

rofessors are not known for their self-criticism; have you ever been completely wrong about something?

With a twinkle in his eye: 'That is indeed a very difficult question.'

There is silence for ten seconds.

'Like every professor I suffer from bias, and sometimes I get it wrong. In the eighties and nineties I got it completely wrong. I thought that scientific progress would help rid the world of hunger relatively quickly. I was far too optimistic. At the start of this century at the United Nations we formulated the Millennium Development Goals for 2015. Goal number one was "No more hunger". I believed we could achieve this, but nothing has come it, not even of the aspiration. Now I'm involved in an attempt to bring about a green revolution in Africa. I'm very positive about it, but maybe I'll be wrong again.'

'Rudy Rabbinge is a hopeless optimist', some of your colleagues say.

'I have heard naïve optimist too. But I don't base my expectations on faith alone. Knowledge and understanding are also important, as well as our past achievements. In the course of the twentieth century, the world population increased sixfold, but we managed to increase world food production by seven times. So now there is more food available per head of population.'

Yet there are now more people suffering from hunger; more than one billion already.

'Yes, it's terrible! That's one of the main reasons for me not to give up. I hope for improvement. I'm a real believer in progress.'

You come from a farming family in the province of Drenthe. Both of your grandfathers were mixed farmers. Is there still a farmer in Rudy Rabbinge?

'I know how to milk a cow. I learned that long ago from my uncles. But it always took me ages; my fingers aren't very strong. The farm where I live, on the land where my

'An end to hunger – I believed in that'

ancestors started in 1600, is now property of Het Drentse Landschap. Production is now secondary to nature and landscape conservation, where the focus is on maintaining certain types of flora and fauna. I'm not a particularly hands-on person, but I do still have a great affinity with agriculture. I opted to be involved in it through science.'

Imagine you are president of the world for a day, with unlimited power and financial means. What would be the ideal measures you would take to solve the problem of hunger?

'The idea of one man being in charge is unacceptable, but putting that aside... In the first place I'd make sure that agricultural development in Africa gets a strong boost, by providing good inputs such as seed, artificial fertilizer and machines, by extending credit, especially to women, and by developing local markets. The leitmotif is: greater food security, more people able to take care of themselves.

'In addition, I would want to solve all sorts of political disputes that cause so much trouble. Take the water shortages that are threatening the world, for example. Ethiopia, Sudan and Egypt are fighting over the water of the Nile. Mali and Burkina Faso are in conflict about the Niger. In Mozambique, Zambia and other countries they're squabbling about the Zambezi River. I would create regional water boards to ensure fair distribution of water.

Now you're preaching about what Africa should do with the Nile and the Niger, but the Netherlands can't even manage to sort out the conflict with Belgium about the river Scheldt and whether or not the Hedwige polder should be flooded.

'Yes, yes, you're right. If you make a commitment, you should stick to it. Otherwise it has serious political consequences. You can imagine how difficult it'll be in Africa.'

'The Netherlands is losing its reputation as a country that stands for justice, solidarity and tolerance' says Agnes van Ardenne, former Christian Democrat minister for development cooperation. Is she correct in saying that the Netherlands is losing its position in the international pecking order?

Resolutely: 'Yes. That's absolutely true. I'm always being asked about this. Kofi Annan, former secretary general of the UN, says to me: "What's the matter with you



lot?" He's referring to the incitement to hatred and the anti-Islam stance of Geert Wilders' PVV, and to the extreme nationalism and the negative attitude towards Europe and the rest of the world. I share your concern, I tell him, but the majority of the Dutch are not like this. Fortunately there are still lots of people who do have an enlightened view of the world. And they still have the upper hand.'

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International top dogs are often far from ecologically responsible. Who lacks integrity here?

'I think Al Gore is a typical example of someone who doesn't practise what he preaches. He has a pretty flamboyant lifestyle: look at how he lives and how he travels. If you're always going on about the environment... and then just look at the fees he commands. He asked 900,000 dollars just for giving a half-hour introductory speech at some meeting or other in Rotterdam. Even if that money went to climate research, I still find it unacceptable. I've gone right off him.

'But it doesn't have to be like that. Three months later one of the speakers invited for the opening of the academic year at our university in Wageningen withdrew. I called Kofi Annan. Even though he had all sorts of other commitments I managed to persuade him to come. Then we called the Queen, who was very friendly and said, 'he must stay with me.' The Royal Family put their security service and a car at my disposal so I could collect Annan from Schiphol airport. First we went to the Prime Minister's office for a talk with Balkenende, and then we drove on to Wageningen. Annan paid for his own flight and charged nothing for speaking. As he said, "I'm doing this as a good turn." So when the local newspaper asked me how much his visit had cost, I said, nothing. They didn't believe me.' >

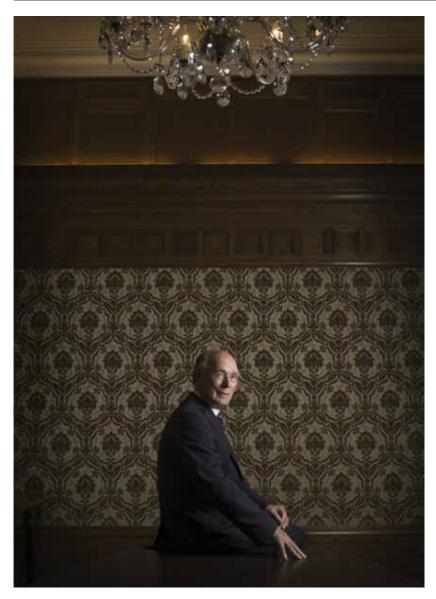
RUDY RABBINGE

Dr. Rudy Rabbinge is University Professor in Sustainable Development and Food Security at Wageningen University in the Netherlands. He holds degrees in Phytopathology, Entomology, Theoretical Production Ecology and Philosophy of Science from Wageningen Agricultural University.

Rabbinge is a chair of the High Level Panel of Experts of the Commission on Food Security of the United Nations. Also he is a member of the board of the Alliance for a Green Revolution in Africa (AGRA) and chairman of the Council for Earth and Life Sciences of the Royal Academy of Sciences. Rabbinge also serves on the boards of various international agribusiness firms.

Formerly he was a chair of the board of trustees of two CGIAR centers (Consultative Group on International Agricultural Research) and chairman of the Science Council of the CGIAR. He was also chair of the Inter-Academy Panel on Food Security and Agricultural Productivity in Africa and deputy chairman of the IFDC board (International Soil Fertility Development Centre).

Rabbinge is a former member of the Senate of the Netherlands Parliament and chairman of the Board of Trustees of the Royal Tropical Institute. Rabbinge has led various missions and agricultural programs in developing countries and served as editor of several journals.



Suddenly there's a serious famine in the Horn of Africa. Are we too late, for the umpteenth time?

'If you don't deal effectively with chronic hunger, the effect of calamities – drought and so on – is so much greater. As long as we don't solve the problem of chronic hunger, we can expect to see lots more disasters of this kind, unfortunately. This is a reason to adopt the structural approach that I've been arguing in favour of for so long.'

Genetic manipulation makes it possible to create varieties that are resistant to disease and insects. We have also developed plants with 'built-in' nutrients. Are you in favour of these developments?

'I have never regarded this as a panacea. Genetic manipulation means we can surgically remove the genes that are responsible for certain characteristics and implant them elsewhere. You can work faster and more efficient-

ly; it's far less hit and miss than conventional plant breeding. When I was chairman of the board of trustees of the International Rice Research Institute in the Philippines, I initiated research on enriching rice with vitamin A and iron. That was pretty successful. Genetic manipulation is an attractive tool. But bear in mind, it's a tool; it won't save the human race.'

Do you understand why some people react, 'this is Frankenstein?'

'No. On the contrary, for me genetic manipulation is a fantastic product of insight and human ingenuity. And, even for those who are deeply religious, surely it is wonderful that we can correct creation's shortcomings?'

'Once you've seen someone die of hunger, you never forget it', you once said. What image comes to mind?

'A woman on a waste tip in Manila. She was trying to scrape some food together for her children. And then ... she wasn't there any more. You think to yourself: dammit, this cán't be allowed to happen.'

She wasn't there any more?

'She collapsed. The only thing you can do is to make a sympathetic gesture. A squeeze of the hand, a pat on the head.' He is close to tears. 'Sorry about this. This never happens to me.'

In the newspaper Het Financieele Dagblad you predicted that a green revolution would wipe hunger off the face of Africa within ten years. To be honest, we're tired of hearing this. People have been saying things like this for fifty years, and nothing has been achieved.

'I can tell you exactly why not: as long as these statements remain at the level of intention, of course nothing will happen. But we are now setting up the AGRA, the Alliance for a Green Revolution in Africa. The board of directors, headed by Kofi Annan, consists of six people from Africa, including Mo Ibrahim, the founder of Celtel telecom company, and Moise Mensah, former minister of finance of Benin. The members from outside the continent are the president of the Gates Foundation, the president of the Rockefeller Foundation and myself. It's a group to be reckoned with. Passionately: 'We have set up practical programmes to make seed, chemical fertilizer and the like available, to open up fertile agricultural land by building roads and to develop regional and local markets. And local trade needs a boost. In the last four years we've already

reached millions of farmers this way.

'Of course, Kofi Annan has enormous clout. He can say to the president of an African country: investments in agriculture are only half a percent of your gross national product; you need to make that at least two and preferably ten percent. Many countries have already pledged to comply with this norm and production is growing fast.'

Many people are fervent believers in organic agriculture. Why are you fighting a personal battle against this?

Indignantly: 'I'm doing nothing of the kind! In fact, I was the first in the Netherlands to introduce organic farming on a research farm. And that was way back in the seventies! Later, as a professor, I gave students the freedom to specialize in this sector although there wasn't even a formal department.

But you also say claims that organic agriculture can feed the world are unfounded: 'There should be no taboos on chemical fertilizer, pesticides and genetic manipulation. If we choose this path, we will lose almost all the world's nature, as far more land would be needed.'

'Exactly: you don't have to eat organic food to save the environment. It would be a disaster for the world food supply and it's not better for your health either. Actually, spreading animal manure on vegetables is risky – as the EHEC bacteria has probably demonstrated. So why then do people so consciously choose organic products? Because so many of the things we do just aren't rational. Look at how many people drink bottled spring water, while objectively tap water is better quality and five thousand times cheaper.'

So actually your message is: organic agriculture is self-indulgence.

'Yes, but if that makes people happy and they enjoy it, I'd be the last person to want to deny them this pleasure.'

You state that there is enough food available to feed the world. That means that hunger is a question of distribution. So what's the solution?

'The multilateral organizations need to become far more effective. The FAO is in a real mess. The organization is becoming a victim of its own bureaucracy and internal power struggles. The United Nations also needs a thorough overhaul. The one-country-one-vote system is 'Genetic manipulation is a fantastic product of insight and human ingenuity'

a disaster: a tiny country like Luxembourg, with less than half a million inhabitants, has as much say as the United States and India. We need to develop a system that has more clout.

'The world food programme (WFP) is designed to provide emergency relief, and that really does help, but it won't rid the world of chronic hunger. Most of the world's food is produced and consumed at a local and regional level; it doesn't reach the regions where hunger reigns. Only a very small proportion of the food available is traded on the world market. To give an example, 650 million tons of rice is produced and consumed every year; only 40 million tons makes it to the world market. If China were to get 10 percent of the 15 million tons it requires from the world market, the whole system would fall apart. The only structural solution is to produce more food in areas where the population density is increasing. And then we are talking mainly about Africa.'

Would you dare to claim that Rudy Rabbinge, with all his zeal, research and international connections has made a difference to people's lives?

'Well, thanks to our insights and assistance, Dutch farmers have succeeded in raising their average wheat yields from six to nine tons in the last forty years. We have reduced the use of chemical fertilizer by half and of pesticides by about a third. We've also managed to develop dairy livestock systems with zero greenhouse gas emissions. We have made land use more effective, so there's more space for nature and biodiversity. We are still doing all we can to make further improvements, but we have certainly achieved a lot. I can say with confidence that agriculture has only become cleaner and more productive. Otherwise our approach wouldn't have been adopted in so many parts of the world.'