when more oxygen is finally supplied through blood transfusion, the cells may not be able to assimilate it. Or, if they can assimilate the oxygen, they will no longer be able to use it for the chemical transformations on which our lives depend.

Lack of oxygen, Dr. Long declared quoting an earlier physiologist, "not only stops the machinery but wrecks it."

Important and established measures for preventing these irreversible changes in shock, he said, are: Prompt use of whole blood, plasma or albumen for early relief of the decreased blood volume and flow and hence decreased oxygen supply; replenishment of lost fluid and salt by judicious use of saline solutions; relief of fixed acid acidosis by use of sodium bicarbonate or lactate.

Changes in action of the adrenal glands and in biochemical reactions involving enzyme systems related to certain vitamins have led scientists to suggest as additional measures in shock treatment the use of adrenal cortical hormones, the use of vitamin mixtures and the use of chemicals that have undergone part of the change they would normally undergo in individual cells of various body organs. The value of these measures has not yet been proved.

Science News Letter, November 25, 1944

CONSERVATION

Wood Production Massive

Simply in the gross tonnage produced in the world each year, wood ranks second only to coal; new uses are constantly being discovered.

➤ WOOD'S importance in the world was stressed by a group of speakers at the autumn meeting of the American Philosophical Society held in Philadelphia. Simply in the gross tonnage produced in the world every year, wood ranks second only to coal, Dr. W. C. Lowdermilk, assistant chief of the U. S. Soil Conservation Service, told the meeting. The world's annual cut of wood is estimated at 1.2 billion tons; coal mined in the same period amounts to 1.3 billion tons. And coal was wood once, Dr. Lowdermilk reminded his hearers.

Unlike coal, oil and all other things dug out of the earth, wood is a replaceable resource, the speaker continued. Under intelligent management, new crops of wood can be grown as fast as existing wood is harvested. Furthermore, while a forest is growing it confers great benefits on the community that fosters it, in soil erosion control, in flood amelioration, and in a score of other ways.

Science News Letter, November 25, 1944

Water Regulation

➤ THE ROLE of the living forest as a regulator of the regional water supply was given particular attention in the address by Dr. Rafael Zon, retired director of the Lake States Forest Experiment Station at St. Paul. The tree canopy, he pointed out, breaks the violence of the rain, and the spongy litter of the forest floor absorbs water for gradual release later, besides keeping open the pores of the soil.

The forest, Dr. Zon continued, abates both summer heat and winter cold, reduces wind velocity and decreases evaporation from the soil. At the same time, growing trees transpire much water through their leaves, enriching the humidity of the air over forests.

Science News Letter, November 25, 1944

Lumber Reduction

➤ SOME RESTRICTION in American lumber production will probably be necessary after the war, in the interests of good long-range forest policy, Edward I. Kotok, assistant chief of the U. S. Forest Service, declared. The assumption that we can safely exceed our present war-accelerated cut of timber he declared fallacious.

This restriction need not be permanent, however, if we take the saving stitch in time, the speaker indicated: "In the long run, America's forests have high potential capacity, if real forest management is undertaken with dispatch, and surpluses for export will be available, either as primary products or converted material."

Science News Letter, November 25, 1944

Nylon rope, used to pick up and tow gliders behind airplanes, can stretch nearly a third without breaking.

DEADLY WEAPONS—The rocket launcher assembly line of the Firestone Tire and Rubber Co. at Akron, Ohio, is turning out thousands of these new war-winners. Completed launchers in the foreground are ready for packing and delivery to the fighting forces.