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研究论文

# 用$^{14}CO_2$示踪研究小麦叶片早衰对籽粒产量的影响

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摘要 研究初步表明,早衰性品系的上部三张叶片绿色面积和叶色消退比正常品种为快,约早4～8天。$^{14}C$ 标记指出,在开花期穗及上部三张叶片的$^{14}C$ 同化物分配为:45%运向茎杆等供继续生长之用;30～35%运向籽粒;20～25%自存。开花后10天约76～81%运向籽粒;11～16%自存;运向茎杆等只占7%。在此期间,早衰性品系分配到籽粒的$^{14}C$ 同化物比正常品系少5%。标记部位留存则多5%。其原因可能由于叶片早衰使同化物输出效率低所致。分析表明,早衰性品系穗及倒二叶、倒三叶$^{14}C$ 同化物输出效率低于正常品系4.0～23.0%。开花后20天内,由于叶片早衰引起的籽粒产量损失率约为5～6%。由于开花后早衰性品系倒二叶、倒三叶比正常品系衰老早5～8天,而此时70%左右的光合产物运向籽粒。因此,在进行早熟小麦育种时,应尽量选育后期叶片不早衰的材料。在栽培上,应重视穗、粒肥的施用,以延长上部叶片功能,增加粒重。

关键词

分类号

# STUDIES OF THE INFLUENCE OF THE EARLY-SENESCENCE OF WHEAT LEAVES ON THE GRAIN YIELD WITH $^{14}CO_2$ AS A TRACER

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**Abstract** Results obtained from preliminarily studies indicated that the three uppermost leaves of the early-senescent lines died 4-8 days earlier than those of the normal varieties of wheat.This phenomenonwas especially serious with the 2nd and 3rd leaves from the top.In early-senescent lines,the totalamount of assimilates distributed to the grains from ears and leaves decreased by 5% at flowering timeand in 10 days after flowering as compared with that in normal lines;and the outflow efficiency ofassimilates from e...

**Key words**

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