

a considerable degree be master of his own destiny.

Scientists have pointed the way for man to attain this mastery. The problem now rests with those responsible for education and government, Dr. McLester indicated. People must be taught what foods to eat and they must be insured an adequate supply of food.

Something like twenty million American people are probably getting barely enough, or in some cases not even enough, food of the kind to keep them healthy, Dr. McLester said in taking up the economic aspect of the problem.

"This condition, if continued, will

surely affect the health of the race. To make agriculture profitable to the extent that a good rural population can be maintained and at the same time the rest of the population supplied with cheap food is a problem that confronts the nation."

While he did not himself offer a solution of the problem, he quoted the report of the Elgin Committee, appointed to determine a national agricultural policy for Scotland, as follows:

"It is in the interest of the state that the price of food be kept so low that the poorest can obtain an adequate dietary."

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MEDICINE

Insulin Finds New Use As It Conquers "Hungry Disease"

INSULIN, gland product that keeps diabetic patients alive and well, can bring health to persons suffering from the "hungry disease," which is the exact opposite of diabetes.

This new, paradoxical use of insulin was described by Dr. Henry J. John of Cleveland at the meeting of the Association for the Study of Internal Secretions.

Heretofore the "hungry disease" was treated by surgical removal of a large part of the pancreas, a radical operation, hazardous even when performed by the most skilled surgeons. Now, instead of removing the pancreas or a large part of it, Dr. John "puts the organ to sleep" by giving a dose of insulin, the very same stuff that is produced by the pancreas in too great amounts in this disease.

The contradictory-sounding treatment was explained by Dr. John somewhat as follows:

Food is the trigger that starts insulin production in the pancreas. In diabetes, not enough insulin is produced and the amount must be supplemented by giving the patient more insulin. In the "hungry disease," known medically as hyperinsulinism, the pancreas goes on pouring insulin into the blood long after there is any need for it. As a result, these patients get very hungry, nervous, irritable and may lose consciousness.

Rests the Pancreas

Eating seemed to take care of the condition temporarily by using up some of the extra insulin, but the only way to shut off the production was by removal

of a large part of the pancreas. Dr. John's method is to give insulin soon after a meal and before the pancreas has received the signal to start its own insulin production. The insulin dose is calculated to take care of the sugars and starches the patient has eaten, while his own over-active insulin factory gets a rest.

The insulin treatment for this "hungry disease" is continued for three months, by which time the condition seems to be permanently relieved. The long rest evidently puts the pancreas back into a normal state and it can go on functioning on its own after that.

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PUBLIC HEALTH

Birth Control Investigated By Medical Association

THE American Medical Association's House of Delegates, meeting at Atlantic City, has just appointed a committee to study problems of birth control, apparently including methods and effect of contraception generally on population's health and to make at least a preliminary report to the Association at the meeting next year.

This is "not to be interpreted as a declaration either for or against birth control." It is the first time, however, that efforts to have such a committee appointed have succeeded or that the Association ever took note of the matter officially as a medical problem.

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PLANT PHYSIOLOGY

Boron and Manganese Important in Plant Growth

LABORATORY experiments with two minor soil elements, boron and manganese, may bring about radical changes in the fertilization of several vegetable crops in the near future, an announcement by the New Jersey Agricultural Experiment Station at Rutgers University reveals.

Research conducted by Dr. John W. Shive, the institution's plant physiologist and professor of plant physiology for the New Jersey College of Agriculture, has demonstrated that vegetable growers are not entirely correct in assuming the addition of nitrogen, potassium and phosphorus to the soil through fertilizer applications will supply all of the elements needed for satisfactory plant growth.

Dr. Shive has shown, through experiments in sand made absolutely "pure" by the removal of all plant nutrients, that deficiencies in either boron or manganese may kill an entire plant. Growers have not previously considered these elements in ordering specific fertilizer formulae for their crop.

Scientists and growers alike have been puzzled by the obvious nutritional deficiencies in fields where time-honored fertilization practices had been properly followed. Dr. Shive's laboratory accomplishments have now focused the spotlight upon the necessity of these two minor elements.

The Rutgers scientist secured "pure" sand for his experiments by washing the sand and then treating it with hydrochloric acid. After a second washing, all soluble material had been removed and it contained no plant nutrients of any kind.

Dr. Shive grew radishes in two-gallon crocks filled with this "pure" sand. To both crocks he provided a nutrient solution containing all the necessary major elements required for plant growth—potassium, calcium, magnesium, nitrogen, sulphur and phosphorus. To one of these crocks he added one-half part per million of boron and manganese.

The radishes receiving boron and manganese thrived. The terminal buds of those not given the additional applications turned brown within a few days; in three weeks they were practically dead.

Dr. Shive secured similar results with other plants such as tomatoes, corn and peas. Nasturtiums were killed by boron deficiency.

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