Initially, the government failed to appreciate the strength of public concern, and the Prime Minister, Tony Blair, was seen on television declaring his faith in genetic modification and confirming that his family were happily consuming foods containing genetically modified constituents. Unfortunately, this reminded people of the ill-fated occasion when a Cabinet Minister, John Gummer, proclaimed the safety of British beef by forcing his child to eat a beefburger. Subsequent events made a mockery of this foolish gesture.

Belatedly, the government took action to limit the number of trial crops in the UK and has promised that all foods containing genetically modified products will be clearly labelled. In June, ten out of the thirteen members of the Advisory Committee on Releases to the Environment are to be replaced by members without links to the agrochemical business. A Food Standards Agency is also to be set up, though this was originally a response to the bovine spongiform encephalopathy disaster.

There appear to be two strands to the opposition to genetically modified technology. First, there is the mistrust of government pronouncements, as already discussed, and second, a feeling that we are being pushed around by the Americans. This has been reinforced by the ‘banana war’ in which the USA has put in place trade sanctions against a number of British products on the grounds that Britain is unfairly giving preferential trading terms to the producers of Caribbean bananas. The World Trade Organization has confirmed that Britain is contravening the regulations. Though bananas are produced in South America, the aggrieved companies are all American-owned.

The fear of American domination of the ‘agrobusiness’ is not confined to the UK and other Western European countries. It has come to light that Monsanto is about to acquire a firm producing plants which have infertile seeds, so that the traditional method of the Third World farmer of retaining part of his crop to be sown the following year will no longer be possible. Farmers would be forced to buy their seed each year from Monsanto, giving the firm an enormous profit. More sinister is the fact that Monsanto has patented a number of herbicide-resistant crops and says that the sowing of seeds from these plants would be in breach of their patent; it even employs detectives to discover transgressors. All this makes Monsanto’s claim, that genetically modified crops, which are drought- or pest-resistant will boost world food production, sound hollow. In the opinion of the celebrated Indian economist Amartya Sen, famines are not due to shortage of food, but to (oversimplifying) failures in distribution.

Clearly, much more research, under carefully controlled conditions, is required before we can accept a new agricultural revolution.

A last minute quote from the BMJ: ‘Many lectins are powerful allergens, and prohevein, the principal allergen of rubber latex, is one. It has been engineered into transgenic tomatoes for its fungistatic properties, so we can expect an outbreak of tomato allergy in the near future among latex-sensitive individuals.’

REFERENCES

JOHN BLACK
How lethal are the ramifications of HIV? In Uganda, in a study on the effects of HIV-1 infection over a 5-year period, the mortality fraction attributable to the infection was very high, 41% for adults, and over 70% for men aged 25–44 years and women aged 20–41 years. The median survival time of infected subjects from the time of enrolment was less than three years in those aged 55 years or more. Life expectancy from birth was estimated to be 42.5 years, which compares disastrously with 58.3 years in Africans known to be seronegative. Clearly, in rural African populations, HIV-1 infection is associated with a high death rate and with a substantial reduction in life expectancy. Similar decreases in survival time have been reported from neighbouring countries (Botswana, Zimbabwe, Zambia and Malawi).

Can this catastrophic situation in southern Africa really be remedied? As for prevention in adults, the general recommendation regarding limiting sex partners and invariably using condoms needs no elaboration. Locally, the annual cost of treatment, managed on triple therapy, has been estimated to be 70 000 rands (about Rs 5 million). A major current field of research concerns the urgent need to lessen the transition of the infection from mother-to-child, which has been rated as 25% in the USA. In that country, the new HIV taming therapy, using zidovudine, can reduce this proportion to 8%. The cost, however, is as much as US$ 10 000 annually. However, the Centers for Disease Control and Prevention, USA have recently announced that the rate at which HIV is transmitted from infected mothers to their infants could be halved by a treatment regimen which is shorter and less expensive than the accepted standard of care. Because transmission is thought to occur towards the end of pregnancy, the short course entails providing pregnant women who have HIV infection with zidovudine during the last 3–4 weeks of pregnancy and an oral dose during labour. No dose is given to the newborn. Interim data from Thailand have shown that mother-to-infant transmission of HIV may be reduced by half. However, in southern Africa, it has been pointed out that efforts to prevent perinatal HIV transmission are beset with many problems. These include irregular attendance at clinics, ramifications regarding not breastfeeding, as well as the cost of treatment—the short course offered during pregnancy costs about 400 rands (Rs 28 000), starting at 36 weeks. Not least of the problems in this field, whether in developed or in developing populations, concerns the impossibility of conducting randomized comparative trials for ethical reasons. Currently, in South Africa, the State Department of Health is unwilling to fund the treatment described to all pregnant women. However, some consider that in the long term, the cost of preventive treatment could well be exceeded by the subsequent cost of treatment of the ailment infected child.

How do South Africans feel about the future? In a recent thoughtful review in the lay press, it was pointed out that most people are simply not seeing evidence indicating that AIDS is a serious concern for the country. The reason is that most of the data relate to the HIV epidemic, not to AIDS. Many people with HIV can lead normal productive lives and cannot, except by testing, be distinguished from those who are infected. It is believed that the period between infection and illness is between 5 and 8 years. At present, statistics indicate that there are several millions in the country who are infected; but, as was stressed, this does not translate into several millions of South Africans falling ill and dying—yet. Indeed, most of those with HIV have no idea that they are infected.

What can be done? In the long term, as stressed in a recent editorial from Kenya, strong emphasis must be placed on the need to integrate medical science with socio-cultural beliefs and practices. Africa is rich, but because of ignorance and poverty, socio-cultural systems are actually helping HIV/AIDS to spread increasingly fast. Since young people constitute the most affected population, educational system based on socio-cultural tradition of mutual responsibility should help them to acquire socially acceptable values and ethics required for survival.

So where does all this leave us South Africans? With hindsight, once the huge potential danger was appreciated, public health authorities should have been aggressively frank in their warnings. Namely, that in the present South African context, promiscuity without protection can almost halve your life expectancy, and that too quite quickly. Yet even at present no billboards tell of the dangers. What would have been the magnitude of the intervention thrusts in western populations if they were faced with the likelihood of a similar lethality?

What of the possibility of a vaccine, for it has been said that ‘only a vaccine has any chance of ending the global epidemic’—an epidemic with almost 16 000 new infections each day. But it will have to be very cheap. For this purpose research programmes involving British, American and African researchers have just been launched. It is hoped that phase 1 safety trials will begin within a year. Should these be successful, it would be the most wonderful news for countries in Africa. However, many rate the chances of success as very remote, bearing in mind the multiple sub-strains of the virus.

REFERENCES

1 Kumar S. India has the largest number of people infected with HIV. Lancet 1999; 353:48.
14 Mungai IM. Integrating health research with socio-cultural systems in the fight against HIV/AIDS. Afr J Health Sciences 1998;5:49.

A. R. P. WALKER