

The Impact of Plant Variety Protection in Korea

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I. PVP system in Korea

History of PVP System and Related Authority

◆ Brief history

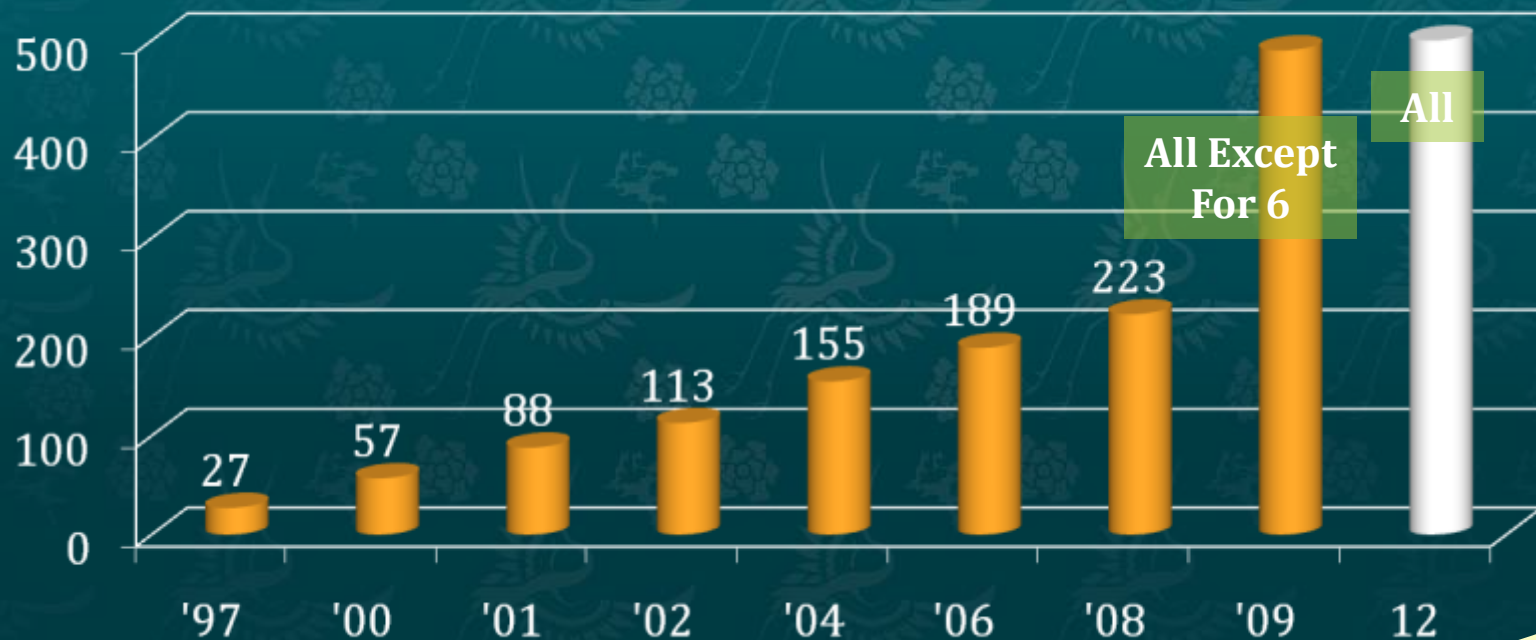
- Dec. 1995 Consolidation of Seed Industry Law
 - Article 27.3(b) of WTO/TRIPS
- Dec. 1997 Implementation of the law on December 31, 1997
Introduction of PVP system
- Jan. 2002 **Joining as a UPOV's 50th member**

◆ PVP office

- Korea Seed & Variety Service (KSVS) : Agricultural species
- Korea Forest Seed & Variety Center : Forestial species

Genera and species eligible for PVP

No. of Species to Entitled



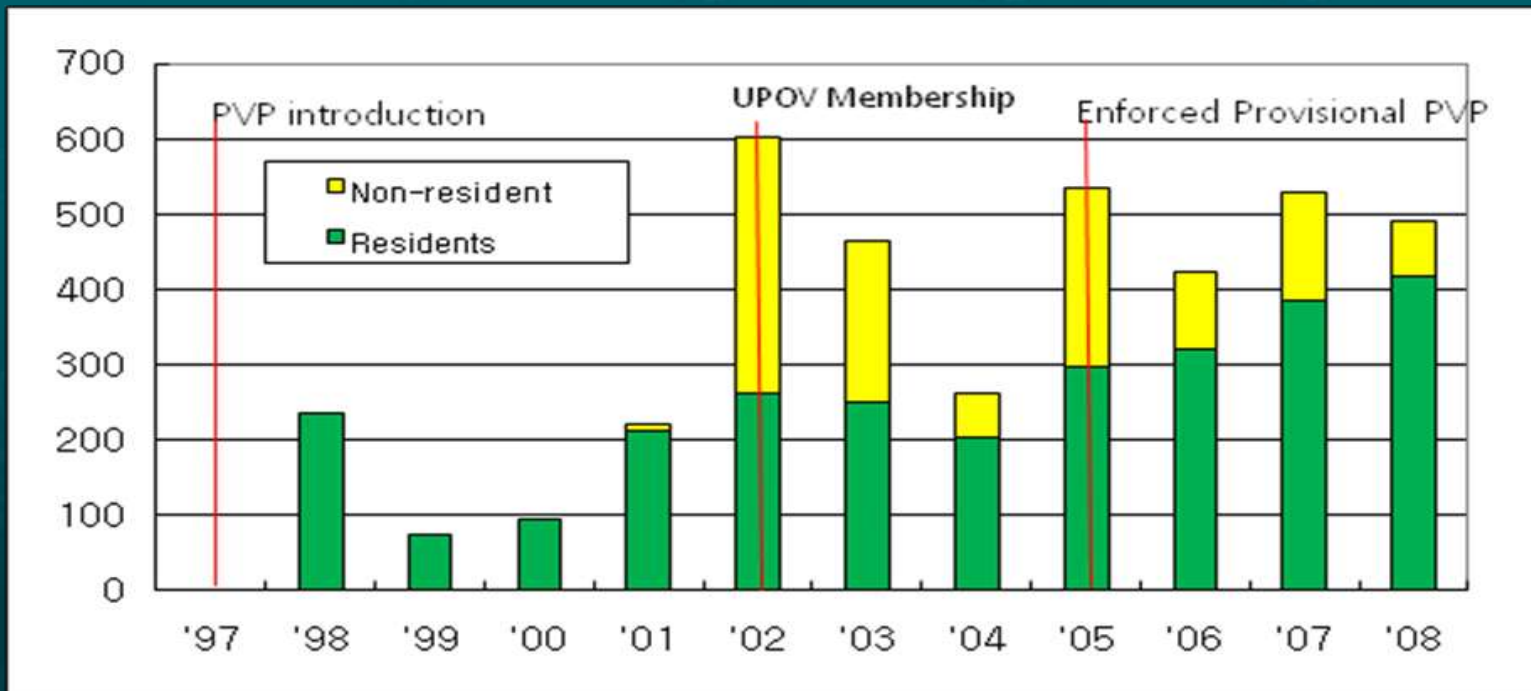
6 plants : strawberry, raspberry, blueberry, mandarin, cherry, sea weeds



II. Impact of PVP System

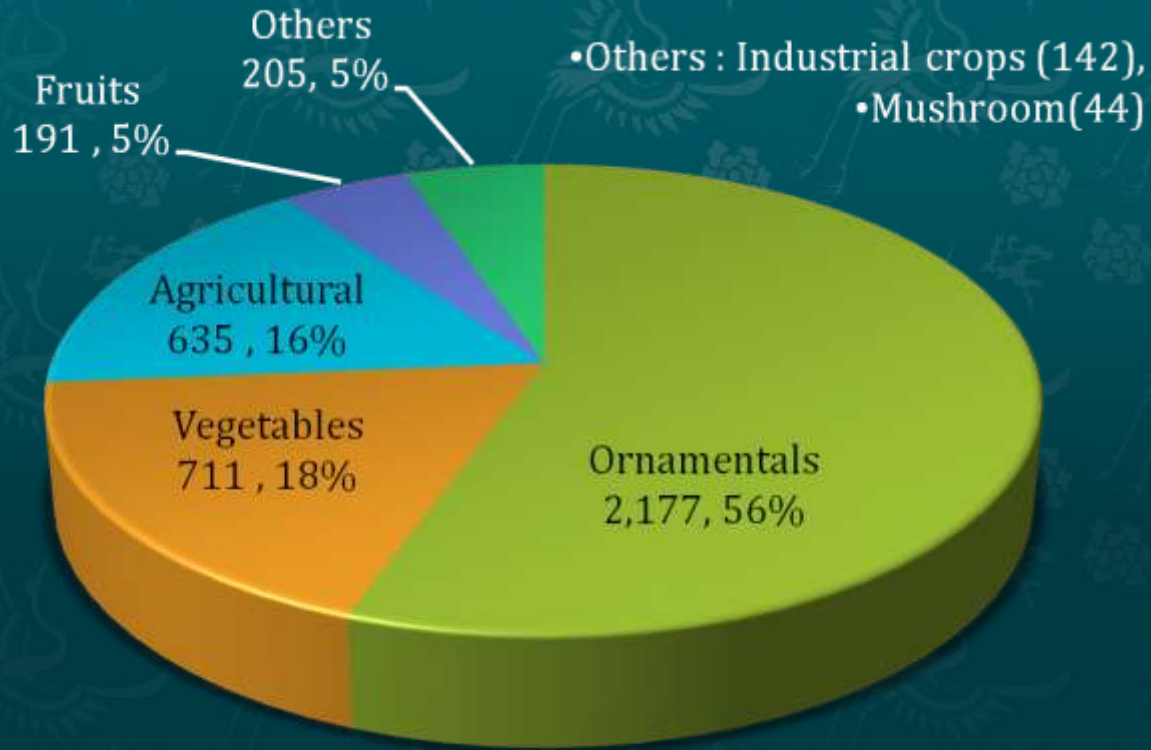
- A. Increase the number of new varieties**
 - B. Diversification & improvement of varieties
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- 

Number of Application by year

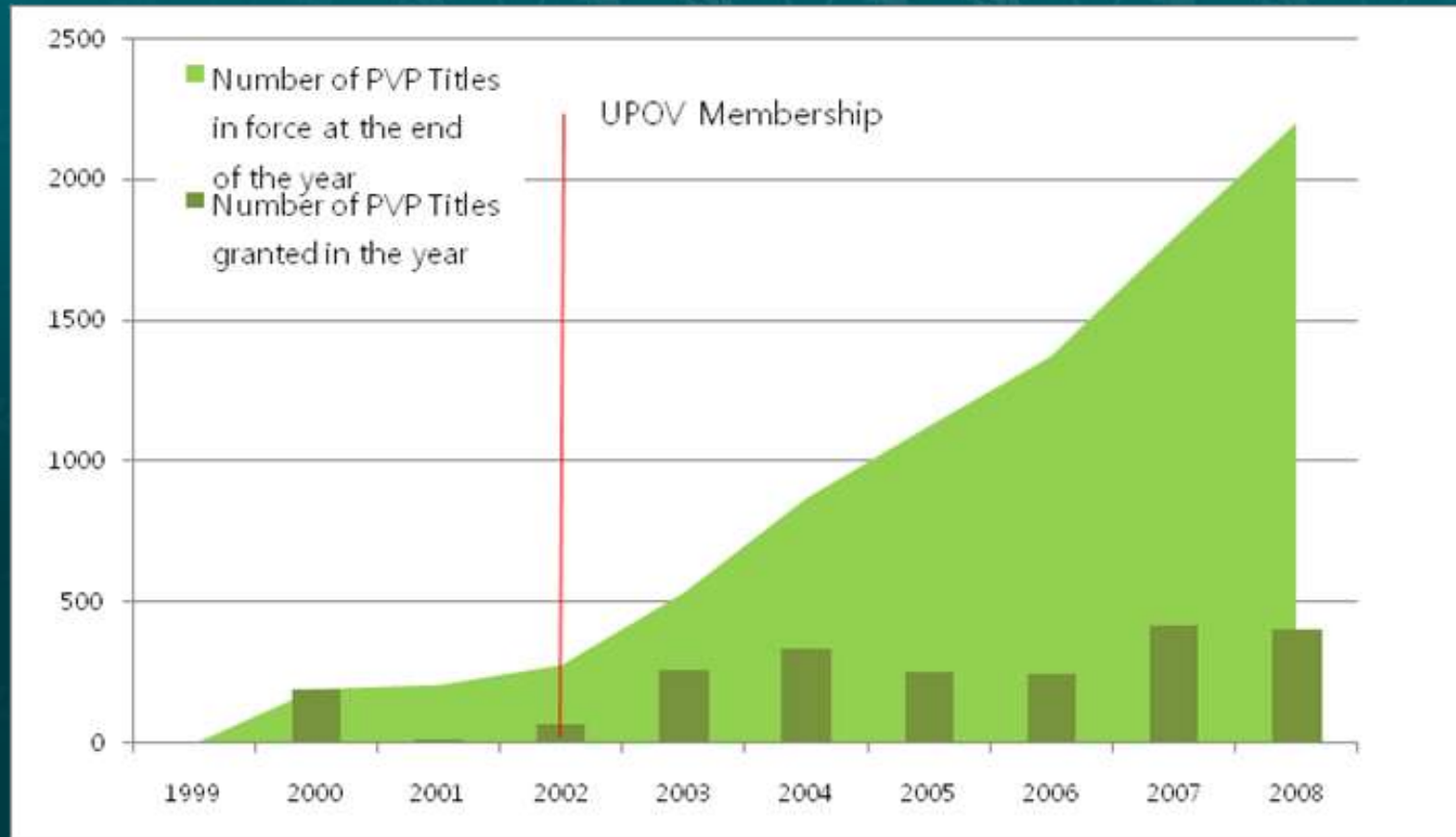


- The reason behind two conspicuous peaks
 - 2002 : UPOV membership & Entitlement of rose, chrysanthemum as PVP subject
 - 2005 : Entitlement of gerbera as PVP subject

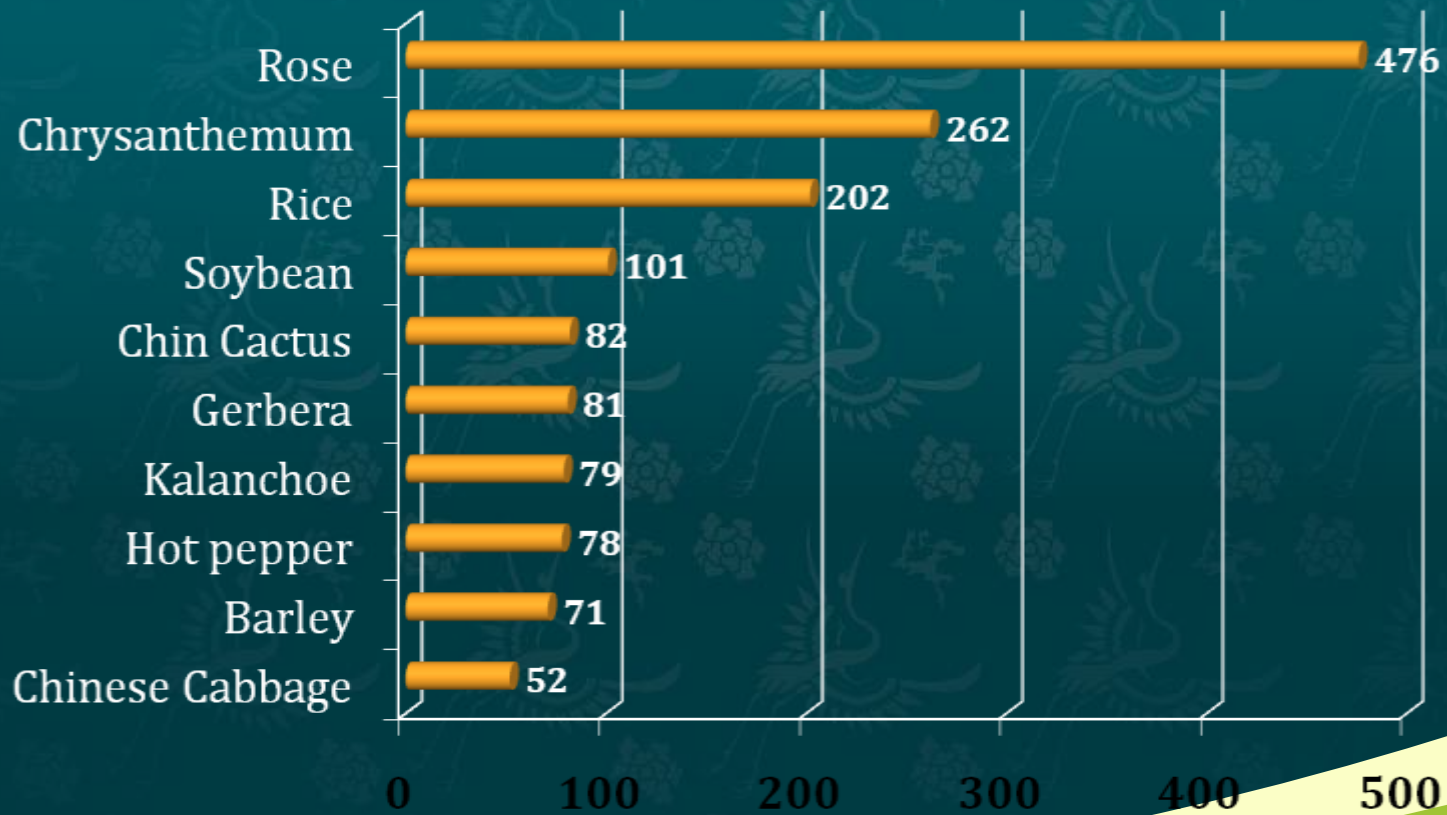
Application ratio by plant category (1998-2008)



No. of PVP Titles Granted and in Force



Top 10 crops in terms of No. of PVP titles granted





II. Impact of PVP System

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Rose

◆ Diversification in variety spectrum ⇒ Increase of germplasm

- Standard type ⇒ standard + spray + pot type
- Color
Red, White, Pink
⇒ existing colors + bi-colors, pastel (orange), green



Standard type
Bi-colors



Pastel (orange)
color



Spray type



Green color

Rice

◆ Breeding objectives

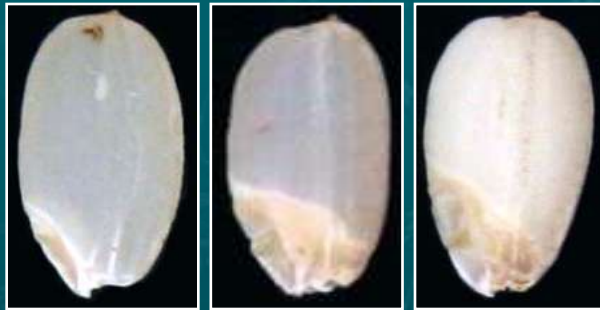
Productivity



Productivity

- Quality
- Resistance to (a)biotic stress
- Usage

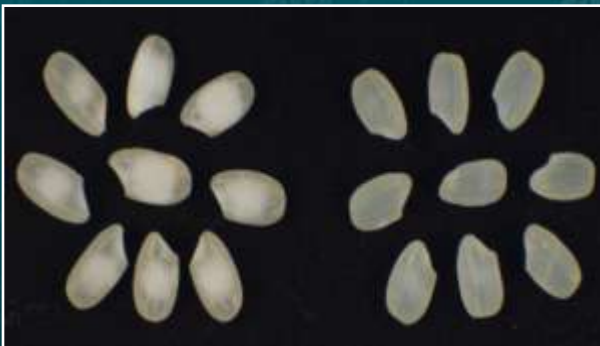
Example of rice varieties



<L> Ordinary variety

<M> Giant embryo variety

<R> Waxy variety with giant embryo



<L> Variety with white core

<R> Variety with transparent milled rice



Greenkerneled variety

<L> Unhulled, <R> Dehulled

Hot pepper



- Characteristics of newly developed varieties
 - Resistant to phytophthora blight/virus
 - Strong to wet damage
 - High yield
 - Good quality of dried pepper shape, color, proper degree of pungency



- Above : Resistant variety to phytophthora blight (fungal disease)
- Bottom : Susceptible variety

Ginseng

◆ Current status

- Eight varieties was bred and PBR granted since PVP introduction

◆ Improved features

- Enhanced production ratio of red ginseng
15 % (landrace, past) ⇒ 20~38%
- High yield of root

※ Red ginseng

The six year old ginseng roots which is steamed with the skins unpeeled, preserving vital nutrients and flavors

Recently released variety “Chun-poong” →

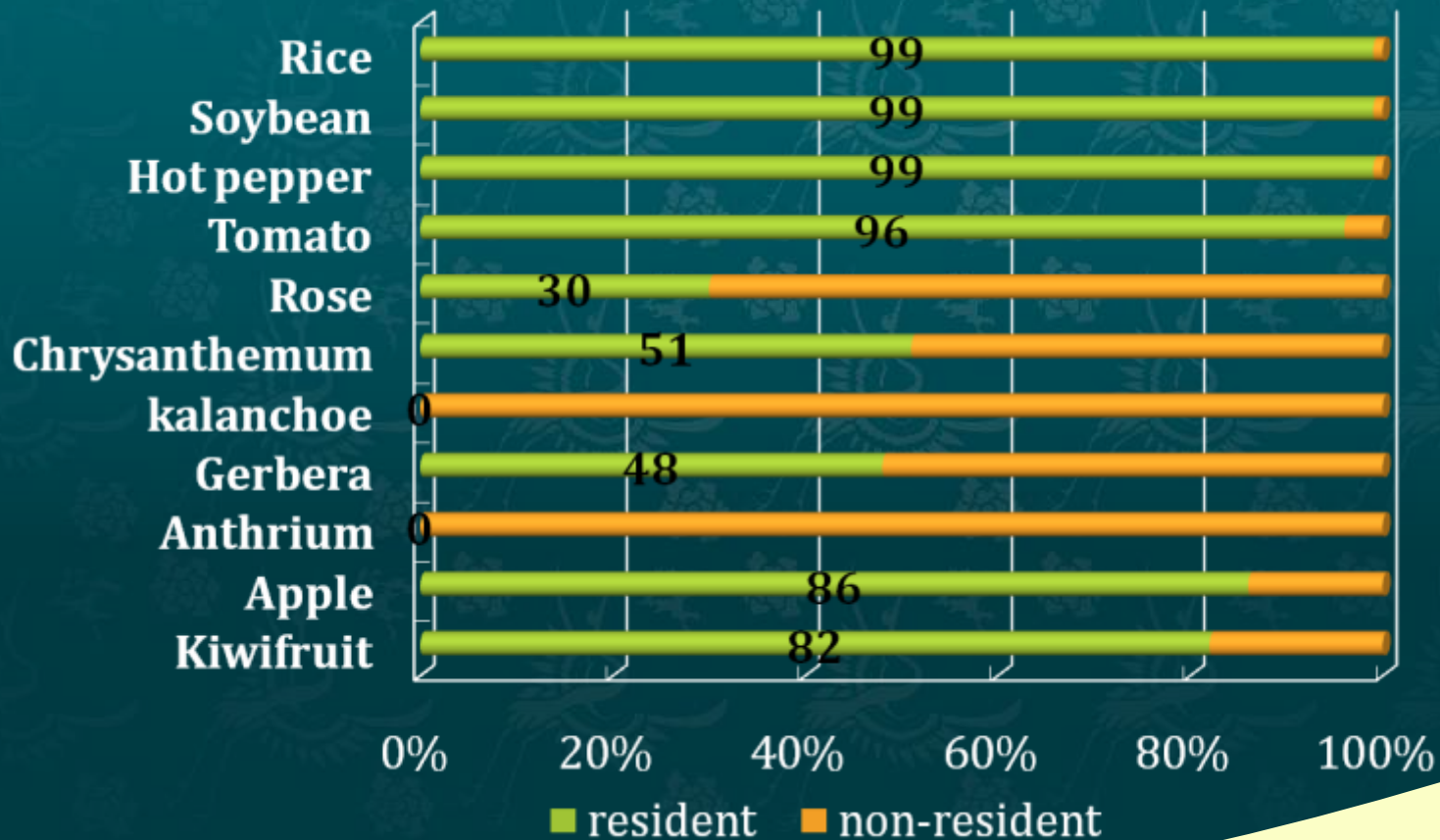




II. Impact of PVP System

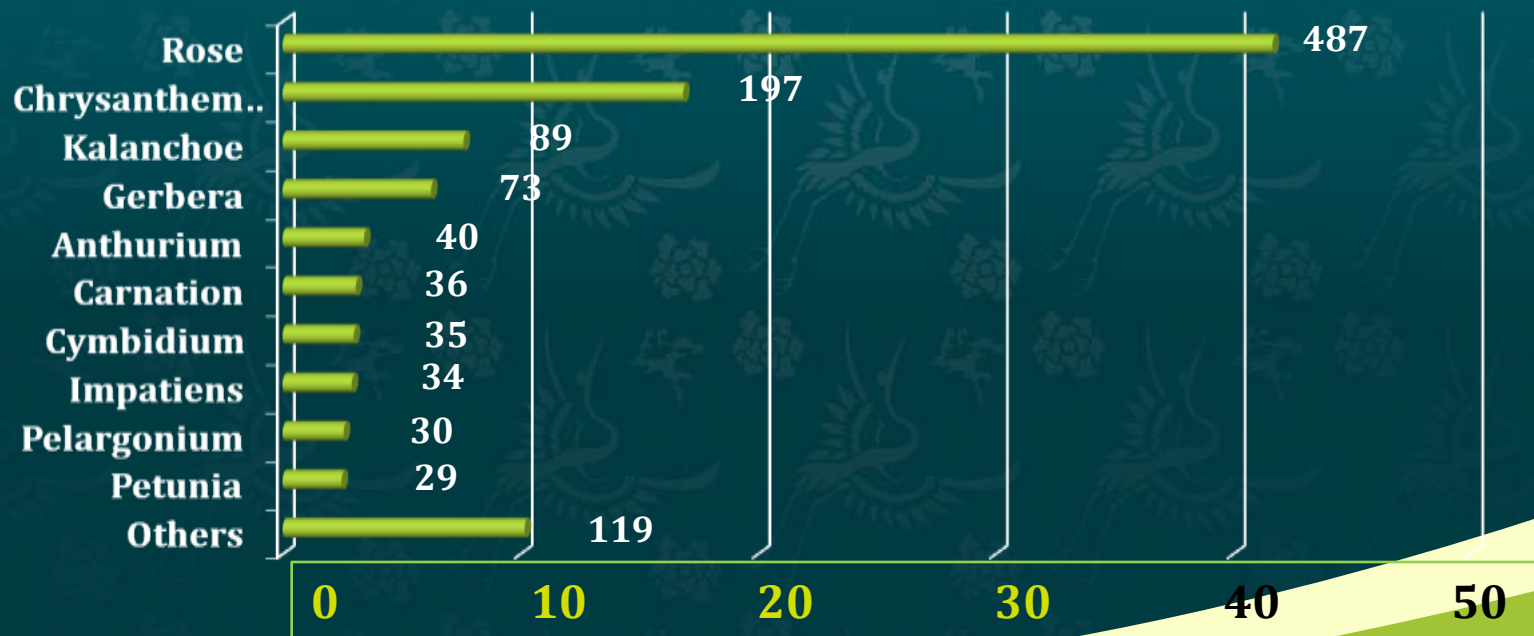
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Application ratio of Residents/Non residents

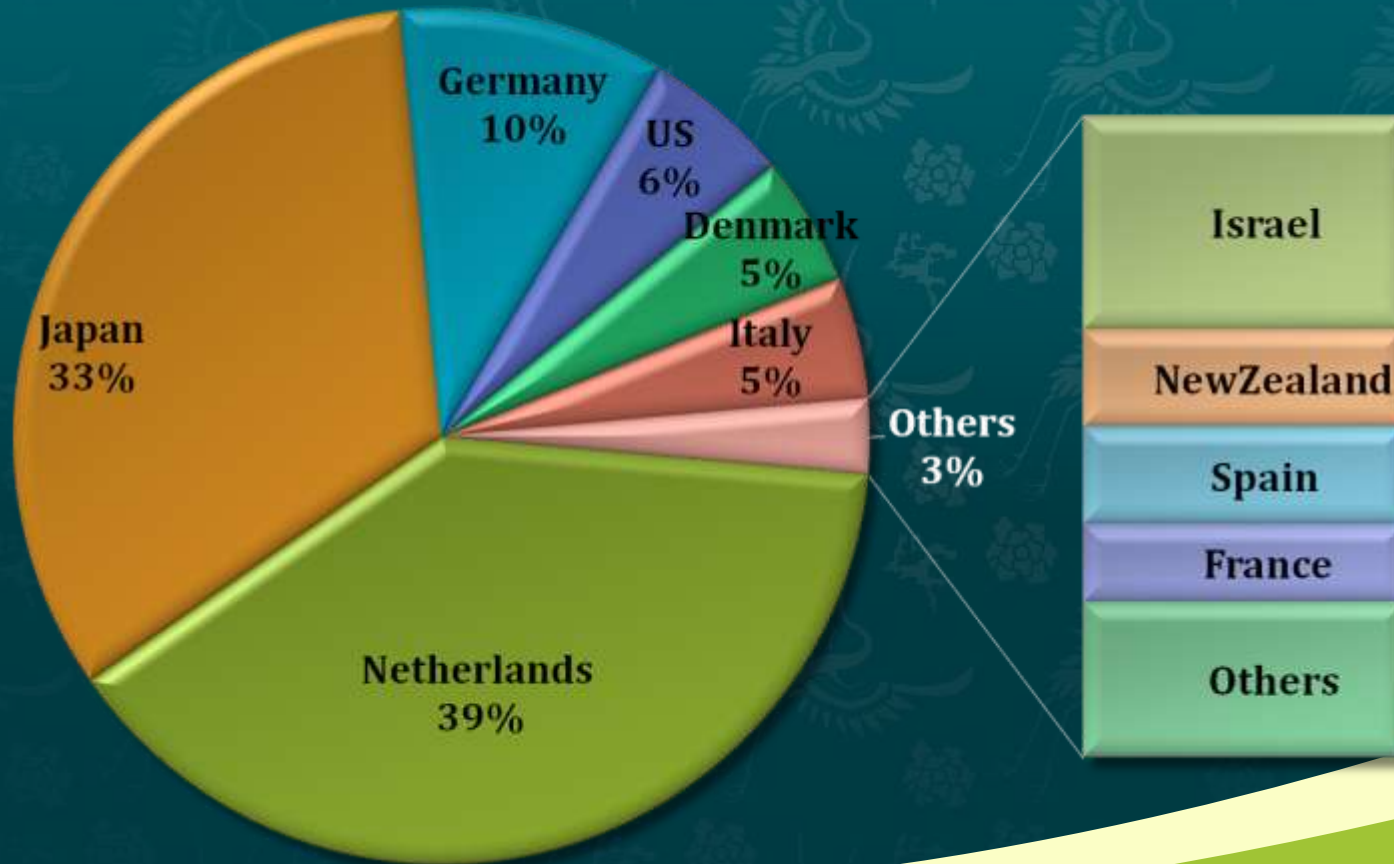


Applications by non-residents by crop

- Total number : 1,169 (As of May 2009)
- Top 10 crops : 1,047 (90%), All ornamentals
- Others : Hot pepper 2, Tomato 2, Rice 1, Soybean 1, etc



Applications by non-residents by country



Utilization of PVP variety

- Breeder's Exemption -

Parent "Nikida"

Parent : "Ruigerdan"
from Netherlands
(PBR granted)



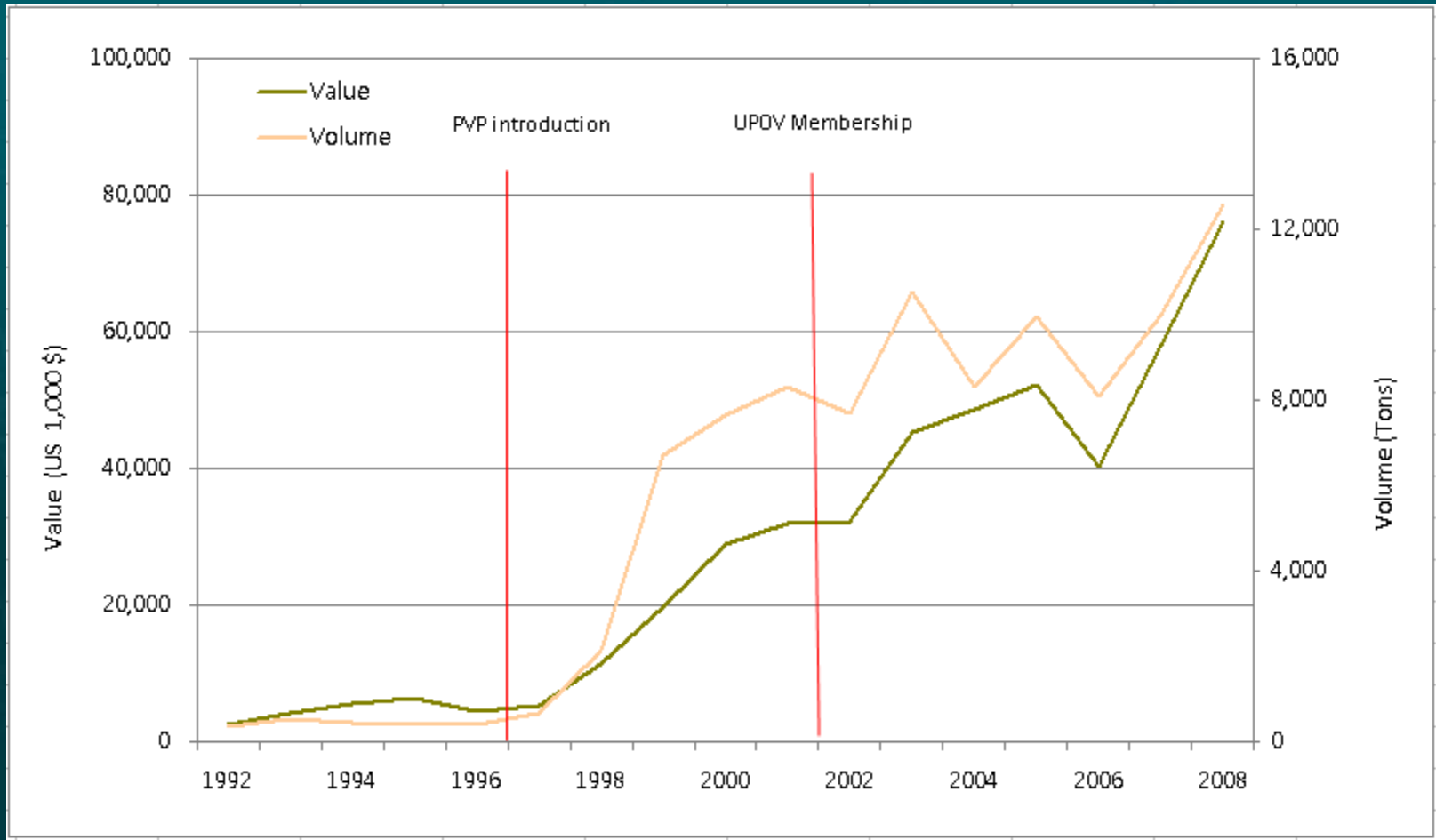
"Little Sun" in Korea
(PBR granted)



Bright red color

※ PBR granted variety can be used in breeding of new variety

Changes of export of ornamentals





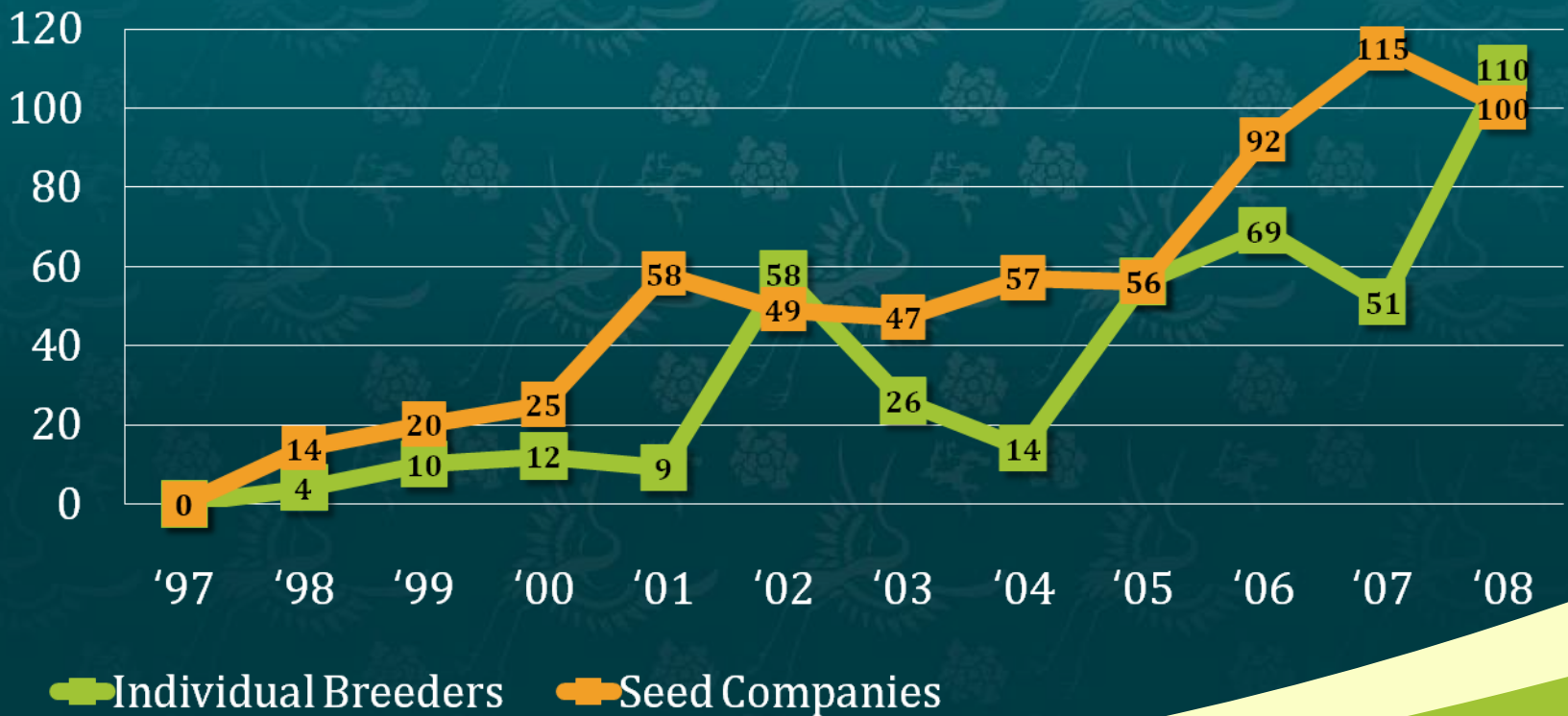
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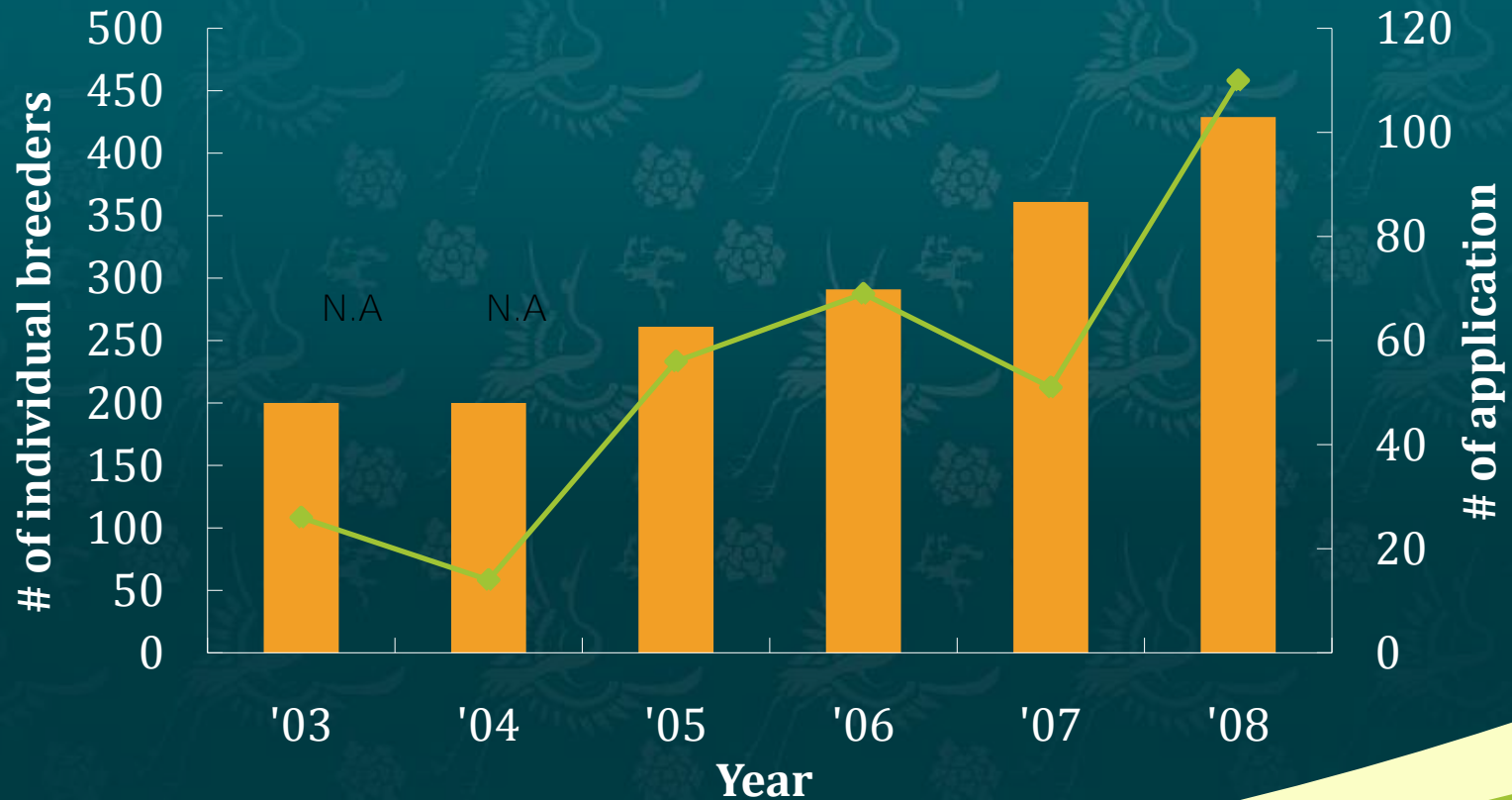
Changes of breeding activity

- Private sector -

◆ Changes of breeding activity in terms of no. of application



Changes in No. of individual breeders and application



Changes of breeding activity

- Public sector -

◆ Changes of breeding activity in terms of no. of application



Governmental investment in breeding

● R&D Matching fund trend in Plant Breeding





III. Other Activities

Efforts for Public Awareness

◆ Korea Top Variety Award

- Award : 3 kinds of prizes
 - Presidential, Prime ministerial, Ministerial prize

◆ Consulting Center for Plant Breeders

- Administrative supports from application to registration of PVP

◆ Korean Variety Exhibition

- Coorganization by the Ministry and KSVS
- Publication of new/diverse domestic plant varieties and the enhancement of consumer's awareness and understanding to breeding/varieties



IV. Summary : Impact of PVP

◆ Increase of PVP application

- Especially remarkable soon after PVP introduction, UPOV accession, increase of the no. of plants eligible for PVP

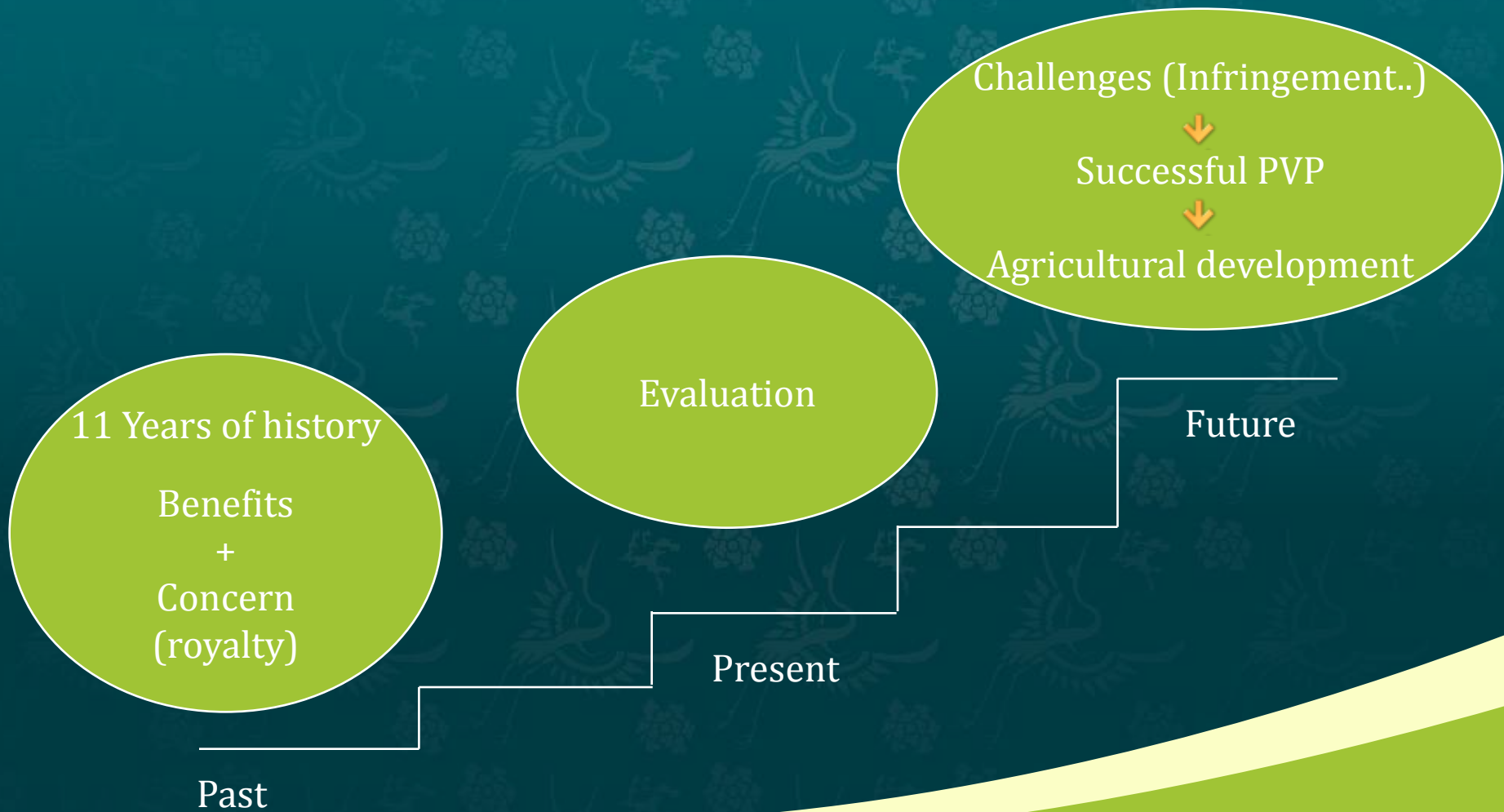
◆ Diversification of varieties or genetic resources

- Utilization of foreign variety as a new breeding material

◆ Encouragement of breeding activities

- especially in private sector

Future direction





Thank you for attention

