| **Working Group on Variety Denominations** | **UPOV/WG-DEN/6/3** |
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| **Sixth Meeting**<br>**Geneva, October 29, 2019** | **Original:** English<br>**Date:** October 18, 2019 |

## UPOV DENOMINATION SIMILARITY SEARCH TOOL

*Document prepared by the Office of the Union*

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1.      The purpose of this document is to report on developments concerning a UPOV denomination similarity search tool.

2.      The background of this matter is provided in document UPOV/WG-DEN/2/3 "UPOV denomination similarity search tool".

3.      The Working Group on Variety Denominations (WG-DEN), at its fifth meeting, held in Geneva, on October 30, 2018, agreed that the Office of the Union should restart its work to explore possibilities to improve the UPOV Denomination Similarity Search Tool in conjunction with the Community Plant Variety Office of the European Union (CPVO) (see document UPOV/WG-DEN/5/3 "Report", paragraph 28).

4.      The CPVO algorithm is a rule-based algorithm and has provided efficient results. Nevertheless, CPVO has reported to the Office of the Union that there may be some possibilities to improve the results of the algorithm.

5.      The Office of the Union has consulted WIPO machine-learning experts in order to explore the possibility of using machine-learning techniques in conjunction with the CPVO algorithm to maximize the efficiency of UPOV denomination similarity tool.

6.      The use of machine-learning techniques requires the following:

- large number of real cases where the denomination has been rejected. Data from the Pluto DB can be used but will not be sufficient.
- reasons why a denomination is rejected should be structured in the form of checkboxes.
- problem to be solved needs to be clearly identified.

7.      The machine-learning solution will try to address some specific defects of the CPVO rule-based algorithm.

8.      CPVO has agreed to share information on denomination rejections with the reasons why denominations were rejected, in a structured format. A meeting will be organized by the Office of the Union with CPVO and machine-learning experts in November 2019.

9.      The Office of the Union will present any further developments on this matter at the sixth meeting of the WG-DEN.

*10.      The WG-DEN is invited to note the information provided in this document and to note that the Office of the Union will present further developments concerning a UPOV denomination similarity search tool at its sixth meeting.*

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