



## MORPHOLOGICAL DESCRIPTOR

**SPINACH** (*Spinacea oleracea* L.)



Federal Seed Certification & Registration Department  
Ministry of Food, Agriculture & Livestock  
Government of Pakistan, Islamabad

*Testing Genetic Suitability and Adaptability: and  
Registration of Crop Varieties is Legal Obligation  
under Section 8 of Seed Act, 1976.*

**Dr. M. Ashraf Tajammal**  
**Ms. Naheed Naz**

**GENERAL**

Variety name .....

Parentage .....

Pedigree .....

Breeder (s) .....

Variety maintainer (s) .....

Comparable variety (s) .....

Breeding center/institute .....

Origin  Local  Exotic

Breeding method  Selection  Hybridization  Introduction  Any other

Areas of adaptation .....

Sowing time .....

Maturity duration  Short  Medium  Long

**SEEDLING CHARACTERISTICS**

Seedling height (cm) ..... (after two weeks)

Seedling anthocyanin  Absent  Weak  Medium  Strong

Cotyledon color  L. green  Green  Dark green

**PLANT CHARACTERISTICS**

Plant height (cm) .....

Stem shape  Angular  Cylindrical

Stem thickness (mm) .....

Stem anthocyanin  Absent  Weak  Medium  Strong

Proportion of male plants  Absent  Low  Medium  High  V. high

Proportion of female plants  Absent  Low  Medium  High  V. high

Bolting  Early  Medium  Late

Speed of bolting  Slow  Medium  Rapid

**LEAF CHARACTERISTICS**

Petiole attitude  Erect  Semi erect  Horizontal

Petiole length (cm) .....

Leaf attitude  Erect  Semi erect  Horizontal  Pendulous

Leaf color  L. green  Green  Dark green

Leaf anthocyanin  Absent  Weak  Medium  Strong  V. strong

Leaf blistering  Absent  Weak  Medium  Strong  V. strong

Leaf lobing  Absent  Weak  Medium  Strong  V. strong

Leaf glossiness  Weak  Medium  Strong

Leaf blade length/width (cm) ...../.....

Leaf blade shape  Elliptic  Broadly elliptic  Ovate  Broadly ovate  Triangular

Margin undulation  Absent  Weak  Medium  Strong

Leaf apex  Acute  Obtuse  Round

Leaf longitudinal section  Concave  Flat  Convex

**SEED CHARACTERISTICS**

Seed size  Small  Medium  Bold

Seed color  L. brown  Brown  Dark brown

Seed shape  Round  Prickly

Seed spines  Absent  Present

000, seed weight (g) .....

Yield (kg/acre) .....

**ENVIRONMENTAL ADAPTABILITY** (Evaluation done under define conditions)

**Flowering Response to seasons**       Stable       Variable       Highly variable

**Drought tolerance**       Least tolerant       Medium       Most tolerant  
(Measured as reduction in yield).

**Tolerance to salinity**       Least tolerant       Medium       Most tolerant  
(Measured by reduction in plant height 30 days after sowing).

**Tolerance to acid soils**       Least tolerant       Medium       Most tolerant  
(Measured as reduction in plant height 30 days after sowing).

**Cold tolerance**       Least tolerant       Medium       Most tolerant  
(Measured as reduction in general vigour and productivity after being continuously exposed to an average temperature of 15 °C for at least 15 days).

**Heat tolerance**       Least tolerant       Medium       Most tolerant  
(Measured as yield reduction when continuously exposed to average of 40 °C during the flowering period).

**RESISTANCE TO INSECTS/PESTS**

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**RESISTANCE TO DISEASES**

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**DISTINGUISHING CHARACTERISTICS**

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**RECOMMENDED/APPROVED BY**

Variety Evaluation Committee (VEC)  
Experts Sub Committee  
Provincial Seed Council

Yes  
 Yes  
 Yes

No  
 No  
 No

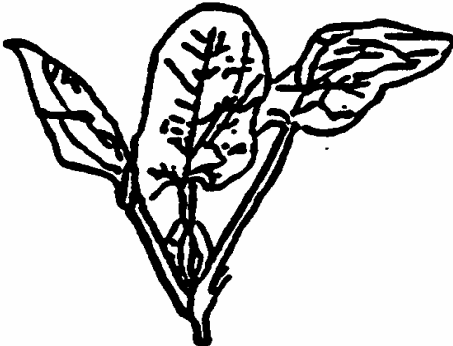
**COMMENTS OF SPOT EXAMINATION**

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**ADDITIONAL INFORMATION**

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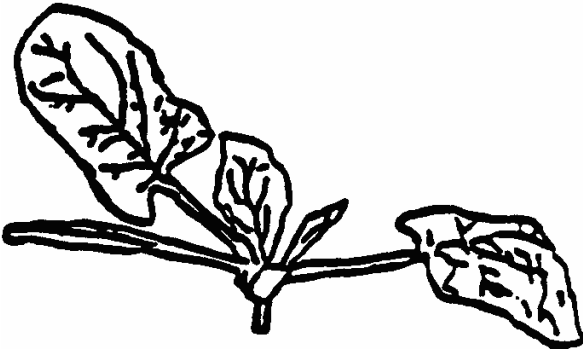
PETIOLE ATTITUDE



Erect

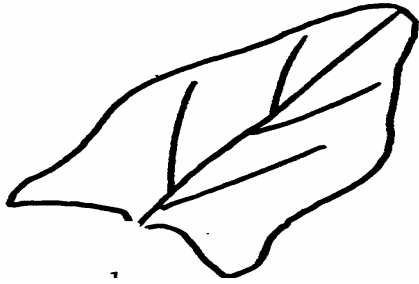


Semi erect



Horizontal

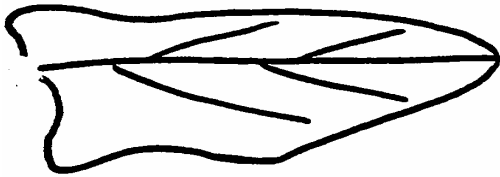
LAMINA ATTITUDE



Erect



Semi erect



Semi pendulous



Horizontal