

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.