

Government rethinks stand over altered organisms

THE BRITISH government has bowed to pressure over its "green" bill and will now consider giving the public access to information on proposed releases of genetically modified organisms into the environment. This U-turn came as the Environment Protection Bill completed its committee stages in the House of Lords last week.

Legislation over genetically modified organisms has proved to be one of the most contentious areas of the bill. An anomaly in the legislation means that the treatment of products of genetic engineering is misaligned with proposals for handling other potential threats to the environment, such as toxic waste and other pollutants. While the legislation requires information on these to be made public, this does not apply to genetically altered organisms.

Environmentalists argue that this omission is a serious flaw in the bill, and they have been campaigning for the legislation to state exactly the information to be made public. This, the environmentalists argue, would increase public confidence in the safety of releases of genetically modified organisms outside. It is too important, they say, to be left to the regulations that flesh out the bill after it gains royal assent.

The Lords who argued for an amendment on this issue insisted that the public has a

Susan Watts and Roger Milne

right to know what is going on, and that it would also be in the best interests of the biotechnology industry. "If there is not the information and not the public confidence, there is a great danger that the whole project of genetic engineering on a commercial scale may be frustrated by public opposition motivated by fear of the unknown. If one has such a reaction from the public, the whole industry will come to a stop," said Lord Nathan.

The government has also agreed to consider an amendment which would recognise the formation of an advisory committee to monitor any proposed releases—the Advisory Committee on Releases to the Environment (ACRE). This, too, had been left to the regulations, and environmentalists feared that the environment minister might choose not to make public the advice of the committee, or perhaps might change its status, without having to seek parliamentary approval.

"We wish to see a committee which will have an existence that is secure; which will have a right to be consulted on each case . . . and minimum safeguards to secure public disclosure of information," said Lord Clinton-Davies in moving an amendment to the bill last week. "We know that as a matter of practice the government have been somewhat cavalier about consultation. Why should we take them on trust in the future?"

Supporting the amendment, Lord Addington said: "When it comes to these

important issues, the government cannot have too much advice, and the debate cannot be public enough. Too many decisions tend to be taken behind closed doors. There is always a danger of people looking for what they want to see from scientific advice, rather than seeing what is actually there."

Julie Hill from the Green Alliance is a member of the ACRE, which held its first meeting last week. The committee agreed to examine the issue of public access to information on genetically modified organisms as a priority. "The government had rejected the provisions we wanted in the bill as unnecessary," says Hill. "Now they have recognised our arguments and, we hope, will provide the guarantees we want over public access to information."

Further government amendments to the bill could emerge later this month when the legislation reaches its report stage in the House of Lords. It will then return to the House of Commons for final scrutiny before becoming law this autumn.

Last week, the government tabled a series of changes to plans for structuring the Nature Conservancy Council—the government's advisory body on conservation—in line with proposals advocated by the House of Lords Select Committee on Science and Technology. These new measures will strengthen the role of the joint nature conservation committee, which will coordinate the council's activities once it has been split up as planned into three separate agencies, one for each country in Britain. They will also give the joint committee more independence. □

Dutch go greener

THE DUTCH government last week allocated an additional billion Dutch guilders (about £310 million) a year to a new "improved" version of the country's ambitious 20-year National Environment Plan (NEP), first prepared in 1988. The revised plan, the NEP-Plus, will absorb up to 16 billion Dutch guilders annually by 1994. The Dutch describe it as Europe's most comprehensive environmental initiative.

"The new plan does not represent a change of strategy from the original NEP, but an accelerated implementation of the measures so that the long-term objectives are achieved earlier," said Eduard Groen of the Environment Ministry in The Hague.

The extra burden of financing the NEP-Plus falls mainly on industry and government whose costs will rise by 16 per cent and 50 per cent respectively. Householders' costs will remain steady at 30 guilders a month in 1994. Prime Minister Ruud Lubbers had originally planned to exact high penalties from motorists, raising their tax by up to 50 per cent to reduce the number of cars on the road by more than 2 million. Instead, motorists get off lightly under the NEP-Plus.

The revised plan focuses on energy conservation, and earmarks an additional 650 million guilders a year for such measures as better insulation of residential and industrial buildings, improved energy efficiency of appliances and the gradual switch to renewable resources of energy such as wind, solar and biomass.

The plan aims to cut carbon dioxide emissions by more than 40 per cent by 2000 as part of the government's strategy to reduce emissions of the gas—the main pollutant accelerating global warming. □

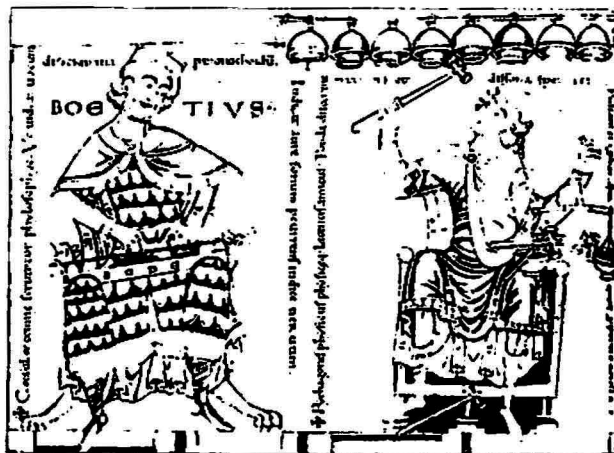
New angle on Pythagorean origins of science

DESPITE founding mathematics, democracy and theatre, the ancient Greeks have popularly been denied credit for being the first modern scientists. Plato and the rest may have been great theorists, but they have failed to impress as experimenters.

Now, argues Andrew Dimarogonas of Washington University, the Greeks do deserve credit for their practical work. He concludes in a paper soon to be published in the *Journal of Sound and Vibration* that the Greeks were scientists.

The picture above shows Pythagoras weighing blacksmiths' hammers as part of an experiment to investigate the nature of musical notes. The image comes from a 5th-century text, written a thousand years after Pythagoras's death, attributed to the Roman scholar Boethius. It is evidence, says Dimarogonas, that Pythagoras was the first modern scientist.

Boethius tells a story about Pythagoras passing a blacksmiths. He notices the different notes being produced as blacksmiths



Pythagoras (right) tests the pitch of blacksmiths' hammers

hammer their anvils and decides to investigate. His first guess, that the pitch depends on the strength of the blacksmith, is wrong. So he begins to experiment. Having built the first laboratory instrument, a monochord to calibrate pitch, he concludes that the note depends on the intrinsic properties of an instrument. (The left-hand part of the picture shows Boethius with a monochord.) Dimarogonas says: "Pythagoras, with his observations in the metal workers' shop, introduced the experimental method." □

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