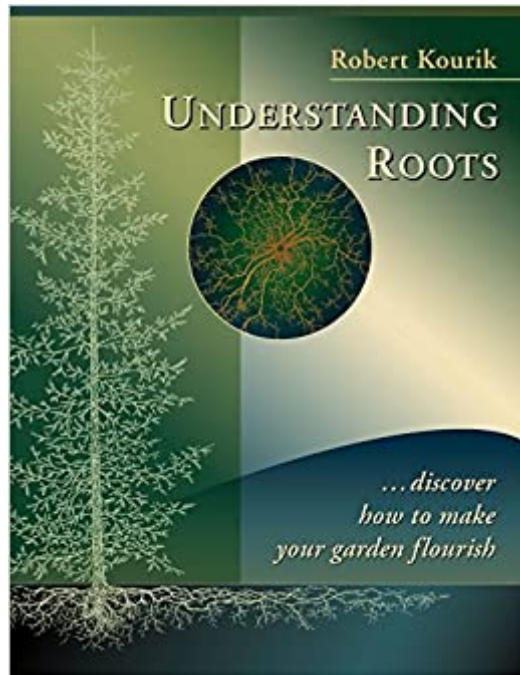




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# Understanding Roots: Discover How To Make Your Garden Flourish



## Synopsis

Award-Winner in the "Home & Garden" category of the 2015 USA Best Book Awards

Understanding Roots uncovers one of the greatest mysteries underground – the secret lives and magical workings of the roots that move and grow invisibly beneath our feet. Roots, it seems, do more than just keep a plant from falling over: they gather water and nutrients, exude wondrous elixirs to create good soil, make friends with microbes and fungi, communicate with other roots, and adapt themselves to all manner of soils, winds, and climates, nourishing and sustaining our gardens, lawns, and woodlands. Understanding Roots contains over 115 enchanting and revealing root drawings that most people have never seen, from prairies, grasslands, and deserts, as well as drawings based on excavations of vegetable, fruit, nut, and ornamental tree roots. Every root system presented in this book was drawn by people literally working in the trenches, sketching the roots where they grew. The text provides a very detailed review of all aspects of transplanting; describes how roots work their magic to improve soil nutrients; investigates the hidden life of soil microbes and their mysterious relationship to roots; explores the question of whether deep roots really gather more unique nutrients than shallow roots; shares the latest research about the mysteries of mycorrhizal (good fungal) association; shows you exactly where to put your fertilizer, compost, water, and mulch to help plants flourish; tells you why gray water increases crop yields more than fresh water; and, most importantly, reveals the science behind all the above (with citations for each scientific paper). This book contains at least eighty percent more new information, more results of the latest in-depth and up-to-date explorations, and even more helpful guidelines on roots than the author's previous book (Roots Demystified: Change Your Garden Habits to Help Roots Thrive). This is not a revised edition – it's a whole new stand-alone book.

## Book Information

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Average Customer Review: 4.9 out of 5 stars 10 customer reviews

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## Customer Reviews

Midwest Book Review-Synopsis: "Understanding Roots: Discover How to Make Your Garden Flourish" uncovers one of the greatest mysteries underground -- the secret lives and magical workings of the roots that move and grow invisibly beneath our feet. Roots, it seems, do more than just keep a plant from falling over: they gather water and nutrients, exude wondrous elixirs to create good soil, make friends with microbes and fungi, communicate with other roots, and adapt themselves to all manner of soils, winds, and climates, nourishing and sustaining our gardens, lawns, and woodlands."Understanding Roots" contains over 115 enchanting and revealing root drawings that most people have never seen, from prairies, grasslands, and deserts, as well as drawings based on excavations of vegetable, fruit, nut, and ornamental tree roots. Every root system presented in this book was drawn by people literally working in the trenches, sketching the roots where they grew. The text provides a very detailed review of all aspects of transplanting; describes how roots work their magic to improve soil nutrients; investigates the hidden life of soil microbes and their mysterious relationship to roots; explores the question of whether deep roots really gather more unique nutrients than shallow roots; shares the latest research about the mysteries of mycorrhizal (good fungal) association; shows you exactly where to put your fertilizer, compost, water, and mulch to help plants flourish; tells you why gray water increases crop yields more than fresh water; and, most importantly, reveals the science behind all the above (with citations for each scientific paper). Critique: Exceptionally well informed and informative, "Understanding Roots: Discover How to Make Your Garden Flourish" is a compendium of thoroughly accessible, nicely illustrated, practical and directly applicable information that will prove invaluable for amateur and professional gardeners alike, and should be a part of every community and academic library Gardening reference collections and supplemental studies reading lists. "I realize now that I've been waiting my whole life to read this book. Robert Kourik makes a major contribution to the science of horticulture and to plant lovers everywhere with Understanding Roots. This book gives us an understanding of the whole plant, and that can only make us better gardeners."--Jeff Cox, former managing editor of Organic Gardening magazine and the author of twenty books on gardening, landscaping, food, and wine"Wow - what a

MINDBLOWING book! I love what you have done and you have made me a better gardener! This is some seriously juicy stuff you have here! With Understanding Roots you have some seriously powerful information in your hands right now!"--Ivette Soler, author of The Edible Front Yard, free-lance author and garden designer

"Understanding Roots changed how I think about plants. Much more is going on below ground than we ever imagined, as this book shows. Robert Kourik brings us up to date with current research and shares his decades of experience in this fascinating journey into the dynamic world of the rhizosphere. Gardeners, farmers, and researchers all will profit from this readable, detailed guide to how plants make their living in the soil."--Toby Hemenway, author of Gaia Garden: A Guide to Home-Scale Permaculture and The Permaculture City

"As is typical of Robert Kourik's books, he distills complex research to give home gardeners both a great read and the knowledge needed to successfully pick out, plant and grow trees and shrubs in their gardens. Kourik, using diagrams of the actual root systems, takes us on a fascinating underground tour. He explains how and why understanding root growth and soil type greatly influences where and how to apply, water, mulch and fertilizer."--Sam Benowitz, Owner, Raintree Nursery

"Roots are the controlling part of the plant, and we get the best results when we know more about them! Robert Kourik in Understanding Roots makes this possible with almost double the information as in his previous book on roots. It has been noted that when we improve root health a tiny amount just two percent to four percent it is possible to increase yields two hundred percent to four hundred percent. Understanding Roots contains a wealth of information. It is a rare treasure!"--John Jeavons, author and developer of Sustainable Biologically Intensive Food-Growing, Willits, CA

"Fascinating, beautifully illustrated and fun to read!"--Larry Korn, editor of Masanobu Fukuoka's The One-Straw Revolution and Sowing Seeds in the Desert

"A must have book in your library! Robert has always been able to make scientific fact and jargon readable, if not entertaining. Understanding Roots is no exception. Having found many rare drawings of excavated roots he presents many guidelines about how to place compost, mulch, fertilizer and water to make your garden thrive."--Rosalind Creasy, author of Edible Landscaping and 17 other gardening and cooking books

"Sometimes in gardening, it's what you don't see that counts. So, unless you have x-ray vision, let the very knowledgeable Robert Kourik help you visualize and improve the root of the situation."--Mike McGrath, host of Public Radio's You Bet Your Garden and garden editor for WTOP in Washington, DC

"Over the decades, author/researcher/contradictarian Robert Kourik has turned gardeners and farmers inside out with

his scientific yet easily accessible books, including *Understanding Roots: Discover How to Make Your Garden Flourish*. You will have several “Whoa, I didn’t realize that!” moments. This is an important book that will change the way you look at your plants, your soil, your fertilizers, and, especially, your watering habits. —Fred Hoffman, producer/host, *Get Growing with Farmer Fred* radio shows, Sacramento, CA “Kourik does it again as he shares his investigations into what makes plants tick (hint, it’s subterranean).” —Ken Druse, radio host and author and photographer of twenty gardening books

Robert Kourik began his career in organic landscape maintenance in 1974. Over the next four decades, he honed his horticulture-related skills by working with clients throughout the US, and has since written fourteen books on the creation of sustainable homes and gardens. His book *Designing and Maintaining Your Edible Landscape Naturally*, originally written in 1986, has become a classic in its field, defining the genera of gardening now known as “edible landscaping” and focusing on organic, natural, sustainable, integrated systems. His extensive thirty-five-year-old ornamental/herbal drought- and deer-resistant garden and orchard have never been watered.

Clear and interesting work on roots, especially useful diagrams of root systems. Recommend

(I received a free copy of this book in exchange for an honest review.) *Understanding Roots* is a great book for the thinking gardener. What do I mean by that? Well, if you want your information spoonfed, I’m afraid you’ll be disappointed. But if you’re willing to read critically, you’ll find some gems in Kourik’s newest book. *Understanding Roots* summarizes information from a wide variety of scientific sources, and the copious illustrations make the scientists’ findings easy to read. But despite being written for a lay audience, the book itself reads a bit like a scientific paper in which the author is leery of making any assertions that can’t be entirely backed up by the facts. Instead, the reader is left to draw his own conclusions on topics like --- do dynamic accumulators really suck nutrients up from deep in the subsoil? how do different types of soil determine rooting habits of plants? etc. Many of the illustrations in *Understanding Roots* are from the same Dr. Weaver who drew the root maps in Kourik’s earlier books. But this new text includes companion root drawings from other sources, notably some German maps. The addition is very handy since I think Dr. Weaver’s prairie soils resulted in much deeper rooting than many of us are likely to see in our own garden, so this most recent book gives a more well-rounded look at roots. In the end, I highly

recommend *Understanding Roots* for the intermediate gardener. The topic is integral to understanding how to keep your soil and plants happy. But it's a good book for a winter night when you can curl up in front of the wood stove and ponder rather than expecting to find information you can instantly utilize in your own garden.

If you want a very informative book then this is not for you. There are a few good tips, but this book is pretty much a compendium of drawn root structures. If you like to look at the curves and twists of trunks and branches then you might find the numerous sketches in this book attractive. I am very impressed with the images and the work that went into excavating the roots. See how the roots grow in different plants has given me many ideas on how to alter my ever expanding orchard.

(I received this book in exchange for an honest review) Robert Kourik has re-visited roots with his trademark humor, detail and curiosity. Delving into historical drawings, re-doing the chart on dynamic accumulators and pushing beyond the already extensive information contained within his previous *Roots Demystified*, Kourik has compiled a resource that will be definitive for many years to come. Unconfined, he roams through soil facts, planting techniques, scientific studies and folk wisdom to enlighten every gardener. Always ready to explore both sides of an argument, Kourik pulls our heads out of the clouds and reveals what is happening beneath our feet. Reviewed by Organic Gardening Techniques teacher, NYBG

(Review via Epic Book Quest) Organic landscaper and author Robert Kourik sheds light on the fascinating world of plant roots in this wonderful resource for gardeners. At over 200 pages, this large book is packed with a wealth of information on how roots grow, collect nutrients, and interact with their environment, and how that knowledge can be used to better care for plants -be they ornamental trees and shrubs, or fruit and vegetable plants in the garden. The book is filled with detailed root drawings and studies of roots from grassland, prairie, and desert plants, fruit and nut trees, and vegetables, pointing out their distinct features and unique needs. Kourik shows readers how this information should affect our approach to mulching, watering, and feeding plants for the best possible outcome. Additional topics discussed include crop rotation, tilling and its effect on beneficial root biota, the function of beneficial root biota, the importance of mycorrhizae and whether or not you should add them to your soil (the answer may surprise you!), and much more. *Understanding Roots* is a must-have for anyone who is truly serious about organic gardening. Though I don't have much experience as a gardener

(yet!), this book has left me with a much better understanding of the role both soil and root health play in the bigger picture of growing stronger, more resilient plants- as well as a newfound appreciation for the complexity of root systems and soil microbes! If you want to save yourself a lot of time, effort, as well as avoid making a lot of costly mistakes, the knowledge compiled in this book is invaluable. And even though it's very detailed and scientific, you definitely don't have to be a scientist to understand and glean from this book. Perfect for beginners and well-seasoned gardeners alike. A fantastic read, highly recommended! I received a free copy of this book in exchange for an honest review.

Fantastic information and explanations. I am an avid gardener for decades. This book is captivating. I have always held soil in the highest regard. Now, I am super amazed by roots. So good, I gave it to a friend as a gift.

All gardeners, arborists, plant and tree owners should read this book. The descriptions and photos are great for understanding how various types of trees and plants grow their roots - and they're different! I also appreciate Kourik's explanation of how to build and care for healthy soil.

Great book! It includes some really interesting information from older studies done on roots from Europe and America.

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