# **Management of Winter Forages to Extract Manure Soil** Nutrients. (A05-rowe150551-Poster)

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## **Abstract:**

Harvested hay captures soil manure nutrients which, if not utilized, could cause pollution of surface water or aquifer. This study determined yields of hay and N, P, K, Mg, Mn, Ca, Fe, Zn, and Cu of three winter forages in five harvesting systems. Dormant bermudagrass (Cynodon dactylon (L.)Pers.) sod regularly fertilized with swine (Sus scrofa domesticus) effluent was fall seeded with Kenland red clover (Trifolium paratense L.), Bigbee berseem clover (T. alexandrinum L.) or Marshall annual ryegrass (Lolium multiflorum Lam.) Hay was harvested for three springs with either a single harvest (June 1) or one of four double harvests: April 1 - June 1, April 15 - June 1, May 1 -June 1, and May 15 - June 1. Ryegrass herbage yields were similar for all harvests. April 1 - June 1 was best harvest for the clovers while the single June 1 harvest was poorest. Double harvest of the legumes increased yields to 130% of the single harvest. Legumes yielded up to 64% more N, 24% more P, and 40 and 72% more Zn and Cu than the ryegrass. Management of soil nutrients is critically affected both by choice of winter forage and by harvest dates.

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