Article published on May 3rd 2012 | Career

In botany , is defined as anomalous secondary growth to all types of secondary growth is not typical of gymnosperms and eudicotiledÃ³neas , which have a bifacial cambium "typical", but one generated by a cambium "anomalous". It is considered anomalous secondary growth that occurs in the roots of sweet potatoes, the so-called "included phloem" ("included phloem"), the unequal activity of vascular cambium and secondary growth occurs in monocots .

Monocot has no secondary growth as the eudicotiledÃ³neas, but some become arborescent and "woody" as the Joshua tree, dragon tree, and palm trees . While palm trees thicken its stalk by "primary gigantism", the first two they succeed by anomalous secondary growth. In these, one type of cambium vascular generated outside the beams furthest from the atactostela , the cambium from cells of the cortex of the same shape as the vascular cambium interfascicular in dicots. However unlike the dicotyledons, the cambium generates only parenchymal , cells not driving. Some parenchyma cells that divide rapidly and produce thin columns of cells which are differentiated into vascular side finally containing phloem and xylem. The outermost cells of each vascular bundle developed in secondary fibers with thick walls. Addition of parenchyma cells that differentiate into vascular tissue forms a secondary "ground", whose arrangement is almost identical to the primary tissues. The resulting logs are "woody" because of the fibers, and have more ability to drive and more strength every year, so that branching is possible, as well as more leaves without adventitious roots as those found in Pandanus .

The chromoplasts are a kind of plastids , organelles characteristic of the plant cell , which store the pigments to be the colors, orange or red, flowers, roots or fruits. When cells are called rodoplastos . Chromoplasts that synthesize chlorophyll are called chloroplasts .

Land plants not angiospÃ©rmicas are basically green, in angiosperms appears striking evolutionary change, the appearance of chromoplasts, with the property of storing large amounts of pigments carotenoids .

Normally occurs with the maturation of fruits such as tomato and orange . A cromoplasto differentiation is not irreversible, in the upper part of the roots of carrot , exposed to light, can differentiate into chloroplasts chromoplasts losing pigments and thylakoids developed.

There are four categories according to their structure chromoplasts:

Globular: the pigments accumulate in drops along with lipids : Citrus , Tulipa .

Fibrillar or tubulosos: pigments associated with fibril protein : Rosa , Capsicum annuum .

Cristalosos: pigments are deposited as crystalloids associated with thylakoid membranes: tomato, carrot.

Membranous: membranes wound helically : Narcissus

In botany , the cortex is the region of the root between the rhizodermis and the vascular cylinder and its main function is to store reserve substances such as starch . The outermost layers of the cortex, below the rhizodermis can be differentiated as a specialized tissue called "exodermis". The innermost layer of the cortex is, in turn, another specialized structure in the seed plants: the endodermis .

The cortex itself (the area between exodermis and endodermis) has a generally homogeneous structure, although in some species may be formed by various types of cells . The roots usually do not have chlorophyll in the cortex, but often the cells containing starch , can be found idioblasts different, such as cells or Crystal tanniferous, may present as secretory structures or esquizÃ³genos lisÃ-genos intercellular spaces. In roots with secondary growth of gymnosperms and dicots that release soon its cortex, this is parenchymatous. In monocots , however, in that the cortex is preserved for a long time, the sclerenchyma present in abundance. This tissue may be available within the exodermis cylindrical or close to the endodermis. You can also find collenchyma . The cortex on aquatic plants and marsh, as well as in the grasses of relatively dry habitats, consists of aerenchyma . The aerial roots of many plant families epiphytes such as orchids and aroids , have chloroplasts in the peripheral cells of the cortex.

The outermost layers of the cortex can be differentiated form the exodermis. This zone is generally not present in the pteridophytes . The exodermis is formed by one of several layers of living cells, which sometimes include sclerenchyma . Their cells may be all or suberificadas elongated lignified or some being short and not lignified. The cells of the exodermis of the roots of many angiosperms have Casparian bands and suberin develop very quickly and in some species pulp inside. Their function would be to prevent water loss from the root to the ground. The exodermis structurally and chemically resembles the endodermis, and the causal factors of development are the same.

The exodermis of aerial roots of some species of orchids consists of two cell types, which alternate regularly tangential: dead cells , longitudinally elongated, lignified walls, thickened and short cells with thin walls and protoplast alive.

http://www.yongefloristhamilton.ca/

Article Source:
http://www.articleside.com/career-articles/secondary-growth-in-monocots.htm - Article Side

Seolncr - About Author:
a florist hamilton a Canadian leading online flower shop. The same day delivery with a flowers hamilton. Premium quality - affordable prices visit now http://www.yongefloristhamilton.ca/

Article Keywords:
florist hamilton, flowers hamilton

You can find more free articles on Article Side. Sign up today and share your knowledge to the community! It is completely FREE!