



Land-Saving Roots

MILK is becoming increasingly impressed on the American public consciousness—even upon the public conscience. It is freely asserted that none of us is really getting enough milk, and in especial, that the children of the great mass of the people are grievously undersupplied with this essential food of childhood.

The results of the national milk survey have already started a great drive for the production and consumption of more milk, and hence to bring about the breeding of many more milch cattle and the increase of acreage devoted to pasture and the raising of their particular types of feed.

Such a reapportionment of agricultural land may reasonably be expected to have a number of beneficial effects on the land itself. Secretary Wallace has been insisting, with a persistent reiteration worthy of one of his own favorite Old Testament prophets, that more of our acreage now in clean-cultivated, ero-

sion-provoking crops should be put back into permanent grass. A great increase in dairying would make this economically feasible, even necessary, rather than an act of sacrifice to prevent further eating away of the bare-surfaced soil by water or wind.

But cows do not live by grass alone. It is also recognized dairy practice to supply cows with "concentrates"—feeds given in the barn rather than in the pasture, such as the meals of alfalfa, cottonseed and soy beans, not to forget that old-time standby, clover hay.

Increased demands for these concentrates would apparently also work beneficially on the land. Alfalfa, clover and some of the other plants in their class are semi-permanent crops, affording at least partial protection against erosion. They have deep root systems, thus tapping the lower strata of the soil for water, especially during drought, and for mineral nutrients at all times. They

harbor soil-enriching colonies of nitrogen-fixing bacteria.

Soy beans are of less value as erosion-checkers, but they are at least efficient nitrogen-capturers. As relative newcomers on the agricultural scene, they are deserving of encouragement in a program calling for greater crop diversification, especially in the South. And the value of a better market for the by-products of cotton, like cotton seed meal, will not need laboring.

These, to be sure, are only a few elementary factors in the question. The task of putting America on a more-milk, more-cows basis will not be simple, nor its accomplishment come without friction. But land as well as children will undoubtedly profit through the ministrations of the cow, so that the job must be undertaken with determination, and wrought upon with understanding and patience.

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MEDICINE

Discover New "Factor" of The Pituitary Gland

DISCOVERING a new hormone from the body's master gland, science may have a clue to the cause of stomach ulcers.

The new product of the pituitary gland seems to stimulate the stomach to pour out increased amounts of hydrochloric acid. This discovery has just been made and reported by scientists at the Courtauld Institute of Biochemistry of the Middlesex Hospital of London.

It may mean that it will be found that a disorder of the pituitary is the cause of stomach ulcers. Excess hydrochloric acid is found in cases of stomach ulcers.

This excess acid is believed by some scientists to be a cause or part of the cause of this condition. The London discovery also ties in with the finding of an American scientist, Dr. Harvey Cushing, that stimulating the base of the brain near where this gland is located may produce stomach ulcers.

The new glandular product comes from the hind part of the pituitary gland. It was discovered by Drs. E. C. Dodds, R. L. Nole and E. R. Smith. With characteristic scientific reserve and caution, they report (*The Lancet*, Oct. 27) that their findings "suggest the probability of a new posterior pituitary

hormone." They call it a "factor."

They think they have discovered either a new hormone or a new, hitherto undiscovered property of an already known pituitary hormone which affects blood pressure. The editor of *The Lancet* considers the new substance more likely to be an entirely new hormone.

In their investigations the London scientists injected under the skin of forty rabbits a special extract from the hind or posterior part of the pituitary gland. This produced marked injuries in the fundus or acid-producing area only of the stomachs of all the rabbits. The same effect was obtained when the rabbits were fed very large doses of the standard posterior pituitary extract prepared according to the directions of the British Pharmacopeia.

The doses given both by mouth and by injection under the skin were so large that the newly-discovered factor that injured the rabbits' stomachs would appear to be negligible in the ordinary doses of posterior pituitary prescribed for patients. What effect the new hormone has on the body in the small quantities normally produced by the pituitary gland is not yet known with certainty.

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