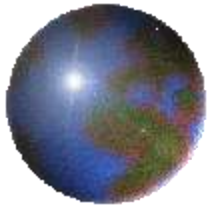




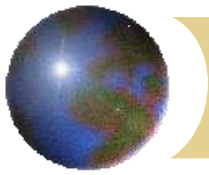
***THE IMPACT OF PLANT VARIETY PROTECTION  
SYSTEM IN KENYA***



***EVANS O. SIKINYI  
HEAD, SEED CERTIFICATION & PLANT VARIETY  
PROTECTION***

***2ND WORLD SEED CONFERENCE, SEPT 8-11, 2009  
ROME***

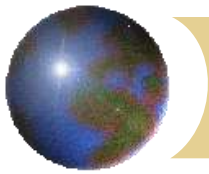




# *OUTLINE*

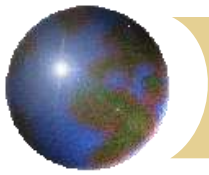
- ❖ **ROLE OF AGRICULTURE IN KENYA**
- ❖ **THE CHALLENGES TO AGRICULTURE**
- ❖ **FACING THE CHALLENGES**
- ❖ **IMPACT OF PVP**
- ❖ **CONCLUSIONS**





# ***UPOV Membership/Territories covered***





✿ Total Land 58 M ha

➤ 11 M ha receive adequate rain

➤ 7.0 M ha in agric production

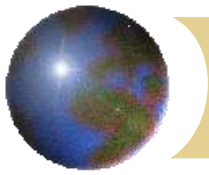
✿ Agriculture Contribution

➤ 26% GDP directly

➤ 27% links with manufacturing,  
transport & services related

➤ 60% export earnings

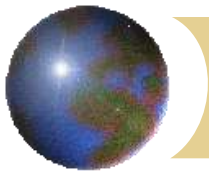




# *Challenges*

- ❖ Increased population
  - 20M in 1970s to 42 in 2009
  - Increased production/ expansion in land
- ❖ Climate Change
  - Unpredictable weather patterns, crop failures
  - Need new crops, appropriate varieties & production technologies





## *Challenges cont*

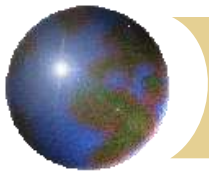
### ✚ Employment

- Diversification in crops
- Labour intensive, 2m directly in Horticulture, 3.5m indirectly

### ✚ Production inputs

- Appropriate varieties
- Quality seeds
- Costly fertilizers & other inputs

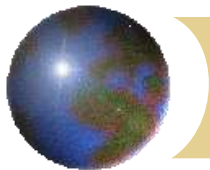




# *Facing the Challenges*

- ✚ Development of Seed Industry
- ✚ Encouragement of Breeding
- ✚ Plant Variety Protection
  - PBR law in place, office operational 1997
  - Membership to UPOV, 1999
- ✚ Encouragement & support of Exports
  - Institutional support : HCDA, KEPHIS
  - Legislative: PVP, seed,
  - Economic reform: Duty waivers



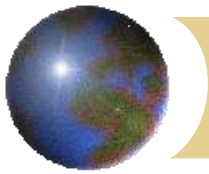


# *No. of Seed Companies over time*

<b>Year</b>	<b>Registered Seed Merchants</b>
1998	13
1999-2000	24
2000-2001	35
2001-2002	43
2002-2003	40
2003-2004	43
2004 – 2005	50
2005 – 2006	57
2006 – 2007	61
2007 – 2008	66
2008 - 2009	75







# *PVP implementation challenges*

## ✦ Legislation

Time to review or make regulations

## ✦ IP Awareness

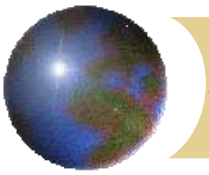
Breeders, institutions, policy makers

## ✦ Lack of Institutional IP policy

Breeders, institutions

## ✦ Capacity, Human & infrastructure





## *Impact of PVP in Kenya*

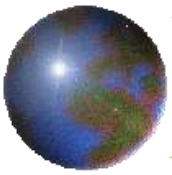
- ✚ Enhanced Access to foreign and number of new varieties
  - Increased production
  - Increased choice
  - Production in new frontiers
  - Germplasm for further breeding
- ✚ Encouragement of domestic breeders
  - Increased number of applications



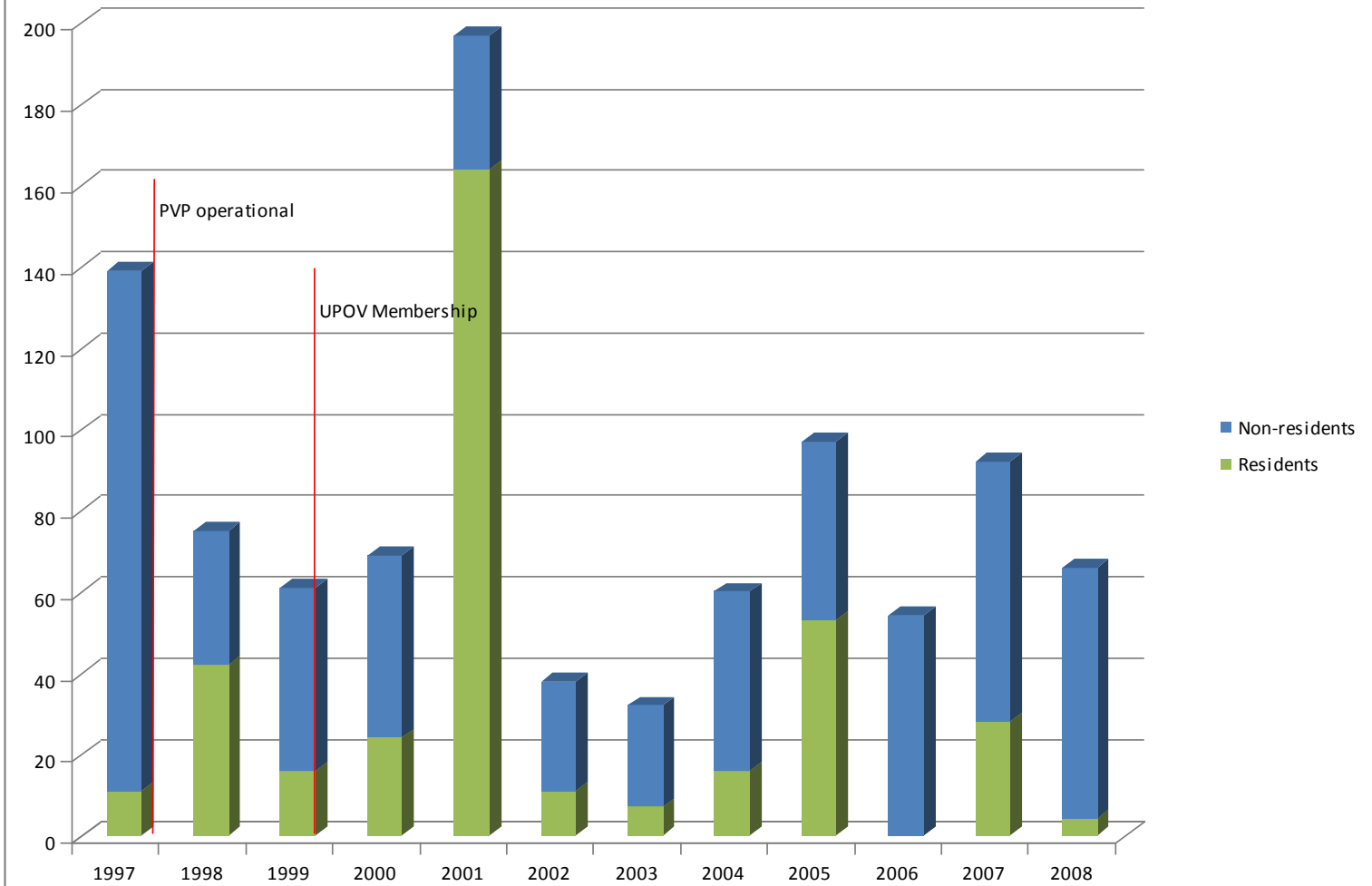


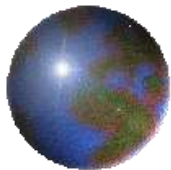
Year	Number of Applications		
	Domestic	Foreign	Total
1997	11	128	139
1998	42	33	75
1999	16	45	61
2000	24	45	69
2001	164	33	197
2002	11	27	38
2003	7	25	32
2004	16	44	60
2005	53	44	97
2006	0	54	54
2007	28	64	92
2008	4	62	66
Total	376	604	980





**Figure 35. Kenya: Number of Applications**





## Distribution of PVP Applications by Country

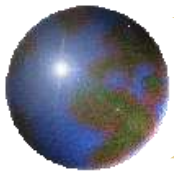
<u>Country</u>	<u>No. of Applications</u>
Kenya	372
Netherlands	300
Germany	124
France	77
United States	13
Israel	8
Italy	7
South Africa	7
Zimbabwe	7
Japan	5
New Zealand	7
United Kingdom	6
Ecuador	1
Belgium	1
India	1
Spain	1
Mexico	1
<b>Total</b>	<b>938</b>





	Plant Species	Number of Applications (1997-2008)
1	Rose	460
2	Maize	132
3	Tea	39
4	Wheat	32
5	Alstroemeria	31
6	Limonium	24
7	Pyrethrum	23
8	French bean	20
9	Chrysanthemum	19
10	Calla lilies	15

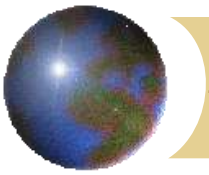




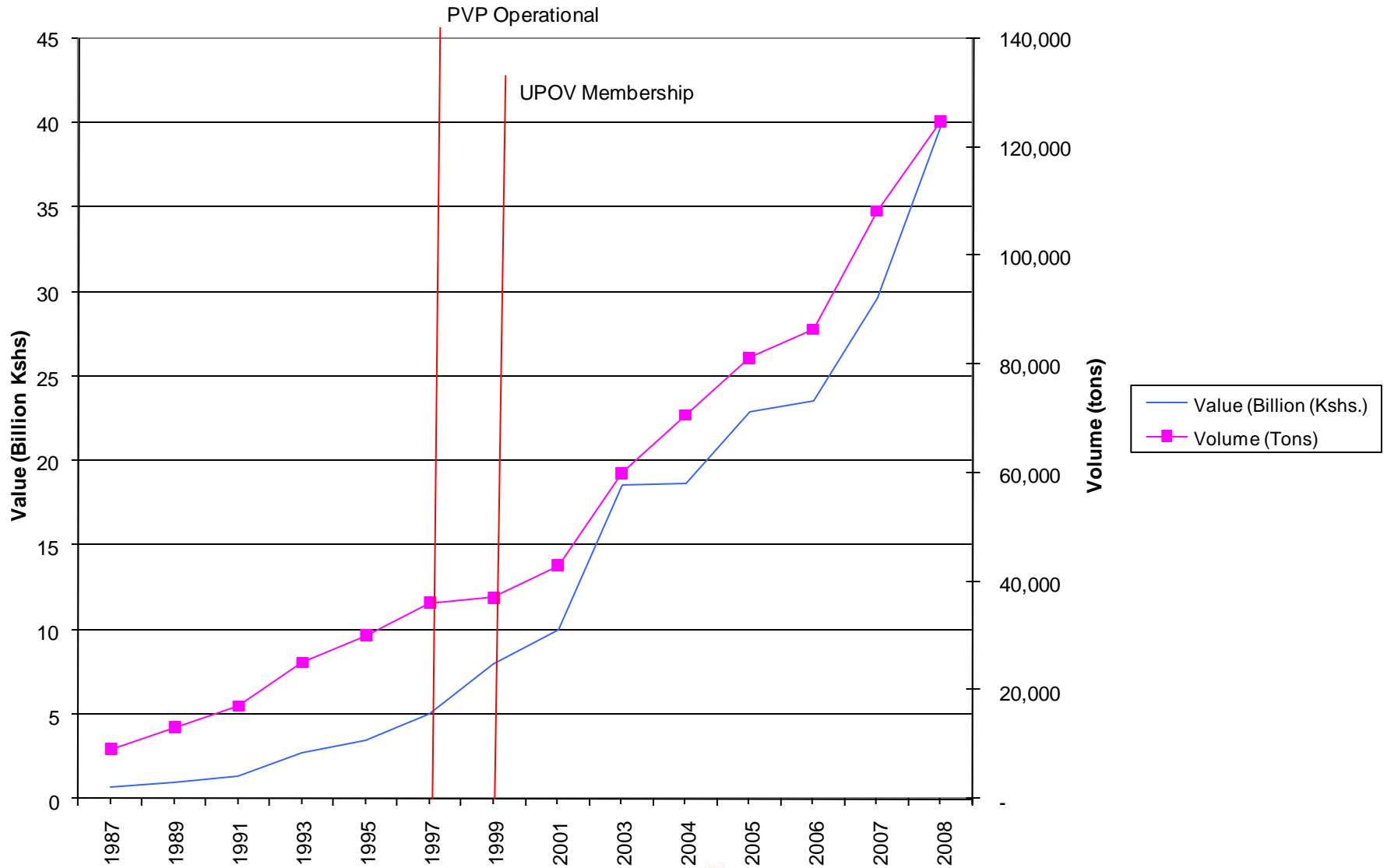
# *HORTICULTURE*

- ✿ Generation of foreign exchange, employment, capture of New markets
- Exports worth \$216m in 2002, but \$1b in 2008
- 2m employed, plus another 3.5 m indirectly
- Close to 45% Export EU market Cut-flowers
- Exports 4% of total production

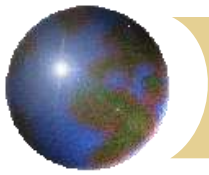




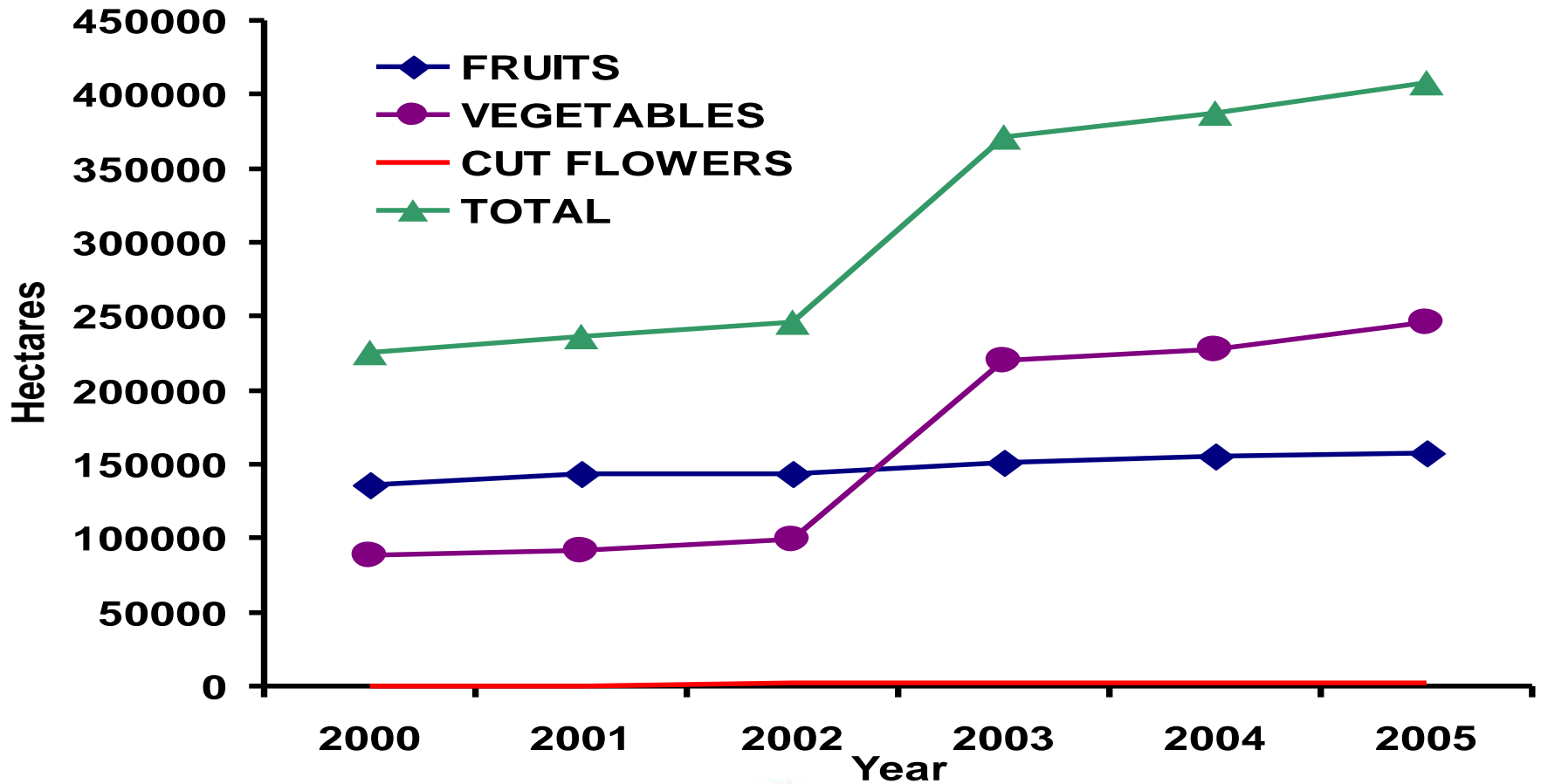
**Figure 2: Export of Kenyan Cut Flowers**

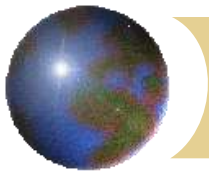






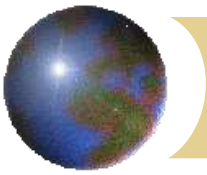
## *Hectares of Horticultural Crops in Kenya (2000- 2005)*





- ❖ **Increased Investment in breeding**
  - Private sector in technology, land & equipment
  - Marketing of new varieties
  - Reduced in public sector
- ❖ **Increased breeding entities and new types of breeders**
  - No doubled between 1996 and 2005
  - Teaching professors, farmers protecting varieties

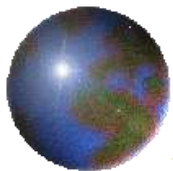




## *Impact cont*

- ⊕ Increased collaboration between local, foreign breeders and international research institutions.
  - Breeding, testing and release of varieties
- ⊕ Increased number of released varieties & crops
- ⊕ Improved qualities of released varieties
  - Drought, pest & diseases, salinity, QPM
- ⊕ A number of institutions with IP Policy in place

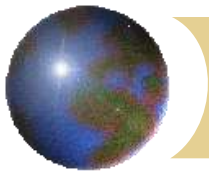




## Varieties Released Between 1998 And 2008

Year	Maize	Bush bean	Climbing bean	Sweet potato	Cassava	Pearl millet	Sorghum	Wheat	Potato
1998		1		3	3		3	3	2
1999	2			1				3	
2000	8					2	3		
2001	14			4		1		3	
2002	10								
2003	22								
2004	25								
2005	21								
2006	15							2	
2007	7							2	
2008	42	11	3		6		4	2	
<b>Total</b>	<b>166</b>	<b>12</b>	<b>3</b>	<b>8</b>	<b>9</b>	<b>3</b>	<b>10</b>	<b>15</b>	<b>2</b>

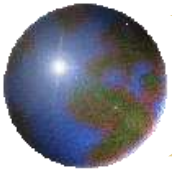




## *Conclusions and Summary*

- ✿ Many challenges due to changing World
- PVP introduction has contributed to increased Breeding, testing and release of varieties and crops, introduction of superior foreign varieties, to meet the demands
- Resulted in increased production, foreign exchange earnings, employment
- A vibrant seed industry
- Plays a major role in meeting the challenges of the changing world





**THANK YOU**

