

MEDICINE

Jelly Contains Antibiotic

The controversial royal jelly, a food given only to the prospective queen bee, has been found to contain an antibiotic effective against microorganisms causing infections.

ROYAL JELLY has been found to contain an antibiotic that is approximately one-fourth as active as penicillin.

Three researchers in Baton Rouge, La., have discovered that this food, fed only to the bee chosen to become a queen of the hive, contains an antibiotic capable of stemming the growth of microorganisms that produce skin and intestinal infections.

This includes those infections that cause welts and boils, Dr. Murray S. Blum of Louisiana State University told SCIENCE SERVICE. Therefore, it is possible there is some merit to the use of royal jelly in cosmetics, but this remains to be shown.

"Royal jelly is such a sticky subject, that it is hard to predict just what, if any, benefits might accrue from its use," Dr. Blum said. The Federal Trade Commission and Food and Drug Administration have consistently warned manufacturers of royal jelly against false claims for their products. More than a year ago, royal jelly was advertised as a beautifier, youth restorer and health food.

Dr. Blum and his co-workers, Dr. Arthur Novak of the chemistry and biochemistry departments, and Stephen Taber, III, U. S. Department of Agriculture in Baton Rouge, explained the antibiotic activity diminishes with age. Therefore, just what amount of the jelly could be helpful for any period of time remains unknown. Neither do they make any claims concerning the cure of intestinal infections. Tests carried out to

date on microorganisms in the laboratory indicate the jelly contains an antibiotic that will inhibit the growth of certain organisms growing in laboratory cultures only, they stressed. There are many strains of each disease-producing microorganisms that, over a period of time, seem to develop or lose resistance to these antibiotics, Dr. Novak explained.

It appears insects are individual "drug houses," capable of producing drugs that help them control those organisms within their environment, Dr. Blum said.

Last year when royal jelly claims were put forth most persistently, U. S. Department of Agriculture scientists said that most of the claims for royal jelly were unwarranted and not backed by clinical research. Reputable scientists have been unable to find any trace of most of the European scientists quoted in many advertisements for royal jelly, James I. Hambleton of the U. S. Department of Agriculture's beekeeping section said at that time.

The experiment of the three Baton Rouge investigators, reported in *Science* (Aug. 21), is one of several independent research projects now underway in this country. The U. S. Department of Agriculture is also studying the by-products of honeybees. The Baton Rouge researchers are investigating the by-products of southern fire ants and stinging ants.

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ENGINEERING

A-Powered Town in Ice

An underground town, powered by atomic energy, is being built by the U. S. Army under the Greenland Ice Cap. One hundred men will be able to live there.

THE UNITED States Army is constructing a small atomic-powered town beneath the surface of the Greenland Ice Cap.

Scheduled for completion in 1960, the town will be situated 138 miles inland from the western edge of the huge ice blanket that covers all of Greenland except some narrow coastal strips.

It will provide year-round facilities for 100 men.

The Army expects to build a sub-surface ice road connecting the town with Camp Tuto, near the sprawling Thule Air Force Base.

The town will be named Camp Century, because it originally was expected to be 100 miles from Camp Tuto.

The main sub-surface trench, 1,000 feet

long, has been completed. Also finished is one of several planned lateral trenches which will resemble side streets branching off a thoroughfare.

Construction and future maintenance is under direction of the newly organized Army Polar Research and Development Center, a division of the Corps of Engineers. When completed, Camp Century will be staffed by men under the Chief of Research and Development, which has no direct connection with the Engineers.

The dimensions of Camp Century will be approximately 1,000 by 800 feet. All of it will be under the surface except for a few air vents and escape hatches.

The trenches are being dug by teams of large rotary snow plows. By starting with

a narrow, shallow trench and making successively deeper and wider undercuts, the plows rapidly finish trenches 22 feet deep and 22 feet wide. Snow discarded by the plows is swept back over the narrow opening at the top and forms an extremely rigid roof.

Five years of Arctic research by the Army Engineers has resulted in this cut-and-cover technique, which can progress five miles a day. The same technique will be used in the 138-mile Century-Tuto roadway.

Caverns will be cut into the trench walls with equipment developed from mechanical coal-mining machinery.

Maintenance Problem

Century will present an unusual maintenance problem. Natural plastic movement of the ice will cause the walls to close in slowly and also may twist the entire area out of shape. To prevent the camp from becoming useless after a number of years, the ice will have to be shaved away periodically.

Announcement of Camp Century project is expected to be released by official Army sources momentarily. The camp is being constructed with approval of the Government of Denmark, of which Greenland is a possession. The use of atomic energy is still under negotiation, but, according to sources well-acquainted with the matter, the Danes are expected to authorize the Army to bring in a reactor.

Early this year, the Department of Defense announced it was working on a portable, pre-fabricated nuclear power plant for supplying heat and electric power in "remote places." Speculation has it that this will be the Camp Century reactor.

Century A-Power

The reactor has a 1,500-kilowatt capacity and is expected to operate a full year on a 10-pound core of uranium-235. It will be cheaper to run than a fuel oil power plant. Fuel oil ordinarily costs approximately \$11 a barrel. Transportation to Greenland would add about \$42 to the cost.

Since 1957, the Army has been training men in the operation of nuclear reactors at Fort Belvoir, Va. Presumably, some of these men will operate the Century reactor.

The camp will contain laboratories for most of the Army technical services, such as signal, medical, ordnance, quartermaster, transportation, engineering, and the Snow, Ice, and Permafrost Research Establishment. Formerly, the scientists connected with these services had to clear out of Greenland before winter set in. Camp Century will enable them to work in relative comfort year-round.

Included at the camp will be a ten-bed hospital, equipped with an operating room. As well as living quarters, there will be complete dining and kitchen facilities. Refrigerated storage for food will be no problem.

Other facilities will include recreational areas, a post exchange, warehouses, and repair and maintenance shops.

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