

thinking prevailed at the White House, where a biotechnology policy has been in the works for more than a year.

The policy, which is meant to inform the way individual regulatory agencies handle biotechnology products, states that "the same physical and biological laws govern the response of organisms modified by modern molecular and cellular methods and those produced by classical methods.... [Therefore] no conceptual distinction exists between genetic modification of plants and microorganisms by classical methods or by molecular techniques that modify DNA and transfer genes."

In short, regulation of biotechnology products, whether in agriculture, medicine, pharmaceuticals or manufacturing, should be based on any inherent risk in the product, not on the process by which it is made.

The US policy also acknowledges one of the important scientific truths about modern biotechnology products. They may be safer than their conventionally derived counterparts, largely because their characteristics—often down to the level of DNA sequences—are so thoroughly known. Concern about the risk of pesticides, herbicides, and other agricultural products made with recombinant DNA technology has overshadowed the fact that conventional agents can also pose unexpected problems. Such is the case now in the state of Florida where thousands of acres of vegetables have rotted because a much trusted fungicide called Benlate, used for two decades by farmers in hot, humid climates, has suddenly stopped working. Nobody knows why.

The White House policy is intended to keep regulatory barriers as low as possible in the US biotechnology industry which, at \$4,000 million today, is predicted to be a \$50,000 million industry by the end of the decade, and thus a significant player in the game of international competitiveness that is one of the President's main concerns. There are already more than 1000 free-standing biotechnology companies employing approximately 70,000 people in the United States, not including the older, established pharmaceutical and chemical companies that are also now in the biotechnology business. The Republicans do not want to see the industry crippled by regulations based on fear rather than a serious assessment of risk.

It is not surprising that biotechnology products, particularly those released into the environment by the agricultural and chemical industries, have elicited strong negative reactions from environmental groups, as well as from ordinary citizens. After all, the very scientists who developed recombinant DNA technology were the ones who alerted the public to its potential hazards, particularly if gene-spliced organisms were to multiply out of control. But 20 years of real-life experimental and commercial science has shown those fears to be largely baseless, while the benefits of the technology (creating herbicide resistant crops, for instance) are easy to identify.

The Administration is in no way suggesting that biotechnology products go unregulated. Rather, it simply says that "products developed through biotechnology processes do not *per se* pose risks to human health and the environment." This approach is entirely sound and long overdue. □

What rate for the job?

The pay of British academics and researchers is scandalously low, but how can it be improved?

If British academics and researchers were realists, they would not let themselves be distracted from their search for jobs elsewhere by the chore of voting in the forthcoming and widely advertised general election. Whichever party forms the next government, the lot of the British research profession will not be substantially improved. True, both the government party and the Labour opposition promise to improve access to an education in science for young people, but neither party is promising to put right the abiding scandal in British universities and research laboratories — the general impoverishment that stems from low salaries.

For the past decade, the growth of academic and research salaries has been linked with inflation, not general prosperity (see *Nature* 353, 105–112). A letter on page 10 cogently argues that the consequences of this state of affairs damage British science as a whole. Who can expect the research profession to compete successfully for new recruits in a dwindling age group when the prospects are known to be so poor? Professor Howard Morris rightly complains that the leaders of the profession have paid too little attention to the issue. His remedy is that the Committee of Vice-Chancellors and Principals (loosely representative of academic institutions) should wash its hands of pay negotiations and demand an independent review instead.

That would be a good start; other British public servants (judges, teachers, nurses and policemen) have recently done rather well from pay boards. But proper rates of pay for academics and academic researchers raise more complicated problems. Not the least of these is the British convention that rates of pay for people of specified age and seniority should be determined by national negotiations. For the past decade, the government has been trying to break this convention, most conspicuously by its ham-fisted threat that universities failing to pay some professors more than others would be denied an increase of recurrent funds. But now that the British university system is being impelled in a direction in which there will be a distinction between research and teaching institutions, is it not in the interests of universities themselves that salaries should be determined institutionally, not nationally?

Academics do not fully appreciate the importance of such derogation as an ingredient of cherished academic freedom. The most obvious benefit, that successful institutions may be able to recruit able people by offering them internationally competitive salaries, is not the most important. What of an unsuccessful institution, believing that its virtues will eventually shine through, that may decide that its best chance of survival is that its members should pay themselves less? That is the direction in which British universities and research laboratories should now be pushing. Of course, nothing can be done until after the general election. Will the climate be any better afterwards? □