Best Management Practices to Reduce Nutrient Loadings in Surface Runoff from Agricultural Land. (S11-he154602-Oral)

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Abstract:

Water quality throughout south Florida has been a major concern for many years. Best management practices (BMPs) have been proposed to improve water quality in the surface runoff from the agricultural land and to restore degraded water systems in the Indian River area. A field study was initiated in 2000 to investigate effects of the BMPs on nitrogen (N) and phosphorus (P) loadings in surface runoff and fruit yield and quality of citrus. The BMPs implemented included replacement of 100 % dry application of water soluble granular blend fertilizer (conventional practice) with 50 % fertigation and 50 % dry application. Surface runoff samples were collected using a portable autosampler that was installed in the field. The BMPs tended to reduce N and P concentrations in surface runoff. The differences in N and P loadings were not significant between the BMPs and conventional practices because of great variation in discharge rates affected by field conditions. There was no significant difference in fruit yield between fertigation plus dry application and dry application alone. The BMPs (fertigation) may have beneficial effects on fruit quality, depending on types of soil and crop. Z. L. He, 772 468 3922,

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