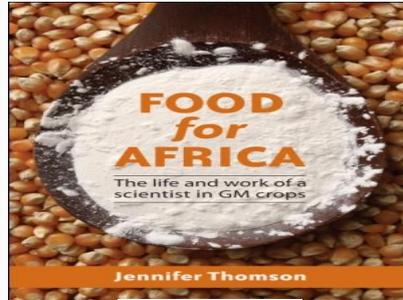


## Food For Africa (The life and work of a scientist in GM crops)



Food For Africa

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### About this Publication:

She has addressed the world's leaders at the UN. She has sat in the hot seat at the World Economic Forum in Davos persuading economists that genetically modified food is the answer to food security in Africa. She has faced vitriolic activists on television and explained the facts and fallacies of genetic engineering. And she has won the L'Oreal Women in Science in Africa award.

So how did someone who thought she would choose the career of a teacher end up as a microbiologist in a very male-dominated arena and become one of the world's leading scientific advisors? In *Food for Africa*, Jennifer Thomson traces through anecdote and science the development of a hotly contended area of research, from the dawn of genetic engineering in the USA in 1974, through the early stages of its uptake in South Africa to the current situation in which approximately 80% of maize in South Africa is genetically modified for drought resistance.

Through her own story of how she came to choose GM as a career and her path-breaking involvement in the development of GM research, she describes the spread of this technology into other parts of Africa and her venture into unknown territory to develop crops resistant to drought, insects and viruses, a journey in which she came up against the multinational Monsanto.

The book describes a remarkable personal and scientific evolution and looks to a future in which staple crops may be grown in difficult conditions by smallholder farmers and help Africans achieve food security.

### Contents Include:

**Introduction: From Sunday School teacher to scientist**

## **Chapter 1: The SAGENE Years**

Setting up the South African Committee for Genetic Experimentation – splicing DNA – cupboard laboratories in Belgium – a larger laboratory at Wits – African Explosives supports genetic modification – developing a body of scientists – guarding against harmful effects – insect-resistant cotton is trialled in KZN.

## **Chapter 2: From SAGENE to the GMO Act**

The term 'genetically modified organisms' is accepted – drawing up procedures for approving trials – the failure of Flavr Savr tomatoes – farmers plant GM cotton in KwaZulu-Natal – South Africa blocks super sorghum study and loses out to Kenya – but by 2011 is the world's eighth biggest planter of GM crops - maize yields increase

## **Chapter 3: Into Africa**

Running courses in Zimbabwe – the African Academy of Science meets in Nairobi – partnerships in Kenya, Uganda, Tanzania, Zambia, Botswana and Zimbabwe – working on disease-free bananas – fears around DNA transfer

## **Chapter 4: Davos leads further into Africa**

Convincing the world – a new vision for agriculture – support from the Rockefeller Foundation – intellectual property and life forms – weed-resistant maize – cowpeas and bananas – the farmers' view – persuading the UN that GM is not toxic

## **Chapter 5: A South African National Biotechnology Strategy**

Where to take South Africa – biotechnology innovation centres – the state takes over and things grind to slow

## **Chapter 6: African Biotechnology Strategies**

Africa follows Europe, and foreign aid – Kenya – Uganda – Tanzania – Burkina Faso – Ghana – Egypt

## **Chapter 7: The maize streak virus story**

The major contributor to low maize yields – help from abroad – wild grasses become the guinea pig

## **Chapter 8: David vs Goliath**

Resurrection plants and tolerance to dehydration – hunting for plants in the Drakensberg – an expert lab in Nairobi – the South African Maize Trust – filing a patent – Monsanto is floored by the local farmers of Lutzville

## **Chapter 9: Food for Africa**

Crossing the agricultural genetic divide – can GM crops feed the hungry in Africa? – environmental effects – insect-resistant cowpea – disease-resistant banana – cassava resistant to virus – drought-tolerant maize – improved rice – nutritionally enhanced crops – sorghum – the views of Africans themselves.

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**Of Interest and Benefit to:**

The layperson interested in the facts of genetic modification; academics in the field of plant genetics and food security; policy-makers.