Dormancy Breaking And Germination Of Rice Seed Rice The World 2nd Most Feeding Consumable Cereal

Ecology of Plant-Derived Smoke is the continuation of the research and discussion presented in Uses & Abuses of Plant-Derived Smoke, published in 2010. Both books are the first of their kind in what is now an ever-expanding and exciting field of research. This volume focuses on the use of plant-derived smoke as a tool, used for promoting seed germination and growth. Our ancestors may have used smoke in this capacity for centuries. Only recently has the scientific community delved into understanding the ecology of smoke as a seed dormancy-breaking mechanism in fire-prone environments. Most research to date has focused on the fire-prone Mediterranean environments of the western U.S.A., Western Australia and South Africa. These environments are among the richest floristic regions in the world, and require ecological understanding in order to be managed properly. This includes knowledge of that role that smoke plays in these ecosystems. Ecology of Plant Derived Smoke presents accounts of 1355 species of plants, from 120 families, whose seed have been tested for their response to aerosol smoke, smoke water, and plant-derived smoke. Each account includes a short summary of research findings, along with any other relevant information. Ecology of Plant-Derived Smoke is a comprehensive resource for ecologists seeking to understand the properties of smoke as they relate to ecosystems.

Tropical Nursery Manual, U.S. Department of Agriculture, Forest Service Agriculture Handbook 732, was first published in 2014.This handbook was written for anyone endeavoring to start and operate a nursery for native and traditional plants in the tropics. Because the tropics cover a vast area of the world, however, the scope of the handbook is geared toward readers in the U.S. affiliated tropics. Specifically, the U.S. affiliated tropics are a diverse area spanning two oceans and half the globe, including the nations of the Federated States of Micronesia, the Republic of Palau, and the Republic of the Marshall Islands, as well as the Territory of Guam, the Commonwealth of the Northern Mariana Islands, the Territory of American Samoa, the Common-wealth of Puerto Rico, the U.S. Virgin Islands, and the State of Hawai'i, southern California, Texas, and the southern part of Florida. Areas with similar conditions may also be served.

Rubus seed characteristics; seed coat morphology, anatomy, germination requirements and dormancy were studied in order to define protocols for breaking seed dormancy. Morphological analysis of the seed coat (testa) using scanning electron microscopy (SEM) included 56 seed accessions of 10 subgenera preserved in the collections of the US Department of Agriculture, Agricultural Research Service, National Clonal Germplasm Repository (NCGR), Corvallis, Oregon. Macromorphological characteristics differed among groups at the subgenus level. Rubus odoratus L. and R. parviflorus Nutt. (subg. Anoplobatus) had a unique hilar end hole and R. saxatilis had seed coat sculpturing inconsistent with its assigned subg. (Cyclactis) and appeared more in common with subg. Idaeobatus. These morphological characteristics of Rubus seed revealed by SEM provide additional information to identify infrageneric levels. Seed of 17 commercially important blackberry cultivars were examined with light and scanning electron microscopy to determine cultivar identity of blackberry fruit using seed coat characters. One key characteristic is the shape of the raphe: straight, concave or convex. Seed shape, color, size and seed-coat sculpturing further distinguish the cultivars. Scarification methods and effective germination requirements were determined for six species of wild Rubus seed. Fresh untreated R. caesius seed had 14.5% germination, but untreated seed of the other five species did not germinate. Most sulfuric acid scarified seed germinated by 6 months with a few more by 12 months. Sodium hypochlorite scarified seed germinated poorly at 6 months, but significantly improved by 12 months. This study indicates that Rubus species vary in their germination requirements with R. hoffmeisterianus exhibiting low dormancy and R. occidentalis very deep dormancy, while the others had moderate dormancy. The seed coat anatomy of R. hoffmeisterianus, R. occidentalis, and R. caesius that exhibited unique responses to germination treatments showed unique structures and cell composition. Especially unique were the sclereids; each had differing layers of exo-, meso-, and endotesta. The anatomical characteristics of each species shown in this study may provide useful information regarding anatomical differences of seed coat hardness and texture. The appendices contain additional SEM micrographs of the seed surface of a wide range of Rubus species.

Breaking Seed Dormancy

Tropical Nursery Manual

Physiology of Development and Germination

Black Wattle

Growth Control in Woody Plants

Germination and Dormancy Characteristics of Sixteen Species of Weedy Crucifers

Dormancy Breaking and Germination of Rice SeedLAP Lambert Academic Publishing

Describes the basics of ROS metabolism in plants and examines the broad range of ROS signaling mechanisms New discoveries about the effects of reactive oxygen species (ROS) on plants have turned ROS from being considered a bane into a boon, because their roles have been discovered in many plant developmental processes as signaling molecules. This comprehensive book teaches about the role of ROS metabolism in plants and how they affect various developmental processes. It also discusses in detail the advancements made in understanding the ROS signaling. Reactive Oxygen Species in Plants: Boon Or Bane - Revisiting the Role of ROS begins by presenting the basic introduction to ROS and deciphers the detailed knowledge in ROS research. It then examines the broad range of ROS signaling mechanisms as well as how they may be beneficial for plants and human beings. This book also describes both the bane and boon aspects of ROS with their impact on plants, and how the recent revelations have compelled us to rethink ROS turning from stressors to plant regulators. ? Compiles, for the first time, the wholesome knowledge in ROS research and their cellular signaling ? Includes new discoveries and in-depth discussions about the advancements made in the field ? Discusses reactive oxygen species which are involved in a broad range of biological processes Reactive Oxygen Species in Plants: Boon Or Bane - Revisiting the Role of ROS will help scientists to utilize the functions of ROS signaling for plants and also enable readers to gain a deeper knowledge of ROS research and signaling. It is highly recommended for researchers, scientists, and academicians in plant science as well for advanced undergraduate and postgraduate students.

A study of nucleic acid changes influenced by gibberellic acid and chilling treatments in peach seed was performed in an attempt to reach a better understanding of the mechanism involved in breaking seed dormancy. Gibberellic acid and the chilling treatment increased the RNA content. These two treatments which break dormancy also increased RNA, suggesting a similar mechanism involving RNA. Chilled seeds contained more RNA than did the gibberellic acid treated seeds. DNA content remained unchanged regardless of treatment. Dry seed had a greater ribonuclease activity than with soaked seeds. Enzyme changes did not correlate well with the RNA content in gibberellic treated seeds. Deoxyribonuclease activity was higher in dry seed than with soaked seeds. Enzyme activity change did not correlate well with the DNA content. The phosphorus content of the seed in regard to the gibberllic acid and chilling treatments was difficult to evaluate. There were no major relationships established. Phosphorus in the methanol fraction from the chilled seed increased some as the storage period increased.

A Guide to Starting and Operating a Nursery for Native and Traditional Plants

Physiology of Development, Germination and Dormancy, 3rd Edition

An Ultrastructural Study

Efficacy of Six Types of Germinating Media in Breaking Dormancy of TQR-2 Paddy Seeds

Dormancy in Grass Seeds

The Prosopis Julifora-Prosopis Pallida Complex

The evolution of seeds has contributed to one of the most astonishing explosions of biodiversity in history. Indeed, most plants employ seeds as reproductively crucial structures. Everything about seeds involves timing. Seeds result from fertilization occurring when conditions are favorable, i.e., after sufficient resources have been devoted to reproductive tissues. Furthermore, seeds help ensure that there are the necessary stored materials for the early growth and development of the next generation of plants. And finally, seeds allow the next generation to wait in a form of suspended animation until conditions for the next generation are once again favorable. This book about seeds focuses upon their two most important functions-dormancy and germination. The topics covered include the types of dormancy, theories of the relationship between dormancy and germination, the timing of germination, the various factors that control germination, and the general aspects of germination in different sorts of habitats. Ecologists, plant scientists, agriculturists, foresters-indeed, anyone interested in plants and their life cycles will want to add this title to his or her library.

What determines the number and size of the seeds produced by a plant? How often should it reproduce them? How often should a plant produce them? Why and how are seeds dispersed, and what are the implications for the diversity and composition of vegetation? These are just some of the questions tackled in this wide-ranging review of the role of seeds in the ecology of plants. The authors bring together information on the ecological aspects of seed biology, starting with a consideration of reproductive strategies in seed plants and progressing through the life cycle, covering seed maturation, dispersal, storage in the soil, dormancy, germination, seedling establishment, and regeneration in the field. The text encompasses a wide range of concepts of general relevance to plant ecology, reflecting the central role that the study of seed ecology has played in elucidating many fundamental aspects of plant community function.

The latest findings in seed physiology—discussed as they relate to agricultural problems! Presenting the latest findings in the area of seed physiology as well as the practical applications of that knowledge in the field, the Handbook of Seed Physiology: Applications to Agriculture provides a comprehensive view of seed biology and its role in crop performance. Key topics include seed germination, crop emergence, crop establishment, dormancy, preharvest sprouting, plant hormones, abscisic and giberellic acids, weeds, grain quality, oil crops, and malting quality. Abundant case studies provide information of value to researchers, students, and professionals in the fields of seed science, field crop research, crop science, agronomy, and seed technology. The Handbook of Seed Physiology discusses vital topics which serve as the basis for the development of techniques and processes to improve seed performance and crop yield. In this text, you will explore: the effect of the soil physical environment on seed germination the roles of physiology, genetics, and environment in the inception, maintenance, and termination of dormancy the relationship between the termination of dormancy and the synthesis and signaling of gibberellins and abscisic acid mechanisms of orthodox seed deterioration and approaches for repair of seed damage characteristics, behavior, and mechanisms of desiccation tolerance in recalcitrant seeds the role of seed moisture in free radical assaults on seeds and the protective function of raffinose oligosaccharides the production of free radicals and their effect on lipids and lipid peroxidation components of grain quality in oil crops and factors influencing them structural components and genotypic and environmental factors affecting barley malting quality In addition to the latest scientific information in the area of seed physiology, this text provides insights into practical applications of that knowledge through the description of: screening protocols for germination tolerance to temperature and water stress methods for improving seed performance in the field techniques for controlling preharvest sprouting of cereals breeding and production strategies for improving grain quality population-based threshold models in the prediction of germination and emergence patterns modeling changes in dormancy to predict weed emergence Extensive reference sections accompanying each chapter include both foundation texts and current research. Principles and concepts discussed in the text are elaborated upon through equations, figures, and tables covering such topics as water and soil thermal regimes; seed water potential; temperature and water effects on germination; free radical attack; and molecular structures. Exploring concepts, techniques, and processes related to seed germination and crop establishment, this comprehensive, one-of-a-kind reference is an indispensable tool for seed scientists and agricultural professionals. Add it to your library today and put seed physiology research to work in establishing high-quality “next crops”!

Seed Dormancy

Techniques in Breaking Dormancy of Bahiagrass Seed

The South African Research Experience

The Ecology of Seeds

Influence of Seed Weight and Dormancy Breaking Methods on Germination Potential of Oil Palm Seed

Boon Or Bane - Revisiting the Role of ROS

Seed dormancy and germination are critical processes for the development of plants. Seed dormancy allows seeds to overcome harsh periods of seedling establishment, and is also important for plant agriculture and crop yield. Several processes are involved in the induction of dormancy and in the shift from the dormant to the germinating state, and hormones and regulatory genetic networks are among the critical factors driving these complex processes. Germination can be prevented by different factors leading to seed dormancy, which is highly dependent on environmental cues. During and after germination, early seedling growth is sustained by catabolism of stored reserves (proteins, lipids, or starch) accumulated during seed maturation, supporting cell morphogenesis, chloroplast development, and root growth until photo-auxotrophic growth can be resumed.

The importance of rice for our country is manifold as it is an agricultural commodity that adds 20% FEC to the national foreign exchange reserves. Seed is a living tissue carries a genetic potential.Failing of seeds to germinate under environmental conditions optimal for germination is called dormancy. True dormancy caused by the conditions within the seed that prevent germination. Thus dormancy is a state of seed, not of the environment, that reduces seed germination and breaking dormancy, could be one of the most important factor for early germination. Whereas the wild species of rice offer an important source of variability for improvement of cultivated rice. Keeping in view of its importance the present work has been attempted to break dormancy of both the wild species and cultivated rice with different treatments. The outcome of breaking dormancy was the early germination, to increase survival percentage, shorten the nursery period and reduced maturity days.This book describe all the possible dormancy breaking methods of wild species and cultivated varities of rice. This may be helpful & used as protocol in future research studies by researchers

The new edition of Seeds contains new information on many topics discussed in the first edition, such as fruit/seed heteromorphism, breaking of physical dormancy and effects of inbreeding depression on germination. New topics have been added to each chapter, including dichotomous keys to types of seeds and kinds of dormancy; a hierarchical dormancy classification system; role of seed banks in restoration of plant communities; and seed germination in relation to parental effects, pollen competition, local adaption, climate change and karrikinolide in smoke from burning plants. The database for the world biogeography of seed dormancy has been expanded from 3,580 to about 13,600 species. New insights are presented on seed dormancy and germination ecology of species with specialized life cycles or habitat requirements such as orchids, parasitic, aquatics and halophytes. Information from various fields of science has been combined with seed dormancy data to increase our understanding of the evolutionary/phylogenetic origins and relationships of the various kinds of seed dormancy (and nondormancy) and the conditions under which each may have evolved. This comprehensive synthesis of information on the ecology, biogeography and evolution of seeds provides a thorough overview of whole-seed biology that will facilitate and help focus research efforts. Most wide-ranging and thorough account of whole-seed dormancy available Contains information on dormancy and germination of more than 14,000 species from all the continents – even the two angiosperm species native to the Antarctica continent Includes a taxonomic index so researchers can quickly find information on their study organism(s) and Provides a dichotomous key for the kinds of seed dormancy Topics range from fossil evidence of seed dormancy to molecular biology of seed dormancy Much attention is given to the evolution of kinds of seed dormancy Includes chapters on the basics of how to do seed dormancy studies; on special groups of plants, for example orchids, parasites, aquatics, halophytes; and one chapter devoted to soil seed banks Contains a revised, up-dated classification scheme of seed dormancy, including a formula for each kind of dormancy Detailed attention is given to physiological dormancy, the most common kind of dormancy on earth

Revisiting Temperature on Germination and Subsequent Seedling Growth of Rice

A Monograph

The Physiology and Biochemistry of Seed Dormancy and Germination

Handbook of Seed Physiology

Seed Dormancy and Germination

Annual Plant Reviews, Seed Development, Dormancy and Germination

Understanding seed-related processes is of major social, environmental, and economic concern. The viability and vigor of seeds are the very basis for sustainable agriculture and forestry, and comprehending the molecular and cellular events underlying these processes will become increasingly important to many economical sectors and for species that provide the world's food supply. Seed Dormancy: Methods and Protocols covers analytical methods and approaches which have already lead to significant advances in the understanding of seed dormancy and germination. Chapters cover explanations of processes leading to the induction, maintenance, and termination of seed dormancy, the classification of different dormancy types, as well as an overview of protocols used for dormancy-termination of seeds of conifer species. This volume emphasizes methods essential for abscisic acid (ABA) analyses, including methods that have been important for receptor identification, analyses of ABA-catabolizing enzymes (the 8'-hydroxylases), and identification of novel signal transduction components, interacting partners, and/or response factors. The volume closes by addressing the development of new technologies, including spectroscopic methods (some of which allow for non-destructive sampling) as well as highly effective tissue-printing methods for seed dormancy research. Written in the successful Methods in Molecular BiologyTM series format, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible protocols, and notes on troubleshooting and avoiding known pitfalls. Authoritative and easily accessible, Seed Dormancy: Methods and Protocols features detailed methods that will prove invaluable for both applied and fundamental seed research.

Seed dormancy is a physiological phenomenon in plants, which is caused by external or internal factors, and prevent of seeds germination, even in optimal conditions. Seed dormancy may be caused due to hard seed coat, immature embryo, rudimentary embryo and inhibitors materials. Seed dormancy is broken with soil melting and freezing, microorganism's activity, forest fires, soil activity, and being eaten by animals, in normal conditions.This book explains the causes of seed dormancy, morphological, physiological and metabolic changes in seeds during and after dormancy breaking and the new methods for breaking seed dormancy.

Seed development and germination; Seed dormancy and germination; Seed vigor, stress and seed germination.

Ecology, Biogeography, and, Evolution of Dormancy and Germination

The Reference Manual of Woody Plant Propagation

Methods for Enhancing Seed Germination of Eastern Gamagrass

Volume 2: Viability, Dormancy, and Environmental Control

Plant Physiology and Function

This updated and much revised third edition of Seeds: Physiology of Development, Germination and Dormancy provides a thorough overview of seed biology and incorporates much of the progress that has been made during the past fifteen years. With an emphasis on placing information in the context of the seed, this new edition includes recent advances in the areas of molecular biology of development and germination, as well as fresh insights into dormancy, ecophysiology, desiccation tolerance, and longevity. Authored by preeminent authorities in the field, this book is an invaluable resource for researchers, teachers, and students interested in the diverse aspects of seed biology.

Seed development and germination; Phenotypic maternal effect of photoperiod on seed germination; Seed dormancy and germination; Seed vigor, stress and seed germination.

The main objective of this study was to determine the effect of different seed dormancy breaking methods and best exposure time regime of leucaena leucocephala seeds for mass multiplication. Tree seeds of leucaena leucocephala were sourced from Kenya Forestry Seed Centre stored and subjected to different pre-treatment methods ranging from soaking in sulphic acid at different concentration and time, soaking in hot water at different temperature and time, soaking in cold time and service scarification. Nipping and scarification treatment gave the best germination percentage of 94% and 92% in that order but have disadvantages of taking time in pre-treatment as one seed is scarified or nipped at a time. Hot water followed in third category with 82% at 1000C for 3 hours, 80% at 800C for 6hours, 80% at 600C for 24hours followed in that order, while sulphic acid treatment in fourth category gave 60% at 100% concentration for 3 hours, 50% at 75% concentration for 6hours, 50% at 50% concentration in that order of time. Cold water treatment gave the least germination across all time factor.. The results obtained will be applied in mass germination for mass seedlings production with inform germination at shorter period for increased fodder production.

Seed Development and Germination

Effect Of Diffent Methods Of Preatreatment For Dormancy Breaking For Higher Germination Of Leucaena Leucacephala Seeds

Seeds

Glossary of Seed Germination Terms for Tree Seed Workers

Evaluation of Rubus Seed Characteristics

From Seed to Tissue Culture : a Practical Working Guide to the Propagation of Over 1100 Species, Varieties and Cultivars

In response to enormous recent advances, particularly in molecular biology, the authors have revised their warmly received work. This new edition includes updates on seed development, gene expression, dormancy, and other subjects. It will serve as the field's standard textbook and reference source for many years to come.

Compiled by two distinguished professors of horticulture, The Reference Manual of Woody Plant Propagation is a must for professionals and students of horticulture. Over 1,100 species and their propagation requirements by seeds, cuttings, grafting and budding, and tissue culture are discussed in exhaustive detail. Essentially a recipe book for making more trees and shrubs, this reference is a high-level how-to.

Eastern gamagrass (Tripsacum dactyloides, L.) is a perennial grass species that is highly productive, has sufficient forage quality, and can be used to reduce soil erosion from croplands, but is grown on a limited land area in the U.S. Problems with stand establishment have been a major restraint to its adoption. These establishment problems in eastern gamagrass result, at least partially, from a very strong seed dormancy. The seed dormancy mechanisms of this species are not yet fully understood. A better understanding of the inhibitors to gamagrass seed germination and development of methods for breaking the seed dormancy could lead to management strategies that result in more widespread use of this promising warm-season grass. This thesis reports methods tested for breaking seed dormancy in eastern gamagrass and new insight into the dormancy mechanisms in this species. In one study, eastern gamagrass seed germination after treatment with a combination of two known germination promoters - moist, pre-chilling and gibberellic acid (GA) - was compared to germination after moist, pre-chilling alone and no pre-chilling. GA3 provided an increase in rate of germination but not overall germination and was able to reduce dormant seed in these lots from 73% to 3%. In a second study, solid matrix priming methods for eastern gamagrass seed were developed for three solid materials. Water uptake into eastern gamagrass seeds was determined at various water potentials in each material. Solid matrix priming systems were then designed to hydrate eastern gamagrass seed to levels that would stimulate the early phases of germination while restricting advancement into later stages of germination. Germination of eastern gamagrass seed was observed after 7 d of conditioning in each of the three solid materials hydrated at either high or low water potentials with water, buffered GA3 solution, unbuffered GA3 solution, or buffer solution alone to determine if any of these systems could break dormancy. GA3 was able to significantly increase the germination of eastern gamagrass compared to water treated seed, but only to levels of 20% of all live seed.

The Germination of Seeds

Ecology, Biogeography, And, Evolution of Dormancy and Germination

The Woody Plant Seed Manual

Physiology and Biochemistry of Seeds in Relation to Germination

Dormancy Breaking and Germination of Rice Seed

Causes and Methods of Breaking it

This text is intended for plant physiologists, molecular biologists, biochemists, biotechnologists, geneticists, horticulturalists, agromnomists and botanists, and upper-level undergraduate and graduate students in these disciplines. It integrates advances in the diverse and rapidly-expanding field of seed science, from ecological and demographic aspects of seed production, dispersal and germination, to the molecular biology of seed development. The book offers a broad, multidisciplinary approach that covers both theoretical and applied knowledge.

The processes and mechanisms that control the growth of woody plants are of crucial importance for both economic and biological reasons. The comprehensive coverage of Growth Control in Woody Plants includes discussion of the growth controlling factors in both reproductive structures (flowers, fruit, seeds, pollen, etc.) and vegetative organs (stems, branches, leaves, and roots). Other major topics covered include seed germination, seedling growth, physiological and environmental regulation of growth, cultural practices, and biotechnology. This comprehensive treatment of the many factors that control the growth of woody plants can serve both as a valuable text and as a frequently used reference. * Includes comprehensive representation of a broad subject * Provides thorough bibliographic coverage * Well illustrated * Serves as a vital companion to Physiology of Woody Plants, Second Edition

The germination of seeds is a magical event, in which a pinch of dust-like material may give rise to all the power and the beauty of the growing plant. The mechanisms of seed dormancy, of the breaking of seed dormancy and of germination itself continue to remain shrouded in mystery, despite the best efforts of plant scientists. Perhaps we are getting there, but very slowly. This book considers germination and dormancy from the point of view of plant physiology. Plant physiologists attempt to understand the relation ship between plant form and function and to explain, in physical and chemical terms, plant growth and development. The place of germination and dormancy in plant ecophysiology is taken into account with attempts to understand the seed in its 'environment, whether the environment be natural, semi-natural or wholly artificial. In due course plant scientists hope to develop a precise understanding of germination and dormancy in cellular and molecular terms, and therefore there is some biochemistry in this book. Biochemists who wish to learn something about seeds should find this book useful.

Effect of Gibberellic Acid and Chilling on Nucleic Acids During Germination of Dormant Peach Seed

Seed Coat Morphology, Anatomy, Germination Requirements and Dormancy Breaking

Standardization of Pre-germination Treatment for Breaking Seed Dormancy in Khejri (Prosopis Cineraria (L.) Druce [With CD Copy]

Seed Dormancy Breaking in Ambrosia Artemisii-folia

Reactive Oxygen Species in Plants

The Physiology and Biochemistry of Seed Development, Dormancy, and Germination

The formation, dispersal and germination of seeds are crucial stages in the life cycles of gymnosperm and angiosperm plants. The unique properties of seeds, particularly their tolerance to desiccation, their mobility, and their ability to schedule their germination to coincide with times when environmental conditions are favorable to their survival as seedlings, have no doubt contributed significantly to the success of seed-bearing plants. Humans are also dependent upon seeds, which constitute the majority of the world's staple foods (e.g., cereals and legumes). Seeds are an excellent system for studying fundamental developmental processes in plant biology, as they develop from a single fertilized zygote into an embryo and endosperm, in association with the surrounding maternal tissues. As genetic and molecular approaches have become increasingly powerful tools for biological research, seeds have become an attractive system in which to study a wide array of metabolic processes and regulatory systems. Seed Development, Dormancy and Germination provides a comprehensive overview of seed biology from the point of view of the developmental and regulatory processes that are involved in the transition from a developing seed through dormancy and into germination and seedling growth. It examines the complexity of the environmental, physiological, molecular and genetic interactions that occur through the life cycle of seeds, along with the concepts and approaches used to analyze seed dormancy and germination behavior. It also identifies the current challenges and remaining questions for future research. The book is directed at plant developmental biologists, geneticists, plant breeders, seed biologists and graduate students.

The Germination of Seeds, Third Edition discusses topics concerning seed germination. The book is comprised of seven chapters that tackle subjects relating to the field of germination. Chapter 1 discusses the structure of seeds and seedlings, while Chapter 2 covers the chemical composition of seeds. Chapter 3 tackles the factors affecting germination, and Chapter 4 deals with dormancy, germination inhibition, and stimulation. Chapter 5 talks about the metabolism of germinating seeds, and Chapter 6 discusses the effect of germination inhibitors and stimulators on metabolism and their possible regulatory role. Chapter 7 covers the ecology of germination. The book will be of great interest to botanists, who are particularly concerned with plant physiology.

Seed Dormancy of Pitcher's Thistle, a Threatened Species of Lake Huron Sand Dunes

Its Use in Seed Germination

Applications to Agriculture

Ecology of Plant-Derived Smoke

Methods and Protocols