

(without cost) if it is not available elsewhere. It will also be possible for foreign researchers to obtain needed seed.

The value of a specific seed stock as basic germ plasm for the future is the criterion for acceptance. Each one accepted must be fully documented as to source and its development history, the USDA pointed out. Seeds will be tested from time to time to ensure that deterioration does not set in.

Actually, our national seed laboratory might be looked upon as the culmination of a program. Many other nations have yet to achieve adequate programs for testing and breeding new varieties of seed, selecting seed for use under specific conditions and climate, arranging for distribution of high quality seed, and improving seed production techniques such as seed bed preparation, weed control, harvesting, grading and storing.

Various countries will have various needs in the field of seed research and study. In most of the underdeveloped countries there is an urgent need for better education and propaganda showing the concrete benefits that can be achieved with better seed.

With growing populations, many peoples throughout the world face a very real problem of food shortage in the near future. Starvation is a problem today for some. One of the quickest and most efficient methods that could be used to reverse this trend is the extensive use of high quality seed.

Every farmer, from Chile, India, Egypt, Cambodia, to The Netherlands, Sweden, Canada and the United States, can see with his own eyes what happens when he plants "good" seed.

The good seed may mean food on what had been a bare table. Or it may mean a new money crop. Either way, the tiny seed is acquiring new importance here and throughout the world.

Science News Letter, June 6, 1959

ENGINEERING

Soviets Claim Inventing "Underground Rocket"

THE RUSSIANS claim they have developed the first underground rocket for burrowing holes in the earth.

A report by the Central Intelligence Agency in Washington says the rocket nose has a pulverizing device which contains liquid fuel and compressed air. In operation, "powerful flames spout from openings in the pulverizer" to open a path for the rocket. The rocket, which can be guided, thus opens a cylinder-like tunnel as it blazes its way through the earth, the CIA report said.

Quoting from the magazine *Magyar Nemzet*, published in Budapest, the CIA reports the rocket was invented by engineers of Tadzhiik S.S.R. of the U.S.S.R.

First experiments have yielded satisfactory results. In practice, the device is to be used for laying underground irrigation canals and pipes, the report states.

United States Government experts specu-

late that the rocket may be a further development of a technique used in the U. S. for "ten years." In this technique, known as jet flame piercing, a flame fed by oxygen is used to flake off rock—a process known as spalling. Washington mining experts believe the Russian rocket is a combination of several similar "cutting heads" which would cover an area large enough to make a tunnel.

One U. S. Bureau of Mines expert said the Russian term "underground rocket" is probably more graphic than accurate.

"The name implies the rocket gets in there and zoom! There she goes!" Actually, he said, the drilling process probably would be slow.

The Russian underground rocket probably is guided by controlling the play of flame from the rocket head, but even so it would probably cut a "wiggly path," one expert said. He implied the Russian rocket would have to be quite spectacular to outclass the fast cable-laying machinery now used in America. Some of this machinery not only digs a straight trench, but fills it after the cable is laid.

Science News Letter, June 6, 1959

MEDICINE

Man's Cancer Disappears After Blood Injection

A 32-YEAR-OLD man apparently has been cured of cancer after receiving blood from a second man who had spontaneously recovered from the same kind of cancer.

Drs. Wilbur C. Sumner and Alvan G. Foraker of Jacksonville, Fla., told the James Ewing Society meeting in New York that they acknowledged the possibility of coincidence. But they pointed out that only one previous case is known in which a person spontaneously recovered from malignant melanoma, the type of cancer that often starts in moles.

(Malignant melanoma can be cured if removed by surgery in a very early stage. If neglected, it tends to spread swiftly and cannot be benefited by radiation or any known chemical agents.)

The young man recovered at the age of 28. A year later, a small cancer area was found in one finger, which was removed. Since then, there has been no further sign of the disease.

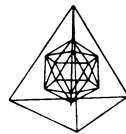
The young man's recovery suggests that the 250 cubic centimeters of blood he received must have contained some type of defense against melanoma, and that this was transferred to him, the doctors said.

National Cancer Institute laboratory tests on blood samples from both patients revealed no virus activity. No effects were seen when the sera was added to melanoma cells growing in test tubes or mice. This might be due to species differences, the doctors said.

A third patient with a far-advanced case was similarly treated. But there was no beneficial effect. This patient, however, unlike the others, had widespread internal deposits of cancer.

Science News Letter, June 6, 1959

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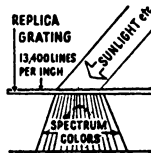
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