| Plant ${ }^{\text {P }}$ |  | Common rush |  | 5012) Primary essential character |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No | Characters | No. of samples | Methods | Rank or measurement unit | Remarks |
| 1 | Stem length | 20 plants | Measurement | cm (integer) | Length from ground to tip in the longest stem at harvest time |
| 2 | Fresh stem color | Block | Observation | 3:Light green 4:Slightly light green 5:Green 6:Slightly deep green 7:Deep green 8:Dark green | Fresh stem color at the beginning time of flowering |
| 3 | Sheath length | 20 plants | Measurement | cm (round to the 1st decimal place) | Sheath length of the longest stem at harvest time |
| 4 | Cluster size | 20 plants | Measurement | mm (integer) | Length of the longest peduncle at fructification time |
| 5 | Number of clusters | 20 plants | Measurement | \% (round to the 1st decimal place) | Rate of stems with flower in the stems longer than 105 cm length at harvest time |
| 6 | Perianth color | Block | Observation | 3:Yellow 4:Light green 5:Green 6:Light brownish green 7:Brown | Perianth color at flowering time |
| 7 | Flowering start time | Block | Observation | date | First date of flowering |


| Plant | Common rush |  |  | 5012) Primary optional character |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No | Characters | No. of samples | Methods | Rank or measurement unit | Remarks |
| 1 | Plant type | Block | Observation | 3:Erect 4:Slightly erect 5:Intermediate 6:Slightly prostrate 7:Prostrate | Plant type at flowering time |
| 2 | Stem thickness (long diameter) | 20 plants | Measurement | mm (round to the 1st decimal place) | Long diameter of stems at about 50 cm above the ground in dry stems longer than 105 cm (after harvest) |
| 3 | Stem thickness (short diameter) | 20 plants | Measurement | mm (round to the 1st decimal place) | Short diameter of stems at about 50 cm above the ground in dry stems longer than 105 cm (after harvest) |
| 4 | Regularity of stem <br> thickness | 20 plants | Measurement | \% (round to the 1st decimal place) | Coefficient of variation in dry stem thickness |
| 5 | Distance between internodes | Block | Observation | 3:Short 4:Slightly short 5:Intermediate 6:Slightly long 7:Long | Length of subterranean stem between the base of the 3rd stem and the base of the 7 th stem in tiller with the longest stem at harvest |
| 6 | Seed fertility | Block | Observation | 3:Sterile 5:Partially sterile 7:Fertile | Seed fertility in open pollination |


| Plant |  | Common rush | 20 (05012) | Secondary essential character |  |  |
| :---: | :--- | :--- | :--- | :--- | :--- | :--- |
| No | Characters |  | No. of samples | Methods |  | Rank or measurement unit |


| Plant | Common rush |  |  | 5012) Secondary optional character |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No | Characters | No. of samples | Methods | Rank or measurement unit | Remarks |
| 1 | Resistance to Bactra furfurona Haworth | Block | Observation | 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High | Assessed by the damage caused by Bactra furfurona Haworth |
| 2 | Resistance to <br> Rhizoctonia solani K | Block | Observation | ```2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high``` | Assessed by the appearance of symptoms caused by Rhizoctonia solani K. |


| Plant | Common rush |  |  | 5012) Tertiary essential character |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No | Characters | No. of samples | Methods | Rank or measurement unit | Remarks |
| 1 | Effective number of stems per plant | 20 plants | Measurement | Stem number per plant (integer) | Number of stems longer than 60 cm length at harvest time |
| 2 | Number of long stems per plant | 20 plants | Measurement | Stem number per plant (integer) | Number of stems longer than 105 cm length at harvest time |
| 3 | Dry weight of stems per 1 meter | 20 plants | Measurement | $g$ per 100 stems (round to the 1st decimal place) | Weight of 1 meter dry stems longer than 105 cm (everything 3 cm below base and above 103 cm at top is cut and removed) |
| 4 | Dry weight of long stems | 20 plants | Measurement | $g$ per plant (round to the 1st decimal place) | Weight of dry stems longer than 105 cm |
| 5 | Dry weight of efficient stems | 20 plants | Measurement | $g$ per plant (round to the 1st decimal place) | Weight of dry stems longer than 60 cm |
| 6 | Dry weight ratio of long stems | 20 plants | Measurement | \% (round to the 1st decimal place) | (dry weight of long stems)/(dry weight of effective stems) x 100 |
| 7 | Hardness of dry stem | 20 plant | Measurement | \% (round to the 1st decimal place) | (stem thickness after 300 g weight for 10 minutes)/(stem thickness) x 100 |
| 8 | Color of dry stem | Block | Observation | 3:Bright 4:Slightly bright 5:Intermediate 6:Slightly dark 7:Dark | Color tone of dry stem after mud soaking |


| Plant |  | Common rush |  | 5012) Tertiary optional character |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No | Characters | No. of samples | Methods | Rank or measurement unit | Remarks |
| 1 | Number of stems per plant | 20 plants | Measurement | Stem number per plant (integer) | Number of stems longer than 15 cm at harvest time |
| 2 | Dry stem weight per plant | 20 plants | Measurement | $g$ per plant (round to the 1st decimal place) | Dry weight of stems longer than 15 cm at harvest time |
| 3 | Number of stems with <br> flowers per plant | 20 plants | Measurement | Stem number per plant (round to the 1st decimal place) | Number of stems longer than 15 cm with flowers at harvest time |
| 4 | Density of dry stem | 20 plants | Measurement | $g$ per cubic centimeter (round to the 1st decimal place) | (weight of dry stem)/(volume of dry stem) |
| 5 | Friction strength | 20 plants | Measurement | times/per square milimeter (round to the 1st decimal place) | (number of times rubbed with cloth file until stem cutting)/(the stem cross section area) |

