ABSTRAK

Penelitian lakukan di Lahan Percobaan Fakultas Pertanian Universitas Islam Sumatera Utara, Jln. Karya Wisata, Gedung Johor Kecamatan Medan Johor Kota Madya Medan, Provinsi Sumatera Utara dengan ketinggian tempat ± 25 mdpl, dengan topografi datar. Penelitian ini dimulai bulan Febuari sampai Mei 2025. Penelitian ini dibimbing oleh Ibu Prof. Dr. Ir. Asmanizar, M.P. sebagai Ketua Pembimbing dan bapak Dr. Ir. Rahmad Setia Budi, M.Sc. sebagai Anggota Pembimbing. *S. frugiferda* merupakan hama penting pada tanaman jagung yang dapat menimbulkan kerugian dengan intensitas serangan mencapai hingga 80 %. Tujuan penelitian elitian ini untuk mengetahui efektifitas beberapa jenis silika dan dosis silika terhadap serangan hama *Spodoptera frugiperda* J.E. Smith dan adanya pengaruh jenis silika terhadap kandungan klorofil daun jagung manis. Penelitian ini menggunakan Rancangan Acak Kelompok Non Faktorial (RAK) satu faktor perlakuan yaitu S0=kontrol, S1= Silika Cair 4 l/ha = 1,6 ml/l/plot, S2 = Silika Cair 5 l/ha = 2 ml/liter/plot, S3 = Silika Cair 6 l/ha = 2,4 ml/l/plot, S4 = Silika Padat 300 g/ha = 0,12 g/plot, S5= Silika Padat 400 g/ha = 0,16 g/plot, S6= Silika Padat 500 g/ha = 0,20 g/plot, S7= Sekam Bakar 10 ton/ha = 4 kg/plot, S8= Sekam Bakar 15 ton/ha = 6 kg/plot, S9= Sekam Bakar 20 ton/ha = 8 kg/plot. Hasil penelitian menunjukkan bahwa jenis silika tidak berpengaruh nyata terhadap intensitas serangan S. *frugiperda* tetapi pada parameter klorofil daun jenis silika berpengaruh nyata dengan rataan tertinggi pada perlakuan S4 yaitu 41,25 dan terendah S0 yaitu 11,20.

Kata kunci: Jagung, varietas, silika.

ABSTRACT

The research was conducted at the Experimental Field of the Faculty of Agriculture, University of Islam Sumatera Utara, Jln. Karya Wisata, Gedung Johor, Medan Johor District, Medan City, North Sumatra Province, at an altitude of ± 25 meters above sea level, with flat topography. This research was conducted from February to May 2025. This research was supervised by Prof. Dr. Ir. Asmanizar, M.P. as the Head Supervisor and Dr. Ir. Rahmad Setia Budi, M.Sc. as the Member Supervisor. S. frugiferda is an important pest in corn crops that can cause losses with an attack intensity of up to 80%. The purpose of this elite research is to determine the effectiveness of several types of silica and silica doses against Spodoptera frugiperda J.E. Smith pest attacks and the effect of silica types on the chlorophyll content of sweet corn leaves. This study used a non-factorial randomized block design (RAK) with one treatment factor, namely S0 = control, S1 = Liquid Silica 4 l/ha = 1.6 ml/l/plot, S2 = Liquid Silica 5 l/ha = 2 ml/liter/plot, S3 = Liquid Silica 6 l/ha = 2.4 ml/l/plot, S4 = Solid Silica 300 g/ha = 0.12 g/plot, S5 = Solid Silica 400 g/ha = 0.16 g/plot, S6 = Solid Silica 500 g/ha = 0.20 g/plot, S7 = Burnt Rice Husk 10 tons/ha = 4 kg/plot, S8 = Burnt Rice Husk 15 tons/ha = 6 kg/plot, S9 = Burnt Rice Husk 20 tons/ha = 8 kg/plot. The results showed that the type of silica had no significant effect on the intensity of S. frugiperda attacks, but it did have a significant effect on leaf chlorophyll parameters, with the highest average in treatment S4 at 41.25 and the lowest in S0 at 11.20.

Keywords: *Maize, varieties, silica.*