PREVENTING DECAY LOSSES IN PULP AND PAPER MANUFACTURE[3]

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The subject assigned me relative to preventing decay losses in pulp wood and wood pulp is one which is being studied with great care by those engaged in the manufacture of all classes of chemical and mechanical wood pulp. Decay losses occur in every stage of timber life, including the standing timber in the forest, the pulp wood stored along tracks or rivers or in the mill yard and, in the case of stored mechanical pulp particularly, in the finished product itself. The Bureau of Plant Industry has estimated that 10 per cent of the annual cut of pulp wood is needed each year to replace the decay loss occurring during that year. When we figure the amount of timber this represents, we realize the necessity of expending every effort to overcome this situation as far as possible.

The financial loss is not the only loss to be considered. If we were dealing with an inexhaustible raw material supply we would not be so concerned, but we are exhausting a resource which is not being replaced, and some time we shall arrive at a point where manufacture from timber can not continue. It therefore behooves us to do those things which will delay that time as long as possible. Perhaps we may awaken in time to do the things which will bridge the gap of no timber production, but if so we must make our start promptly and with a determination to continue the work consistently.

The subject of preventing decay was brought prominently to the attention of manufacturers through the work of the Forest Products Laboratory about six or seven years ago, and there has been constant improvement in the handling and storing of both pulp wood and wood pulp since that time.

The savings possible through proper yard sanitation were so apparent that the improvement in yard storage conditions was taken up quickly and has resulted in enormous savings to pulpwood owners. The cost of properly arranging a wood yard for piling pulp wood and logs so as to permit of a circulation of air between the piles, elevating the piles above the ground by means of skids, and covering the ground with cinders or other materials to keep down the vegetable growth and the removal of old bark and débris from previous piling has been so small that immediate financial benefits were received; and, naturally, where such a condition exists you are bound to get prompt cooperation.

The introduction and use of barking drums as against the use of knife barkers is another simple innovation which has reduced the wood losses due to barking tremendously, and it seems to me as though a conservative estimate of the saving affected would be from 8 to 10 per cent of the wood used, and of the best wood in the tree. This proposition, like the sanitation of the wood yard, was a saving which could be readily appreciated by the mill owner and was promptly adopted.

In the production of wood pulp against the work of destructive fungi, the savings made have not been so apparent, and research work along that line still continues. It is a fact, however, that the discussion of this problem has brought about much better storage conditions for pulp in the various plants throughout the country. With the supply of pulp wood in this country constantly diminishing, it is a shame that anyone should today permit pulp wood to deteriorate in value while stored in the yard, due to fungi or other causes, and it is even more serious to permit wood pulp to decay after all the expenditure necessary to convert it from pulp wood to wood pulp. The Forest Products Laboratory is entitled to the credit of having brought to the attenition of the manufacturer this great economic waste and of having outlined plans whereby much of it might be overcome. It is reasonable to suppose that the annual financial saving will run to many million dollars, as well as the conservation of timber which can not readily be replaced.

There is also another forest pathological problem which is in urgent need of investigation, and, if possible, solution. That is the problem of forest diseases. The losses from insect pests, tree diseases, and timber rot is enormous. With the establishment of forest experimental stations throughout the country, we will have the means of studying these pathological

[3] Read by O. M. Porter, assistant secretary, American Paper and Pulp Association.