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研究简报

蔬菜温室土壤某些化学性质的演变特征

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摘要

关键词

分类号

Soil chemical property changes in vegetable greenhouse fields

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Abstract

To explore the changes of soil chemical properties in vegetable greenhouse,a comparative study was carried out with the samples gathered from vegetable greenhouse fields and their adjacent upland fields in Damintun Town,Xinming County,Liaoning Province.The results showed that compared with upland fields,the contents of soil organic carbon and total nitrogen in greenhouse fields increased significantly.At the depth of 0～30 cm,soil organic carbon in greenhouses of 1-,4-and 10-year increased by 31.09%,35.44%,and 66.80%,respectively,compared with the upland soil.Soil nitrate content at the depth of 0～30 cm in greenhouse fields was 5.05～12.49 times as much as that in upland fields.The nitrate content in different soil layers increased with the increasing age of greenhouse field.,e.g.,at the depth of 20～30 cm,soil nitrate content was significantly higher in 10-year than in 1- and 4-year greenhouse field,with an increase of 65.73% and 50.89%,respectively,and 6.55 times as much as that in upland field,which indicated that soil nitrate transported downwards,and obviously enriched in deeper soil layers under heavy application of fertilizer.Also with the increasing age of greenhouse field,soil pH decreased,while soil soluble salts accumulated.

Key words Vegetable greenhouse Upland vegetable field Soil chemical property Nitrate enrichment

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