



TREE HARVEST TIME—A crop of cut timber is examined by a New England tree farmer.

wood or lumber under certain conditions. A resin is employed as a binder; heat and pressure do the rest.

A new process of making good pulp for paper from deciduous softwood trees opens up a new possible market to tree farmers for wood that otherwise might be unmarketable. Such woods as beech, birch, maple and poplar can be used. Most paper pulp is now made from evergreen trees, such as spruce, fir, hemlock and pine.

With the present tremendous demand for woodpulp, evergreen pulpwood trees are becoming scarce. With the new process, sponsored by the U. S. Bureau of Standards, woods never before used in quantities can be utilized to relieve the world's newsprint shortage. The process is similar to that used in making other pulp, but the addition of a chemical is required. It is a synthetic resin known as melamine formaldehyde. It is an important discovery because it makes the erection of pulp mills possible in areas with little evergreen but with plenty of other trees.

Chemicals from Wood

The production of organic chemicals from wood has lagged behind possibilities, perhaps because of the ease with which many of them are obtainable from coal, petroleum and other sources. In nationwide programs being formulated for the elimination of wood wastes, the production of chemicals is included.

Wood alcohol, distilled out of wood by heating it in a retort from which air is excluded, is well known. Charcoal is left in the retort. Gases driven off in the process

include such usable ones as carbon monoxide, hydrogen, methane and ethylene. A dark-colored liquid that distills off contains acetic acid, acetone and some tar and oils.

The cellulose of the wood may be broken down into many useful products by chemical treatment. Important among these are the wood sugars obtained. Wood sugar can be used to grow feed yeast and to make ethyl alcohol. Perhaps a more important use, and one in which there is great interest at the present time, is in cattle feed.

Wood Molasses

For this purpose, it is used in the form of what is called wood molasses. From 120 to 200 gallons of molasses, 50% sugar, can be made from a ton of wood wastes. Sugarcane molasses, usually blackstrap, has long been used for livestock feed. Cattle seem to do well on wood molasses and like the taste. A commercial process for obtaining wood molasses has recently been developed by the U. S. Forest Products Laboratory, Madison, Wis., and the product compares favorably with blackstrap for many uses in addition to cattle feed.

Tree farming is an activity of far more than local importance. Metal reserves can become exhausted and can not be replaced. With proper acreage devoted to timber growing, there will always be available lumber for all purposes. Also, tree farming promotes other types of land use. Forest-covered lands hold water, and act as reservoirs to prevent floods and to provide moisture for cultivated crops during dry seasons.

Science News Letter, April 16, 1949

GENERAL SCIENCE

Award to Be Made for Kindness to Animals

➤ **BOYS** and girls who show kindness to animals ordinarily do so without expectation of praise or reward—other than the gratitude of the animal itself. However, the American Veterinary Medical Association, with headquarters in Chicago, has announced that an award consisting of a framed certificate and a \$100 U. S. savings bond will be given to some boy or girl under 18 for an outstanding act of help or mercy to a domestic animal.

This may be a rescue, some project in behalf of animals, or a written essay, Dr. S. T. Michael of San Francisco, chairman of the award committee, stated.

Nominations close May 1, and the winner will be announced on July 11, at the A.V.M.A. national convention in Detroit. Entries should be sent to the American Veterinary Medical Association, Chicago, Ill., or to Dr. S. T. Michael, 2500 Sixteenth St., San Francisco 3, Calif.

Science News Letter, April 16, 1949

LINGUAPHONE



is your *Passport* to the World

In your own home, alone or in a group, you can now learn to speak

**SPANISH • PORTUGUESE
FRENCH • RUSSIAN
ITALIAN • GERMAN**

or any of 23 other languages by the world-famous

**LINGUAPHONE
Conversational METHOD**

You learn the new language by listening to voices of native teachers. It is amazingly simple; thousands have succeeded. Educators hail Linguaphone as a notable advance in simplifying the mastery of languages. That is why so many Linguaphone Sets are used in schools, colleges, universities, as an aid to *fluent* speaking.

**Available to Veterans under
G I BILL OF RIGHTS**

SEND FOR FREE BOOK
LINGUAPHONE INSTITUTE
31 RCA BUILDING, NEW YORK 20, N. Y.

LINGUAPHONE INSTITUTE
31 RCA Bldg., New York 20, N. Y.
Send me the FREE Linguaphone Book.
I am , am not a World War II Veteran
I want to learn.....language.
Name
Address..... City.....

