Effects of Nitrogen Rate and Herbicide Doses on Yield and Yield Components of Corn under Weed Competition

H.R. Moradi¹, M. Armin²* and H. Marvi³

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Abstract
In order to study the effect of different levels of nitrogen and herbicide dosage on yield and yield components of corn, an experiment was conducted as split plot design with three replications at farm Research Center in Sabzevar natural resource station in 2010-2011. The main plots included three nitrogen fertilizers amount (recommended-25%, recommended (185 kg N ha⁻¹) and recommended+25%) and subplots were four herbicide dose (control (weedy), recommended-25%, recommended (60 g ha⁻¹ a.i Nicosulfuron) and recommended+25%). The result showed that 25% increase at recommended amount of nitrogen was increased 17.88% in row per cob, 11.60% seed per row, 34.29% biological yield and 39.56% economic yield of corn. The highest economic and biological yield was observed at the recommended dose of herbicide + 25% that there was no significant difference with recommended dose. Overall, the results showed that in the presence of weeds in terms of lack of nitrogen (recommended -25%), the use of higher doses of herbicide (the recommended dose of + 25%) resulted in the best economic yield, while in the availability of nitrogen the recommended dose of herbicide had good economic yield.

Keywords: Herbicide, Low herbicide dose, Nitrogen, Yield loses,