The quarterly newsletter of the Canada-British Columbia Forest Resource Development Agreement (FRDA)



FRDA will require an estimated 2 000 kg of seed from natural stands of various species to produce up to 180 million seedlings over 5 years.

The Greening of British Columbia

A report on the programs and progress at the end of year two of the five-year \$300 million Canada-British Columbia Forest Resource Development Agreement.

Federal and **Provincial Cost-Shared Programs**

Expenditures and achievements of the cost-shared programs of FRDA at the end of year two (March 31, 1987) indicate over \$50.5 million has been invested in backlog reforestation, intensive forest management and other forestry programs on over 675 000 ha of British Columbia forest land. These activities have generated

over 205 000 person days of activity throughout all regions of the province. (see Table 1 for more detail).

Backlog Reforestation

Close to half a million hectares of land have been treated under surveys and prescriptions at a cost of almost \$3.8 million. An additional 39.4 thousand ha have been site prepared at a cost of \$13.1 million and over 31 thousand ha have been planted at a cost of \$10.9 million. In addition, approximately \$8.5 million have been spent

on seeds and seedlings. Over \$3 million has been spent on Extension, Demonstration, Research and Development projects.

Intensive Forest Management

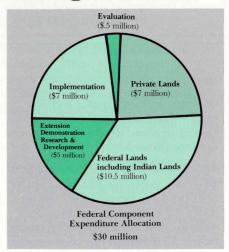
Brushing, weeding and pest control activities have been carried out on 4 272 ha at a cost of just over \$1.5 million. Juvenile spacing, at a cost of nearly \$5.0 million has been conducted on 9 313 ha, while an additional 912 ha at a cost of \$421 016 have been conifer released. Over \$2 million has been spent fertilizing just over 11 thousand hectares.

Expenditures for the six forest regions to March 31, 1987, were: Vancouver — \$7.4 million; Prince Rupert — \$4.3 million; Prince George — \$12.9 million; Kamloops — \$4.6 million; Nelson — \$5 million; and the Cariboo — \$3 million.

FRDA hit the half-way point on September 30, and although we have only preliminary statistics at the time of writing, it is clear FRDA programming has increased significantly in the third year as was intended. The FRDA budget calls for greater spending in the final three years — \$78 million in each year — because of biological and administrative reasons. Most of the substantial labour-intensive groundwork, indicated by the current surveying and prescription phases, will be undertaken between 1988 and 1990.

Preliminary cumulative figures to June 30, 1987 show an overall costshared commitment of over \$112 million — a two-fold increase over the first two years. Expenditures in backlog reforestation have hit the \$78 million figure, while intensive forest management expenditures reached \$28 million. Further details on year three commitments will appear in the next issue of Renewal.

Federal Component Programs



Private Forest Lands Program

In B.C. there are an estimated 500 000 hectares of private land which contains some of the most productive growing sites in the province.

The Private Forest Lands program encourages forest inventories, forest management plans, backlog reforestation and intensive forest management on these lands.

Progress:

More than 110 projects have been approved at a value of more than \$1.1 million. While most of these contracts were with small landowners, significant funding has gone toward the development of the Greater Vancouver Regional District's Seymour Demonstration Forest in North Vancouver and to the Municipal District of North Cowichan on Vancouver Island.

Development Officer: John Burch, RPF, Pacific Forestry Centre, Victoria, B.C. (604) 388-0600.

Indian Forest Lands Program

In British Columbia, there are 196 Indian bands with 1 606 reserves containing 153 700 hectares of forest land. The Indian Forest Lands Proram encourages forest inventories, forest management plans and sound silvicultural practices on these lands.

Progress:

Sixty-two bands have completed inventories with 49 of these also completing management plans at a total cost of \$1.3 million. This figure represents more than 32% of all Indian bands and 31% of all reserve land in British Columbia. (see 'Banding Together' in this issue for a more detailed update.)

Development Officer: Mark Atherton, RPF, Pacific Forestry Centre, (604) 388-0600.

Federal Forest Lands Program

The thrust of this program is to develop inventory and management plans on federal forestry lands, primarily Department of National Defence (DND) lands.

Progress:

Currently, 18 DND lands are identified as having potential for forest management. The largest of these is the Chilcotin Block, currently managed by the Ministry of Forests and Lands. The remaining 17 properties are held in CFB Esquimalt, CFB Comox, CFB Chilliwack and CFB Masset. To date, forest inventory and management plans have been completed on 4 813 hectares at a cost of \$41 000. A resource evaluation and

assessment of inventory data for forest management planning of the Dominion Coal Blocks (20 200 hectares) in the East Kootenays was completed at a cost of \$8 000.

Development Officer: Jennifer Parkinson, RPF, Pacific Forestry Centre, (604) 388-0600.

Extension, Demonstration and Research and Development

This program complements the costshared FRDA research program, and expands the knowledge of foresters and forestry managers of public, private and Indian lands. The emphasis is on topics where knowledge gaps have been identified concerning forestry management.

Progress:

To date, \$2.2 million has been used to fund 37 research projects by all three B.C. universities, several forest companies, consultants and researchers. A contract has been awarded to the Silviculture Institute of B.C. to develop advanced silvicultural training programs. Funding has been provided to the British Columbia Forestry Association to promote National Forest Week. See 'Research Results' on page 4 for progress reports on three research projects.

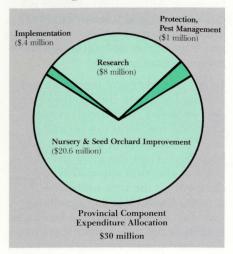
Program Officer: Wayne Coombs, RPF, Pacific Forestry Centre, (604) 388-0600.

TABLE 1 Expenditures and Achievements of Cost-Shared Programs by Region

Forest Region	Expenditures to March 31/87 (\$)	Area Treated (ha)
Vancouver	7 461 170	60 201
Prince Rupert	4 356 333	76 531
Prince George	12 922 014	176 793
Kamloops	4 665 748	74 331
Nelson	5 032 137	132 084
Cariboo	3 793 723	155 463
SUB TOTAL	38 231 125	675 403
Headquarters	12 328 621	
TOTAL	50 559 746	
		1 D 0 D C

Note: Headquarters includes Extension, Demonstration and R & D, cost of seed and cost of seedlings.

Provincial Component Programs



Nursery and Seed Operations Improvement Program

The objectives of the Nursery and Seed Operation Improvement Program are: 1) to accelerate the transition from bare root to container facilities; 2) to build infrastructure for cold storage facilities, especially in the north of the province; 3) to construct a new seed extraction, storage, testing and processing facility; 4) to assist in the development and improvement of seed orchards; and 5) to develop private sector support service facilities.

Progress:

Planting of seedlings has increased from 80-million in 1980 to 200million per year in 1987. Storage capacity for seedlings has increased by 160 000 cartons. A new seed centre is now in operation in Surrey, and an increased summer planting program has been assisted by FRDA by meeting the demand necessary for open compound-type containers. The Nursery and Seed Operations Improvement Program has achieved its level of funding every year and invested more than \$3 003 000 in seed and nursery program development in the 1986/87 fiscal year.

Contact: Dave Armit, RPF, Ministry of Lands and Forests, Victoria, B.C. (604) 387-8955.

Research Program

This program is designed to expand knowledge on growth and yield of managed forests and to assist in making decisions between alternative silvicultural treatments and Annual Allowable Cut determinations. It complements provincial programs already in place and expands the information for both the private and public sectors.

Progress:

Excellent progress is being made throughout the province. One of this year's projects is a massive survey and assessment of over 4 300 permanent sample plots with preliminary screening to utilize available growth and yield information. A variety of research projects are addressing short and long term data needs for both the coast and interior of the province. An enhancement to the Tree and Stand Simulator computer program will allow managers to examine the impact of silvicultural regions on the quality and value of end products. Last year, Ministry investment in research totalled \$1 167 632 with a projected expenditure of more than \$2 202 600 in 1987/88. For more information on the forestry research projects underway in the province see Solutions magazine.

Contact: Mik Kovats, Research Branch, Ministry of Lands and Forests, Victoria, B.C. (604) 387-6648

Protection and Pest Management Program

This program is designed to focus on important pests in young forests. Much of the work that will be completed over the five years utilizes trials and demonstrations for major pests which injure young trees.

Progress:

Since the beginning of this program in 1985 more than 20 extensive and intensive surveys for forest pests have been completed. Destumping trials and surveys of residual roots have taken place in several areas throughout the province. Strategies have been developed for surveying root diseases in the southern interior. And a computer program is under development to record pest control projects and keep track of infestations. This

program has achieved a consistent level of investment over the two years of the Agreement with pest control projects now underway at approx. \$30 000 per region for the 1988/89 fiscal year.

Contact: John A. Muir, Forest Pathologist, Ministry of Forest and Lands, Victoria, B.C. (604) 387-3789

Forest Quiz

What does the forestry industry mean to British Columbia? Test your knowledge in this quick quiz. (Answers below).

- 1. The forest industry employs what percentage of the working population in British Columbia:
 - a. 10 percent
 - b. 17 percent
 - c. 20 percent
- 2. The value of forest products account for how much of the gross provincial product:
 - a. 5 percent
 - b. 12 percent
 - c. 10 percent
- 3. The total value of forest product exports in British Columbia last year was:
 - a. \$6.2 billion
 - b. \$4.1 billion
 - c. \$881 million

(Answers: 1:c; 2:c; 3:a)

The Canada-British Columbia Forest Resource
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onomic & Regional Development Agreement

Research Results

Some of the Canadian Forestry Service funded research activities are still in the initial stages but results are coming in on others.

The federal Extension, Demonstration and Research Development component of FRDA has now funded thirty-seven projects at a cost of over \$2 million. Some of these projects are in the initial stages but results are coming in on others.

The Effects of Mycorrhizal Fungi on Coniferous Nursery Stock and Reforestation Performance in Interior British Columbia' initiated in May 1986, is one such study. Research scientist Dr. Gary Hunt, of the Balco Canfor Reforestation Centre in Kamloops, is investigating the potential of mycorrhizal fungi for improving container-grown nursery stock. Mycorrhizal fungi has a symbiotic relationship with the roots of most plants: the fungi form microscopic webs in the soil or growing medium which wrap around tree roots, grow into a plant's root cells and help the roots take up nutrients. In return, the fungi uses up to 10% of the tree's photosynthate to produce its crop of mushrooms.

The objective of this study is to produce hardy container-growth seed-lings. To achieve this, Dr. Hunt is inoculating nusery seedlings with specific mycorrhizal fungi to enhance root growth and to increase survival and growth rates after outplanting.

In 1986, over 15 000 Engelmann spruce, lodgepole pine and interior Douglas-fir seedlings were sown for use in the study, and a percentage of these were inoculated with mycorrhizal fungi. Colonization rates were variable, with results so far indicating that fertility levels and poor aeration in the root zone reduced fungal colonization. Thousands more seedlings were sown in 1987, and a



Nursery seedlings are inoculated with specific mycorrhizal fungi to enhance root growth and to increase survival and growth rates after outplanting.

number of inoculate and control seedlings have been planted on three different sites in the Kamloops region. The growth of both treated and untreated seedlings on these sites will be followed for the rest of the study.

Research results are also coming in at AFC Research in Sidney. Their 1986-87 study examined the soil environment in styroblock containers and its relationship to needle-tip dieback of container-grown Douglas-fir. Michael Peterson, the principal investigator for this project, is currently attempting to predict the need for, or timing of, fungicide sprays for gray mould on container-grown Douglas-fir. For the purposes of this second study, fungicide is applied only when the microclimatic conditions are suitable for gray mould spore germination.

Preliminary results suggest that these conditions occur in June and July earlier in the growing season than was previously thought. Because of a drop in temperature that coincides with irrigation, the conditions that optimize infection by spore germination most often occur when the seedlings are watered. Preliminary findings indicate that it may be possible to reduce the amount of time when ideal conditions for spore germination occur simply by watering the seedlings at a different time of a day. This may help reduce the number of fungicide sprays a grower puts on the seedlings, and at the same time, give the grower better control.

On a third study, Dr. Thomas Sullivan at the Applied Mammal Research Institute in Langley, is investigating the use of predator odors to repel black-tailed deer in back log plantations. Douglas-fir and western red cedar are the tree species most often damaged by deerbrowsing. Although no estimate is available on the economic loss in B.C., losses due to deer-browsing in Oregon and Washington amount to several million dollars annually.

In the past, chemical repellents and fencing have been used to discourage deer-browsing, with mixed results. Chemical repellents can be washed away in bad weather and need to be reapplied. Trees can grow past the point of chemical application and deer will eat the new, untreated growth. Lastly, deer can develop a taste for chemically-treated seedlings and, in some cases, prefer them to untreated plants. Fencing is an effective way to protect a newly planted stand from deer but it is prohibitively expensive.

Dr. Sullivan is trying to develop an encapsulated controlled-release odor repellent that will elicit a fear response in deer, keeping them away from reforested areas for long periods of time. Synthesized fecal odors of such predators as cougar, wolf and coyote are currently being evaluated. If successful, this system should reduce the damage done to seedlings without harming the wildlife.

For more information on FRDA federal component research projects, please contact Wayne Coombs at (604) 388-0600.



Dr. Thomas Sullivan is investigating the use of predator odors to repel black-tailed deer in backlog plantations.

Green Gold

Federal and provincial governments cosponsor grants to non-profit groups to improve public awareness of the forest industry in B.C.

If you're a non-profit organization and you want to communicate a message about the forest industry in British Columbia, you may qualify for federal/provincial funding of up to \$10 000 under the Green Gold Grants program.

Operation Green Gold is a federal/ provincial government national forestry awareness campaign sponsored under the auspices of the Canadian Council of Forest Ministers.

The campaign is aimed at: 1) increasing public awareness of the importance of the forest sector, of forests, and of responsible forest management based on the principles of integrated resource management; 2) creating public support for, commitment to and involvement with forest management activities; 3) increasing support and recognition of government actions in the forest sector; and 4) demonstrating efforts in forest management.

The Green Gold Grants program is one of several Operation Green Gold projects sponsored by the Government of Canada and the Province of British Columbia. A fund of \$105 000 has been set up for each of two years to provide registered non-profit organizations with financial assistance to support projects which will meet the objectives of operation Green Gold as stated above. Examples of such projects include printing posters and brochures; preparation of audiovisuals; interpretation areas; seminars; workshops; etc.

Applications must be received no later than March 15, 1988 for next year's program. Details on projects funded under this year's program will appear in next issue.

Application forms and criteria for the grants are available from Ministry of Forest and Lands or Government Agents offices throughout the province or by writing Green Gold Grants, P.O. Box 4115, Station A, Victoria, B.C. V8X 3X4.



Newspaper ads ran in papers throughout the province to publicize the Green Gold Grant program.

Banding Together

48% of all Indian Lands in the province have inventories and management plans funded under FRDA.

Program Highlights

- Inventories and management plans underway or completed for 48% of all B.C. Indian Bands.
- 53% of all reserve land in British Columbia to be inventoried.
- 22 bands carrying out silviculture projects worth \$1.1 million over next three years.

The accomplishments of the Canadian Forestry Service's Indian Forest Lands Program in the first two and a half years are impressive.

To date forest inventories have been completed for 62 Indian bands, and 49 forest management plans have been written. An additional 25 bands are currently conducting forest inventory and management plan projects which are nearing completion. Inventories are pending implementation with a further eight bands and management plans will be written for 11 more bands. By the end of the fiscal year (March 31, 1988) inventories and management plans will have been completed for 95 bands or 48% of all B.C. Indian bands.

The properties surveyed contained 28% mature forest, 17% immature forest and 11% non-productive, not satisfactorily restocked and environmentally sensitive. The balance of the land base, 44% of total area, is nonforest land. When all of this year's projects are completed, 180 000 ha of land will have been inventoried at a total cost of \$2 million. This amounts to 53% of all the reserve land in British Columbia!

The management plans point out heavy timber exploitation over the past decades and put a new emphasis on rehabilitation. The plans provide a plan of action to bring these properties under professional forest management.



Flavian Harry of the Homalco Band timber cruising with a rifle to ward off grizzly bears.

Further surveys on 5 500 ha of backlog and intensive forest management treatments on 31 300 ha at a total cost of \$9.7 million was also recommended. When all the plans are submitted it is expected that up to \$40 million may be required to carry out all the treatments recommended.

This year, five member bands of the Nicola Valley Indian Administration will be juvenile spacing 680 ha at a cost of \$337 000. Three Hazelton Bands and three Fraser Valley Bands will clear 600 ha of deciduous trees and brush species and then plant for a total cost of \$333 000. But this is only part of the story of this successful program.

Silviculture

Twenty-two bands have received approval to carry out silviculture projects on their reserves over the next three years at a total cost of \$1.1 million. The Canadian Forestry Service share of this is \$875 000.

The emphasis this year is on site preparation and juvenile spacing.



Worker at Tanizul Timber Ltd. Tree Farm License at Fort St. James.

Once sites are prepared and seedlings grown, the emphasis will shift to planting those areas.

The program provides up to 80% of total project costs and the bands are obligated to provide the balance from their own finances or other government sources. Many have received partial funding from the CEIC programs as well as the Indian Community Human Resources Development



Pole of the Tsawataineuk Band in Kingcombe Inlet.

Strategy. The Canadian Forestry Service has been flexible in entering creative financing arrangements to make the best use of these programs.

FRDA Reports

FRDA research papers available from the Canadian Forestry Service.

Limited quantities of the following FRDA reports have been printed and are now available by sending your request and a return address label to: Publications, Canadian Forestry Service, Pacific Forestry Centre, 506 West Burnside Road, Victoria, B.C. V8Z 1M5.

FRDA Report 014

Impact of Intensive Forestry Practices on Net Stand Values in British Columbia Prepared by: Nawitka Resource Consultants

A study was done to indicate the economic impact of intensive forestry practices on net stand values in B.C. The purpose of the study was to develop a trail from treatment responses predicted by theory and demonstrated research results, through changes caused by focussing on the merchantable part of the stand, to further changes caused by

applying treatments in operational conditions. Results include operational yield tables for major species for second growth managed stands, and a set of relative priorities for treatment.

FRDA Report 015

Productivity and Profitability of Grapple Yarding B.C. Coastal Second-Growth Timber Prepared by: Jack MacDonald

A study was established to examine the profitability of grapple yarding second-growth timber of the type being produced by treatments implemented by FRDA. The study block was located approximately 15 km northwest of Sooke, B.C. The stand composition was mainly secondgrowth Douglas-fir. A Madill 122 yarding crane was monitored on a shift-level basis over a two month period, and at a detailed-timing period, individual logs were scaled and graded, and their varding time recorded. The yarding costs and profits of these logs were calculated. Marginal log sizes for each species by log grade were determined. The major factor influencing the profitability of a log was turn size with yarding distance having a lesser influence. Grapple size and design influenced yarder productivity.

FRDA Report 016

Site Preparation Equipment in British Columbia: Current Availability and Future Needs Prepared by: R.E. Breadon, R.P.F.

Requirements by type, quantities and potential sources, of mechanical site preparation (MSP) equipment in B.C. were investigated in relation to work forecast under FRDA. On B.C. Crown lands, an estimated 66 300 ha of "current" MSP and 38 700 ha of "rehabilitation" MSP are planned for each year during the period 1988-1992. Taking into account annual equipment productivities, added work on federal and private lands, machine replacements and other factors, it is estimated that existing pieces of MSP equipment must be supplemented with 93 new pieces by the 1988 field season. Prime movers for the new MSP equipment must also be purchased or diverted from other work. Experienced MSP operators or welltrained new operators will be required. Cost and technical problems encountered with current equipment

are outlined, along with possible solutions in some cases.

FRDA Report 017

Utilization Opportunities for Western Red Cedar — A Review Prepared by: M.R.C. Massie, Nawitka

Resource Consultants.

A review of the red cedar specialty products industry was done to determine future research needs. The study focussed on present products and markets, research done on new products and potential markets for cedar specialty products.

Prescribed Fire Papers

A collection of four papers published in the Proceedings of the 1986 Annual Meeting of the Northwest Forest Fire Council, Olympia, WA, November 18-19, 1986. These papers (with the exception of the Hawkes/ Lawson paper) were funded under FRDA and were presented as part of a panel entitled "Prescribed Fire Research — State of the Art and Future Needs".

Effects of Prescribed Burning on Some Coastal B.C. Sites

Prepared by: William J. Beese, Silviculturist, MacMillan Bloedel Limited

Short and Long-Term Effects of Slashburning on Soil Properties, Tree Growth and Nutrition on Some Coastal B.C. Sites Prepared by Mike Curran, Soil Science Department, UBC.

Rehabilitation of Densely Stocked Lodgepole Pine Stands in the Lakes Forest District, West Central British Columbia Prepared by: B. Blackwell, M.C. Feller, Faculty of Forestry, U.B.C. and R. Trowbridge, Ministry of Forests and Lands, Smithers.

Prescribed Fire Decision-Aids in B.C.: Current status and Future Developments Prepared by Brad C. Hawkes and Bruce D. Lawson, Canadian Forestry Service





Over the next three years, the federal and provincial governments, in partnership with the B.C. Research Council, will fund experts in molecular biology, tissue culture, biochemistry, tree physiology, microbiology, plant pathology and ecophysiology at the new Centre of Forest Biotechnology in Vancouver.

The Centre will receive \$874 000 from the federal government and \$1 474 000 from the provincial government, with B.C. Research raising the balance required to meet the Centre's operating budget.

Located at B.C. Research's facilities near the University of British Columbia's campus, the centre will develop and improve seedlings for bigger and hardier trees. This will be accomplished through genetic engineering and tissue culture and the resulting seedlings will enhance reforestation across the country when incorporated into traditional forestry operations.

In announcing the funding, Federal Minister of State (Forestry and Mines), Gerald Merrithew, said that the new facility will become a centre of biotechnology expertise, working in collaboration with and complementing the research programs of universities, industry and government. Provincial Forests and Lands Minister, Dave Parker, noted that two reports

completed last year identified the need for forest biotechnological research and that the new centre will fulfill this need.

The Centre plans to market its services to government, forest companies, biotechnology firms, international development agencies and organizations funding basic and applied research. Its goal is self-sufficiency by March 31, 1990.

Talking Shop

FRDA funds three day workshop on the herbicide use at Carnation Creek.

In September 1984, the Carnation Creek Watershed, located on the west coast of Vancouver Island, was treated with glyphosate. The herbicide was applied from a BELL-47 helicopter equipped with a microfoil boom to minimize the drift of the herbicide into an adjoining salmon-bearing stream. This treatment provided an unprecedented opportunity to examine the long-term residue inputs resulting from winter storms into tributaries of the stream used by overwintering salmon. It further allowed an opportunity to monitor salmonid habitat changes resulting from this treatment.

On December 8, 9 and 10, a workshop will be held at the Coast Bastion Inn in Nanaimo, B.C. to discuss the research findings of this treatment and the implications of these findings on future operations or regulations. Two days of presentations will be followed by a day devoted to workshop discussions.

For further information, please contact Kathy Banky at (604) 384-5762.

At the signing ceremony in Vancouver were (L-R) Lorne Greenaway MP and Parliamentary Secretary to Federal Minister of State Forestry and Mines, Gerald Merrithew; Dave Parker, B.C. Minister of Forests and Lands; Bob O'Shaunessay, Chairman of the Board of the B.C. Research Council; Terry Howard, President of the B.C. Research Council and Ben Marr, B.C. Deputy Minister, Forests and Lands.

Brushing Up

Former logging sports champion demonstrates brush clearing saw

A former world logging sports champion, Brian Herlihy of Vancouver, demonstrated proper use of Husqvarna clearing saws to more than 50 foresters and silviculture contractors in Castlegar this summer.

Brian was in the West Kootenays training a small crew working on a Canadian Forestry Service (CFS) and Forest Engineering Research Institute of Canada (FERIC) research study funded under the federal research component of FRDA.

The objective of this study is to assess the saw's suitability for weeding young forest plantations. The FERIC engineers are interested in finding out how well new brush cutting attachments work and what daily produc-

Team Work

Industry, government and associations form a Forest Sector Advisory Committee to make recommendations and provide advice.

A Forest Sector Advisory Committee has recently been formed to provide input to the FRDA Management Committee.

The principal objectives of the Committee are to make recommendations and provide advice to the Management Committee pertaining to the present and possible future FRDA agreements. At the first meeting of the Committee Bob Cavill, President of B.C. Forestry Association was elected chairman.

The following organizations which will be participating in the Industry Advisory Committee include:



Brush cutting saw from Husqvarna is demonstrated by world champion logger, Brian Herlihy.

tion a forester should expect from his workers. The Canadian Forestry Service is assessing the saw's effectiveness in controlling problem brush species and what benefits or damage to the forest crop can be expected from the treatment. The clearing saw was designed in Sweden to increase worker productivity and comfort by causing less physical stress and injury than a conventional chainsaw. It is expected to see increasing use in B.C. as silviculture programs continue to expand.

Contacts: Roger Whitehead, Canadian Forestry Service (604) 388-0600 Sylvi Holmsen, FERIC (604) 732-3711



New saw causes less stress to workers than conventional chainsaws, is light to use and easy to wear.

Organization

Council of Forest Industries of B.C. Interior Lumber Manufacturer's Assoc. B.C. Forestry Assoc. I.W.A. (Western Canadian Reg. Council) University of B.C. Northern Interior Lumber Sector Cariboo Lumber Manufacturer's Assoc. WSCA (Western Sil. Contractors Assoc.) PRWA (Pacific Reforestation Worker's Assoc.) ABCPF (Assoc. of B.C. Professional Foresters) B.C. Wildlife Federation B.C. Cattleman's Association FERIC (Forest Engineering Research Institute of Canada) Department of Fisheries & Oceans Nurseryman's Association

Representative

Jack Toovey
Fred Parker
Bob Cavill
Philip Legg
Dr. G. Weetman
Gerry Deere
Van Schofield
Karl Loland
Alister McColl
Brian Zak
Eugene Rogers
Lorne Leach

Alex Sinclair Dennis Deans Garry Kenwood Terry Vold

Renewal

Renewal is the quarterly newsletter of the Canada-British Columbia Forest Resource Development Agreement.

Ministry of Environment & Parks

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