

研究论文

黑暗对冬小麦花粉育性和结实率的影响

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收稿日期 修回日期 网络版发布日期 接受日期

摘要 在冬小麦雄蕊造孢细胞开始增大到花粉母细胞形成期间,给整株小麦以72小时的黑暗处理,可导致花粉的全部败育,给麦穗套袋后的空粒率达到100%。然而,在人工授粉后的结实率可以达到90%以上。在被黑暗处理的花粉的双核阶段,不具有淀粉粒,并失去了过氧化物酶的活性。与小麦雄性不育系的表现相同。因此,可以在杂交育种中应用这种小麦去雄的生理学方法。此外,还讨论了进入全黑暗适期的外部形态学特征。

关键词

分类号

EFFECT OF DARKNESS ON THE POLLEN FERTILITY AND SEED SETTING

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Abstract During the period between the enlargement of sporogenous cells and the formation of pollen mother cells entire plant of winter wheat was given 72 hrs. of dark treatment. This resulted in the full abortion of pollen grains and complete failure of seed setting in the spikes covered with parchment paper. However, after manual pollination the treated spikes set seeds up to 90%. There were no starch grains and peroxidase activity found in the binucleate pollen from the treated plants. This is similar to the situation found ...

Key words

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