Journal of
Plant Genetics and Breeding

Editorial

Recent Advancements on Plant Science & Genomics

Abdul Mujib
Hamdard University, India

Since many years, plants with desirablecharacteristics were being produced by employingconventional breeding methods. In this process,desirable traits will be selected, combined andpropagated by continuous crossing for variousgenerations and is a very long method, which takesup to 15 years to produce new varieties withdesired characters. Based on the presentconditions, traditional methods solely will not besufficient to supply required food, fuel and fiber toovercome the future demands. Plant Science Today increasing the productivity similar to the period ofgreen revolution during 1960s to 1980s, whichbrought a great change in rural incomes and thisidea is about three decades old. The advantage ofthese techniques related to the traditional breedingmethods is, they not only efficiently expedite in ahighly focused manner by inserting particular genes,but also prevailed the limit of sexual variancebetween different plant species and immensely raisethe available gene pool. By adopting the strategyof genetic engineering, rural poverty can bedecreased by increasing the food production and itencircles all aspects of agricultural production thatincludes high crop yield, less fertilizer and pesticideapplications, increase in quality, simple processingand improved storage, better quality of the productsand modern technologies to examine the conditionof plants.This field further encircles a broad range oftechnologies and can be used for a wide range ofpurposes, like generation of new plant varieties andanimal communities to increase their yields,development of disease and insect resistant varieties,abiotic stress tolerant varieties, diagnosis of plant oranimal diseases, increasing the livestock feed andproduction of plant based vaccines. Commercial transgenic crops with desired traits canbe developed by the insertion of one or more newgenes along with regulatory sequences or by downregulating the internal genes. In plantbiotechnology, to control the gene expressionvarious methods like RNA sequencing could be used and in this orientation various syntheticpromoters, repressors and enhancers weredeveloped by the scientists for innate and transgenesexpression regulation