

PHYSIOLOGY

Syrup of Germs Devised To Help Soldiers Eat Grass

Bacteria That Do Not Cause Disease Can Also Be Planted in the Intestines To Make B Vitamins

A CHOCOLATE-flavored syrup of germs that, according to preliminary tests, enables human beings to eat grass, leaves and wood if other food supplies fail was announced by Dr. Gustav J. Martin, of the Warner Institute for Therapeutic Research, New York City, at the meeting of the American Chemical Society in Memphis.

The germ syrup, which would accomplish the desired result for a lifetime at a cost of \$2 per person, is considered particularly suitable for paratroops and other army units. It seems to be the American research scientist's answer to reports that the Germans have developed a similar procedure for enabling their soldiers to live on wood, leaves or grass.

For civilians as well as soldiers, a germ syrup to supply vitamins for a lifetime is also on its way, if Dr. Martin's experiments prove successful. Certain bacteria, or germs, of a type that do not cause disease, are known to manufacture various of the B vitamins. The cow does not have to eat B vitamins in food because her rumen contains the bacteria that manufacture them. Dr. Martin's experiments are designed to develop similar germ vitamin factories in man's intestines.

Dr. Martin's work on developing germ vitamin factories and the chocolate-flavored germ syrup for digesting grass, leaves and wood has been done on laboratory animals. Preliminary tests on humans have been started in New York hospitals, but have not gone long enough for conclusive results to be reported.

The idea of creating germ vitamin factories in man's body to make him independent of food sources of vitamins or even of vitamin pills resulted from the discovery that one of the B vitamins, pantothenic acid, can stimulate the growth of those intestinal tract germs which synthesize another B vitamin, inositol. In past experiments when pantothenic acid was left out of the diet, the symptoms that resulted, such as hair graying and hemorrhage of the adrenal glands and so on, were attributed to the

lack of pantothenic acid. But because there was no pantothenic acid in the diet, there was also an unsuspected deficiency of inositol. It was this unsuspected lack of inositol that was responsible for some of the symptoms attributed to lack of pantothenic acid.

Graying of the hair, Dr. Martin reported, is actually due to pantothenic acid deficiency and inositol will not cure the condition. The adrenal hemorrhages, however, are due to the inositol deficiency.

Lack of pantothenic acid, Dr. Martin pointed out, is not the only dietary lack which will produce gray hair. Restoring hair color lost through lack of pantothenic acid may be accomplished by restoring pantothenic acid to the diet. Hair color may also be restored, as has

previously been reported, by doses of another vitamin para-aminobenzoic acid. This vitamin acts to "cure" gray hair, Dr. Martin is now convinced, through its action on bacteria in the intestinal tract.

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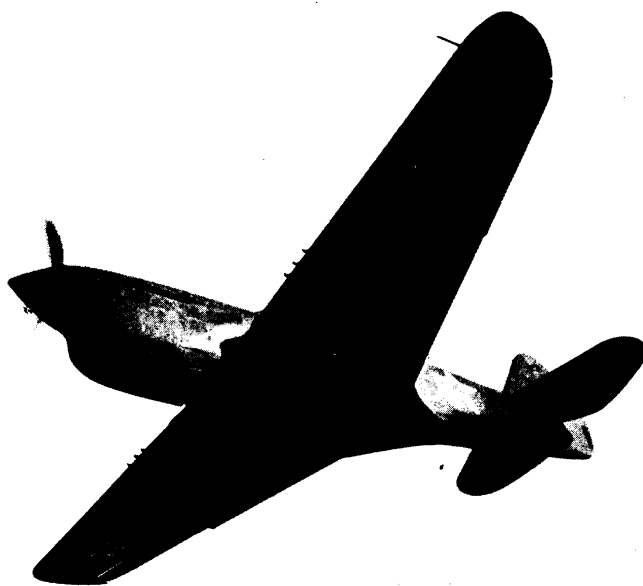
CHEMISTRY

Plastics Shortage Averted By New Material From Wood

A NEW plastic filler material made from sawdust, scrap wood, cotton, plant fibers or other waste cellulosic materials was announced by A. O. Reynolds of the Northwood Chemical Company and Raphael Katzen and Dr. Donald F. Othmer of the Polytechnic Institute of Brooklyn at meeting of the American Institute of Chemical Engineers in Boston.

The filler material can be combined with phenolic resins in the proportion of three parts of filler to one of resin. This gives a plastic comparable to that obtained from one part filler to one part resin when ordinary fillers are used, according to the authors of the paper. Thus the present limited supplies of phenolic resins can be made to go twice as far.

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WARHAWK

This new Curtiss fighter plane is said to be fast and high-climbing. Details on the performance, however, have not been released by the War Department. It is a successor to the Curtiss Tomahawk and Kittyhawk.