Article published on June 8th 2012 | Business

Is the phase postembrionaria of plant development. Not all plants germinate after the embryo has fully developed, many go through periods of dormancy in which metabolism slows, the seed becomes dehydrated and the integuments are hardened to protect the embryo. Hormones such as abscisic acid are important in maintaining latency and gibberellins in his break. 8

Germination is given as a highly evolved product of interactions between seed and environmental conditions around it. During germination the embryo extracts nutrients from the endosperm or in some cases, the cotyledons. In monocots, the embryo interacts with the endosperm by gibberellins that activate signaling cascades that end with the breakdown of starch into sugar. Chloroplasts as soon begin to differentiate the stem reaches the surface due to exposure to light.

Plants are modular organisms. This implies that growth occurs by repeating modules. Each module consists of a leaf with an axillary bud and the point where the leaves are inserted are called nodes. Between node and node is an internode. Thus, the growth of plants is the repetition of this pattern and the expression of reproductive appendages axillary buds (flowers) or vegetative (branches).

The growth in length and thickness is given by the action of meristems.

The size of the meristem is controlled by intercellular signals mediated by the action of genes.

CLV (clavata) : Found in Arabidopsis . Mutations in this gene lead to an increase in the size of the stem apical meristem and production of extra appendages. 8

CLV1, CLV2, CLV3 : Proteins. CLV1 kinase is a serine / tronina that binds to the protein CLV2 is a transmembrane receptor protein for CLV3 . Coupled, these proteins limit the number of undifferentiated stem cells in vegetative and floral meristems.

The development of each plant parts involves different sets of genes.

The architecture and the gestalt of the plant are determined by the number of buds that are present and are expressed on the leaf axils. The tip of the rod engages in a phenomenon called "apical dominance", which consists in regulating the pattern of branching of the plant by the rod end. On this point, the hormones seem to play an important role in environmental regulation of plant architecture. Besides the environmental plasticity, the architecture of the plant is genetically regulated.

Some hormones involved in the growth pattern of plants are:

Auxin: Produced by the young leaves and transported to the base. You can suppress the formation of axillary buds.

Cytokinin: You can free buds. From him the phenomena occur as the buds produce their own tips leading to a complex gestalt.

Research pteridophytes and angiosperms indicate that the youngest leaf primordia visible is determined to produce a sheet but a stem. 11 The establishment of the dorsoventral axis is essential for determining the flattened shape characteristic of most of the leaves. To model the less conspicuous forms and more detailed of these, often the plant uses strategies such as apoptosis .

The establishment of adaxial surface (beam) and abaxial (underside) is in charge of a group of genes known as PHABULOSA (Phab) PHAVOLUTA (PHAV) KANADI (KAN) and YABBY . 12

Proteins Phab and PHAV accumulate in the adaxial surface of the sheet to be activated by a ligand lipid. Conversely, protein KAN and YABBY accumulate and expressed in the abaxial side. The protein KAN activates genes YABBY . These two groups of genes (the expression of adaxial and abaxial expression) restrict the activity of their antagonists. That is, Phab and PHAV restrict the actions of KAN and YABBY the abaxial surface, while KAN and YABBY restrict the action of Phab and PHAV the adaxial surface.

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Article Keywords:
florist cornwall,flowers cornwall

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