

Plant		Lawngrass		459	Primary essential character	
No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Stolon thickness	5 measurements per plot	Measurement	mm (round to the 1st decimal place)		Diameter of the 4th or 5th internode from the tip of stolon measured by slide calipers or dial caliper
2	Culm thickness	5 measurements per plot	Measurement	mm (round to the 1st decimal place)		Diameter of the culm just below the panicle measured by slide calipers or dial caliper
3	Culm length	5 measurements per plot	Measurement	cm (round to the 1st decimal place)		Length from the ground to the base of spike at the full heading stage
4	Internode length	5 measurements per plot	Measurement	mm (integer)		Length of the 4th or 5th internode from the tip of stolon
5	Leaf length	5 measurements per plot	Measurement	1:Extremely short 2:Very short 3:Short 4:Slightly short 5:Intermediate 6:Slightly long 7:Long 8:Very long 9:Extremely long		Length of mature leaf blades in early summer
6	Leaf width	5 measurements per plot	Measurement	1:Extremely slender 2:Very slender 3:Slender 4:Slightly slender 5:Intermediate 6:Slightly wide 7:Wide 8:Very wide 9:Extremely wide		Width of mature leaf blades in early summer
7	Leaf color	1 observation per plot	Observation	1:Extremely light 2:Very light 3:Light 4:Slightly light 5:Intermediate 6:Slightly dark 7:Dark 8:Very dark 9:Extremely dark		Greenness of leaf blades in early summer
8	Spike color	1 observation per plot	Observation	1:Extremely light 2:Very light 3:Light 4:Slightly light 5:Intermediate 6:Slightly dark 7:Dark 8:Very dark 9:Extremely dark		Color of spikes in early summer
9	Date of first heading	1 observation per plot	Observation	date		Date when 3 spikes have emerged per square meter
10	Spreading of stolons	3 measurements or 1 observation per plot	Obs.&Measr.	1:Extremely small 2:Very small 3:Small 4:Slightly small 5:Intermediate 6:Slightly large 7:Large 8:Very large 9:Extremely large		Degree of spreading of new stolons after planting estimated by the total length of stolons

Plant		Lawngrass		459	Primary optional character	
No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Density of stolons	1 observation per plot	Observation	1:Extremely sparse 2:Very sparse 3:Sparse 4:Slightly sparse 5:Intermediate 6:Slightly dense 7:Dense 8:Very dense 9:Extremely dense		Total length of stolons per unit area
2	Number of spikelets per spike	5 measurements per plot	Measurement	1:Almost none 2:Extremely few 3:Very few 4:Few 5:Intermediate 6:Some 7:Many 8:Very many 9:Extremely many		Number of spikelets per spike at heading stage before the first crop
3	Width of spikelets	10 measurements per plot	Measurement	1:Extremely slender 2:Very slender 3:Slender 4:Slightly slender 5:Intermediate 6:Slightly thick 7:Thick 8:Very thick 9:Extremely thick		Width of spikelets per spike at heading stage before the first crop
4	Heading	1 observation per plot	Observation	1:Extremely little 2:Very little 3:Little 4:Slightly little 5:Intermediate 6:Slightly abundant 7:Abundant 8:Very abundant 9:Extremely abundant		Number of spikes per unit area at the full heading stage in spring and autumn
5	Hullability	1 observation per plot	Observation	1:Extremely easy 2:Very easy 3:Easy 4:Slightly easy 5:Intermediate 6:Slightly hard 7:Hard 8:Very hard 9:Extremely hard		Ease of hulling, estimated by sampling 10 spikes per plot at the first crop
6	Plant vigor in early stage	1 observation per plot	Observation	1:Extremely poor 2:Very poor 3:Poor 4:Slightly poor 5:Intermediate 6:Slightly vigorous 7:Vigorous 8:Very vigorous 9:Extremely vigorous		Growth after sowing or transplanting
7	Weight of 1000 seeds	1 measurement per plot	Measurement	g (round to the 2nd decimal place)		Weight of 1000 seeds, estimated by sampling more than 100 cleaned seeds per plot

Plant		Lawngrass		459	Secondary essential character	
No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Crown rust resistance	1 observation per plot	Observation	1:Extremely low 2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high 9:Extremely high		Degree of the infection of Puccinia zoysiae by artificial inoculation or planting in an infected field
2	Large patch resistance	1 observation per plot	Observation	1:Extremely low 2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high 9:Extremely high		Degree of the infection of Drechslera dictyoides by artificial inoculation or planting in an infected field
3	Plant vigor in spring	1 observation per plot	Observation	1:Extremely poor 2:Very poor 3:Poor 4:Slightly poor 5:Intermediate 6:Slightly vigorous 7:Vigorous 8:Very vigorous 9:Extremely vigorous		Amount of growth in spring
4	Greening time	1 observation per plot	Observation	date		Date when the half of plot became green by sprouting after overwintering
5	Coloring time	1 observation per plot	Observation	date		Date when leaf blades of almost half of plot turned to autumn colors
6	Overwintering ability	1 observation per plot	Observation	1:Extremely poor 2:Very poor 3:Poor 4:Slightly poor 5:Intermediate 6:Slightly good 7:Good 8:Very good 9:Excellent		Overwintering ability evaluated based on the degree of regrowth and plant vigor in early spring after overwintering

Plant		Lawngress		459	Secondary optional character	
No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Curvularia leaf blight resistance	1 observation per plot	Observation	1:Extremely low 2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high 9:Extremely high		Degree of the infection of Curvularia leaf blight
2	Typhula snow blight resistance	1 observation per plot	Observation	1:Extremely low 2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high 9:Extremely high		Degree of the infection of Typhula snow blight
3	Pink snow mold resistance	1 observation per plot	Observation	1:Extremely low 2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high 9:Extremely high		Degree of the infection of Fusarium nivale
4	Hunting billbug resistance	1 observation per plot	Observation	1:Extremely low 2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high 9:Extremely high		Degree of damage by hunting billbug
5	Plant vigor in autumn	1 observation per plot	Observation	1:Extremely poor 2:Very poor 3:Poor 4:Slightly poor 5:Intermediate 6:Slightly vigorous 7:Vigorous 8:Very vigorous 9:Extremely vigorous		Amount of growth in early autumn
6	Shade tolerance	1 observation per plot	Observation	1:Extremely poor 2:Very poor 3:Poor 4:Slightly poor 5:Intermediate 6:Slightly good 7:Good 8:Very good 9:Excellent		Amount of growth under shaded conditions
7	Drought tolerance	1 observation per plot	Observation	1:Extremely poor 2:Very poor 3:Poor 4:Slightly poor 5:Intermediate 6:Slightly good 7:Good 8:Very good 9:Excellent		Amount of growth under drought conditions
8	Salinity tolerance	1 observation per plot	Observation	1:Extremely poor 2:Very poor 3:Poor 4:Slightly poor 5:Intermediate 6:Slightly good 7:Good 8:Very good 9:Excellent		Amount of growth in saline soil

Plant		Lawngrass		459	Tertiary essential character	
No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Canopy height	3 measurements per plot	Measurement	1:Extremely low 2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high 9:Extremely high		Canopy height of turf measured by turf height meter in 2 - 4 weeks after mowing in growing season
2	Plant coverage	1 observation per plot	Observation	1:Extremely low 2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high 9:Extremely high		Turf coverage percentage per unit area observed in 2 - 4 weeks after mowing in growing season

Plant		Lawngrass		459	Tertiary optional character	
No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Tolerance to mowing in spring	1 observation per plot	Observation	1:Extremely poor 2:Very poor 3:Poor 4:Slightly poor 5:Intermediate 6:Slightly tolerant 7:Tolerant 8:Very tolerant 9:Extremely tolerant		Mowing tolerance based on the regrowth and density of turf after mowing 2 - 4 times in 1 - 2 week(s) interval in spring
2	Tolerance to mowing in summer	1 observation per plot	Observation	1:Extremely poor 2:Very poor 3:Poor 4:Slightly poor 5:Intermediate 6:Slightly tolerant 7:Tolerant 8:Very tolerant 9:Extremely tolerant		Mowing tolerance based on the regrowth and density of turf after mowing 2 - 4 times in 1 - 2 week(s) interval in summer
3	Tolerance to mowing in autumn	1 observation per plot	Observation	1:Extremely poor 2:Very poor 3:Poor 4:Slightly poor 5:Intermediate 6:Slightly tolerant 7:Tolerant 8:Very tolerant 9:Extremely tolerant		Mowing tolerance based on the regrowth and density of turf after mowing 2 - 4 times in 1 - 2 week(s) interval in autumn
4	Sod density	1 observation per plot	Observation	1:Extremely sparse 2:Very sparse 3:Sparse 4:Slightly sparse 5:Intermediate 6:Slightly dense 7:Dense 8:Very dense 9:Extremely dense		Growth in trampling treated area compared to control
5	Elongation of stolons	1 observation per plot	Observation	1:Extremely poor 2:Very poor 3:Poor 4:Slightly poor 5:Intermediate 6:Slightly good 7:Good 8:Very good 9:Excellent		Elongation of stolons under trampling treated conditions observed between each cutting
6	Seed productivity	1 measurement per plot	Measurement	g/square meters (integer)		Cleaned seed yield per square meter in spring
7	Seed fertility	1 measurement per plot	Measurement	% (round to the 1st decimal place)		Ratio of fully mature seeds per 100 caryopses estimated by sampling 10 spikes per plot
8	Fresh yield in spring	1 measurement per plot	Measurement	kg/a (round to the 1st decimal place)		Fresh yield in spring estimated from fresh weight harvested at 3 - 5 cm height from 1 square meters area during spring
9	Dry matter ratio in spring	1 measurement per plot	Measurement	% (round to the 1st decimal place)		Dry matter ratio in spring estimated by sampling 200 g fresh weight and drying at 70 centi degree for 48 hours
10	Fresh yield in summer	1 measurement per plot	Measurement	kg/a (round to the 1st decimal place)		Fresh yield in summer estimated by the same way as that in spring

Plant		Lawnglass		459	Tertiary optional character	
No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
11	Dry matter ratio in summer	1 measurement per plot	Measurement	% (round to the 1st decimal place)		Dry matter ratio in summer estimated by the same way as that in spring
12	Fresh yield in autumn	1 measurement per plot	Measurement	kg/a (round to the 1st decimal place)		Fresh yield in autumn estimated by the same way as that in spring
13	Dry matter ratio in autumn	1 measurement per plot	Measurement	% (round to the 1st decimal place)		Dry matter ratio in autumn estimated by the same way as that in spring
14	Dry matter digestibility	1 measurement per plot	Measurement	% (round to the 1st decimal place)		Ratio of digestible dry matter discerned by in vitro enzyme method or near infrared spectroscopy (NIRS)