

研究论文

# 黑麦不同叶位叶片、叶鞘叶肉细胞形态及其功能的研究

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收稿日期 1990-11-13 修回日期 1991-12-10 网络版发布日期 接受日期

**摘要** 以田间生长的两个黑麦品种为材料, 对各叶位叶片、叶鞘的叶肉细胞形态进行了离析观测。黑麦各叶片叶肉细胞形态不一, 从1环到10余环。冬前所生叶片叶肉细胞的形态各叶位间无明显的变化规律; 春季伸长节间的叶片, 随叶位的上升多环细胞所占比例渐增, 旗叶尤其明显。越冬前后长出的叶片叶肉细胞的长、宽均较大, 以前和此后伸出的叶片叶肉细胞的长、宽均变小, 高位叶片变小的幅度要大于低叶。叶鞘叶肉细胞的形态及叶位间的变化规律同叶片。黑麦上位叶片的逃逸速度高于下位叶片, 下部各叶位叶片的光合速率差别不大。对叶肉细胞的形态与光合速率的关系进行了讨论。

**关键词** [黑麦,叶肉细胞,形态与功能](#)

分类号

## Studies on the Morphology and function of the Mesophyll Cells of Leaf-blades and Leaf-sheaths in Rye (*Secale cereale* L.)

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**Abstract** Using cell separation technique, the mesophyll cells of leaf-blades and leaf-sheaths at different positions of the main stems of 2 rye varieties grown in the field were investigated. The results indicated that the morphology of the mesophyll cells of the leaf-blade varied from no link to about 15 links. There was no apparent change in the morphology of the mesophyll cells in different autumn leaves, but the morphology of the mesophyll cells changed gradually from simple to complex when the leaf position shifted from the first spring leaf toward the flag leaf. The percentage of simple cells was higher in the lower leaves than in the upper ones, but there were more complex cells in the upper leaves than in the lower ones. The mesophyll cells in the leaf-sheath showed the same changes as in the leaf-blade, except there were more simple mesophyll cells in the leaf-sheath than in the leaf-blades. In autumn leaves, the size of the mesophyll cells increased when the leaf position shifted from lower leaves toward upper leaves, but with spring leaves, it decreased when the leaf position shifted upward. The net photosynthetic rates of the 2 uppermost leaves were higher than those of the other leaves.

**Key words** [Rye \(\*Secale cereale\* L.\)](#) [Mesophyll cell](#) [Morphology and function.](#)

DOI:

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