

## OBITUARY – Professor U. Ravi Sangakkara



Ravi Sangakkara, 64, passed away after a tragic accident on 29 August 2014 in Kandy, Sri Lanka. Ravi was known worldwide as a renowned scientist; he was a member of the Department of Crop Science, University of

Peradeniya, Sri Lanka and a long-term guest at ETH Zurich. We, his colleagues from ETH Zurich, have the privilege to remember and honour him as an esteemed member of our Swiss University, where he was warmly welcomed and highly appreciated guest professor for tropical crops for 3 months every year since 1992. But neither his home nor his host university could truly claim to have had him to themselves throughout the years, as he and his broad expertise were in demand on all continents, for research projects, exchange visits or memberships of committees and advisory boards. His work brought him to more than 50 countries.

Despite his outstanding qualities as a scientist and as a teacher, Ravi was always a modest person who never drew attention to himself. Indeed, it would be tiring to mention all the rewards he received during his school and university time, and afterwards, during a professional life full of honours. It suffices to mention that at the end of his time at high school he was awarded the gold medal for the ‘Best All Round Student’; far-sighted teachers indeed, as this remained the attribute that we respected most in Ravi until today. During his long career at the University of Peradeniya, starting as a Lecturer in Agriculture after achieving his B.Sc. in 1977 and ending as a Senior Professor in Crop Science, he was also a Commonwealth Scholar in New Zealand from 1979 to 1983 where he obtained a Ph.D. in Crop Ecology and Environment at the Massey University, Palmerston North. Ravi also focused his efforts on the development of science in his home country; he was a founder member of the National Science Foundation, Sri Lanka and chaired the Research Advisory Board on Agriculture and Food. He was of course a member of numerous scientific societies and editorial boards. He was especially proud to be – until recently – the

only Asian member on the Editorial Board of *Journal of Agricultural Science, Cambridge* in its 109-year history.

His research topics in Sri Lanka ranged from crop plants for food, feed and industry, including wild and cultivated medicinal plants, to cropping systems, focusing on weed management. This resulted in numerous publications and conference contributions that made him visible nationally and internationally and built the basis of his global scientific reputation.

For Swiss students, he was an honest broker of tropical agriculture, able to transmit the fascination for the natural beauties of his home country and to find solutions to urgent problems. He was capable of taking his audience with him into a world of richness and diversity in agricultural systems and to challenge everyone by prompting them on the basics of abiotic stress, soil fertility and sustainable management. Thereby, he made students realize that there is only a thin line between a ‘Garden of Eden’ and a devastated field. Once this line is crossed, it can take forever to return. Motivated by discussions with him, more than 25 ETH students used the chance to work under his supervision and diligent guidance in Sri Lanka, at all levels of education from trainees to Ph.D. students. They kept contact with each other, forming long-lasting cultural bonds.

At ETH Zurich, he started with a keen research interest in several relevant domains. Ravi studied the adaptability of important legumes to variation in potassium supply and soil moisture on symbiotic nitrogen fixation, photosynthesis and partitioning of carbon. During his many years at ETH, we were able to support him and provide access to advanced laboratory equipment for analyses of physiological bottlenecks in the cultivation of tropical food legumes. In addition, he saw the universal swift access to literature in our excellent library, humbling us that a seemingly common facility in Zurich could slow down a scientific career in a developing country. Throughout this period of our mutual exchange, he enlarged his knowledge of controlled growth studies and hypothesis (and thus literature-)driven research of crop physiology. These experiences, particularly during the early years of our cooperation, strongly influenced

his decision-making in research, always strictly applying the appropriate methodology for reaching his goals.

Since about the year 2000, our cooperation started to focus on cropping systems and soil fertility. This was an important concern for Ravi, strengthened by his own impressions received via numerous field visits around the globe. Student exchanges between our countries took place to combine research and education in field studies, mostly with maize and legumes, resulting in many graduate theses, publications and conference proceedings. After the Tsunami hit Sri Lanka, a call to react to this extraordinary disturbance by research was issued by the ETH. We were three colleagues from agronomy, socio-economy and photogrammetry who decided to 'double-cross' disciplinary boundaries by studying the slow risks of erosion in the neglected erosion-prone upland area of Meegahakiula, Sri Lanka, as proposed and prepared by Ravi; by the way, the only project which made it to funding. Owing to communication skills that bridged the gap between scientists and farmers, we could rely on the cooperation and warm welcome by 120 poor farmers' families, an unforgettable personal experience. Our socio-economists focused on the impact of the development of agricultural systems on poverty alleviation. A farming system analysis approach was applied to detect inter-relationships between the different components of a farm household like the available land or labour and the framework of farmers' decision-making. Accordingly, improving living conditions of farm households depended on two main pillars: economic growth and increased on-farm productivity – a task for the agronomists in the research team. The field studies involving maize and mungbean showed that a continuous high input of fresh leaves and compost could reverse soil degradation. However, this impact was minimal at steep inclinations that should never be used for arable crops. The chemical fertility of soils was more impaired by previous erosion events than the physical fertility. A similar model could also be applied to steep landscapes in Asia, Latin America or Africa, which are also prone to soil erosion. Meanwhile, some of the results have been published in refereed journals and Ravi was still working on three additional manuscripts. Clearly, we will work on their publication in his memory. For the regional 'know-how' transfer, a workshop was carried out right after the end of the civil war in Sri Lanka. Besides being a scientific

event initiated by Ravi, it was also a chance to help repair the war-torn social relationships between Sinhalese and Tamils. Ravi touched the hearts of the Tamil farmers by spontaneously translating the summaries of the English lectures into their language. Both the Tamil farmers and their Sinhalese colleagues decided then on mutual visits to share the opportunities offered by our recommendations for sustainable land use.

A younger generation of colleagues at ETH Zurich took over the inspiring and fruitful co-operation, knowing about the precious talent of Ravi in teaching and research as well as the challenge of obtaining research funding. But success came and we were recently able to start two projects in close partnership with Ravi and his colleagues in Sri Lanka. One project is addressing nutrient management in yam in the dry zone of Sri Lanka, whereas the other deals with the importance of crops grown in home gardens for the nutrition of young children. The Ph.D., M.Sc. and B.Sc. students and their supervisors are in shock now, but they are highly motivated and determined to conduct these projects to a successful end.

We will honour and remember Ravi as an outstanding researcher, as a gifted teacher and as a true ambassador who built bridges between agricultural scientists from European countries and the tropics around the world and between theory and practice. Ravi will be missed and remembered also by his many friends and colleagues for his humility, integrity, compassion and outstanding interpersonal skills.

P. STAMP, N. BUCHMANN, E. FROSSARD,  
B. LEHMANN, J. NÖSBERGER AND A. WALTER

It is an honour to add to what has been written above about Ravi Sangakkara. He was a personal and professional friend. At Aberdeen University, we too engaged him for some years as an Honorary Visiting Professor to contribute to our course on tropical crops. It was fascinating to watch him lecture: he was able to immediately make students engage with and understand the challenges of crop production in a variety of tropical climates and to understand the biological and social constraints which limited possible solutions. In the end of year assessments of the course by the students, his lectures were always mentioned positively. His approachability and quiet competence was recognized and valued.

Ravi's wide range of competencies made him an ideal Editor for the *Journal of Agricultural Science*,

Cambridge and he brought the same calm confidence but gentle incisiveness to his appraisal of the manuscripts we sent him. I sometimes worried that we sent him too many submissions for review, but his response was that he always learnt something from assessing what others had done. Would that all editors were so enlightened! Many authors have cause to be grateful for his insightful suggestions.

When Ravi visited us at Aberdeen University, he stayed with my wife and me in our country home. Geraldine's engagement ring incorporated a Sri Lankan gem stone given us by Ravi. Subsequently,

when we visited Sri Lanka in 2011, it was Ravi who tracked down the postgraduate students who had studied with us at Aberdeen and arranged an evening meal for us all in Kandy. It was a memorable evening for us, made possible by our friend Ravi, and the memory of that final time we met will linger fondly. U. Ravi Sangakkara is a true gentleman, who contributed so much to so many around the world.

ROBERT E. L. NAYLOR

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