

Study the residual effect of some paddy herbicides on second cropping

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When planning crop rotations, producers must consider the injury potential to subsequent crops herbicide residues in order to getting proper decision for choosing type of plant and time of planting. In this experiment, pots were treated with bensulfuronmethyl at rates equivalent to 0, 35, 70 and 140 g.ai.ha⁻¹. Rice was cultivated in pots and after rice harvest pots soil were applied in biological test by using lettuce and celery in order to detect the carryover of bensulfuronmethyl. The growth response of the test species was carried out by topsoil (0-5 cm) and subsoil (10-15 cm) of pots. The goal of study was to investigate the leaching or degradation of bensulfuronmethyl in paddy soils. Results indicated that response of test plants celery and lettuce to bensulfuronmethyl carryover was affected by type of test plant, bensulfuronmethyl dose and also interaction. Lettuce shoot height and fresh weight was less than celery in control. By increasing bensulfuronmethyl rate both traits increased in lettuce but remained constant or decreased in celery especially in subsoil. Lettuce root length was less than celery and both plant root increased by increasing herbicide dose and then decreased by increasing herbicide dose. Topsoil was less toxic and the subsoil was severely toxic for root. By increasing bensulfuronmethyl dose root fresh weight reduced dramatically, while in subsoil by increasing bensulfuronmethyl dose the root fresh weight changes was too small.

Keywords : Key words: Bensulfuronmethyl, Bioassay, Herbicide residual, Celery, Lettuce

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