The aim of this study was to determine the balance of sugar bagasse compost and N fertilizer from urea toward to the growth and yield of soybean crops.

The experiment was conducted at field of experiment using media in polybag and in soil science laboratory of agriculture faculty, Universitas Muhammadiyah Yogyakarta.

This study used single factor experiment method compiled in Completely Randomize Design (CRD) consisting of 5 treatments: 100% N from urea (control), 25% N (from sugar bagasse compost) + 75% N (from urea), 50% N (from sugar bagasse compost) + 50% N (from urea), 75% N (from sugar bagasse compost) + 25% N (from urea), 100% N (from sugar bagasse compost).

The dosage composition of 75% bagasse and N fertilizer from urea 25% is the right dosage ratio with yield of 8.70 tons/hectare of soybean seed.

Keywords: Soybean Var. Anjasmoro; Balance of fertilizer Dosage