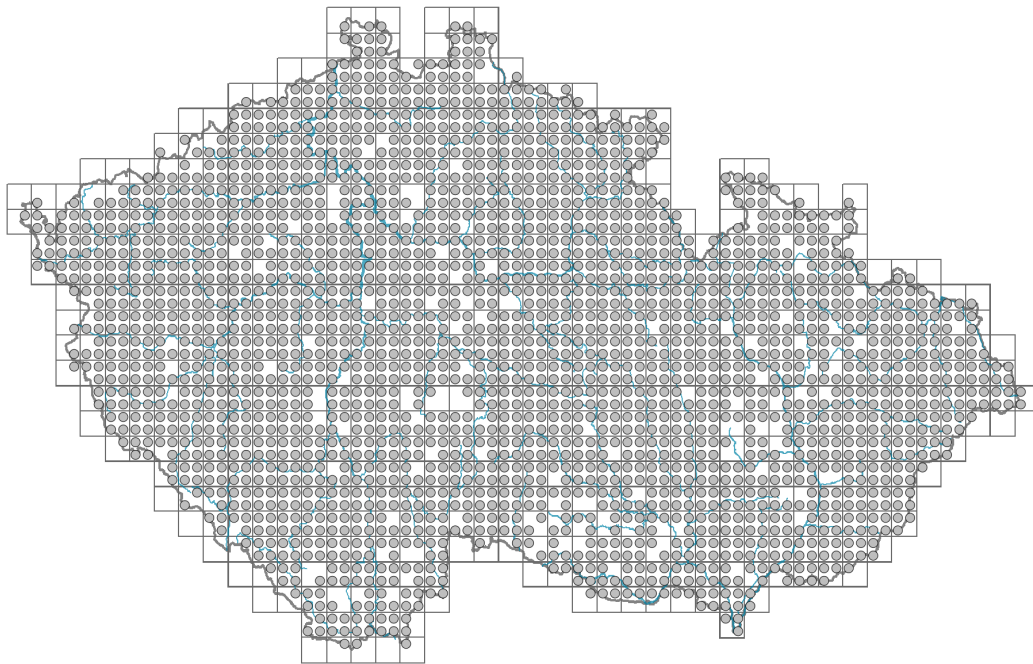


# *Lolium perenne*

## Distribution



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### Map info

● revised records

○ unrevised records

On the map are not visualized records without the coordinates and records marked as incorrect or doubtful.

## Habitus and growth type

Height [m]: **0.1-0.6**

Growth form: **clonal herb**

Life form: **hemicryptophyte**

Life strategy: **C - competitor**

Life strategy (Pierce method based on leaf traits): **R/CSR**

Life strategy (Pierce method, C-score): **18.5 %**

Life strategy (Pierce method, S-score): **29.3 %**

Life strategy (Pierce method, R-score): **52.3 %**

## Leaf

Leaf presence and metamorphosis: **leaves present, not modified**

Leaf arrangement (phyllotaxis): **alternate**

Leaf shape: **simple - entire**

Stipules: **absent**

Petiole: **absent**

Leaf life span: **evergreen**

Leaf anatomy: **mesomorphic**

## Flower

Flowering period [month]: **May-October**



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Flowering phase: **7 Ligustrum vulgare-Stachys sylvatica (end of early summer)**

Flower colour: **green**

Perianth type: **reduced**

Perianth fusion: **reduced**

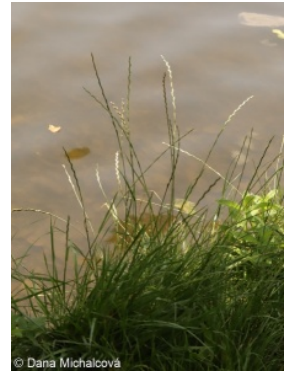
Inflorescence type: **spica e spiculis composita**

Dicliny: **synoecious**

Generative reproduction type: **allogamy self-incompatibility, facultative allogamy**

Pollination syndrome: **wind-pollination**

Pollinator spectrum: **hoverflies, flies s. l., meat flies s. l., other Diptera (honeybee, other Hymenoptera, butterflies, beetles, nitidulids)**



## Fruit, seed and dispersal

Fruit type: **dry fruit - caryopsis**

Fruit colour: **brown**

Reproduction type: **only by seed/spores**

Dispersal unit (diaspore): **fruit, infrutescence or its part**

Dispersal strategy: **Allium (mainly autochory)**

Myrmecochory: **non-myrmecochorous (b)**



## Belowground organs and clonality

Storage organ: **tuft**

Type of clonal growth organ: **epigeogenous rhizome**

Freely dispersible organs of clonal growth: **absent**

Shoot life span (cyclicality): **dicyclic or polycyclic shoots prevailing**

Branching type of stem-derived organs of clonal growth: **sympodial**

Primary root: **absent**

Persistence of the clonal growth organ [year]: **3.7**

Number of clonal offspring: **4.3**

Lateral spreading distance by clonal growth [m]: **0.04**

Clonal index: **4**

### Bud bank

Number of buds per shoot at the soil surface (root buds excluded): **6**

Number of buds per shoot at a depth of 0-10 cm (root buds excluded): **7**

Number of buds per shoot at a depth greater than 10 cm (root buds excluded): **0**

Size of the belowground bud bank (root buds excluded): **14**

Depth of the belowground bud bank (root buds excluded) [cm]: **3**

Number of buds per shoot at the soil surface (root buds included): **6**

Number of buds per shoot at a depth of 0-10 cm (root buds included): **7**

Number of buds per shoot at a depth greater than 10 cm (root buds included): **0**

Size of the belowground bud bank (root buds included): **14**

Depth of the belowground bud bank (root buds included) [cm]: **3**



## Trophic mode

Parasitism and mycoheterotrophy: **autotrophic**

Carnivory: **non-carnivorous**

Symbiotic nitrogen fixation: **no nitrogen-fixing symbionts**

## Karyology

Chromosome number (2n): **14**

Ploidy level (x): **2**

2C genome size [Mbp]: **4754.08**

1Cx monoploid genome size [Mbp]: **2377.04**

Genomic GC content: **46.4 %**

## Taxon origin

Origin in the Czech Republic: **native**

## Ecological indicator values

### Ellenberg-type indicator values

Light indicator value: **8 - light plant, only exceptionally occurring at less than 40% of diffuse radiation incident in an open area**

Temperature indicator value: **5 - moderate heat indicator, occurring from lowland to montane belt, mainly in submontane-temperate areas**

Moisture indicator value: **5 - indicator of fresh soils, focus on soils of average moisture, missing on wet and on soils that frequently dry out**

Reaction indicator value: **7 - indicator of slightly acidic to slightly basic conditions, never occurring in very acidic conditions**

Nutrient indicator value: **6 - transition between values 5 and 7**

Salinity indicator value: **1 - salt tolerant, mostly on low-salt to salt-free soils, but occasionally on slightly salty soils**

### Indicator values for disturbance

Whole-community disturbance frequency indicator value: **-0**

Herb layer disturbance frequency indicator value: **-0**

Whole-community disturbance severity indicator value: **0.67**

Herb layer disturbance severity indicator value: **0.69**

Whole-community structure based disturbance indicator value: **0.66**

Herb layer structure-based disturbance indicator value: **0.7**

## Habitat and sociology

### Occurrence in habitats

1 Vegetation of cliffs, screes and walls

1C Walls: **1 - rare occurrence**

4 Wetland and riverine herbaceous vegetation

4E Reed vegetation of brooks: **1 - rare occurrence**

4I Vegetation of nitrophilous annual hygrophilous herbs: **1 - rare occurrence**

4J River gravel banks: **1 - rare occurrence**

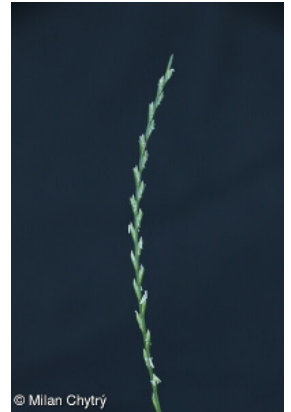
4L Nitrophilous herbaceous fringes of lowland rivers: **1 - rare occurrence**

6 Meadows and mesic pastures

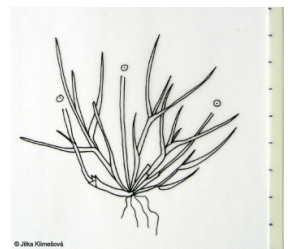
6A Mesic Arrhenatherum meadows: **2 - optimum**

6C Pastures and park grasslands: **3 - dominant**

6D Alluvial meadows of lowland rivers: **1 - rare occurrence**



- 6F Intermittently wet Molinia meadows: **1 - rare occurrence**  
 6G Vegetation of wet disturbed soils: **2 - optimum**  
 8 Dry grasslands  
 8C Narrow-leaved sub-continental steppes: **1 - rare occurrence**  
 8D Broad-leaved dry grasslands: **1 - rare occurrence**  
 8E Acidophilous dry grasslands: **1 - rare occurrence**  
 8F Thermophilous forest fringe vegetation: **1 - rare occurrence**  
 9 Sand grasslands and rock-outcrop vegetation  
 9B Open vegetation of acidic sands: **1 - rare occurrence**  
 9C Festuca grasslands on acidic sands: **1 - rare occurrence**  
 9E Acidophilous vegetation of spring therophytes and succulents: **1 - rare occurrence**  
 9F Basiphilous vegetation of spring therophytes and succulents: **1 - rare occurrence**  
 10 Saline vegetation  
 10G Continental vegetation of annual halophilous grasses: **1 - rare occurrence**  
 10I Inland saline meadows: **2 - optimum**  
 11 Heathlands and scrub  
 11R Scrub and pioneer woodland of forests clearings: **1 - rare occurrence**  
 12 Forests  
 12T Robinia pseudacacia plantations: **1 - rare occurrence**  
 12U Plantations of broad-leaved non-native trees: **1 - rare occurrence**  
 12V Spruce plantations: **1 - rare occurrence**  
 12W Pine and larch plantations: **1 - rare occurrence**  
 13 Anthropogenic vegetation  
 13A Annual vegetation of ruderal habitats: **2 - optimum**  
 13B Annual vegetation of arable land: **2 - optimum**  
 13C Annual vegetation of trampled habitats: **2 - optimum**  
 13D Perennial thermophilous ruderal vegetation: **2 - optimum**  
 13E Perennial nitrophilous herbaceous vegetation of mesic sites: **2 - optimum**



#### Affinity to the forest environment

Affinity to the forest environment in Thermophyticum: **0 - taxon that does not spontaneously occur in Czech forests**

Affinity to the forest environment in Mesophyticum and Oreophyticum: **0 - taxon that does not spontaneously occur in Czech forests**

#### Diagnostic taxon

Diagnostic taxon of classes: [XA \*Polygono arenastri-Poëtea annuae\*](#)

Diagnostic taxon of alliances: [TDC \*Cynosurion cristati\*](#), [XAA \*Coronopodo-Polygonion arenastri\*](#), [XAB \*Saginion procumbentis\*](#)

Diagnostic taxon of associations: [TDC01 \*Lolium perennis-Cynosuretum cristati\*](#), [TDC03 \*Lolietum perennis\*](#), [XAA01 \*Polygonetum arenastri\*](#), [XAA02 \*Sclerochloa durae-Polygonetum arenastri\*](#), [XAB05 \*Lolium perennis-Matricarietum discoideae\*](#), [XBG12 \*Ivaetum xanthiifoliae\*](#), [XBK03 \*Eragrostio poaeoidis-Panicetum capillariss\*](#)

#### Constant taxon

Constant taxon of classes: [XA \*Polygono arenastri-Poëtea annuae\*](#)

Constant taxon of alliances: [TDC \*Cynosurion cristati\*](#), [XAA \*Coronopodo-Polygonion arenastri\*](#), [XAB \*Saginion procumbentis\*](#), [XBI \*Malvion neglectae\*](#)

Constant taxon of associations: [TCB02 \*Loto tenuis-Potentilletum anserinae\*](#), [TDC01 \*Lolium perennis-Cynosuretum cristati\*](#), [TDC03 \*Lolietum perennis\*](#), [TDC04 \*Prunello\*](#)

[vulgaris-Ranunculetum repentis](#), [XAA01 Polygonetum arenastri](#), [XAA02 Sclerochloo durae-Polygonetum arenastri](#), [XAA03 Poo annuae-Coronopodetum squamati](#), [XAB04 Poëtum annuae](#), [XAB05 Lolio perennis-Matricarietum discoideae](#), [XBG08 Descurainietum sophiae](#), [XBG10 Chamaeplietum officinalis](#), [XBG12 Ivaetum xanthiifoliae](#), [XBH01 Hordeetum murini](#), [XBI01 Hyoscyamo nigri-Malvetum neglectae](#), [XBI02 Malvetum pusillae](#), [XBI04 Malvo neglectae-Chenopodietum vulvariae](#), [XBK03 Eragrostio poaeoidis-Panicetum capillaris](#), [XCB02 Berteroetum incanae](#)

Dominant taxon

Dominant taxon of associations: [MCC12 Tripleurospermo inodori-Bolboschoenetum planiculmis](#), [TCB02 Loto tenuis-Potentilletum anserinae](#), [TDC03 Lolietum perennis](#)

Ecological specialization indices

Ecological specialization index for all vegetation types: **4.1**

Ecological specialization index for non-forest vegetation: **4.1**

Ecological specialization index for forest vegetation: **3.7**

Colonization ability

Index of colonization success (ICS): **6**

Index of colonization potential (ICP): **2**

Optimum successional age [years]: **8**

## Distribution and frequency

Floristic zone: **boreal, northern temperate, southern temperate, submeridional, meridional**

Floristic region: **Europe**

Distribution range extension along the continentality gradient: **5**

Elevational belt in the Czech Republic: **lowlands, colline belt, submontane belt**

Expansive taxon in the region: **Bohemian Thermophyticum, Bohemian Moravian Mesophyticum, Bohemian Moravian Oreophyticum, Pannonian Thermophyticum, Carpathian Mesophyticum, Carpathian Oreophyticum**

Occurrence frequency in the basic grid mapping cells and quadrants of the basic grid mapping cells: **653**

taxon.data.freq\_in\_quad: **2283**

Commonness in vegetation plots from the Czech Republic

Occurrence frequency in vegetation plots: **5 %**

Occurrence frequency in vegetation plots with a cover above 5%: **27.1 %**

Occurrence frequency in vegetation plots with a cover above 25%: **14.2 %**

Occurrence frequency in vegetation plots with a cover above 50%: **5.5 %**

Mean percentage cover in vegetation plots: **10.5 %**

Maximum percentage cover in vegetation plots: **88 %**

Number of habitats with taxon occurrence in the Czech Republic

Number of narrow habitats in which the taxon occurs: **30**

Number of narrow habitats in which the taxon has its optimum: **9**

Number of broad habitats in which the taxon occurs: **9**

Number of broad habitats in which the taxon has its optimum: **3**

## **Threats and protection**

Red List 2017 (national categories): **taxon is not on the Red List**

Red List 2017 (IUCN categories): **LC(NA) - least concern (taxon is not on the Red List)**

Legal protection: **not protected by law**