

Plant		Currant		488	Primary essential character
No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Bud shape	10 buds	Observation	3:Round 5:Ovate 7:Oblong	Observe bud shape of one-year-old dormant shoots with moderate growth
2	Shape of leaf scar	10 buds	Observation	1:Crescent 2:Wedge 3:Needle	Observe bud shape of one-year-old dormant shoots with moderate growth
3	Anthocyanin level in shoot	10 shoots	Observation	0:None 1:Very low 3:Low 5:Intermediate 7:High 9:Very high	Observe the central part of medium-sized growing shoots in July
4	Shoot pubescence	10 shoots	Observation	0:None 1:Very low 3:Low 5:Intermediate 7:High 9:Very high	Observe the central part of medium-sized growing shoots in July
5	Leaf size	15 leaves	Observation	square centimeters (integer)	Calculate $\pi \times L \times B/4$ (L=length, B=breadth) of 3 leaves from 5 shoots
6	Shape of leaf base	15 leaves	Observation	1:Linear 2:Very open 3:Open 4:Slightly open 5:Closed 6:Overlapping	Observe 3 central leaves of 5 growing shoots with moderate growth
7	Depth of leaf lobation	15 leaves	Observation	1:Very shallow 3:Shallow 5:Intermediate 7:Deep 9:Very deep	Observe 3 central leaves of 5 growing shoots with moderate growth
8	Lower leaf surface pubescence	15 leaves	Observation	0:None 1:Almost none 3:Little 5:Intermediate 7:Much 9:Very much	Observe 3 central leaves of 5 growing shoots with moderate growth
9	Flower color	10 flowers	Observation	1:Greenish white 2:Light greenish white 3:Greenish yellow 4:Yellow 5:Light yellow purple 6:Yellow purple 7:Purple	Representative flower color at full bloom
10	Fruit color	10 fluits	Observation	1:Bright red 2:Dark red 3:Pink 4:White 5:Yellowish white 6:Black 7:Brown black 8:Purple black	Observe color of healthy mature fruits

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No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Fruit shape	10 fruits	Observation	1:Round 2:Oval 3:Oblate 4:Ovate	The shape of fruit silhouette (side view)

Plant		Currant		488	Secondary essential character	
No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Time of bud break	2 trees	Measurement	date		Date when the first 2-3 buds break dormancy
2	Flowering time	2 trees	Measurement	date		The first date when the flower opening occurs daily
3	Ripening time	2 trees	Measurement	date		The day when the largest number of mature fruits are harvested
4	Harvest period	2 trees	Measurement	days (integer)		Number of days from the start to the end of harvest
5	Pre-harvest fruit drop	2 trees	Observation	0:None 3:Little 5:Intermediate 7:Much		Degree of fruit drop in orchard before harvest
6	Juice color	10 fruits	Observation	1:Bright red 2:Dark pink 3:Pink 4:Light pink 5:Milky white		By observation
7	Resistance of leaf spot	2 trees	Observation	1:High 3:Slightly low 5:Moderately low 7:Very low		Based on symptom expression

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No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Tree height	2 trees	Measurement	cm (integer)		The height from ground level to tree top
2	Tree width	2 trees	Measurement	cm (integer)		The average tree width measured at the E-W and N-S axes
3	Tree shape	2 trees	Observation	3:Upright 5:Intermediate 7:Spreading		Based on the ratio between tree height and width and direction of shoot growth
4	Vigor	2 trees	Observation	1:Very weak 3:Weak 5:Intermediate 7:Strong 9:Very strong		Based on the length and thickness of shoots
5	Sucker production	2 trees	Observation	0:None 3:Low 5:Intermediate 7:High		Observe the appearance of suckers
6	Number of clusters	10 buds	Measurement	clusters (round to the 1st decimal place)		Number of clusters in one flower bud (average of 10 buds)
7	Fruit cracking	2 trees	Observation	0:None 3:Little 5:Intermediate 7:Much		Degree of fruit cracking in orchard
8	Length of cluster	10 fruit clusters	Measurement	cm (round to the 1st decimal place)		Average of 10 clusters
9	Weight of cluster	10 fruit clusters	Measurement	g (round to the 1st decimal place)		Average of 10 clusters
10	Berry density	10 fruit clusters	Measurement	Number of berries/cm (round to the 1st decimal place)		Number of berries divided by the length of cluster (cm)
11	Berry weight	30 berries	Measurement	g/berry (round to the 1st decimal place)		Weight of 30 healthy berries at the peak harvest time
12	Berry uniformity	30 berries	Observation	3:Poor 5:Intermediate 7:Excellent		The uniformity of berries at the peak of harvest time
13	Number of seeds	10 berries	Measurement	Number of seeds/berry (round to the 1st decimal place)		Number of seeds per berry (average of 10 berries)

Plant		Currant		488	Tertiary essential character	
No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Juiciness	10 berries	Sensory	3:Little 5:Intermediate 7:Much		Evaluated by eating mature berries
2	Juice brix	30 berries	Measurement	% (round to the 1st decimal place)		Measured by refractometer
3	Juice acidity	30 berries	Measurement	pH (round to the 1st decimal place)		Measured by pH meter
4	Astringency	10 berries	Sensory	0:None 3:Little 5:Intermediate 7:Much		Evaluated by eating mature berries
5	Aroma	10 berries	Sensory	0:None 3:Little 5:Intermediate 7:Much		Evaluated by eating mature berries
6	Fruit quality	10 berries	Sensory	3:Poor 5:Intermediate 7:Good		Evaluate overall taste by eating mature berries
7	Storability	20 berries	Measurement	days (integer)		Length of time fruits keep fresh at room temperature
8	Yield	2 trees	Measurement	g/tree (integer)		Yield of tree at the full productive age

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No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Taste	10 berries	Sensory	1:Very sweet 3:Sweet 5:Intermediate 7:Sour 9:Very sour		Evaluate balance between sweetness and acidity by eating mature berries
2	Bitterness	10 berries	Sensory	0:None 3:Little 5:Intermediate 7:Much		Evaluate bitterness by eating mature berries
3	Thickness of berry skin	10 berries	Sensory	3:Thin 5:Intermediate 7:Thick		Evaluate berry skin thickness by biting mature berries