Symposium on the Benefits of Plant Variety Protection for Farmers and Growers

The Role of PVP in Improving Incomes for Farmers and Growers

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Vice Secretary-General, UPOV

Geneva, November 2, 2012

Plant Variety Protection: Improving Income for Farmers and Growers

variety **CHOICE**
+ **INFORMATION** on performance
+ **DELIVERY** of good quality planting material
= Opportunities for **ADDED VALUE**
• Choice:
  – New varieties
  – Old varieties
  – Diversity

- Diversity of breeders
- Number of breeders
- Investment in breeding
Welcome

The International Union for the Protection of New Varieties of Plants (UPOV) is an intergovernmental organization with headquarters in Geneva (Switzerland).

UPOV was established by the International Convention for the Protection of New Varieties of Plants. The Convention was adopted inParis in 1961 and it was revised in 1972, 1990 and 1991. To provide and promote an effective system of plant variety protection, with the aim of encouraging the development of new varieties of plants, for the benefit of society.

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UPPOV Lex

OSTHE Database

UPPOV Lex

Fresh Local Database (PLUTO)

News & Upcoming Events

Seminars & Symposia

More items

Seminars & Symposia

Meeting by Topic: Seminars & Symposia

- UPOV/ST2016.1 Symposium on the Benefits of Plant Variety Protection for Farmers and Breeders: Tbilisi, 2-3 November 2016 (Georgia, Republic of)
• Choice:
  – New varieties
  – Old varieties
  – Diversity

Old Varieties

• Access to old, unprotected varieties is not governed by plant breeders’ rights
• A variety must be **NEW** to be eligible for protection
• Only the **BREEDER** of a new variety is entitled to protection
• Choice:
  – New varieties
  – Old varieties
  – Diversity

GENETIC DIVERSITY IN AGRICULTURE:
TEMPORAL FLUX, SUSTAINABLE PRODUCTIVITY AND FOOD SECURITY (GEDIFLUX)

• Project to determine any changes to genetic diversity in past 50 years: barley, wheat, maize, and potato

• Over 500 European winter wheat varieties originating from 1940’s through to 2000 from ten northern European countries.

An EU funded project carried out by the following:

F Leigh1, E Chiapparino1, P Donini1, M Ganal4, J Guard2, H Herrn3, M Hecklenberger3, X-Q Huang5, M van Kaauwen8, E Kochieva8, R Koebner6, J R Ley1, V Le Clerc2, T van der Lee7, G van den Leeden7, L Matschkevall, A E Melchinger3, S Orford6, D O’Sullivan1, J C Reif3, M Röder5, A Schulman7, B Vosman8, C van der Wiel8, M Wolf4, D Zhang2, J C Reeves1

1NIAB, 2GEVES, 3University of Hohenheim, 4TraitGenetics GmbH, 5Institut für Pflanzengenetik und Kulturpflanzenforschung (IPK), 6UMI
7Innex Centre, 8University of Helsinki (UH) and MTT Agrifood Research Finland, 9Plant Research International (PRI).
Techniques for Assessing Diversity (1)

- **Nucleotide Binding Site - Leucine Rich Repeat (NBS-LRR)**

- A DNA profiling approach relying on conserved sequence domains targeting disease resistance (R) genes and analogues (RGA)

- More functional than random markers due to the tight linkage of markers to R genes and R gene clusters which can lead to the mining of novel alleles and resistance

Principle Coordinate Analysis (PCO) was deemed the best graphical representation of the data

Convex hulls then show the extent of divergence

Pre 1960s

1960 - 1970

1970 - 1980

1980 - 1990

1990 - 2000
GENETIC DIVERSITY IN AGRICULTURE:
TEMPORAL FLUX, SUSTAINABLE PRODUCTIVITY AND FOOD
SECURITY (GEDIFLUX)

• No significant loss in wheat genetic
diversity […]

GENETIC DIVERSITY TRENDS IN TWENTIETH CENTURY CROP
CULTIVARS: A META ANALYSIS

• Meta analysis of 44 published papers
• Barley, Flax, Maize, Oat, Pea, Rice, Soybean, Wheat
• Argentina, Brazil, Bulgaria, Canada, Central Europe,
  China, Czech Republic & Slovakia, Developing
countries, Europe, France, Italy, Italy & Spain, Nordic
countries, Nordic & Baltic countries, Serbia, Siberia,
Spain, Republic of Korea, Russian Federation, UK, UK &
Europe, USA, Yugoslavia

Genetic diversity trends in twentieth century crop cultivars: a meta analysis
Mark van de Wouw • Theo van Hintum • Chris Kik • Rob van Treuren • Bert Visser
GENETIC DIVERSITY TRENDS IN TWENTIETH CENTURY CROP CULTIVARS: A META ANALYSIS

Abstract

[…] The meta analysis demonstrated that overall in the long run no substantial reduction in the regional diversity of crop varieties released by plant breeders has taken place. A significant reduction of 6% in diversity in the 1960s as compared with the diversity in the 1950s was observed. Indications are that after the 1960s and 1970s breeders have been able to again increase the diversity in released varieties. Thus, a gradual narrowing of the genetic base of the varieties released by breeders could not be observed. Separate analyses for wheat and the group of other field crops and separate analyses on the basis of regions all showed similar trends in diversity.

Genetic diversity trends in twentieth century crop cultivars: a meta analysis
Mark van de Wouw • Theo van Hintum • Chris Kik • Rob van Treuren • Bert Visser
Dok-Ya-Cheong-Cheong
Resistant to phytophthora blight/virus

Phytophthora blight (Fungal disease):
- above: **Resistant variety**
- below: **Susceptible variety**

Chang Hyun Kim, Second World Seed Conference
• Choice
• Information & Delivery
• Opportunities for Added Value
Seminar on PVP & Technology Transfer: the Benefits of Public-Private Partnership
April 11-12, 2011

Technology Transfer by the Private Sector
Chair: Kitisri Sukhapinda  Conclusions – Session 2

Private sector:

- An effective means of delivering varieties to farmers
- Assessment of the market potential of varieties
- Link between public research and the needs of farmers
- Provides a channel for income for public sector research
- Facilitates strategic associations and coordinated technology transfer

1. Willi Wicki, DSP
2. Barry Barker, Masstock Arable
3. Diego Risso, URUPOV
4. Evans Sikinyi, KY

Chair: Kitisri Sukhapinda
NEW VARIETIES
BREEDERS
NEW VARIETIES
FARMERS, GROWERS
CONSUMERS

INCOME & KNOWLEDGE

DELIVERING IMPROVED VARIETIES TO FARMERS & GROWERS

• Choice
• Information & Delivery

Stephen Smith
Vuyisile Phehane

• Investing to deliver the varieties that farmers and growers need
• Delivering high performance varieties to subsistence/small-holder farmers
• Choice
• Information & Delivery
• Opportunities for Added Value
Opportunities for Added Value

Stephen Mbithi
- The experience of small-holder flower growers in Kenya

Eduardo Baamonde
- Adding value for grower cooperatives

Philippe Toulemonde
- The use of plant variety protection to add value for fruit growers

Oscar Stroschon
- The use of plant variety protection to add value for farmers in Brazil
Plant Variety Protection: 
Improving Income for Farmers and Growers

variety  **CHOICE**  
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= Opportunities for  
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THANK YOU