

BOTANY

Ancient Seeds Not Viable

Oldest historically dated seeds that have actually sprouted were 150 years old. In 70-year test, only two out of 60 kinds of seeds were still good.

► DESPITE the optimistic reports that two Indian lotus seeds reputed to be 50,000 years old have sprouted, you can raise an eyebrow over any claim that seeds more than a few hundred years old have remained alive.

The oldest historically dated seeds that have actually sprouted were in the British Museum for 150 years when a Nazi bomb caused them to be inadvertently tested for viability. Bomb damage allowed water to penetrate into the priceless type collections of the British herbarium, saturating the packing of the collection and providing right conditions for germination tests.

Two seed varieties, one of them the Indian lotus and the other the mimosa tree, sprouted after a century and a half of storage. As a result, botanists would not be surprised if such seeds did live even half a millenium. For the Indian lotus is one of the hardest and thickest shelled seed, which excludes the air and moisture that would speed up the life within the seed and exhaust it before sprouting conditions are right.

The length of life of seeds is economically important to farmers and gardeners and federal and state departments keep careful check on the growing ability of seed sold commercially. Whether seed is suitable for sale is determined by actual germination tests in most cases, rather than by the age of the seed. So much depends upon under what conditions the seed is kept. Soy beans may refuse to grow after even six weeks while another lot may sprout strongly even when ten years old. Wheat kept 32

years after drying over calcium chloride and sealed tight has sprouted, but generally wheat is dead after 10 years.

Two American experiments in seed longevity are recalled by Dr. E. H. Toole, senior physiologist of vegetable seed investigations at the U. S. Department of Agriculture in Washington. The government scientists buried seed at their old experimental station at Arlington, Va., which was destroyed to make way for the Pentagon building and other World War II structures. When this happened the test had continued for 39 years and 36 out of 100 seeds tested were still alive. Among them were jimson weed, morning glory, poke-weed, and tobacco. A still longer test is running at East Lansing, Mich. Begun in 1879, it was found that in 1949, which was 70 years later, only two out of 60 kinds of weed seeds were still good.

It may be possible to check the extremely long age of 50,000 years assigned to the sprouting Indian lotus seeds by a Japanese paleontologist by subjecting similar seeds, if they are available, to a test for radiocarbon content which determines age up to about 25,000 years. This method has been used successfully on various archaeological remains. The geological dating of material is subject to error because of the misdating of the earth in which the seeds are found or because the seeds have somehow found their way into older layers of the earth a few hundred years ago.

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● RADIO

Saturday, March 31, 1951, 3:15-3:30 p.m., EST
"Adventures in Science," with Watson Davis, director of Science Service, over Columbia Broadcasting System.

Dr. Russell M. Wilder, director, National Institute of Arthritis and Metabolic Diseases, Public Health Service, will discuss "Nutritional Quality of Foods."

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