruit Research Programme Coordinator KARI, Thika.

## ***KARI Sweet Yellow Passion that withstand critical diseases that ravaged Purple passion***

*'KARI is also working with KEPHIS and HCDA together with other development partners to recruit as many as possible private and community sweet yellow passion nurseries so as to bring the vines closer to farmers.'*

Passion fruit is among the most competitive fruits in Kenya with a great economic importance.

There are two main types of passion fruits; yellow and purple. The Purple does well in midlands in addition to highlands 1500m to about 2200m above sea level. This variety is the one that has been dominantly grown in Kenya, in areas such as Murang'a, Kiambu, Meru, Embu, Elgeyo Marakwet, Uasin Gishu and Nandi among other highland regions.

The yellow variety has sour and sweet varieties. It is mostly suited for low lands and has been mainly grown at the coastal region. It does also thrive in mid altitudes

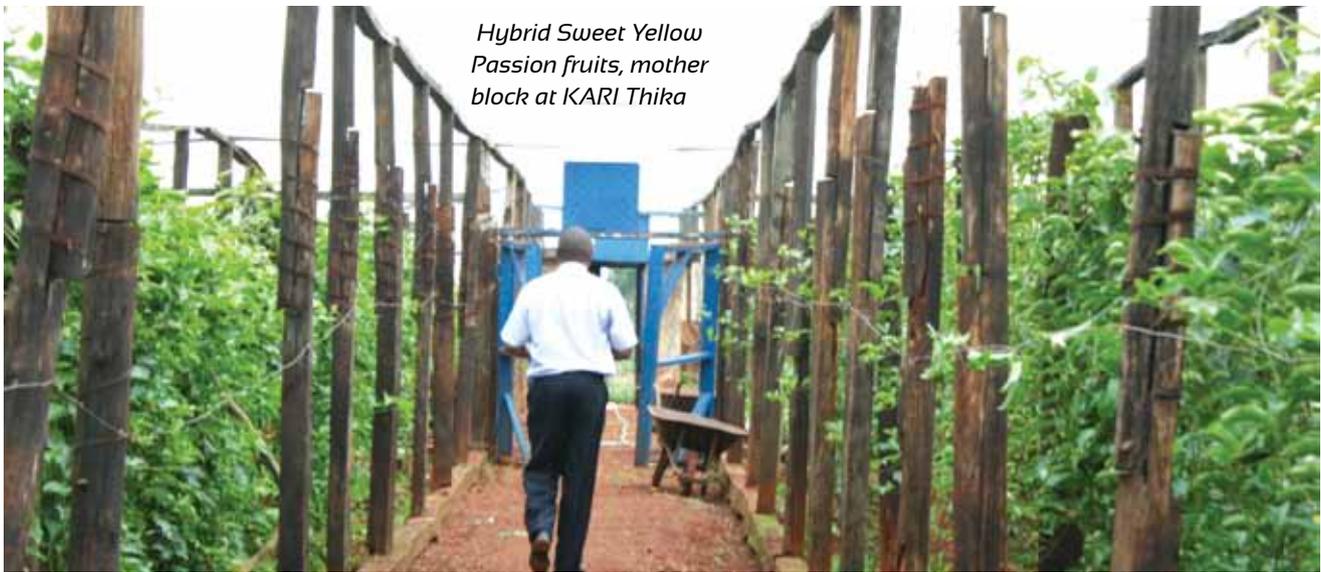
of up to 1500 above sea level; the reason why we are witnessing its increased presence in semi-arid regions of Embu, Meru, Tharaka-Nthi and Kirinyaga counties among others.

The strength of yellow passion is that it is more tolerant to the most critical disease reducing passion fruit productivity: *Fusarium wilt*. This disease is soil

borne and affects the root system of vines killing them. It is also resistant to *woodiness virus* and *Brown spot* diseases. These diseases reduce purple passion yields greatly as well as drop its life expectancy from an average of 6 years to 2 years. "Thus when yellow passion is used as a rootstock in grafting purple passion, it offer the endangered



Watering Sweet Yellow Passion nursery at KARI Thika



*Hybrid Sweet Yellow Passion fruits, mother block at KARI Thika*

fruit a flourishing opportunity”, says Joseph Kori Njuguna; Senior Research Officer and Fruit Research Programme Coordinator Kenya Agricultural Research Institute (KARI), Thika.

Vulnerability of purple passion to diseases and its resultant loss of Kenya’s considerable chunk of markets in the European Union and Middle East impelled KARI between 1996 and 1997 with the support of USAID and World Bank to swing into action coming up with new Sweet Yellow Passion varieties.

Apart from tolerant to diseases, KARI breeding programme that took 20 years to establish these new varieties was informed by the need of coming up with passion fruit that was drought resistant and acceptable in both the fresh and processing markets based on size, juiciness and sweetness.

“This we achieved by combining traits of the sour and purple passion to get the Sweet

Yellow Passion varieties: KPF4, KPF11 and KPF12 which we introduced in 2011. There is greater preference for KPF4 as its yields are of very high quality,” informs Joseph.

“To ensure the varieties benefit farmers, we partnered with TechnoServe to establish a mother block for seed extraction and nurseries. All work done in the mother block and nurseries such as grafting; happen in a greenhouse with an insect proof net. Insects can carry in diseases such as woodiness virus. Another function of the mother block is conserving germplasm for facilitating continuous research” the Coordinator said.

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KARI is also working with KEPHIS and HCDA together with other development partners to recruit as many as possible private and community sweet yellow passion nurseries so as to bring the vines closer to farmers. Through this plan, nurseries have been established in Meru, Embu, Mbeere and Murang’a.

Those people who buy vines from KARI are offered free technical backstopping. “We visit farmers regularly and advice them accordingly. Additionally, we are working with Ministry of Agriculture Livestock and Fisheries through training extension officers. Most of out-grower companies we are working with on this project such as Wilmar and Veg Pro have recruited their own field

agronomists who work as extension officers and we train them on agronomic aspects of sweet Yellow Passion farming. This way there is rapid collection of intelligence and quick response to issue cropping up on the ground”, notes the Senior Research Officer and Fruit Research Programme Coordinator.

When pruning Joseph advises farmers to maintain a good balance between vegetative and floral growth. If a farmer over prunes, the passion fruit main shoot on the trellis wire is exposed to burning and this can lead to Die back. On the other hand, bushy vines create a macro-climate for thriving of thrips, mites as well as fungi that lead to Brown spot contraction. In addition to minimizing spray coverage.



*Hybrid Sweet Yellow Passion nursery at KARI Thika, ready for planting*