

ABSTRACT

Soybeans are one of the important food commodities in Indonesia that have a high protein content. The use of soybeans besides being used as food is also a raw material for the agroindustry. This study aims to obtain the right planting distance for the growth and production of soybean plants, obtain the right weeding time for the growth and production of soybean plants, and obtain the interaction of planting spacing treatment and weeding time on soybean growth and production. This research was conducted in Tambun Tunong Village, Dewantara District, and continued at the Laboratory of Plant Pests and Diseases, Department of Agricultural Cultivation, Faculty of Agriculture, Malikussaleh University. The research was carried out in February – May 2024. This research was carried out in the form of a field experiment using a Randomized block factorial design of a factorial pattern with three replicates, where two factors were studied, namely Planting Distance 25x15 cm, Planting Distance 30x20 cm, Daily Weeding, Weeding 14 HST, Weeding 28 and 42 HST. This study had 6 treatment combinations with 3 repetitions so there were 18 experimental units. Then there were 20 plants in each bed, so that 360 plants were obtained. Weed sampling was carried out by purposive sampling using the quadrant method using an observation plot measuring 50x50 cm. The observed parameters consisted of plant height, number of branches, flowering age, harvest age, seed weight per plant, seed weight per plot, weight of 100 seeds, and weed cover percentage. The results of the variety analysis showed that the difference in planting distance had a real effect on the height of the plant and the number of branches at the age of 14 HST and 56 HST. The difference in weeding time had a significant effect on seed weight per plant, seed weight per plot, and weight of 100 seeds. The most dominant weed was a *Cyperus rotundus* with the highest NJD value of 7.50%, followed by *Dactyloctenium aegyptium* L with a NJD value of 4.09%.

Keywords: Planting Distance, Soybeans, Weeding, Weeds