EDITORIAL

Agricultural Science and Food Processing: The Future is Here

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Agricultural science is the science that studies agricultural theory and practice. It plays an important role in promoting the development of other disciplines and related technologies such as biology, chemistry, medicine, resources and environment, and food. It has become a hot research field where life sciences and other natural sciences intersect. It is becoming an important foundation for the application of high-tech in modern agriculture, forestry, animal husbandry, and fishery, the development of key technologies, and the integration of technology systems. The development law of agricultural disciplines is mainly reflected in the needs of human food, social economy, and environmental ecology [1]. These needs are the driving force for the continuous development of agricultural science. The close combination of theory and practice is the core vitality of the development of agricultural science. The rapid transformation of basic agricultural scientific achievements directly supports the development of agriculture.The current trend of agricultural development is the transformation from traditional agriculture to modern agriculture. Its fundamental purpose is to improve land productivity, resource output rate, labor productivity, and product commodity rate, and to achieve the unity of social, economic, and ecological benefits of agriculture. At the same time, sustainable agriculture will be highly valued. Through reasonable adjustment and layout of agricultural production structure, reasonable arrangement of agricultural, forestry, animal husbandry, and fishery production, and reasonable configuration of varieties and cultivation technologies. In recent years, the application of high-tech in agriculture has accelerated and expanded with the rapid development of technology itself and the support of economic development [2]. It mainly focuses on the use of modern biotechnology to cultivate new varieties and new germplasm, improve animal and plant resistance, improve agricultural product yield and quality, and combine agricultural robot development, electronic information technology, remote sensing technology, laser technology, aerospace technology, nuclear technology, synchrotron radiation technology and conventional agricultural technology. Its characteristics are that the technical content and added value of science and technology have been significantly improved. In particular, the comprehensive development of biotechnology systems will penetrate into various related conventional technology fields, making it more likely for people to develop and utilize natural resources and biological resources to a greater extent, greatly broaden the scope of bioenergy utilization, and significantly increase the output rate of agricultural production to meet the requirements of human development for food quantity and quality. Other high-tech technologies such as information will have a huge impact on improving the production environment, increasing labor productivity, and improving food quality [3].

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Food processing takes edible raw materials such as animals, plants and microorganisms and their products as research objects, and takes the theoretical systems of physics, engineering, agriculture and medicine as the main scientific and knowledge basis to study the physical, chemical, biological and other characteristics of food and its raw materials, as well as their nutrition, quality, safety and engineering technology. Chemistry, physics, biology in physics and public health and preventive medicine in medicine are important scientific foundations for food. The analytical detection theories and methods of chemistry and physics are used to study the characteristics of food raw materials, the microscopic and macroscopic structures and change laws of food components, the interaction mechanisms between food components, and explore the composition, structure and properties of food raw materials and food. The theories and methods of biology and medicine are used to study the biological changes of food raw materials and foods during processing, manufacturing, storage, packaging, preservation, circulation, etc., revealing the biological mechanisms of food quality and safety changes; studying the composition, structure and biological activity of various nutrients in food raw materials and foods, exploring the digestion, absorption and metabolism of nutrients in the human body, and clarifying the relationship with human health; clarifying various food safety risk factors that endanger human health and formulating corresponding prevention and control measures, providing theoretical support for the application of modern life sciences in the food industry and ensuring food safety and hygiene. The theories and methods of crop science, horticulture, animal husbandry, aquaculture, etc. In agronomy are used to study the physical, chemical and biological characteristics of food and its raw materials, determine their processing adaptability, and guide the production of food raw materials according to consumer and processing needs [4]. Engineering is the core scientific foundation of food processing. Use the engineering concepts and methods of engineering to optimize food processes and design factories, use computer science and technology to build control strategies and monitoring systems for the main processes of food processing, and use electronic and mechanical engineering methods to develop food green processing and resource efficient utilization technologies and equipment to achieve automation and intelligence in food production.Meeting the new product demands of "safety, nutrition, health, convenience, deliciousness, economy, personalization, and diversity" and the new industrial requirements of "intelligence, energy saving, low carbon, environmental protection, greenness, and sustainability" has become the "new normal" of food processing development, which has promoted the continuous deepening of food science research, the continuous penetration and integration with engineering science and humanities and social sciences, the continuous emergence of new discipline growth points and interdisciplinary studies, and the continuous enrichment and development of research methods, gradually forming a research system based on multidisciplinary cross-disciplinary studies and combining theory, technology and engineering research [5].

Our journal Agricultural Science and Food Processing is an international peer-reviewed journal that publishes high-quality, cutting-edge original research, representing complete research and research progress, peer-reviewed research papers, review articles, viewpoints, communications, comments and short notes, reflecting the breadth and interdisciplinary nature of agriculture and food. There is no limit on the maximum length of the paper. "Agricultural Science and Food Processing" mainly publishes papers in the field of agricultural natural sciences in the directions of agricultural science, agricultural engineering, forestry science, planting science, resource environment, animal husbandry science, soil science, agricultural ecology, agricultural meteorology, aquatic science, agricultural economy, agricultural products and food processing, agricultural microorganisms, fermentation engineering, and the development and application of Chinese herbal medicine resources. The journal also encourages submissions of research results with the main content of bioengineering technology, synthetic biology technology, multi-omics technology, artificial intelligence technology, and the application of big data technology in the agricultural field. In addition, papers with chemistry, biochemistry, molecular biology, and animal experiments as the main content, combined with food-related biological/sensory/nutrition/toxicological evaluation, are welcome to submit to our journal.

We hope that the journal Agricultural Science and Food Processing will help you with your research. We also hope that it will become a platform for communication and a treasure trove of resources for researchers in all related fields. We eagerly look forward to the many exciting developments that will emerge in the field of agricultural science and food processing in the coming

years with the joint efforts of our colleagues.

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