Aplikasi Pupuk Kandang Sapi Dan Abu Sekam Sebagai Alternatif Pengganti Pupuk Anorganik Terhadap Hasil Benih Tanaman Kacang Hijau (Vigna radiatama L.) Application Of Cow Manure And Husk Ash As An Alternative To Inorganic Fertilizers For Green Bean Seed Yields (Vigna radiatama L.). Supervisor Dr. Ir. Nurul Sjamsijah, MP and Sri Wahyuningsih, SP.

> Randi Deauilla Susanto Study Program of Seed Production Technique Department of Agricultural Production

## ABSTRACT

The study aimed to determine the application of cow manure and husk ash as an alternative to inorganic fertilizers for green bean seed yields (Vigna radiatama L.) was carried out on November 20, 2020 – February 10, 2021 at the Research Institute for Assorted Beans and Bulbs (BALITKABI) at an altitude of 445 m above sea level and the average temperature is 22 - 28°C. This study used a Randomized complete Block Design (RCBD) which consisted of two factors arranged in a factorial manner. The first factor was the treatment of cow manure, namely: Treatment without cow manure application (S0), 30.00 gr/polybag (S1), 60.00 gr/polybag (S2), and 90.00 gr/polybag (S3). The second factor was the dose of husk ash, namely: Treatment without husk ash application (A0), 90.00 gr/polybag (A1), and 120.00 gr/polybag (A2). So there were 12 treatment combinations, each treatment was replication three times. The results showed that the cow manure treatment had a significant effect on plant height at 14 DAP and 28 DAP, stem diameter, root length, number of seeds per pod, and weight parameters of 100 seeds with manure treatment of 90.00 g/polybag (S3). The dose of husk ash significantly affected plant height at 14 DAP by 19.43 cm at the treatment of 90.00 g/polybag (A1). There was an interaction between cow manure treatment and the dose of husk ash had a significant effect on the parameters observed for plant height 42 DAP, number of productive branches 42 DAP, and seed weight per plant with S1A0 treatment with the highest average of 11.22 grams and weight parameter of 100 seeds with S3A2 treatment with the highest average of 6.18 grams.

Key words: Cow manure, Green beans, Husk ash