Using $GA_{4/7}$ to Induce Flowering in *Pinus ponderosa* Seed Orchards

Marc L. Rust[1]

[1]Director, Inland Empire Tree Improvement Cooperative, University of Idaho, Moscow, ID, USA

Ponderosa pine (*Pinus ponderosa* P.& C. Lawson) is an important tree species in much of the western USA. Members of the Inland Empire Tree Improvement Cooperative (IETIC) are interested in increasing seed crops from first generation ponderosa pine seed orchards to provide improved seed for operational planting programs. Beginning in 2003, IETIC members began establishing a series of trials to test the effectiveness of using $GA_{4/7}$ to promote flowering in both young and mature ponderosa pine seed orchards. Earlier experiments by one IETIC member suggested that flowering response could be obtained using $GA_{4/7}$ alone without the addition of stem girdling. Treatments were designed to 1) identify the optimal timing of $GA_{4/7}$ application to induce flowering, 2) compare single versus pulsed (repeated) dose treatments of $GA_{4/7}$, and 3) compare the results of standard versus reduced dose treatments. Results from several seed orchards treated over a four year period will be presented and discussed.