Inheritance of Spiral Grain in Young Loblolly Pine

BRUCE J. ZOBEL, ROY W. STONECYPHER, AND CICELY BROWNE [2/]

Summary

A study of spiral grain on material from 52 control-pollinated families of four-year-old loblolly pine indicated that genetic variation in this trait is of the nonadditive type. This study involving 1043 trees suggests that mass selection to reduce spiral grain will not be very effective in loblolly pine if the pattern for older trees is similar to the young trees studied. The trees were only four years of age but spirality was measured in that portion of the tree where it often attains maximum values. Only rarely was a tree found with spirality bad enough to cause serious degrade in sawn or veneer products. The study raises some question whether spiral grain in loblolly pine is either widespread or serious. The reference or datum from which degree of spirality is determined is important; since spirality was measured as deviation from pith, results must be interpreted in this light.

1/ The text of this paper will be printed in the proceedings of the International Union of Forest Research Organizations meeting in Munich 1967. The work was conducted at Southlands Experiment Forest, Bainbridge, Georgia with cooperation of North Carolina State University, National Science Foundation, and National Institute of Health.

2/ Professor, Forest Genetics, North Carolina State University, Raleigh, North Carolina; Forest Geneticist, International Paper Company, Bainbridge, Georgia; Laboratory Technician, North Carolina State University, Raleigh, North Carolina, respectively.