The development of plant breeding and plant variety protection

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Development of plant breeding and plant variety protection

- The Neolithic Revolution and the domestication of crops.
- The selection of improved cultivars by farmers after domestication.
- The emergence of plant breeding and professional breeders.
- The protection of plant breeders 'right and the 1961 UPOV Convention.
- Some achievements of plant breeding
- Evolution of plant breeding after 1961 and the need for a revision of the Convention.

Decrease of crop diversity during domestication

- 250 000 higher plant species
- 30 000 edible crops
- 7 000 species used for food on regular basis
- 300 species domesticated.

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Preamble of the 1961 Act of the Convention

- The contracting parties “are convinced of the importance attaching to the protection of varieties of plants not only for the development of agriculture in their territories but also for the safeguarding of the interest of the breeders”.

Pedigree of Sonalika wheat

Some achievements of Plant Breeding

- Yield improvement
- Adaptation to new environments
  - maize in northern Europe
  - rapeseed in Australia
  - soybean in equatorial area
- Development of new species: Triticale
- Quality improvement: rapeseed
Comparison of yield performance of rice improved lines and landraces

Evolution of Maize acreage in the Netherlands

Evolution of Soybean acreage in Brazil

Evolution of Triticale acreage at world level
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Objectives of the revision of the Convention

- To strengthen the right of the breeder;
- To extend the practical scope of application of the plant variety protection system;
- To clarify, on the basis of experience, a number of provisions, [...], and to adapt them to the recent and prospective developments.

Main changes in the 1991 Act

- More detailed description of a variety.
- Extension of the protection to all genera and species.
- Extension of the scope of protection.
- Clarification on the use of farm saved seed.
- Introduction of the concept of essential derivation and dependency from an initial variety.

Evolution of the number of species with protected varieties

1981: 80 species
1988: 350 species
2011: 3045 species

Conclusion

Thank you for your Attention