

研究报告

耕作方法和除草剂对玉米田杂草群落的影响

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收稿日期 2004-11-26 修回日期 2005-3-24 网络版发布日期 接受日期

摘要

应用群落生态学方法,在中国科学院沈阳生态实验站对玉米田杂草群落进行了调查研究,探讨了耕作方法和除草剂对杂草群落组成、多样性和生物量的影响.结果表明,玉米田优势种杂草为野黍、苘麻、大狼把草和鸭趾草,其中野黍重要值最高;免耕不施加除草剂处理6月下旬杂草生物量较大,5月末到8月中旬物种丰富度较高(S),7月14日和8月1日均匀度(J)较低,优势集中性(C)较高,均与常规施加除草剂处理有显著差异.施用除草剂可减少免耕玉米田杂草种类,抑制杂草生物量的增长.耕作方法和除草剂可对杂草群落组成、多样性及稳定性产生影响.

关键词 [杂草群落](#), [耕作方法](#), [除草剂](#), [玉米田](#), [多样性](#)

分类号

Effects of tillage method and herbicide on cornfield weed community

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Abstract

By the method of community ecology, this paper surveyed the weed community in a cornfield at the Shenyang Experimental Station of Ecology, CAS, and studied the effects of tillage method and herbicide on the weed composition, species diversity, and biomass at the experimental site. The results showed that the dominant weed species in the cornfield were *Eriochloa villosa*, *Abutilon theophrasti*, *Bidens frondosa* and *Commelina communis*, of which, *Eriochloa villosa* had the highest important value. In non-tillage field without herbicide application, the weed community had larger biomass, higher richness (S) and concentration (C), but lower species diversity (D) and species evenness (J). Herbicide could decrease weed species and inhibit biomass growth significantly in non-tillage field. It was clear that tillage method and herbicide could affect the weed composition, diversity and stability significantly.

Key words [Weed community](#) [Tillage method](#) [Herbicide](#) [Cornfield](#) [Diversity](#)

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