



## USDA-CSREES 2005 National Water Quality Conference

### Development of Regionally-Consistent Phosphorus Source Coefficients for Use in Phosphorus Index Evaluations in the Mid-Atlantic Region

*Abstract:*

*Development of Regionally-Consistent Phosphorus Source Coefficients for Use in Phosphorus Index Evaluations in the Mid-Atlantic Region*

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*The P Index uses readily available information to evaluate two broad categories of factors that contribute to the potential for P loss from agricultural land: 1) P loss potential due to site and transport characteristics; 2) P loss potential due to management and source characteristics. The second group of factors assesses the quantity, availability, and forms of P present at the site and the likelihood that the P present in the soil is a source of potential environmental concern. The P Source Coefficient (PSC) is a quantifiable characteristic of organic amendments that is independent of the soil to which the amendment is to be applied. The PSC is an expression of P solubility or the relative proportion of the total P applied that is potentially subject to loss with drainage water. Water soluble P (WSP) in manures is a good measure of the immediate potential impact from surface applications on dissolved reactive P concentrations in runoff prior to soil incorporation. Differences in PSC of chemically stabilized amendments may persist long after soil incorporation. The PSC of biosolids is difficult to classify according to type of treatment process, amount of metals added and stabilization procedure and PSC should be determined from an analysis of the biosolids that are to be land-applied. Mid-Atlantic PSC values range on a relative scale from 1.0 for commercial fertilizer and swine slurry to 0.4 for non-BPR biosolids.*

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