

研究报告

黑土和棕壤中甲胺磷的根际降解脱毒模拟研究

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摘要

利用塑料根际盒研究了甲胺磷在黑土和棕壤大豆根际和非根际环境中的降解脱毒行为.结果表明,甲胺磷虽是急性毒性较高的农药,但在土壤环境中能很快降解,并且同等条件下,甲胺磷在黑土中的残留量普遍低于棕壤.在无大豆种植情况下(对照处理),培养试验第2天,棕壤甲胺磷残留量约为33%,黑土只有26%.在大豆根际圈中,甲胺磷的降解明显加快,尤其是在黑土中.第9天,根际盒中层黑土和棕壤的农药残留分别比无植物对照低87.5%和76.0%.甲胺磷的土壤降解过程符合一级动力学方程,降解半衰期为2 d左右.

关键词 [黑土,棕壤,甲胺磷,根际圈,降解脱毒](#)

分类号

Degradation-detoxification behavior of methamidophos in phaeozem and burozem rhizosphere

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Abstract

With plastic rhizobox system, this paper studied the degradation behavior of methamidophos in the rhizosphere and non-rhizosphere of phaeozem and burozem planted with soybean. The results suggested that methamidophos could be rapidly decomposed in soil environment despite its higher acute toxicity, and its residual amount in phaeozem was generally below the level in burozem under same condition. In the absence of soybean (control), the residual amount of methamidophos at the 2nd day of incubation was about 33% in burozem, whereas only about 26% in phaeozem. An accelerated degradation of methamidophos in soybean rhizospheric soil was observed, especially in phaeozem. At the 9th day of incubation, the insecticide residue in the middle rhizobox phaeozem and burozem with soybean was decreased by 87.5% and 76.0%, respectively, compared with that of the control. The degradation process of methamidophos in soil environment followed the first-order equation, and its half-life was about 2 days.

Key words [Phaeozem](#) [Burozem](#) [Methamisophos](#) [Rhizosphere](#) [Degradation-detoxification](#)

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