



# Challenges in strawberry seedling production in Kenya

[Short article]

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## INTRODUCTION

Strawberry (*Fragaria* spp.) is a high value crop with great potential for income generation and employment creation through employment and application in value added products including yogurt, fresh juice and jam. The fruits can also contribute to household nutrition through availability of vitamins. Although a ready market exists with high demand especially in urban areas, strawberries are in short supply and highly costly in Kenya's markets. Besides local demand substantial markets exist for strawberries in foreign markets, especially in the European Union.

The scarcity is partly due to limited production, since many prospective farmers have not been able to engage in full-scale production. Production constraints include scarcity and high cost of planting materials, lack of knowledge on appropriate planting and crop management practices. There is also low awareness on the huge potential of the crop and available market opportunities.

This study investigated availability of seedlings and challenges associated with production of the fruits around Nairobi area.

## METHODOLOGY

A survey was carried out within a 50 km radius on the main roads leading out of the city where tree nurseries proprietors are mainly located. The main information sought was whether the nursery operators stocked or propagated strawberry seedlings, the price of seedlings

and provision of information on crop management to seedling purchasers. In addition to the survey some seedlings were purchased and established for observation at FaCT Ltd farm.

## RESULTS



The study found that information is not easily available on where prospective farmers can purchase strawberry seedlings around Nairobi city. Less than 5% of plant nursery operators (on roadsides) sell strawberry seedlings, and these are usually rooted in polybags. The roadside nursery proprietors are mostly middlemen and stock only few strawberry plants at a time (between 10 – 30 depending on demand, with the price ranging between 0.45 – 0.65\$ per plant. Upon further enquiry it was determined that roadside nursery proprietors often provide incorrect or no information at all on plant establishment and management. Only one small-scale agro enterprise specializing in strawberry seedling production was identified located in Limuru. This company relies on vegetative propagation and sells large numbers of seedlings at a lower price of 0.3\$ each. However, the seedlings are sold unrooted, which makes them more difficult to establish especially for farmers without prior experience. The

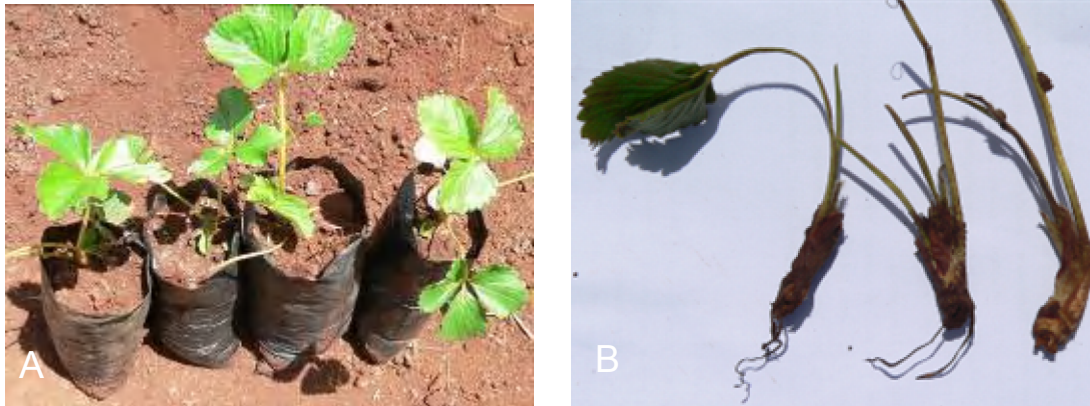
company provides free basic training on planting and crop management (about 20 min long) but a more detailed training is provided at a fee of 7 USD per person.

Upon planting of the purchased seedlings, it was observed that though rooted seedlings are more costly to purchase, they attain significantly higher establishment rates (>90%) than the unrooted seedlings (< 60%). Thus seedlings should be preferably rooted in the nursery before sale to farmers to transplanting.

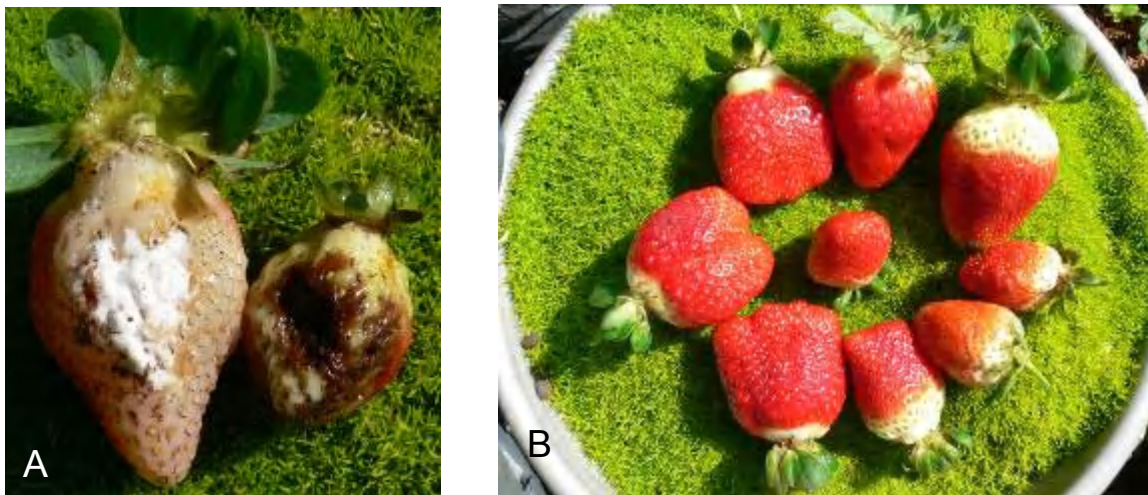
However nursery operators must take precautions during rooting to ensure the potting medium is appropriately sterilized to avoid transmission of pests, which can slow growth or cause death of plants after transplanting seedlings. Regardless of the type of seedlings sown, it is recommended that seedlings should preferably be transplanted during the rainy season when supplementary water supply is not required.



**Figure 1:** [A] A well developed strawberry plants from which numerous splits can be obtained for further propagation; [B] Strawberry seedlings placed in soil potted in polythene bags for root formation before sale and transplanting.



**Figure 2:** [A] well rooted seedlings ready for transplanting, these establish much better than the seedlings sold before rooting shown in [B].



**Figure 3:** [A] Poor management of strawberry orchard leads to spoilt fruits, often due to heavy infection by pests/pathogens; [B] Well developed and ripened fruits following good orchard management.

### RECOMMENDATIONS

To support strawberry farming, more extension education and support should be given to farmers on production, post-harvest handling and marketing. To reduce seedling costs more efficient propagation methods should be

developed, e.g tissue culture. It is proposed that research and academic institutions should consider giving more attention to this crop, which has high economic potential.