Bioretention Systems for Control of Non-Point Sources of Nitrogen

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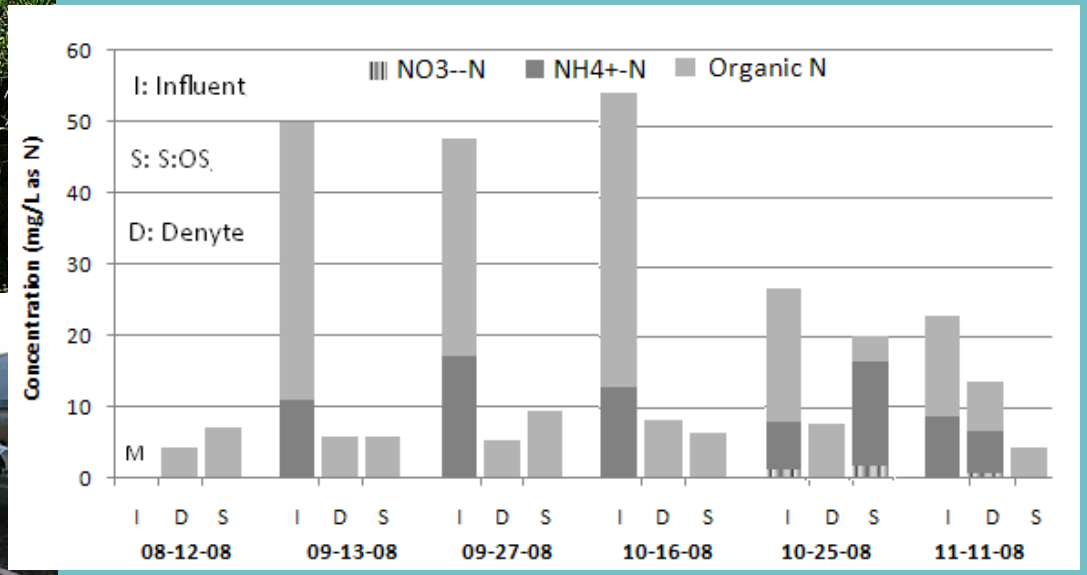
Synopsis: This research evaluated pilot-scale (200 L) denitrifying bioretention systems to control of N in runoff under both controlled laboratory and field (dairy farm) conditions. A heterotrophic unit (Denyte) utilized hardwood sawdust denitrification media while the autotrophic unit (S:SO) utilized elemental sulfur pellets and crushed oyster shells. High N removal efficiencies were observed in both units during "lab storm events". Excellent removals were observed for N, P, organics, solids and coliforms in both units under field conditions, with somewhat better P removal in the heterotrophic unit.



N removal in denitrifying bioretention systems during Phase III field events.