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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

Geneva

TECHNICAL WORKING PARTY ON AUTOMATION AND COMPUTER PROGRAMS

Thirty-Fourth Session
Shanghai, China, June 7 to 10, 2016

MINIMUM NUMBER OF GROWING CYCLES

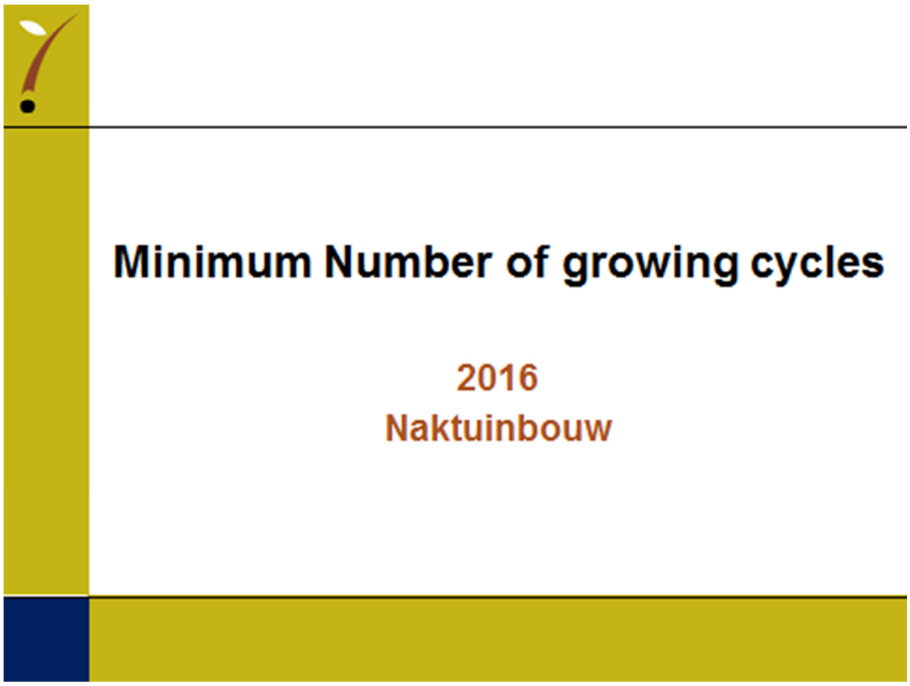
Document prepared by an expert from the Netherlands

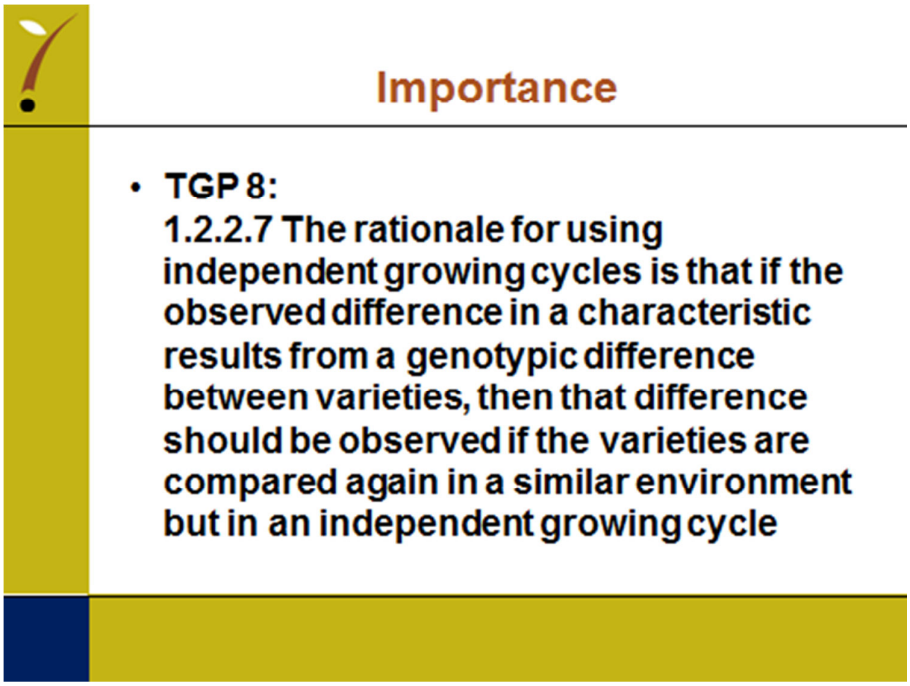
Disclaimer: this document does not represent UPOV policies or guidance

The Annex to this document contains a copy of a presentation on “Minimum Number of growing cycles” that will be made at the thirty-fourth session of the Technical Working Party on Automation and Computer Programs (TWC).

Kees van Ettekoven, Head, Variety Registration Department, Naktuinbouw

[Annex follows]


Minimum Number of growing cycles
2016
Naktuinbouw


Importance
• TGP 8:
1.2.2.7 The rationale for using independent growing cycles is that if the observed difference in a characteristic results from a genotypic difference between varieties, then that difference should be observed if the varieties are compared again in a similar environment but in an independent growing cycle

Importance

- In TGP 8 solely linked to Distinctness
- Also important for high quality stable descriptions!

Number of growing cycles

- Mentioned in TG's based on factors:
  - the number of varieties to be compared in the growing trial,
  - the influence of the environment on the expression of the characteristics, and
  - the degree of variation within varieties,
  - the features of propagation of the variety e.g. whether it is a vegetatively propagated, self-pollinated, cross-pollinated or a hybrid variety.

Independent growing cycles

- When a characteristic is observed in a growing trial in two independent growing cycles, it is generally observed in two separate plantings or sowings.

  However, in some perennial crops, such as fruit trees, the growing cycles take the form of one trial observed in two successive years.

Independent growing cycles

- Two cycles in same place
  - Usually two years to have comparable environment. Two plantings in one place in one year is possible with sufficient time between plantings.
- Two cycles in different places in one year
  - Possible with sufficient distance between places, but risk to introduce new variation

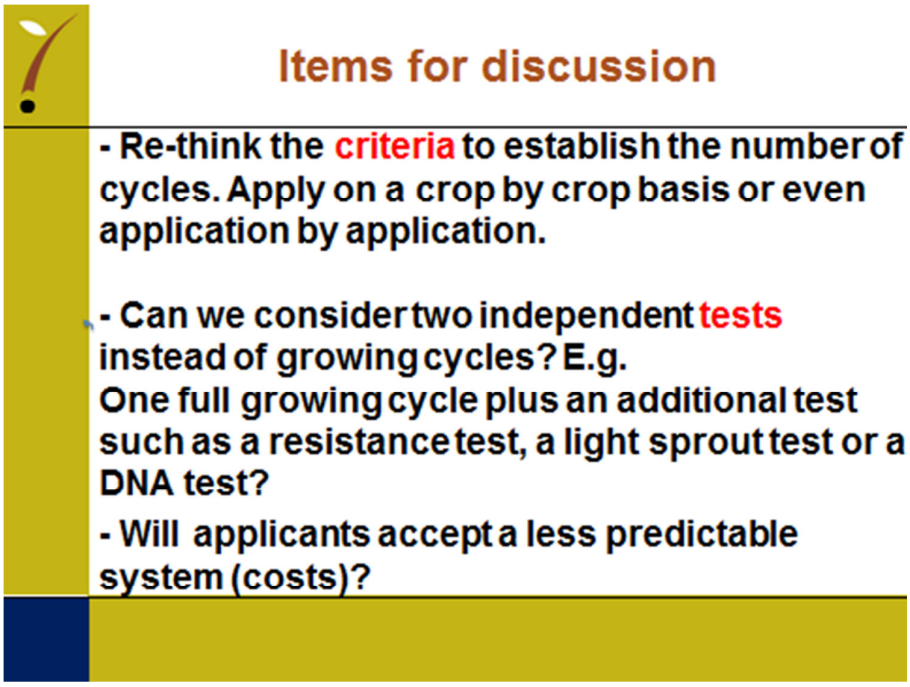
Practice

- Roughly the present UPOV practice:

- Seed propagated agricultural and vegetable crops: two independent growing cycles
- Fruit crops: two independent growing cycles
- Vegetatively propagated ornamentals: one growing cycle

Full growing cycles?

- Bolting characteristics in separate trial once, also for crops with two cycles
- Disease resistant tests in separate trial once, also for crops with two cycles
- Some additional tests as Light Sprout tests in potato separate from normal growing trial
- Can DNA test replace one year of growing trial?



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