

EFFECT OF DIFFERENT IRRIGATION RATES DURING DRY SEASON ON *Moringa oleifera* LEAF PRODUCTIVITY

Tu Quang Hien, Mai Anh Khoa, Tu Quang Trung

Summary

The study on irrigation rates during dry season for *M. oleifera* green fodder for animals feed was conducted from 2017 to 2019 at Thai Nguyen University of Agriculture and Forestry which belongs to the northern mountainous region of Vietnam. The experiment consisted of 4 formulas (NT), from NT1 to NT4 in respond to 4 different irrigation rates that were 0 m³, 20 m³, 40 m³ and 60 m³/ha/harvest. Each formula used 30 sqm with 5 replicates, the design was of complete block. Plantation density, fertilizer application and other factors were similar among all four treatments. Results showed that, dry matter yield of leaves during dry season of all four treatments was increase with the increase rates of irrigation; the dry matter yields of leaves in NT1 to NT4 were 1.644; 1.962; 2.210 and 2.338 ton/ha/dry season, respectively. If that yield of NT1 was considered as 100% then that of NT2, NT3, NT4 was 119.3%; 134.4% and 142.2%, respectively. The protein yield of leaves during dry season also increased in accordance with the increase of irrigation rates; the protein yields of NT1 to NT4 were 0.545 ton (100%) and 0.775 ton/ha/dry season (142.2%). Dry matter and crude protein yields of NT2, NT3 and NT4 were significant different compared to NT1, that of NT3 and NT4 were significant different compared to that of NT2, but between NT3 and NT4 were not. Therefore, it can be suggested that *M. oleifera* should be irrigated at the rate of 40 cubic meter/ha/harvest or above in order to have the best production.

Keywords: *Irrigation rates, dry season, leaf productivity, Moringa oleifera.*