

Kozłowski, T.T., Pallardy, S.G.: **Growth Control in Woody Plants**. (Physiological Ecology Series, ed. Mooney, H.A.). - Academic Press, San Diego - London - Boston - New York - Sydney - Tokyo - Toronto 1997. 641 pp. ISBN 0-12-424210-3.

The book expands and updates major portions of two books previously published: "Physiology of Woody Plants" (Kramer, P.J., Kozłowski, T.T., Acad. Press 1979 and recently 1997), and "The Physiological Ecology of Woody Plants" (Kozłowski, T.T., Kramer, P.J., Pallardy, S.G., Acad. Press 1991). Since the publishing of these books, intensive research add more information on the regulation of plant growth by physiological processes and environmental factors, and therefore it became desirable to update available information.

The book is divided into 9 chapters. A summary and list of general references have been added to the end of each chapter. Introductory chapter emphasises the complexity of regulation of growth (genetic control, environmental regulation). The second chapter addresses environmental and physiological regulation of the germination of seeds and growth of seedlings, and production of plantlets in nurseries. The third and fourth chapters describe physiological regulation of vegetative and reproductive growth with emphasis on carbohydrate, mineral, water, and hormone relations in the regulation of growth. The fifth chapter analyses the effect of abiotic environmental factors (light, water, temperature, soil, fertility, salinity, pollution, wind and fire) and biotic factors (diseases, insects) on vegetative growth. The sixth chapter describes the effects of irradiance, day length, temperature, water, soil fertility, salinity and pollution on such aspects of reproductive growth as floral induction, bud dormancy, flowering, pollen formation, growth of pollen tubes, fertilisation, and development of fruits, cones, and seeds. The seventh chapter analyses on vegetative growth the effect of site preparation, drainage of soil, herbicides, irrigation, correction of mineral deficiencies, thinning of forest stands, pruning, use of growth regulators and integrated pest management. The eight chapter describes the effects of cultural management practices on reproductive growth (arrangement and spacing of trees, grafting, use of fertilisers, irrigation, thinning of forest stands, pruning, scoring and girdling of stems and branches, use of growth regulators, storage of harvested fruits, and prevention of freezing and chilling injury). The last, ninth chapter deals with the scope, techniques, accomplishments, and future potential of different fields of biotechnology (transformation, molecular analysis of genetic structure and variation, macro-propagation and propagation *in vitro*).

A list of more than 2500 references was added to the appendix and serves for the first orientation of reader in more detailed study. A vocabulary of scientific and English common names of main woody plants could be found also very useful, however, rules of compounding and hyphenating of Latin scientific names were not used strictly and moreover, these names contain a couple of typographic errors, and therefore the list cannot be taken as a norm.

The book can serve as a textbook for undergraduate and postgraduate student, as well as a reference for woody plants growers and wide range of scientists and professionals including agroforesters, agronomists, biotechnologists, botanists, ecologists, foresters, horticulturists, plant breeders, geneticists, pathologists, physiologists, and soil scientists.

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