



MORPHOLOGICAL DESCRIPTOR

OATS (*Avena sativa* 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

Species 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

Earlier than Cultivar

Later than Cultivar

Maturity duration Short Medium Long

Suitable for sowing Early Medium Late All sowings

SEEDLING CHARACTERISTICS

Seedling height (cm) (after two weeks)

Seedling color L. green Green Dark green

Seedling leaf hairiness Absent Weak Medium High

PLANT CHARACTERISTICS

Growth habit (at tillering) Erect Semi erect Semi prostrate Prostrate

Plant height (cm)

Color at booting L. green Green Dark green

No. of tillers/m

Stem diameter (mm)

Hairiness of upper most node Absent Weak Medium Strong

Stem waxy bloom Absent Weak Medium Strong

Straw color at maturity White Red

LEAF CHARACTERISTICS

Leaf color L. green Green Dark green

Flag leaf length/width (cm)/.....

Leaf margin hairiness Absent Weak Medium Strong V. strong

(below flag leaf)

Sheath hairiness of lower leaves Absent Weak Medium Strong

Leaf anthocyanin Absent Weak Medium High

Ligule color

Ligule length (cm)

PANICLE CHARACTERISTICS

Days to panicle emergence

Panicle length (cm)

Panicle orientation of branches Uni lateral Sub unilateral Equilateral

Panicle attitude of branches Erect Semi erect Horizontal Drooping

Spikelet attitude Erect Pendulous

Glume shininess Absent Weak Medium Strong

Glume length (mm)

SEED CHARACTERISTICS

Seed shape Spindle

Seed color White Yellow Brown Gray Black

Seed length/width/thickness (mm)/...../.....

Seed awning Absent Present

Seed hairiness at base Absent Weak Medium Strong

Morphological Descriptor

Oats

Length of basal hairs Short Medium Long
 000, seed weight (g)
 Yield (kg/acre) /
 Green fodder 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

<input type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="checkbox"/> Yes	<input type="checkbox"/> No

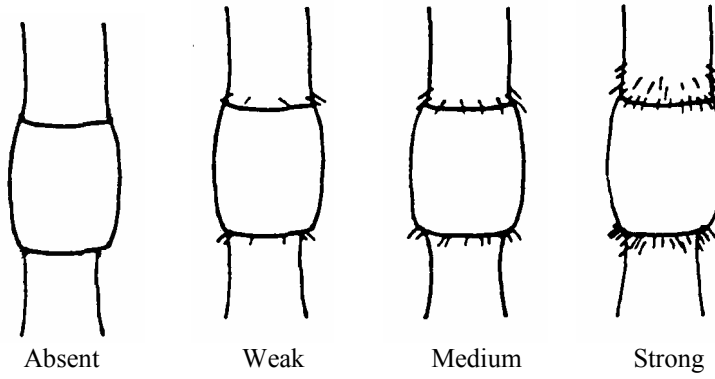
COMMENTS OF SPOT EXAMINATION

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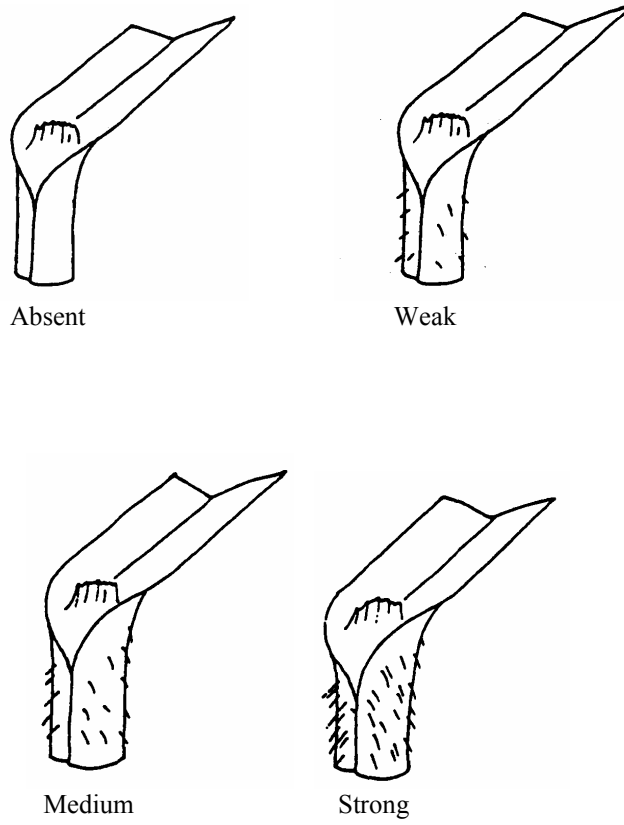
ADDITIONAL INFORMATION

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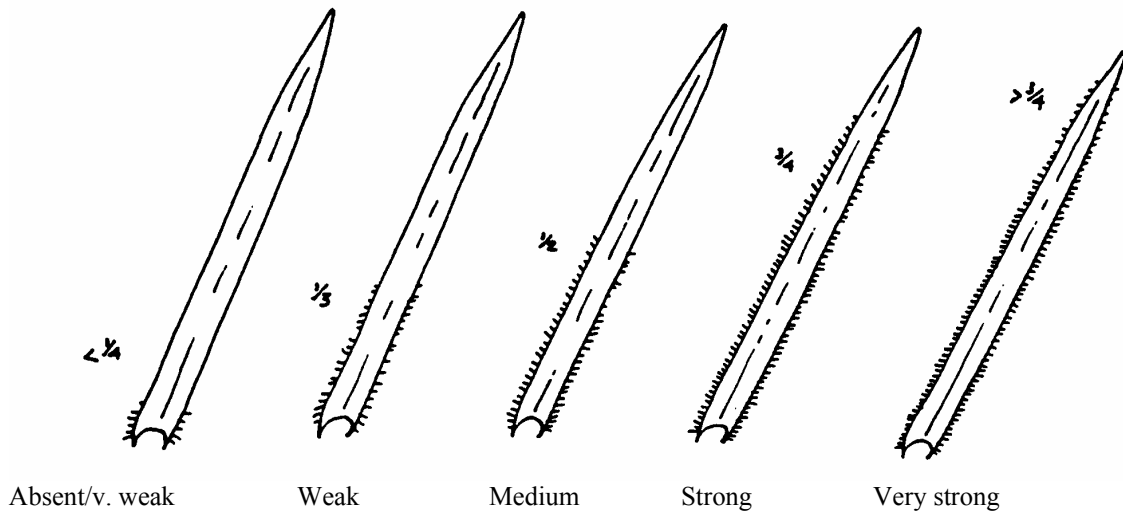
INTENSITY OF HAIRINESS OF UPPERMOST NODE



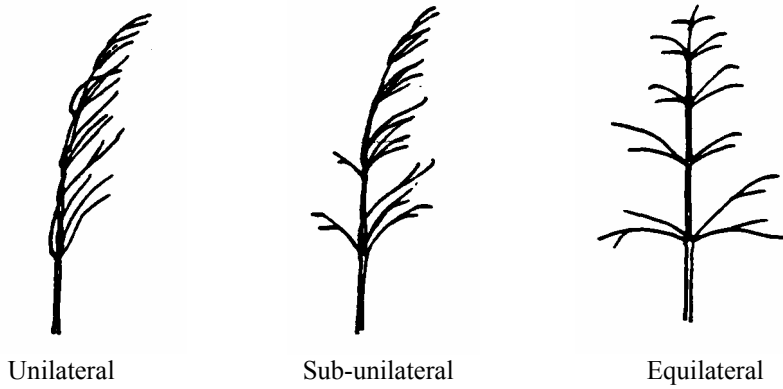
HAIRINESS OF SHEATHS



HAIRINESS OF MARGINS OF LEAF BELOW FLAG LEAF



ORIENTATION OF BRANCHES



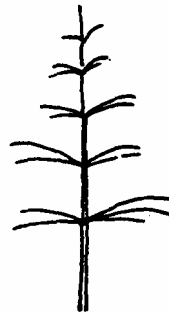
PANICLE ATTITUDE OF BRANCHES



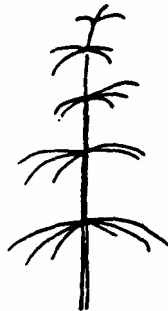
Erect



Semi-erect



Horizontal



Drooping



Strongly drooping

SPIKELET ATTITUDE



Erect

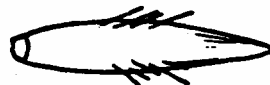


Pendulous

HAIRINESS OF BACK OF LEMMA

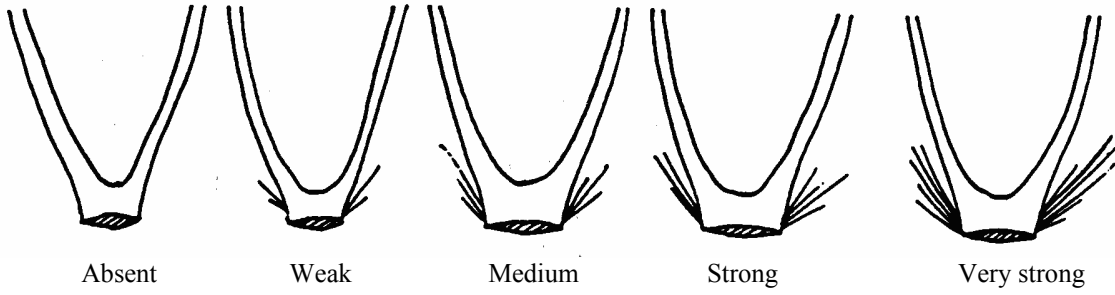


Absent

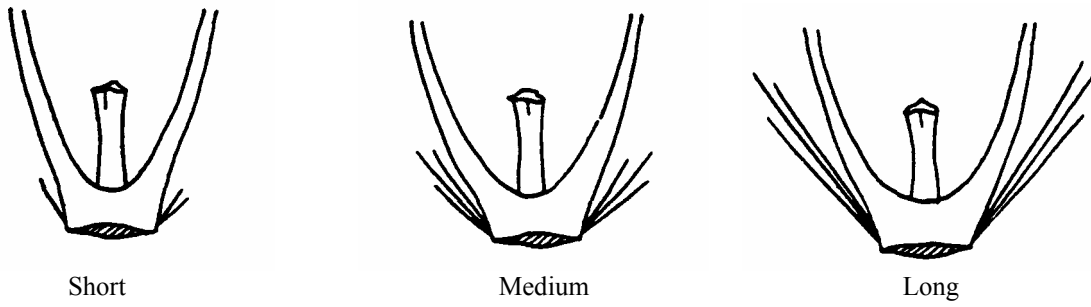


Present

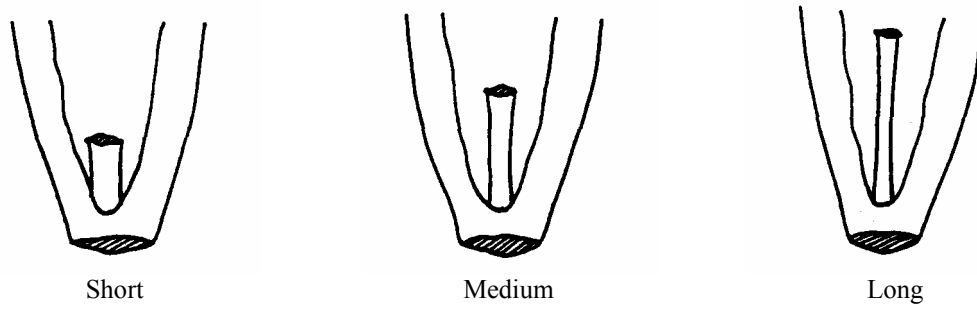
HAIRINESS OF BASE



LENGTH OF BASAL HAIRS



LENGTH OF RACHILLA



OAT GRAIN IN HUSK

