

IN BRIEF

Appointment of GMAG chairman

The first chairman of the British Genetic Manipulation Advisory Group is to be Sir Gordon Wolstenholme, Director and Secretary to the Trustees of the Ciba Foundation and President of the Royal Society of Medicine. The establishment of a group to advise laboratories on appropriate precautions in genetic experiments was the main recommendation of the Williams working party which reported in August this year. The group will examine proposals from laboratories (though precisely which types of experiment will have to be submitted is yet to be decided), assess the hazards involved and advise on appropriate precautions. The names of other members of the group will be announced soon.

Customers for nuclear club?

The secret club of 13 nuclear exporters, which aims to restrict nuclear exports to countries which have not ratified the 1970 Non-Proliferation Treaty, is reported to be considering admitting customer nations to its circle. The group is expected to meet in London this week. Customer nations made their resentment of the group's clandestine activities clear at the International Atomic Energy Agency annual conference in September; it has been suggested previously that the group admit customer nations but some members, notably France, were against it. Iran is being suggested as a possible first customer-member, as its large nuclear programme involves exports from several countries including the United States, Germany, France and the United Kingdom.

French chemical controls

Production and import of chemicals in France will be much more strictly controlled in future if a draft law adopted by the Council of Ministers last week is passed in Parliament. Producers and importers will be required to make a study of the effects of new chemicals on man and the environment and make their results available to the authorities, who will have six months to decide whether the manufacture, sale or use of the chemical should be subject to regulations or even banned completely.

The measure will fill a gap in existing legislation, which regulates the use of specific products such as explosives, pesticides and food additives and protects certain defined groups. The new law will be the first of its kind in Europe.

BRAZIL is a country of extremes; wealth and poverty, grandeur and squalor, but above all, tremendous vitality and optimism. What other country could build such a fantastic new capital as Brasilia? Brazil is completely fascinating to a biologist, whether standing on a street corner in downtown Sao Paulo and watching the complete ethnic diversity of the hurrying crowds, or gazing from a plane at the unbroken green carpet of wild vegetation stretching for hundreds of miles below, without a sign of human impact. Or seeing the "mud house" nests of a charming bird, Joao de Barro, on the crossbars of most of the power line poles along the highway going south from Porto Alegre.

Brazil is where the high technology of the 1970s is brought to bear on one of the last great untouched areas of the earth. Can we hope that enlightenment will come in time to enable this country to escape the rapacity of human beings and their new machines? Sometimes, the results of change are obviously beneficial. Large numbers of Japanese immigrants have come to Brazil in recent years. The farmers among them were accustomed to producing large yields from their tiny farms in Japan. They found that land was plentiful in Brazil, and they evidently apply the intensive methods they used in Japan to much larger farms. (Brazil is the world's fourth largest market for pesticides.) The result is that the huge city of Sao Paulo now receives a plentiful supply of splendid fruits and vegetables, probably for the first time.

I saw these commodities exchange-

ing hands in the big wholesale markets at midnight. The produce was as carefully packed and graded as if it had been intended for gift shops. The nutritional status of many Brazilians must have been greatly improved by the industry of these new farmers. But in some regions, malnutrition is

Brazilian dilemma



THOMAS H. JUKES

common. When I visited the Ministry of Health in Brasilia, I was told that vitamin A deficiency is so prevalent in north-eastern Brazil that the changes produced by it obscure the "Pap test" in women. Also, the deficiency causes blindness in many children. For people who cannot or will not eat green leaves, synthetic vitamin A should be added to food. It costs about three cents per million units—about \$150 for one million adult Recommended Daily Allow-

ances or for two million for children under four.

The huge Volkswagen factory at the western edge of Sao Paulo has helped to produce an "instant middle class" in Brazil. On city streets, drivers blow their horns and flash their lights at each other, to challenge the right of way, except when, as often happens, traffic is completely clogged.

A great question for the future of the biosphere concerns the fate of Amazonia, which includes six states and portions of three more. The Companhia Industrial de Amazonia was formed in 1966 for producing non-ferrous metals; Sudam is the agency for development of Amazonia including plans for iron ore and bauxite, for hydroelectric power, timber-cutting and raising cattle.

Twenty per cent. of the world's fresh water supply flows through the Amazon basin network of rivers. Amazonia's area is nine times that of France. Its colossal jungles have a canopy of green vegetation above a thin layer of fragile soil and resting on hardpan. When the jungle is cut down the topsoil tends to disappear, leaving an infertile base. It seems that little is gained by destroying the jungle, and at stake is one of the world's great photosynthetic factories for maintaining atmospheric oxygen. The birth-rate of Brazil, where Roman Catholicism is the state religion and divorce is not permitted, results in a population growth of about 2.8% annually.

Will a desire to preserve Amazonia override the pressures for Brazil's western expansion?