### The development of plant breeding and plant variety protection

Bernard Le Buanec

Symposium on plant breeding for the future

Geneva, October 21, 2011

B. Le Buanec, UPOV Symposium Breeding for the Future, 21/10/2011

### 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.

B. Le Buanec, UPOV Symposium Breeding for the Future, 21/10/2011

2

# 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.

B. Le Buanec, UPOV Symposium Breeding for the Future, 21/10/2011

### 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.

B. Le Buanec, UPOV Symposium Breeding for the Future, 21/10/2011

# 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.

B. Le Buanec, UPOV Symposium Breeding for the Future, 21/10/201

# 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.

B. Le Buanec, UPOV Symposium Breeding for the Future, 21/10/2011

## 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.

B. Le Buanec, UPOV Symposium Breeding for the Future, 21/10/201

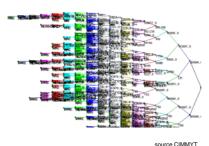
### Preamble of the 1961 Act of the Convention

 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".

for the Future, 21/10/2011

8

### Pedigree of Sonalika wheat



334.65 5.....

## 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.

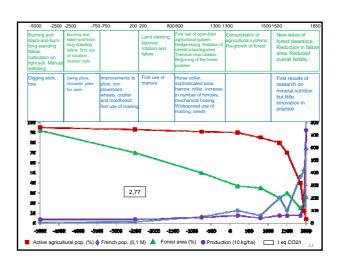
B. Le Buanec, UPOV Symposium Breeding for the Future, 21/10/2011

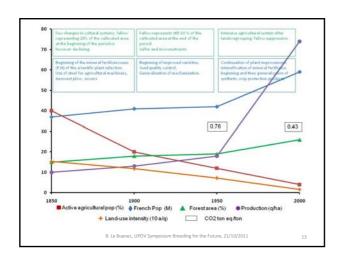
10

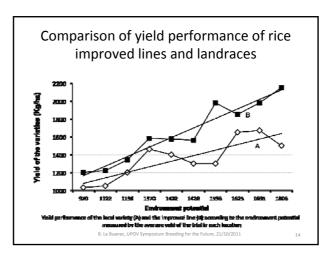
### Some achievements of Plant Breeding

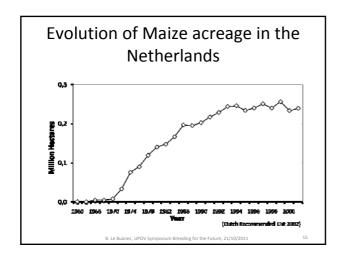
- . Yield improvement
- . Adaptation to new environments
  - -maize in northern Europe
  - -rapeseed in Australia
  - -soybean in equatorial area
- . Development of new species: Triticale
- . Quality improvement: rapeseed

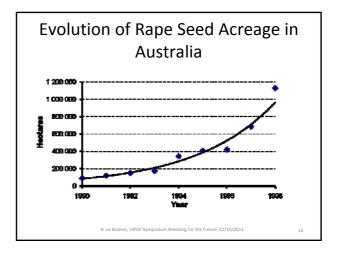
B. Le Buanec, UPOV Symposium Breeding for the Future, 21/10/20

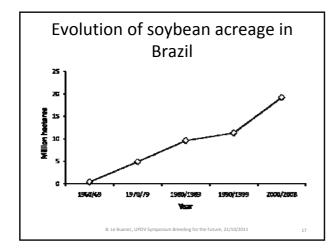


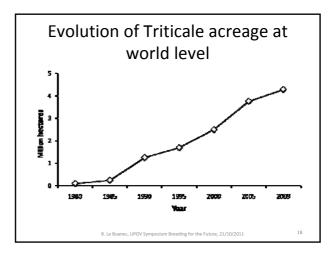












### Development of plant breeding and plant variety protection

- 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.

B. Le Buanec, UPOV Symposium Breeding for the Future, 21/10/2013

### 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.

B. Le Buanec, UPOV Symposium Breeding

20

#### 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.

B. Le Buanec, UPOV Symposium Breeding for the Future, 21/10/2011 21

# Evolution of the number of species with protected varieties

1981: 80 species

1988: 350 species

2011: 3045 species

B. Le Buanec, UPOV Symposium Breeding for the Future, 21/10/2011

Conclusion

B. Le Buanec, UPOV Symposium Breeding for the Future, 21/10/201

Thank you for your
Attention

2