FORESTRY

Timber for the Future

American timber lands, if handled properly, can meet needs. But growing own trees is most practical plan for lumber business.

➤ A FOREST resource appraisal just completed answers the question relative to America's ability to meet current and future needs in wood products. The answer is "yes," in spite of heavy war drains, if modern practices and policies are followed.

A group of experts representing the American Forestry Association has completed a three-year survey, and recently reported to the Association's committee which met recently at Roscommon, Mich., and which is drafting plans for the restoration and development of the country's tree-growing lands.

The report declares that from the nation's 465,000,000 acres of commercial forest land, 44,000,000,000 board feet of saw timber could be taken annually, and that pulpwood needs could be met without reducing the forest productivity. But, it states, to harvest this much wood without serious damage to the forests will require many changes in woods practices and policies.

One difficulty in establishing widespread modern scientific forest management is due to the percentage of tree-growing areas in private ownership. Over 90% of the products of the forests now come from privately-owned forest lands, although these lands contain only 55% of the merchantable timber, the report states. The other 10% comes from the 45% of merchantable timber under control of the federal government, states and other political subdivisions.

Privately-owned lands bore the brunt of the four-year war harvest of 131,400,000,000 board feet of lumber and over 59,000,000 cords of pulpwood, farm woodlands in the east being heavily cut. To assure some degree of control over future cutting, the program committee will propose a plan of action for consideration at the fall meeting of the American Forest Congress to be held in Washington, D. C., Oct. 9 to 11.

Lumbermen Grow Own Trees

➤ WITH THE nation's lumber bins emptied by four years of war, lumbermen, farmers and private forest owners not only must, but can now well afford to take the advice of conservationists they have been ignoring for 80 years.

It is now more practical for them to meet the shortage by growing their own trees than it is to buy up virgin timber, declares J. B. Woods, director of a three-year inventory of the nation's forest resources.

The great economic advantages to be gained by private forest owners today, by proper forest management, added Mr. Woods, was the point most stressed throughout the three-day session of the meeting. On the basis of the inventory which he made for the American Forestry Association, the committee drafted a program of restoration and development for the country's tree-growing lands. To arouse public support of the program, it will be presented to the American Forest Congress.

One thing the inventory shows is that we have "contracted our frontiers," said Mr. Woods. It is still possible to increase production to meet the postwar emergency, but it must be done by growing new trees. Old forest stands cannot long support the heavy cuttings necessary.

To assure this, one of the points which will be proposed to the Congress is a vigorous nationwide expansion of advice and technical assistance to the four million owners of small forest properties, which comprise 57% of the commercial forest area of the country. "Tree Farm" and "Trees for Tomorrow" movements will be encouraged.

Believing that "good forestry practice begins at home," the committee is sponsoring adoption by states of forest practice laws. These would be similar in some ways to the old Code laws, resulting 10 years ago from the NIRA, the first attempt at nation-wide controls over lumber manufacturers in the interest of conservation. Coming from the states, and made up by the people who are closer to the problems, it is the belief of the committee, Mr. Woods explained, that they will be more effective than federal administration.

It is the opinion of Mr. Woods that unless this shortage is met quickly, the lumber industry will lose parts of its war-gained market back to wood-substitute building materials.

Science News Letter, August 17, 1946

AERONAUTICS

Navy's "Project Squid" Studies Rockets and Jets

➤ UNDER THE name, "Project Squid," five universities are conducting a two-year research program to develop liquid rocket and intermittent jet propulsion devices for the Navy.

Institutions participating in the $2,000,000 studies set up by the Navy's Office of Research and Inventions at the request of the Bureau of Aeronautics are Cornell, Purdue, Princeton and New York Universities and the Polytechnic Institute of Brooklyn.

Fundamental research in aerodynamics, chemistry, mathematics and physics will be included in the comprehensive studies, believed to be the largest peacetime program of scientific research and development in American history.

Headquarters of "Project Squid" have been established at Princeton with Dr. Hugh Stott Taylor, dean of the Princeton Graduate School and chairman of the Princeton department of chemistry, serving as chairman of a six-man policy committee. Pending appointment of a full-time director of the program, Prof. Robert N. Pease of Princeton is acting project director.

Science News Letter, August 17, 1946

MEDICINE

African Sleeping Sickness Cured with New Drug

➤ SCIENTISTS in the interior of tropical Africa, armed with a new chemical weapon, have won another victory in their fight to control the dreaded plague, African sleeping sickness.

Early cases of the fatal disease, long thought to be incurable, and previously battled by attacks on its carrier, the tsetse fly, have been cured in one week of treatment with the new drug. P-arsenosophenylbutyric acid is its name.

Dr. Harry Eagle, of the U. S. Public Health Service, in cooperation with the Sleeping Sickness Services of the Belgian Congo, French Equatorial Africa, French West Africa, the Gold Coast, Nigeria, treated 319 human cases of one type of African sleeping sickness be-

fore the central nervous system had become infected.

The success of the treatment varied with the total amount of the drug administered, but it was estimated that more than 90% of the early cases can be cured within a period of one week if the standard total dosage set by this experiment is used. Treatment with other drugs may have to continue for as long as 12 to 15 weeks, according to some published reports.

Doctors administering the new drug to natives found also that injections into the muscles of the patients proved to be as effective in treating the disease as the previous method of injection into a vein.

Mass treatment of sleeping sickness patients throughout tropical Africa may be simplified even more when the studies now in progress of the treatment of more advanced cases are reported.

Science News Letter, August 17, 1946

PHYSIOLOGY

Living 29,000 Feet Up

➤ TWO NAVY volunteers lived without supplemental oxygen for 30 minutes in conditions simulating an altitude of 29,025 feet while doctors kept valuable records on living in high altitudes, Commodore J. C. Adams, chief of the division of aviation medicine of the Navy's Bureau of Medicine and Surgery, announced.

Lt. (jg) Walter S. McNutt, Jr., Jefferson, Texas, and hospital apprentice Carlton R. Morris, Farmerville, La., actually were in a 10 x 10 foot pressure chamber at the Naval Air Station, Pensacola, Fla., when they "climbed" 23 feet higher than Mt. Everest. The atmospheric conditions in the room were those of a higher altitude than man has ever before survived without added oxygen.

The experiment, dubbed "Operation Everest," built up the simulated altitude from sea level conditions to the record height in 32 days and tested the adaptation of the human body to anoxia, the decreasing supply of oxygen encountered at high altitudes. Two other volunteers, hospital apprentice Earl D. Wilkins, Jr., Dorchester, Mass., and pharmacist's mate Horace C. Hertel, The Dalles, Ore., blacked out after the conditions went above 27,000 feet. They were revived with additional oxygen.

After living at the record altitude conditions for half an hour on July 30, the "high living" volunteers were given oxygen and pressures were lowered to simulate 50,000 feet. The chamber was gradually returned to sea level conditions at the end of the operation.

Mt. Everest, for which the high-altitude experiment was named, rises 29,002 feet above sea level in the Himalaya Mountains in northern India, and no climbers have ever reached its peak, the highest in the world.

Terming the experiment "a new chapter in altitude physiology," Commodore Adams pointed out that this study is the first scientific record of effects on the human body of conditions at such high altitudes for any length of time.

Careful records were kept of the men's temperatures, blood pressures and weights during the experiment and special devices recorded their heartbeats as they slept at night.

Recreation for the "guinea pig" volunteers in the more-than-a-month of living in the pressure chamber included reading books on mountain climbing.

Science News Letter, August 17, 1946

FLYING HIGH—Respiration is being checked on volunteer for Operation Everest, Navy's experiment to test adaptation of the human body to anoxia, the decreasing supply of oxygen encountered at high altitudes. Both doctors wore oxygen masks while in the altitude chamber.

MEDICINE

Report First Adult Survivor of Rare Disease

➤ A "UNIQUE" case in medical history, the first adult known to have survived an attack of the rare disease, toxoplasmosis, is reported by Dr. Jerome T. Syverton and Dr. Howard B. Slavin, of the University of Rochester, N. Y., School of Medicine and Dentistry, in the *Journal of the American Medical Association* (July 27).

Only one other patient, a child, is known to have survived this ailment. The germ that causes the disease is a large one-celled parasite called toxoplasma. The disease itself was unknown to medical scientists before 1939. Since then, only 35 cases have been reported, three of them in adults.

The case reported by the Rochester doctors was discovered by accident. While most of the previously reported cases showed signs of brain injury or of inflammation of the membranes covering the brain, the Rochester patient had symptoms more like those of typhoid fever or some other intestinal infection.

Blood tests and the course of the disease led the doctors to suspect trichinosis, so they cut out a tiny piece of a leg muscle and examined it under the microscope. Instead of finding the worm that causes trichinosis coiled in a cyst in the muscle, they found toxoplasma organisms.

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