

## लेखक परिचय

डॉ. मुनीश कुमार

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डॉ० मुनीश कुमार का जन्म वर्ष 1966 में उत्तर प्रदेश के बरेली जनपद में हुआ था। डॉ० कुमार ने कृषि विश्वविद्यालय, कानपुर में जनवरी, 1992 में सहायक प्राध्यापक, कृषि वानिकी के पद पर योगदान दिया तब से अब तक विश्वविद्यालय के विभिन्न पदों पर कार्यरत रहे, तथा वर्तमान में आप विभागाध्यक्ष भूमि संरक्षण तथा जल प्रबन्ध एवं वानिकी विभाग के पद पर कार्यरत हैं। पिछले 27 वर्ष से आप शोध व शिक्षण कार्य कर रहे हैं वर्ष 2002 से आप लगातार औषधीय एवं संगंधीय पौधों के शिक्षण व शोध के क्षेत्र में कार्यरत हैं।

आपकी पुस्तक औषधीय एवं संगंधीय फसलों का कृषिकरण पर 30प्र० हिन्दी संस्थान से सर्जना पुरस्कार 2005 में मिल चुका है आपके उत्कृष्ट कार्य हेतु राष्ट्रीय एवं अन्तराष्ट्रीय संगठनों द्वारा 21 पुरस्कार प्राप्त हो चुके हैं, जिसमें डॉ. सूरजभान विशिष्ट कृषि वैज्ञानिक पुरस्कार, दिवांग मेहता राष्ट्रीय शिक्षा पुरस्कार एवं औषधीय एवं संगन्ध पौधों के शोध पर अन्तराष्ट्रीय उत्कृष्ट पुरस्कार से सम्मानित किया गया है, डॉ. कुमार द्वारा विभिन्न फसलों की कृषि तकनीकी विकसित की है तथा 12 संस्थाओं द्वारा वित्तपोषित परियोजनाओं का संचालन किया है, आप ने राष्ट्रीय एवं अन्तराष्ट्रीय स्तर पर 130 शोध पत्र, 6 पुस्तकें, 10 बुक चैप्टर, तथा प्रशिक्षण बुलेटिन प्रकाशित की हैं डॉ. कुमार द्वारा 20 प्रशिक्षक प्रशिक्षण तथा 30 कृषक प्रशिक्षण एवं 15 राष्ट्रीय व अन्तराष्ट्रीय सेमिनार/कॉन्फ्रेंस आयोजित किये हैं तथा विभिन्न समितियों के अध्यक्ष एवं सदस्य भी रहे हैं।

## डॉ. डी. आर. सिंह



डॉ० डी० आर० सिंह, कुलपति, चन्द्रशेखर आजाद कृषि एवं प्रौद्योगिक विश्वविद्यालय, कानपुर के पद पर कार्यरत हैं। आपका जन्म वर्ष 1964 में हुआ था, डॉ० सिंह का कार्य अनुभव 28 वर्ष से अधिक का है। इस दौरान आप हार्दिकल्वरिस्ट, प्रोफेसर तथा भारतीय कृषि अनुसंधान परिषद्, नई दिल्ली के संस्थान में निदेशक के पद पर कार्यरत रहे हैं। इसके अतिरिक्त आप द्वारा विभिन्न योजनाओं को मूर्तरूप, मार्गदर्शन, समन्वयन एवं कार्यान्वित किया है। विभिन्न राष्ट्रीय एवं अन्तराष्ट्रीय संगठनों द्वारा आपको 16 पुरस्कारों से सम्मानित किया गया है, जिसमें आई०सी०ए०आर०-फरुखदीन अली अहमद, लेफ्टिनेंट गवर्नरस कमेन्डेसन, डॉ० आर०एस० परोदा पुरस्कार, उत्कृष्ट वैज्ञानिक पुरस्कार, लिम्का बुक नेशनल रिकार्ड तथा फेलो पुरस्कार आदि प्रमुख हैं। आप द्वारा विभिन्न बागवानी फसलों की 17 प्रजातियों के साथ-साथ विभिन्न फसलों की कृषि तकनीकियाँ भी विकसित की है तथा 14 विभिन्न संस्थाओं द्वारा वित्तपोषित परियोजनाओं का सफलता पूर्वक संचालन मुख्य अन्वेषक के रूप में किया है। आपके राष्ट्रीय एवं अन्तराष्ट्रीय स्तर पर 206 शोध पत्र, 13 पुस्तकें, 50 बुक चैप्टर, तथा प्रशिक्षण बुलेटिन प्रकाशित हुये हैं, साथ ही आप विभिन्न नीतिगत निर्णयों हेतु गठित समितियों एवं वैज्ञानिक समितियों के अध्यक्ष, विशेषज्ञ एवं सदस्य भी हैं। आप ने राष्ट्रीय एवं अन्तराष्ट्रीय स्तर पर उद्यानिकी के क्षेत्र में ख्यातिलब्ध वैज्ञानिक हैं।

## डॉ. आर. एस. कटियार



डॉ० कटियार जन्म एक कृषक परिवार में अक्टूबर, 1958 को जनपद कानपुर में हुआ था, आपने स्नातक कृषि 1979, परास्नातक उद्यान विज्ञान 1981 में चन्द्रशेखर आजाद कृषि एवं प्रौद्योगिक विश्वविद्यालय, कानपुर, उत्तर प्रदेश, भारत से पढ़ाई की तथा पी.एच-डी. उद्यान विज्ञान में वर्ष 1984 में कानपुर विश्वविद्यालय, कानपुर से डिग्री हासिल कर जीवनवृत्त की शुरुआत उद्यान एवं खाद्य प्रसंकरण विभाग, उत्तर प्रदेश में 5 वर्षों की राजकीय सेवा के उपरान्त 1989 में सी.एस.आई.आर.-राष्ट्रीय वनस्पति अनुसंधान संस्थान, लखनऊ में वैज्ञानिक-बी (उद्यान) के रूप में शोध/विकास कार्य प्रारम्भ किया। मुख्यता उद्यान विज्ञान फसलें पुष्प कृषि, औषधीय एवं संगंधीय फसलें सामाजिक वानिकी, जलीय पौधों तथा गैर परम्परागत फसलों की आंशिक सुधरी ऊसर भूमि पर कृषि तकनीकी विकसित की गयी शोध एवं विकास पर किये कार्यों के परिणामों को शोध कर्त्ताओं/कृषकों तक शोध पत्रों, बुक चैप्टर, बुक बुकलेटस आदि के माध्यम से पहुँचाया। लगभग 29 वर्ष संस्थान की सेवा करते हुये विभिन्न पदों पर कार्य किया। अन्त में मुख्य वैज्ञानिक, विभागाध्यक्ष-वनस्पति उद्यान, पुष्प कृषि एवं भूदृश्य विभाग से 2018 में सेवानिवृत्त हुये।

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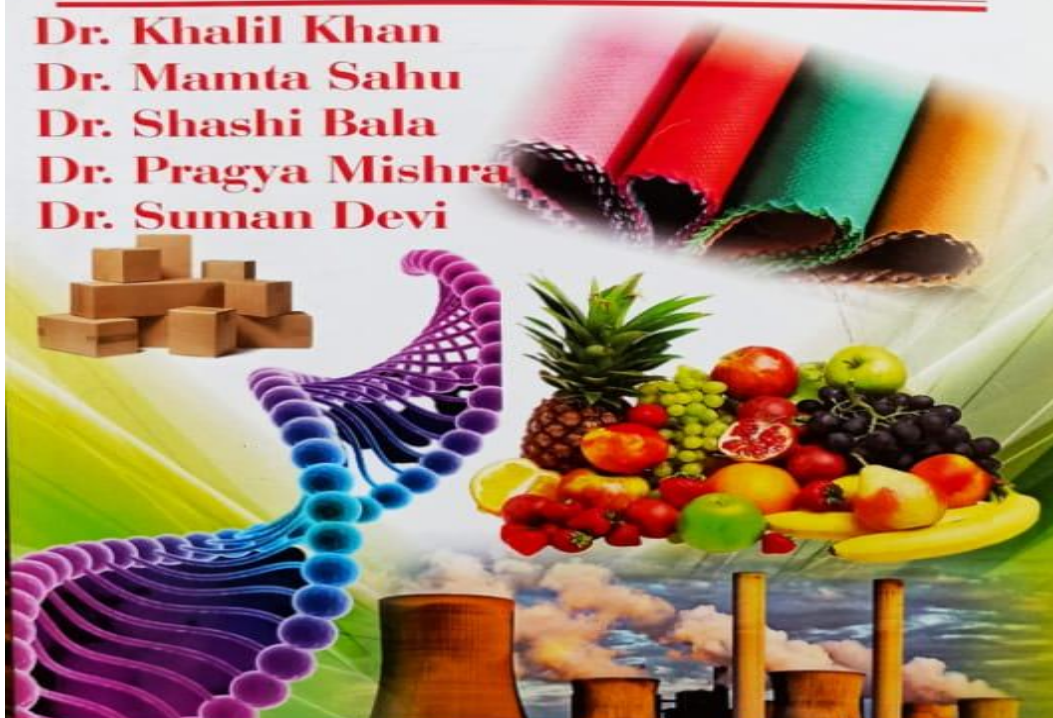
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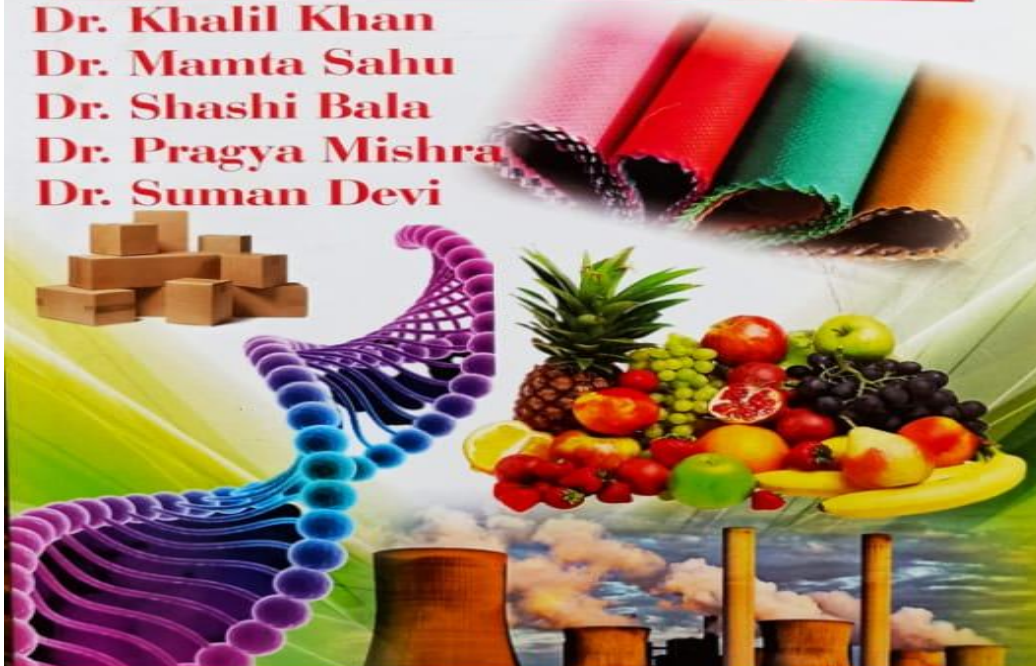
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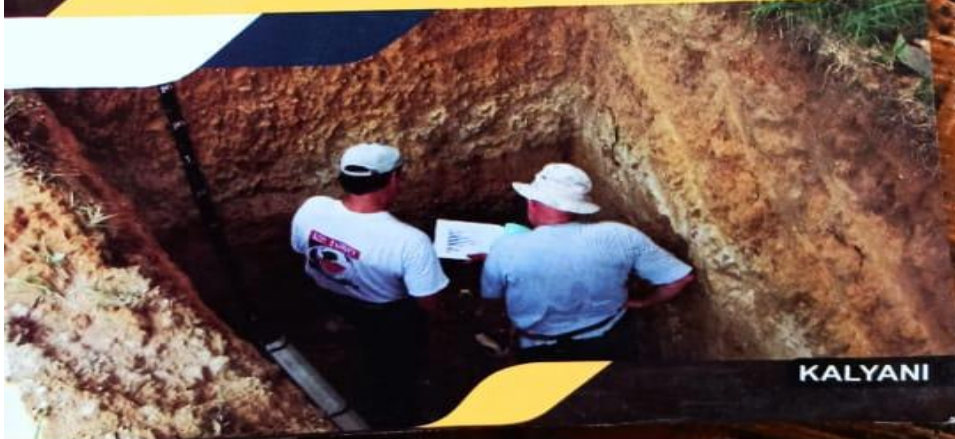
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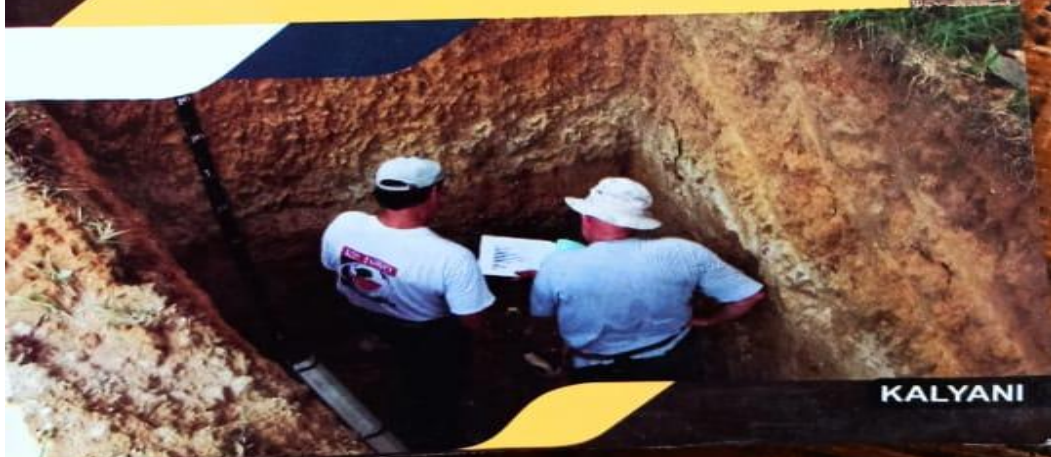
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# ORGANIC GROWER

This book is an effort to give simple and concise information about the aspects relevant to organic grower. The book consists of ten chapters. Efforts have been made to incorporate information on Undertake planning for organic farming, seed selection and treatment, soil nutrient management, weed control, irrigation management, integrated pest and disease management, harvest and postharvest management, undertake quality assurance and certification in organic farming, undertake business of organic farming, maintain health and safety at the workplace. The book provides you with comprehensive information on organic farming and related methods of farming. As valuable source of information to all those involved in organic farming including developmental personnel, policy makers, NGOs and progressive farmers.



**Dr. D. R. Singh** is currently working as the Vice Chancellor, Chandra Shekhar Azad University of Agriculture & Technology, Kanpur (Uttar Pradesh).



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# ORGANIC GROWER



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# FLORICULTURIST OPEN CULTIVATION

First chapter Preparatory Flower Cultivation covers importance of floriculture and floriculturist, classification of flower crops, nursery raising, preparation of land for nursery, media for propagation of plants in nursery beds, soil testing, nutrient managements, IPM in the nursery, basics of the flower propagation, nursery tools and implements, use of growth regulators, selection and maintenance of mother trees, collection of scion wood stick, techniques of propagation through specialized organs, corm, runners, suckers, plant protection, hi-tech nursery, high yield varieties of flowers, drought tolerance, transplanting, marketing survey and feasibility. In the second chapter, Cultivation of Flower Crops have been covered with emphasis on types of flowers for cultivation, estimate nutrient requirement for flower crop, crop spacing and border crops, time of planting flower crop, seed rate, integrated nutrient management, method of application of fertilizers, specialized practices, irrigation management, pest and disease management. In the third chapter, Harvest and Postharvest Management in Floriculture deals with practicing flower harvesting, identify harvesting stage, handling harvested flowers, grading of different flower, use of chemicals for enhancing vase life of flower, value addition of flowers, packing of flowers, tools for flower harvesting, storage and transportation. Chapter four Maintain Health and Safety at Work Place deals with health hazards at work place, practice general safety and first aid, maintain clean and efficient workplace, render appropriate emergency procedure, fire and emergency procedures.

This book has been designed to meet the needs of the floriculturists, students of Agriculture, Horticulture, Botany and layman flower enthusiasts, landscape professionals, horticulturists, nurserymen, amateur growers, enthusiasts, city and industry planners teachers as well as garden and nature lovers.



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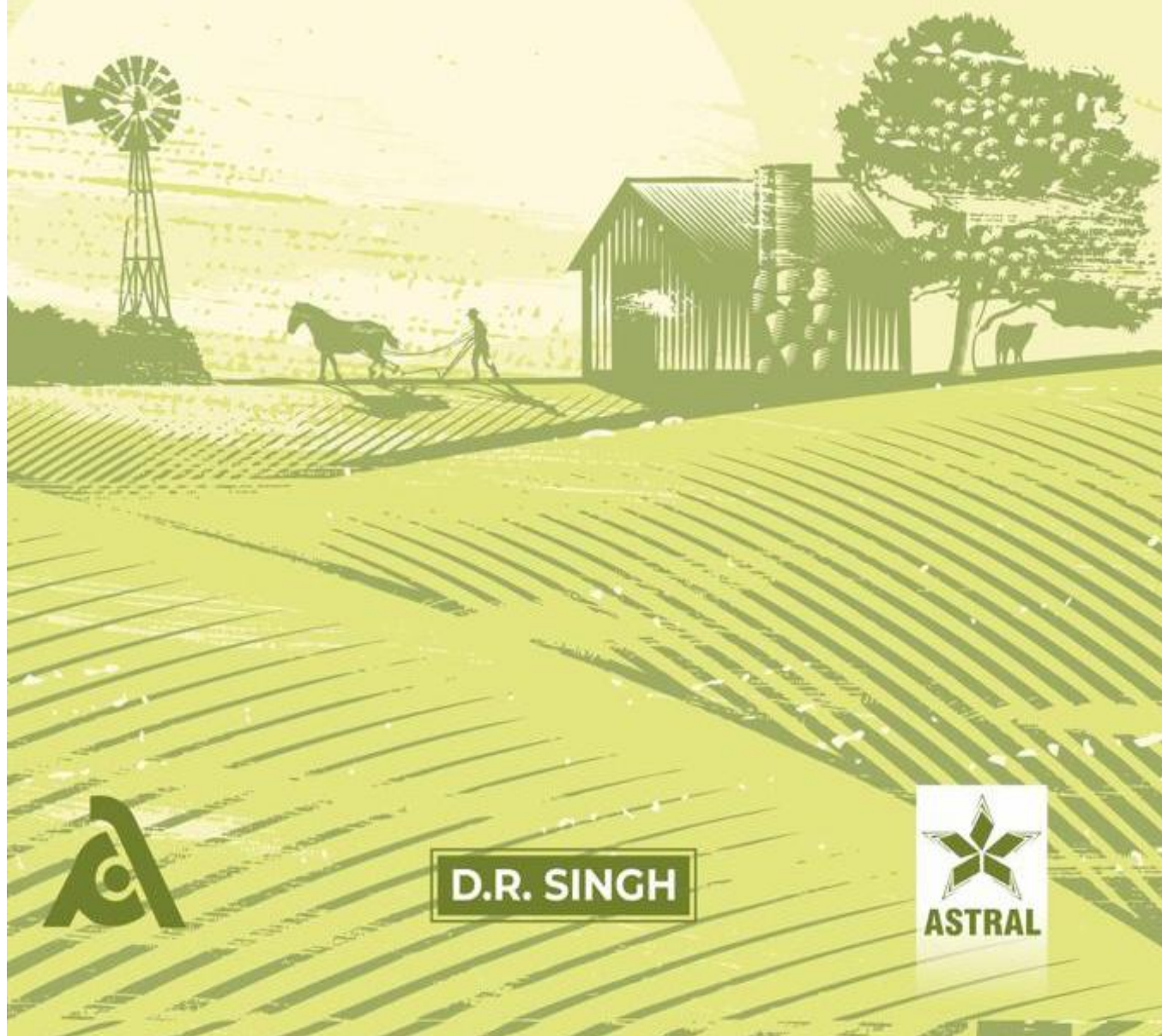


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# ORGANIC GROWER



D.R. SINGH



# पादप पोषण में जैव उर्वरकों का महत्व



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खलील खान  
मनोज मिश्र  
एच. जी. प्रकाश  
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# HANDBOOK OF AGRICULTURAL BIOTECHNOLOGY

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The present book "Handbook of Agricultural Biotechnology" for ICAR ARS, NET Examinations" is a very tedious and comprehensive work. This book covers the syllabus of ARS, NET and various Competitive Examinations. This book "Handbook of Agricultural Biotechnology" will be a milestone and useful for the M.Sc.Ag., Ph.D students of Agricultural Biotechnology, Aspirant of ARS, SRF and NET examinations and Professors of colleges and Universities of India and abroad. This book has been written in a simple language and lucid manner. Efforts have been made to provide up-to-date information about various genetic principles and their practical implications especially in Genetics and Plant Breeding and related disciplines. Amidst the stiff competition, many aspire, but only a few get successes in their selection in reputed institutes because of vast sphere of ARS syllabus. Hope that there should be at least a book which will cover all the aspects of **Handbook of Agricultural Biotechnology** for ICAR ARS, SRF and NET examinations syllabus.

## About the Authors



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# HANDBOOK OF GENETICS AND PLANT BREEDING

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# PRACTICAL MANUAL ON CROP IMPROVEMENT-I (KHARIF CROPS)

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This book covers the syllabus of ICAR-JRF Examination and other competitive examinations. Lucidly written, this book will serve for ICAR, Junior Research Fellowship Examination, Agricultural Research Service Examination (ASRB) of Indian Council of Agricultural Research, National Eligibility Test (NET), Civil Service Examination, Entrance Examination, University and College Examinations. This book entitled "Hand Book of Plant Sciences" will be a milestone and useful for the UG and PG students and Professors of College and Universities of India and abroad. Students have to answer both descriptive and objective type of questions.

### ABOUT THE AUTHOR

**Professor (Dr.) Rajendra Kumar Yadav** was born in 1969. He has over twenty six years experience in a both teaching and research in Genetics and Plant Breeding. He has made outstanding contribution in the field of Agriculture Education and Research by way of commercial release of two varieties of cereals (Wheat variety K-1317, barely variety K-1055) publishing of more than 100 research papers in various International and National reputed journals besides participating in many International and National conferences, supervision of nearly three dozen students (P.G. and Ph.D Scholars) for their thesis work, actively engaged in teaching courses of UG, PG and Ph.D. of Genetics and Plant Breeding published ten books i.e. Experimental Genetics and Plant Breeding 2010, A text Book Principles of Genetics – 2011, Experimental Sciences of Genetics and Plant Breeding- 2012, Objective Breeding of Field Crops- 2014, Competitive Genetics and Plant Breeding 2015, Intellectual Property rights -2018 by Kalyani Publishers, Atlas Economic Botanist- 2015, Practical Manual on Elements of Genetics – 2003, Principles of Plant Breeding Practical Manual – 2004, Laboratory Manuals on Fundamentals of Genetics – 2017 and Fundamentals of Plant Breeding Practical Manual-2018. He is a recipient of **Dr. Rajendra Prasad Puraskar- 2012 of Indian Council of Agricultural Research, New Delhi**. He has been awarded as Kunwar Saxena Bahadur SRDA Award- 2008, Young Scientists Award – 2009, SARC Excellence in Teaching Award- 2009, Best paper presentation Award- 2012, Best Author Award-2014, Distinguish Scientists Award -2015, Dr. Z. Ahmad Vishishth Krishi Vaigyanic Puraskar (Crop Improvement in Wheat) -2015 and SRDA Gold Medal Award -2016, ICN Awards-2018 for **Agricultural Education and Distinguished Scientist Award – 2018, Bali, Indonesia**. Additionally, he is Executive Editor in Indian Citizen News, HOD, Department of Agri-business Management and **Nodal Officer** in All India Higher Education Survey, Ministry of HRD, Government of India, New Delhi. Presently he is working as Professor, Department of Genetics and Plant Breeding, Chandra Shekhar Azad University of Agriculture and Technology, Kanpur -208002 (India.)



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