


**Variety collections**  
-  
**Harmonised DNA  
databases**

Bert Scholte  
Department Variety Testing

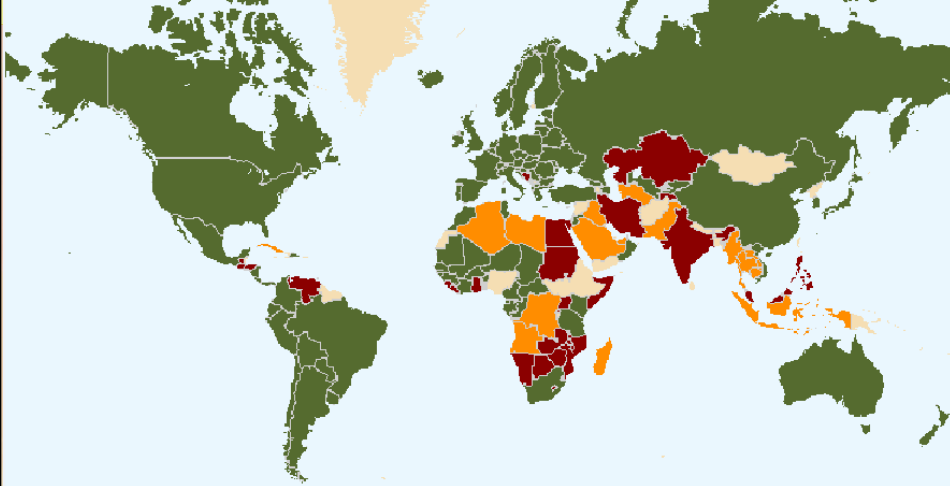


**TGP/4**

**DOCUMENT TGP/4**  
Constitution and maintenance of variety collections.

Article 7 UPOV1991  
“a variety shall be deemed to be distinct if it is clearly distinguishable from any other variety whose existence is a matter of common knowledge at the time of the filing of the application.”

## UPOV status



Members of UPOV (74) covering 93 States

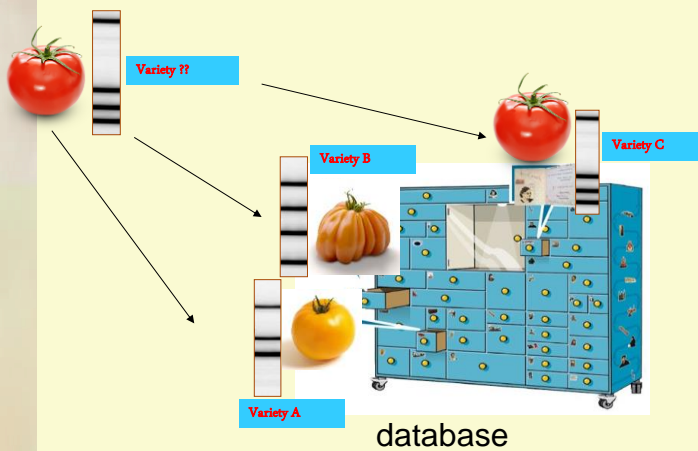
Initiating States (16) and Organization (1)

States (24) and Organization (1) in contact with the UPOV Office

The boundaries shown on this map do not imply the expression of any opinion whatsoever on the part of UPOV concerning the legal status of any country or territory

## Databases

- Crop-specific databases



## Variety collections - Now



Code	Naam	Land	Soort
1	...	...	...
2	...	...	...
3	...	...	...
4	...	...	...
5	...	...	...
6	...	...	...
7	...	...	...
8	...	...	...
9	...	...	...
10	...	...	...



nak  tuinbouw

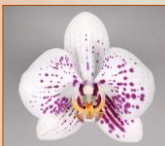
### Different databases

- Variety descriptions
- Photo's
- DNA profiles
  - AFLP
  - SSR
  - SNP
- Combined databases
  - Phenotypic + DNA (Potato, Roze, Tomato)

## Variety collections - Now



Code	Naam	Land	Soort
1	...	...	...
2	...	...	...
3	...	...	...
4	...	...	...
5	...	...	...
6	...	...	...
7	...	...	...
8	...	...	...
9	...	...	...
10	...	...	...



nak  tuinbouw

### Some examples

#### Joint (CPVO) phenotypic databases

- Maize / Peach

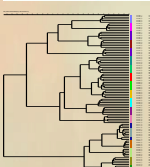
#### Difficulties in cooperation



## Variety collections – In the future



```
00T0AGAGCATATCCAACTTTCTTCTTAGCTGGG
00T0AGAGCATATCCAACTTTCTTCTTAGCTGGG
00G0AGAGCATATCCAACTTTCTTCTTAGCTGGG
00G0AGAGCATATCCAACTTTCTTCTTAGCTGGG
00T0AGAGCATATCCAACTTTCTTCTTAGCTGGG
00T0AGAGCATATCCAACTTTCTTCTTAGCTGGG
00T0AGAGCATATCCAACTTTCTTCTTAGCTGGG
00T0AGAGCATATCCAACTTTCTTCTTAGCTGGG
00T0AGAGCATATCCAACTTTCTTCTTAGCTGGG
00T0AGAGCATATCCAACTTTCTTCTTAGCTGGG
00T0AGAGCATATCCAACTTTCTTCTTAGCTGGG
00T0AGAGCATATCCAACTTTCTTCTTAGCTGGG
00T0AGAGCATATCCAACTTTCTTCTTAGCTGGG
00T0AGAGCATATCCAACTTTCTTCTTAGCTGGG
00T0AGAGCATATCCAACTTTCTTCTTAGCTGGG
00T0AGAGCATATCCAACTTTCTTCTTAGCTGGG
00T0AGAGCATATCCAACTTTCTTCTTAGCTGGG
00T0AGAGCATATCCAACTTTCTTCTTAGCTGGG
00T0AGAGCATATCCAACTTTCTTCTTAGCTGGG
```



nak tuinbouw

Harmonised Crop databases – DNA

Constraints

- Serious investment needed
  - Selection appropriate marker set
  - DNA Profiling existing variety collections
- Choices to be made
  - Setting up an own / joined database
  - Make use of existing databases at a cost

*Quality in Horticulture*