

植物保护

小麦蚕豆间作系统中的氮钾营养对小麦锈病发生的影响*

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摘要 田间小区试验表明: 小麦/蚕豆间作系统中, 间作有提高小麦氮吸收量的趋势。在低氮水平条件下间作优势和边行优势突出, 间作平均提高小麦氮的吸收量2.33%~44.88%, 边行优势平均为3.49%~66.66%; 高肥料投入水平条件下, 间作优势和边行优势减弱。随着氮肥投入水平的提高, 小麦氮的吸收量也随之提高, 而增施钾肥不能明显提高小麦氮的吸收量。间作和不同的施氮水平均不能明显提高小麦钾的吸收量, 但增施钾肥有提高小麦钾吸收量的趋势。小麦/蚕豆间作可以明显降低小麦锈病的发生, 间作相对防效达22.2%~100%, 增施钾肥平均降低小麦锈病46.15%~59.1%。锈病的发生与小麦体内的氮素营养呈极显著的正相关关系, 相关系数为 $r=0.747^{**} \sim 0.7822^{**}$, 与钾素营养没有明显的相关关系。

关键词 [小麦](#); [间作](#); [氮](#); [钾](#); [小麦锈病](#)

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Effects of Potassium and Nitrogen Supply on the Occurrence of Wheat Rust in Wheat and Faba Bean Intercropping System

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Abstract

Field experiment of wheat intercropped faba bean was conducted. The results showed that: intercropping improved N uptake of wheat in wheat and faba bean intercropping system. Nitrogen uptake advantage of intercropping and broad-row effect were apparently when low nitrogen fertilization was applied, and intercropping improved wheat nitrogen uptake 2.33%~44.88%, broad-row effect was 3.49%~66.66%. Intercropping advantages were disappear when high fertilizations applied. With increasing of the amount of nitrogen applied, N content of wheat increased, while applied potassium fertilization could not improve nitrogen uptake of wheat. Intercropping and various nitrogen levels could not affect potassium uptake, while potassium uptake of wheat was increased after applied potassium fertilization. Occurrence of wheat rust was decreased in wheat and faba bean intercropping system., averagely decreased 22.2%~100%; and decreased 46.15%~59.1% after applied potassium fertilization. There was significantly positive correlation ship between nitrogen content of wheat and occurrence of wheat rust, $r=0.747^{**} \sim 0.7822^{**}$, but there was not correlation ship between potassium content of wheat and occurrence of wheat rust.

Key words [wheat](#); [intercropping](#); [nitrogen](#); [potassium](#); [wheat rust](#)

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