



The effects of application of a microorganism mixture (EM) as a bio-fertilizer on yield and protein content of corn forage (KSC 704)

Mohsen Borji

Research Center of Agriculture and Natural Resources-Arak.

Corresponding author e-mail: Mborji2001@yahoo.com. TEL:

0861-3664974.

ABSTRACT

In this study, effects of a microorganisms mixture (EM) and two kinds of fertilizer was determined on yield, and protein content of corn forage. In order to study the effects, EM as the first factor was sprayed in three levels: 1= no spray or control, 2= $1/200$ concentration and 3= $1/500$ concentration. Fertilizer was the second factor with 1=without fertilizer, 2= chemical fertilizer, and 3= farm yard manure (FYM). The study was designed in a complete block design in four replicates and factorial experiment. The results highlighted that EM, promotes plant growth, seed size, plant height, leaf area index, 1000 seeds weight, fresh and dry ear weight, and seed percentage significantly. The EM had no significant effect on forage CP content. The organic fertilizer (FYM) increased CP significantly, but the chemical fertilizer no had significant difference with control (without fertilizer). The greatest yield was related to interactions of: No fertilizer $1/500$ EM. Thus application of EM would helps to improve agriculture production.

Key words: Effective Microorganism, Chemical fertilizer, Organic fertilizer, Yield, Crude protein, Corn forage.