

不同间作模式对辣椒养分利用、主要病虫害及产量的影响

祖艳群, 胡文友, 吴伯志, 湛方栋, 李元*

(云南农业大学资源与环境学院, 昆明 650201)

摘要: 在云南省丘北辣椒示范区对辣椒-花生、辣椒-大豆和辣椒-玉米间作模式进行调查。结果表明, 总体上, 间作系统中辣椒叶片 N、P 和 K 含量均显著高于辣椒单作, 其中辣椒-玉米(10:2)间作系统中辣椒叶片 N、P 和 K 含量分别比单作增加 12.93%、5.17% 和 22.64%。与辣椒单作相比, 辣椒间作显著提高了盛果期辣椒的株高和单株结果数, 提高幅度分别为 1.57%~20.89% 和 3.06%~307.52%; 有效控制了辣椒病毒病、疫病和烟青虫的发生, 控制效果分别达 24.01%、6.87%~23.80% 和 4.31%~36.40%; 辣椒间作显著提高了辣椒的生物量和产量, 辣椒产量的增幅为 9.73%~53.52%, 起到了明显的增产、增值效果。初步筛选出的辣椒-花生(15:5)、辣椒-大豆(8:2) 和辣椒-玉米(10:2) 三种辣椒间作模式供进一步生产示范。

关键词: 辣椒; 间作; 养分利用; 病虫害控制; 产量

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Effect of Chilli Pepper Intercropping System on Nutrient Utilization, Main Diseases and Pests and Yield of Chilli Pepper

ZU Yan-Qun, HU Wen-You, WU Bo-Zhi, ZHAN Fang-Dong, LI Yuan*

(College of Resources and Environment, Yunnan Agricultural University, Kunming 650201, China)

Abstract: The three chilli pepper intercropping system, including chilli pepper-peanut, chilli pepper-soybean and chilli pepper-maize, were studied in chilli pepper demonstration area of Qiubei County, Yunnan Province. The results showed that chilli pepper intercropping system increased the contents of N, P and K in chilli pepper leaves, in general. Chilli pepper-maize intercropping system increased the contents of N, P and K in chilli pepper leaves by 12.93%, 5.17% and 22.64%, respectively. Comparing to monocultures, the chilli pepper intercropping system increased plant height and fruit amounts significantly, the increases were detected ranging from 1.57% - 20.89% and 3.06% - 307.52%, respectively. Control effect on mosaic virus, phytophthora blight and tobacco budworm in chilli pepper ripening period were also obvious, which were detected ranging from 24.01%, 6.87% - 23.80% and 4.31% - 36.40%, respectively. Biomass and yield of chilli pepper were also increased significantly in chilli pepper intercropping system, chilli pepper yield in the same area were detected ranging from 9.73% - 53.52%. Based on study on the three chilli pepper intercropping pattern, chilli pepper-peanut (15:5), chilli pepper-soybean (8:2) and chilli pepper-maize (10:2), will be used for large scale production and demonstration in the future.

Key words: Chilli pepper (*Capsicum annuum* L.); Intercropping; Nutrient utilization; Diseases and pests; Yield

间作具有充分利用光、热、水分、养分和土壤等资源的特点, 已经成为提高土地利用率, 促进农作物高产、高效、持续增产的重要技术措施^[1,2], 也是控制作物病虫害的有效手段^[3,4], 并广泛应用于农业生产中。

云南省丘北县被誉为“中国辣椒之乡”。丘北

辣椒的种植已有 350 多年的历史, 近年来种植规模不断扩大, 但传统的种植模式制约着产量的提高。在其他地区的有关研究中, 辣椒与玉米、豇豆等作物的间作模式在生产实践中发挥了明显的增产作用, 但有关这类间作的研究目前多数集中在间作的产量与配套技术方面, 而对间作增产机理的研究仍然很

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作者简介: 祖艳群(1966-), 女, 在读博士, 教授, 主要从事环境生态和植物营养研究。

* 通讯作者 (Author for correspondence. E-mail: liyuan03@yahoo.com.cn)。