E

TWC/25/18
ORIGINAL: English
DATE: August 22, 2007

UPOV

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS
GENEVA

TECHNICAL WORKING PARTY ON AUTOMATION AND COMPUTER PROGRAMS

Twenty-Fifth Session
Sibiu, Romania, September 3 to 6, 2007

POPULATION STANDARDS USED FOR ASSESSING UNIFORMITY BY OFF-TYPES

Document prepared by experts from Germany, the United Kingdom and the Office of the Union

1. At its twenty-second session, held in Tsukuba, Japan, from June 14 to 17, 2004, the Technical Working Party on Automation and Computer Programs (TWC) agreed to produce a questionnaire to seek information on population standards used in the assessment of uniformity by off-types, in particular when tests from more than one year were used.

2. A first proposal for such a questionnaire was presented in document TWC/23/14 and discussed at the twenty-third session of the TWC, held in Ottawa in 2005. Comments from participants of the TWC meeting and from subsequent discussions with crop experts led to a new draft of the questionnaire which is presented in the annex to this document.

ANNEX

Population standards used for assessing uniformity by off-types

Please complete the following tables and return to UPOV by e-mail to upov.mail@upov.int:

Country/Organization:	
Person completing the form	
Name:	
E-mail:	
Tel. No.:	
Fax No.:	

The acceptable number of off-types tolerated in samples of various sizes is often based on a fixed "population standard" and "acceptance probability". The "population standard" is the maximum percentage of off-types to be accepted if all individuals of the variety could be examined. The "acceptance probability" is the minimum probability of accepting a variety with the population standard of off-types.

The UPOV Test Guidelines recommend for a particular type(s) of variety a general, i.e. "fixed", population standard and acceptance probability and provide the maximum acceptable number of off-types for an appropriate sample size. However, in some cases, the proportion of off-types in a variety may be assessed in more than one sample (e.g. one growing cycle and more than one sample per growing cycle, one sample per growing cycle with two growing cycles, etc.). Some of the possible situations are described in document TGP/10 draft 7 Examining Uniformity, Section 6: Combining all observations on a variety.

Various strategies are possible to combine the results from samples, including sequential testing. In such cases, clear decision rules need to be defined for the varieties concerned.

This survey is intended to collect information on how uniformity is assessed by off-types for such cases. Information is requested on the general approach for combining results from samples for individual crops/species and it is not necessary to describe exceptional situations.

.

An example for wheat is given in the following table:

Species	Number of growing cycles	Sample size	Population standard (%)	Acceptance probability (%)	Maximum number of off-types	Further rules	Decision rule
Wheat	2/3	2000	0.1	95	5		A variety is accepted if in 2 out of 3 years the uniformity standard is met in all samples (see also TGP/10, section 6.3).
	2/3	100	1.0	95	3	For characteristics observed in a sample of 100 plants, uniformity can be tested in 2 steps as follows: In a first step, 20 plants are observed. No off-type in 20 = uniform. More than 3 off-types = not uniform. 1 to 3 off-types = second step: observation of further 80 plants.	

[End of Annex and of document]