

## Inaugural Editorial: Agrobiodiversity

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Life on Earth has evolved over four billion years, resulting in marvellous biodiversity despite at least five massive extinctions. The interactions between environment and organisms have formed a complex ecosystem, a magnificent scroll unfurling throughout history, and recording this spectacular story of the evolution of life. As a critical factor in advancing the plot, humans have established themselves in the ecological pyramid, drawing on various species for nourishment and essential resources. About 10,000 to 15,000 years ago, humans began to cultivate crops and domesticate animals, striking sparks in the Mesopotamian Plains, and thereafter, multiple agrarian centres sprouted up across the Earth, and the enormous biological diversity flourished deriving from such continuous, deliberate activities until today. Just as James Watt's steam engine catalysed machine-based industries, global exploration and exchange of biological materials promoted by novel breeding technologies and modern biotechnologies of the Green Revolution in the mid-20<sup>th</sup> century accelerated the embellishment of biodiversity. A wide array of novel bio-resources, particularly crops, livestock, and microbial varieties, have been domesticated, resulting in greatly increased food yield, quality, extended supply and shelf life. The agriculture of today, the largest industry in the world, meshes with politics, economy, culture and other aspects of human society, cogs engaging with each other and running the giant society machine.

However, the remarkable escalation in agricultural production to meet the demand of quality food and novel biomaterials has become toppled in a domino rally, triggering a chain reaction of climate changes caused by deforestation and industrialization, soil degradation in consequences of mis-irrigation, soil contamination, overuse and abuse of chemicals and fertilizers in farmland and coastal regions and so on. Furthermore, modern agriculture is increasingly overdependent on a small number of species, varieties, and strains, while commercial breeding and its extension systems cause the loss of diversity of indigenous varieties and landraces. All these factors may lead to the complete loss of regional biodiversity, in turn, threatening sustainable food and bioresource supply, environment and ecosystems.

Over the past centuries, research in the fields of agriculture have focused on efficient agricultural production, like selective breeding, genetic modification and gene editing, mechanized farming and breeding, and technology of chemicals and fertilizers. In the last few decades, more attention has been given to biodiversity, represented by a milestone report issued by the Food and Agriculture Organization of the United Nations (FAO) in 2019, *The State of the World's Biodiversity for Food and Agriculture*, which stresses the importance of agrobiodiversity, and the urgent need for improved monitoring of it to achieve a more sustainable and flexible food system. How does biodiversity impact agricultural production? How do we utilize and preserve

biodiversity in the process of agricultural production? Research output on agrobiodiversity has dramatically increased in recent years, calling for a journal in a more professional, specialized, rigorously peer-reviewed way to unite the experts in the fields of agriculture, biology, ecology and other related disciplines.

I'm honoured to introduce our journal, *Agrobiodiversity* (ABD), a new international open-access journal to be published by Maximum Academic Press ([www.maxapress.com](http://www.maxapress.com)), which has been selected into the 2023 *High Starting Point New Journals of Excellence Action Plan for China's STM Journals* issued by the China Association for Science and Technology. The journal will be edited by highly selected professionals, be rigorously peer-reviewed, and be executed with high standards in professional ethics. It aims to become a comprehensive journal and professional publishing platform of academic achievements with significant influence, covering research in broad aspects of agricultural biodiversity. We expect to unite a group of visionary experts, scholars, and researchers, to explore and protect agricultural biodiversity, and utilize the sources and technologies of agricultural biodiversity for the sustainable development of agriculture; we hope to give guidance for potential authors and readers in related fields. The journal will publish original articles, letters and reviews, covering research on the following, but not limited to: (1) mechanisms for the formation and loss of agroecosystem diversity; (2) characterization of diverse agricultural biological resources at the genotype and phenotype levels; (3) discovery, development and utilization of new agricultural resources and species, innovative techniques of cultivation, breeding and biotechnology; (4) research and application of biologically diverse plant protection; (5) research of interaction between agriculture and ecosystem, conservation and restoration of agricultural biodiversity, including soil sphere diversity; (6) agricultural biodiversity and human health; (7) policies on assessment, and management of agriculture and agricultural biodiversity, big data for agriculture and biodiversity. We promise to serve *Agrobiodiversity's* authors by publishing high quality papers, by rigorously reviewing in a timely manner, providing constructive feedback and support for improving papers. We will also regularly provide opinions and debates on emerging topics, arranging webinars, workshops, and conferences related to agricultural biodiversity so readers, the general public and policy makers can be engaged in promoting, conserving, and best utilizing agricultural biodiversity. We encourage researchers to work in groups to submit manuscripts of reviews, methods, or perspectives. To advance research in the agricultural and biodiversity community and ensure a steady influx of highly qualified manuscripts for *Agrobiodiversity*, the editorial board will also offer training opportunities for the *Agrobiodiversity* community, particularly graduate students, and

postdoctoral researchers, on research, publishing basics and essentials, and research ethics.

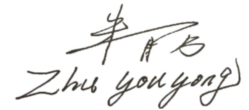
As the Editor-in-Chief, I will make sure that the highest ethical standards in research and publication are upheld, working with our editors, authors, readers, and the publisher. *ABD* will strictly adhere to the standards set forth by the Committee on Publication Ethics (COPE) and will provide training on research and publishing ethics.

As we move into an open-science era, I want to make sure that the *Agrobiodiversity* community embraces sharing and reusing public data, methods and bioresources generated for further advancement of agriculture and biodiversity. *ABD* is published as Gold Open Access, and under the terms of the [Creative Commons Attribution \(CC BY 4.0\) License](#), allowing scientific knowledge published in *ABD* free for teaching, research and public effort for sustainable agricultural biodiversity.

I would like to take this opportunity to extend my sincere gratitude to all enthusiastic individuals who have agreed to serve on the *ABD* Editorial Board, who will ensure the quality and integrity of each manuscript, organize focal issues related to their areas of expertise. Please contact us if you are interested in joining the *ABD* Editorial Board.

I would like to conclude this inaugural editorial by extending an invitation to all of you working in the fields of agriculture and biodiversity, faculty, scientists, postdoctoral researchers, and graduate students, to submit your fascinating discoveries to *ABD*

and to accept invitations to serve as editors and reviewers. We are fully committed to building this new journal into a highly influential, international publication to serve the community in basic agricultural and biodiversity research. With your steadfast support, we believe we can achieve this goal.



## Conflict of interest

The authors declare that they have no conflict of interest.

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