

SUMMARY

Cassava plants in Indonesia can be grown in the lowlands up to an altitude of 1,500 m above sea level (mdpl), such as in the Serang Village area, Purbalingga Regency. The method used in this research is the survey method with a purposive random sampling technique. The research will be carried out in August 2022 until no additional predatory mite species are found, estimated to be until October 2022. The height of the sampling location includes cassava plantations in the lowlands Banyumas Regency, Central Java (100-200 mdpl), medium plains Purbalingga Regency, Central Java (600-700 mdpl), and the highlands (>1000 mdpl) Purbalingga Regency, Central Java. The sampling method used is random sampling technique, At each elevation, one field will be selected to represent the sampling. Samples were taken from cassava leaves taken from the bottom five stalks, as many as three sheets at five sampling points at each altitude. In addition to taking cassava leaves, temperature and humidity measurements were also taken using a thermohygrometer. Samples were then taken to Teaching Laboratory I, Faculty of Biology, Universitas Jenderal Soedirman to be observed using a stereo microscope.

Data in the form of the number of species and the number of individuals of each predatory mite species were analyzed using a random model analysis of variance at a 10% and 20% error rate. In comparison, the diversity of predatory mites at each altitude was analyzed with the Shannon-Wiener diversity index. Five species of predatory mites were found at three altitudes *Iphiseius degenerans*, *Typhlodromus rykei*, *Neoseiulus idaeus*, *Phytoseius sp.* and *Phytoseius amba*, with the highest number of *Typhlodromus rykei* species with a total of 97 species. The abundance of predatory mite species of the whole that is included in the medium category is the abundance of *Neoseiulus idaeus* species of medium height with an abundance percentage of 33.7% as well as the highest abundance value of other species. Composition analysis showed that the adult stage was the most common stage in total. Analysis of Variance results were not significantly different ($P < 0.05$), and altitude had no effect on species composition and diversity at the three altitudes.

Based on the results of the research that has been carried out, it can be concluded that six species of predatory mites were found in cassava cultivars at three different altitudes (128 amsl, 715 amsl, 1135 amsl) namely *Iphiseius degenerans*, *Neoseiulus idaeus*, *Typhlodromus rykei*, *Phytoseius sp.*, *Phytoseius amba*. The diversity index obtained from three different altitudes was low. The species composition based on the stage with the highest number was the egg stage of *N. idaeus* with 40 eggs and the least number was the Nympha stage of *P. amba* with 4 pieces.

Keyword : *Cassava, Composition, Diversity, Predatory Mites*