Capacity Building and Adaptation of Precision Agriculture to Increase Crop Yield by Transfer of Concept from Progressive to Developing Countries

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ABSTRACT:

Developed countries has greatly optimized the use of chemicals and fertilizer by adapting precision agriculture (PA), with positive economic and environmental impact and increasing the productivity. PA Technology such as auto-guidance systems in farm vehicles increased the field capacity and efficiency and also resulted in reduction of GHG emissions, aiding in mitigating climate change impacts. Similar technology with adaptive modifications/customization can be used in developing countries. Policy makers along with scientist, academicians and progressive farmers in South and South-East Asia have substantial influence on development of modern agricultural methodologies.PA is in nascent stage in these countries. It may be noted that the technology is there and some of the large farmers have started to use it for economic benefits.The adaptation of analytic techniques with importance of Q certificate, carbon balance, livelihood adjustment due to change in climate is being studied in Bangladesh, India, Thailand and Vietnam. The impact of global change research by practicing PA technology with advanced mechanization is assessed by reducing agricultural inputs and its effect on CHG emission in these countries. The impact is substantial in terms of crop yield increase as well as on the environment.