



# *Enhancing Phytosanitary Systems for Healthy Plants, Safe & Sustainable Trade”*



INTERNATIONAL YEAR OF  
**PLANT HEALTH**  
2020

## **Sub-theme:**

Import control and Export certification in phytosanitary systems

## **Title:**

**Reimagining the e-market: The role of Kenya Plant Health Inspectorate Service (KEPHIS) in regulating trade of plant products on the online market in Kenya**

## **Presented by:**

Miriam Karwitha Charimbu

Egerton University; Kenya and Michigan State University; USA



# Introduction

---

- e-commerce is experiencing unrivaled growth in that it's competing with traditional commerce because of the savings associated with low cost of trading.
- The formal trade of plants and plant products has been the traditional target for phytosanitary measures by national plant protection regulator (KEPHIS).
- This is because of the volumes and identifiable transportation pathways of traded commodities.
- These transportation pathways include overland freight, air-freight and ocean freight that have frameworks for regulation by customs authorities for revenue collection and KEPHIS for phytosanitary risks.

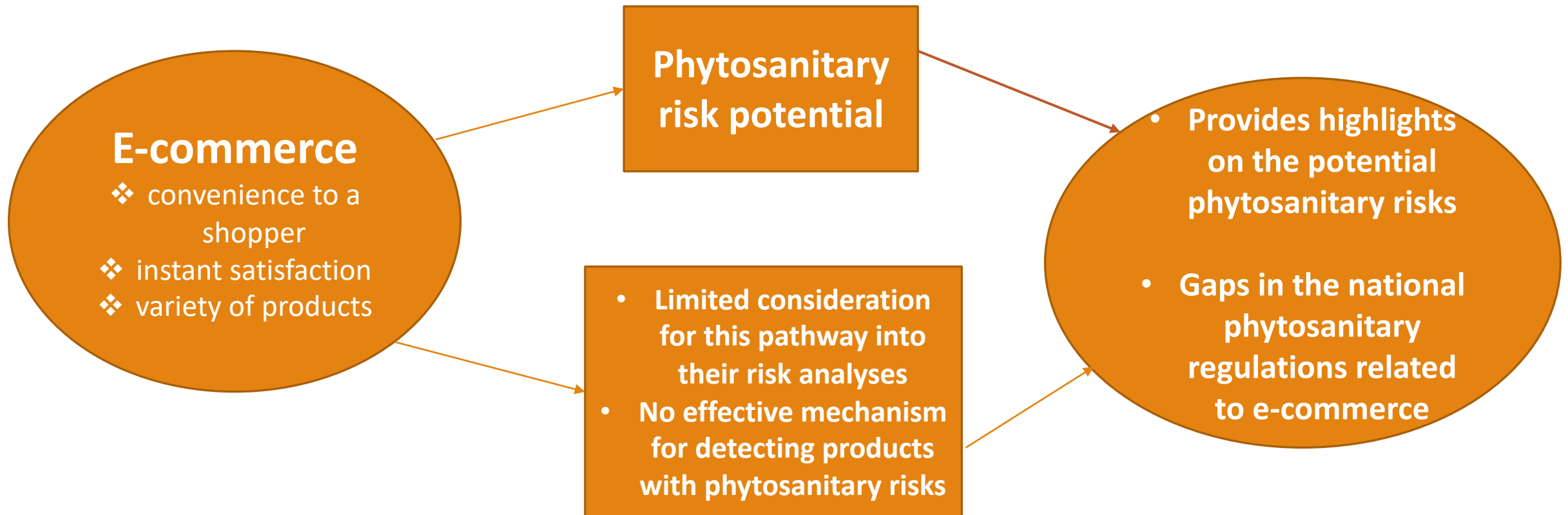


# Introduction cont'

---

- ❖ E-commerce is becoming increasingly common and presents another pathway by which many small and often uneasily recognizable consignments of plants and plant products move across international borders into countries and across continents.
- ❖ These plants and plant products are marketed on many web-commerce sites in either conventional forms (e.g. packets of seeds or whole plants or plant parts), or as novelties in the form of products containing viable seeds (e.g. seed-infused greeting cards, bookmarks, apparel among others).
- ❖ There is limited consideration for this pathway into their risk analyses as there is, as yet, no effective mechanism for detecting products with phytosanitary risks. Since they are often sold in small quantities and are being imported into and then distributed within their country.

# Problem Statement





# Justification

---

- ❖ Kenya has the largest, most diversified economy in East Africa with agriculture being the backbone and central to the country's development strategy.
- ❖ Kenya's GDP is estimated at US\$ 55.2 billion (25 percent higher than previously estimated), making Kenya the fourth largest economy in sub-Saharan Africa, after Nigeria, South Africa and Angola.
- ❖ Agriculture is a key driver of economic growth and remains the main source of livelihood for the majority of the population (FAO, 2015). Based on estimates, the agricultural sector directly contributes about 30 percent to total GDP and another 25 percent indirectly.
- ❖ The Plant Protection Act Cap 324, an Act of Parliament provides regulatory framework for prevention of introduction, spread and management of pests and disease destructive to plants in Kenya as well as importation of the Biological Based Organisms and Related Products.
- ❖ Kenya Plant Health Inspectorate Service (KEPHIS) is the government parastatal whose responsibility is to assure the quality of agricultural inputs and produce to prevent adverse impacts on the economy, the environment, and human health.



# Objectives

---

The main goal of this study is to examine the missing links between the prevailing regulations on Plant health/plant protection bill and the legal gaps that exist in the plant health act/bill in relation to e-commerce/trade.



# Methodology

---

- The study was achieved using comprehensive desk review of existing literature, background documents and databases.
- Data availability on plant and plant products trade varies by website and even within a website (Toivonen et al. 2019).
- On a basic level, online advertisements (i.e., listings or posts) are provided in the form of text, pictures, and videos.
- Foremost, the name of the species, taxa, or derived product traded is usually stated but in some cases not stated. Characteristics of the traded taxa or product can include quantity (number, size, volume).



# Methodology cont'

---

- ❖ The physical location of the advertisement (i.e., city) and metadata on the advertisement itself, such as the number of page views and username of the trader, may be provided.
- ❖ Further, the current purpose for which the product is being used and the rationale for trading (e.g., fun, biodegradable, environmental friendly, therapeutic etc) can sometimes be ascertained from advertisements with open text fields.





# The tradition of national phytosanitary regulations

---

- ❖ The formal trade of plants and plant products has been the traditional target for phytosanitary measures by national plant protection regulator (KEPHIS).
- ❖ This is because of the volumes and identifiable transportation pathways of traded commodities. These transportation pathways include overland freight, air-freight and ocean freight that have frameworks for regulation by customs authorities for revenue collection and KEPHIS for phytosanitary risks.
- ❖ The frameworks are primarily geared to manage bulk shipment of consignments of commodities moving through these traditional transportation pathways.



# PLANT PROTECTION (IMPORTATION) ORDER

---

- ❖ (1) Subject to this Order— (a) no plant; and (b) no seed of any plant specified in the First Schedule, shall be imported into Kenya except under and in accordance with the conditions of a permit previously obtained from, and signed by, the Director of Agriculture or an officer of the Ministry of Agriculture authorized by the Director of Agriculture for the purposes of this Order.
- ❖ (2) Notwithstanding the provisions of this paragraph but subject to the provisions of any other written law, any plant and the seeds of any plant may be imported without a permit if such plant was grown in and is exported from Tanzania or Uganda or such seeds were taken from such plant: Provided that this subparagraph shall not apply in respect of any plant or the seeds of any plant specified in the Second Schedule.
- ❖ 3. All applications for permits shall state— (a) the full name and address of the applicant; (b) the name and address of the person or firm from whom the plants or seeds are to be obtained; (c) the names and quantities of the plants or seeds to be obtained; (d) the name of the farm or estate on which the plants or seeds are to be planted and the district in which it is situated.



## PLANT PROTECTION (IMPORTATION) ORDER Contd'

4. No plant shall be imported except through one of the following ports or places of entry—  
(a) Mombasa; (b) Kisumu; (c) Nairobi.
5. All plants, seed and fruit, other than canned or bottled fruits imported, shall be examined by an inspector
6. The inspector may— direct, authorize or carry out the disinfection or treatment of any plant and of any article believed by him to be infected or infested with or in any way carrying a pest or disease, or likely to infect any plant with a pest or disease; direct, authorize or carry out the immediate destruction of any imported plant or article which on inspection appears to be infected or infested with or in any way carrying any pest or disease  
-direct, authorize or carry out the disinfection or fumigation of any vessel, vehicle or aircraft which in the opinion of the inspector is harboring any pest or disease, or an article likely to infect any plant with a pest or disease.



## PLANT PROTECTION (IMPORTATION) ORDER Contd'

---

- 1) Any package or parcel containing any plant or seed imported otherwise than by post shall be delivered to an inspector by the Commissioner of Customs and Excise.
- (2) Any package or parcel containing any plant or seed imported by post shall be delivered to an inspector by the Managing Director of the Kenya Posts and Telecommunications Corporation.
- (3) After examination and treatment as provided in subparagraphs (1) and (2), the package or parcel shall, except where such package, parcel, plant or seed has been destroyed under the instructions of such inspector, be returned by such inspector to the Commissioner of Customs and Excise or the Managing Director of the Kenya Posts and Telecommunications Corporation, as the case may be, for delivery to the addressee.
8. No compensation shall be payable in respect of any package, parcel, article, plant or seed destroyed or damaged in any treatment required to be carried out under this Order.



## PLANT PROTECTION (IMPORTATION) ORDER Contd'

---

9. The Director of Agriculture may require imported plants to be detained in quarantine or in special nurseries or places approved by him, for such period as he may think fit.
10. The importation of all species of fruit trees and fruit grown in or consigned from Japan, China, Korea or Manchuria is prohibited.
11. No plant or part of any plant of the order Gramineae (except seeds) intended for use as fodder shall be imported.
12. No living insects or invertebrate animals in any stage shall be imported except by virtue of a permit previously obtained from and signed by the Director of Agriculture and under the conditions stated in such permit.
13. Any person who contravenes or fails to comply with any of the provisions of this Order shall be guilty of an offence and liable to a fine not exceeding two thousand shillings or to imprisonment for a term not exceeding two months.



## Gaps 'The popularity and importation of seed in disguised plant and plant products consignment'

---

- ❖ Although, there law requires for conformity to the importation rules such as application for phytosanitary certificate and import permit; official designated points of entry for the importation of plant, plant product, exempt a plant, plant product or regulated article from the requirement of obtaining an import permit or phytosanitary certificate.
- ❖ Declaration of arrival of plants, plant products etc. to an inspector report the arrival of any consignment of plants, plant products, tests and follow up inspections, Import clearance.
- ❖ The law is not clear on the product mainly on the online market and are disguised and they contain plant and plant products.
- ❖ The disguised plant and plant products include



## Plant/Seed papers

---

- ❖ Seed paper is a paper that includes any number of different plant seeds. The seeds themselves can still germinate after the papermaking process and they can sprout when the paper is planted in soil.
- ❖ A wide variety of flower, vegetable, and tree seeds can also be used in seed paper for decorative effect. The seeds and flowers in the paper can create decorative effects and colors. Depending on the type of seed and the process used, different colors, thickness, and patterns can be created (climatekids.nasa.gov 2020).
- ❖ The Seed paper is the new rebellion against deforestation and it's promoted into the market as a paper that is the ultimate answer to all the unethical practices against nature; as an eco-friendly version of the paper which is handmade and totally biodegradable (Figure 1A, B, C).

❖ Seed paper can be used for stationery, cards, invitations, and for decorative wraps.

❖ Seed paper has traditionally been handmade in smaller batches and is often made-to-order for clients. Sprouting seed paper has enjoyed a resurgence of popularity in the United States recently (Bluecat paper, 2020).



Handmade Seeded Plantable Paper Envelopes 10 Count A6 4.75 x 6.5 inches

Visit the Of The Earth Store

★★★★★ 4 ratings

Price: **\$13.35** Get Fast, Free Shipping with Amazon Prime & FREE Returns

- Unique handmade plantable envelopes featuring a mixture of flower seeds (see description for details)
- Use ballpoint pen to avoid ink bleeding through the paper
- One set of planting instructions with each set of envelopes
- Handmade in Nepal with traditional methods and sustainable materials

Similar item to consider

Amazon Basics Poly Envelope, snap button, Letter Size, 10 Packs

\$11.50

★★★★★ (157)

**A**



Bloomin Signature 10 pt. Seed Paper for Inkjet Printers - 50-75% Germination Rate - 8.5x11 Sheets (1 Pack- 50 Sheets)

Brand: Bloomin

★★★★★ 10 ratings | 4 answered questions

Price: **\$85.00** & FREE Returns

Size: 50 Sheets

50 Sheets	100 Sheets
\$85.00	\$150.00

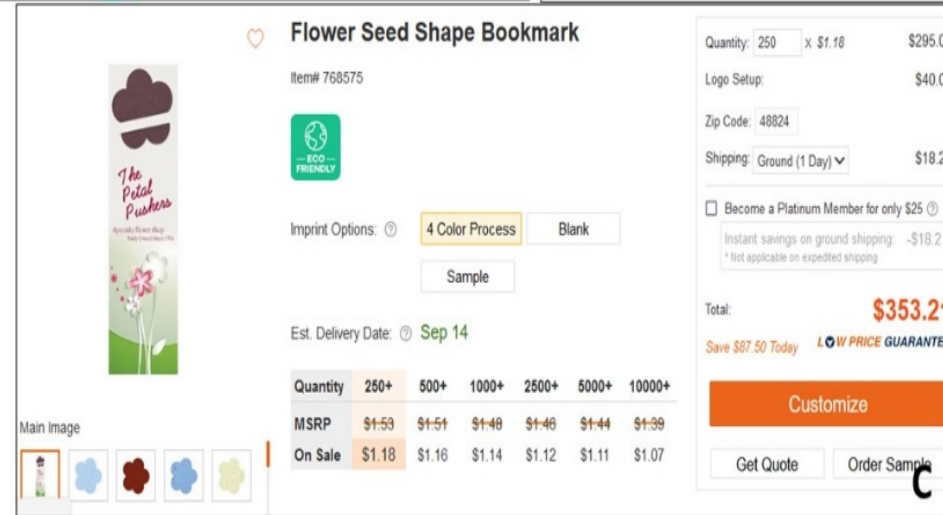
Brand: Bloomin

Paper Finish: Smooth

Sheet Size: 8.5-x-11-inch

Sheet Count: 50

**B**



Flower Seed Shape Bookmark

Item# 768575

ECO FRIENDLY

Imprint Options: 4 Color Process Blank

Sample

Est. Delivery Date: Sep 14

Quantity	250+	500+	1000+	2500+	5000+	10000+
MSRP	\$1.53	\$1.51	\$1.48	\$1.46	\$1.44	\$1.39
On Sale	\$1.18	\$1.16	\$1.14	\$1.12	\$1.11	\$1.07

Quantity: 250 x \$1.18 \$295.00

Logo Setup: \$40.00

Zip Code: 48824

Shipping: Ground (1 Day) \$18.21

Become a Platinum Member for only \$25

Instant savings on ground shipping: -\$18.21  
\* Not applicable on expedited shipping

Total: **\$353.21**

Save \$87.50 Today **LOW PRICE GUARANTEE**

Customize

Get Quote Order Sample

**C**

Figure 1: seed infused stationery A) Seeded plantable paper envelopes; B) Seed printing papers; c) Seed paper bookmark





## Use of market captivating promotional messages in seed paper online sale

---

- ❖ Plantable papers are used to create fun, creativity and style in ways by including eco-friendly goods into day-to-day life.
- ❖ They are used as party favors – Wine tags, gift tags, patches, and plantable favor boxes are all great ways to green a party or wedding reception.
- ❖ Business cards that stand out from the corporate pack with unique and environmentally-friendly.
- ❖ Stationery and cards that have a phrase -Don't just send a card: Send a card that keeps on giving in the form of vegetables, herbs, or flowers- (Figure 2B).
- ❖ Bookmarks – Reading just got a whole lot greener. If your plantable bookmark starts to get tattered, then it's time to give it new life: Plant it and watch it grow (Figure 1C).

❖ Invitations cards that have captivating or promotional message – Your future guests will be excited to attend your event and remember it every time they see the beautiful plants grown from your invitation (Figure 2C).

❖ Wedding gifts – Blooming boxes make for an eco-friendly and symbolic gift: Couples can plant the box together and watch flowers grow along with their love for each other. Wedding confetti – Shower the happy couple with confetti that can grow after the celebration (Figure 2A).

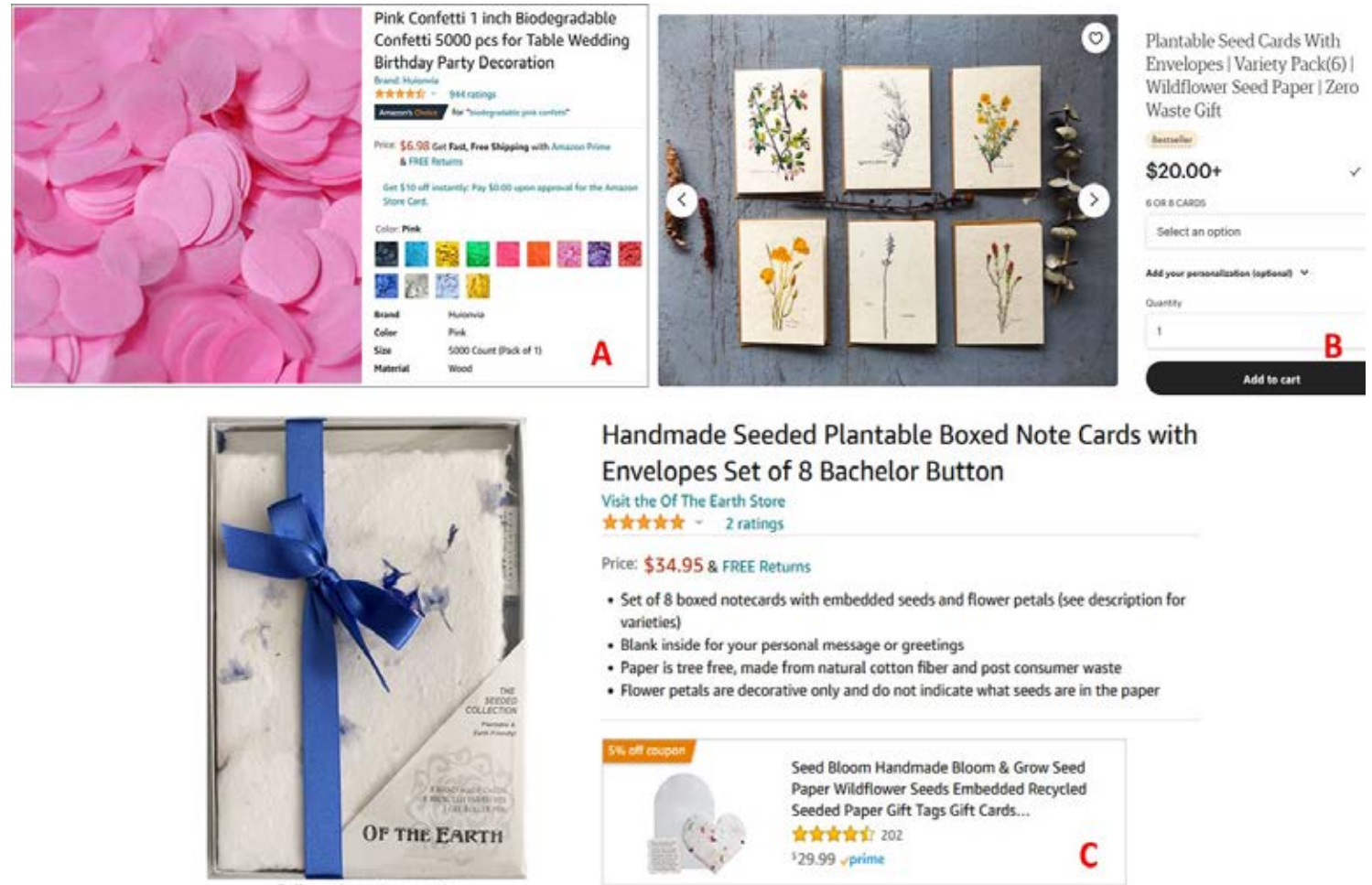


Figure 2: Seed infused wedding accessories A) Biodegradable plantable wedding confetti; B) Plantable note card C) Plantable wedding card

# Therapeutic and throw pillows

These are marketed as sleeping innovations that provide sleep and neck pain therapy. The throw pillows are for decorative purposes for couches and beds. The most common on the online market are therapy pillows stuffed with flax seeds (figure 3).

**NB: All products discussed in this section contain seed that is capable of germinating. These imported plant materials do not fall under the category of seed imports hence the national regulator KEPHIS does not quarantine or restrict their importation. They are imported as wedding gifts, household goods or stationery.**

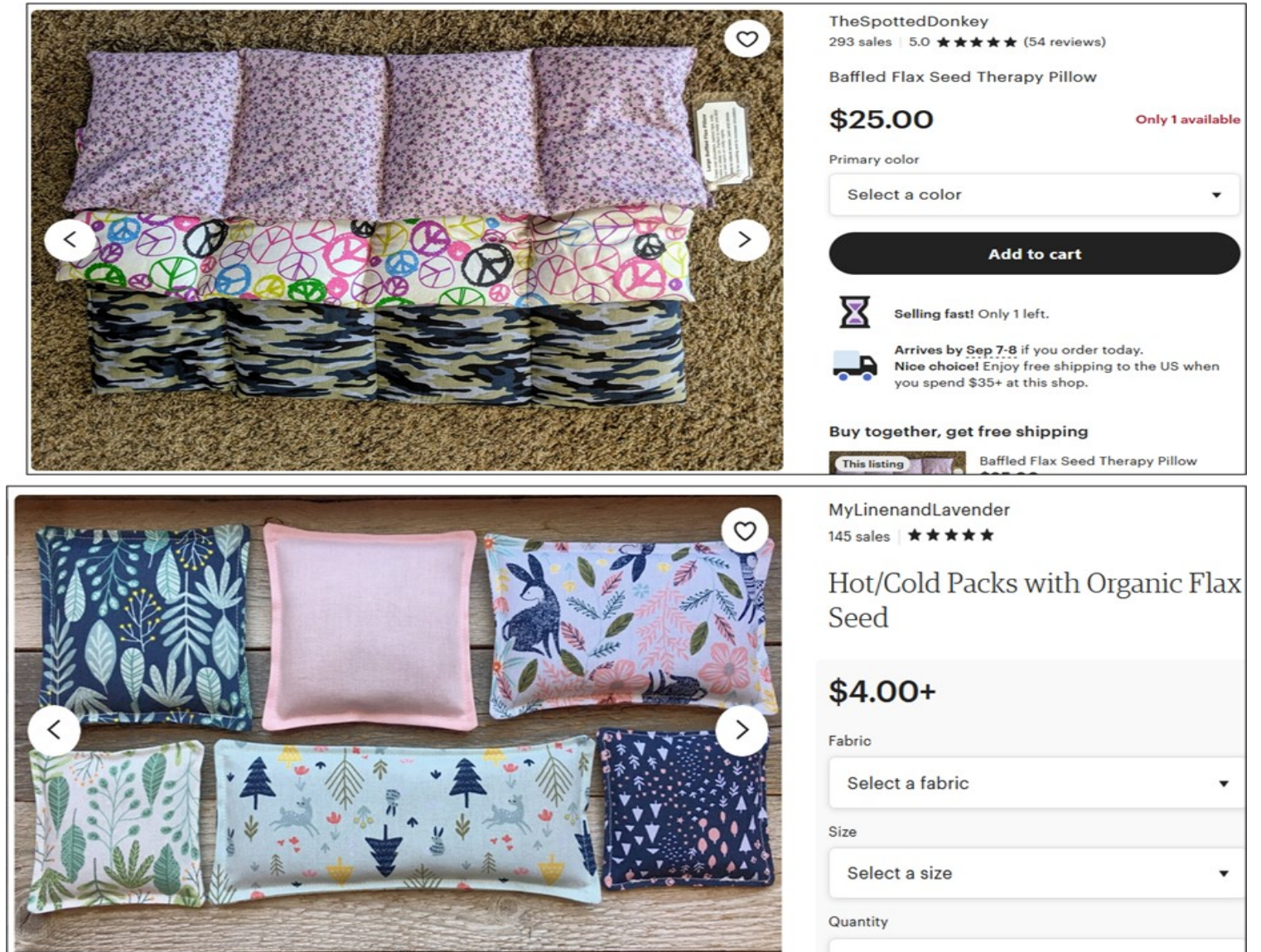


Figure 3: Flax seed stuffed therapeutic and throw pillows



## Risks associated with the seed infused products

---

- ❖ **The seed infused products are a pathway** through which certain pests associated with a given species of plant may be introduced into a country. Though it may occur on a lower scale, it may lead to an outbreak if the pest in the seed find favorable host, conducive environment and there are no natural enemies.
- ❖ They are a pathway of introducing invasive species into the country. This may be *Intentional*, which is the result of a deliberate movement of a species by humans outside of its natural range. Intentional introductions as a whole should not be labeled as either good or bad. A specific intentional pathway can only be judged by the positive or negative impact of the specific organisms that are moving along that means. It may be *unintentional*, which is the inadvertent movement of species as a byproduct of some other human activity.



# Conclusion

---

- ❖ Plant protection act outlines the regulation of importation of plant and plant products, KEPHIS implements the importation regulations efficiently.
- ❖ However, there are gaps in the law that needs to be addressed in terms of the online trade which provides for easy access of international market of 'disguised' plant and plant products.
- ❖ There are easy delivery methods of consignments through courier that deliver the packages at home. This presents a very complex and difficult importation pathway that creates the possibility of introduction of new pests and plant species to Kenya.



## Conclusion contd'

---

- ❖ These pathways need to be researched to develop predictions of what species might be associated with which imports and the quantity of these imports. This can advise on import interception.
- ❖ The pathway risk analysis approach will provide useful framework for characterizing the nature of a pathway, identifying events that affect pest risk, and highlighting possibilities for risk reduction or mitigation.
- ❖ In this case, a qualitative description of the pathway from point of origin to end use at destination provides a better understanding of the multiple interacting factors that may affect imports, and this may help to focus plant protection efforts in future.



# Recommendations

---

- ❖ As the volume and frequency of plant and plant products trade increases over the internet, having a unified method for using the internet to obtain data on the plant and plant products trade becomes very critical for KEPHIS. However, such a method or guide does not currently exist in Kenya.
- ❖ Therefore, it is necessary for the national regulator (KEPHIS) and other stakeholders to initiate the process of reviewing the plant protection regulations and provide a guide to be used in order to curb the phytosanitary risks that are associated with online trading with plant, plant products and other related products.



# Acknowledgement

---



**for funding this research**





# Acknowledgements



**Theme:** *"Enhancing Phytosanitary Systems for Healthy Plants, Safe & Sustainable Trade"*

[www.africa-cope.org](http://www.africa-cope.org)



INTERNATIONAL YEAR OF  
**PLANT HEALTH**

2020

😊  
Thank you!

