V. CONCLUSION

A. Conclusion

Based on the results of the research, it can be concluded that:

The application of lime changed the pH of the soil, which strongly affected the activity of the phosphate-degrading Acid and Alkaline Phosphatase. Acid Phosphatase predominated in an acidic medium. In contrast to Acid Phosphatase, Alkaline Phosphatase performed well in neutral media. For the β-glucosidase, Exo-1,4-β-D-glucanase and some other biology parameters were unaffected by the change in soil pH (possibly due to the slight difference, only 4.73 and 6.02). Sweet corn grown on soil with lime gave better results than the treatment without lime.

Generally, Glyphosate herbicides at high doses of 6 and 7 L/ha strongly reduced the activity of most β-glucosidase, Exo-1,4-β-D-glucanase, Acid Phosphatase, Alkaline Phosphatase, Total bacteria population, and Microbial biomass carbon. Application of 5 L/ha Glyphosate stimulated β-glucosidase activity. The activities of the above biological indicators decreased markedly three days after herbicide application and gradually stabilized 60 days after the first herbicide application. It could be said that the indirect effects of herbicides on biological parameters of the soil, such as enzyme activity, MBC, and total bacteria population, affected the growth and production of sweet corn, especially at high doses (6 and 7 L/ha).

B. Suggestion

Use the herbicide Glyphosate at a low dose equivalent to the dosage recommended on the package (5 L/ha), either under lime or no lime application on acidic soils for suitable production of sweet corn. This result gave in to the high efficiency and productivity of sweet corn.