

## ABSTRACT

Cassava (*Manihot esculenta*) is the third staple food commodity after rice and corn, therefore it plays a very important role. Cassava with low cyanogenic glycoside is categorized as sweet type (*Manihot palmate*), while the more toxic type with high cyanogenic glycoside content is designated as bitter type (*Manihot utilissima*). This study aimed to characterize and inventory the potential of local cassava plants in Aceh (Lhokseumawe & Bireuen). There were 3 major experiments in this study, namely exploration and characterization of cassava plants at 6 months after planting, characterization of plants and cassava yields at 9 months after planting, observation after harvest and analysis of plant similarity. The field research found that cassava plants in Lhokseumawe were scattered in 2 sub-districts (Muara Satu & Muara Dua), while cassava in Bireuen was more clustered and centralized in 2 sub-districts (Peusangan & Simpang Mamplam). Cassava in Lhokseumawe and Bireuen had morphological diversity, as seen from the character of margin lobes, middle leaflets, leaf color, vein color, protrusions, and distance between leaf scars, stem growth shape, external root color, ease of cortex peeling and root epidermis texture. The level of similarity of cassava plants in Bireuen and Lhokseumawe based on morphological characters and cassava quality ranges from 0.50 to 0.95 (50% - 95%). This means that cassava plants had a moderate to high level of similarity. The highest similarity was found in 2 samples of cassava, MP-1 (Lhokseumawe) and MD-3 (Lhokseumawe), which was 95%.

Keywords: Cassava, Dendrogram, Exploration, Morphology, Similarity.