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摘要: 分别在有除草剂污染的豆田土壤和无除草剂污染的正茬土壤分层采集土壤样本,在盆栽条件下种植甜菜,鉴定农药残留。结果表明:大豆田土壤中残留的氯嘧磺隆主要分布在0~20 cm土层中,残留量随着土层深度的增加逐渐减少。其中0~10 cm土层植株生长到4叶期全部死亡,表明该层残留农药最多;10~20 cm土层对甜菜生长产生严重抑制,表现为株高降低37%,鲜重降低31.7%;20 cm以下土层的甜菜正常生长,该层氯嘧磺隆的残留量对下茬作物无明显影响。通过对特定指示作物甜菜苗期生长发育的研究揭示了豆田除草剂氯嘧磺隆在不同深度的分布特点,为进一步研究消除残留除草剂药害提供科学依据。

Abstract: The experiment collected 0~40 cm soil with Chlorinuron-ethylon residue from soybean field to do the pot trial. The seedling rate, plant height, root length and weight of beet (*Beta vulgaris*) at seedling period were measured to study the spatial distribution of Chlorinuron-ethylon herbicide and its effect on other crops in soybean field. Results showed that the Chlorinuron-ethylon was mainly distributed in 0~20 cm soil, and the residual amount decreased with soil depth. The 0~20 cm soil showed significant phytotoxicity to beet, especially in 0~10 cm, the beet all died in four leaves period. Beet growth was significantly inhibited by 10~20 cm soil treatment, with plant height reduced 37%, fresh weight decreased 31.7%. Beet growth was not affected by under 20 cm soil, which indicated that the residual amount of Chlorinuron-ethylon had no significant effect on next seasonal crop. Results reveal the distribution of chlorinuron-ethylon residue in different soil depths and its effect on beet growth in seedling period, which will provide references to reduce residual phytotoxicity of herbicide.

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