Plant Biotechnology Adrian Slater Ebook Free Download pamalar

This tutorial provides a thorough introduction to biotechnological approaches to developing plants, and the selection of appropriate techniques for research and commercial application. Emphasis is placed on a systems approach to plant development, considering plant phenotypic parameters, in the context of the scientific and the business perspectives. By completing this course, students will learn to conduct and integrate research projects for the design of plant organisms with improved nutritional, environmental, and economic traits, and how to apply the resulting knowledge to the production of new foods and chemicals, and to improve our knowledge of plant biology and biotechnology. Introduction {#s0005} ========== Plant genetic engineering is the purposeful introduction of foreign genetic information into a plant genome to enhance the trait and properties of an organism, either for a new trait to be expressed, for a new property to be conferred to the organism, or for an existing property to be intensified. The final outcome of the genetic engineering process is the achievement of a novel organism with a unique set of traits and characteristics, compared to those of the organism from which the genetic information was introduced. It is generally accepted that these products are safe to humans and animals, are not genetically modified organisms (GMOs), and therefore are considered 'GE foods'. There is also a broad consensus that genetically modified organisms are generally a benefit to the environment and that their use should be encouraged. The technologies that have been used to transform plants to produce GMOs include a wide variety of different methods, as well as combinations of these. To date, a considerable proportion of the engineered plants are genetically modified to produce pharmaceutical and industrial chemicals, which have become an important commodity in the global economy. Within this group, those that have had the greatest impact on the economy are those that have been transformed to produce additional starch or oil. Currently, there are no commercially marketed GMO plants that produce biofuel components. Although the main focus of this paper is on plant biotech, there are many examples of the use of plant biotechnology for the production of industrial products, such as pharmaceuticals and cosmetics, in addition to other uses of food and feed crops. The history of plant genetic engineering is relatively short, having only been in development since the early 1990s, but has already made a significant contribution to the improvement of food production, as well as to the development of products for industrial and medical uses. The use of these methods in the past has been limited by many factors, such as the cost of the technology, the challenges of genetically engineering a

Plant Biotechnology: Genetic manipulation of plants. Front cover. Adrian Slater, Nigel Scott, Mark Fowler. Oxford University Press. Foreground: fffad4f19a