

ABSTRACT

The research whose title is "The Effectiveness of Bone Ash Test as a Source of Phosphorus For Sweet Corn (Zea mays saccharata) On Regosol Soil" has been conducted in the University of Muhammadiyah Yogyakarta on May to August 2016. This research aims to determine the effectiveness of the use of Phosphorus element of cow bone ash in replacing the element phosphorus from SP-36 and to define the proper dose regarding the growth and result of sweet corn.

This research was conducted by using experimental methods, by the pattern of single factor, which was arranged in a completely randomized design. The treatment of dose is bovine bone ash which consists of 7 levels, namely: 35,34 grams of cow bone ash / plant, 17,7 grams of cow bone ash / plant, 8,85 grams of cow bone ash / plant, 5,9 grams of cow bone ash / plants 4,42 grams of cow bone ash / plant, 3,54 grams of cow bone ash / plant, and the supervision to provide an element of P from the SP-36 at a dose of 1.8 grams /plant. Each treatment was repeated 3 times and each replicate contained 3 sample, thus obtained 63 experimental units. The parameters observed were plant height, number of leaves, heavy cob with husks, cobs weight without husks, cob diameter, cob length, fresh weight of shoot, fresh weight of root, dry weight of shoot , dry weight of root and the result of plant / hectar.

The results showed that the use of bovine bone ash as a source of phosphorus delivered an effective results in replacing SP-36 on sweet corn crop cultivation. The most appropriate dose for the growth and result of sweet corn is 486.75 kg / hectar (4.42 g / plant).

Keywords: Cow Bone Ash, Phosphorus, plant of Sweet Corn, Regosol Soil.