

# RESEARCH ON INTELLIGENT PRODUCTION TECHNOLOGY OF TROPICAL FRUITS

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Tropical fruits occupy an important position in the global agriculture and food industry, with high market demand and obvious economic value. However, as social problems such as the aging of the population and the decline of the agricultural population have become more prominent, this field is facing severe challenges. This article discusses the current status, advantages and future trends of intelligent production of tropical fruits from the perspective of the necessity of intelligent production technology application. It is concluded that: (1) The smart production of tropical fruits is based on the integration of modern agricultural technology and information technology, using innovative tools such as automation, big data analysis, Internet of Things, and artificial intelligence to improve production efficiency and quality control, and reduce production costs. Cost; (2) In the smart production of tropical fruits, the application of automation technologies such as smart irrigation systems, automated picking machines and weather stations can achieve precise resource management, thereby improving water resource utilization efficiency and reducing the use of chemical fertilizers and pesticides; (3) Big data analysis and Internet of Things technology can monitor plant growth and environmental parameters, provide timely warnings of pest and disease outbreaks, and reduce losses. The implementation of the above technologies enables farmers to better cope with climate change, pest and disease threats, and market fluctuations, thereby enhancing their ability to develop sustainably. However, there are still some issues that need to be resolved in this process, such as data privacy and security issues, technology popularization, and farmer training.

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