

EFFECT OF FROST ON WHEAT¹By R. H. Harris²

When hard red spring wheat is damaged by frost the bushel weight and flour yield are lowered. The ash content and gassing power are increased, and the color of the flour is darker and greyish. Bleaching will not remove the grey color. The wheat is hard to mill and does not break up in milling like sound wheat, thus slowing up production and increasing costs. The dough slacks off during fermentation and the baked loaves of bread are coarse and open in texture. Baking strength is greatly reduced as the content of green and immature kernels increases.

Frosted durum wheat has a lower test weight and grade. The macaroni pigment is largely lost during processing because of the increased amount of green and frosted kernels. Macaroni color decreased sharply with wheat grade.

¹Summary of quality studies made by the Grain Research Laboratory, Board of Grain Commissioners for Canada, Winnipeg, Manitoba, Canada, on composite samples representing farm deliveries to October 6, 1950. These samples were grown in western Canada.

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FORESTRY IN NORTH DAKOTA

It is estimated that the present commercial forest area in North Dakota covers about 470,000 acres and includes 434 million feet of saw timber, mostly cottonwood and aspen. Noncommercial forest may cover an additional 150,000 acres. Approximately 90 per cent of the forest land area is owned by private individuals, the balance being in public ownership. The natural timbered areas are concentrated in the Turtle and Killdeer Mountains, the Pembina Hills, the Devils Lake area, and along the bottom lands of the Missouri, Red, and Sheyenne Rivers and their tributaries. Those woodlands have served to provide a small part of the local needs for lumber, fuel wood, fence posts, and railroad ties. If carefully protected and managed, their growth could be greatly improved in both quality and quantity. However, major forestry emphasis in the future must be placed on shelter-belt and windbreak planting.

This information is included in a paper, "Forestry in North Dakota," by E. L. Demmon, Director, Lake States Forest Experiment Station, which is maintained by the federal government in cooperation with the University of Minnesota, University farm, St. Paul, Minnesota. The paper was given at the North Dakota Prairie Tree Farm System dedicated at Fessenden, N. D.

Recent census figures (1947) showed 12 active sawmills in North Dakota, with a total cut for the year of 627,900 feet of lumber (614,000 feet cottonwood and aspen, 10,000 feet basswood, and 3,000 feet oak).

The native woodlands of North Dakota are almost entirely broad-leaved species—cottonwood, boxelder, green ash, paper birch, aspen, bur oak, American elm, hackberry, basswood, and several species of willow and poplar. Ponderosa pine grows in scattered stands throughout the Bad Land area south and west of the Missouri River, the heaviest concentration being in Slope County. Also, red cedar grows sparsely on some of the bluff lands in the western part of the state.