



## Rhizobium–Legume Symbiosis

Guest Editor:

### Dr. Shin Okazaki

Tokyo University of Agriculture  
and Technology, Fuchu, Tokyo  
1838509, Japan

Deadline for manuscript  
submissions:

**closed (20 August 2019)**

### Message from the Guest Editor

Dear Colleagues,

Legumes establish symbiosis with root nodule bacteria (rhizobia) and form nitrogen-fixing nodules in the roots. The nitrogen fixation by rhizobia serves as an important nitrogen source for grain legumes like soybean and pea. Also, by utilizing legume crops for green manure, mixed- and intercropping, soil fertility and the productivity of subsequent crops are improved. The inoculation of rhizobia has been carried out to obtain the benefits of symbiotic nitrogen fixation, however, its effectiveness is often affected by the compatibility between legumes and rhizobia, the competition with indigenous microbiota, and the soil's chemical properties.

This Special Issue will focus on biotic and abiotic factors controlling legume–rhizobium symbiosis. We welcome novel research related to understanding the basic principles of legume–rhizobium symbiosis from molecular- to field-level toward the effective use of symbiotic nitrogen fixation in agriculture.

Dr. Shin Okazaki  
*Guest Editor*





an Open Access Journal by MDPI

## Editor-in-Chief

### Prof. Dr. Leslie A. Weston

Gulbali Centre for Agriculture,  
Water and Environment  
Research, Charles Sturt  
University, Wagga Wagga, NSW  
2678, Australia

## Message from the Editor-in-Chief

*Agronomy* draws together researchers from diverse areas of agricultural research with a common aim of enhancing agricultural productivity globally. The journal provides unlimited free access to all those interested in advancing agricultural science from both the research and general community. Papers are released immediately after acceptance through the internet. *Agronomy* is supported by our authors and their institutes through low article processing charges (APC) for accepted papers. We hope you will support the journal by becoming one of our authors.

## Author Benefits

**Open Access:** free for readers, with article processing charges (APC) paid by authors or their institutions.

**High Visibility:** indexed within Scopus, SCIE (Web of Science), PubAg, AGRIS, and other databases.

**Journal Rank:** JCR - Q1 (Plant Sciences) / CiteScore - Q1 (Agronomy and Crop Science)

## Contact Us

---

*Agronomy* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
www.mdpi.com

mdpi.com/journal/agronomy  
agronomy@mdpi.com  
X@Agronomy\_Mdpi