



## MORPHOLOGICAL DESCRIPTOR

### TURNIP (*Brassica rapa* 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.*

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**Ms. Naheed Naz**

**GENERAL**

Variety name .....

Parentage .....

Pedigree .....

Breeder (s) .....

Comparable variety (s) .....

Breeding center/institute .....

Variety maintainer .....

Origin  Local  Exotic

Breeding method  Selection  Hybridization  Introduction  Any other

Areas of adaptation .....

Planting time .....

Maturity duration  Short  Medium  Long

**SEEDLING CHARACTERISTICS**

Seedling height (cm) .....

Seedling pubescence  Absent  Sparse  Medium  Strong

Seedling anthocyanin  Absent  Weak  Medium  Strong

**PLANT CHARACTERISTICS**

Growth habit  Erect  Semi erect  Spreading

Leaf attitude  Erect  Semi erect  Horizontal  Drooping

Leaf color  L. green  Green  Dark green

Leaf lobes  Absent  Present

No. of lobes .....

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

Undulation of leaf margin  Weak  Medium  Strong

Leaf incisions blade base  Absent  Weak  Medium  Strong  V. strong

Leaf dentation of margin  Absent  Weak  Medium  Strong  V. strong

Leaf hairiness on upper side  Absent  Weak  Medium  Strong

Leaf hairiness on lower side  Absent  Weak  Medium  Strong

Leaf blade anthocyanin  Weak  Medium  Strong

Leaf reflex of top  Absent/  
V. weak  Weak  Medium  Strong  V. strong

Petiole length (cm) .....

**ROOT CHARACTERISTICS**

Root anthocyanin coloration of skin at top  Absent  Present

Expression of anthocyanin coloration of skin at top  Reddish  Bluish

Intensity of coloration of skin at top  Weak  Medium  Strong

Color of skin below ground  White  Yellow  Any other

Root flesh color  White  Yellow

Root shape  Transverse narrow elliptic  Transverse elliptic  Circular  Obovate...  
 Narrow oblong  Narrow obtriangular

Root length/width (cm) ...../.....

Shape of crown  Indented  Level  Raised

Shape of root base  Indented  Truncate  Round  Pointed

Root rings  Absent  Weak  Medium  Strong

Root weight (g) .....

**STEM CHARACTERISTICS**

Stem shape  Round  Ridged  Any other

Stem color  L. green  Green  Dark green

Stem length/thickness (cm) ...../.....

Stem diameter (mm) .....

**SEED CHARACTERISTICS**

- Seed size  Small  Medium  Bold
- Seed color  L. brown  Reddish brown
- Seed shape  Rounded  Semi rounded
- Seed length/width/thickness (mm) ...../...../.....
- 000, seed weight (g) .....

**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

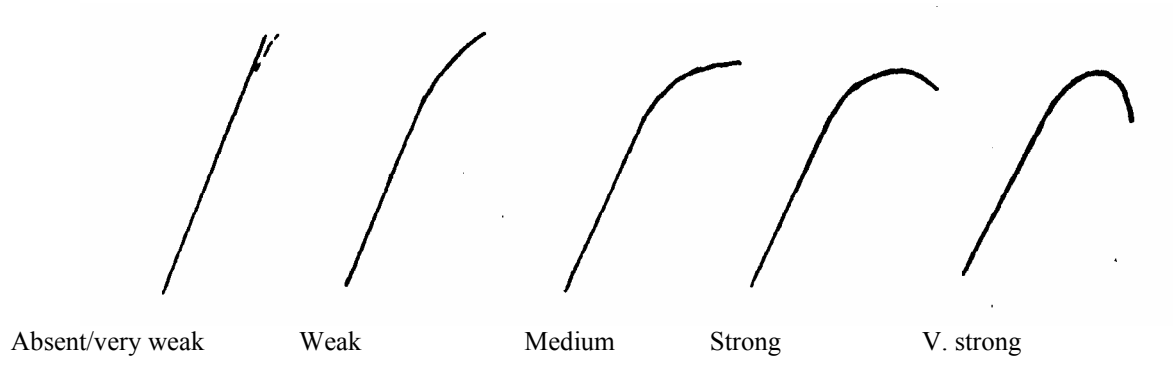
**COMMENTS OF SPOT EXAMINATION**

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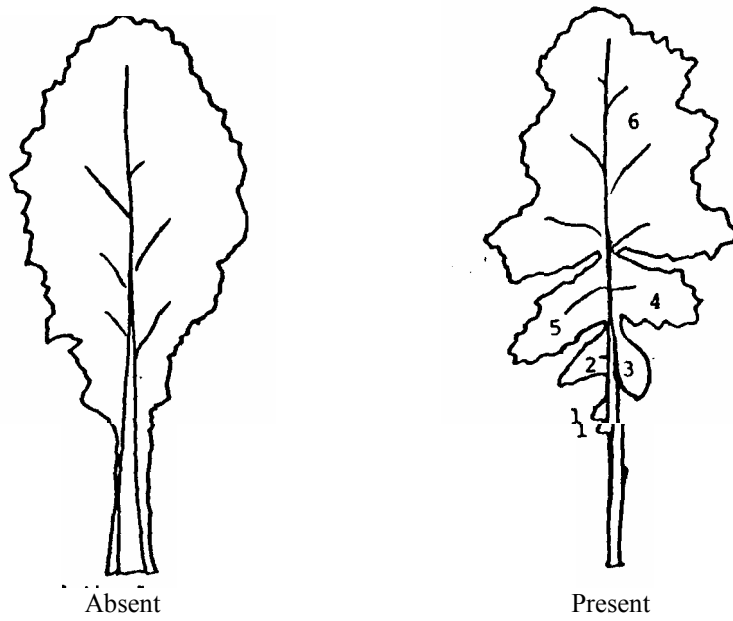
**ADDITIONAL INFORMATION**

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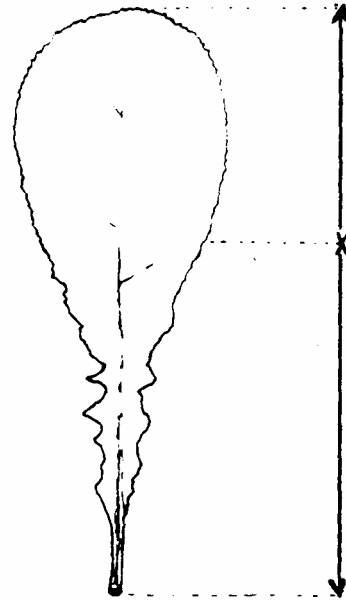
**LEAF REFLEX OF TOP**



**PRESENCE AND NUMBER OF LOBES**



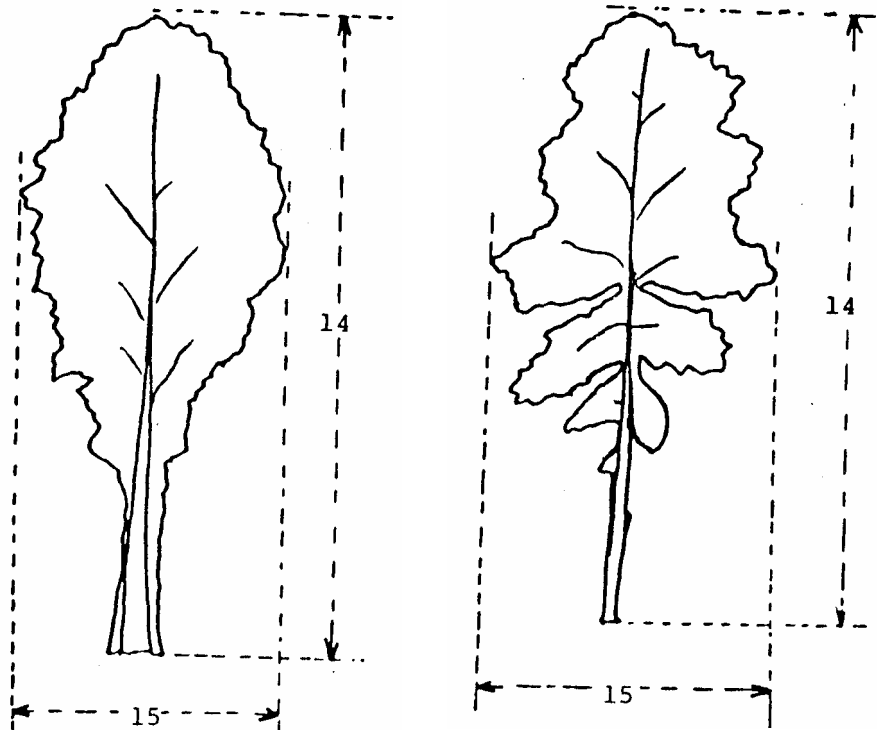
**LEAF INCISIONS AND DENTATION**



Part on which the dentation should be recorded

Part on which the incisions of base of the blade should be recorded

**SCALE FOR MEASURING LEAF LENGTH (14) AND WIDTH (15)**



**ROOT SHAPES**



Transverse narrow elliptic



Transverse elliptic



Circular



Obovate



Narrow oblong

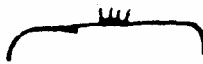


Narrow obtriangular

**SHAPE OF CROWN**



Indented



Level



Raised

**ROOT BASE**



Indented



Truncate



Round



Pointed