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Control of light environment: A key technique for high-yield and high-quality vegetable production in protected farmland

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ABSTRACT

Vegetable crops such as cucumber and tomato are grown widely through the world using not only field but also protected farmland. Sensitive responses of many vegetables have been widely reported to environmental conditions such as light, air temperature, relative humility, and CO2 concentration in the past years. Among these environmental factors, light is considered to be the most important one for vegetable growth and development, especially in protected farmland. Therefore, lots of researches on effects of light environment, including light intensity, light quality, photoperiod, and light direction, on vegetable growth and development have been done in order to optimize the environmental conditions for high-yield and high-quality vegetable production in protected farmland. In this review, recent advances in light environment control for vegetable production in protected farmland have been reviewed and the prospective for the future research has been proposed as well.

KEYWORDS

Light Environment; Protected Farmland; Vegetable

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