



Nutrient Use Efficiency Through **NEXT GENERATION FERTILIZERS**

The book chapters presented in this book '*Nutrient Use Efficiency Through Next Generation Fertilizers*' depicts about next generation fertilizers and innovative agricultural technological interventions related to applications of fertilizers and alternative sources of plant nutrients which play a pivotal role in improving nutrient use efficiency. This book also highlights the recent advances in enhancing nutrient use efficiency, smart nutrient delivery systems, precision tools for higher fertilizer use efficiency and aqua-fertilization that deal with the challenges of low nutrient use efficiency and soil health. Different kinds of next generation fertilizers viz; customized fertilizers, nano-fertilizers, coated and value-added fertilizers, slow release fertilizers, liquid biofertilizers, zincated fertilizers and organic fertilizers have been included in the book covering the diverse aspects of enhancing nutrient use efficiency and productivity of field crops. In addition, certain alternative nutrient sources for the crops like biochar, seaweed biostimulants, rock phosphate, nitrification inhibitors and urease inhibitors have also found place in order to address the issues of nutrient use efficiency on a holistic way. As next generation fertilizers are technologically superior over straight or traditional fertilizers both in terms of higher nutrient use efficiency and cost effectiveness, these could have the real potential to pace faster in future as need based sources of plant nutrients. The content and information elaborated in this book will certainly provide multiple novel ideas of advance techniques; and will further stimulate innovative directions amongst researchers, academicians and policy makers in the field of plant nutrition. Further, the scientific contributions presented in the book will be a good source of background knowledge and technical know-how to educate the students and bring new scientists/technologists into the agriculture field.

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