UPOV

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ADDENDUM TO POSSIBLE EFFECT ON UNIFORMITY DECISIONS BETWEEN APPROACH 3 AND OTHER APPROACHES IN DOCUMENT TWP/1/17 "ASSESSING UNIFORMITY BY OFF-TYPES ON THE BASIS OF MORE THAN ONE GROWING CYCLE OR ON THE BASIS OF SUB-SAMPLES"

Document prepared by the Office of the Union

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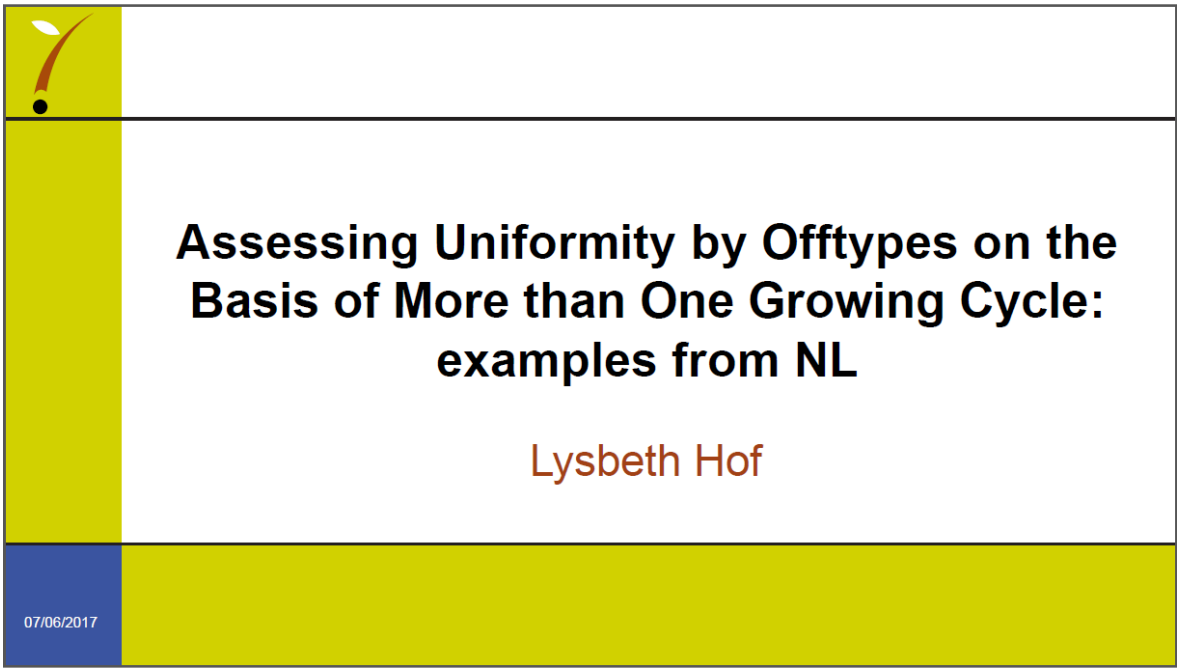
The Annex to this document contains a copy of a presentation on "Assessing Uniformity by Off-types on the basis of more than one Growing Cycle: examples from the Netherlands", prepared by an expert from the Netherlands, to be made at the forty-sixth session of the Technical Working Party for Agricultural Crops (TWA).

[Annex follows]

ANNEX

ASSESSING UNIFORMITY BY OFF-TYPES ON THE BASIS OF MORE THAN ONE GROWING CYCLE: EXAMPLES FROM THE NETHERLANDS

Presentation prepared by an expert from the Netherlands



Overview approaches

Summary of the three approaches:

- Approach 1: Third growing cycle in case of inconsistent results
- Approach 2: Combining the results of two growing cycles in the case of inconsistent results
- Approach 3: Combining the results of two growing cycles
  - *A variety may be rejected after a single growing cycle if the number of offtypes exceeds the number of allowed offtypes for the combined sample (over two cycles)*

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Case 1: Tomato Variety A

Crop: Tomato Variety A
Population standard 1%, Acceptance Prob. ≥ 95%
Sample size per growing cycle = 20
Maximum number of offtypes per growing cycle = 1
Maximum number of offtypes growing cycle 1 and 2 combined (n=40) = 2

Number of offtypes per growing cycle			Decision		
First	Second	Third	Approach 1	Approach 2	Approach 3
3	0	0	third cycle: => uniform	non-uniform	non-uniform*

*With the current wording of document TWP/1/17 (particularly approach 3) the variety could/would have been rejected after 1st growing cycle!

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Case 2: Tomato Variety B

Crop: Tomato Variety B
Population standard 1%, Acceptance Prob. ≥ 95%
Sample size per growing cycle = 20
Maximum number of offtypes per growing cycle = 1
Maximum number of offtypes growing cycle 1 and 2 combined (n=40) = 2

Number of offtypes per growing cycle			Decision		
First	Second	Third	Approach 1	Approach 2	Approach 3
3	1	4	third cycle: => non-uniform	non-uniform	non-uniform

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Comparing Variety A and Variety B

- Both in Variety A and in Variety B the number of offtypes in the first growing cycle was 3 (non-uniform)
- In Variety A, approach 1 eventually lead to decision 'uniform' after 3 growing cycles, and in Variety B the final decision after 3 growing cycles was non-uniform
- In Variety A, the current wording of the document (TWP/1/17) could/would have resulted in a rejection after the first growing cycle. In retrospect a 'wrong' decision?
- Early decisions, based on small deviations from the allowable number of offtypes, can be premature and are risky

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Example from UPOV document TWP/1/17

Population standard 1%, Acceptance Prob. ≥ 95%
Sample size per growing cycle = 50
Maximum number of offtypes per growing cycle = 2
Maximum number of offtypes growing cycle 1 and 2 combined (n=100) = 3

Number of offtypes per growing cycle			Decision		
First	Second	Third	Approach 1	Approach 2	Approach 3
2	2	-	uniform	uniform	non-uniform

This example illustrates the pitfall of approach 3. It considers the variety non-uniform, while it is considered uniform in both separate cycles!

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Conclusions

- The number of allowed off-types in a sample is sometimes small. This increases the risk of a 'wrong' decision: one offtype more or less could lead to a different decision
- In approach 3, the allowed number of offtypes of the combined cycles can be smaller than the sum of allowed offtypes of both cycles (see example previous slide). This may lead to a 'questionable' decision
- Decisions on non-uniformity should only be made when cases are clear. In case of doubt: the benefit should be for the applicant.

- Naktuinbouw has decided to use approach 1, as with this approach the chance of a 'wrong' decision seems smallest

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[End of Annex and of document]