



**BC Forest Safety**

# **Tree Planting Safety Resource Package**



## **Introduction:**

The BC Forest Safety Council has compiled some of the latest information on tree planting safety in this resource package. The following information contains 3 recently developed resources:

- 1) Preventing MSIs in Silviculture Series** – WorkSafeBC information sheets for licensees, contractor/supervisors and workers to help prevent musculoskeletal injuries (MSI).
- 2) Wrist and Forearm Exercise Pamphlet** – learn the best ways to prevent tendonitis this season. Thanks to the Western Silvicultural Contractors Association for this pamphlet.
- 3) Teabag Fertilizer Safety Information** – handling and storage guide from Reforestation Technologies International.
- 4) Resources** – links to additional information



# PREVENTING MUSCULOSKELETAL INJURIES IN SILVICULTURE — **CONTRACTOR/SUPERVISOR**

The Preventing Musculoskeletal Injuries in Silviculture series includes information sheets for licensees, contractor/supervisors and workers. Musculoskeletal injuries (MSIs), such as sprains and strains, make up the largest number of workplace incidents in silviculture. They cause pain and suffering and make it hard for workers to carry out their normal activities. They can also become permanent, long-term injuries. The other workers on a team will have to work harder to get the job done, and the contractor's costs may go up if projects are delayed or if incidents need to be investigated.

As a contractor/supervisor, you can help reduce the risk of MSI through proper planning, training, and supervision.

## PLAN

1. Identify conditions that may increase the risk of MSI (risk assessment) and determine how you can reduce the risks. Share this information with the owner/licensee as well as supervisors and workers and include in your written plan. Conditions that may increase the risk of MSI include:

- Harvesting method (ground skidding, cable yarding, bucking and limbing, etc.)
- Site preparation
- Access; camp locations
- Block completion order (timing)
- Planting microsite selection
- Screefing, hand closures, and fertilization at time of planting
- Planting density and density adjustment in rocky, slashy, steep-slope, and/or otherwise extreme ground.
- Stock type and size
- Project start and completion dates (don't start too early if freezing; don't rush to finish)
- Numbers of trees planted or carried, depending on the conditions




*Disc trenching breaks up the ground to reduce the force required to dig holes for the trees.*



*In slashy ground, tree planters have to use greater force to clear away bark, branches, and roots. Slashy ground can also increase awkward postures and tripping hazards at the site.*



2. Continually assess and take steps to reduce risks as conditions change. Keep supervisors, workers, and licensees informed and update your written plan. Seek flexibility in your contract so you can respond quickly to changing conditions.
  3. Organize the crews and blocks to minimize the risk of MSI:
    - Start the project with lower production targets.
    - Schedule shorter days early in the season to give the body more recovery time.
    - Schedule more frequent recovery days, such as 3 days on, 1 day off.
    - Assign new workers to less difficult sites. Partner them with experienced planters for mentoring.
    - Have more tree caches spread out over the block to reduce carry distances.
    - Carry out team planting as a group. This will improve supervision, reduce other risk factors such as wildlife, help workers keep their minds on the task at hand, and help reduce the risk of falls.
    - Ensure that front-line supervisors can see all workers during a shift.
    - Be aware of the potential for fatigue and plan to reduce fatigue.
    - Equip all teams with cold/ice packs so that cold can be applied quickly in the event of a MSI.
    - Ensure that adequate nourishment and hydration are available on the block as well as at camp.
  4. Develop an MSI prevention and early intervention system:
    - Educate workers about early MSI signs and symptoms, risk factors, and risk control methods in silviculture.
    - Assess conditions that may increase the risk of MSI.
    - Implement risk control methods as identified in this information sheet and in the FPIInnovations Infoflip A Tree Planter's Guide to Reducing Musculoskeletal Injuries and the FPIInnovations Tree Planters Web Portal (see "Additional Resources").
  - Train workers in appropriate techniques, pacing, equipment (make sure they know to use a shovel that is the right length for their body and planting bags that fit on their hips), and self-care in tree planting.
  - Provide workers with the tools they need to set up equipment properly (grinder/saw, safety glasses, etc.). Make sure that all equipment fits properly.
  - Ensure that workers know to report early signs and symptoms of MSIs to supervisors and/or first aid.
  - Track reports of MSIs, where the injuries occurred in the block, and the conditions at the time. Use these reports to fine-tune your MSI prevention system and address conditions that may affect workers.
  - Ensure that first aid attendants know how to recognize, assess, and treat MSIs, and that they can determine whether workers require modified duties.
  - Consult with workers throughout the process.
- A photograph showing two workers in a forest setting. They are wearing hard hats, safety vests, and gloves. One worker is using a shovel to dig a hole in the ground, while the other is standing nearby, possibly observing or assisting. The ground is uneven and covered with dirt and some vegetation.
- Coach workers to ensure that they follow safe work practices, such as using neutral postures as much as possible.*

5. At the end of the project, review the project with the licensee, supervisors, and workers. Evaluate the processes used to address health and safety concerns along the way. Make a list of lessons learned and use it in the next project.

## TRAIN

### 6. Train supervisors to:

- Teach and monitor worker technique (neutral postures, change of hands, etc.) and equipment fit (see the FPIInnovations Technique and Training Checklist under “Additional Resources”)
- Estimate workers’ capabilities and adjust expectations, production limits, and site location
- Recognize early signs and symptoms of MSI in workers
- Respond appropriately to reports of MSI by reviewing a worker’s technique (see the FPIInnovations Intervention Checklist under “Additional Resources”) and equipment fit, applying cold/ice pack (or refer to first aid), and modifying duties if necessary

### 7. Train first aid attendants to:

- Recognize, assess, and treat MSIs
- Let the supervisor know if alternate duties are necessary



### 8. Train workers to:

- Identify MSI risk factors and control them (see FPIInnovations Infoflip and website under “Additional Resources”)
- Use proper techniques with neutral posture
- Read the ground to find the optimal spot to plant the tree (soft soil, no rock, etc.)
- Change hands (plant ambidextrously, or “ambi”)
- Pace themselves according to their capability and environmental conditions
- Use well-fitting and well-maintained equipment
- Wear warm, layered clothing as well as hand warmers in cold weather
- Use shock/vibration-absorbing gloves or wraps on equipment
- Recognize and report early signs and symptoms of MSI
- Practice good nutrition and hydration pacing throughout the day and evening (see Delia Roberts’s *Power Eating for Power Planting* under “Additional Resources”).
- Follow a good sleep and recovery schedule



## SUPERVISE

9. Supervise workers on MSI prevention:
- Ensure that workers have appropriate equipment (quality boots, gloves, shovel, planting bags, tools, etc.) and that they fit properly.
  - Have a variety of company equipment available to assist workers in finding the best fit and the best tool for the application (planting bags, shovels, gloves, etc.).
  - Coach workers on proper techniques and pacing; offer them mentoring opportunities with experienced workers.
  - Ensure appropriate self-care: proper nutrition, hydration, physical conditioning, recovery time, pacing, keeping warm when it's cold, appropriate stretches and warm-up exercises before, during, and after a shift, etc.
  - Respond effectively to reports of early signs and symptoms of MSI.
  - Assign a worker to light duties if necessary.

## ADDITIONAL RESOURCES

The following resources from FPIInnovations are available at the Tree Planters Web Portal:

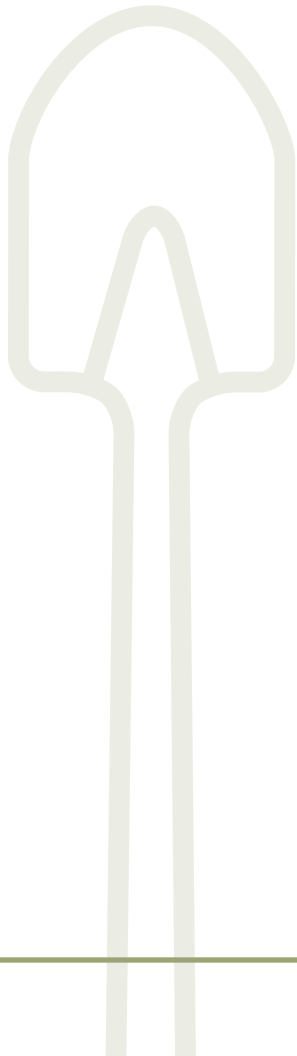
<http://fpi.na5.acrobat.com/tree-planters/>

- *A Tree Planter's Guide to Reducing Musculoskeletal Injuries* Infoflip, Advantage vol. 9, no. 7, June 2008
- *Train-the-Trainer Workshop: Implementing a Tree Planter's Guide to Reducing Musculoskeletal Injuries* — **Intervention Checklist**
- *Train-the-Trainer Workshop: Implementing a Tree Planter's Guide to Reducing Musculoskeletal Injuries* — **Technique and Training Checklist**

The following resources by Delia Roberts can be found at the Selkirk College "Treeplanting" web page: <http://selkirk.ca/research/faculty/treeplanting/>

- *Fit to Plant Training Log*
- *Top Ten Tips for Tree Planters: How to Eat to Keep Planting*
- *Power Eating for Power Planting*
- *The Desperate Planter's Last Chance*

For more information go to WorkSafeBC's Ergonomics page: [www2.worksafebc.com/Topics/Ergonomics/Home.asp](http://www2.worksafebc.com/Topics/Ergonomics/Home.asp)



# PREVENTING MUSCULOSKELETAL INJURIES IN SILVICULTURE — **WORKER**

The Preventing Musculoskeletal Injuries in Silviculture series includes information sheets for licensees, contractor/supervisors and workers. Musculoskeletal injuries (MSIs), such as sprains and strains, make up the largest number of workplace incidents in silviculture. They cause pain and suffering and make it hard for workers to carry out their normal activities. They can also become permanent or long-term injuries.

If you suffer an MSI and cannot do your usual amount of work, you won't be able to earn money doing piecework. The other workers on your team will have to work harder to get the job done, otherwise the project will take longer than planned. The contractor's costs may go up if projects are delayed or if incidents need to be investigated.

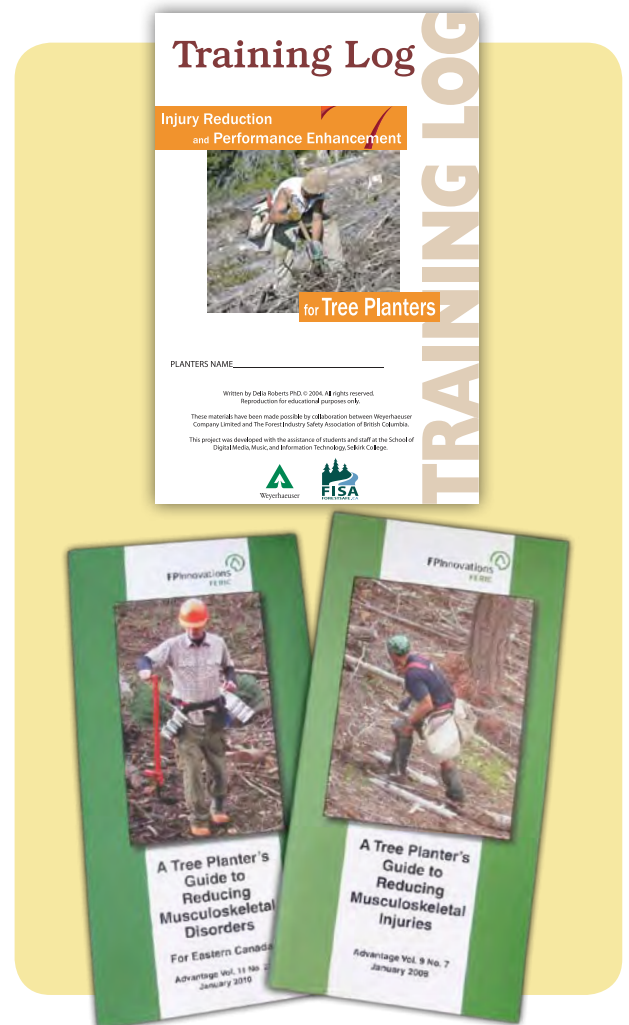
As a worker, you can help reduce the risk of MSI by planning and preparing for the upcoming season, making sure you know what to do on the job, communicating with your supervisor, and taking care of yourself.

## PLAN

1. Physically prepare for tree-planting work (see Delia Roberts's *Fit to Plant Training Log* or *The Desperate Planter's Last Chance* under "Additional Resources").
2. Use equipment that fits you properly and that is appropriate for the conditions where you will be planting (see the FPInnovations Infoflip *A Tree Planter's Guide to Reducing Musculoskeletal Injuries* and the FPInnovations Tree Planters Web Portal under "Additional Resources").
3. Bring appropriate camp equipment to ensure a restful sleep.
4. Start with a slow, steady pace to warm up the body for the season.

Prepare for the planting season by using the *Fit to Plant Training Log*.

*A Tree Planter's Guide to Reducing Musculoskeletal Injuries* Infoplip by FP Innovations has specific information about safe work techniques and equipment fit





## TRAIN

5. Make sure that you've been trained to:
  - Identify MSI risk factors and control them (see *A Tree Planter's Guide to Reducing Musculoskeletal Injuries* and the Tree Planters Web Portal under "Additional Resources")
  - Use proper techniques with neutral posture
  - Read the ground to find the best spot to plant the tree (soft soil, no rock, etc.)
  - Change hands (plant ambidextrously, or "ambi")
  - Pace yourself according to your capability and environmental conditions
  - Use well-fitting and well-maintained equipment
  - Wear warm, layered clothing and hand warmers in cold weather
  - Use shock/vibration-absorbing gloves or wraps on equipment
  - Recognize and report early signs and symptoms of MSI
  - Practice good nutrition and hydration pacing throughout the day and evening (see Delia Roberts's *Power Eating for Power Planting* under "Additional Resources")
  - Follow a good sleep and recovery schedule



Communicate with your supervisor to make sure that you are working safely.

## COMMUNICATE

6. Report early signs and symptoms of MSI to your supervisor.
7. Ask questions if you need more information.

## SELF-CARE

8. Take care of yourself by paying attention to:
  - Proper nutrition and hydration
  - Pacing and recovery time
  - Appropriate stretches and warm-up exercises before, during, and after your shift (see *A Tree Planter's Guide to Reducing Musculoskeletal Injuries* and the Tree Planters Web Portal under "Additional Resources")

## ADDITIONAL RESOURCES

The following resources from FPIInnovations are available at the Tree Planters Web Portal:

<http://fpi.na5.acrobat.com/tree-planters/>

- *A Tree Planter's Guide to Reducing Musculoskeletal Injuries*, Advantage vol. 9, no. 7, June 2008
- *Train-the-Trainer Workshop: Implementing a Tree Planter's Guide to Reducing Musculoskeletal Injuries* – **Intervention Checklist**
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# PREVENTING MUSCULOSKELETAL INJURIES IN SILVICULTURE — **LICENSEE**

The Preventing Musculoskeletal Injuries in Silviculture series includes information sheets for licensees, contractor/supervisors and workers. Musculoskeletal injuries (MSIs), such as sprains and strains, account for the greatest proportion of workplace incidents in silviculture. Besides causing pain and suffering and impairing the ability of workers to carry out their normal activities, they can become long-term injuries from which an injured worker may never fully recover. This leads to higher claims costs and ultimately to increased assessment costs for the silviculture industry as a whole. MSIs can also make it more difficult for contractors to complete projects on schedule.

As a licensee, you can help reduce the risks and costs associated with such injuries by including a focus on MSIs when planning the silviculture/reforestation prescription and by addressing any identified issues with the contractor.

Here are some things you can do to help prevent MSIs.

**1.** In developing the silviculture/reforestation prescription, consider the following factors that may increase the risk of MSI and include in your written plan:

- Harvesting method (ground skidding, cable yarding, bucking and limbing, etc.)
- Site preparation
- Access; camp locations
- Block completion order (timing)
- Planting microsite selection
- Screefing, hand closures, and fertilization at time of planting
- Planting density and density adjustment in rocky, slashy, steep-slope, and/or otherwise extreme ground.
- Stock type and size
- Project start and completion dates (don't start too early if freezing; don't rush to finish)
- Numbers of trees planted or carried, depending on the conditions (consider specifying these in the bid package)

**2.** When conditions change, re-evaluate risk assessments while maintaining good communication with the contractor. Be sure to update your written plan. Provide some flexibility in the contract to help the contractor respond quickly to changing conditions.



Disc trenching breaks up the ground to reduce the force required to dig holes for the trees.



In slashy ground, tree planters have to use greater force to clear away bark, branches, and roots. Slashy ground can also increase awkward postures and tripping hazards at the site.

3. Ensure that the contractor you are working with is taking steps to prevent MSIs:
  - The contractor has an MSI management system that includes prevention, early intervention, and return-to-work.
  - Supervisors monitor workers directly with regard to MSI risk factors.
  - Ergonomic information is made available to workers, and workers are assisted with setting up their equipment.
  - First aid reports are prepared and there is a system for injury tracking.
4. Carry out site visits and interview supervisors and workers to get first-hand information about the contractor's MSI prevention program.
5. Upon completion of the project, review the project with the contractor and evaluate the processes that were used to address health and safety concerns along the way. Make a list of lessons learned and carry this learning into the next project.



Direct supervision helps workers to learn safe work practices, such as using neutral postures. Supervisors can also detect early signs of MSI, such as a worker favouring one hand.

## ADDITIONAL RESOURCES

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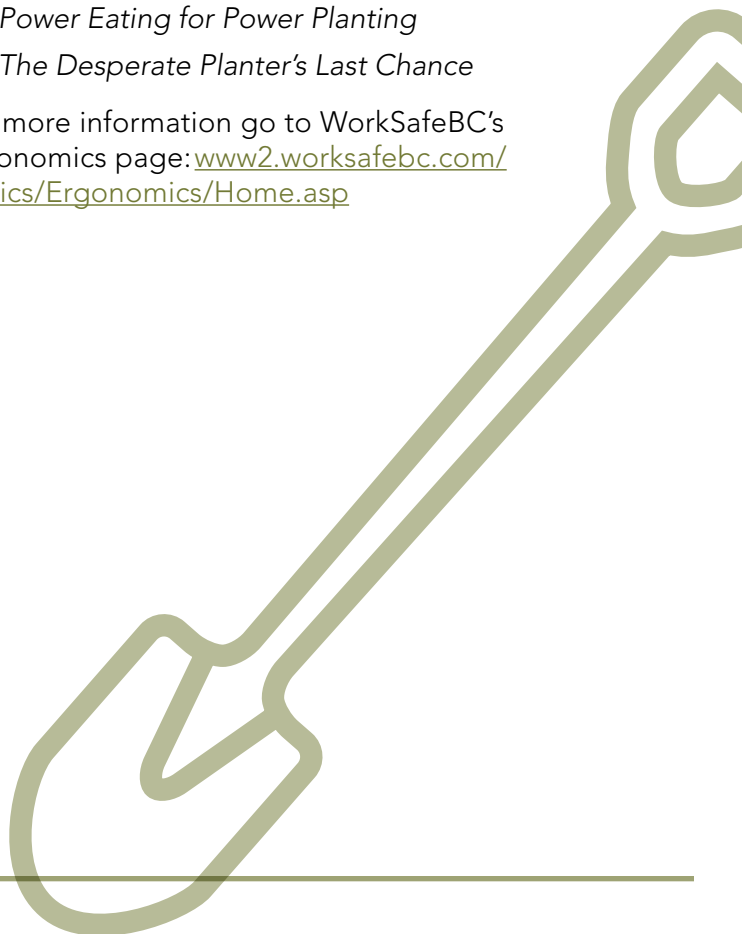


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## BEFORE YOU START THE SEASON...

### REFLEX TRAINING



Take a small piece of bubble wrap or thin foam and put about 200g of lead fishing weights (or other small heavy objects) in the middle, wrap the foam around them and tape it closed. Bounce it off the back of your hand while keeping your wrist in neutral to teach your muscles to respond quickly when there is a sudden load change. Start with 20 bounces and work up to 60.

**STRENGTH TRAINING:** The stronger your wrist the more work it will withstand. Here are some examples of exercises to use; do 10-15 repetitions of each one 3 times in one session. Ideally do 3 sessions per day.



#### WRIST FLEXION

Curl the object towards your elbow. Let it return slowly down towards the table, avoid going past neutral.



#### WRIST EXTENSION

Curl the object towards your elbow, keeping the palm facing the floor.



**ULNAR DEVIATION** (looks like you are hammering behind you)

- With a very small *wrist movement only*, tilt the object upwards towards your shoulder blade, bringing it more parallel to the floor.
- *Slowly* return to neutral wrist.



**RADIAL DEVIATION** (Looks like you are hammering but with no elbow movement)

- With a very small wrist movement only, tilt the object so the heavy end is coming closer to your body. It should be more vertical than the start position
- *Slowly* return to neutral wrist.

## IN SEASON MAINTENANCE

**1. WARM UP:** Tendons are fibrous so they need a warm-up in order to avoid the small tears and irritation that lead to the dreaded inflammation.

### IN THE TRUCK ON THE WAY TO THE BLOCK:

- *Gently move your wrist through a limited range of motion* in all directions, don't go to the limit of your movement, the idea is just to warm up the tendon and muscle. (Don't stretch, just move gently)
- Squeeze and release a soft foam ball to gently warm up
- Keep your wrist in neutral and contract it against an immovable object in short sharp bursts to activate the reflex and remind it where neutral is



The wrist in neutral.

### ON THE PLANTING BLOCK:

- Always start your day with 5 – 10 min of going slow. Even if you have creamy ground starting slow will get your tendons ready for the day's work
  - On cold days make sure that you keep your wrists warm! Use some arm warmers (old wool socks with the toes cut out work great) and gloves to keep your wrists and hands warm and dry. Blood flow to these areas is not very good so they need a little extra help to stay warm and pliable.
- 2. Get your gear set up right to KEEP YOUR WRIST IN NEUTRAL AND YOUR HAND RELAXED**
- Make sure your shovel handle is right for you – check out the recommendations in A Treeplanter's Guide to Reducing Musculoskeletal Injuries for more information.

### 3. EAT RIGHT AND STAY HYDRATED

- When blood sugar rises and falls, the reflexes that protect your joints don't kick in as fast. Making sure you eat frequent small snacks that are high in complex carbs and lean protein will keep your muscles and nervous system fuelled up for peak performance. For more information on the Power Planting Diet see [www.selkirk.ca/treeplanting](http://www.selkirk.ca/treeplanting)
- Dehydration can cause a lot of the same problems as hypoglycemia. Make sure you take extra water with you every day, even when the weather is cold, and especially when it warms up. Plan on at least 500 ml/hour and when the temperatures rise use a rehydration fluid or add a bit of sugar and a pinch of salt and baking soda to your fluids

**4. CHECK YOUR POSTURE** every time you bag up: Most repetitive strain injuries occur from using your muscles when they are in a poor position. Stay neutral in your spine, knees, ankles, shoulders and wrists. If your hands, back or hamstrings have shortened up, make sure to GENTLY RETURN TO NEUTRAL at each bag up. Forcefully stretching at this stage will probably just add insult to injury, so be gentle! For more on this topic check the [www.selkirk.ca/treeplanting](http://www.selkirk.ca/treeplanting).

**5. LEARN TO PLANT WITH BOTH HANDS.** Try planting just the first and last bundle of each bag with your non-dominant hand. It will only cost a few seconds per day, and will help develop your weaker side. Ambidextrous planting can also help prevent fatigue and muscle imbalances in other parts of the body by distributing the strains of planting more evenly.

### AFTER PLANTING:

- 6.** Just like drying out your gear, there are a few important bits of maintenance required to keep your wrists in top shape:
- **STRETCH: GENTLY RESTORE THE FULL RANGE OF MOTION WITHOUT LOADING** the wrist at end range. Be sure to focus on opening your hand after spending a day gripping your shovel
  - **ICE:** After a tough day (fast ground, lots of screefing, frozen or rocky ground, cold weather, hung over) the wear and tear on your wrist is unavoidable. **KEEP INFLAMMATION AT BAY BY ICING.** Even if there isn't any pain or swelling, ice can help keep any inflammation from accelerating into tendonitis. Most drug stores carry inexpensive reusable blue gel ice packs. The veteran's tip is to pick up a couple at the start of the season and keep them in the freezer so they are ready for when you need them. They don't leak water all over you, and don't give you ice burns either.
- 7. SLEEP POSITION CAN MAKE A BIG DIFFERENCE** in minimizing the stress on your hands and wrists. Make sure you keep your wrists in neutral and if you are one of those people that clutch your teddy bear while asleep, think about using a brace to keep your wrist in neutral while you get your ZZZZZZ

Thanks to Chris Akehurst; Ed Collen, Lisa Houle and Jordan Tesluk for their assistance in compiling this pamphlet.



## BEWARE OF TENDONITIS

Tendonitis is always lurking for a planter but it also can be prevented. Be vigilant in watching for the early warning signs! Get on top of it right away to prevent the inflammation from accelerating into full-blown tendonitis. Manage your symptoms with the tips on this page BUT if they continue to get worse - **YOU HAVE TENDONITIS**, see COPING WITH TENDONITIS section of this pamphlet.

### THINGS TO WATCH OUT FOR:

- Aching
- Redness
- Creaking
- Point tenderness
- Numbness

The *first step* is to **start using ice** on the inflamed area. Reusable gel packs work great and won't give you freezer burn! Apply for 10 min on/10 min off, starting right after work. You can also use an anti-inflammatory for a few days to help suppress the inflammation if it doesn't bother your stomach.

More importantly take it easy for a few days, planting a little slower than usual and **resting your wrist** as much as possible. If this doesn't relieve your symptoms ask for a day or two of alternate duty. Often *taking a day off early on can prevent a small injury from turning into full-blown tendonitis*.

Sometimes **changing the type of shovel** handle can help. Switching between a D-handle, slanted and staff handles changes the load on your wrist.

**Deep friction massage** can also help. Work across the grain of the tendon beginning gently and gradually pushing harder to break up adhesions between the tendon fibers. Ice afterwards.



**Use a brace** on your wrist during the day to prevent as much loading of the joint as possible, and also at night to make sure your wrist stays in neutral while you are sleeping.

**Gently stretch** your wrist to maintain the range of motion, but don't be overly aggressive. You don't want to cause more damage.

### IF YOUR SYMPTOMS ACCELERATE:

If your pain accelerates and you can feel the tendon creaking you need to stop using your wrist.

**REST:** Stop planting, even if it's early in the day. Your options are to try planting with the other hand, sleep in the truck, or offer to shuttle trees.

## COPING WITH TENDONITIS

### ACUTE

- **REST:** Use your wrist as little as possible.
- **ICE:** Get ice on your wrist to decrease inflammation.
- **IMMOBILIZE:** Use a wrist brace
- **LIGHT DUTIES:** Keep active, but avoid any movement that reproduces the symptoms.

### ABOUT 1 WEEK POST or when swelling decreases:

- **RANGE OF MOTION:** Gently encourage your wrist to move by rotating it in all directions (up, down, side to side, and flip palm up and down).
- **DEXTERITY EXERCISES:** Start with gentle exercises to get muscles moving.
  - + Pick up small objects like coins or pebbles
  - + Tying and untying a shoelace
- **STRENGTHENING EXERCISES:** These exercises will rebuild the tendon, but they are also meant to reproduce the symptoms. Don't go too hard too soon or all you will do is bring back the inflammation!! Treat the damaged tendon gently. Keep up with the exercises until your strength and function are fully restored (about a month).
  - + Each exercise session should consist of 15 – 20 repetitions of each exercise 3 times/day.



#### OPEN/CLOSE FINGERS with ELASTIC BAND

Place 4 elastic bands from finger to finger as shown (thumb to pointer; pointer to middle; middle to ring; ring to pinky)

- Start with fingers straight and touching.
- Open your fingers, putting tension on the elastics, and slowly return so fingers are touching.



#### THUMB ABDUCTION

Place sore hand on a table with pinky touching the table, palm facing the side. Place elastic around the thumb, holding the other end with the opposite hand flat on the table.

- + Keeping wrist and fingers stable, move sore thumb very slowly towards the table. The elastic will be getting looser.
- + Now pull thumb back up to stack over the rest of the fingers.



#### TOWEL TWIST

Hold a towel in both hands.

- + Twist the towel in the same motion used to wring out a wet towel. Use a loose grip, and gradually grip firmer as pain decreases.

## THE DESPERATE PLANTER'S LAST CHANCE:

# WRIST MAINTENANCE

## THINK IT CAN'T HAPPEN TO YOU?



*After 12 years without an injury, highballer Jordan is stopped in his tracks when his wrist turns red, swollen, and painful.*

To make a lot of money treeplanting you have to have a strong body. It might seem that you will survive without looking after your wrist, but if you don't care for it, **tendonitis WILL get you eventually**. Veteran and novice alike, tendonitis can ruin your season. This pamphlet is designed to give you the quick and dirty on how to prepare your wrist for planting, look after it once you are at work, and what to do if tendonitis strikes.

For more information on any of these points, visit [www.selkirk.ca/treeplanting](http://www.selkirk.ca/treeplanting) and have a great and pain free season!

By Delia Roberts PhD, FACSM and Ashlie DeJong BSc, HKin, RK.  
Graphic Design by Kelly Simpson © Delia Roberts, 2013.



This project was made possible by grants from WSCA and Weyerhaeuser Princeton Timberlands

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# RTI Planter-Pak Safety and Handling Sheet

2013

Integral Forest Management Ltd.

## Your safety is important to us!

And we kept that in mind when building our product. Before using our product please take the time to read the following storage and handling procedures. Review them with those handling the product to ensure that your experience with our product is not only safe but, uneventful.



## Storage Procedures Prior to Use (At the Yard)

Please store RTI Planter-Paks in a cool, dry area away from moisture. They can be safely stored this way for years without worry of product deterioration. A good suggested location, would be a warehouse, garage or shed, where it is protected from the elements, not under a tarp in a storage yard.



## Storage Procedures When on the Planting Site

The plastic bags that contain RTI Planter-Paks are relatively waterproof and should protect the Paks from exposure. However, as a precaution, Planter-Paks must be covered during periods of rain or they can turn into mush. A good suggested standard operating procedure would be to keep RTI Planter-Paks out of the elements under a planting tarp at the cache or in a FIST whenever at the planting site. At the end of the day, take all unused material back with you. Do not leave it cached on site overnight as it can attract bears, who being curious creatures, have been known to get into it and make a mess. The bags containing RTI Planter-Paks are strong but as a precaution transport the material in such a way that it is not subject to tearing or breakage (ie. Keep shovels and cork boots away from it during transport).



# Planter Safety and Handling

RTI was part of a joint Planter Health and Safety Study conducted by FERIC, Worksafe BC, and the Western Silviculture Contractors Association. The following recommendations are taken directly from the studies report. Follow these common sense, precautionary operating procedures and there is no reason to expect any issues with handling RTI Planter-Paks. For detailed copies of the entire report Tree Planter Exposure to Fertilizers and Pesticides please contact Darius Bucher, R.P.F. at [integralfm@telus.net](mailto:integralfm@telus.net) and he will be happy to pass it along to you.

- Open bags of fertilizer in well ventilated areas and avoid inhaling any vapours.
- Use planting gloves made of nitrile when handling RTI Planter-Paks, not Butyl, neoprene or Latex. Bring several pairs of gloves to use during the day and ensure that they fit well.
- Remove gloves before eating, drinking or smoking.
- Wash hands with soap prior to eating, drinking, or smoking after handling the product. Take a small bottle of biodegradable soap to work each day, and use a small bottle of water to wash hands. Note: Alcohol based cleaners and disposable hand wipes are not effective at removing any chemical residue.
- Carry RTI Planter-Paks in a special fertilizer pouch, plastic bag, or customized container. Carrying them loose in planting bags or Silvicool bags does not offer effective containment.
- If using a 4-litre milk-jug with a hole just big enough to fit a closed hand through to carry teabags, line the edges of the hole with duct tape, and hang the jug from the planting belt. The plastic will prevent any wet fertilizer granules from leaching through clothing.
- Immediately clean up any spills, and do not leave loose, broken Planter-Paks in planting bags.

## MSDS Sheets

All RTI Planter-Pak products have up-to-date MSDS sheets. They are sent out with the shipment of each order to the client. For additional copies of these please contact Darius Bucher, R.P.F. at [integralfm@telus.net](mailto:integralfm@telus.net). Please note that RTI Planter-Paks do not fall under the definition of a Dangerous Goods.

## Emergency Contact Information

Although there is very unlikely to be an emergency situation if these instructions are carefully followed, RTI offers full product support and is available at any time if necessary to respond to any questions and concerns. Please do not hesitate to contact **Darius Bucher, R.P.F.** at **250-318-8861** if you need assistance with the handling and safety of RTI Planter-Paks.



#### 4) Resources – Links

**WorkSafeBC – Additional Information on Tree Planting Ergonomics**

<http://www2.worksafebc.com/topics/ergonomics/Resources-Forestry.asp>

