

## ABSTRACT

Soybeans (*Glycine max* L.) are a food commodity rich in vegetable protein and the third most important food commodity after rice and corn. One effort that can be made to address this problem is by using superior varieties and the use of NaCl (Sodium Chloride) to increase soybean production. This study aims to determine the effect of using several soybean varieties due to the administration of NaCl (Sodium Chloride). The study was conducted at the Experimental Garden of the Faculty of Agriculture, Universitas Malikussaleh, Reuleut, North Aceh, from June to August 2025. It used a Randomized Block Design (RBD) with two factors. The first factor was soybean varieties (V), which consisted of V1 = Anjasmoro, V2 = Grobogan, and V3 = Detap-1. The second factor was NaCl (N), which consisted of N0 = control, N1 = 100 ppm, N2 = 200 ppm, and N3 = 300 ppm. The parameters observed included plant height, number of leaves, leaf area, number of productive branches, flowering age, number of pods per plant, number of filled pods, number of empty pods, seed weight per plant, dry seed weight, 100-seed weight, number of root nodules, root length, root volume, and shoot-to-root ratio. The results of the study show that differences in varieties affected the variables of plant height at 7 weeks after planting, number of leaves at 9 WAP, leaf area, number of productive branches, flowering age, number of pods per plant, number of filled pods, number of empty pods, seed weight per plant, dry seed weight, 100-seed weight, number of root nodules, root length, root volume, and shoot-to-root ratio. The single application of NaCl affected the variables of plant height at 7 WAP, leaf area at 3 and 5 WAP, flowering age, number of pods per plant, number of filled pods, seed weight per plant, dry seed weight, 100-seed weight, root volume, shoot-to-root ratio, and production. There was an interaction between the use of soybean varieties on the number of leaves at 3 WAP.

**Keywords :** *Organic, Legumes, Variety, Salinity*