

Much of the excitement caused by the announcement of the find results from two factors: use of room temperature and use of sawdust.

As Dr. Block and Mr. Tsao see the picture, the fact that the oyster mushroom can be raised at 78 degrees Fahrenheit points the way for open season on the steak embellishers the year around. The process would no longer have to be seasonal and would not have to be confined to the cooler areas of the world as is now the case with *Agaricus campestris*.

Waste Product Used

Use of sawdust in the process can mean the utilization of a by-product now being dumped or burned as waste. Sawdust, wood shavings, wood bark, bagasse and similar cellulosic and ligneous waste products are in abundant supply in many areas of the world.

"In the United States alone, 7,500,000 tons of sawdust go to waste every year. The significance of a process to convert this waste into a flavorful nourishing food is self-evident," the scientists state.

Sawdust, unlike manure and straw, is uniform in composition and can be handled readily by mechanized equipment.

However, as if all this were not enough, the researchers have also looked ahead to find a use for the used sawdust. With their desire to use waste in a productive, chain-reaction fashion, Dr. Block and Mr. Tsao believe that the spent sawdust in which mushrooms have been cultivated will have by-product value as an organic fertilizer.

"Mushrooms," says Prof. Clyde M. Christensen of the University of Minnesota, "have been long regarded all over the world as the most delectable and succulent of foods. Their peculiarly delicate flavor charmed the luxury-loving Roman aristocrats more than 20 centuries ago, as it charms all civilized folk today."

Although the mushroom has been collected and eaten for 20 centuries, it has been commercially cultivated as an industry for only about 200 years.

When Dr. Block and Mr. Tsao made the announcement of their work, they modestly told fellow scientists of the American Chemical Society there "are a number of different species of mushrooms that grow

on trees in nature and are considered quite desirable for eating by mushroom collectors. It occurred to us that these mushrooms might be produced from sawdust, an abundantly available waste product."

Fortunately for mushroom fanciers, the American housewife, and the mushroom industry, the Florida team has so far been correct in their assumptions and experiments.

As an industry, the mushroom business may soon mushroom into a mushroom boom.

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BIOCHEMISTRY

Acid Added to Bread Almost Triples Growth

➤ **ADDING** a small amount of the amino acid, l-lysine, to white bread almost tripled the growth rate of laboratory rats, Drs. J. B. Hutchinson, T. Moran and J. Pace of the Research Association of British Flour-Millers' Cereal Research Station at St. Albans found.

What effect the lysine enrichment of white bread may have on other aspects of development still needs to be learned, the scientists state in *Nature* (July 7).

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TECHNOLOGY

Hydrocarbon Fuel From Western Mineral

➤ **A SOLID FUEL**, neither coal nor asphalt, although it resembles both, is to be tested.

Latest mining and transportation methods are put to use in a new processing plant, to be completed in 1957, which will make high purity coke out of an unusual geological formation found near Salt Lake City.

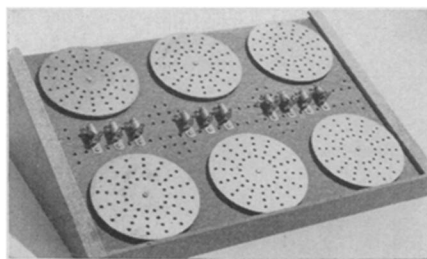
The formation, known to geologists as Uintaite, is of hydrocarbon origin. Black like coal, it contains more resin and less sulfur than asphalt. Petroleum-like by-products, similar to those from oil shale, are expected to be recovered in the coking process.

Barber Oil Corporation and Standard Oil Co. of California have joined in the effort to adapt the hydrocarbon mineral to fuel use. They have re-named it "Gilsonite," after an early explorer of the formation where it is found, and are building the processing plant near Grand Junction, Colo.

A six-inch pipeline will be used to pump a suspension of the mineral over the mountain from the mines at Bonanza, Utah.

Science News Letter, July 21, 1956

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