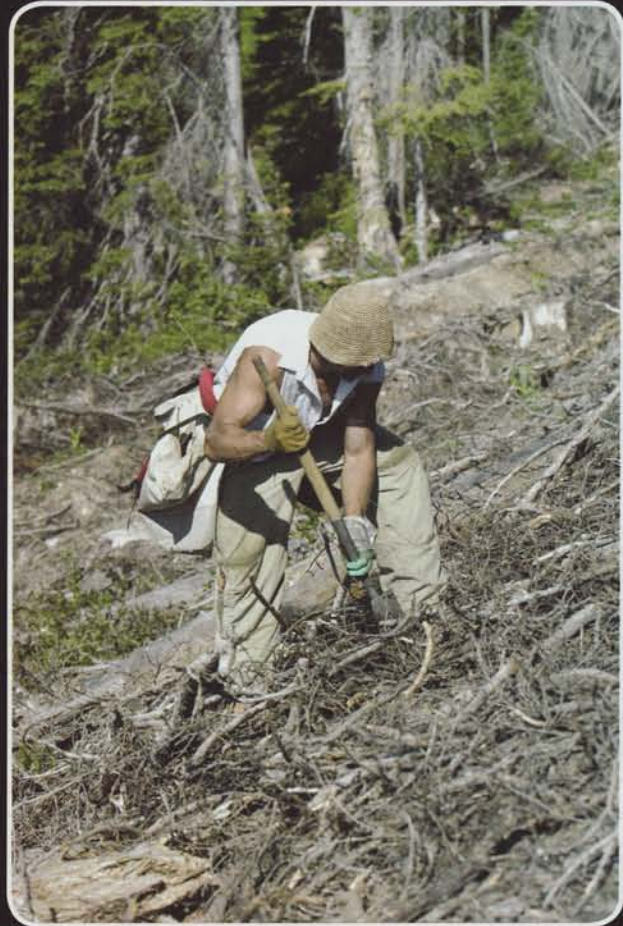
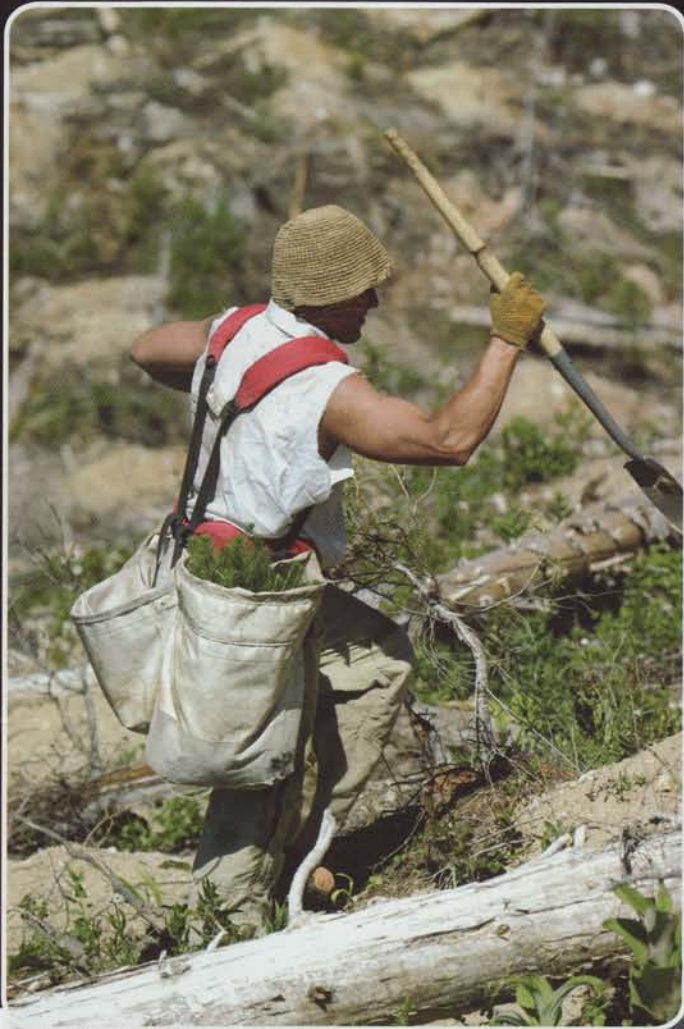


# Getting Tree Planting Fit

*by Steve Mueller*



As you gear up for another season, your checklist may look something like this:

- 2008 contracts negotiated and secured
- Equipment repairs and annual maintenance
- Crews recruited and hired
- Supervisors trained in safety responsibilities
- ATV training provided for crew leaders
- Off road/resource road driving course for drivers
- Safety program reviewed and revised

You've pretty much covered all the bases in terms of safety - but what about health? What are you doing to encourage workers to arrive fit and ready for a summer in the woods?

As many tree planters have learned, there is fit, and then there is tree planting fit. The reality for most is that a regular fitness program won't necessarily get you ready

for the type of stress and physical output required by a summer on the cut block. According to WorkSafeBC, a tree planter who plants 1,200 trees a day:

- Lifts a cumulative weight of more than 1,000 kilograms
- Bends more than 200 times per hour
- Drives the shovel into the ground more than 200 times per hour
- Travels about 16 kilometres on foot while carrying heavy loads of seedlings

You can help your workers be prepared by encouraging them to use a free, web-based fitness program that is no secret to savvy contractors since its release in 2004. The Fit To Plant program, developed by Dr. Delia Roberts, helps workers to avoid injury and go home safely at the end of the season. The program is based on the outcome of her 2003 study that showed how improving fitness levels and diet can minimize the risk of injury and enhance planting productivity.

Daily workouts are generally about 20-30 minutes in length, with one longer session a week, and include both aerobic power training as well as exercises to strengthen specific muscles and tendons.

Dr. Roberts' study revealed that tree planters who use the eight-week pre-season training program experienced 40% fewer injuries and illnesses than planters who did not train. The Fit To Plant program also helps tree planters to:

- Increase their aerobic power so they can move fast all day
- Strengthen their muscles and tendons to protect against wear and tear
- Speed up their reflexes to protect their joints
- Plant up to 12.5% more trees

According to initial testing, on average planters worked an impressive 6 hours/day at heart rates between 60 and 80% of maximum

heart-rate and carried over 30% of their body weight in their planting bags. To fuel all this work, planters consumed approximately 5,000 calories per day, but could not meet their energy needs, losing an average of nearly 2 kg over the 18 days of the study. Planters were working as hard as many elite athletes, without proper preparation and nutrition. No wonder so many of them were getting hurt!

When asked how her program could help someone to avoid two of the most common tree planting injuries (tendonitis and spraining a leg by falling on the ground), Dr. Roberts explained, "Pre-training the muscle and its connective tissue attachment to the bone (i.e. the tendon) in a slow, progressive manner accustoms these tissues to withstand the repetitive nature and sudden forces experienced during planting without sustaining the small injuries that lead to inflammation of the tendon. With a stronger core and better muscle activation patterns, the planter's balance will be better. He will step more positively (with more muscle control), and have more energy available to concentrate on walking through slash."

Planters can also improve performance by using electrolyte beverages containing carbohydrates rather than just water to avoid dehydration. These beverages help prevent the drops in blood sugar known as bonking (loss of concentration, poor muscle coordination, slowing of reflexes and suppressed immunity), thereby avoiding the middle-of-the-afternoon slowdown of planting. Planters also didn't feel as exhausted at the end of the day, and that they were able to plant successive high output days.

If someone offered you a surefire method to increase your overall productivity by more than 10%, wouldn't you jump at it? The catch is that you are going to have to get everyone involved - your workers, camp cooks, and, initially, your management staff - in order to realize the benefits. Fortunately, almost every worker will have an email address and you can set up email lists to get the information out.

"Email is the main way of conversing with our workforce," says Chris Akehurst, of Akehurst & Giltrap Reforestation, who reminds his workers about the Fit To Plant program every January when he emails their T-4 slips.

Chris describes how the program has helped workers at Akehurst & Giltrap Reforestation camps: "You get a reduction in the number of nagging injuries. We get a lot of sprains and strains - sore back, sore wrists, sore elbows. If someone comes fit, incidents of that type of injury are greatly reduced," he says. "From the planters' point of view, just looking at money, they can make more money if they're fit. Secondly and perhaps most importantly, they don't push their body where it doesn't want to go when it's not ready to go there."

Of course, you can't control what your workers do with the information

once they have it. There are many distractions and reasons why workouts get short changed. Sending a reminder by email is a good first step, but it's important to follow up and do more to get everyone on board. Garth Hadley, owner of Coast Range Contracting, describes the challenge of influencing a worker's choice to get fit for planting.

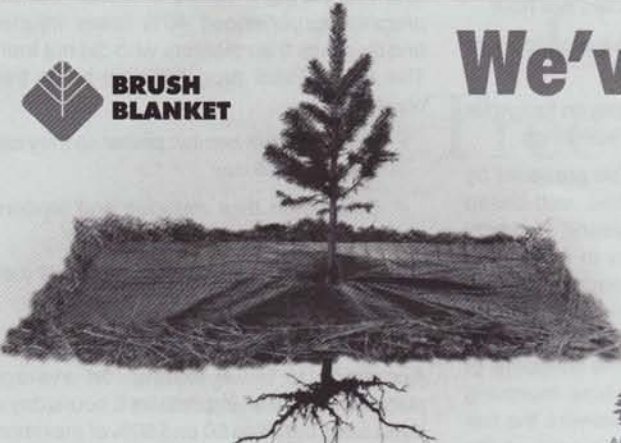
"You get the information out there and you remind them of it, and then what do you do from there? How do you actually get five or 10% more people doing it?" Garth asks. "Our business is such a funny one. We only work with these people a maximum of two to three months a year and it's tough for us to make demands on their lifestyle or life - even though we know it's in their best interest and they know that too."



## WOMEN TREE PLANTERS

by Dr. Delia Roberts

Female tree planters make up about 33% of the total planting population, and generally 3 of the top ten highballers in a camp are women. Interestingly, women are only responsible for 26% of lost time claims, but make up 50% of alternate duty days. Women carry the same weight in their bags as men, but due to their smaller body size it means that women are carrying about 30% of body mass, while men carry only 24%. Both the physiological and biochemical data show that women are working at a higher intensity than men, but that they are able to meet the performance demands of this rigorous occupation as well as men do.




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One solution is to provide additional incentives to workers who make the investment, by giving them t-shirts, hats, or a cash bonus. You may also want to invest in a more substantial incentive and hold a draw for the prize. At first glance, this may seem too expensive to fit within tight profit lines - but remember that more fit workers means less injuries. Your return on investment will be a savings in claim costs and less lost productivity down the road.

Even though musculo-skeletal injuries from tree planting are not generally classified as "serious" injuries, Dr. Roberts reminds us of their serious impact on workers' lives. "How serious is it if you can't plant this summer and don't have enough money to live on next year?" she asks. "How serious is it if you have joint damage that results in cartilage degeneration and ultimately osteoarthritis? How serious is it if you hurt your back and can't participate in the activities you love to do?"

For more information, visit:

**Dr. Roberts' program: Fit To Plant**

[www.selkirk.ca/research/facultyresearch/tree planting](http://www.selkirk.ca/research/facultyresearch/tree%20planting)

**WorkSafeBC's Preventing Tree Planting Injuries**

[xrl.us/bbz7c](http://xrl.us/bbz7c)

**WorkSafeBC's MSI Prevention Bulletin 6 - Tree Planting**

[xrl.us/bbz7x](http://xrl.us/bbz7x)

**Treeplanting.com's Special Advisory for Women**

[xrl.us/bbz35](http://xrl.us/bbz35)

**A & G Reforestation's Planter Health and Safety Notes**

[www.agreforestation.ca](http://www.agreforestation.ca)

**Coast Range Contracting - Health and Safety**

[www.coastrange.ca/employees/health.html](http://www.coastrange.ca/employees/health.html)

Steve Mueller is the Director of Forest Worker Development at the BC Forest Safety Council and a former tree planter. More information on the Council is found at [www.bcforestsafesafe.org](http://www.bcforestsafesafe.org).



## MUSCULO-SKELETAL INJURIES IN THE BC SILVICULTURE SECTOR

In 2006, there were 505 silviculture companies working in BC and WorkSafeBC paid \$3,534,989 in claims costs. The sector had 8,012 days lost due to injury, down from 11,462 in 2005.

From 2002 to 2006, the most common injuries to BC tree planters were: sprains, strains, and tears (41%) and inflammation and irritation of joints, tendons, muscles and connective tissues (11%). The body parts most often injured are: legs (22%); back (11%); ankles (8%); wrists (8%); and arms (7%). The most common causes of injury are: falls from same level (18%); repetitive motion (14%); and struck by object (13%).

Injury rates in 2006 were 9 claims per 100 person-years of employment, down from 11 in 2005 and 2004, 12 in 2003, and 15 in 2002. One person-year is the equivalent of 52 paid weeks of employment, worked by one individual or several.

## Get home safe



**SAFETY IS VITAL** to the people who work in British Columbia's forest sector. Everyone wants to get home safe at the end of the day.

The BC Forest Safety Council is working with silviculture employers and workers to improve safety programs and performance. We are:

- » Training workers and companies to recognize and manage the hazards of working in the forest; and
- » Focusing on the safe transportation of people and products to and from worksites

The SAFE Companies program is now underway. Companies can register, have their safety programs audited, get certified and receive rebates on their WCB payments.

Call now for information about how you or your company can participate in training and SAFE Companies activities.

[www.bcforestsafesafe.org](http://www.bcforestsafesafe.org) 1.888.632.0211



**BC Forest Safety Council**  
*Unsafe is Unacceptable*