Can drip irrigation solve global water and food crises?

The world is facing two serious interdependent crises; a water crisis and a food crisis. These crises are a result of the proliferation of world population and the economic improvement in many developing countries.

World food demand is expected to increase by more than 50% over the next 40 years. Irrigation is crucial to the global food supply: 18 percent of the world’s farmland that is irrigated yields 40 percent of the world’s food needs and uses 70% of total available fresh water.

The supply of additional food will be carried out through intensification of agriculture production; mostly by increasing irrigation efficiency and by enhancing agriculture in less productive drylands. Drip irrigation can double or triple water productivity – boosting crop per drop – alleviating both the world water and food crises.

In spite of this, only 4 percent of the world’s irrigated land is equipped with drip-irrigation systems. Our objective is to exploit the 2014 DDD conference in order to bring awareness of the role drip irrigation in solving the world water and food crises to the international community.

The meetings will demonstrate that recent breakthroughs are allowing the profitable irrigation of rice, sugar cane and other major field crops with significant saving in water and significant increases in yield. It will also show how low pressure drip systems are helping small farmers to get out of poverty. The meetings will provide a forum to discuss and evaluate economic, social-cultural, agronomic and environmental aspects of drip irrigation and its role in today’s world.
Drip Irrigation Themes for Drylands, Deserts and Desertification 2014

- The roles of drip irrigation in the alleviation of water and food crises
- The economics of drip irrigation
- Sub-surface drip irrigation
- Low pressure drip irrigation
- Drip irrigation for small farmers in developing countries
- Innovative approaches to drip irrigation
- Chemigation, Fertigation
- Drip irrigation with saline water
- Drip irrigation with recycled water
- Drip irrigation of rice
- Drip irrigation of field crops
- Drip irrigation of horticultural crops
- Landscaping with drip irrigation
- Environmental aspects of drip irrigation

We invite you to participate in this exciting event and to contribute from your experience to its success.

For more information please contact us:

Dr. Naftali Lazarovitch:

Dr. Naftali Lazarovitch is a professor and researcher at the Wyler Department for Dryland Agriculture, French Associates Institute for Agriculture and Biotechnology of Drylands, Jacob Blaustein Institutes for Desert Research, Ben-Gurion University of the Negev. He received his PhD in 2006 from the Hebrew University in Jerusalem. His main research interests are creating a better understanding of water flow and solute transport in the soil-plant-atmosphere system, increasing agricultural water use efficiency using optimal irrigation and fertigation scheduling and modeling (numerical and analytical), measurements and interpretation of water flow and solute transport in the root and vadose zone. His work has been published in more than thirty journal articles.
Dr. Dov Pasternak:

Dr. Dov Pasternak is a Professor Emeritus from the Ben Gurion University of the Negev. In 1964 he was among the first pioneers who introduced the drip irrigation system to the Arava valley of Israel. Over a period of 30 years he developed the basis for irrigation with saline water using drip irrigation. In 1998 he started the development of the low pressure drip irrigation system for small African farmers called the African Market Garden and during a period of 10 years he lead the dissemination of this system in dry West Africa countries. Prof. Pasternak working at ICRISAT-Niger developed new production systems and new crops for the semi arid regions of Africa. Author of 66 articles in peer reviewed journals and book chapters. Currently he is serving as an international adviser on agricultural development of dry regions.

Dr. Alon Ben-Gal:

Dr. Alon Ben-Gal is a senior researcher in the Department of Environmental Physics and Irrigation, Institute of Soil, Water and Environmental Sciences, The
Agricultural Research Organization, Gilat Research Center, Israel. Dr. Ben-Gal's interests may be best described as: "X-treme agriculture: managing water in the arid zones".

He works extensively with drip irrigation with research and expertise including: irrigation of crops; agricultural utilization of saline water and of recycled wastewater; optimization of water under irrigation in arid regions; plant response to environmental stress conditions; and flow and transport of water and solutes in the vadose zone. He enjoys active multi-disciplinary regional and multi-national collaboration on topics promoting agricultural water use efficiency and is the author of over 60 peer reviewed journal articles and book chapters.