

News focus

Flaws bug television gene drama

Mediawatch: Rejection of scientific advice by the writers of a BBC thriller based on the consequences of genetic modification of wheat with an antibiotic-resistance gene renders the plot absurd, writes **Bernard Dixon**.

A 'conspiracy thriller' was how the BBC categorised its recent TV drama *Fields of Gold*, which portrayed a plague of human disease triggered by an antibiotic-resistance gene in wheat. The description was more true than they realised. Even before the programme appeared on screen, co-author Ronan Bennett was complaining about 'an ugly conspiracy by those with a vested interest in discrediting it.' His principal target was Cambridge University biologist Mark Tester, scientific adviser to the programme which Tester then disowned because of 'ridiculous errors of fact.'

Bennett's apparently sincere belief that the film would aid public discussion of GM crops was shared by co-author Alan Rusbridger, editor of *The Guardian*. He defended the epidemic-from-wheat scenario as one upon which there was no scientific unanimity. The programme was written 'on the basis of scenarios quoted to us by scientists and in House of Lords scientific reports', he told *The Times*. 'There is a lot of anxiety about the potential side-effects of antibiotic-resistance genes.'

There has indeed been concern — sufficient to trigger moves, now under way, to phase out those genes as markers in the plant modification process. Even regulatory committees have taken differing views on the possibility and significance of resistance travelling from GM plants to pathogenic bacteria. Unfortunately, however, Bennett and Rusbridger misunderstood and/or misrepresented the science to such a degree that their scenario became literally absurd.

The programme was misleading not only in detail — for example, in

describing wheat being engineered in a kitchen blender using a resistance gene acquired from hospital waste. More seriously, it was blatantly wrong in its central message — that a bacterium insensitive to an antibiotic was thereby also highly pathogenic and highly transmissible.

Such confusion may well stem from the media's use of the term 'superbug' to describe both multiply resistant organisms and exceptionally virulent ones. But with at least one technical adviser to help, this was a crucial error which the programme makers should easily have avoided.

Fortunately perhaps, turning fact into fantasy was not the only mistake by *Fields of Gold's* authors. They also went utterly over the top in their cast of characters. There was an odious doctor, murdering his patients, and a red-faced, randy, aggressive, alcoholic reporter. There was a terrible pharmaceutical company and its smooth executives, plus security heavies attacking a plucky young investigative journalist. A government minister was pathetically spineless alongside his obnoxiously slick press spokesman.

One reviewer, A.A. Gill in *The Sunday Times*, responded with incredulity: 'Businessmen were pantomimically bad, politicians remorselessly feeble and duplicitous, agri-industrialists cunningly psychotic, farmers stupid, short-sighted and venal.' His conclusion: 'Where would television be without hysterical nonsense? We don't watch drama as documentary.'

Reassuring too was the number of commentators who clearly recognized the film as blatant

propaganda. *The Daily Telegraph's* reviewer James Walton strongly attacked Bennett and Rusbridger for insisting that they had simply asked questions rather than answering them, and had tried to put both sides of the GM argument. 'Well, they hadn't. *Fields of Gold* was an earnest, often bracing polemic about the dangers of genetically modifying anything. Claiming that [the programme] ever sought objectivity was a bit rich.'

Walton claimed, nevertheless, that 'its plotting was deft, its atmosphere suitably claustrophobic and, in its broad-brush way, it did provoke thought.' He coupled this praise with allegations (that 'nobody knows how genetic modification works' and that 'modern farming is poisoning both everybody who eats food and the planet itself') re-hashed from the screen without comment.

Reviews also confirmed that the serious factual errors in the programme had been accepted for real. In *The Times*, for example, Paul Hoggart described how one character had 'mixed an indestructible superbug into the genetic structure of his experimental wheat crop in order to demonstrate how easily such a dangerous thing could be done.'

This reflected the character's repeated assertion that he had put VRSA (vancomycin-resistant *Staphylococcus aureus*), also described as 'the bug', into wheat. Given the central premise of *Fields of Gold*, it would be difficult to make a more simplistic yet profound error than to confuse a bacterium with a gene.

Tester describes himself as a green socialist. It is a terrible irony that his advice should have been rejected in favour of irresponsible scaremongering.

Bernard Dixon is European editor for the American Society for Microbiology.