# **Transport of Herbicides as Affected by Sugarcane Mulch Residue. (S01-selim185654-Poster)**

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### Abstract:

We evaluated the effectiveness of sugarcane residue in reducing non point source contamination of applied herbicides from sugarcane fields. Two main treatments were investigated: a no till treatment and no mulch treatment. The effect of mulch residue on herbicide retention was quantified following preemergence as well as post emergence (layby) applications. The amounts of extractable atrazine, metribuzin, and pendimethalin from the mulch residue and the surface soil layer were quantified during 1999 and 2000 growing seasons. Significant amounts of applied herbicides were intercepted by the mulch residue. Extractable concentrations were at least one order of magnitude higher for the mulch residue compared with that retained by the soil. The presence of mulch residue on the sugarcane rows was highly beneficial in minimizing runoff losses of the herbicides applied. A reduction in runoff effluent concentrations, as much as 50 percent, for atrazine and pendimethalin was realized when mulch residue was not removed. Moreover, the presence of mulch residue resulted in lower estimates for rates of decay or disappearance of atrazine and pendimethalin in the surface soil.

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