

# Preface

The authors were once crop protection specialists, one a nematologist and the other an entomologist. Inevitably, both have leanings towards their original callings, especially in the context of the productivity of the tropical legume crops that were their primary focus. However, they have moved on. They are intensely aware of the problem presented by global food production, as a whole. They have stood back and taken in the global food security situation, but with a much wider focus or perhaps with no focus—through squinted eyes—hence ‘*vision infinity*’.

Their perspective is gathered from virtually global experience of interacting with various stakeholders especially with farmers in their fields. Neither spent much time in Latin America, but they have worked for extended periods in Asia, Africa, USA, Europe and now Australia. Professor Sharma became deeply involved in quarantine policy issues, biosecurity, market access and trade and food security, in general, and as international issues. He is a strong advocate of biosecurity as an integral part of global food security strategy. Dr. Wightman cut his professional teeth in New Zealand, working with farmers as a research scientist to solve the most important pest problems of their industry. He carried that approach with him throughout his many subsequent international missions. He now converts published research-based information into farmer knowledge and works on tree-based agroecosystems that produce multiple benefits, including biofuel.

Both authors hope that their mission can be extended to influencing the knowledge base of decision-makers and hope that this book can contribute.

Their view of the management of the world by fellow members of *Homo sapiens* is defined by a cartoon that appeared in *The Economist* 18 April 2015. ‘Sapiens’ means ‘wise’ in Latin. Linnaeus gave us the name in 1758. Would he adopt the same descriptor now? Thankfully, there are many people whose thoughts and experience could be condensed into the vision encapsulated in this cartoon. The authors saw it when this commentary was close to completion and were encouraged. Many of the concepts discussed in this book are included—thoughts about a picture being worth a thousand words were close to the surface.



Source KAL's cartoon in *The Economist* 18 April 2015 (Courtesy Kevin Kallaugher (KAL))

The cartoon shows 'a man' (presumably) forging ahead, destroying natural habitats and wildlife, making too many babies, polluting and over-exploiting resources, while he drives on with his head in the 'sand ... of de Nile'. Many of the concepts depicted are included in the commentary that follows. More importantly, potential solutions to the problems are also addressed.

Our species has developed incredible technology, but our heads are in the sand when it comes down to the fundamentals of our survival as a species. There is a distinct lack of long-term vision in our plans for achieving global food security. The destruction through over-exploitation of natural environments, pollution of all kinds and the ensuing impacts of climate change are putting at risk our ability to garner food and potable water from our environment. It is not hard to picture that war will result—more for access to land and natural resources, less than for ideals and individual or corporate greed. If war is considered in terms of a density-dependant mortality factor (terminology of population ecologists), it will reduce the number of mouths to feed and relieve pressure on resources, but that, with compulsory sterilisation, is not a direction of thought that we wish to follow.

Colonies of aphids (small plant-sucking insects) develop winged forms when their density reaches a certain level. These individuals fly away, often in clouds of millions of individuals, and establish new colonies. This reduces the pressure on the resources of their original home and clearly extends the influence of their genome in new environments. Perhaps, there is something there for us to learn. Space travel may not be such a bad idea.

It has not been too difficult to put together a world view of all the issues depicted here in the hope of making such a difference in our home planet. It is not rocket science—just the application of what some would call a brand of common sense that is devoid of self-interest and profit motives, and heavily spiced with altruism. Perhaps, rocket science could be part of the solution!

Vision Infinity for Food Security

Some Whys, Why Nots and Hows!

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