

Kajian struktur dan kariotipe Gadung (*Dioscorea bulbifera* L.) di Sumatera Barat

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Abstrak

Penelitian tentang anatomi organ vegetatif *Dioscorea bulbifera* L. (gadung) telah dilakukan dari Januari - Juli 2005, di Laboratorium Struktur dan Perkembangan Tumbuhan, Jurusan Biologi, Fakultas Matematika dan Ilmu Pengetahuan Alam, Universitas Andalas. Penelitian dilaksanakan menggunakan metoda deskriptif dan kuantitatif, dengan pembuatan preparat permanen menggunakan metoda parafin dan pembuatan preparat semipermanen. Pada sayatan melintang struktur batang secara sentripetal terdiri atas satu lapis epidermis, korteks (6-9 lapis sel), endodermoid dengan sel sklerenkim (1-2 lapis sel) dan ikatan pembuluh. Anatomi daun terdiri dari epidermis atas dan epidermis bawah, mesofil sudah terdiferensiasi menjadi parenkim palisade dan parenkim spons (tipe daun dorsiventral). Stomata anomositik terdapat pada kedua permukaan daun. Anatomi akar terdiri dari satu lapis sel epidermis, korteks (9-11 lapis sel), ikatan pembuluh dan empulur. Sel endodermis satu lapis mengalami penebalan pada dinding dalam berbentuk U. Perisikel (1-2 lapis sel). Ikatan pembuluh ukurannya meningkat secara sentripetal dan tersusun dalam tiga lingkaran. Floem pada akar tersusun mengelilingi xilem (tipe amfikribal). Umbi didominasi oleh parenkim berisi pati. Pada umbi banyak didapatkan struktur khusus diduga berisi HCN. Kromosom berjumlah $2n=20$.

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The study of anatomical structure and karyotype of West Sumatran *Dioscorea bulbifera* L. Had been done from March 2005 to January 2006 in plant Structure and Development Laboratory of Biology Department, Faculty of Mathematic and Natural Science, Andalas University. In present study were used descriptives and quantitatives method by preparing semi-permanent and permanent slide. Anatomical structures of green aerial stem were consisting of epidermal, cortex with endodermoid cells and sclerechima tissue centripetally. Vascular bundle can be recognized in three distinct rings with amphycribal type. Transverse section of leave anatomical composed by both a layer epidermal on upper and lower leaf surface, palysade parenchima, and spons parenchyma (dorsiventral type). The stomata were anomocytic type on both upper and lower surface of leaf (amphystomatic type). Idioblast of cell raphides crystals and tannin containing founded in leaf structure. In transverse section each of eight individual bundle surrounded by sclerenchyma. The root anatomical structures consist of epidermal, cortex, endodermal (U shape wall thickening), pericycle and pith (with three ring of vascular bundles) centripetally. The air tuber lacking of starch grains containing of parenchyma cells. Idioblast cell expected contain of HCN distributed over all of tuber tissue. The somatic cell chromosome were diploid $2n=20$ with basic chromosome number were $x=10$.