THE PULP AND PAPER INDUSTRY LOOKS AT FUTURE WOOD REQUIREMENTS

by

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During the past 20 years the growth of the pulp, paper and paperboard industry has been very rapid, especially here in the South. From a small beginning in the middle 1930's it has grown by leaps and bounds into the large industry it is today.

I will not attempt to predict just what the future wood requirements for the pulpwood industry will be, but I will try to project from the information we have on the past and present situation, what it is likely to be in the future.

The production of paper and paper products has risen about 55% during the last 10 years. The amount of pulpwood used in this country increased during the same period from less than 17 (16.9) million cords to approximately 33 million cords. The industry produced a total of 29.9 million tons of paper and paperboard during the year of 1955. It is (was) expected that mill expansion and construction of new mills in 1956 will increase this production by an additional 1.6 million tons per year.

In 1956, in the south, at least 15 mills were busy expanding their manufacturing facilities. Eleven (11) new mills were listed for starting construction during 1956. Of these, seven (7) have definitely indicated their location here in the south; one (1) in South Carolina, four (4) in Alabama, and two (2) in Arkansas.

HISTORY

Pulpwood consumption in 1906 for the United States was 3,661,176 cords. The south produced 164,000 cords or approximately 4.5%. In 1931, the U. S. total was 6,722,766 cords. The south produced 1,750,000 cords or 26% of the total.

Now in 1955 the National production was 33,300,000 cords, of which the south produced approximately 19 million cords or about 60% of the total. You, are probably familiar with the figures just quoted. We use them to emphasize two things: (1) the tremendous increase in the production and consumption of pulpwood during the last 20 to 25 years and (2) the huge increase, percentage wise, of the total amount produced in the south.'

plant breeding began. Breeders became interested in the development of new varieties for a specific purpose. Our methods of breeding today are based upon a knowledge of genetics.

Since 1900 countless experiments and discoveries have been made in the field of genetics. This basic information is being applied in many ways for the improvement of plants and animals. Fundamental genetic principles are the same for all organisms. A knowledge of the genetic fundamentals, mode of inheritance, linkage relationships, and heritability enables the breeder to plan the most effective breeding program. Many of the most important economic characters are inherited in a quantitative manner and controlled by a large number of genes. Nilsson-Ehle from Sweden and East from the United States were the first to show that this group of characters is inherited in a Medelian manner. They published in 1908 and 1910, respectively, their papers.

Economic Importance of Plant Breeding

The development of hybrid corn has been termed the outstanding scientific accomplishment of the 20th century. Its value must not be restricted to corn alone. Principles applied to the development of hybrid corn and its utilization of heterosis are being applied now to many other plants and animals.

In the words of Paul C. Mangelsdorf (10) of Harvard, "In my opinion hybrid corn is the most far-reaching development of this century, not only in applied genetics, but in the entire field of applied biology. It has already affected more lives, I venture to guess, than any of the epoch-making discoveries in medical biology of the same period. Insulin and penicillin have saved thousands of lives in the past twenty-five years, but the new abundance of foodstuffs which hybrid corn has created has saved millions of lives in this same period of the world's history.

Approximately 90% of the corn acreage in the U.S> today is planted to hybrid corn. In 1933 less than 1% of the corn acreage was planted to hybrids. American farmers are producing more corn today on 82 million acres than was produced on 103 million acres a generation ago. Extra bushels produced by hybrid corns in one year are worth enough to pay for all the research ever performed with cereal crops (11).

Improved varieties of wheats have increased the production of this vital bread grain by 20% on a given acreage. This gain is represented by approximately 200 million bushels worth $400,000,000 per year.

There are over 50,000 crop diseases. In 1950 the most vicious race of stem rust (Puccinia graminis tritici) found in North America hit the northern wheat belt. The race, known as 15B, was a hybrid produced by a natural cross on barberry bushes. At that time all the commercial wheats, both spring and winter, were susceptible to 15B. An estimated 10 million bushels of wheat were lost in 1950 due to stem rust. Over 13,000 different varieties and strains of wheat in the U.S.D.A. world collection were subjected to tests in the greenhouse to find resistant

as low as possible if we expect to remain competitive. We must improve our practices in all phases of Forestry and find more efficient ways of manufacturing and handling the products of our mills.

If we do this the demand for pulpwood and other forest products looks extremely bright for the future.

The pulpwood industry is doing quite a bit of work in tree improvement. Some of the mills have their own men working on this in their own nurseries. The industry is cooperating with State and Federal agencies in Forest Genetics Programs throughout the south and the United States. We feel sure that these programs in tree improvement will result in faster growing trees of better quality and will help supply the ever increasing demand for pulpwood and other forest products.