

It is recommended that the horticulture industry stakeholders:-

- Should have Memorandum of Understanding with Academic institutions (University of Eldoret in particular) to expand production of **Eldo-Seedlings Media Mix<sup>®</sup>** so as to attain commercial levels of production.
- Establish working groups whose purpose is to holistically address issues affecting Kenya's horticultural sector - including challenges of importing cocopeat or high quality seedlings.
- Engage Kenyan Academic Institutions of higher learning offering horticulture training to work synergistically with the Kenyan horticultural commercial sector for exponential growth in this important sector.
- Change strategy and move away from importing cocopeat and peatmoss and promote local manufacturers of plant propagation media.

ACKNOWLEDGEMENT

We acknowledge, with appreciation, that the funds used in this project were obtained from University of Eldoret Research Fund (UoERF).

**Contacts:**  
Anjichi V.E<sup>1</sup> and K. Odhiambo<sup>2</sup>  
School of Agriculture and Biotechnology  
<sup>1</sup>Department of Seed Crop & Horticultural Sciences  
<sup>2</sup>Department of Forestry & Agro-forestry  
Corresponding E-mail : [veanjichi@uoeld.ac.ke](mailto:veanjichi@uoeld.ac.ke)  
Corresponding Tel no. :- +254 720 536 400 / +254 777 536 400

**Published by:**  
Directorate of Research and Innovation  
University of Eldoret  
P.O Box 1125-30100  
Eldoret  
Website: [www.uoeld.ac.ke](http://www.uoeld.ac.ke)  
Email: [ridirector@uoeld.ac.ke](mailto:ridirector@uoeld.ac.ke)

USE OF LOCALLY CONSTITUTED ENVIRONMENTALLY SUSTAINABLE SEEDLING GROWING MEDIA (Eldo-Seedlings Media Mix<sup>®</sup>) TO RAISE COMMERCIAL SEEDLINGS.

INTRODUCTION

Agricultural development in Kenya is key to achieving sustainable social and economic targets of Sustainable Development Goals (SDGs). Horticulture, a dynamic sub-sector of agriculture avails food such as vegetables and fruits both for local consumption and for exports. This sub-sector is also a key foreign exchange earner for Kenya from cut-flower exports. It provides employment for many and avails raw materials for some industries. Most horticultural crops grown are started as seedlings in a nursery, and later transplanted to their final growing environment.

The horticultural crop seedlings are grown using imported planting media namely cocopeat and peatmoss which are obtained from Israel and Malaysia. These propagation media have unique quality which enable seedlings to be transported to farms far away and arrive in good plantable condition. Imported cocopeat and peatmoss, when available, are expensive, reducing profit margins of the seedling propagators and making the seedlings to be expensive for the growers. A study was initiated to constitute and avail an affordable, locally available alternative to cocopeat and peatmoss. The outcome is an excellent alternative referred to as **Eldo-Seedlings Media Mix<sup>®</sup>**

THE ISSUE

- Horticultural crop production is faced with the challenge of raising high quality seedlings using imported cocopeat and peatmoss planting media which are expensive, and are not always available when needed by farmers.
- Importing cocopeat and peatmoss uses the much needed foreign exchange to be purchased from Israel and Malaysia. (cntd pg.2)

- The objective of this study was to improve livelihoods of Kenyan horticultural crop growers by constituting a planting media (**Eldo-Seedlings Media Mix<sup>®</sup>**) using locally available environmental sustainable materials.
- The new locally constituted planting media has been constituted and is available as a suitable replacement for imported cocopeat and peatmoss.
- This locally produced, environmentally sustainable seedling production media mix has the potential to enable timely availing of horticultural crop seedlings for improvement of horticultural crop production in Kenya. A policy bringing together horticulture industry stakeholders and giving guidance towards large-scale production of this media mix will improve the living standards of Kenya's horticultural crop growers.

THE FINDINGS

- Several seedling production mixtures were tried out to raise tomato, capsicum, spinach and managu seedlings.
- The best results were obtained from a mixture referred to as **Eldo-Seedlings Media Mix<sup>®</sup>**.
- This media-mix is composed of processed rations of animal and plant wastes; amounts of crushed coconut husks obtained from a local manufacturer based in Kilifi County; and other agricultural plant propagation ingredients.
- Horticultural crop seedlings raised using this media-mix were able to tolerate water stress for up to one week.
- Upon transplanting, the seedlings were not adversely affected by the water stress.

ELDO-SEEDLINGS MEDIA MIX<sup>®</sup>

In search of a commercial environmental friendly sustainable Seedling media mix.



Solanum Nigrum – Managu seedlings

Managu seedlings in tray using Eldo-Seedlings media mix<sup>®</sup>



Sturdy managu seedlings with intact root-ball



IMPACT.

- This outcome, is an innovation that will eliminate the need to import cocopeat and peatmoss for growing commercial horticultural crop seedlings.
- It will help to avail high quality seedlings that will boost Kenyan horticultural crop production.
- It will increase income for horticultural farmers and avail affordable seedlings for planting.
- Subsequent horticultural crops obtained from these seedlings will be used for local consumption for better health/food security, and also for export.

THE STAKEHOLDERS

The major stakeholders are commercial horticultural crops seedling producers, Horticultural Crops Directorate (HCD), Kenya Plant Health Inspectorate Services (KEPHIS), Kenya Agricultural & Livestock Research Organization (KALRO), Fresh Produce Exporters Association (FPEAK), Kenya Flower Council (KFC) and County Governments – Departments of Agriculture.

WHO ARE INVOLVED IN THIS ISSUE ?

Importers of cocopeat and peatmoss include Amiran (K) Ltd and Vatan (K) Ltd. These are issued import permits by KEPHIS and work in collaboration with HCD. County Government Extension agents interact with the above mentioned to offer extension/advisory services to horticultural crop growers to improve production of seedlings for sale within their respective Counties.