

**ABSTRACT**

**THE EFFICACY OF PYROXASULFONE AND ITS COMBINATIONS WITH SEVERAL POST-GROWTH HERBICIDES IN ERADICATING WEEDS FOR THE PREPARATION OF CORN (*Zea mays L.*) PLOTS WITHOUT SOIL TILLAGE**

Anisa Pakpahan

Corn (*Zea mays L.*) is one of the most important food in the world crops besides wheat and rice. The increase of corn production can be achieved by several ways, one of which is by controlling the crops-interfering organisms (OPT) such as weeds. The objectives of this research were: (1) to examine the effectiveness of pyroxasulfone herbicide and its combinations (glyphosate, paraquat, 2,4-D, saflufenasil and atrazine) in controlling weeds on no tillage-cultivated corns, (2) to identify composition changes of weed species after the applications of pyroxasulfone herbicide and its combinations (glyphosate, paraquat, 2,4-D, saflufenasil and atrazine), and (3) to study the effects of pyroxasulfone herbicide and its combinations (glyphosate, paraquat, 2,4-D, saflufenasil and atrazine) on the growth and yield of corn plants cultivated in no tillage system.

The research was conducted in Natar, South Lampung and at the laboratory of Weed Science, Faculty of Agriculture, University of Lampung, from October 2009 until February 2010. Treatments were arranged in randomized block design

with 3 replication . These treatments consisted of 12 river. Homogeneity of variance was tested with Bartlett's test and additivity with Tukey's test. Data were then analyzed using anova, and mean differences among the treatments were determined with Tukey's HSD (Honestly Significant Difference) test at  $P=0,05$ .

The results of experiment indicated that pyroxasulfone and its combinations with glyphosate, paraquat, 2,4-D, saflufenasil and atrazine, repressed the total growth of weeds only at 3 and 6 msa. There were also some changes in the composition of weed species due to the application of pyroxasulfone and its combinations with glyphosate, paraquat, 2,4-D, saflufenasil and atrazine. Those changes included the emergence of some new types of weeds and the shifting of dominance among the weed species. All treatments using pyroxasulfone herbicide and its combinations with glyphosate, paraquat, 2,4-D, saflufenasil and atrazine, resulted in no significant effect on the growth of corn plants cultivated in no tillage system.