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

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| Technical Working Party for Fruit Crops  Fifty-Third Session Virtual meeting, July 11 to 15, 2022 | TWF/53/9  Original: English  Date: June 10, 2022 |

Partial revision of the Test Guidelines for Walnut

Document prepared by an expert from the Czech Republic

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 Walnut (document TG/125/7).

The Technical Working Party for Fruit Crops (TWF), at its fifty-second session, hosted by China and organized by electronic means, from July 12 to 16, 2021, agreed that the Test Guidelines for Walnut (document TG/125) be partially revised (see document TWF/52/10 “Report”, Annex IV).

The following changes are proposed:

1. Addition of a new characteristic “Tree: predominant location of fruit buds” after characteristic 2 “Tree: branching”
2. Change from “ventral view” “to lateral view” in the following characteristics:

(i) Char. 10. Nut: shape in ventral view

(ii) Char. 11. Nut: shape in lateral view

(iii) Char. 13. Nut: shape of base in lateral view

(iv) Char. 14. Nut: shape of apex in lateral view

(v) Char. 18 Nut: width of pad on suture in lateral view

1. Addition of a new characteristic “Time of leaf bud burst” after characteristic 27 “Kernel: ease of removal from shell”

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

Proposal to add a new characteristic “Tree: predominant location of fruit buds” after characteristic 2 “Tree: branching”

|  |  | | English | | | français | | | deutsch | | español | | Example Varieties Exemples Beispielssorten Variedades ejemplo | | Note/ Nota | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **2.** | |  | | **QN** | **VG** | | **(+)** | **(a)** | |  | | | | | | | |
|  | |  | | |  | | --- | | **Tree: branching** | | | | |  | | --- | | **Arbre : ramification** | | | | |  | | --- | | **Baum: Verzweigung** | | | |  | | --- | | **Árbol: ramificación** | | |  | |  | |
|  | |  | | weak | | | faible | | | gering | | escasa | | Chico, Huashan 5, Shangluo 3, Vina,  Xisiyu 1 | | 3 | |
|  | |  | | medium | | | moyenne | | | mittel | | media | | Chuanhe 2, Franquette, Hartley, Lübo, Marbot, Qinyou 1, Shangsong 6, Xinzaofeng | | 5 | |
|  | |  | | strong | | | forte | | | stark | | abundante | | Corne, Daixiang, Jinfeng, Liaoning 1, Liaoning 4, Luguang, Luguo 2, Parisienne, Shaanhe 1, Xiangling, Xifu 2, Xilin 2, Zhonglin 1, Zhonglin 5 | | 7 | |
| **NEW** | |  | | **QN** | **VG** | | **(+)** |  | |  | | | | | | | |
|  | |  | | |  | | --- | | **Tree: predominant location of fruit buds** | | | | |  | | --- | | **Arbre: localisation**  **prédominante des bourgeons à fruit** | | | | |  | | --- | | **Baum: vorwiegende Position der Fruchtknospen** | | | |  | | --- | | **Árbol: localización**  **predominante de los yemas fructíferas** | | |  | |  | |
|  | |  | | at tip of one-year old shoot (fruiting on outer side of tree) | | | à l’extrémité des rameaux  d’un an (fructification  en périphérie  de l’arbre) | | | an der Spitze der  einjährigen Zweige  (Fruchtbildung an der  Außenseite des Baumes) | | en el ápice de tallos  de un año (fructificación  en la parte  externa del árbol) | | Corne, Franquette, Marbot | | 1 | |
|  | |  | | mainly on the top of long shoots bound on branches of 2 years or older (fruiting in clusters) | | | brprincipalement en  extrémité de pousses  longues insérées sur  des rameaux de 2 ans  ou plus (fructification  par bouquets) | | | an der Spitze langer  Triebe an zweijährigen  oder älteren  Zweigen (Fruchtbildung  in Gruppen) | | predominantemente  en el extremo de  tallos largos, sobre  ramos de 2 o más  años (fructificación  en grupos) | | Hartley | | 2 | |
|  | |  | | all along the one-year old shoot (fruiting on lateral brindilles) | | | tout le long des  rameaux d’un an  (fructification sur  brindilles latérales) | | | auf die ganze Länge  einjähriger Zweige  verteilt (Fruchtbildung  an kleinen  Seitenzweigen) | | a lo largo de tallos de  1 año (fructificación  en brindillas laterales) | | Chico, Payne, Serr | | 3 | |
| **4.** | | **(\*)** | | **PQ** | **VG** | | **(+)** |  | |  | | | | | | | |
|  | |  | | |  | | --- | | **Bud: shape** | | | | |  | | --- | | **Bourgeon : forme** | | | | |  | | --- | | **Knospe: Form** | | | |  | | --- | | **Yema: forma** | | |  | |  | |
|  | |  | | circular | | | circulaire | | | kreisförmig | | circular | | Daixiang, Jinlong 1, Luguang, Luguo 2,  Milotai 10, Xiangling,  Xilin 2, Xinzaofeng, Zhonglin 1 | | 1 | |
|  | |  | | flabellate | | | flabelliforme | | | fächerförmig | | flabeliforme | | Fenghui | | 2 | |
|  | |  | | triangular | | | triangulaire | | | dreieckig | | triangular | | Chuanhe 2, Liaoning 4, Zhenzhuhetao | | 3 | |

Ad. NEW: Tree: predominant location of fruit buds

The type of fruiting (predominant location of fruit buds) should be observed at the time of full bloom of the female flowers.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| 1 | 2 | 3 |
| at tip of one-year old shoot  (fruiting on outer side of tree) | mainly on the top of long shoots bound on branches of 2 years or older (fruiting in clusters) | all along the one-year old shoot (fruiting on lateral brindilles) |

Proposal to change from “ventral view” “to lateral view”

### Characteristic 10 “Nut: shape in ventral view”

#### Current wording

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **10.** | **(\*)** | **PQ** | **VG** | **(+)** | **(b)** |  | | | |
|  |  | |  | | --- | | **Nut: shape in ventral view** | | | |  | | --- | | **Noix : forme en vue ventrale** | | | |  | | --- | | **Nuß: Form in Bauchansicht** | | |  | | --- | | **Nuez: forma en vista ventral** | |  |  |
|  |  | triangular | | triangulaire | | dreieckig | triangular | Hartley | 1 |
|  |  | broad ovate | | broad ovate | | breit eiförmig | oval ancha | Marbot, Payne, Serr | 2 |
|  |  | ovate | | ovale | | eiförmig | oval | Gustine, Jinfeng | 3 |
|  |  | oblong | | oblongue | | breitrund | oblonga | Milotai bőtermő, Mumahetao, Sunland | 4 |
|  |  | elliptic | | elliptique | | elliptisch | elíptica | Corne, Daifeng, Franquette, Sorrento, Xilin 2 | 5 |
|  |  | circular | | circulaire | | kreisförmig | circular | Jinlong 1, Jinlong 2, Liaoning 4, Milotai 10, Meylannaise, Xiangling, Zhonglin 1, Zhonglin 5, | 6 |
|  |  | broad elliptic | | elliptique large | | breit elliptisch | elíptica ancha | Parisienne, Luguang | 7 |

#### Proposed new wording

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **10.** | **(\*)** | **PQ** | **VG** | **(+)** | **(b)** |  | | | |
|  |  | |  | | --- | | **Nut: shape in lateral ~~ventral~~ view** | | | |  | | --- | | **Noix: forme en vue latérale ~~ventrale~~** | | | |  | | --- | | **Nuß: Form in Seitenansicht ~~Bauchansicht~~** | | |  | | --- | | **Nuez: forma en vista lateral ~~ventral~~** | |  |  |
|  |  | triangular | | triangulaire | | dreieckig | triangular | Hartley | 1 |
|  |  | broad ovate | | broad ovate | | breit eiförmig | oval ancha | Marbot, Payne, Serr | 2 |
|  |  | ovate | | ovale | | eiförmig | oval | Gustine, Jinfeng | 3 |
|  |  | oblong | | oblongue | | breitrund | oblonga | Milotai bőtermő, Mumahetao, Sunland | 4 |
|  |  | elliptic | | elliptique | | elliptisch | elíptica | Corne, Daifeng, Franquette, Sorrento, Xilin 2 | 5 |
|  |  | circular | | circulaire | | kreisförmig | circular | Jinlong 1, Jinlong 2, Liaoning 4, Milotai 10, Meylannaise, Xiangling, Zhonglin 1, Zhonglin 5, | 6 |
|  |  | broad elliptic | | elliptique large | | breit elliptisch | elíptica ancha | Parisienne, Luguang | 7 |

### Characteristic 11 “Nut: shape in lateral view”

#### Current wording

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **11.** | **(\*)** | **PQ** | **VG** | **(+)** | **(b)** |  | | | |
|  |  | |  | | --- | | **Nut: shape in lateral view** | | | |  | | --- | | **Noix : forme en vue latérale** | | | |  | | --- | | **Nuß: Form in Seitenansicht** | | |  | | --- | | **Nuez: forma en vista lateral** | |  |  |
|  |  | triangular | | triangulaire | | dreieckig | triangular | Hartley | 1 |
|  |  | broad ovate | | ovale large | | breit eiförmig | oval ancha | Payne, Serr, Xiangling | 2 |
|  |  | ovate | | ovale | | eiförmig | oval | Gustine, Jinfeng | 3 |
|  |  | circular | | circulaire | | kreisförmig | circular | Meylannaise, Milotai 10 | 4 |
|  |  | broad elliptic | | elliptique large | | breit elliptisch | elíptica ancha | Franquette | 5 |
|  |  | oblate | | arrondie aplatie | | breitrund | achatada | Yuanbao | 6 |

#### Proposed new wording

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **11.** | **(\*)** | **PQ** | **VG** | **(+)** | **(b)** |  | | | |
|  |  | |  | | --- | | **Nut: shape in ventral ~~lateral~~ view** | | | |  | | --- | | **Noix: forme en vue ventrale ~~latérale~~** | | | |  | | --- | | **Nuß: Form in Bauchansicht ~~Seitenansicht~~** | | |  | | --- | | **Nuez: forma en vista ventral ~~lateral~~** | |  |  |
|  |  | triangular | | triangulaire | | dreieckig | triangular | Hartley | 1 |
|  |  | broad ovate | | ovale large | | breit eiförmig | oval ancha | Payne, Serr, Xiangling | 2 |
|  |  | ovate | | ovale | | eiförmig | oval | Gustine, Jinfeng | 3 |
|  |  | circular | | circulaire | | kreisförmig | circular | Meylannaise, Milotai 10 | 4 |
|  |  | broad elliptic | | elliptique large | | breit elliptisch | elíptica ancha | Franquette | 5 |
|  |  | oblate | | arrondie aplatie | | breitrund | achatada | Yuanbao | 6 |

### Characteristic 13 “Nut: shape of base in lateral view”

#### Current wording

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **13.** | **(\*)** | **PQ** | **VG** | **(+)** | **(b)** |  | | | |
|  |  | |  | | --- | | **Nut: shape of base in lateral view** | | | |  | | --- | | **Noix : forme de la base en vue latérale** | | | |  | | --- | | **Nuß: Form der Basis in Seitenansicht** | | |  | | --- | | **Nuez: forma de la base en vista lateral** | |  |  |
|  |  | cuneate | | cunée | | keilförmig | cuneada | Corne, Milotai bőtermő | 1 |
|  |  | rounded | | arrondie | | abgerundet | redondeada | Chico, Franquette, Payne, Serr, Xiangling | 2 |
|  |  | truncate | | tronquée | | gerade | truncada | Parisienne | 3 |
|  |  | emarginate | | récurrente | | eingekerbt | emarginada | Hartley | 4 |

#### Proposed new wording

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **13.** | **(\*)** | **PQ** | **VG** | **(+)** | **(b)** |  | | | |
|  |  | |  | | --- | | **Nut: shape of base in ventral ~~latera~~l view** | | | |  | | --- | | **Noix: forme de la base en vue ventrale ~~latérale~~** | | | |  | | --- | | **Nuß: Form der Basis in Bauchansicht ~~Seitenansicht~~** | | |  | | --- | | **Nuez: forma de la base en vista ventral ~~lateral~~** | |  |  |
|  |  | cuneate | | cunée | | keilförmig | cuneada | Corne, Milotai bőtermő | 1 |
|  |  | rounded | | arrondie | | abgerundet | redondeada | Chico, Franquette, Payne, Serr, Xiangling | 2 |
|  |  | truncate | | tronquée | | gerade | truncada | Parisienne | 3 |
|  |  | emarginate | | récurrente | | eingekerbt | emarginada | Hartley | 4 |

### Characteristic 14 “Nut: shape of apex in lateral view”

#### Current wording

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **14.** | **(\*)** | **PQ** | **VG** | **(+)** | **(b)** |  | | | |
|  |  | |  | | --- | | **Nut: shape of apex in lateral view** | | | |  | | --- | | **Noix : forme du sommet en vue latérale** | | | |  | | --- | | **Nuß: Form der Spitze in Seitenansicht** | | |  | | --- | | **Nuez: forma del ápice en vista lateral** | |  |  |
|  |  | obtuse | | obtus | | stumpf | obtuso | Vina | 1 |
|  |  | rounded | | arrondi | | abgerundet | redondeado | Zhonglin 1 | 2 |
|  |  | truncate | | tronqué | | gerade | truncado | Milotai bőtermő, Zhonglin 5 | 3 |
|  |  | emarginate | | récurrent | | eingekerbt | emarginado | Xiangling | 4 |

#### Proposed new wording

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **14.** | **(\*)** | **PQ** | **VG** | **(+)** | **(b)** |  | | | |
|  |  | |  | | --- | | **Nut: shape of apex in ventral ~~lateral~~ view** | | | |  | | --- | | **Noix : forme du sommet en vue ventrale ~~latérale~~** | | | |  | | --- | | **Nuß: Form der Spitze in Bauchansicht ~~Seitenansicht~~** | | |  | | --- | | **Nuez: forma del ápice en ventral ~~lateral~~** | |  |  |
|  |  | obtuse | | obtus | | stumpf | obtuso | Vina | 1 |
|  |  | rounded | | arrondi | | abgerundet | redondeado | Zhonglin 1 | 2 |
|  |  | truncate | | tronqué | | gerade | truncado | Milotai bőtermő, Zhonglin 5 | 3 |
|  |  | emarginate | | récurrent | | eingekerbt | emarginado | Xiangling | 4 |

### Characteristic 18 “Nut: width of pad on suture in lateral view”

#### Current wording

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **18.** |  | **QN** | **VG** | **(+)** | **(b)** |  | | | |
|  |  | |  | | --- | | **Nut: width of pad on suture in lateral view** | | | |  | | --- | | **Noix : largeur du bourrelet de suture en vue latérale** | | | |  | | --- | | **Nuß: Breite des Wulstes auf der Naht in Seitenansicht** | | |  | | --- | | **Nuez: anchura del almohadillado de la sutura en vista lateral** | |  |  |
|  |  | narrow | | étroit | | schmal | estrecho | Chico, Grandjean, Parisienne, Xiangling | 1 |
|  |  | medium | | moyen | | mittel | medio | Gustine, Hartley | 3 |
|  |  | broad | | large | | breit | ancho | Corne, Marbot, Payne, Serr | 5 |

#### Proposed new wording

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **18.** |  | **QN** | **VG** | **(+)** | **(b)** |  | | | |
|  |  | |  | | --- | | **Nut: width of pad on suture in ventral ~~lateral~~ view** | | | |  | | --- | | **Noix : largeur du bourrelet de suture en vue ventrale ~~latérale~~** | | | |  | | --- | | **Nuß: Breite des Wulstes auf der Naht in Bauchansicht ~~Seitenansicht~~** | | |  | | --- | | **Nuez: anchura del almohadillado de la sutura en vista ventral ~~lateral~~** | |  |  |
|  |  | narrow | | étroit | | schmal | estrecho | Chico, Grandjean, Parisienne, Xiangling | 1 |
|  |  | medium | | moyen | | mittel | medio | Gustine, Hartley | 3 |
|  |  | broad | | large | | breit | ancho | Corne, Marbot, Payne, Serr | 5 |

Proposal to add of a new characteristic “Time of leaf bud burst” after characteristic 27 “Kernel: ease of removal from shell”

|  |  | | | English | | | | | français | | | | | deutsch | | | español | | | Example Varieties Exemples Beispielssorten Variedades ejemplo | | | Note/ Nota | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **27.** | | |  | | | **QN** | | **VG** | | | **(+)** | | **(c)** | | |  | | | | | | | | | | | |
|  | | |  | | | |  | | --- | | **Kernel: ease of removal from shell** | | | | | | |  | | --- | | **Cerneau : facilité d’extraction de la coquille** | | | | | | |  | | --- | | **Kern: Leichtigkeit des Entfernens von der Schale** | | | | |  | | --- | | **Semilla: facilidad con que se extrae de la cáscara** | | | |  | | |  | | |
|  | | |  | | | very easy | | | | | très aisée | | | | | sehr leicht | | | muy fácil | | | Milotai 10, Payne, Pedro, Serr | | | 1 | | |
|  | | |  | | | easy | | | | | aisée | | | | | leicht | | | fácil | | | Franquette, Hartley, Marbot | | | 2 | | |
|  | | |  | | | medium | | | | | moyenne | | | | | mittel | | | media | | | Jinlong 2, Meylannaise | | | 3 | | |
|  | | |  | | | difficult | | | | | difficile | | | | | schwer | | | difícil | | | Corne | | | 4 | | |
|  | | |  | | | very difficult | | | | | très difficile | | | | | sehr schwer | | | muy difícil | | | Aodidaguanmao, Jilong | | | 5 | | |
| **NEW** | | |  | | | **QN** | | **MG** | | | **(+)** | |  | | |  | | | | | | | | | | | |
|  | | |  | | | |  | | --- | | **Time of leaf bud burst** | | | | | | |  | | --- | | **Époque de débourrement foliaire** | | | | | | |  | | --- | | **Zeitpunkt des Blattknospenauf- bruchs** | | | | |  | | --- | | **Época de brotación de las hojas** | | | |  | | |  | | |
|  | | |  | | | very early | | | | | très précoce | | | | | sehr früh | | | muy precoz | | |  | | | 1 | | |
|  | | |  | | | very early to early | | | | | très précoce à précoce | | | | | sehr früh bis früh | | | muy precoz a precoz | | | Ashley, Chico, Payne | | | 2 | | |
|  | | |  | | | early | | | | | précoce | | | | | früh | | | precoz | | | Chase D 9, Vina | | | 3 | | |
|  | | |  | | | early to medium | | | | | précoce à moyenne | | | | | früh bis mittel | | | precoz a media | | | Adams 10, Hartley, Pedro | | | 4 | | |
|  | | |  | | | medium | | | | | moyenne | | | | | mittel | | | media | | | Chandler, Howard | | | 5 | | |
|  | | |  | | | medium to late | | | | | moyenne à tardive | | | | | mittel bis spät | | | media a tardía | | | Grandjean, Marbot, Mayette | | | 6 | | |
|  | | |  | | | late | | | | | tardive | | | | | spät | | | tardía | | | Franquette, Parisienne | | | 7 | | |
|  | | |  | | | late to very late | | | | | tardive à très tardive | | | | | spät bis sehr spät | | | tardía a muy tardía | | | Ronde de Montignac | | | 8 | | |
|  | | |  | | | very late | | | | | très tardive | | | | | sehr spät | | | muy tardía | | |  | | | 9 | | |
| **28.** | |  | | | **QN** | | **MG** | | | **(+)** | |  | | |  | | | | | | | | | | | |
|  | |  | | | |  | | --- | | **Time of beginning of female flowering** | | | | | | |  | | --- | | **Époque de début de floraison femelle** | | | | | | |  | | --- | | **Zeitpunkt des Beginns der weiblichen Blüte** | | | | |  | | --- | | **Época de inicio de la floración femenina** | | | |  | | |  | | |
|  | |  | | | early | | | | | précoce | | | | | früh | | | temprana | | | Chase D 9, Lübo, Luguo 2, Sorrento, Xilin 2 | | | 3 | | |
|  | |  | | | medium | | | | | moyenne | | | | | mittel | | | media | | | Daifeng, Daixiang, Fenghui, Luguang, Marbot, Milotai 10 | | | 5 | | |
|  | |  | | | late | | | | | tardive | | | | | spät | | | tardía | | | Bonifác, Jinlong 1, Jinlong 2, Liaoning 1, Liaoning 4, Milotai kései | | | 7 | | |

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