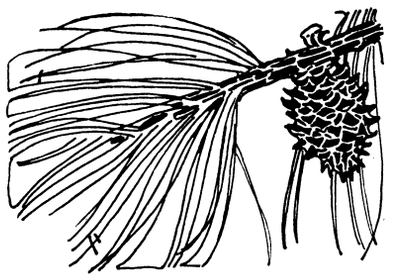
FORESTRY

NATURE RAMBLINGS
by Frank Thone



Pine Outyields Cotton

KING COTTON'S possible abdication to Prince Pine in the South has been much talked of in a general way, since it has become a part of common public information that the shrub's white lint and the tree's white wood yield the same basic material, cellulose, used now in a score of industries, from textiles and transparent wrapping materials to molded plastics and automobile lacquers.

Definite quantitative status is now given, in a preliminary way at least, by figures presented by Henry Bull of the Southern Forest Experiment Station. Mr. Bull estimates that under average growing conditions, ordinary Arkansas cotton land planted to loblolly pine will yield four and one-half times more cellulose per acre under the new crop than it did under the old.

The cotton land selected for comparison is not the best in the South, but is classified as only moderately productive, yielding about 145 pounds of lint cotton per acre. The same land, under best tree-growing conditions, can yield 3,616 pounds of dry wood per acre per year, with a net cellulose content of 1,627 pounds, or 11 times as much wood cellulose as cotton cellulose.

However, Mr. Bull admits, to compare the best that land can do in producing wood with "only average" in producing cotton is hardly fair. So he reduces the tree stand to an "only average" basis for purposes of comparison. Recent Forest Service figures show that the average wood production of trees in that general region is about 40 per cent. of the maximum possible. Applying this factor, therefore, to comparative yields, Mr. Bull shows that loblolly pine would still outyield cotton 4.5 times, in per-acre production of cellulose.

Direct comparisons may be misleading, however, Mr. Bull warns. Cotton cellulose and pine cellulose are quite different substances and have very different qualities and uses. But even so, the much greater possible production of pine cellulose on certain Southern lands would seem to make the subject worthy of very serious consideration.

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METEOROLOGY

Britain And France Aided By Advance Weather Data

Weather Moving From West to East Hits Western Europe Before It Reaches Nazis; Germans Lack Reports from Sea

WEATHER, which regularly migrates from west to east, is proving an ally of the Allies in the present war, as it did in 1914-1918. Britain and France know what the weather is going to be like over Germany before the Germans themselves know, and can plan their military operations accordingly.

The British and French have this private foreknowledge of German weather because they get the same weather first. Storm centers and areas of fair weather that eventually reach Germany cross Britain or France on the way, or at least some stretch of ocean patrolled by Allied warships and open to non-German commercial shipping, from all of which weather information can be obtained for Allied use but denied to Germany.

To be sure, German submarines may possibly be sending weather information home by radio, but that would be a risky procedure, with British and French destroyers and aircraft constantly on the alert to pick up any hint of a U-boat's whereabouts. And if the anti-submarine campaign succeeds completely, as the British Admiralty claims it will, even this slender source of weather information would then be lost to the Reich.

In the meantime, every effort is being made in Britain to deprive the Germans of any possible crumb of weather information. Publication and broadcasting of weather data are strictly forbidden; not even the occurrence of a local thunderstorm may be mentioned. Public forecasting in the islands has undergone a complete black-out, lest the enemy glean any helpful information from it.

Weather broadcasts are still being radioed from such places as the Azores Islands, Greenland and of course the United States; but these are too remote to give German meteorologists any real help. And the coastal countries—Belgium, the Netherlands and Denmark—are too near and too small to be of any use.

Weather knowledge has become of immense value in war. Before a major offensive is launched the general staff wants to be assured that it will not bog down in mud. Before an air raid takes off, or a naval move is undertaken, the chances of storm, cloudiness, fog and high wind must be determined. Chemical warfare is notoriously dependent on wind and the chances of rain. Meteorologists have taken the place of the augurs and soothsayers who used to go with the armies of antiquity.

Accounts of the successful British air raid on the Kiel Canal area indicate that it was timed on a knowledge of weather probabilities. The pilots' stories of taking off in clear weather, flying into rain, and swooping out of clouds to loose their bombs on German warships and shore works all suggest rather strongly that English weather men knew