

## Binary weapons voted out

by Colin Norman, Washington

THE Pentagon's plan to replace its ageing stockpiles of chemical weapons with a new generation of so-called binary nerve agents received a severe blow in the House of Representatives last week, and it now seems likely that Congress will eventually kill the plan entirely. Virtually unnoticed in the welter of events being played out in Washington, the House voted to deny funds for the Army to begin producing special 155-mm artillery shells for the binary weapons.

The vote, which came on an amendment to the Defense Appropriation Bill, represents sweet victory for a group of congressmen, led by Wayne Owens of Utah, who have fought the binary programme for months on the basis that if it were allowed to go ahead it would torpedo international chemical disarmament negotiations now taking place in Geneva.

The Pentagon—or, more accurately, the Army Chemical Corps—had requested \$5.8 million this year to begin producing binary shells in the Pine Bluff Arsenal in Arkansas, with a view to replacing part of its nerve gas stockpiles with binaries in 1977. The Army began touting the advantages of the weapon late last year, by arguing that since they consist of two "relatively non toxic" components, they will be safe to store, transport and use. The idea is that the two components would be kept apart until needed on the battlefield, then they would be loaded into the binary shell and mixed together to form a lethal nerve agent.

But the House was persuaded last week that if the United States now launches a massive new chemical weapons programme, the credibility of United States negotiators in Geneva would be destroyed and the chances of reaching agreement on international chemical disarmament would be negligible. Last month Mr Nixon and Mr Brezhnev signed an agreement in Moscow to launch new initiatives to help the negotiations along, but the binary weapons programme is scarcely seen as a helpful initiative.

Another factor in last week's vote was that the Pentagon had asked for funds from Congress before the binary programme had even been approved by the Administration, a situation which several congressmen regarded as putting the cart before the horse. In fact, since Congress started considering the funding request, the Administration has been carrying out a review of the necessity for binary weapons, and the programme has already picked up strong opposition from the Arms Con-

trol and Disarmament Agency. Thus, the Pentagon's strategy seemed to be to try to get approval for the programme from Congress and then use that to bolster its case with the Administration.

Last week's House vote was, however, far from the last word on the matter, for the Senate has yet to consider the Pentagon's budget request. But it is generally believed that the anti-binary forces in the Senate will be strong enough to uphold the House's action. For one thing, an amendment will be offered in the Senate Appropriations Committee to cut off funding of binary weapons, and if that fails a number of influential Senators led by Edward M. Kennedy are prepared to take their case to a vote on the Senate floor. □

## Windfall for natural resources

THE Wolfson Foundation recently announced its £1 million programme of support for research into the more efficient use of natural resources. The object of the programme is to come up with at least some answer to the problems of Britain's dependence on imported food, raw materials and energy.

This is a departure from the foundation's previous practice of giving grants for university research linked specifically to industry. The foundation received more than 150 applications for money, and in choosing the 18 projects which make up the present programme it was particularly anxious that ideas should be quickly and easily realisable commercially if the research was successful.

The projects chosen cover a wide field. Predictably, studies on various sorts of recycling and uses of wastes are much in evidence, and on the energy front there are two concerned with the use of solar energy. But money has also been found for work on the impact of motorways on agricultural land, and on cultivating the scallop, a potentially valuable export.

The Department of Agriculture at the University of Reading gets the largest slice of the cake. It has been given £250,000 for two pieces of work: one to improve the production and direct use of green leaf protein, and one for improving the production of oil and protein from seed crops. Together with a complementary study at the University College of Wales, Aberystwyth, on breeding grasses and legumes for upland areas, these lines of research could eventually lead to far more home-grown feedstuffs for Britain's animal and even human population. □

## Ecological railway line

from Vera Rich

THE new branch of the Trans-Siberian Railway, which is to run via Ust-Kut on the Lena, skirting the north of Lake Baikal, and across some 1,500 km of the Siberian taiga to join the existing tracks at Komsomolsk on the Amur, is clearly being treated as a prestige project by the Soviet media, which faithfully report every step in its progress.

This publicity is, perhaps, not surprising, since the projected line will run through some of the most promising of the undeveloped areas of Siberia. The line will, however, pass through a region which is a constant focus of attention for ecologists.

Lake Baikal has, of course, been subject to railway 'pollution' since the trans-Siberian route was envisaged in 1891. Indeed, in the early days, the track actually ran across the lake—rails were laid on the ice in winter and ferry boats were used during the summer (with a twice-yearly break in service during the thaw and freeze-up).

Conservation has now become an emotive concept, and the planners of the new line have not only taken it into account in their proposals for the line, but have also taken considerable care to be seen to be taking it into account.

Mikhail Reks, the chief engineer of the Baikal project, has assured world opinion (through the Novosti agency) of the environmental protection measures to be taken. No tree felling is to be permitted on slopes with gradients exceeding 15°, or in valley bottoms, to obviate erosion caused by avalanches and mud streams. Special dams and trenches in permafrost areas will protect the soil—as well as ensuring the safety of the railway itself. The banks of the reservoir on the River Zeya are to be reinforced, and it is stated that the massive bridge-building programme involved (over 140 bridges in all) will tend to stabilise the channels of the Siberian river beds, and thus reduce erosion.

The wild life of Siberia is to be left as undisturbed as possible—although Reks admitted that the line will to a certain extent "press back" many species. One wonders however, how the construction workers themselves will react to the ruling on insect life. For, in order to disturb the ecological balance as little as possible, no insecticides may be used, not even against the traditional curse of Siberian life—mosquitoes. The only means of self defence permitted, according to the official ruling, will be mosquito nets and special repellent creams. □