Soil Compaction: Principles, Problems and Practical Solutions. (A09-voorhees153357-Oral)

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Abstract:

Modern farming methods are resulting in increased concerns at the field level about potential production problems caused by soil compaction. These concerns often arise due to conflicting reports of what soil compaction is and why it is important, a lack of standardized methods for measuring soil compaction/plant response and often a defeatist attitude that nothing practical can be done about it if it is a problem. Wheel/track traffic is the main source of current soil compaction concerns. Scientific field experiments have shown yield decreases of 50% or more as a result of soil compaction from normal field operations. Furthermore, factors that previously were believed to be effective in alleviating soil compaction may no longer be effective with modern agriculture. But there are practical and effective ways to manage wheel/track traffic to minimize potentially harmful soil compaction. These will be disscused along with some rule of thumb guidelines to help practioners identify and measure soil compaction/plant responses and make reasonable recommendations to manage this potential problem.

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