

GENETICS

New Food Yeast Strain

Treatment with camphor vapor produces from *Torulopsis utilis* a new strain with cells bigger and with double content of edible protein.

➤ A NEW STRAIN of yeast, with cells double the size of its parent species, has been originated at the British government's Chemical Research Laboratory at Teddington. The increased cell volume seems to be hereditary and permanent, for it has remained constant through the many cell generations through which the new strain has now been propagated, Dr. A. C. Thaysen and Muriel Morris state in a joint report. (*Nature*, Nov. 6, 1943)

Dr. Thaysen and Miss Morris were working on a species of "wild" yeast, known technically as *Torulopsis utilis*, which appears to have definite promise as a quick-producing source of edible protein when raised in great mass cultures in vats. They wanted a strain with bigger cells, just as a potato breeder might want a strain with bigger tubers.

First they tried a solution of colchicine, which has had astonishing effects in producing giants among larger plants.

Colchicine failed to work, as did also another heredity-changing chemical, alpha naphthylamine.

However, the experimenters recalled the statement of another researcher, who claimed that camphor vapor caused changes in cell size in ordinary yeast. They tried this on their *Torulopsis* cultures, and presently were able to isolate a strain with cells slightly longer and decidedly thicker than those of the parent stock, with a net content a little more than twice as great.

Analyses showed that the chemical constitution of the new strain was not substantially different in most respects. It did, however, show considerably higher phosphorous content. Also, what may be of considerable practical significance later, the individual cells grow to full size and are ready to divide in considerably shorter time, despite their double size.

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GENERAL SCIENCE

Science in Leningrad

Despite incessant bombing and the vicious attacks of two winters, report indicates that the scientific institutions remain in good order.

➤ DESPITE the incessant bombing that the Luftwaffe gave Leningrad, and the vicious attacks of two winters during which it was besieged, the scientific institutions and buildings of that city remain in relatively good shape. Soviet scientists are preparing, as the enemy is driven back, to resume normal scientific life.

The conditions in Leningrad were surveyed by Academician Leon Orbeli, vice-president of the Academy of Sciences of the U.S.S.R. and director of the Pavlov Physiological Institute, in a report prepared by the Soviet Scientists' Anti-Fascist Committee.

The main buildings of the Leningrad Academy remain in good shape, largely due to the work and care of the scientists who remained there during the war. The old academy buildings and the eth-

nological museum that formerly housed Peter the First's collection of curiosities are still standing.

Only the botanical gardens suffered heavily. A direct hit demolished the conservatory, destroying rare palms of great value and other tropical plants. It is difficult, Academician Orbeli reported, to estimate the damage done to the country's scientific findings in the field of botany. The herbarium and world collection of seeds, however, are safe, having been removed to a bomb-proof shelter in good time. The employees of the botanical gardens have begun to restore the gardens and are now growing new seedlings.

Work on plants for camouflaged airdromes, cultivation of various medicinal herbs and consultations with truck gardeners are among the war projects of

the Botanical Institute, named in honor of Academician V. Komarov.

In the autumn of 1941 a bomb struck a building of the Pavlov Physiological Institute, but scientists were able to continue their work, as every dog used for experimental purposes was saved. Even during the most difficult months of the siege and blockade, Leningrad authorities supplied these animals with sufficient food.

Ivan Pavlov's closest colleague, Prof. Maria Fetrova, who remained in Leningrad, is conducting experiments on these dogs to determine the influence of bombings and shellings on higher nervous activity.

The Koltushi Experimental Station, in which Pavlov spent so much time during the last years of his life, remains the same and continues its scientific work.

Looking toward the day when normal scientific life can be resumed in Leningrad, the scientists are beginning to take necessary steps to repair the buildings of the Leningrad Academy and scientific institutions.

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BOTANY

Dropping of Cotton Buds Caused by Dim Light

➤ SUSPICIONS that the money-losing premature dropping of flower buds and immature bolls by cotton plants is caused



COLD WORK — This winter scene shows a U. S. Bureau of Mines exploratory crew working on the snow-clad slopes of Mt. Pleasant, Utah.