

MEDICINE

Color Test on Blood Detects Disease of Liver

► A BLOOD test that may prove helpful in detecting liver disease, including cancer that has spread to the liver, was announced by Drs. David W. Molander, Max M. Friedman and John S. LaDue of the Pack Medical Group, New York, at the meeting of the American Association for Cancer Research in New York.

The test is a colorimetric method for determining the level of a body chemical, cholinesterase, in the blood serum. Low levels of this chemical are found in patients with widespread cancer that has spread to the liver and in patients with lymphoma that has spread to the liver. When these lymphoma patients improve under treatment, the cholinesterase in the blood serum, as shown by the test, progresses toward a normal level.

Useless operations can sometimes be prevented by the information given from this test, the doctors reported. They also stated it should be valuable in distinguishing between different possible causes of jaundice in various patients.

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INVENTION

Automobile Salvaging in Easy-to-Handle Packages

► A MACHINE which cuts automobile bodies into three sections so they can be baled by a conventional power-driven press has been invented by Bruce I. Hochman of Los Angeles, and awarded patent number 2,590,700.

The device consists of two pairs of rotary saws. Each set of saws has one saw mounted with its center near a conveyor belt carrying the chassis-stripped auto bodies, and the other saw suspended immediately above it.

The auto bodies are fed crosswise into the saws and are cut into three sections which can be baled by scrap-metal presses into easy-to-handle packages.

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Prairie and Plow

► WHEN FARMERS first transplanted themselves from the Old World to the New, most of them came from countries that had once been forest-covered.

Land had to be won with the ax before it could be given to the plow. Unforested land was mostly moor, heath, rocky upland or swamp—all unfit for farming, though the swamplands might be reclaimed by draining.

They found essentially similar conditions in the eastern part of this country, where the first settlements were established. When a pioneer went out to win a farm from the wilderness, the first thing he had to do was "make a clearing."

The trees were cut down, and except for the logs he needed for his cabin and rail fences, they were burned to get rid of them.

Potash, leached out of the ashes, was used mainly in soapmaking, though some of it might be traded for such "store goods" as gunpowder, calico, salt and ironware. Then the stumps were pulled or blown out, and finally the land could be plowed and planted.

Not until the generation after the Revolution, when the first great wave of migration broke into the West, did settlers encounter extensive natural grasslands. There were "prairie islands" in the forest cover of Ohio, and when the settlers got to northern Illinois they found a continuous sea of tall grass, with timber belts confined mostly to the banks of rivers.

At first they did not know what to make of it. A doctrine arose, and was widely accepted, that only soil that could grow such big things as trees was "strong" and could produce good crops; soil that grew only grass was "weak" and not fit for farming.

So for some years the farmers stuck stubbornly to the river banks and did not attempt to break the prairie sod, which was really much richer than the cut-over land they were cultivating.

There were two other, and better, reasons for the failure at first to put the grasslands under the plow. Early transportation followed the rivers a good deal, going either by boat or along roads that stuck to the easy water-level grades.

The other reason was the unsuitability of the early part-wooden or cast-iron plows for the tough task of ripping through the matted cordlike roots of the prairie grasses. But about a hundred years ago steel plows began to be built—big ones, too, drawn by six or eight span of oxen. They made possible the conquest of the long-grass prairies, which are now the world's most productive corn lands.

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MEDICINE

Birth Control in Rats

► BIRTH CONTROL by a chemical that a woman can swallow like a pill or in water is the prospect held out in studies reported by Drs. Gustav J. Martin and J. M. Beiler of the National Drug Company Research Laboratories, Philadelphia.

The chemical is phosphorylated hesperidin. It prevents conception by protecting the jelly-like covering of the egg cell. This jelly-like covering is normally dispersed by the enzyme, hyaluronidase, which accompanies the sperm cell from the male. The action of hyaluronidase enables the sperm to penetrate the jelly-like covering of the egg cell.

The hesperidin compound which counteracts hyaluronidase has so far been studied in rats. In these agents it "was found to be an effective antifertility agent," Drs. Martin and Beiler state in their report to fellow scientists through the journal SCIENCE (April 11).

In a group of rats that got the chemical by mouth, six out of 30 became pregnant and had successful deliveries. In a group that got it by injections, or "shots", into the belly, four out of 24 delivered. About 80% of these same rats became pregnant when they were remated after the hesperidin treatment was stopped.

As a further check on the effectiveness of the chemical, the scientists set the experiments up with two females and one male in each cage. One of the females got the phosphorylated hesperidin treatment. The second did not. Unless this untreated rat became pregnant, showing that the male was fertile, the treated female was not counted in evaluating the results of the chemical.

The phosphorylated hesperidin had no effect when given to the males.

Although the scientists call the results "striking," they consider them preliminary.

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