EFFECTS OF PHOSPHORUS FERTILIZATION AND HARVESTING STAGES ON FORAGE YIELD AND QUALITY OF WOOLYPOD VETCH

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ABSTRACT

The effects of five phosphorus rates (0, 30, 60, 90 and 120 kg ha⁻¹) and three harvest stages (beginning of flowering, full flowering and seed filling) on forage yield and quality components of woolypod vetch (Vicia villosa ssp. dasycarpa Ten.) were evaluated under rainfed conditions in Isparta, Turkey in the 2005-2006 and 2006-2007 growing seasons. Dry matter yield (DMY), nitrogen (N), phosphorus (P), potassium (K), acid detergent fiber (ADF), neutral detergent fiber (NDF), calcium (Ca), magnesium (Mg), K/Ca+Mg ratio, manganese (Mn), iron (Fe), copper (Cu) and zinc (Zn) were determined individually. Phosphorus applications increased DMY, N, P, Ca and Mg contents but decreased K, Fe, K/Ca+Mg ratio, ADF and NDF and had no effect Mn, Cu and Zn. Harvesting at the late stages causes a reduction in forage quality. N, P, K, Cu, Fe, Zn, Mg contents and K/Ca+Mg ratio decreased with advancing stages while DMY, Ca, ADF and NDF contents increased.

Key words: Dry matter yield, forage quality, phosphorus rate, harvest stage.