

Plant		Rape		438	Primary essential character	
No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Plant type	Block	Observation	1:1 2:2 3:3 4:4		Height of main stem and branches, and branching at maturity
2	Plant height	10 plants	Measurement	cm (integer)		Length of plant from base to top at maturity
3	Anthocyanin on stem and pod	Block	Observation	1:Absent 9:Present		Presence of anthocyanins on stem and pod at maturity
4	Root enlargement	10 plants	Observation	1:Absent 9:Present		Enlargement of root at maturity
5	Rachis length	10 plants	Measurement	cm (round to the 1st decimal place)		Rachis length from top to flag leaf in main stem at maturity
6	Red point of anther	Block	Observation	1:Absent 9:Present		Red point on the top of anther
7	Seed color	Block	Observation	1:Yellow 3:Brown 5:Chocolate 7:Blackish grey 9:Black		Seed color at maturity
8	Bolting time	Block	Observation	date		Date of bolting in about 50% of plants in a plot
9	Flowering time	Block	Observation	date		Date of flowering in about 50% of plants in a plot
10	Maturity	Block	Observation	date		Date of maturing in about 50% of plants

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No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Number of primary branches	10 plants	Measurement	(round to the 1st decimal place)		Total number of branches originating from main stem with at least five pods at maturity
2	Number of total branches	10 plants	Measurement	(round to the 1st decimal place)		Total number of branches at maturity
3	Leaf shape (1)	Block	Observation	1:Round 2:Spatulate 3:Elliptical		Shape of the first and second leaves at 3-4 leaf stage
4	Leaf shape (2)	Block	Observation	1:Absent 9:Present		Wrapping at base of leaf blade at bolting stage
5	Incision	Block	Observation	1:None 3:Superficial 5:Intermediate 7:Deep		Depth of incision in leaf margin at 7-8 leaf stage
6	Pubescence	Block	Observation	1:None 3:Little 5:Intermediate 7:Abundant		Amount of pubescence on the second leaf
7	Leaf color	Block	Observation	1:Yellowish green 2:Pale green 3:Green 4:Dark green 5:Purple		Leaf color at 7-8 leaf stage
8	Anthocyanin on cotyledon	Block	Observation	1:Absent 9:Present		Presence of anthocyanins in cotyledon at seeding (5-6 leaves) stage
9	Color of corolla	Block	Observation	3:Pale yellow 4:Slightly pale yellow 5:Yellow 6:Slightly orange 7:Orange		
10	Number of pods	10 plants	Measurement	(round to the 1st decimal place)		Number of pods with seeds in main rachis at maturity
11	Length of pod	10 pods	Measurement	cm (round to the 1st decimal place)		Average length of pods grown on the 9th rachilla from base of rachis to the 18th in main rachis at maturity
12	Beak length	10 pods	Measurement	cm (round to the 1st decimal place)		Average length of style of pod
13	Density of pods	10 plants	Measurement	cm (round to the 1st decimal place)		Rachis length of the 9th rachilla from base to the 18th rachilla in main rachis at maturity

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14	Number of seeds in pod	10 pods	Measurement	(integer)		Average number of seeds in pods of pre-determined length at maturity
15	1000 seed weight	1000 grains	Measurement	g (round to the 1st decimal place)		Seed weight of 1000 air-dried grains

Plant		Rape		438	Secondary essential character	
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1	Cold resistance	80 plants, 2 replications	Observation	1:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 9:Very high		Degree of cold damage through overwinter period
2	Snow resistance	80 plants, 2 replications	Observation	1:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 9:Very high		Degree of snow damage through overwinter period
3	Disease resistance	80 plants, 2 replications	Observation	1:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 9:Very high		Resistance to Sclerotinia sclerotiorum infection at maturing
4	Degree of spring habit	10 plants, 5 treatments	Observation	1:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 9:Very high		Degree of green vernalization and days to flowering after vernalization under long-day condition
5	Resistance to lodging (1)	Block	Observation	1:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 9:Very high		Degree of stem lodging at maturity
6	Resistance to lodging (2)	Block	Observation	1:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 9:Very high		Degree of lodging shown in canopy

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1	Insect resistance		Block	Observation	3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High		Resistance to Phytomyza horticola infection at flowering stage
2	Disease resistance		Block	Observation	3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High		Resistance to Alternaria brassicae infection at maturity

Plant		Rape		438	Tertiary essential character	
No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Yield	Block	Measurement	kg/a (round to the 2nd decimal place)		Seed weight per are after fine processing and air drying
2	Oil content	10 g	Measurement	% (round to the 1st decimal place)		Oil content of air-dried seeds analyzed by GQA or Soxhlet method
3	Fatty acid composition (Erucic acid)	0.1 g	Measurement	% (round to the 1st decimal place)		Erucic acid content measured by gas chromatography
4	Fatty acid composition (Oleic acid)	0.1 g	Measurement	% (round to the 1st decimal place)		Oleic acid content measured by gas chromatography
5	Fatty acid composition (linoleic acid)	0.1 g	Measurement	% (round to the 1st decimal place)		Linoleic acid content measured by gas chromatography
6	Fatty acid composition (linolenic acid)	0.1 g	Measurement	% (round to the 1st decimal place)		Linolenic acid content measured by gas chromatography
7	Content of glucosinolates	5 grains, several replications	Measurement	0:0 1:+ 3:++ 5:+++ 7:++++		Glucosinolate content in meal of seeds

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1	Vitamin E	Block	Measurement	% (round to the 1st decimal place)		Vitamin E content analyzed by High Performance Liquid Chromatograph
2	Seed size uniformity	Block	Observation	3:Irregular 4:Slightly irregular 5:Intermediate 6:Slightly uniform 7:Uniform		Uniformity of seed size
3	Fatty acid composition (stearic acid)	0.1 g	Measurement	% (round to the 1st decimal place)		Stearic acid content measured by gas chromatography
4	Fatty acid composition (palmitic acid)	0.1 g	Measurement	% (round to the 1st decimal place)		Palmitic acid content measured by gas chromatography
5	Fatty acid composition (eicosenoic acid)	0.1 g	Measurement	% (round to the 1st decimal place)		Eicosenoic acid content measured by gas chromatography