information and move toward closed-loop management, although automated recommendation remains an important next step. Future systems will also depend on continuous monitoring and adaptive control.Reinforcement-learning-based digital twins are emerging as promising tools for optimization, automation, and resource management in agriculture, particularly where virtual environment representations can support policy learning for dynamic decision tasks.More broadly, digital farming and twin-based systems are expected to enhance productivity and efficiency through real-time synchronization between physical farms and virtual models, creating a practical foundation for precision medicinal plant agriculture. The most credible long-term outlook is therefore human-centered and trustworthy AI rather than fully autonomous black-box prediction.Agricultural AI must integrate multimodal information, remain robust to small disturbances, and explain its outputs to domain experts if it is to be trusted in biologically and economically sensitive systems. For Zhejiang medicinal plants, next-generation computational medicinal botany will be strongest when explainable AI, multi-omics, environmental sensing, and experimental validation are combined into transparent decision-support systems for sustainable cultivation and reliable quality control.

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Conflict of Interest Disclosure

The author affirms that this research was conducted without any commercial or financial relationships that could be construed as a potential conflict of interest.

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