

## IN BRIEF

**Nuclear trade**

Export of Australian uranium ore to the United States, Japan and West Germany, embargoed for four years, is to be increased but not matched by an extension of mining operations. Export permits are to be issued for Rio Tinto-Zinc to meet existing contracts, but exploitation of other mines must await the further findings of the Fox environmental enquiry.

Canadian sternness over the proposed French sale of a nuclear reprocessing plant to Pakistan has meanwhile resulted in France letting it be known that if Pakistan chose to cancel the contract no strong objections would be raised. The French have no intention of backing out themselves, in spite of modifications in their nuclear export policy acknowledging the dangers of nuclear proliferation. Canada provided Pakistan's only nuclear reactor, and has threatened to supply fuel for only

two years instead of six if Pakistan acquires a reprocessing plant.

● The informal association of nuclear exporters which met in London last week has grown to 15 with the addition of Switzerland, with observer status only. Members of the group have now been named officially. They are the United States, the Soviet Union, France, Britain, West Germany, Japan, Canada, Belgium, Sweden, The Netherlands, Italy, Switzerland, East Germany, Poland and Czechoslovakia.

**Genetic proposals: reactions**

The Institute of Biology has now expressed its concern about the UK Health and Safety Commission's proposals for regulating genetic manipulation experiments in Britain. Commenting last week on the Commission's consultative document, which was circulated at the same time as the Williams Committee report, the Insti-

tute says it is "neither practicable nor desirable" to have both a blanket regulation requiring advance notice to be given on all experiments and a clause exempting "what is likely to be over 90% of microbiological experiments".

The Commission, the Institute says, "has not available, nor will it be able to recruit, sufficient suitably qualified staff to deal with notifications and exemptions", and goes on to suggest that its involvement should be "solely as a body able to enforce recommendations" of GMAG, the advisory group recommended by Williams and now being established by the DES.

The Association of University Teachers (AUT) also made its views known last week. Making similar criticisms to those of the Institute of Biology, the AUT asks that the Commission think again "on the lines that it puts forward a much stricter definition of the experiments covered".

Our farm animals, as they exist today, have been produced by selective breeding from wild ancestors. Domestic cattle in Europe and North America grow rapidly when kept warm and dry with an ample supply of nutritious feed, and they give milk in large volumes under similar, unnatural conditions. Unless grazed on lush pastures of cultivated grasses whose productivity is maintained by the plentiful use of fertilisers, or unless they receive concentrated high-protein rations, their yield of meat and milk falls well below their potential. So long as the world produces a surplus of food to support this type of husbandry, the breeds which are at present the most numerous—the Friesian and the Charolais for instance—will retain their popularity.

As new and more productive types of cattle have been produced, so many of the older breeds have become less common, and some are already extinct. Similar processes have operated with sheep, pigs and poultry. The variety of the livestock on our farms is rapidly being reduced.

Most farmers have welcomed the simplification of having only a few well-characterised breeds of animals to choose from, and have not been worried by the disappearance of so many others. However, there has recently been more concern about the loss of so many breeds which have evolved during the last two thousand years, particularly as the original ancestors of the breeds cannot now be identified. Organisations such as the Rare Breeds Survival Trust have been established, and the results of

their efforts can be seen at the Cotswold Farm Park in England, and in Folk Museums in Scandinavia.

Many who wish to save our old breeds probably do so for senti-

**Past breeder****KENNETH MELLANBY**

mental reasons, but they also justify their policy by suggesting that it has an educational value, to teach children and students about the history of farming. It is also claimed that some of the old breeds may be able to contribute valuable genes to future breeding programmes, and thus produce animals with virtues missing from existing commercial strains. Plant breeders have used ancestral forms of potatoes and cereals in this way, and animals might be treated in a similar manner. Unfortunately, though this may still be a possibility, most

breeders of cattle and sheep think that there is little valuable genetic material in the small surviving stocks of most old breeds. This opinion may be coloured by their preoccupation with animals suitable for intensive farming, where hardiness and the ability to survive are no longer sought.

I believe that we should look again at some old breeds as meat producers in their own right. As the world population grows, there will be less surplus food for intensive animal rearing. Our best land, in all countries, will be increasingly needed for crops for human consumption, and marginal land in the uplands will become more important for raising livestock. Already it has been shown that non-domestic species such as the Red Deer in Scotland and the Eland in Africa may produce meat more efficiently than cattle or sheep on poor grazing, and some scientists think we should make more effort to find new species to domesticate. Unfortunately deer and antelope have proved difficult to manage in large numbers, so their potential is limited.

Some of the old breeds may be as good at making meat from poor herbage, and we may benefit from their heritage of domestication. I have kept Soay sheep, the breed still found on the islands of St Kilda off the west coast of Scotland and apparently little changed since they were herded by Neolithic man, on pasture on which ordinary domestic breeds would have starved. The animals flourished and bred. Other breeds of sheep and cattle, unsuitable for the intensive farm, might do equally well.