



BENEFITS OF PVP SYSTEM AND UPOV MEMBERSHIP TO KENYA



Presented during the International Seminar on “Benefits of PLANT Variety Protection” – Singapore, 5th August, 2025

PROF. THEOPHILUS M. MUTUI, PHD
MANAGING DIRECTOR
KEPHIS





Introduction

- Plant Variety Protection (PVP) in Kenya is administered by the Kenya Plant Health Inspectorate Service (KEPHIS).
- KEPHIS is a state corporation in the Ministry of Agriculture and Livestock Development (MoALD) mandated to offer regulatory services in the agricultural sector.
- It was established through a Legal Notice under the State Corporations Act in **October 1996** and commenced operations in **1997**.
- Currently, KEPHIS operates under the Kenya Plant Health Inspectorate Service Act of 2012.



Plant Variety Protection in Kenya

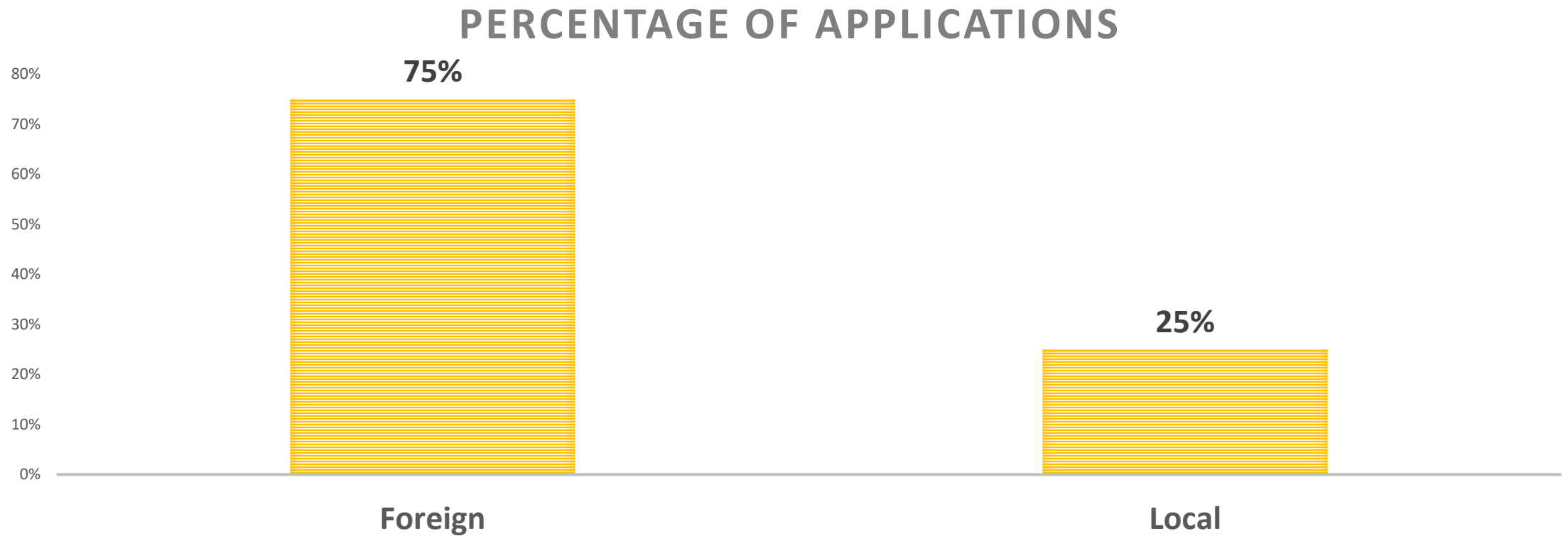
- The office to administer the PVP was established in 1997 and has functioned under KEPHIS since 1998
- Kenya acceded to UPOV under the 1978 Convention on **13th May 1999**
- The Seed and Plant Varieties Act was amended in **2012** to incorporate aspects of the 1991 Act of UPOV Convention.
- In **May 2016**, Kenya acceded to the 1991 Act of the UPOV Convention.
- Kenya grants Plant Breeders Rights (PBRs) for all plant genera and species

UPOV



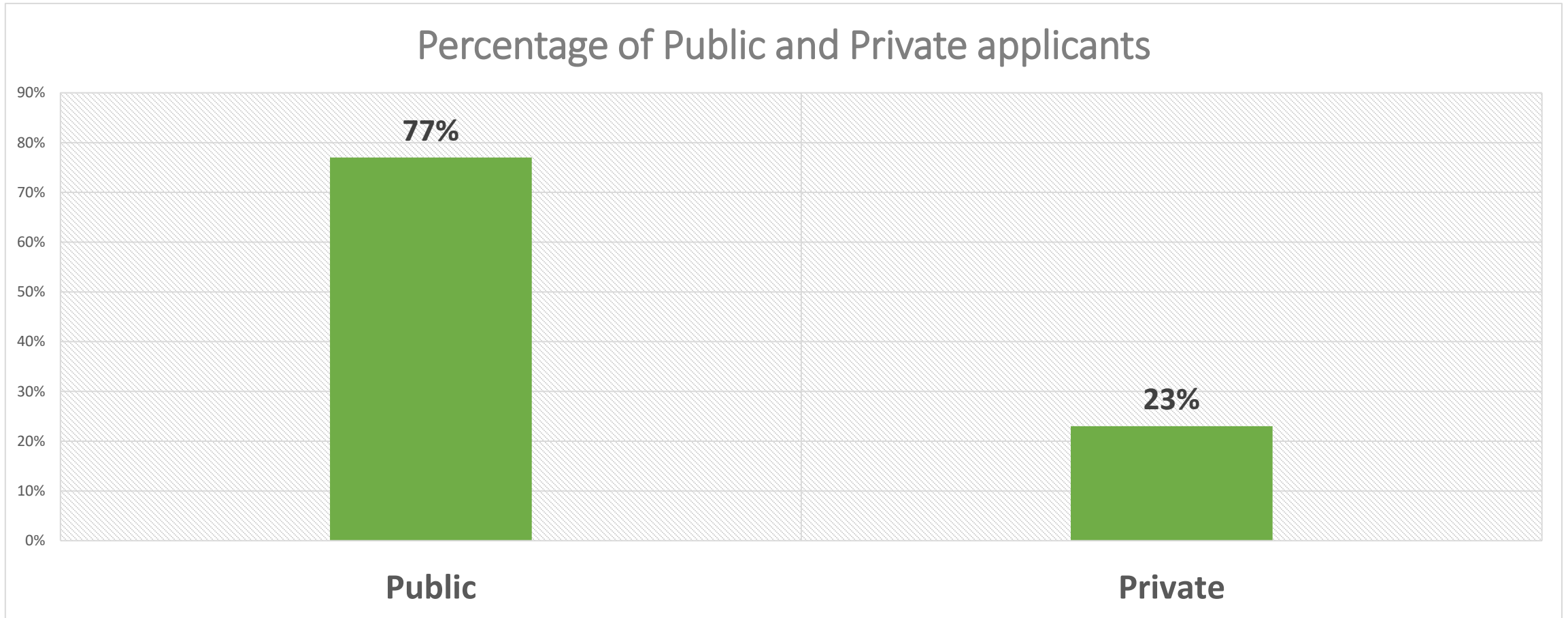
Status of Plant Variety Protection

- A total of 2215 applications for PVP received by July 2025



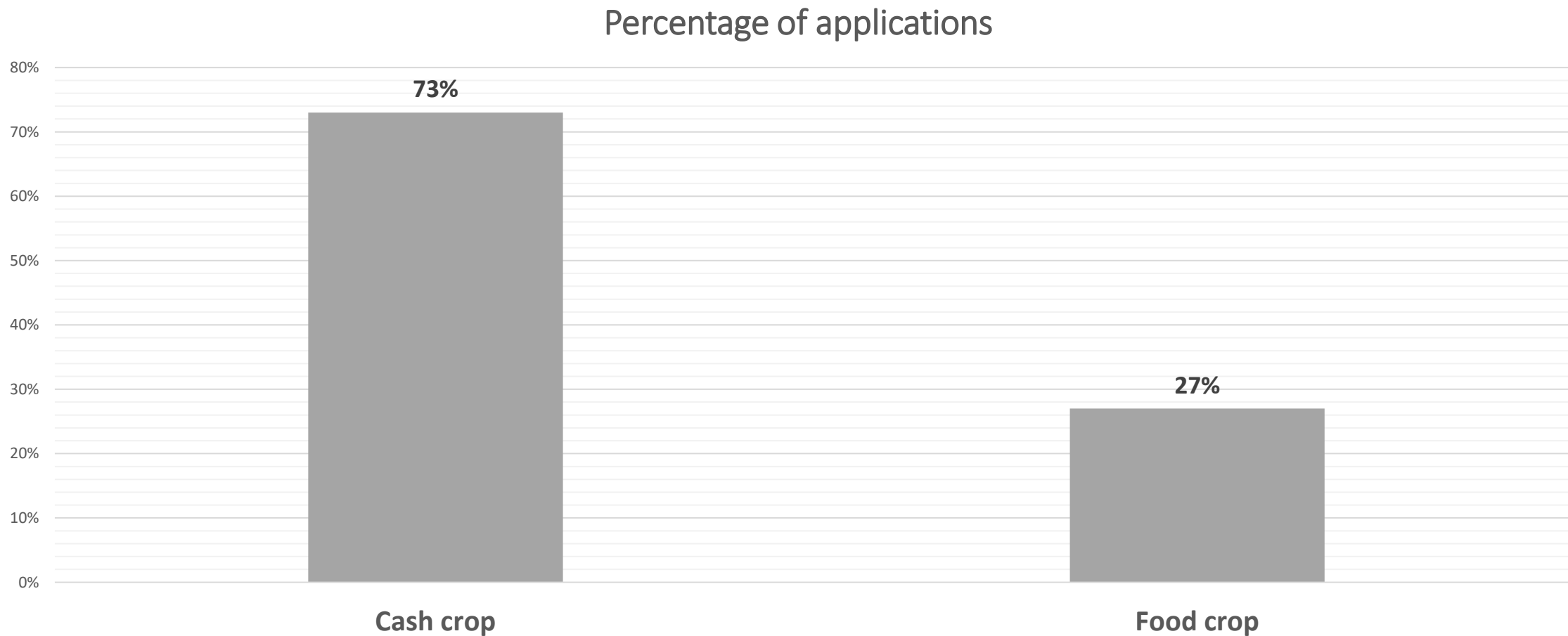


Domestic PBR Applications





Industrial (Cash) and Food Crop Applications





Benefits of PVP System and UPOV Membership to Kenya

- The introduction of PVP has had profound effects on the country's agricultural sector, breeding innovation, seed system development, economic performance, and smallholder livelihoods.
- The system protects breeders from unfair exploitation of their varieties and helps them recover their cost of investment, thereby motivating development of new varieties.
- Seventy per cent (70%) of applications for plant breeders' rights are for horticultural (ornamental) crops.
- Top world horticultural breeders have introduced their varieties into Kenya, resulting to farmers accessing elite varieties and hence increased productivity.



Benefits of PVP System and UPOV Membership to Kenya

Stimulating Plant Breeding Innovation

- PVP has incentivized both Local (Universities, KALRO & Seed Companies) and International breeders (Selecta one, Kordes Roses, Dummen Orange, De Ruiter Innovations B.V., United Selections, Jan Spek Rozen and HM. Clause) to develop new plant varieties tailored to Kenyan agro-ecological conditions
- The assurance of exclusive commercial rights has led to significant investment in breeding programs for crops such as maize, wheat, potato, sorghum, beans, sweet potatoes, and floricultural plants.
- Public institutions like the Kenya Agricultural and Livestock Research Organization (KALRO), universities, and private firms have all become active contributors to variety development.



Benefits of PVP System and UPOV Membership to Kenya

Economic Growth and Export Earnings

- The protection of commercial plant varieties has had a direct impact on Kenya's export-oriented horticulture and floriculture sectors.
- Kenya is now a global leader in flower exports, with the horticulture sector contributing over **KES 153 billion (USD 1.2 billion)** in export revenue as of 2023.
- These gains are partly attributed to breeders' willingness to release their varieties into Kenya's market under the protection of PVP.



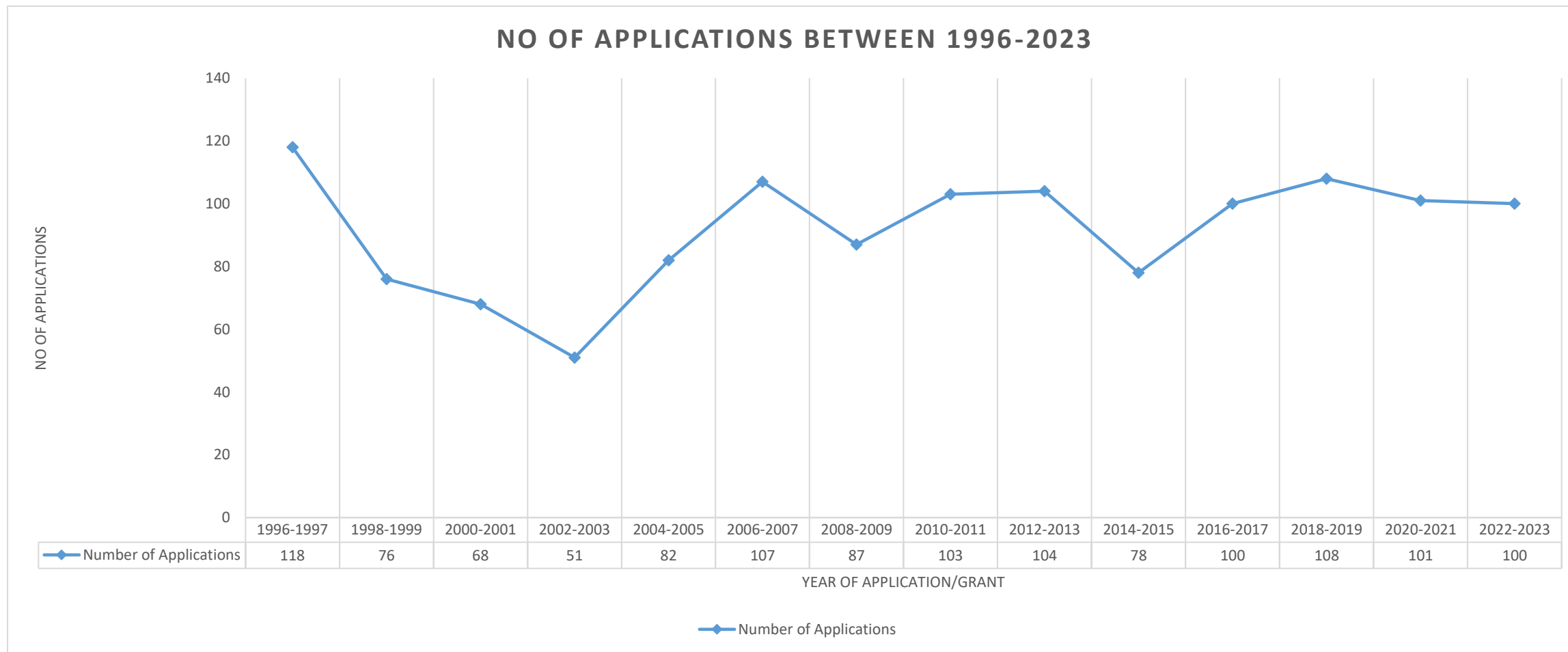
Benefits of PVP System and UPOV Membership to Kenya

- The impact of plant variety protection in Kenya is demonstrated by growth in the horticultural, industrial and food crops sectors.
- In 2023, tea exports earned Kenya KES 182 billion (USD. 1.4b).
- Industrial crops represent 9 per cent of the applications, with tea being the leading crop with a robust breeding programme.



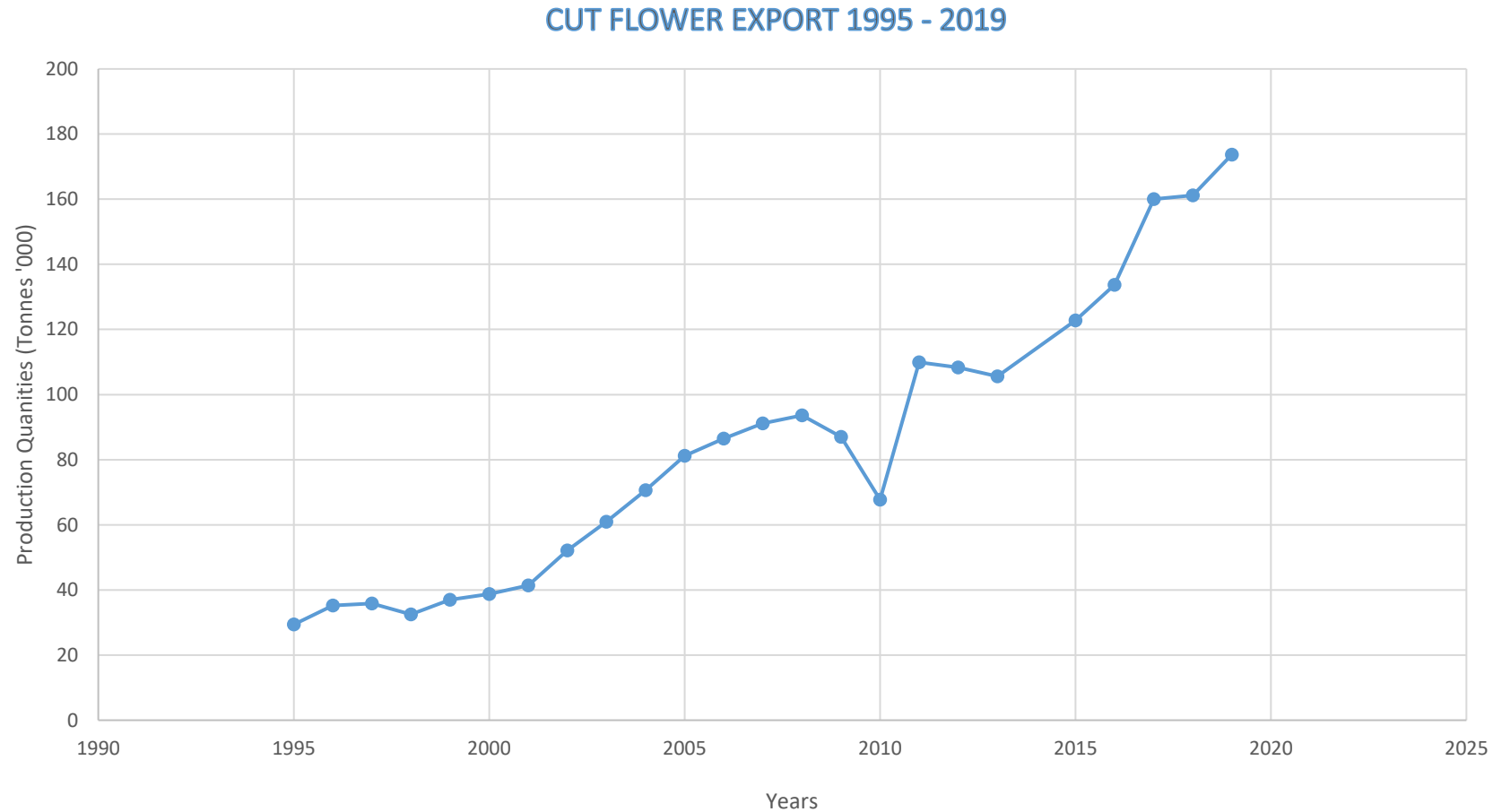


Number of PVP Applications in Ornamentals in Kenya





Production Trend in Cut-Flower Export (1995 – 2019)



Source : HCDA
: Floral Daily



Benefits of PVP System and UPOV Membership to Kenya

Wealth Creation

- Agricultural sector contributes directly 24% of GDP and 60% of export earnings.
- Kenya entered into floriculture market in the 1980s where approximately 10,946 tons were exported
- By 2021, Kenya floriculture was valued at USD\$ 766M making it third global supplier of flowers
- The EU is leading destination for Kenya flowers – 75%
- Major Destinations
 - EU – Netherlands, Germany, France, Italy
 - United Kingdom
 - Australia, USA, Saudi Arabia, Japan





Benefits of PVP System and UPOV Membership to Kenya

Employment creation

- It employs over 40% of the total population and more than 70% of the rural populace
- Estimated that floriculture industry employs over **500,000** people and impacts more than **2 million** livelihoods indirectly.

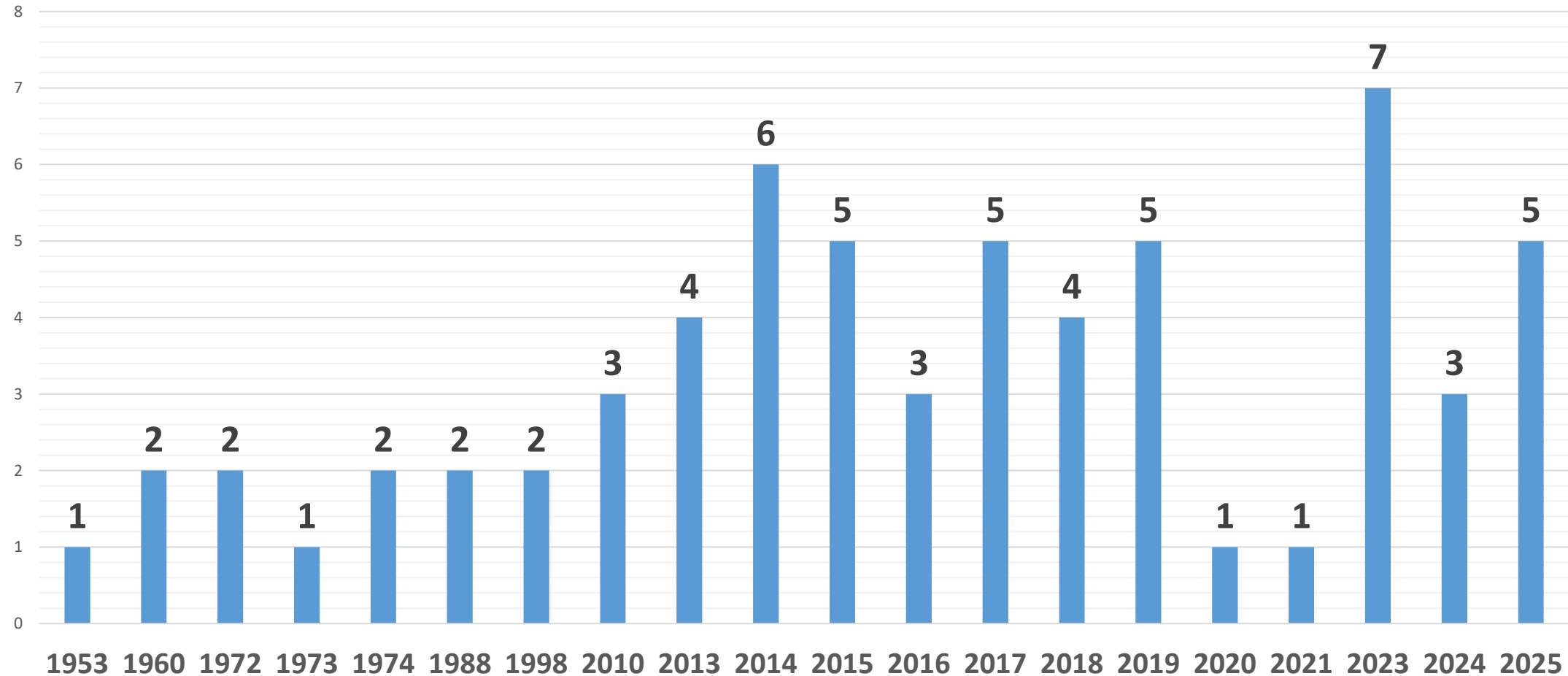




Benefits of PVP System and UPOV Membership to Kenya

- Food crop research has also been promoted by variety protection with an average of 35 varieties released for commercialization every year. These include climate smart varieties (CSV), which cover 30 per cent.
- The CSV can tolerate high soil salinity, low nitrogen, drought, flooding, extremes of temperature (hot and cold), pest and diseases
- The CSV seed should produce high yields with minimum inputs and bio-fortification can assure nutrient security
- Number of new potato varieties increased by 326 per cent between 2013 (19) and 2023 (45) and these include top varieties from different parts of the world.
- PVP has led to increased diversity of crops and varieties, including new crops such as safflower, teff, castor and rangeland grasses.

Introduction of Potato varieties





Benefits of PVP System and UPOV Membership to Kenya

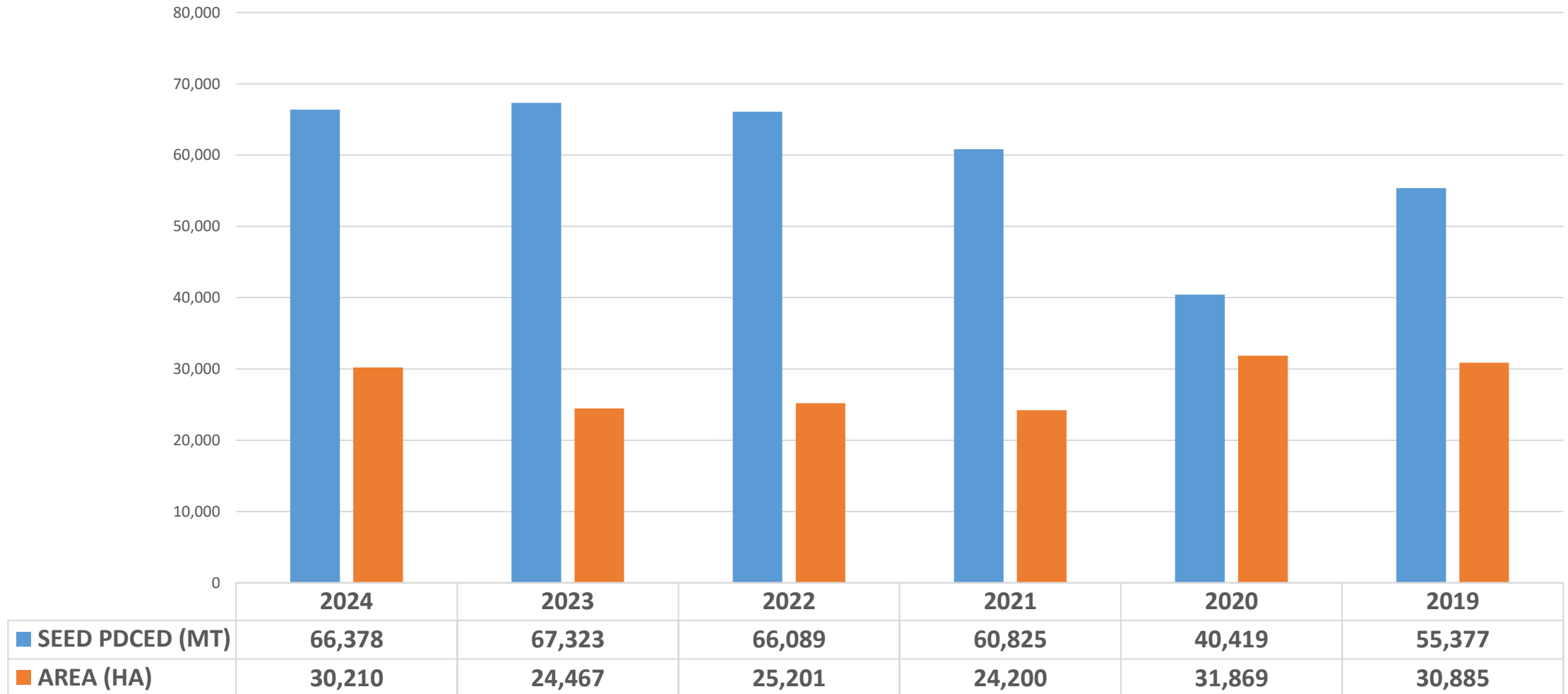
Expansion of the Seed Industry

- Since PVP implementation, Kenya witnessed rapid growth in number of registered seed companies—from less than 15 in 1990s to over 200 today.
- In the period between 2013 and 2023,
 - the volume of seed produced increased by 47%;
 - the number of seed companies registered increased by 33%.
- This growth has increased **competition, diversified seed options for farmers, and improved seed quality.**
- Many of the seed companies now engage in both local breeding and importing foreign-protected varieties, especially in the horticultural and floriculture sectors.



Growth in the Seed Sector – Volume of seed production and area under production

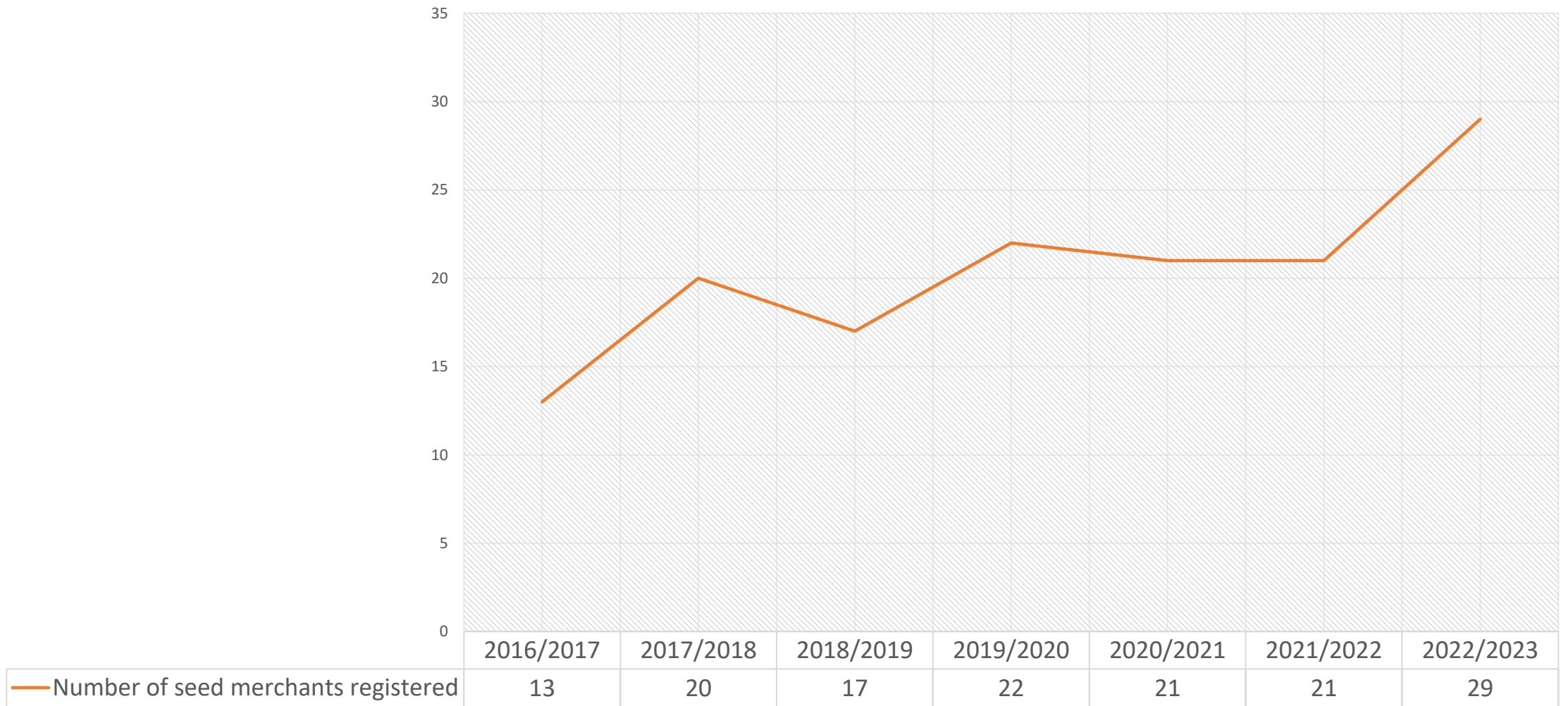
Summary of seed production





Growth in the Seed Sector – Seed Merchants trends

Seven year trend for the number of seed merchants registered





Benefits of PVP System and UPOV Membership to Kenya

Improved Access to Better Varieties

- Through PVP, farmers now have access to improved varieties that are more productive, pest & disease resistant, abiotic stress (extremes of temperatures, low nitrogen, high soil salinity), drought-tolerant, and sometimes nutritionally enhanced.
- Farmers spray less thus reducing exposure to pesticides resulting in improved human health.
- The Climate Smart Varieties produce acceptable crop yields with minimum inputs. For examples, farmers have realized 50% yield increase and reduced cost of production.
- This would ultimately contribute to SDGs on erasing hunger, eliminating poverty and establishing Good Health and Well-Being



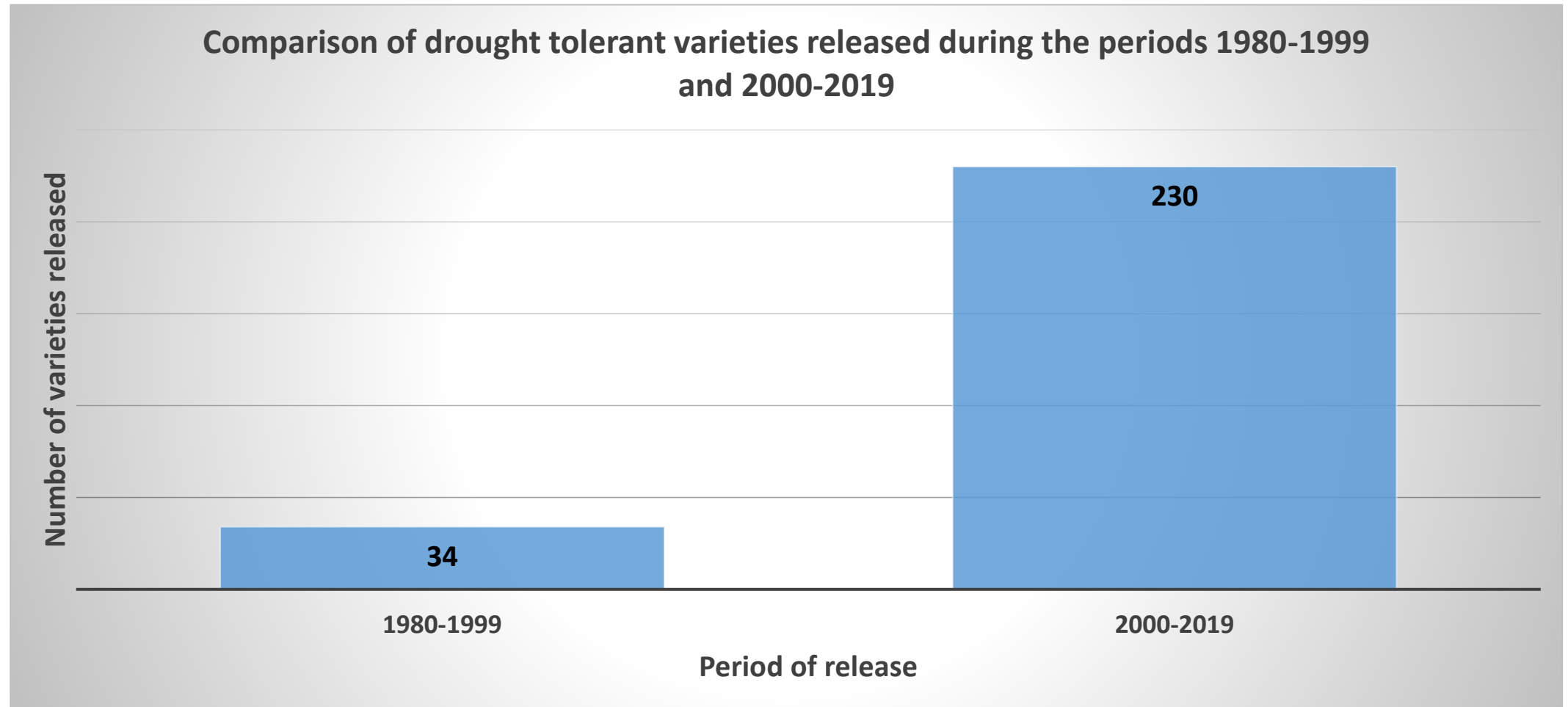
Impact of PVP on Development of Climate Smart Varieties

- During last 10 years, breeders have embarked on development of drought tolerant varieties of maize, wheat, sweetpotato, cassava, sorghum, pigeon peas, amaranth, rangeland grasses
- Released pest and disease tolerant varieties to counter emerging pests due to climate change
- Sixteen Maize Lethal Necrosis Disease and 3 Fall Army Worm tolerant varieties have been released





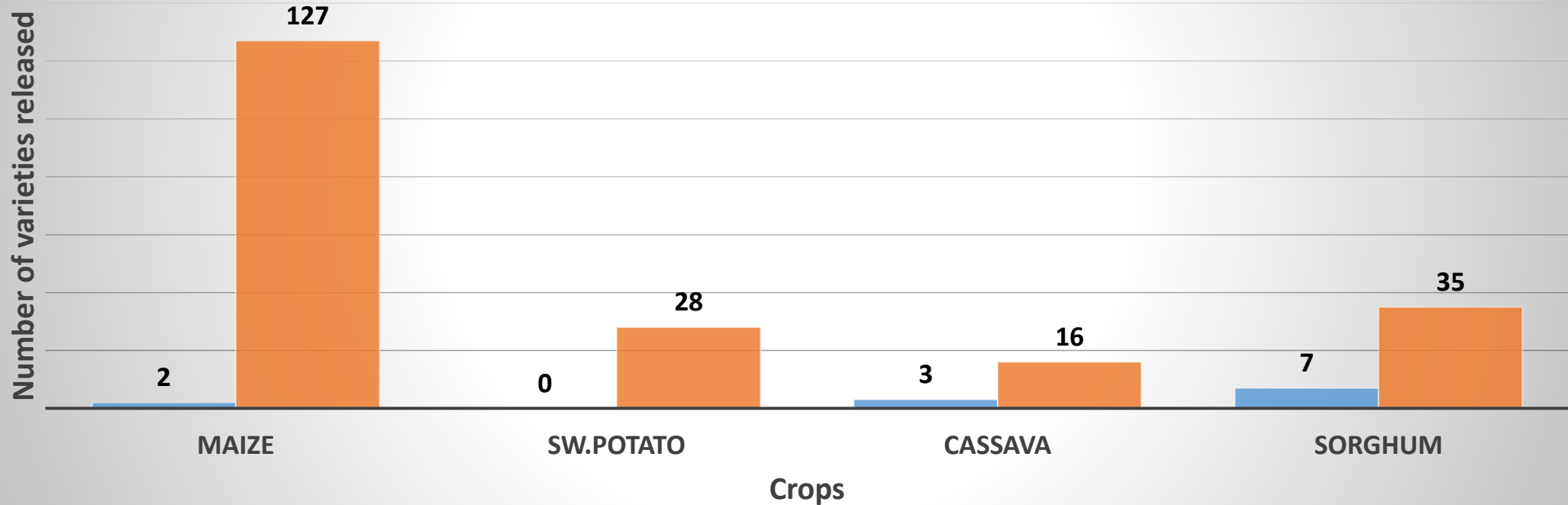
Development of Climate Smart Varieties





Development of Climate Smart Varieties

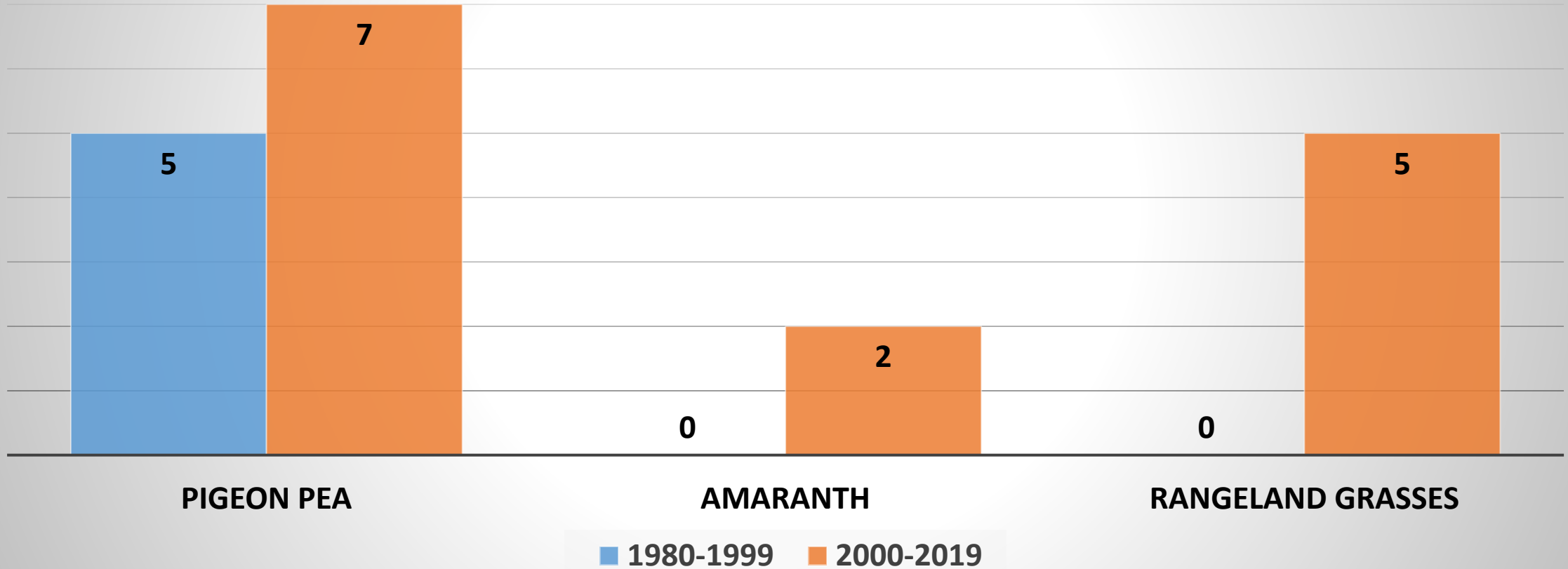
Comparison of drought tolerant varieties released during the periods 1980-1999 and 2000-2019





Development of Climate Smart Varieties

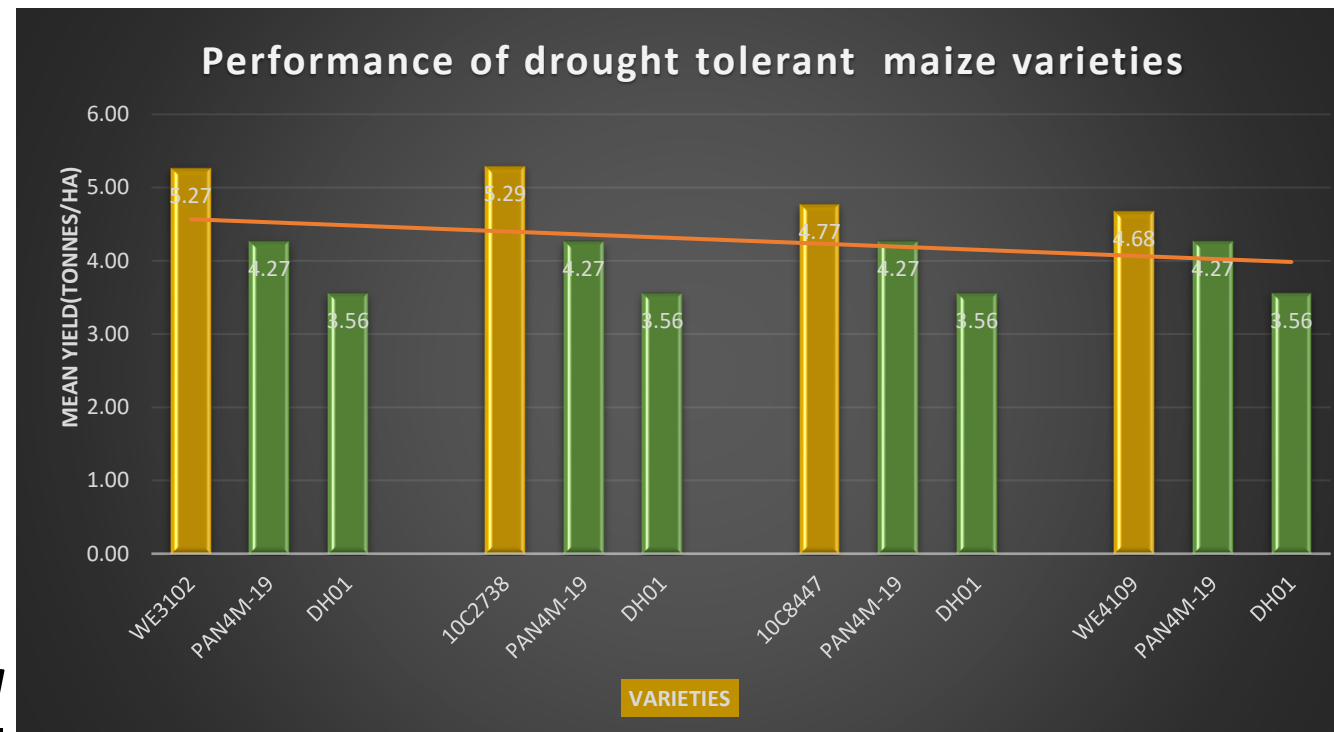
Comparison drought tolerant varieties released during the periods 1980-1999 and 2000-2019





Development of Climate Smart Varieties

Increased production through breeding of better yielding and drought tolerant varieties



Legend

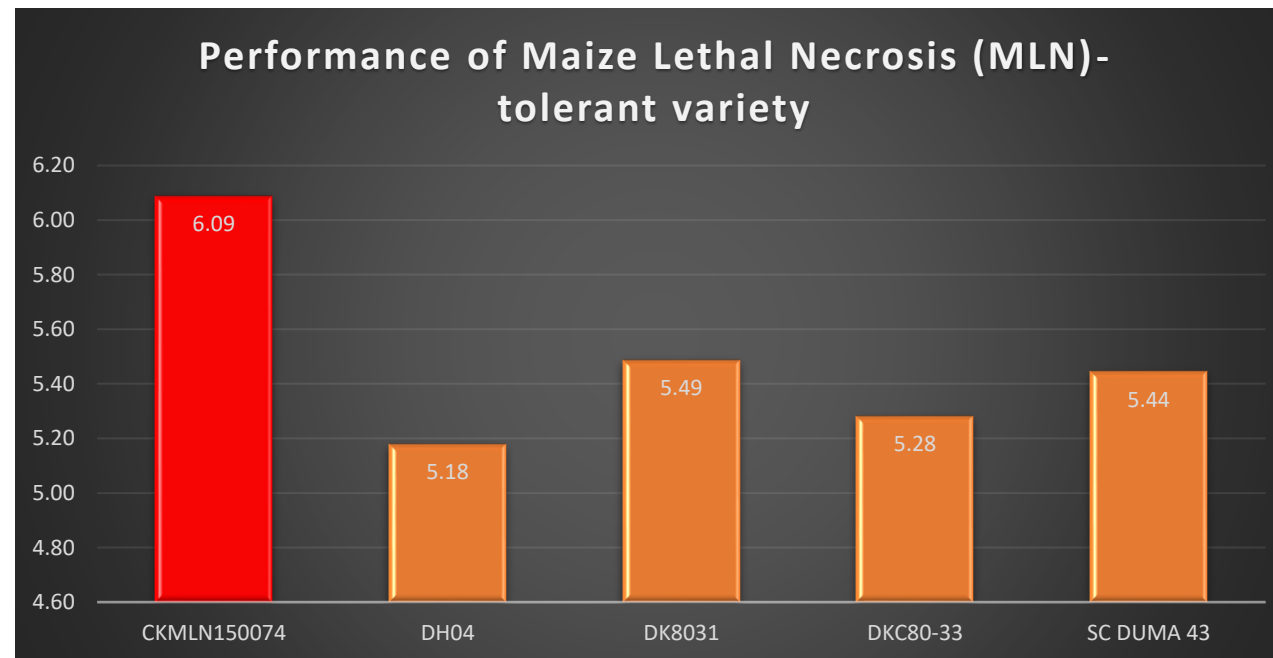
	New drought tolerant varieties
	Check Varieties

Source: KEPHIS VCU Data



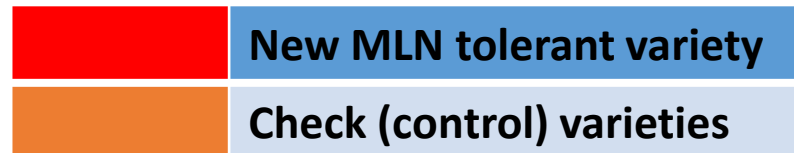
Development of Disease Tolerant Varieties: Food Security

- Development and release of MLN tolerant varieties thus improved yields



Legend:

Source: KEPHIS VCU Data





Benefits of UPOV Membership to Kenya

Technology Transfer and Capacity Building

- Establishment of a PVP office and subsequent membership to UPOV, conferred the following advantages:
 - Readily available UPOV test guidelines for most of the Agricultural crops
 - Trained personnel through cooperation with UPOV and UPOV members on development of national test guidelines.
 - Collaboration and co operation between the breeders and the testing authority on variety description.
- KEPHIS engaged in sensitization of breeders to develop new varieties and benefit from the PVP system.
- This led to increased introduction of crop varieties



CONCLUSION

- Implementation of Plant Variety Protection in Kenya and subsequent UPOV membership has played a pivotal role in transforming the agricultural sector by promoting innovation, enhancing productivity, and contributing to economic growth and sustainability.
- This has come as a result of:
 - Breeders having assurance on return of investment following development of new varieties.
 - Enhanced capacity for testing of new varieties through cooperation with UPOV and UPOV members.
 - Collaboration and co-operation between the breeders and the testing authority on variety testing.



Success Stories of New Plant Varieties

- <https://nation.africa/kenya/health/new-potato-varieties-with-high-yields-4500266>
- <https://www.uoeld.ac.ke/research/wheat-and-dolichos-varieties-research-university-eldoret>
- <https://uoeld.ac.ke/research/intellectual-property-management>
- <https://www.youtube.com/watch?v=pMeFMa26VOc>



Thank you for your kind attention!



For more information contact:
Managing Director
KENYA PLANT HEALTH
INSPECTORATE SERVICE (KEPHIS)
P. O. Box 49592-00100 Nairobi, Kenya.
Tel: +254-722 891000
E-mail: director@kephis.org
Website: www.kephis.org