

CHAPTER V

CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

1. The application of chicken bone meal influenced the growth of water spinach on Ultisol . A dosage of 30 g resulted in the greatest plant height, increasing it by 62.91% and the number of leaves by 79.74% compared to the control. Additionally, a 15 g dose increased shoot dry weight by 187.38% and chlorophyll content by 19.76% compared to the control. However, the application of chicken bone meal did not significantly affect root fresh weight or root dry weight.
2. The frequency of chicken bone meal application influenced the leaf area of water spinach. Application every two weeks resulted in the largest leaf area, representing a 40.20% increase compared to once-weekly application.
3. The interaction between dosage and application frequency of chicken bone meal significantly affected the shoot fresh weight of water spinach. The combination of a 15 g dosage and a once-weekly application frequency yielded the highest shoot fresh weight—367.52% higher than the control—making it the most effective treatment combination for enhancing water spinach growth on Ultisol.

5.2 Recommendations

Based on existing research, the optimal application rate of chicken bone meal for water spinach plants in Ultisol is a moderate dose (45 g–60 g). Applying fertilizer at the correct dose can help improve plant quality without causing negative effects on the soil. People who use chicken bone meal as an organic fertilizer are advised to use a dose that is not too high, so that the results obtained are more optimal and environmentally friendly.