

USE OF BAYLETON FOR FUSIFORM RUST CONTROL
AT INDIAN MOUND NURSERY

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Abstract.--Bayleton / fungicide has been used at Indian Mound Nursery near Alto, Texas since 1982 with excellent success. Stratified pine seed is treated with Bayleton powder at a rate of 2 oz of Bayleton 50 WP per 50 lbs of seed. Thiram and aluminum powder are added following the Bayleton. Once the seed are sown, three Bayleton foliar sprays are used. The first spray is applied approximately 26 days after sowing, the second spray 21 days after the first and the third spray applied 21 days after the second or on June 10, whichever is earlier. By following the outlined schedule, the incidence of fusiform rust at our nursery has been negligible.

Indian Mound Nursery, located near Alto, Texas and owned by the Texas Forest Service, has a total seedling production area of approximately 116 acres. The original nursery site consisting of 40 acres of seedbed area was established in 1942 and expanded to its present size in 1970 and 1982. Production is currently 23.5 million pine and 300,000 hardwood seedlings, with loblolly pine (*Pinus taeda* L.) accounting for over 90 percent of the pine production.

Bayleton / (Triadimefon) has been used at Indian Mound Nursery since 1982 with excellent control of fusiform rust. Bayleton is a systemic fungicide that provides excellent residual fusiform rust control, even at very low rates of application. Our current treatment method closely follows that recommended by W. D. Kelley (1985).

SEED TREATMENT

Stratified pine seed is placed in a rotating cement mixer, and Bayleton 50WP powder is applied at a rate of 2 oz of product per 50 lbs of wet seed. The treated seed is then allowed to tumble for a few minutes. Once the Bayleton is uniformly distributed over the

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✓ Bayleton is a registered trademark of Mobay Chemical Co.

seed, approximately 3/4 gallon of Thiram 42-S, containing a latex sticker, is added followed by aluminum powder. After tumbling for a few more minutes to distribute the materials evenly, the seed is poured onto screen racks and spread to allow air drying. Once dry, the seed is sown that day or placed into plastic bags for short term cold storage at 36-38 degrees F. We have noted no damaging effects for up to seven days under refrigeration. Kelley (1985) notes that treated seed may be kept in the cooler for up to 26 days after treatment without reducing the effectiveness of Bayleton.

SPRAY SCHEDULE

Once the seed are sown, three Bayleton foliar sprays are applied. An FMC hydraulic boom sprayer is used to cover three beds per pass. The sprayer delivers 36 gallons per acre at a pressure of 50 p.s.i., and is equipped with hollow cone nozzles for complete foliar coverage. The first spray is applied approximately 26 days after sowing, the second spray 21 days after the first and the third spray is applied 21 days after the second or between June 7 and 10, whichever is earlier. The chemical mixture rate for each application is 8 oz of Bayleton 50 WP per acre with 4 oz of crop oil-surfactant per acre which increases the foliage absorption of the chemical.

RESULTS AND CONCLUSIONS

No decreased germination or phytotoxic symptoms were observed with the use of Bayleton as described. Although no control plots were established, it appeared that the Bayleton treatments had not affected mycorrhizae development.

By following the outlined schedule, the incidence of fusiform rust at Indian Mound Nursery has been negligible. In fact, during the 1985-86 lifting season, not a single seedling was observed to be infected by fusiform rust.

LITERATURE CITED

Kelley, W. D. 1985. Recommended Bayleton treatments for control of fusiform rust in forest tree nurseries. Auburn University Southern Forest Nursery Management Cooperative, Number 21. 2 p.