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

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| Technical Working Party for Vegetables  Fifty-Third Session Seoul, Republic of Korea, May 20 to 24, 2019 | TWV/53/6  Original: English  Date: April 9, 2019 |

Partial revision of the Test Guidelines for Vegetable Marrow, Squash

Document prepared by experts from France

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 Vegetable Marrow, Squash (document TG/119/4 Corr. 2).

The Technical Working Party for Vegetables (TWV), at its fifty-second session, held in Beijing, China, from September 17 to 21, 2018, agreed that the Test Guidelines for Vegetable Marrow, Squash (document TG/119/4 Corr. 2) be partially revised to add new Characteristic “Resistance to ZYMV” (see document TWV/52/20 “Report”, Annex V).

The following changes are proposed:

1. Addition of a new Characteristic “Resistance to *Zucchini yellow mosaic virus* (ZYMV)” at the end of the Table of Characteristics
2. Addition of an explanation for the new Characteristic “Resistance to *Zucchini yellow mosaic virus* (ZYMV)” in Chapter 8.2 “Explanations for individual characteristics”

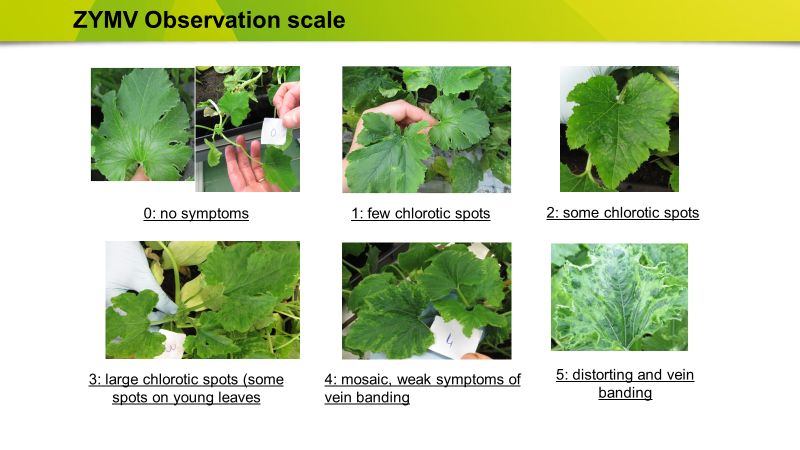
## Proposal to add a new Characteristic “Resistance to *Zucchini yellow mosaic virus* (ZYMV)” at the end of the Table of Characteristics

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|  | English | français | Deutsch | español | Example Varieties Exemples Beispielssorten Variedades ejemplo | Note/ Nota |
| **82**. | Resistance to *Zucchini yellow mosaic virus* (ZYMV) | **Resistance au *Zucchini yellow mosaic virus* (ZYMV)** | **Resistenz gegen *Zucchini yellow mosaic virus* (ZYMV)** | **Resistencia a *Zucchini yellow mosaic virus* (ZYMV)** |  |  |
|  | susceptible | sensible | anfällig | sensible | Cora | 1 |
|  | intermediate resistant | modérément résistante | mäßig resistent | moderadamente resistente | Mirza | 2 |
|  | resistant | résistante | resistent | resistente | Mikonos | 3 |

Proposal to add an explanation for the new Characteristic “Resistance to Zucchini yellow mosaic virus (ZYMV)” in Chapter 8.2 “Explanations for individual characteristics”

Ad. 82: Resistance to *Zucchini yellow mosaic virus* (ZYMV)

|  |  |  |
| --- | --- | --- |
| 1. | Pathogen | *Zucchini yellow mosaic virus* (ZYMV) |
| 2. | Quarantine status | No |
| 3. | Host species | *Cucurbita pepo* L. |
| 4. | Source of inoculum | GEVES[[1]](#footnote-2) (FR) |
| 5. | Isolate | e.g. strain E9 |
| 6. | Establishment isolate identity | - |
| 7. | Establishment pathogenicity | Symptoms on susceptible squash variety |
| 8. | Multiplication inoculum |  |
| 8.1 | Multiplication medium | Living plant |
| 8.2 | Multiplication variety | e.g. Cora |
| 8.3 | Plant stage at inoculation | - |
| 8.4 | Inoculation medium | - |
| 8.5 | Inoculation method | - |
| 8.6 | Harvest of inoculum | - |
| 8.7 | Check of harvested inoculum | - |
| 8.8 | Shelflife/viability inoculum | - |
| 9. | Format of the test |  |
| 9.1 | Number of plants per genotype | At least 20 |
| 9.2 | Number of replicates | At least 2 |
| 9.3 | Control varieties | Susceptible : Cora  Intermediate resistant: Mirza  Resistant: Mikonos  *Up to now, no complete resistance is identified. The two intermediate and resistant controls are necessary to validate the agressiveness of the test.* |
| 9.4 | Test design | add non inoculated plants |
| 9.5 | Test facility | Climatic room or greenhouse |
| 9.6 | Temperature | e.g. 22°C or 24°C/18°C |
| 9.7 | Light | 12h-16h |
| 9.8 | Season |  |
| 9.9 | Special measures | - |
| 10. | Inoculation |  |
| 10.1 | Preparation inoculum | 1 g leaf with symptoms with 4 mL of PBS with carborundum (400 mg) and activated carbon (400 mg) or similar buffer, homogenize |
| 10.2 | Quantification inoculum | - |
| 10.3 | Plant stage at inoculation | First expanded leaf |
| 10.4 | Inoculation method | Rubbing with virus suspension |
| 10.5 | First observation | 14 days post-inoculation |
| 10.6 | Second observation | - |
| 10.7 | Final observations | 21 days post-inoculation |
| 11. | Observations |  |
| 11.1 | Method | Visual observation |
| 11.2 | Observation scale | Class 0: no symptoms  Class 1: few chlorotic spots  Class 2: some chlorotic spots  Class 3: large chlorotic spots (some spots on young leaves)  Class 4: mosaic, weak symptoms of vein banding  Class 5: distorting and vein banding |
| 11.3 | Validation of test | Results should be compared with results of controls and are depending of the aggressiveness of the test and the distribution of the plants over the categories. |
| 11.4 | Off-types | - |
| 12. | Interpretation of data in terms of UPOV characteristic states | Classes 0, 1 are commonly judged as resistant – Note 3  Classes 2, 3 are commonly judged as intermediate resistant – Note 2  Classes 4 and 5 are commonly judged as susceptible – Note 1 |
| 13. | Critical control points | Recommended dates of notation should be adapted depending on expression of symptoms on controls.  Environmental conditions can have an effect on the expression of symptoms over time. In this case a second notation could be necessary. |



[End of document]

1. matref@geves.fr [↑](#footnote-ref-2)