

# Integration of Artificial Intelligence and Digital Technologies in Greenhouses

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**Abstract:** *The rapid development of artificial intelligence (AI) and digital technologies over recent years has revolutionized several sectors. From healthcare to finance, AI has proven to be highly effective in enhancing automation and streamlining workflow processes. The agriculture sector too stands to benefit significantly from AI and digital tech, particularly in the area of greenhouse farming. The aim of this article is to explore the current trends and possibilities of integrating AI and digital technologies in modern greenhouse cultivation.*

**Keywords:** Artificial intelligence, Digital technology, Greenhouse, Protected cultivation

## REFERENCES

- [1]. K. Tran. "A primer on AI and its rise in the greenhouse," Structures & Equipment Trends, GREENHOUSE CANADA, Sept. 2021.
- [2]. T. Hein. "Artificial intelligence in the greenhouse". Environmental Control Handling Systems Structures & Equipment, GREENHOUSE CANADA, June 2021.
- [3]. A. Koukounaras. "Advanced Greenhouse Horticulture: New Technologies and Cultivation Practices." Horticulturae. 7(1):1, 2021
- [4]. J. A. Aznar-Sánchez,\* J. F. Velasco-Muñoz, B. López-Felices, and I. M. Román-Sánchez. "An Analysis of Global Research Trends on Greenhouse Technology: Towards a Sustainable Agriculture". Int J Environ Res Public Health. 17(2): 664, 2020.
- [5]. M. J. Gupta and P. Chandra. "Cultivation in Hi-tech Greenhouses for enhanced productivity of natural resources to achieve the objective of precision farming," Precision Farming in Horticulture, Ed. 1, pp. 64-96, Jan. 2003.
- [6]. N. Castilla and J. Hernandez. "Greenhouse technological packages for high-quality crop production," XXVII International Horticultural Congress-IHC2006: International Symposium on Advances in Environmental Control, Automation 761, pp. 285-297, 2006.
- [7]. K. Anil, G.N. Tiwari, K. Subodh and P. Mukesh. "Role of greenhouse technology in agricultural engineering." International Journal of Agricultural Research 5, no. 9, pp. 779-787, 2010.
- [8]. A. Escamilla-García, G. M. Soto-Zarazúa, M. Toledano-Ayala, E. Rivas-Araiza, & A. Gastélum-Barrios. "Applications of artificial neural networks in greenhouse technology and overview for smart agriculture development." Applied Sciences 10, no. 11, 2020.