



TWV/49/30 Add.
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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS
Geneva

TECHNICAL WORKING PARTY FOR VEGETABLES

Forty-Ninth Session
Angers, France, June 15 to 19, 2015

ADDENDUM TO

NEW ISSUES ARISING FOR DUS EXAMINATION

Document prepared by the Office of the Union

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1. The Annexes to this document contain the following presentations made at the forty-ninth session of the Technical Working Party for Vegetables (TWV):

ANNEX I CPVO Collaborative R&D Project - "Effect of seed Priming on vegetable DUS tests" (European Union)

ANNEX II Photos in the variety collection (Netherlands)

[Annexes follow]

ANNEX I



CPVO
Community Plant Variety Office

TWW/49 Session

CPVO Collaborative R&D Project

"Effect of seed Priming on vegetable DUS tests"


Angers, 15-19 June 2015

Aim of R&D project
"Effect of seed priming on vegetable DUS tests"

➤ Applicants wished to provide primed seed for DUS test

Analyse the effect of seed priming on the outcome of the DUS test for two pilot vegetable species (eggplant, tomato rootstocks) in nominated entrusted examination offices within the EU


- ✓ R&D project proposed at CPVO's 2013 vegetable experts' meeting and approved by CPVO President in March 2014.
- ✓ Cost of project: € 62,400 for one year, 100% CPVO funded



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Partners involved in R&D project


- ❖ CPVO (coordinator)
- ❖ Natkuintbouw (NL): eggplant + tomato rootstocks
- ❖ GEVES (FR): eggplant
- ❖ OEVV/INIA (ES): tomato rootstock
- ❖ ESA



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Technical details of R&D project


- 3 Varieties per species, delivered as primed and unprimed seed lots:
 - Eggplant: 'Adele', 'Brigitte', 'Dalia'
 - Tomato rootstock: 'He-Man', 'Protector', 'Unifort',
- Duplicate DUS tests for one year using CPVO protocols:
 - TP-117/1: Eggplant
 - TP-44/4: Tomato
 - TP-294/1: Tomato rootstock



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Technical details of R&D project

- Special attention to be given to characteristics which may be influenced by the germination rate of seed sample (e.g. vigor, time of harvest maturity, etc.)
- Related study on gemination rates of primed/unprimed seed samples for reference collection purposes
 - ❖ 2nd germination test after six months
- CPVO to compile results from each partner examination office and conclude on study in 2015




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Preliminary Partner results

Naktuinbouw (NL) (tomato rootstock + eggplant)

- Trials carried out according to plan on both sets of species based upon prescribed methodology
- Better start for seedlings primed seed lots, but seedlings for non-primed seed lots then caught up
- Morphological characteristics in CPVO protocol for both species were unaffected by priming process
- Slight variations in symptoms for some disease resistance characteristics in one tomato rootstock variety
- No germination loss for any sample after 6 months, but faster germination in some primed samples of tomato rootstocks



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Preliminary Partner results

OEVV/INIA (ES) (tomato rootstock)

- Trials carried out according to plan on both sets of species based upon prescribed methodology
- Better start for seedlings in 2 out of 3 primed seed lots, but seedlings for non-primed seed lots then caught up
- Expression of morphological characteristics in CPVO tomato & tomato rootstocks protocol were unaffected by priming process
- Slight difference in uniformity for Fusarium oxysporum race 2 (ex 3) in one tomato rootstock variety
- No germination loss for any sample after 6 months



TWV/49

7

Preliminary Partner results

GEVES (FR) (eggplant)

- Trials carried out according to plan on both sets of species based upon prescribed methodology
- Faster seedling emergence in all 3 primed seed lots, but seedlings for non-primed seed lots then caught up
- Expression of morphological characteristics in CPVO eggplant protocol were unaffected by priming process
- No disease resistance characteristics in testing protocol
- After 6 months, faster seedling emergence in all 3 primed seed lots, and decrease in germination for one non-primed seed lot
- GEVES expressed reservations in using primed seed samples for DUS test



TWV/49

8



...will primed seed samples be allowed for DUS tests?

- *Report being drawn up, its conclusions to be analysed by project partners in second half 2015*



TWV/49

9

THANK
YOU



TWV/49



10

[Annex II follows]




The aim of photos in the variety collection

- Supporting the variety collection
- Useful for:
 - Searching for similar varieties
 - Reporting
 - Registration and documentation of problems/ diseases...

“A picture is worth a thousand words”

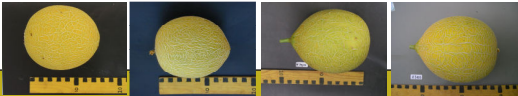
Photography for vegetable crops



- Minimum rules for a vegetable picture:
 - Use the whole screen
 - Label
 - Ruler
 - Exposure

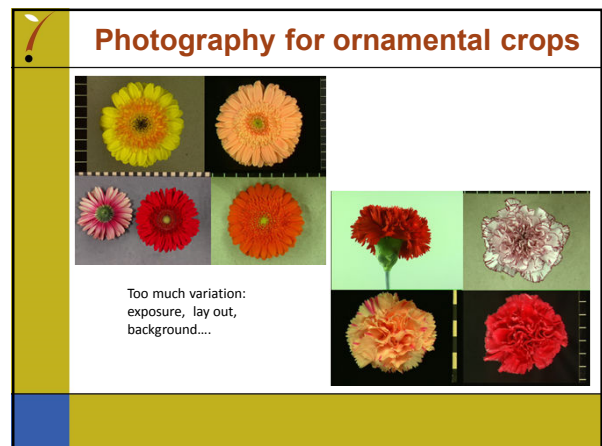
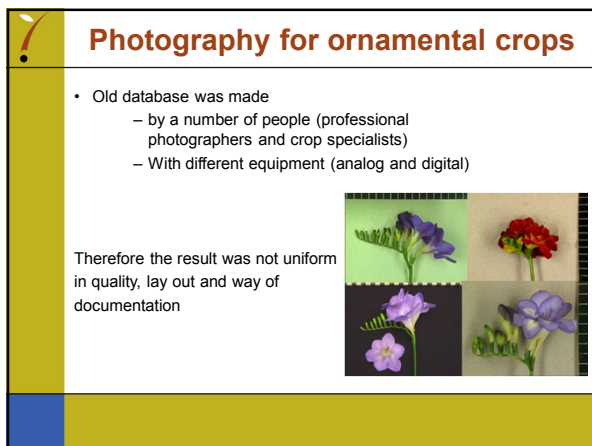
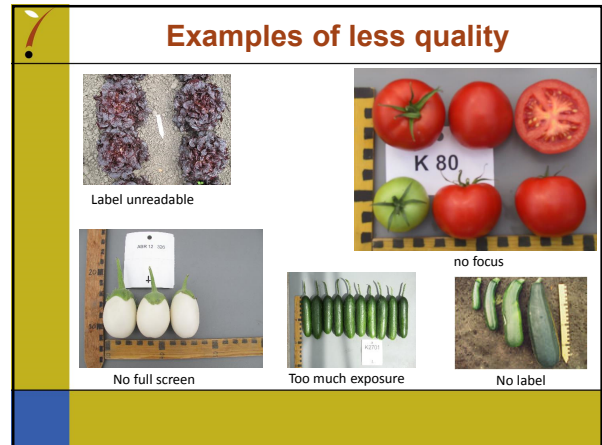
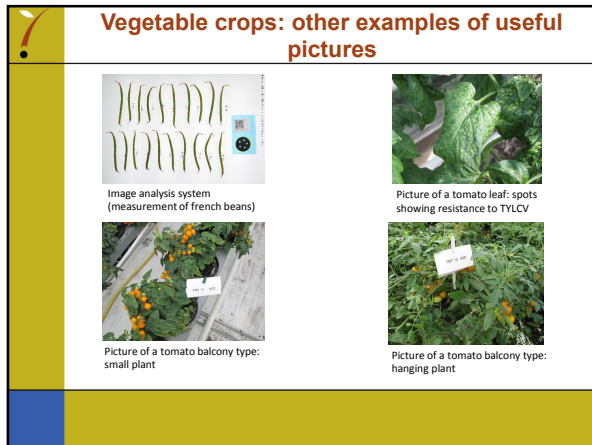
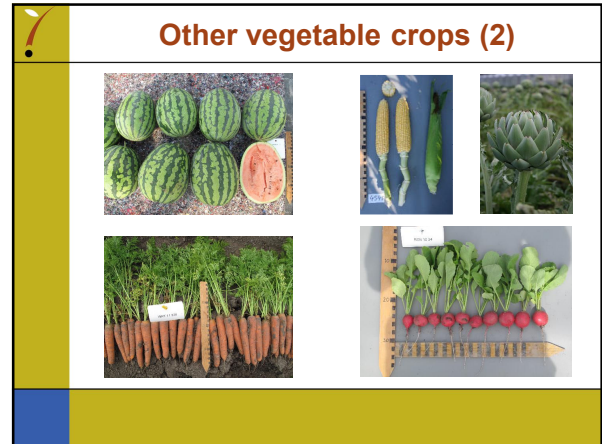
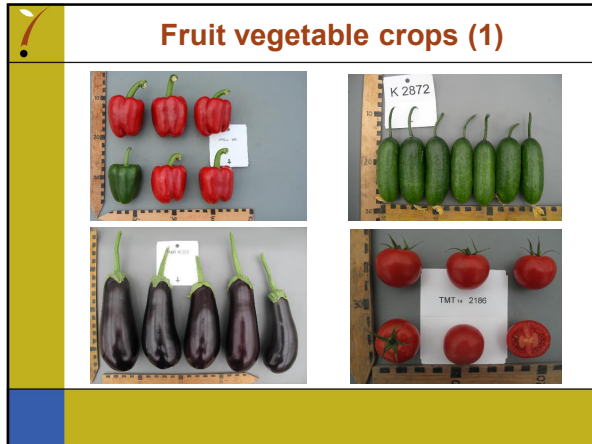
Criteria and recommendations for taking photographs

- See also TG Template: GN 35
- The choice of the plants for the photo requires knowledge of the species and varieties
- Not only a photo of the candidate, but also of the similar varieties in the same trial
- Preferably a photo every growing cycle
- Standardise the lay-out




Leaf vegetable crops






Photography for ornamental crops

- That's why rules have been defined in which way the photos have to be taken
- These rules are adapted to each crop and laid down in photo-protocols



Photography for ornamental crops


Example of a photo-protocol



Photography for ornamental crops



The photo-protocol contains:

- 1: administrative data (project number, crop expert)
- 2: what to photograph (plant, leaf and/or flower)
- 3: moment to photograph (development of object)
- 4: lay out of the picture (composition)
- 5: presence of a ruler (yes or no and where)
- 6: illumination (photo lamps, flash, daylight)
- 7: background (color, on location)
- 7: setting of white balance (preset, daylight, flash)
- 8: code in database (file name)




Photography for ornamental crops

Photo studio



Examples of ornamental crops



Examples of ornamental crops

The pictures are stored in the database as JPEG files of high quality and low compression

The code of documentation is based on:

- **crop code:** 3 letters in capital
- **variety number** or **variety name**
- **and year of the trial**

