

Splinters Don't Count.

Just for fun, name 2,500 products that come from trees. But don't count lumber, plywood, paper or splinters. Before you get started, here's another challenge: What do beekeepers, Maine lobstermen, chicken ranchers, photographers and Texas wildcatters all have in common? The work they do, the products they sell, all depend on by-products from trees.

Now before you settle down to make your list of those products, remember trees are renewable. There are no "dry holes," no "exhausted veins," no "bottom of the barrel" in a forest — if we practice good forest management. For centuries, people saw trees only as lumber or firewood. In the process of making lumber, however, there was a tremendous amount of waste. Sawdust, bark, wood scraps all had to be hauled away or burned, and that created more complications. Finally, scientists came along and peered into the very structure of trees. They found a brew of chemicals. The stuff of energy. And new ways of taking a tree apart and shaping it to human needs.

They perceived that the molecular lattice work of a tree had a potential beyond their wildest dreams. The lights burned late at research centers all over the country. The story of how the forest industry used this research to create new products, new markets, new ways of doing things and even new energy is too big a story to be told here. But to help with that incredible list you'll be working on, we'll outline some of the products that depend on the exotic chemistry of a tree. We'll start with:

Bark

Up to 21 percent of a cord of wood may be bark. Much of it is used as fuel in forest industry mills. It is also a source of chemicals, resins, waxes, vitamins, plywood adhesives, plastic fillers, lacquers and oil-spill control agents. Bark is also used for mulches and soil conditioners.

Wood Flour, Resins

Wood flour and melamine resins using cellulose filler are principal components of dinnerware, electrical receptacles and parts, toys, handles for cooking utensils, telephone housings, camera cases and appliance housings.

Cellulose

Ethyl cellulose and other chemical based cellulose are used in making tool handles, photographic films, sausage casings and football helmets. Acetate filament yarns make textile products such as clothing, drapes and rugs. Nitrocellulose is used in making solid rocket propellants and other explosives.

Torula Yeast

Torula yeast is a high protein product made from wood sugars as a by-product of the pulping process in papermaking. Type S Torula is used in baby food and cereals. Type F Torula is used in feed supplements for cattle, fish and chickens. Type FP goes into pet foods. Torula has been found to make bees and lobsters grow faster!

Turpentine, Tall Oil

Turpentine and tall oil are resinous materials that are also reclaimed from the paper-pulping process. They are important ingredients in paint, varnish, adhesives, asphalt, printing inks, rubber products, soaps and polishes. Synthesized essential oils are used in chewing gum, toothpaste, menthol cigarettes, detergents and shampoos.

Spent Pulping Liquids

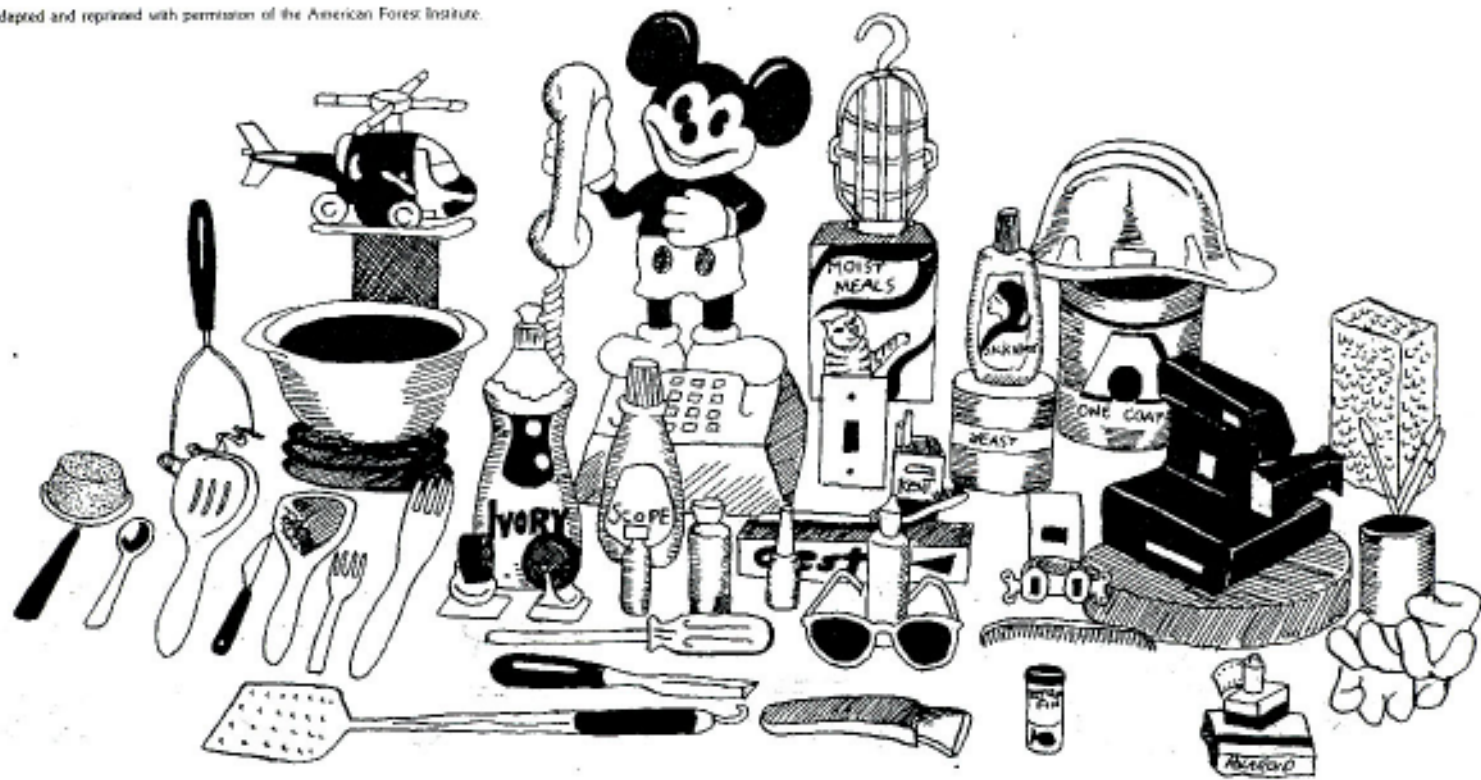
Lignosulfonates from spent sulphite pulping liquor are used in cleaning compounds, insecticides, cement, ceramics, fertilizers, oilwell drilling muds, cosmetics, gummed tape and certain pharmaceuticals (Aldomet and Aldoril for hypertension and L-Dopa for Parkinson's disease are examples).

Energy

Bark, ground wood and spent pulping liquors provide an important source of the pulp and paper industry's total energy requirements. Nationally, over half of the industry's energy use is self-generated from these residues.

Lobsters and bees grow faster, chickens prosper, photographers have film for their cameras, and mud additives make drilling easier for Texas oilmen. All because of chemicals and by-products from trees. Now that you have a hint, get busy on that list of tree products. Here's a suggestion that might help: Inventory just about everything in sight, in the next room and out on the street. That'll give you a good start — but remember, splinters don't count!

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Let's Look At Some Nice Round Numbers!

One cord of wood equals 80 cubic feet, or a pile of wood 4 feet high, 4 feet thick and 8 feet long. Different products require different kinds of trees, but for general information, a cord of wood will yield the following quantities of products:

- *7,500,000 toothpicks
- *61,370 standard business envelopes
- *4,384,000 commemorative size postage stamps
- *460,000 personal checks
- *89,870 sheets of 8½ x 11 inch paper
- *1,200 copies of National Geographic magazine
- *250 copies of the Sunday New York Times newspaper
- *12 dining room tables, each seating 8

Building an average 1,800 square foot home uses 10,000 board feet of lumber, equalling 20 cords of wood. Domestic demand for wood and paper products could double by the time a new generation of trees is available. And this projection does not take into consideration the potential for improving our balance of trade through more exports to supply increasing world demand.

Fortunately, we have the forest resources and the know-how to meet our domestic needs, to keep costs of wood and paper products reasonable for consumers and to serve the growing worldwide demand for forest products as well. But all this won't happen unless, as a nation, we make a commitment to manage our forests to their potential — NOW!

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