Agricultural Bioinformatics Services Section Front Page

?With plant genes evolutionarily conserved, the science of bioinformatics in agriculture has caught interest with myriad of applications taken from bench side to in silico studies. A multitude of technologies in the form of gene analysis, biochemical pathways and molecular techniques have been exploited to an extent that they consume less time and have been cost-effective to use. As genomes are being sequenced, there is an increased amount of expression data being generated from time to time matching the need to link the expression profiles and phenotypic variation to the underlying genomic variation. This would allow us to identify candidate genes and understand the molecular basis/phenotypic variation of traits. While many bioinformatics methods like expression and whole genome sequence data of organisms in biological databases have been used in plants. The sequencing of whole genomes from several species permits to define their organization and provides the starting point for understanding their functionality, therefore favoring human agriculture practice. Efforts addressed to the achievement of an appropriate knowledge of associated molecular information, such as the one arising from transcriptome and proteome sequencing, are also essential to better depict the gene content of a genome and its main functionalities. These efforts indeed led to major advancements in all biological sciences and in agriculture as well.