Dr. Indra Vasil, Ph.D.

University of Florida
Dept. of Horticultural Science
Lab. of Plant Cell & Molecular Biology
1143 Fifield Hall
Gainesville, FL 32611-0690
United States

Graduate Research Professor, University of Florida, Gainesville, FL
Chairman, Biotechnology Action Council of UNESCO
President, International Association for Plant Tissue Culture and
Biotechnology (IAPTC&B)
President, International Society of Plant Morphologists

Molecular Improvement of Wheat

Cereal grains account for nearly 66% of the world food supply, and are justifiably described as being the centerpiece of international agriculture. With declining annual yields and greater demand for cereals owing to improved economic and changing dietary conditions in China and India, there is great urgency in increasing the productivity of cereal crops. Yet, more than 40% of cereal productivity is lost to competition with weeds, and to pests and pathogens. Molecular techniques now make it possible to reduce or eliminate these losses by the introduction of single, well-defined genes, and also contribute to overall improvement in the quality of cereal grains by the manipulation of nutritional ingredients such as essential minerals, vitamins, proteins, and starch. This presentation will focus on the application of such molecular techniques for the improvement of wheat, the foremost food crop in the world.