|  |  |
| --- | --- |
|  | E |
| International Union for the Protection of New Varieties of Plants |  |

|  |  |
| --- | --- |
| Technical Working Party for Vegetables  Fifty-Seventh Session Antalya, Türkiye, May 1 to 5, 2023 | TWV/57/13  Original: English  Date: March 24, 2023 |

Partial revision of the Test Guidelines for PEA

Document prepared by an expert from the Netherlands

Disclaimer: this document does not represent UPOV policies or guidance

The purpose of this document is to present a proposal for a partial revision of the Test Guidelines for Pea (document TG/7/10 Rev. 2).

The Technical Working Party for Vegetables (TWV), at its fifty-sixth session[[1]](#footnote-2), agreed that the Test Guidelines for Pea (*Pisum sativum* L.) be partially revised (see document TWV/56/22 “Report”, Annex II).

The following changes are proposed:

1. Addition of new characteristic “Resistance to *Peronospora viciae* (Pv)” (downy mildew)
2. Addition of new explanation Ad. 61 “Resistance to *Peronospora viciae* (Pv)”
3. Addition of new characteristic “Resistance to *Peronospora viciae* (Pv)” to Chapter TQ 7

The proposed changes are presented below in highlight and underline (insertion) and ~~strikethrough~~ (deletion).

Proposed addition of new characteristic “Resistance to Peronospora viciae (Pv)”

|  |  | English | français | deutsch | español | Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo | Note/ Nota |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 61.  (+) | VG | Resistance to *Peronospora viciae* (Pv) | Résistance à *Peronospora viciae* (Pv) | Resistenz gegen *Peronospora viciae* (Pv) | Resistencia a *Peronospora viciae* (Pv) |  |  |
| QL |  | absent | absente | fehlend | ausente | Bingo | 1 |
|  |  | present | présente | vorhanden | presente | Idalgo | 9 |

Proposed addition of new explanation “Ad. 61 “Resistance to *Peronospora viciae* (Pv)”

Ad. 61: Resistance to *Peronospora viciae* (Pv)

|  |  |  |
| --- | --- | --- |
| 1. | Pathogen | *Peronospora viciae* f.sp*. pisi* |
| 2. | Quarantine status | no |
| 3. | Host species | Pea – *Pisum sativum* L. |
| 5. | Isolate | Available at Naktuinbouw |
| 6. | Establishment isolate identity | On resistant control variety |
| 7. | Establishment pathogenicity | On susceptible control variety |
| 8. | Multiplication inoculum |  |
| 8.1 | Propagation medium | Susceptible variety |
| 8.2 | Propagation variety | Bingo or other susceptible variety |
| 8.3 | Stage plant at inoculation | 2-3 true leaves |
| 8.4 | Inoculation medium | Cold tap water |
| 8.5 | Inoculation method | Spray spore |
| 8.6 | Harvest of inoculum | Sporulating leaves and tendrils in a centrifuge tube. Add 40 ml of tap water and vortex for 1 minute at +/- 2400 RPM. Sieve spore suspension through cheesecloth. |
| 8.7 | Control harvested inoculum | count spores |
| 9. | Trial duration | Day Action  0 sowing  14 inoculate  24 1st assessment  24-28 final assessment |
| 9.1 | Total number of plants | 35 seeds, min. 20 plants |
| 9.2 | Number of repetitions | no repetition |
| 9.3 | Control varieties | Susceptible control: Bingo  Resistant control: Idalgo |
| 9.5 | Test facility | Climate chamber |
| 9.6 | Temperature | 13°C D/N |
| 9.7 | Light | 13 hours light 8.000-10.000 Lux |
| 9.8 | Season | year round |
| 10. | Inoculation |  |
| 10.1 | Preparation inoculum | See 8.6 |
| 10.2 | Quantification inoculum | Minimum 1 x 105 and maximum 5 x 105 spores/ml |
| 10.3 | Plant stage at inoculation | Cotyledon stage |
| 10.4 | Inoculation method | Spray spore suspension |
| 10.5 | 1st assessment | 10 days after inoculation |
|  | 2nd assessment | 14 days after inoculation |
| 10.6 | Final evaluation | 10 to 14 days after inoculation |
| 11. | Observations |  |
| 11.1 | Method | Visual |
| 11.2 | Observation scale | Class 1: No symptoms  Class 2: Local necrosis  Class 3: Limited sporulation with local necrosis  Class 4: Strong sporulation on the leaf and/or tendrils  Class 5: Strong sporulation on the leaf, tendrils and stem |
| 11.3 | Validation of the test | Validation using the standards. |
| 12 | Interpretation | Class 1 and 2 lead to interpretation [9] present  Class 3, 4 and 5 lead to interpretation [1] absent |

[End of document]

1. organized by electronic means, from April 18 to 22, 2022 [↑](#footnote-ref-2)