AGRICULTURE—CHEMISTRY

All-American Cigarettes Marketed For First Time

Paper Which Has Been Made from Russian, Polish Rags Now Can Be Made from Flax Grown in United States

CIGARETTE smokers in America were made independent of European supplies of cigarette papers just in the nick of time—the first sheet of all-American cigarette paper came off the rolls on Sept. 3, 1939, the very day the European War started. The story of the new all-American wrappers for America's smokes was told at the Sixth Annual National Farm Chemurgic Conference by Harry H. Straus, president of the Ecusta Paper Company, Pisgah Forest, N. C.

Mr. Straus became convinced, in the course of his frequent trips to Europe, that another great war was inevitable. He knew that the huge American cigarette industry was absolutely dependent on paper made from linen rags, which came from Russia, Poland and the Baltic countries. He was sure that the coming war would seriously curtail this supply, and might cut it off altogether.

Flax has been grown in the United States since Colonial days, but lately only seed flax, for oil, has been cultivated. Cultivation of straw flax had about died out. Mr. Straus set out to revive the old flax industry, especially for the direct production of high-grade cigarette paper.

Large plantings in the Imperial Valley of California yielded good material. However, the center of flax production was and remains Minnesota. For the needs of the new mill, California can supply 2,500 tons a year, Minnesota 7,000 tons; which just meets minimum requirements. This production will keep between 75,000 and 100,000 acres of land under cultivation.

Science News Letter, April 13, 1940

Soybeans for Human Food

PASS your plate for a big helping of tasty soybeans. The pigs and the chickens have already been served; now is the family's turn.

Soybeans for human food, however, won't be the same kind now produced for stock feeding and industrial processing, Prof. W. L. Burlison of the University of Illinois told the Farm Chemurgic Conference. A number of varieties specially adapted for human consumption have been brought in from the Orient by the U. S. Department of Agriculture, and six of them have been selected and bred as having especial promise. Next big expansion in soybean use may be expected to come across the dinner table, via these new varieties.

Canned soybeans have already been marketed in an experimental way. The new varieties, however, give promise of being acceptable as green vegetables, for shelling like the already well known Lima beans. Research aiming at better results in canning is also under way. Soybeans, whether green or canned, bring the appeal of a new series of flavors in vegetables. They also offer an entirely different type of dietary possibilities, because in them a high oil content replaces the starch that predominates in all other kinds of beans.

Science News Letter, April 13, 1940

ON PEACEFUL BORDER

Rivalled in power and speed only by war machines, is this tractor plowing through thick gumbo on the International Boundary Levee along the Rio Grande.

Seek Industrial Corn Use

RESEARCH to find industrial uses for corn will have to go clear down to details of molecular structure of the starch, proteins and other constituents of the corn grain, Dr. Henry G. Knight, U. S. Department of Agriculture, told the Chemurgic Conference. Dr. Knight outlined to his audience some of the lines of attack contemplated in the research program for the Northern Regional Laboratory, now building at Peoria, Ill.

Corn, the country's biggest single crop, has an apparently inevitable flow toward food, Dr. Knight's figures indicated. Only 9% of the crop leaves the farm for the hoppers of industrial plants. Of this, about a fourth goes right back to the farm as feed for animals, and another half becomes human food in one form or another. In other words, the actual percentage of the total corn crop that enters non-food uses is very small.

Starch, which makes up the bulk of the corn grain, also makes up the bulk of corn's present industrial output. By far the greater part is used as starch or after conversion into compounds of smaller molecular size, the most familiar of which are glucose and alcohol. Practically nothing has been done in the direction of building the molecules up into bigger ones, as molecules of starch's kin-compound, cellulose, have been built up into synthetic plastics.

Science News Letter, April 13, 1940