

Diversity of Soil Surface Arthropods on Shallots Plants(*Allium ascalonicum* L.) Applied by Several Botanical Pesticides In Peatlands

RISDA YETNA MEIYANA^{1)*}, SALAMIAH^{2**)}, SAMHARINTO SOEDIJO^{2)*}, MUHAMMAD INDAR PRAMUDI^{2*}

¹⁾Department of Agroecotechnology, Faculty of Agriculture, Lambung Mangkurat University

²⁾Department of Plant Pest and Diseases, Faculty of Agriculture, Lambung Mangkurat University

*Jl. A. Yani Km. 36 Banjarbaru Kalimantan Selatan, Kode Pos 70711

*Author: Risdayetna.meiana@gmail.com

**Corresponding Author: salamiah@ulm.ac.id

Abstract. To overcome the pest insects problems in shallots, farmers still use chemical pesticides with a lot of negative impacts, so they are offered the use of botanical pesticides such as Kepayang (*Pangium edule*) seeds, Kirinyu (*Chromolaena odorata*) leaves and Galam (*Melaleuca leucadendron*) leaves as an alternative environmentally-friendly control. This study aims to determine whether botanical pesticides (botanical pesticides) applied to shallot plants affect the diversity of arthropods on the surface of the soil and to identify what types of arthropods are found in shallot cultivation in peatlands. This research was conducted from April-August 2019. The research was carried out in Tegal Arum village, Landasan Ulin District, Banjarbaru City, South Kalimantan. The method used was an experimental method with a randomized block design (RBD) one factor with five treatments and 4 replications. The variables observed were diversity index, evenness index, species wealth index & dominance index and arthropod types. The results showed a diversity of arthropod species from highest to lowest, namely in the treatment of Kepayang seed extract (2.03), Galam leaf extract (2.00), Kirinyu leaf extract (1.80), Chemical Pesticides (active ingredient Monosultap) of (0.78) and control (2.31). Arthropods were found as many as 19 species from 10 orders. Four species act as pests, one species as a vector and the others as predators and decomposers.

Keyword: botanical pesticides, diversity of arthropods, peatlands, shallots