



NEW HAZARD

This is what happened when the first explosion occurred in a soybean industrial plant.

MEDICINE

Germinated Barley Yields Diabetes Remedy Like Insulin

A SUBSTANCE akin to insulin, which may prove useful not only in diabetes but also in helping to gain weight, has been obtained from germinated barley by two French scientists, Drs. E. Donard and H. Labbé of the Faculty of Medicine of Paris.

Insulinoide of germinated barley — I. G. B. for short — is the name Dr. Labbé gives the substance in his report. (*Canadian Medical Association Journal*, Feb.)

Valuable as insulin is, Dr. Labbé points out, it has certain disadvantages and can only be used under the careful guidance of a physician. For this reason, almost as soon as insulin had been discovered scientists tried to find whether certain vegetable cells, like those of the animal pancreas, had the power to secrete substances with properties like those of insulin but which would at the same time be "less dangerous to apply and easier to manipulate."

One of the first to work on this prob-

lem was Prof. J. B. Collip of McGill University, Montreal, who discovered a "glucokinine hormone" in vegetable tissues. Other investigators tried the effects of various plant extracts, among them whortleberry tea and bean pod extract.

The barley insulinoide prepared by Drs. Donard and Labbé has been tried on animals and human patients by themselves and by colleagues at the Hospital Saint-Louis of Paris. In diabetes the preparation reduces the high sugar content of the blood and relieves other symptoms, Dr. Labbé reports. Its use, he states, seems to be absolutely justified for fattening cures for underweight people.

"Of course," he adds, "only long experience will tell if, while being much less dangerous to handle than insulin, insulinoïdes and particularly the I.G.B. will produce gently and continuously the desired effects on the recovery of the general nutrition."

Science News Letter, February 22, 1936

CHEMICAL ENGINEERING

Soybean Explosions New Industrial Hazard

THE SOYBEAN is repeatedly in the limelight these days.

What with the United States growing a bumper crop of the Asiatic beans, and farmers and industrial companies launching out into new projects to make the most of them, the soybean situation is, as the market journals might say, "lively."

But with new opportunities, appears a new hazard: soybean plant explosions.

Last October 7, without warning, came the first explosion in a soybean industrial plant. Eleven men died, 45 were injured, when a Chicago processing plant handling 4,000 bushels of soybeans a day was badly wrecked. So violent was the explosion that approximately 500 homes and business houses were damaged by flying debris and by the shock.

Within the same month, a rural soybean unit in Illinois suffered a similar disaster. This soybean oil extraction plant had been installed to enable farmers of the community to utilize their soybean crop to better advantage. A swift, disastrous chain of events—fire, ignited solvent vapors, explosion—left two men dead and two injured.

Before this second explosion occurred, chemical engineers of the Bureau of Chemistry and Soils of the U. S. Department of Agriculture had already gone into action. Dr. David J. Price, the department's chief investigator of these problems, and his assistant, Hylton R. Brown, inspected the ruins, and gave their verdict:

Caused by Hexane

Both disasters, judging by the ruins, started when hexane vapors became ignited. Hexane is a flammable liquid used as a solvent in extracting the soybean oil. In the industrial plant an accumulation of the explosive hexane gas was ignited by a minor dust explosion near a flaking roll in the bean preparation room. In the rural unit the heavy hexane vapors settling in the extraction room apparently were carried over through an open door to the fire in a nearby boiler room and were ignited in the fire box.

Dr. Price believes in preventive treatment for such disasters. He is busy now warning farmers and manufacturers in the soybean industry to follow the safety codes for protecting against other explosive dusts. (Turn to Next Page)