

Achieving sustainable greenhouse cultivation

Edited by Professor Leo Marcelis and Dr Ep Heuvelink
Wageningen University, The Netherlands



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Achieving sustainable greenhouse cultivation

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Endorsement:

"This much anticipated publication, '*Achieving sustainable greenhouse cultivation*', will be highly valued by the international protected cropping industry. The subjects explored reflect the modern face of sustainable horticultural production and the book is a key example of the necessary collaboration between the knowledge makers and the knowledge users. It will prove to be a highly beneficial reference for industry and a great example of the publisher's aim of 'delivering knowledge for the global scientific community'."

Dr Graeme Smith (CPAg), Graeme Smith Consulting, Australia; Chairman ISHS Working Group - Hydroponics & Aquaponics; Vice Chair ISHS Division - Protected Cultivation and Soilless Culture; Life Member - Protected Cropping Australia; Life Member - Hydroponic Farmers Federation

Description:

This collection provides a comprehensive review of key advances in greenhouse and other forms of protected and controlled environment cultivation.

Chapters discuss developments in types of production systems: greenhouses, net houses, aquaponic and vertical farming systems. A particular focus is on ways of controlling the aerial environment, including lighting and atmosphere control, and on optimising root development, including growing media, irrigation and nutrient management. Chapters also summarise advances in systems monitoring and management, including the use of sensors, decision support systems and robotics to optimise efficiency.

Key features:

- Reviews advantages and disadvantages of different protected cultivation systems, from greenhouses and net houses to aquaponic and vertical farming systems.
- Detailed assessment of current research on optimising the two main variables in protected cultivation: the aerial environment and root development.
- Particular focus on systems control to optimise product quality and environmental impact.

Audience:

Horticultural scientists and agricultural engineers researching greenhouse and other forms of protected cultivation; government agencies supporting agricultural innovation.

Editors' details:

Professor Marcelis is Head of the Horticulture and Product Physiology Group at Wageningen University, The Netherlands. The Group is widely regarded as one of the world's leading centres of expertise on greenhouse cultivation. Professor Marcelis is an internationally-recognised authority on the use of light in greenhouse and other protected systems to optimise crop production.

Dr Ep Heuvelink is Associate Professor in the Horticulture and Product Physiology Group at Wageningen University and is well known for his work on crop physiology and modelling. Both have published widely on greenhouse cultivation.

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