

A new look at the 'biobed's' role in pesticide spills

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Scientists in Sweden are cautioning about the need for further research as more countries embrace a popular method for preventing pesticide spills. Their review of current scientific knowledge on the so-called "biobed" is scheduled for the August 13 issue of ACS' *Journal of Agricultural and Food Chemistry*.

In the study, Maria Del Pilar Castillo and colleagues point out that pesticide spills are common when farmers transfer highly concentrated liquid preparations into spray tanks where the pesticide is diluted with water. Even if a small, few-inch wide puddle of this concentrate spilled under the tank, the nearby environment could be exposed to up to one hundred thousand times the normal pesticide dose. "The risk of contamination is obvious," says Castillo.

To remedy the problem, Swedish scientists in 1993 developed the biobed. Built from layers of grass, clay and a biomixture of straw, peat and soil approximately two feet deep, the biobed functions as an absorbent sponge for leaking concentrate from parked spray tanks.

Castillo says the effectiveness and simplicity of biobed systems help them spread worldwide. But as biobeds are modified to suit local conditions and needs, she cautions that it is important to analyze their actual performance in each specific location and evaluate the effects of changes to the biobed's composition and how local temperature and other conditions affect performance.

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