Keynote Speech of the Inaugural Session

Convergence of Technologies in Agriculture

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Over the past few decades we have witnessed a rapid evolution of immensely diverse technologies with significant impact on all disciplines of sciences including agriculture. Convergence of some of these technologies (especially with information technologies) have been leading and directing future economy, society and culture by creating new value through synergistic convergence between new high end technologies with existing knowledge and industry. These synergies have not only overcome limitations of existing knowledge and industries, but have created new scientific and technological disciplines, revolutionized industries and businesses and improved environmental sustenance by converging different existing fields of information and knowledge driven by appropriate combination of human resources, systems and infrastructure. The impact of any technological convergence may be beneficial or harmful depending on how these tools and technologies are applied. Some may have very different applications from those originally intended, or may be combined in unexpected, nontraditional configurations. Converging technologies provide the best opportunity for achieving sustained food security.

Many of the technologies that have been developed to date create novel opportunities for scientists and technologists to explore aspects of biological and chemical diversity that cannot be accessed through conventional science and technology. A current perspective on the breadth and types of technologies that may have an impact on the life sciences enterprise of the future should be looked at with the understanding that there are inherent difficulties in accurately anticipating or predicting what technology synergies could occur and how they would impact the human society and the Planet Earth. Given the unpredictable nature of technological change, it is even difficult to describe in definite terms what the global technology landscape will look like in 5 to 10 years, both with regard to the emergence of convergent technologies and the global geography of future breakthroughs. New, unexpected discoveries and technological applications will be evolving even during the course of this conference.

Technologies will continue to evolve and converge. Scientists and technologists can certainly combine and maneuver them to achieve a holistic and sustained impact by balancing economic returns with improved social equity and the sustenance of this planet. The industry should be informed of the growing trends and the potential of these convergent technologies so that they are prepared to absorb them into their products and processes. Convergence of technologies should therefore be supported and encouraged in the National Development Agenda of the Government by encouraging different stakeholders to come together creating an enabling environment and a platform with appropriate systems, skills, infrastructure and funding, ensuring, encouraging and entrenching sustainability principles in all these activities.