



## MORPHOLOGICAL DESCRIPTOR

### PEAS (*Pisum sativum* 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) .....

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) .....

(after 2 weeks)

Cotyledon color  L. yellow  Yellow  Greenish yellow

Auxiliary bud pubescence  Absent  Weak  Sparse  Medium  Profuse

**PLANT CHARACTERISTICS**

Growth type  Determinate  Indeterminate

Plant height (cm) .....

Plant anthocyanin  Absent  Weak  Medium  Strong

**STEM CHARACTERISTICS**

No. of Nodes up to first fertile node .....

Internode shape  Straight  Zig zag

Stem anthocyanin  Absent  Present

**LEAFLET CHARACTERISTICS**

Foliage color  L. green  Green  Dark green  Bluish green  Yellowish green

Foliage pubescence  Absent  Sparse  Medium  Profuse

Upper most leaflet length/ width (cm) ...../.....

Number of leaflets pair  Not paired  One  Two  Three or more

Waxiness of upper surface of leaflet  Absent  Low  Medium  High

Leaflet dentation  Low  Medium  Strong

Degree of leaflet dentation  V. weak  Weak  Medium  Strong  V. strong

**STIPULE CHARACTERISTICS**

Stipules development  Absent  Rudimentary  Well developed

Stipule shape Rabbit-eared  Present  Absent

Stipules color  L. green  Medium green  Dark green  Blue green  Yellow green

Stipule waxiness  Absent  Present

Stipule length/width ...../.....

Stipule size  Small  Medium  Large

Stipule flecking  Absent  Present

Tendrill length (cm) .....

**FLOWER CHARACTERISTICS**

Flowering days .....

Coloration of venation  White  Greenish  Lavender  Purple  Red  Any other

Coloration of standard  White  Blue  Pink  Purple  Red  Any other

- Coloration of wing  White  Greenish  Lavender  Purple  Red  Any other  
 Coloration of Keel  White  Greenish  Lavender  Purple  Red  Any other  
 Shape of base of standard  Strongly raised  Raised  Level  Arched  Strongly arched  
 No. of flowers/node .....
- Standard length/width (mm) ...../.....  
 Flower/shape of apex  Acuminate  Pointed  Rounded  
 Anther color  White  Creamy  Yellowish  Orange  
 Peduncle length (cm) .....

**POD CHARACTERISTICS**

- Pod color  L. green  Green  Dark green  
 Pod length/width (cm) ...../.....  
 Pod thickness  
 Pod shape  Straight  Slightly curved  Curved  
 Pod type of curvature  Concave  Convex  
 Pod degree of curvature  Absent  Weak  Medium  Strong  V. strong  
 Pod shape of distal end  Pointed  Blunt  
 Pod wall thickness (mm) .....
- Pod surface  Smooth  Rough  
 Pod surface appearance  Shiny  Dull  
 Pod strings of suture  Absent  Low  Medium  High  
 Pod parchment  Absent  Partially present  Entirely present  
 Pod pubescence  Absent  Present  
 Pods/plant .....
- No. of seed /pod .....

**SEED CHARACTERISTICS**

- Seed color  L. green  Medium green  Dark green  Yellow green  Yellow  Brown  
 Seed shape  Round  Cylindrical  Dimpled  
 Seed thickness (mm) .....
- Seed size  Small  Medium  Bold  
 Seed surface  Smooth  Wrinkled  
 Cotyledon color (mature)  Creamy  Green  Yellow  
 Violet or pink spots on testa  Absent  Present  
 Seed hilum color  White  L. green  Green  
 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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 .....  
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**DISTINGUISHING CHARACTERISTICS**

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 .....  
 .....  
 .....

**RECOMMENDED/APPROVED BY**

Variety Evaluation Committee (VEC)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Experts Sub Committee	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Provincial Seed Council	<input type="checkbox"/> Yes	<input type="checkbox"/> No

**COMMENTS OF SPOT EXAMINATION**

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 .....  
 .....

**ADDITIONAL INFORMATION**

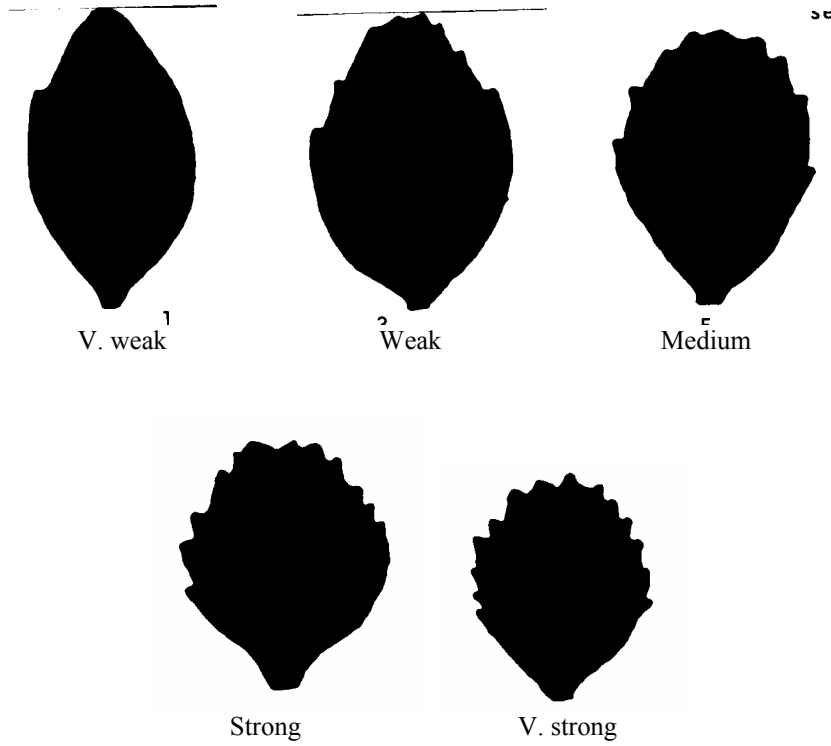
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**GROUPING OF VARIETIES**

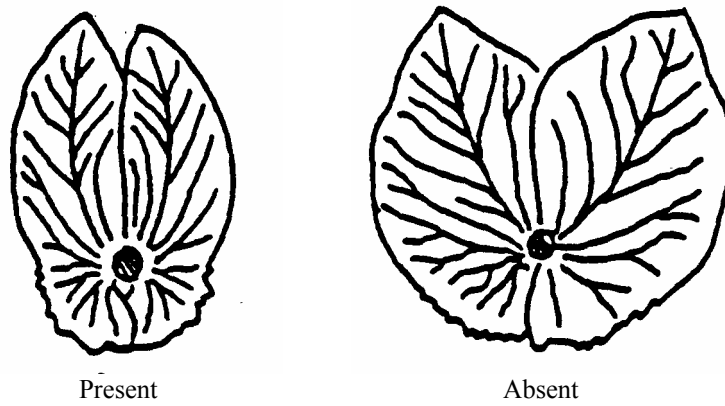
Following characteristics are proposed to be used for grouping field pea varieties

1. Plant height
2. Stipule Rabbit-eared
3. Days to flower opening
4. Pod shape of distal part
5. Seed cotyledon color
6. Seed shape

**LEAFLET DEGREE OF DENTATION**



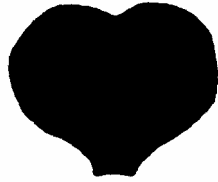
**STIPULE SHAPE RABBIT EARED**



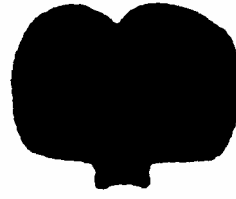
**SHAPE OF BASE OF STANDARD**



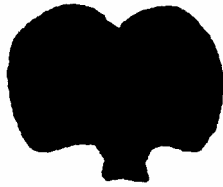
Strongly raised



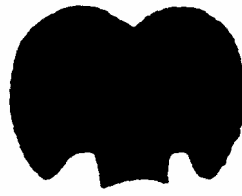
Raised



Level

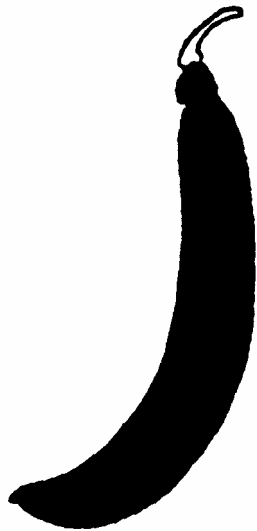


Arched

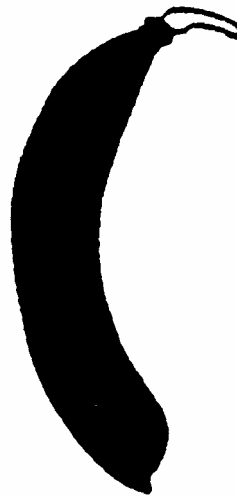


Strongly arched

**POD CURVATURE**



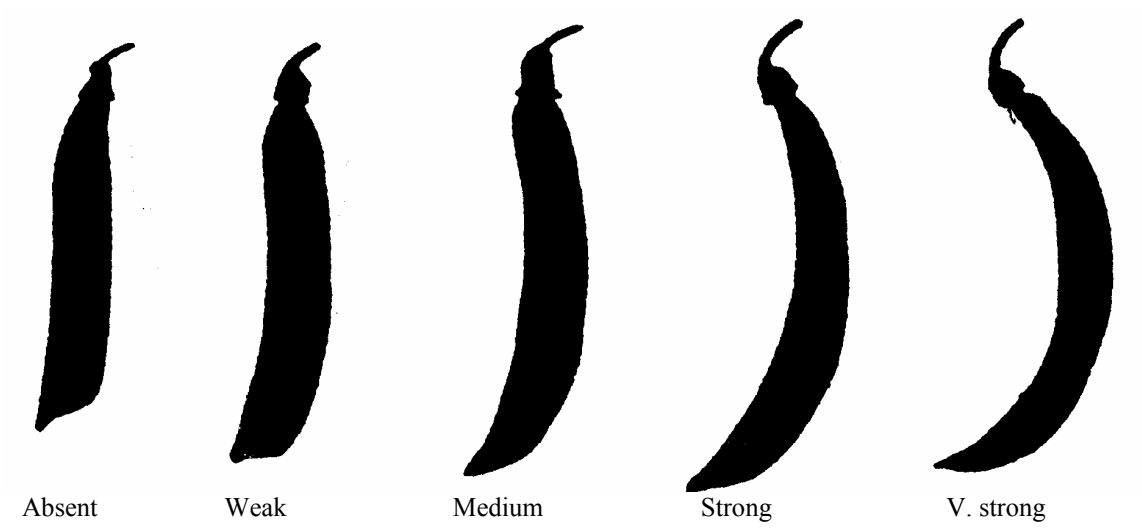
Concave



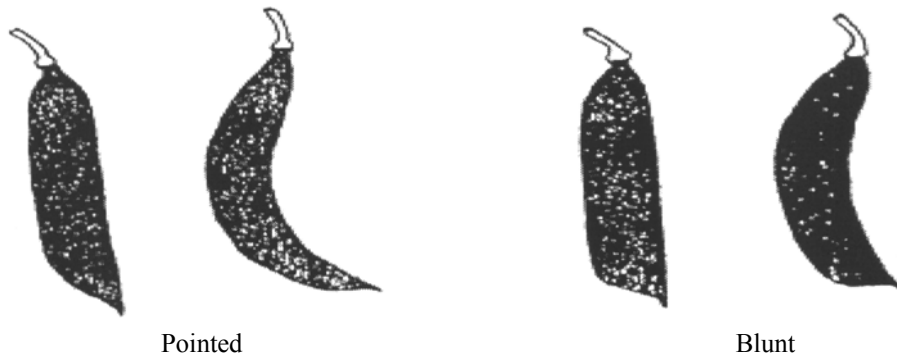
Convex



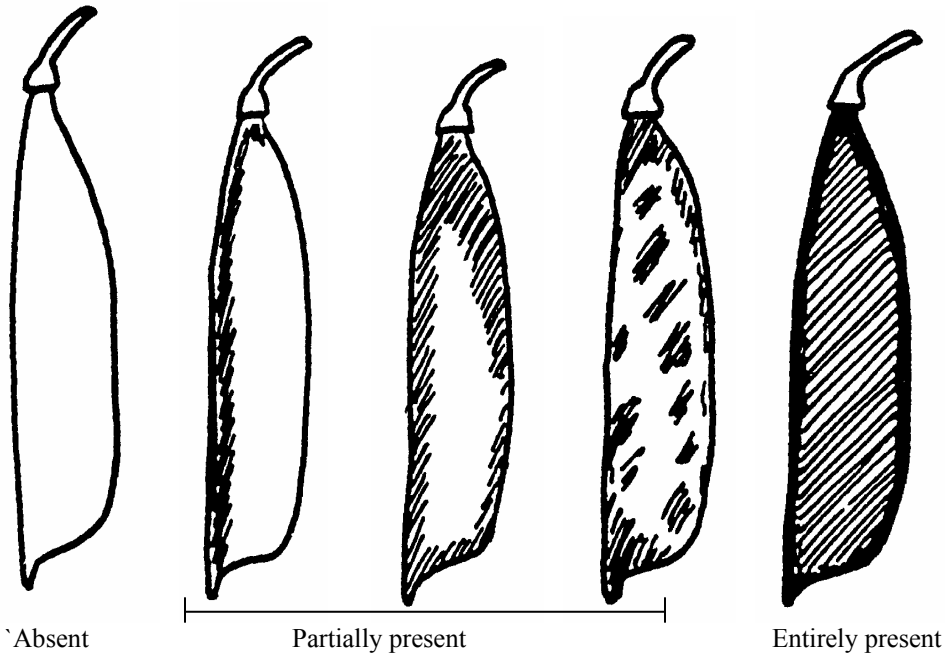
**POD DEGREE OF CURVATURE**



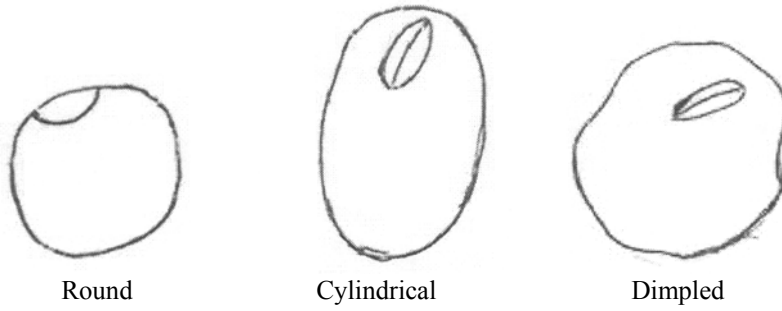
**POD SHAPE OF DISTAL END**



**POD PARCHMENT**



**SEED SHAPE**



**SEED SURFACE**

