MALNUTRITION

Beans Means Meat

from our Special Correspondent

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"PEOPLE do not ingest nutrients, they eat food." This was the premise underlining the unique Unorthodox Foods Conference held in the sumptuous surroundings of the Portmeirion Hotel here last week. The conference, organized by 77-year-old Mrs Amabel Williams-Ellis (her husband is the distinguished architect and the builder of the village at Portmeirion), was attended by more than a hundred guests including nutritionists, representatives from overseas aid organizations, industrialists and domestic science teachers. They had in common the hope of lessening the world's food problems.

Mrs Williams-Ellis says that on a recent visit to Africa, she was moved by the sight of children suffering from kwashiorkor, and that she has since learned that the problem can be eased significantly by the availability of new and unconventional sources of protein. One example is fish protein concentrate, a product that can be made from the 40 per cent of the world catch which never reaches the table and which costs as little as £0.06 per pound of protein compared with £2.70 per pound of protein in the form of white fish. Leaf protein, which can be extracted from most kinds of foliage, is another foodstuff that could be made available cheaply to developing countries. The machinery required to extract enough of this product to supplement usefully the diet of 80,000 people could be installed for a mere £3,000. The conference also heard from Mr W. R. McDowall, a representative of British Petroleum, whose plant at Grangemouth in Scotland is producing annually 4,000 tons of a microorganism which feeds on the otherwise useless wax fraction making up one per cent of crude oil. The general conclusion seems to have been that no single source of protein can meet the demand, but that much can be done by pooling innovations.

With such a potential, why are 15 million people dying every year from malnutrition? "Acceptability is the keyword," said Mrs Williams-Ellis. "We are not sensitive enough to the basic anthropology of the situation." The prejudices and taboos even of starving people are difficult to overcome and any aid programme cannot expect that novel foods will be accepted at first offering. Food habits can and do change, however. This was the view put forward by Professor F. Aylward, head of the Department of Food Science at the University of Reading, and he instanced as an example the rise in consumption of soya protein in the United States during the past five years.

Nutritionists believe that if the people in developing countries are to alter their food habits, they will do so not because they are convinced of their nutrient value, but because they like them. One encouragement is to give the food "prestige value", which persuaded the conference last week that because the new foods rarely grace the tables of the aid-givers, the recipients regard what they are given as the very opposite of prestigious. "It is essential to remove the stigma of poor man's food," said Mr N. W. Pirie, head of the biochemistry department at Rothamsted Experimental Station and chairman of the conference, and Mrs Williams-Ellis set about doing just this in a way as unorthodox as the foodstuffs she was championing. Where better to seed the rumour that "all the best Europeans are eating it" than the dining rooms of a luxury hotel renowned for its *haute cuisine*?

Throughout the day, conference members were treated to dishes liberally fortified with delicacies such as A 3/5, Itona TVP and FPC. Using techniques pioneered by members of the Cauldron Club (a group of local ladies organized by Mrs Williams-Ellis on her return from Africa) the hotel chef demonstrated just how acceptably these unconventional products can be incorporated into conventional European dishes. He was assisted by chef Leonard, on loan for the day from the Lord Rank Research Centre, who convincingly demonstrated that fish mousse and liver pâté, both made from a high-protein fungal microorganism grown on starch, are as good as the real thing and certainly more nutritious; compared with his fungal meat loaf, beef steak, with its mere 15 per cent of protein, seemed positively frugal.

Beans, making a very good stab at being meat in the form of spun protein chunks (courtesy of Courtaulds), were served as a very passable goulash at dinner, and supplemented the main course of roast eland. This large antelope is seen by many as the "aid on the doorstep" answer to some of the problems in Africa. At £0.05 per pound, low in saturated fat content and delicious, it might well be.

More a get-together than a conference, the occasion none the less succeeded in several of its objectives. It demonstrated that there was a real basis for Professor Aylward's prophecy that these unorthodox foods will be in common use in 25 years' time. But more than that, it brought together a wide range of people with the interests of the undernourished at heart, and whether their concern was nutritional, sociological, financial or merely humanitarian, they left with minds that were at least as enlightened as their stomachs.

MARINE CONSERVATION

Lundy Comes First

THE proposal first put forward last winter for making the underwater littoral round the island of Lundy in the Bristol Channel a marine nature reserve dedicated to the study and protection of a distinctive flora and fauna and for informed diving recreation has been making steady progress this spring. The scheme was originally put forward by a group of marine biologists with West Country connexions and coordinated by Mr Keith Hiscock of the Menai Bridge Marine Science Laboratories. It has now been backed by the Nature Conservancy, the Lundy Field Society and the Devon Trust for Nature Conservation.

With the purchase of the island by the National Trust (for which the Landmark Commission acts as administrator) the moment seemed appropriate. Lundy has a unique situation in that it shares the semi-tropical regime of the south-west peninsula, but due to its prolonged isolation (it is 11 miles from shore and 20 miles from a port) has avoided the depredations of Victorian collectors which decimated the natural populations of the seashore of the remainder of the region. It remains rich in species and indeed has a number of flora and fauna unknown elsewhere in the British Isles. The Landmark Commission has now endorsed the scheme and some funds have been made available for a fortnight's expedition by a range of scientists this summer to draw up a biological catalogue and to make recommendations in the light of field experience of how a marine nature reserve round the island should be run. Mr Hiscock is coordinating the field expedition which is intended to be multidisciplinary.

The Landmark Commission, which administers the island and its facilities on behalf of the owners, the National Trust, is in any case considering introducing sea-wardens and starting a small museum, so the coordination of these can be effected with the interests of the marine nature reserve in mind from the beginning. The Landmark Commission, having adopted the proposal, is being kept in close touch with the further enquiries and thinking being put into the plan by the scientists. The immediate objectives of the proposal are to protect the natural populations of marine flora and fauna, to provide facilities for tourist divers to encourage an informed interest in natural history and to enable the public to glimpse the underwater world through special displays. The promoters are taking the scheme slowly and systematically. They wish to avoid such pitfalls—mostly sins of omission—that some other schemes abroad have encountered.