TOOLS USED BY PLANT BREEDERS TO ENABLE THE DEVELOPMENT OF NEW SEED PRODUCTS. Sam R. Eathington; Breeding Applications Lead, Monsanto, 3302 SE Convenience Blvd., Ankeny, IA 50021

Plant Breeding is a long established discipline that has delivered remarkable improvements in commodity crops. To sustain the long-term improvement in commodity crops, plant breeders continue to improve the methodologies used to develop new hybrids and cultivars. In the last 20 years, scientists have demonstrated that DNA based molecular markers can improve plant breeding methodologies. Monsanto has integrated DNA based breeding tools into our global plant breeding programs. These new tools improve the selection efficiency in our plant breeding programs and enable development of new hybrids and cultivars. This presentation will outline some of the key components required to effectively use molecular marker information in a large scale breeding program and some of the DNA based breeding tools used in Monsanto's breeding programs.