

ANATOMICAL STRUCTURE OF DEVELOPMENT TUBER PLANTS (*Dioscorea alata* L.) AND TALAS (*Colocasia esculenta* L.) AS A SOURCE OF CARBOHYDRATES

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ABSTRACT

ABSTRACT The purpose of this research is (1) to know the development of the structure of purple and taro tubers, (2) to know the development of taro and purple uwi tubers, (3) to know the differences in the development of the structure of purple and taro tubers. This research is a research with purposive sampling method and the results are analyzed descriptively. Samples taken were (1) taro stems, stolons, and taro tubers (2) taro stems and tubers. Developmental data observed were anatomically stem and tuber anatomical structures. The results of this study are (1) The development of airborne tubers is derived from axillary buds while the soil tubers are derived from stem swelling. The development of tuber structure is the size of starch, vessel size, thickness of the periderm, cambium, and cortex. soil tubers and air tubers have increased according to the tuber size increase, while the amount of starch has decreased. Anatomically development of taro tubers occurs due to the presence of primary thickening meristem activity that divides outward to form cork tissue and in the direction of forming hoarding parenchyma that causes tubers to morphologically appear to swell. (2) In the uwi bulbs and taro the larger the tuber size then the amount of starch will be more and more. In taro tuber the tuber size increases the greater the starch size. Whereas in the tubers uwi starch size increase is not accompanied by an increase in the amount of starch in both the soil tubers and air tubers the amount of starch from both types of tubers has decreased in the size of the tubers that are getting bigger. (3) The difference in the development of tubers uwi and taro can be seen from the structure of each tuber and can be seen from the network that plays a role in the development of tubers and starch amount.

Kata Kunci: *tuber plants, anatomical structure, carbohydrate compound analysis,*