THE TENDENCY FOR ROUND GALL DEVELOPMENT IN LOBLOLLY PINES THAT ARE RESISTANT TO *CRONARTIUM QUERCUUM* F. SP. *FUSIFORME*

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Abstract.--The hypothesis that gall shape can be an expression of resistance or susceptibility to *C.q. fusiforme* has been developed from inoculation experiments with loblolly pine seedlings. Pine families that formed long fusoid galls usually had higher percentages of trees galled than families that formed round cerebroid galls. If the relationship is the same in field-grown trees, one would expect a tendency for galls to be round in resistant populations of loblolly pine. Fusiform rust galls were examined in pine plantations in Texas, Louisiana, Mississippi, Florida, and Georgia to determine if gall shape differed by seed source and planting location. Gall length and width were measured and a gall form value (gall length/gall width) was derived for each gall. The largest values were for galls on slash pine grown from a seed source known to be susceptible to fusiform rust. Trees grown from Texas seed sources tended to have low gall form values wherever they were planted, except for some locations in Texas. Livingston Parish, Louisiana seed sources had low gall form values in all locations, except Madison County, Florida, where Livingston Parish stock is susceptible to *C.q. fusiforme*.

Gall shape may be a useful parameter in evaluating field-grown pines for rust resistance.

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