

YIELD AND NUTRITIVE QUALITY OF FORAGE LEGUMES ON RECLAIMED SURFACE MINED LAND¹

D.C. Ditsch and M. Collins²

Abstract: Legumes are necessary for establishing permanent vegetative ground cover on reclaimed mine land because they are able to fix atmospheric nitrogen and thus survive in low N fertility environments. Legumes also greatly improve the nutritive quality of the forage utilized by livestock. A deficit of high quality forage currently exist in the Appalachian region of Kentucky. However, surface mine reclamation offers land owners an opportunity to bring new lands into forage production. The objectives of this study are to i) measure the yield potential and persistence of birdsfoot trefoil (*Lotus corniculatus*), red clover (*Trifolium pratense*) and alfalfa (*Medicago sativa*) on reclaimed surface mine land and ii) to determine the nutritive value of these legumes when managed for hay production. This paper will present yield and quality data as affected by species, harvest date and year from two study sites. Forage quality data will include measurements of crude protein, acid detergent fiber, neutral detergent fiber, cellulose and acid detergent lignin.

Additional Key Words: Pasture/hayland, alfalfa, red clover, birdsfoot trefoil

¹Poster presented at the 1995 National Meeting of the American Society for Surface Mining and Reclamation, Gillette, Wyoming, June 5-8, 1995.

²David C. Ditsch, Extension Agronomy Specialist, University of Kentucky, Robinson Substation, 125 Robinson Rd. Quicksand, KY 41363.