

Professional & Technical / Non-Divisional Awards

KISHIDA INTERNATIONAL AWARD



The Kishida International Award serves to “recognize outstanding contributions to engineering mechanization—technological related programs of education, research, developmental consultation or technology transfer outside the United States.” Initiated in 1978, the award is endowed by Shin-Norinsha Co., Ltd. of Japan—publisher of *Agricultural Mechanization* in Asia, Africa and Latin America magazine and other publications—in honor of Yoshikuni Kishida, founder of the firm. Kishida, whose signature appears in the upper-right corner of the plaque, earned worldwide recognition as a result of his pioneering agricultural mechanization developments.

The award consists of a plaque and a cash award of \$1,000. Mounted on American walnut, the plaque is a metal reproduction of a certificate on which the International character of the award is graphically indicated and which carries the inscription: “For outstanding contributions toward food and fiber production, improved living, and education of people outside of the United States of America.”

Previous Kishida International Award Winners

1978.....	Ralph C. Hay	1997.....	Giuseppe Pellizzi
1979.....	Bruce H. Anderson	1998.....	Pierre F.J. Abeels
1980.....	G. Wallace Giles	1999.....	No Recipient
1981.....	Emmanuel U. Odigboh	2000.....	Abdel Ghalyl
1982.....	Merle L. Esmay	2001.....	Osamu Kitani
1983.....	Byron L. Bondurant	2002.....	Brian G. Sims
1984.....	William J. Chancellor	2003.....	John L. Merriman
1985.....	Harry D. Henderson	2004.....	Ronald T. Noyes
1986.....	Bill A. Stout	2005.....	James W. Jones
1987.....	Lyle G. Reeser	2006.....	Yasushi Hashimoto
1988.....	Amir U. Khan	2007.....	R. Paul Singh
1989.....	Gilbert L. Corey	2008.....	K.C. Ting
1990.....	Gajendra Singh	2009.....	Fedro S. Zazueta
1991.....	Jaw-Kai Wang	2010.....	Wayne Clyma
1992.....	Do Sup Chung	2011.....	Rabi H. Mohtar
1993.....	Ravindra N. Kaul	2012.....	Donald C. Slack
1994.....	Gerald E. Thierstein	2013.....	Radhay Lal Kushwaha
1995.....	Lloyd Johnson		Vilas M. Salokhe
1996.....	John S. Bailis		



DIGVIR S. JAYAS
Vice President Research & Distinguished Professor
University of Manitoba

DIGVIR S. JAYAS, P.E., ASABE FELLOW, is the recipient of the 2014 Kishida International Award for his distinguished leadership and outstanding record of international collaboration in grain storage research and education.

Jayas, vice president (research and International), distinguished professor, University of Manitoba, Winnipeg, Manitoba, Canada, and formerly the Canada Research Chair in Stored-Grain Ecosystems, conducts research in the areas of physical properties of agricultural products; modified atmosphere storage of grains, oilseeds, potatoes, and meats; mathematical modeling of biological systems; and digital image processing for grading and processing operations in the Agr+Food industry. The tools and techniques developed by his research have positively impacted grain storage, handling, and safety worldwide.

Jayas is world-renowned for his research on drying, storing, handling, and quality monitoring of cereal grains, oilseeds, and legumes, collectively referred to as grains. He has excelled in integrating the physical and biological processes to preserve stored grain. As a leader in carrying out interdisciplinary research, he has integrated the work of entomologists, agricultural engineers, and mathematicians. He has demonstrated through experimental studies and by developing mathematical models that insect movement in bulk grain can be modelled as diffusion phenomenon. This has allowed simultaneous solution of heat, moisture, gas, and insect movement in bulk grain and has helped in the development of an integrated mathematical model of a stored-grain ecosystem. By inputting weather data of a location, the models are usable globally to manage stored grain.

Jayas was the first to demonstrate experimentally that the resistance to airflow through bulk grain in the horizontal direction is about one half of the resistance to airflow in the vertical direction. This led to the development of a prototype grain dryer, in collaboration with Agrowth Industries, that forces air horizontally and dries grain more evenly and efficiently, and uses a fan that is one half the capacity of a traditional vertical airflow dryer, and thus more energy efficient.

Jayas has contributed greatly to the literature of the profession, having authored or coauthored more than 700 refereed journal articles, conference proceedings, technical publications, book chapters, and 105 invited presentations. Results of his research have been incorporated in standards of ASABE.

A 31-year member of ASABE, Jayas has provided leadership to Food Process Engineering Institute and Information and Electrical Technologies division committees; the Membership Development and Publication Council; E-08 Fellows; and the Board of Trustees. He has served as associate editor of *Transactions of the ASABE and Applied Engineering in Agriculture*. He has received numerous awards and honors from professional organizations and most recently was inducted as Foreign Fellow of the National Academy of Sciences, India, and received an Education Leadership award presented at the World Education Congress, Mumbai, India. His ASABE awards include a Paper award and the Young Researcher award. He was named an ASABE Fellow in 2005 and is a Fellow in 11 other organizations. Jayas is a member of numerous engineering scientific and honorary societies, serves on the boards of various organizations, and was recently appointed a member of the Natural Sciences and Engineering Research Council of Canada.