

THE BRITISH ASSOCIATION.

ARTIFICIAL BREEDING POSSIBILITIES.

The British Association at its annual meeting at Plymouth has had many interesting discussions and presented many subjects of scientific interest. None, however, are of greater importance, or open greater vistas of far-reaching possibilities than the announcement made at that meeting that after experiments on cattle, sheep, rabbits, and other animals, members of the animal research station near Cambridge have proved it possible and even simple to breed living creatures by artificial insemination.

Although the discovery, says *The Times*, has not quite reached the stage of practical farming, test tube parenthood has been brought to a tiny Shetland pony and a massive Shire horse.

An agriculturist who saw the demonstration said: "Already there has been produced an international cow—an animal born in England to a father in Denmark.

"There were still certain difficulties to be overcome before artificial breeding would be more than an interesting experiment," he added, "but its development could only be a matter of time.

"The present methods would be replaced by central stud farms, each serving hundreds of farms, and the farmer would choose fathers for his future herds from a catalogue.

"One may even visualise test tubes containing the germ of new life being rushed across the Atlantic in specially equipped aeroplanes so that an Aberdeen cow can produce a calf from a champion bull in Arizona."

THE PROBLEM OF MENTAL RE-CREATION.

In the Section of Physical Medicine and Physical Education which met at Torquay, Dr. E. P. Cathcart opened a discussion on "The Physical Approach to Fitness" reported in the same paper when he said the aim of the present campaign for physical fitness was to develop and perfect the potentialities which existed in all for the integration of the several bodily systems. As a result of this integration it was hoped to achieve a harmony of motion, a grace of carriage, a pride of body, a mental concentration and quickness of reaction, and a happiness and contentment which characterised the really fit.

If we were only concerned with physical re-creation it might be regarded as a relatively simple problem, but the need of rebuilding for the morrow might be as much psychical as physical.

Dr. Cathcart went on to discuss the dietary aspect of fitness, and said that adequate feeding did not mean elaborate feeding. There was no scientific evidence to show that meat was essential. He did most emphatically desire to bring home the point of view that diet alone was not the only factor involved in malnutrition. Just as there was no one cause of unfitness, so there was no one solution. Malnutrition of the spirit was quite as common as malnutrition of the body. The one reacted upon the other. In these days, when the raucous enunciation of rights threatened to extinguish the still small voice of duty, it should not be forgotten that fitness demanded discipline.

SYNTHETIC HORMONES.

In the section of medicine, Sir Walter Langdon-Brown opened a discussion on "Organotherapy." He reviewed briefly the history of the hormones, mentioning Hopkin's phrase: "chemical substances produced locally and temporarily, translate for the tissues the messages received through the nerves." The co-operation of organic chemists with biologists had led to the preparation of synthetic hormones and it had been found that simpler chemical substances than those existing in nature might be adequate to produce the biological effect. These basal groups were, in Dodd's happy phrase, "skeleton keys which can pick the physiological lock."

PUBLIC HEALTH.

UNDULANT FEVER IN BRITAIN.

"Pasteurisation would stamp it out."

—Sir W. Dalrymple-Champneys.

Undulant fever, contracted from cattle suffering from contagious abortion and estimated to attack about 500 people in Britain every year, is discussed by Sir Weldon Dalrymple-Champneys, Medical Officer of the Ministry of Health, in the issue of *The Lancet* published on August 6th.

The disease may be transmitted by milk as well as by direct contact with infected cows.

"Veterinary surgeons with experience of this disease are agreed that probably not less than half the herds in this country at any given moment are infected with *Br. abortus*, and that this disease is the most serious cause of loss to the dairy industry—even more serious than bovine tuberculosis," states Sir Weldon.

"The clinical diagnosis of undulant fever is often extremely difficult, but the disease should always be suspected in cases of continued fever of unknown origin. The possibility should also be borne in mind in cases of chronic ill-health and neurasthenia.

"The veterinary surgeon, farmer and butcher should take special precautions when handling possibly infected animals to protect themselves from infection through the skin."

Urging the safeguarding of milk supplies, he points out that pasteurised milk may be regarded as perfectly safe.

Raw Milk Dangers.

"It is no exaggeration to say that apart from those persons who by reason of their occupations are exposed to special risks *no one need have undulant fever*."

"Two hundred and twenty-eight of the patients in my series (of 321) had apparently had no contact with cattle but were raw milk drinkers.

"London, where well over 90 per cent. of the milk supply is pasteurised, provided only 25 of the 321 cases and in 16 of these cases raw milk had been consumed.

"I have been astonished by the frequency with which 'tuberculin-tested milk' is assumed invariably 'safe,' even by medical men. The consumer of efficiently pasteurised milk is safe, and universal (efficient) pasteurisation would practically stamp out the disease.

"The adult is, of course, at liberty to run the risk of contracting undulant fever if he so desires, but it will be generally agreed that no parent or person responsible for the health of children has the right to expose them to the risk of contracting this, or indeed any other of the many milk-borne diseases, by giving them raw milk to drink."

THE VALUE OF NATURAL FRUIT JUICE.

Mr. Francis J. Smith, of Wisbech, Cambs., in a letter in *The Times* writes that the leading article in that paper on the subject of the work which the Long Ashton Research Station of the University of Bristol are carrying out in connection with fruit juice products is a welcome indication that the value of natural fruit juices in the furthering of national health is gaining a semblance of official recognition. "This fruit-starved nation," as Sir John Orr has described us, is one of the few countries in Europe in which the consumption of natural fruit juice, and especially apple juice, has not been developed with full Government aid.

The German Government, which has 2,000 registered factories manufacturing fruit juice at the present time, gives them an equal place, in the diet of the nation, with milk, and the consumption is only slightly less than that of beer. In Switzerland 12 pints of apple juice a head of the population are consumed each year. In America, where

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