EUROPE

Nuclear reports

THE OPPOSITION which the thousands of demonstrators faced at the weekend in expressing their opposition to the Super Phénix fast breeder reactor near Lyons is not confined to the French government alone. The European Commission of the EEC last week voiced its own support for developing fast breeder technology when it released the final two parts of its three-part review on nuclear policy.

Last week's papers were on fast breeders and radioactive waste. A fortnight earlier the Commission released its first paper, on reprocessing. That report, acknowledging the Community's need for nuclear power given its desire to reduce dependence on imported energy, argued that reprocessing would help contain uranium imports and saw greater danger in not reprocessing. The Commission also proposed a special committee to consider a strategy for joint reprocessing.

Last week's breeder report was equally bullish. The limited contribution from new energy sources and the Community's limited access to uranium resources made the breeder an "essential link" in the Community's strategy. Member states had to preserve the option of making the breeder available to utilities on a commercial basis during the early 1990s.

Presenting the paper, Herr Guido Brunner, the Energy and Research Commissioner, insisted that there was no evidence to show that breeders were inherently more dangerous than existing types of reactor, although there were special security problems with plutonium.

● The OECD's Nuclear Energy Agency (NEA), in its annual report published last week, says that even under the most favourable circumstances of high availability and low demand for reprocessing services, the cumulative backlog of un-reprocessed material in member countries will increase from 4,000 tonnes U in 1977 to 16,000 tonnes U in 1986, and will remain at that level until 1990. "Uncertainties at the policy-making level" are the main obstacle to adequate reprocessing capacity, it says.

The report also says there is a pressing need to construct large scale demonstration facilities for the solidification and storage of high level waste.

Chris Sherwell

USA

Lost pre-eminence?

The US Office of Technology Assessment has published a report on research in agricultural science. Colin Norman reports from Washington

FOUR major reports in as many years have concluded that basic research in agricultural science in the United States has suffered from financial neglect, and that a modest injection of cash could pay handsome dividends. The latest, a slim volume issued last month by the Office of Technology Assessment (OTA), even goes so far as to suggest that the United States has lost its pre-eminence in basic research to increase food production, because of inflation.

The study, conducted by OTA staff with the help of two outside advisory committees, singles out three areas which should be given particular emphasis—photosynthesis, nitrogen fixation and tissue culture—and it suggests that new funding arrangements should be instituted to ensure that the cash is not siphoned off into other research.

Agricultural research in the United States is mostly funded by the Department of Agriculture, which operates its own research laboratories and channels funds to the State Agricultural Experiment Stations in the form of block grants. No funds are specifically set aside for basic research and, unlike other research agencies in the federal government it does not provide grants for university research on a competitive basis. Virtually every recent study of the agricultural research system in the United States has recommended that the department should institute a competitive grants programme, supporting projects on the basis of peer review; the OTA report is no exception.

One problem with the present system, according to the OTA study, is that since no specific funds are earmarked for basic research, a growing share of the research budget has been taken up by work on immediate problems, such as pest control and disease control, and "the net effect has been to short change basic research whose payoff is long term". Moreover, while basic research has been getting a smaller share of the pie, the pie itself has been shrinking. According to figures compiled by OTA, the Department of Agriculture's total R&D budget this year—\$570.6 million—is some \$48 million below the 1966 level in terms of purchasing power.

OTA therefore suggests (like all OTA reports, it doesn't actually come

out with a hard recommendation) that a competitive grants programme in the Department of Agriculture, specifically designed to boost funding for research on photosynthesis, nitrogen fixation and tissue culture, would pay dividends. Some \$15.6 million is now being spent in those three areas by the department, the National Science Foundation, other government agencies and private sources, the report states. It suggests that an additional \$12.5 million "appears cost beneficial" in the first year of the new grants programme, and \$4–6 million should be added each year for the next six years.

The recommendation is relatively modest. An Academy committee suggested recently that a competitive grants programme should be established with a \$60 million initial fund, rising by at least 10% a year in real terms. The programme suggested by the Academy would, however, encompass a vast range of research areas, including studies on nutrition and social policies.

There is at least some indication that repeated calls for such a programme are beginning to be heard in the federal government and in Congress. Earlier this year, President Ford recommended, as part of his valedictory budget, that \$27.6 million should be spent on a competitive grants programme in the Department of Agriculture, for a broad range of studies. The funds, in fact, were recommended by the newly-established Office of Science and Technology Policy (OSTP).

A massive agriculture policy bill, now under consideration in Congress, would also elevate research within the department's bureaucratic structure and formally establish a competitive grants programme. The bill has already cleared the Senate, and it was under debate last week in the House.

It is the appropriations committees in Congress which really count, however. Earlier this year, the House appropriations subcommittee which handles the budget for the Department of Agriculture approved only \$10 million for competitive grants in the 1978 fiscal year, \$17.6 million less than the Administration had recommended. After a bit of lobbying from the White House and from some agricultural scientists, the Senate appropriations committee approved the full \$26.7 million, however, and the conference committee which reconciled differences in the House and Senate versions last week came up with a compromise of \$15 million. □