

ABSTRACT

Corn production in recent years has been unstable caused by low soil fertility. Efforts are needed to address low soil fertility and reduce corn imports by increasing the productivity of corn plants through the use of biological fertilizers and liquid organic fertilizers. This study aimed to determine the effect of the application of photosynthetic bacteria and jakaba on the growth and yield of corn plants. This research was conducted at the Experimental Garden and Agroecotechnology Laboratory, Faculty of Agriculture, Universitas Malikussaleh from December 2024 to April 2025. This research using a two factor Random Group Design with three replications. The results showed photosynthetic bacteria had a significant effect on the variable of plant height, stem diameter, number of leaves, weight of cobs without husks, dry cob weight, and corn production yield with the best treatment being B2 at 20 ml/l. Jakaba showed a significant effect on the plant height, stem diameter, number of leaves, leaf area, length and diameter of cobs (with and without husks), weight of cobs without husks, weight of 1000 seeds, weight of dry cobs, and corn production yield with the best treatment being J1 at 40 ml/l. Furthermore, there was a significant interaction between photosynthetic bacteria and jakaba on the growth and yield of corn plants on plant height, stem diameter, leaf area, and length of cobs without husks.

Keywords : Biofertilizer, Chlorophyll, Food Crop, Microorganism