Effects of Different Irrigation Amounts on Yield and Quality Parameters of Flue-Cured Tobacco *Nicotiantobaccum* (cv. K326) in Mazandaran Province

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Abstract

In order to investigate the effects of different irrigation regimes on yield quantity and quality of flue-cured tobacco cv. K326, an experiment was carried out based on a randomized complete blocks design (RCBD) with three replications, at Tirtash Tobacco Research Center, in 2011. Treatments were combination of \( W_1 = 40\% \), \( W_2 = 60\% \), \( W_3 = 80\% \), and \( W_4 = 100\% \) percent crop water requirement with \( D_1 = 5 \), \( D_2 = 10 \), \( D_3 = 15 \) days irrigation interval with two control treatments (without irrigation (R) and furrow irrigation (I)). The results showed that treatment \( W_4D_1 \), \( W_4D_2 \), \( W_4D_3 \), \( W_3D_1 \), \( W_3D_2 \), \( W_3D_3 \), \( W_2D_1 \), and \( W_1D_1 \) had statistically significant difference with the other treatments and had more dry leaf yield. Also, the minimum leaf chlorine content was observed in \( W_4D_2 \), \( W_3D_1 \), \( W_3D_2 \), \( W_2D_1 \), \( W_1D_1 \), \( W_1D_2 \), and \( W_1D_3 \) treatments. Under \( W_4D_2 \), \( W_3D_1 \), \( W_3D_2 \), \( W_2D_1 \), \( W_1D_1 \), \( W_1D_2 \), and \( W_1D_3 \) treatments, tobacco had statistically significant difference with other treatments and had higher price. Also, the minimum gross income was obtained under \( W_2D_2 \), \( W_2D_3 \), \( W_1D_3 \), I, and R Treatments.

Key words: Irrigation depth, Irrigation interval, Dry leaf yield, Chlorine percent, Gross income.

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