

# Overview of Sierra Cascade Intensive Forest Management Research Cooperative

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## Abstract

The Sierra Cascade Intensive Forest Management Research Cooperative was founded in February of 1999. Its goal is to create a structure for ensuring and sustaining research in the areas of regeneration and early stand management. The Co-op currently has 23 members and is accepting new members.

The Cooperative is located at the Pacific Southwest Research Station in Redding, CA. Membership is comprised of private, state, and federal entities. Annual dues are required for membership. Research studies are approved by the full membership after review by the Board of Directors and the designated working groups. All members have full access to all the research results generated by the Cooperative.

**Mission Statement:** The SCIFRMC will conduct extensive research on conifer reforestation and young stand management in Northern California and Southwestern Oregon as a means of determining how trees react with their environment. The Cooperative will promote research on maximizing survival, growth and value while meeting other quality objectives of sound land stewardship.

To date, the Co-op has funded 10 forestry research studies including remeasurements of two studies that are 20 and 30 years old. Researchers do not have to be Co-op members in order to qualify for these funds and research proposals can be submitted to the Co-op at any time. An annual field trip, featuring members' forestry operations, is sponsored by the Cooperative. The Cooperative has its own web page.

## Introduction

Early in 1999 a group of industrial foresters, researchers, and manufacturers met to discuss the need for more intensive, management-oriented forestry research. At that time most research had been redirected to political issues rather than addressing issues that led to maximizing forest productivity.

The goal of the group was to create a structure for ensuring and sustaining research directed toward priority issues of conifer regeneration and early stand management. The focus would be on improving conifer plantation establishment and early stand growth in the interior forests of the Cascades and Sierra Nevada.

Research would center on a variety of factors which contribute to plantation establishment success and stand growth such as seedling technology, tree nutrition, stocking levels, and vegetation management.

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## Discussion

Based on a show of interest from prospective members, a Membership Agreement for a forestry research cooperative was developed and mailed in October, 1999 to interested parties in twenty-five organizations. Membership types and the fee structures were detailed in the mailing.

An informal meeting of parties showing an interest in forming the cooperative was held in January, 2000 in conjunction with the Vegetation Management Conference at Redding, California. The proposal for the cooperative was presented to those present. It was well received and eighteen organizations voted to join the cooperative. These members were from Oregon and California and included: land owners/managers, forest nursery owners, fertilizer/chemical manufacturers/distributors, and employees of state and federal agencies. The Sierra Cascade Intensive Forest Management Research Cooperative was officially formed.

Three Directors were selected:

Ed Fredrickson, Roseburg Resources

Joe DiTomaso, University of California Davis

Bob Powers, USFS Pacific Southwest Research Station, Redding

Voting rights for the membership are based on the type of membership chosen by each company or organization. Membership types and the fee structure are as follows:

1. Land Manager Membership – for land managers who manage over 100,000 acres the membership fee will be \$8,000 per year. For land managers who manage under 100,000 acres, the membership fee will be \$4,000 per year. Each member shall receive two votes per their voting rights.
2. Associate Corporate Membership – for non-timberland managers (chemical companies, nurseries, fertilizer companies, etc.) the membership fee will be \$4,000 per year. Each member will receive one vote per their voting right.
3. Affiliate Membership – for any organization or group which does not wish to have voting rights, the membership fee will be \$2,000 per year.

All members regardless of membership type will have full access to all information derived from the work of the Cooperative once data are in the final, edited, published form.

The Cooperative will have the same common objectives:

Mission:

1. To conduct applied reforestation and young stand management research from seed collection to the first commercial thinning focusing on intensive silviculture of

conifer species and how they interact with their biotic and abiotic environments in the interior region of northern California and southwestern Oregon.

2. To promote research on how to maximize survival, volume, growth and value while meeting other quality objectives of sound land stewardship.

Objectives:

1. To develop, implement and evaluate research designed to increase conifer productivity utilizing intensive management techniques in young forests while enhancing or maintaining other forest values.
2. To integrate the various aspects of reforestation (seed and nursery technology, vegetation management, nutrition, spacing, etc.) into one inclusive cooperative focusing on improving establishment, growth and yield of forest plantations.
3. To provide an opportunity for forest land managers to focus research on local problems of young stand management associated with interior forest types of the Sierra Nevada and Cascade ecosystems.
4. To provide and inform members of the most current young stand management research.
5. To present results in a product which foresters can integrate into the decision process.

The first official meeting of the Co-op was scheduled for June, 2000. Members were encouraged to submit research proposals for possible Co-op funding to the membership at this June meeting.

The June 2000 meeting was the first working meeting of the Co-op so several items of business were covered. Priorities were developed for the research to be done. Working Groups were established to recommend these priorities to the full membership. The membership would then determine which of the submitted proposals fit these priorities and would be funded. Two Working Groups were formed:

1. Working Group I – seed to establishment
2. Working Group II – outplanting through precommercial thinning

The next item of business was the evaluation of the research proposals that had been submitted to the Co-op up to that time. There were nine of these proposals. Any proposals that were to be funded had to result in statistically sound publications that were acceptable by a referred journal. Research proposals did not have to come exclusively from members of the Co-op.

Five of the nine proposals were chosen for funding. These included two long-term competition studies (one in its 25<sup>th</sup> year and the other in its 22<sup>nd</sup> year), a literature review of fall planting, and two proposals on seedling fertilization.

Funds were distributed to the researchers and by the end of 2000, the first year of the Co-op, the two long-term proposals had been remeasured and the literature review had been completed. Results from the remeasurement of the long-term studies and a set of recommendations for fall planting which resulted from the literature review were reported in the 2000 Annual Report of the Co-op.

A web site had been developed for the Co-op by this time, also.

The years 2001 and 2002 showed increased growth not only in Co-op membership but also in Co-op activities. Membership was up to 23.

New proposals that were funded included research in wildlife/forest management interactions, another long-term competition study, western pine shoot borer effects on plantations, and a study on slow release fertilizers.

The Co-op hosted its first field trip in June of 2001. The theme was fall planting. Stops on the trip were located at research areas on Sierra Pacific Industries and Roseburg Resources lands.

The 2002 field trip was held in September on Boise Cascade lands out of Medford, Oregon. The theme for this field trip was plantation fertilization and release.

The Co-op hosted a meeting for its membership on wildlife and intensive forest management in January of 2002. Speakers from private industry, the University of Georgia, the Wildlife Conservation Society, and the U.S. Forest Service made presentations.

The Annual Reports for 2001 and 2002 included results from eight proposals that had been funded by the Co-op. These included two long-term competition studies, a study on the effects of intensive forest management on wildlife, a proposal on seedling nutrition, and a study on western pine shoot borer impacts on pine plantations.

The year 2003 was another busy one for the Co-op. One of the Directors, Bob Powers, successfully competed for federal grant money under a competitive grants program called Agenda 2020. This was a partnership effort between the American Forestry and Paper Association (AF&PA) and the U.S. Department of Energy (DOE). The purpose was to focus research on industrial priorities for increasing productivity and energy efficiency. The Forest Service and DOE provide funds and technical support. The AF&PA provides oversight and establishes priorities through various working groups. The National Council of the Paper Industry for Air and Stream Improvement provides technical expertise.

The title of Bob's study was: "An Experiment to Evaluate the Competitive and Ecological Effects of Understory Vegetation on the Productive Potential of Young Douglas-fir Plantations." This study is designed along the lines of Bob's "Garden of Eden Study" but will focus on Douglas-fir rather than ponderosa pine. It is a multiple year study and comes with its own funding. The Co-op will in essence be the contractor who will install and make the measurements for the study.

Two sites have been selected for the study – one on Sierra Pacific Industry lands between Burney and McCloud, California and the second one on Roseburg Resources land near Big Bend, California. The sites have been logged recently and study layout will take place in the summer of 2004 with treatment installation scheduled for spring of 2005. Some interesting treatments, along with the more typical treatments of fertilization, herbaceous vegetation release, etc., are included. Bob wants to study the effects on conifer growth if the competing vegetation is entirely nitrogen-fixers such as a ceanothus species as opposed to being entirely nonnitrogen-fixers such as manzanita. Conifers will be grown with five different levels of competition from these two types of shrubs. These levels include 0, 5, 15, 30, and 50 percent ground cover. All other weed species will be eliminated from the plots.

Other activities in 2003 that the Co-op participated in included the California Forest Council Weed Tour in July. A featured stop was one of the long-term competition studies for which the Co-op had funded the 25 year remeasurements in 2000.

Research results from five on-going proposals were reported in the 2003 Annual Report. To date, the Co-op has installed over 600 new research plots on land holdings of the membership.

The annual business meeting was held on January 19, 2004, in conjunction with the Forest Vegetation Management Conference. Based on the new proposals that are coming to the Co-op, 2004 will be another busy year.