

ECONOMICS

Valuable Tung Oil Industry Now Developing in America

SHOULD fighting in China continue, Americans will probably have to do less house painting and industry will suffer the loss of a valuable raw material, tung oil.

But a few years hence while Chinamen fight, Americans will be able to keep up house painting and industry's supply of tung oil will not be interrupted.

For a new industrial and botanical revolution, similar to that which took the wild rubber tree out of the Amazon jungles and set it out in orderly plantations, is going on. The tree that supplies \$12,000,000 worth of tung oil to the United States each year is being taken from its native China to the far southern states of this country.

Already about 25,000 acres of land here have been planted in trees producing tung oil, Dr. Henry A. Gardner, director of the scientific section of the American Paint and Varnish Manufacturers' Association, told the American Chemical Society recently. He estimates that between 50,000 and 100,000 acres of trees will be needed to supply the quantity of oil that has been imported from China.

"Tung oil trees have been grown successfully in California, Alabama, Louisiana, Mississippi and Florida," Dr. Gardner said. "However, California is not considered a favorable state for the commercial growing of the trees because of the lack of low priced land in sections where the soil and climate conditions are suitable. The largest plantings have been made in northern Florida."

Seed of a tree of the genus *Aleurites*, which is native to China, produce tung oil. They ripen about October in both China and North America and are crushed in a mill similar to that used to press peanuts for peanut oil. The fruit which contains the seed is about the size and appearance of a small russet apple.

The tree is deciduous, shedding its leaves in the fall and covering itself with new foliage in the spring. It will stand light frosts.

The Chinese use tung oil for waterproofing, making native lacquer and ink. In this country, in addition to its applications in the manufacture of varnishes and varnish paints, it is "used

in making insulating compounds, as an ingredient in automobile brake linings, in gaskets for steam pipes, in linoleum and table oilcloth, for waterproofing fabrics, paper cartridge shells, etc., as a binder for wall board and plastic synthetic lumber, or lacquers, primers, pipe coating plastics, synthetic resins, battery jar compounds, airplane tubing fillers, etc."

The first tung oil seed were brought to this country in 1905 by David Fairchild, plant explorer of the U. S. Department of Agriculture, and planted at the government experiment station at Chico, Calif. Seedlings were distributed to southern states. Extensive plantings, however, were not made until eight years ago.

Science News Letter, April 9, 1932

CHEMISTRY

Chemical Nature of Vitamin C Explained

SCURVY-PREVENTING vitamin C has been obtained in crystalline form and its chemical nature examined, Drs. C. G. King and W. A. Waugh of the University of Pittsburgh report in *Science*. The vitamin C crystals, obtained by the Pittsburgh investigators from lemon juice, are identical with an acid, hexuronic acid, which is formed in

plants and functions in the animal body as a reducing agent during normal metabolism. A very small daily dose of these vitamin C crystals protects growing guinea pigs from scurvy when they are otherwise deprived of vitamin C.

Commenting on the recently reported isolation and synthesis of vitamin C by the Norwegian investigators, Dr. O. Rygh and collaborators, Drs. King and Waugh state that the Norwegian work as reported is not in accord with their own findings and that they believe Dr. Rygh's results were misinterpreted.

Dr. Rygh and associates reported that vitamin C is derived from narcotine, a poison found in opium, which is present in unripe fruits but which turns into vitamin C when the fruits ripen.

Science News Letter, April 9, 1932

On the Radio

The Science Service weekly radio address will be on the subject of

THE PROTECTION OF OUR NATIVE FLOWERS

P. L. Ricker

of the U. S. Department of Agriculture will be the speaker.

FRIDAY, APRIL 15
at 3:45 P. M., Eastern Standard
Time

Over Stations of
The Columbia Broadcasting System

Science Service



Hold your SNL in a grip of steel

Here is a cover for your SCIENCE NEWS LETTER that is no bother at all! No holes to punch, no screws to tighten. Just snap it open, lay in your latest SCIENCE NEWS LETTER on top of the older ones, snap it closed. Two strong fingers of steel hold the copies firmly. Capacity, four months' issues. Cover color, black. Cover material, leather finished heavy bookbinder's bristol. Cost 50c, postpaid anywhere in U. S. A. \$1 elsewhere. Cash in advance. Send order and remittance to Librarian, SCIENCE NEWS LETTER, 21st and Constitution Avenue, Washington, D. C.