



Technical questionnaire

Spinach

Version 18

Mandatory fields or sections are marked with an asterisk (*)

01 . Botanical taxon: name of the genus, species or sub-species to which the variety belongs:

Spinacia oleracea L.

Other species (please specify)

02 . Application code:

For office use only

03 . Breeder's reference

Breeder's Ref.

04 . Information on the breeding scheme and propagation of the variety *

04 . 01 . Type of material *

(this question could be confidential)

hybrid

cross-pollinated variety

self-pollinated variety

parent line

04 . 01.01 . Parental line use *

(this question could be confidential)

In many cases there is a link in morphological expression of characteristics between the parent line and its hybrids. Therefore, it is recommended to provide information about the identity of hybrid varieties where the parental line is used. This makes the organisation of the technical examination more efficient and lowers the risk of an additional year at the costs of the applicant. This information will be dealt with confidentially and only share with the examination office in charge of the technical examination.

Please indicate for the production of which hybrid variety(ies) the parental line is used

*

04 . 02 . Method of propagation of the variety **(this question could be confidential)*

seed propagated

vegetatively propagated

04 . 03 . Other information on genetic origin and breeding method*(this question could be confidential)*

Please specify

05 . Characteristics of the variety to be indicated **(the number in brackets refers to the corresponding characteristic in the CPVO Technical Protocol; please mark the state of expression which best corresponds)***05 . 00 . Seeds: spines (submitted seeds) (1) ***

- | | |
|-------------|-----------------------|
| 1 - absent | Butterflay, Marimba |
| 9 - present | Breedblad, Scherpzaad |

05 . 01 . Plant: red coloration of stem, petioles and veins (3) (G) *

- | | |
|-------------|---------------------|
| 1 - absent | Resistoflay, Nores |
| 9 - present | Red Cardinal, Reddy |

05 . 02 . Leaf blade: intensity of green colour (4) (G) *

- | | |
|-------------------------|-------------------------------|
| 1 - very light | |
| 2 - very light to light | |
| 3 - light | Monet, Viroflay, Winterreuzen |
| 4 - light to medium | |
| 5 - medium | Butterflay, Monnopa |
| 6 - medium to dark | |
| 7 - dark | Imola, Lavewa, Nores |
| 8 - dark to very dark | |
| 9 - very dark | Lorelay, Mystic |

05 . 03 . Leaf blade: blistering (5) (G) *

| | |
|---------------------------|---------------------------|
| 1 - absent or very weak | Matador |
| 2 - very weak to weak | |
| 3 - weak | Polka, Tarp |
| 4 - weak to medium | |
| 5 - medium | Butterflay, Koala, Mystic |
| 6 - medium to strong | |
| 7 - strong | Giraffe, Rhythm |
| 8 - strong to very strong | |
| 9 - very strong | Menorca, Revolver |

05 . 03.01 . Petiole: length (8) *

| | |
|-------------------------|---------------------|
| 1 - very short | |
| 2 - very short to short | |
| 3 - short | Imola, Mystic |
| 4 - short to medium | |
| 5 - medium | Butterflay, Giraffe |
| 6 - medium to long | |
| 7 - long | Grappa, Resistoflay |
| 8 - long to very long | |
| 9 - very long | |

05 . 03.02 . Leaf blade: shape (excluding basal lobes) (10) *

| | |
|---------------------|---------------------|
| 1 - triangular | Grappa, Maracas |
| 2 - medium ovate | Lavewa, Resistoflay |
| 3 - broad ovate | Butterflay |
| 4 - medium elliptic | |
| 5 - broad elliptic | Nores |
| 6 - circular | Giraffe |

05 . 04 . Leaf blade: shape of apex (12)

| | |
|-------------|----------------|
| 1 - acute | Grappa, Rhythm |
| 2 - obtuse | Resistoflay |
| 3 - rounded | Imola, Nores |

05 . 05 . Proportion of monoecious plants (14) (G) *

| | |
|------------------------|----------------------------|
| 1 - absent or very low | Please indicate percentage |
|------------------------|----------------------------|

| | |
|---------------------|----------------------------|
| 2 - very low to low | Please indicate percentage |
|---------------------|----------------------------|

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|---------|----------------------------|
| 3 - low | Please indicate percentage |
|---------|----------------------------|

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|-------------------|----------------------------|
| 4 - low to medium | Please indicate percentage |
|-------------------|----------------------------|

| | |
|------------|----------------------------|
| 5 - medium | Please indicate percentage |
|------------|----------------------------|

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|--------------------|----------------------------|
| 6 - medium to high | Please indicate percentage |
|--------------------|----------------------------|

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|----------|----------------------------|
| 7 - high | Please indicate percentage |
|----------|----------------------------|

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|-----------------------|----------------------------|
| 8 - high to very high | Please indicate percentage |
|-----------------------|----------------------------|

| | |
|---------------|----------------------------|
| 9 - very high | Please indicate percentage |
|---------------|----------------------------|

05 . 06 . Proportion of female plants (15) (G) *

| | |
|------------------------|----------------------------|
| 1 - absent or very low | Please indicate percentage |
|------------------------|----------------------------|

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|---------------------|----------------------------|
| 2 - very low to low | Please indicate percentage |
|---------------------|----------------------------|

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|---------|----------------------------|
| 3 - low | Please indicate percentage |
|---------|----------------------------|

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|-------------------|----------------------------|
| 4 - low to medium | Please indicate percentage |
|-------------------|----------------------------|

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|------------|----------------------------|
| 5 - medium | Please indicate percentage |
|------------|----------------------------|

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|--------------------|----------------------------|
| 6 - medium to high | Please indicate percentage |
|--------------------|----------------------------|

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|----------|----------------------------|
| 7 - high | Please indicate percentage |
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|-----------------------|----------------------------|
| 8 - high to very high | Please indicate percentage |
|-----------------------|----------------------------|

| | |
|---------------|----------------------------|
| 9 - very high | Please indicate percentage |
|---------------|----------------------------|

05 . 07 . Proportion of male plants (16) (G) *

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|------------------------|----------------------------|
| 1 - absent or very low | Please indicate percentage |
|------------------------|----------------------------|

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|---------------------|----------------------------|
| 2 - very low to low | Please indicate percentage |
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|---------|----------------------------|
| 3 - low | Please indicate percentage |
|---------|----------------------------|

| | |
|-------------------|----------------------------|
| 4 - low to medium | Please indicate percentage |
|-------------------|----------------------------|

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|------------|----------------------------|
| 5 - medium | Please indicate percentage |
|------------|----------------------------|

| | |
|--------------------|----------------------------|
| 6 - medium to high | Please indicate percentage |
|--------------------|----------------------------|

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|----------|----------------------------|
| 7 - high | Please indicate percentage |
|----------|----------------------------|

| | |
|-----------------------|----------------------------|
| 8 - high to very high | Please indicate percentage |
|-----------------------|----------------------------|

| | |
|---------------|----------------------------|
| 9 - very high | Please indicate percentage |
|---------------|----------------------------|

05 . 08 . Time of start of bolting (for spring sown crops, 15% of plants) (17) (G) *

- | | |
|-------------------------|--|
| 1 - very early | Please indicate comparable variety(ies) of your choice |
| 2 - very early to early | Please indicate comparable variety(ies) of your choice |
| 3 - early | Please indicate comparable variety(ies) of your choice |
| 4 - early to medium | Please indicate comparable variety(ies) of your choice |
| 5 - medium | Please indicate comparable variety(ies) of your choice |
| 6 - medium to late | Please indicate comparable variety(ies) of your choice |
| 7 - late | Please indicate comparable variety(ies) of your choice |
| 8 - late to very late | Please indicate comparable variety(ies) of your choice |
| 9 - very late | Please indicate comparable variety(ies) of your choice |
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06 . Similar varieties and differences from these varieties

06 . 1 . Are there any similar variety(ies) known? *

- 1 - yes
- 2 - no

06 . 2 . Similar varieties and differences from these varieties: *

| Denomination of similar variety | Characteristic in which the similar variety is different | State of expression of similar variety | State of expression of candidate variety |
|---------------------------------|--|--|--|
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07 . Additional information which may help to distinguish the variety ***07 . 01 . Resistance to pests and diseases ***

07 . 01 . In addition to the information provided in sections 5 and 6, are there any additional characteristics which may help to distinguish the variety? *

Yes, specify

No

07 . 02 . Special conditions for the examination of the variety *

Yes, specify

No

07 . 03 . Other information ***07 . 03.01 . Variety use ***

only in glasshouse

only in the open

in the open and in glasshouse

07 . 03.02 . Resistance to pests and diseases ***07 . 03.02.01 . Resistance to *Peronospora effusa* (Pe)(ex *Peronospora farinosa* f. sp. *Spinaciae* (Pfs)) (19) ***

07 . 03.02.01.01 . Race Pe: 1 (19.1) * absent present

07 . 03.02.01.02 . Race Pe: 2 (19.2) * absent present

07 . 03.02.01.03 . Race Pe: 3 (19.3) * absent present

07 . 03.02.01.04 . Race Pe: 4 (19.4) * absent present

07 . 03.02.01.05 . Race Pe: 5 (19.5) * absent present

07 . 03.02.01.06 . Race Pe: 6 (19.6) * absent present

07 . 03.02.01.07 . Race Pe: 7 (19.7) * absent present

07 . 03.02.01.08 . Race Pe: 8 (19.8) * absent present

07 . 03.02.01.09 . Race Pe: 10 (19.10) * absent present

07 . 03.02.01.10 . Race Pe: 11 (19.10) * absent present

| | | |
|--|--------|---------|
| 07 . 03.02.01.11 . Race Pe: 12 (19.11) * | absent | present |
| 07 . 03.02.01.12 . Race Pe: 13 (19.12) * | absent | present |
| 07 . 03.02.01.13 . Race Pe: 14 (19.13) * | absent | present |
| 07 . 03.02.01.14 . Race Pe: 15 (19.14) * | absent | present |
| 07 . 03.02.01.15 . Race Pe: 16 (19.15) * | absent | present |
| 07 . 03.02.01.16 . Race Pe: 17 (19.16) * | absent | present |
| 07 . 03.02.01.17 . Race Pe: 18 (19.17) * | absent | present |
| 07 . 03.02.01.18 . Race Pe: 19 (19.18) * | absent | present |

07 . 03.02.02 . Resistance to *Cucumber mosaic virus* (CMV) (20) *

absent

present

not tested

07 . 03.02.03 . Other resistances to pests and diseases (fill none if you are not concerned) *

Please indicate *

07 . 03.03 . Other information *

Yes, specify

No

07 . 04 . Photo

It is highly recommended to provide pictures. Otherwise, the organisation of the technical examination will be rendered less efficient, with the risk of an additional year of technical examination at the costs of the applicant.

08 . GMO-information requested

08 . a . The variety represents a genetically modified organism (GMO) within the meaning of Article 2(2) of Council Directive EC/2001/18 of 12/03/2001 which requires authorization for release in the environment: *

1 - yes

2 - no

08 . b . If yes, has such authorization been obtained? *

1 - yes

2 - no

08 . c . If yes, please attach a copy of such an authorization *

DECLARATIONS *

I/we hereby declare that to the best of my/our knowledge the information given in this form is complete and correct.

Place

Date

Name

Signature