Summit

Summit Reforestation and
Forest Management Ltd.

Upper Management

[PLANTERS HANDBOOK]

The basics of what we do, how we do it, and what you will need to know about Planting trees and working with Summit

Table of Contents

OVERVIEW

Tree planting is both very simple and extremely difficult. It can bring periods of smooth tranquility and moments of sheer frustration. There is nothing very complicated with the act of putting a tree in the ground. But there is a lot to be said for the effort and skills needed to pound in 3 to 5+ thousand trees each day in all types of conditions.

How to plant a tree can be learned in a matter of minutes, but can take seasons to master. Variations in soil type, ground cover, seedlings, planting specifications, weather, temperature, topography, local vegetation and so on can have a significant bearing on the style and considerations needed to effectively plant the ground. Techniques evolve over time to suit the terrain and eventually all planters can and do reach a point where they can maintain a consistent pace throughout the day that is both efficient and ergonomically healthy. A good planter will maximize the number of trees they plant while minimizing the effort exerted. A great planter, or highballer, will do this and put in large numbers each and every day.

While each technique may differ and have its own unique characteristics, all good planters follow a set of basic practices to help them reach incredible feats each and every day. This Guide is intended to share many of these practices to new planters in a format that covers the fundamental aspects of tree planting as it is known to seasoned vets, to Summit, and to the foresters for whom we plant.

The glossary at the end of the Guide puts some definitions to the tree planting lingo you are bound to hear and pick up on the day you enter camp.

There is more to good tree planting than just sticking a tree in the ground. Knowing how to fit your gear, bag up your trees, manage your land, cache and time is all equally important. We want to share with you what we've learned over the past 30 years and do our best to get you pounding trees, making money and having fun without having to sacrifice your health and sanity in the process. *We want you to succeed.*

KNOW-HOW

EXPECTATIONS – ALL PLANTERS SHOULD KNOW THIS INFORMATION

When we know what to expect from each other we know our roles and responsibilities.

SUMMIT

It is important to Summit that our employees know what we expect from them, it is equally important that they know what to expect from us. Expectations are very important. They allow you to know exactly what you are agreeing to when you come to work for us. They ensure that you are not surprised by what we expect from you when you arrive in camp. They allow you to make a fair decision about coming to work for us.

If at any time, as an employee of Summit, you feel that we are not living up to these expectations, please bring the issue to management. We all *must* meet and exceed our expectations to be successful.

Summit will provide:

1. A safe and healthy work environment.
2. Healthy, plentiful and nutritious meals.
3. Consistent and predictable days off -- changes to our shift plans will be discussed with our workforce as soon as possible.
4. Clear and accurate payroll, you will be paid on time.
5. Fair prices.
6. Full planting days
7. A full planting season - at least 45 planting days –Our target for 2016 is 52-56 days of planting

We will:

1. Treat you with respect.
2. Be open to constructive criticism and feedback, and to the best of our ability use this feedback to make Summit a better place to work.
3. To the best of our ability, compensate for Summit caused downtime.
4. Maintain adequate camps and equipment.
5. Follow employment standards.
6. Be punctual with time-lines and appointments.
7. Be reasonable in our expectations of our employees.

PLANTERS – WHAT WE EXPECT FROM YOU

Production and Quality

1. Work hard every day – plant lots of trees.
2. You must ensure that you plant trees to the quality required by your current contract; if you are not clear on the requirements of our client you must ask your crew boss.
3. Be responsible for your own density – throw enough plots so that you **know** your density.

On The Block

4. Caches must be kept *clean*, garbage boxes broken and weighted down.
5. Tarps must be *fully* secured at all times.
   a. Boxes of trees are never left in the sun (trees will be tarped up at all times).
   b. Individual trees or bundles will *not* be laid out where they are exposed to direct sunlight
6. Bag-up immediately prior to planting
   a. Do not bag-up *before* meals
   b. Do not bag-up for tomorrow at the end of the day
7. Never throw or drop boxes or trees.
8. Always count out transfers between blocks when you move between blocks and have trees left over.
9. Never leave garbage on the block.
   a. Food garbage will be packed out daily
   b. All other block garbage (tree wrappers, flagging roles, long strings of flagging) will be put in the garbage box at the cache

Around Camp

10. Be on time, leaving camp, and leaving the block.
11. Let your crew boss know as soon as possible if you are sick or injured and cannot work.
12. Help keep camp clean – this applies to both common areas and tenting areas.
13. Help with camp set-up and take-down.
14. Help with the reefers when required.

Safety and EMS

15. Follow Summit Safety system at all times.
16. Follow Client Environmental Systems at all times.
17. Report all injuries *or* unsafe acts and conditions immediately to your supervisor.
18. Refuse unsafe work.

Days off and around town

19. Be on time for the crummy when it is leaving for town on the day off.
20. Know when to meet the crummy to return from town on the days off and be there ready to leave. Vehicles will not be late returning to camp to wait for you.
21. Excessive drinking and / or any drug use is unacceptable

THE BASICS – INFORMATION FOR NEW PLANTERS

STOP & ASK

If at any time you are unsure of anything – whether in camp or on the block or on the way there – take the time to **stop and ask** your crew boss.

GEAR

Your equipment needs to be efficient, effective and comfortable to work with. This is even more important when you consider that you will be using the same tools day after day, shift after shift, for eight or more hours at a time. You want to have the right tools for the job and you want them to work for you, not against you. Fitting your equipment to your body and your range of motion is essential to maintaining correct technique, quickness and above all, good health.

Planting gear can be purchased directly from your crew boss. Gear is sold at-cost, meaning Summit buys it in bulk then turns around and sells it to the planter for what we paid for it. Alternatively, gear can also be purchased through outdoor equipment retailers throughout BC. Lists for these retailers can be found of the websites of two of tree plantings most reputed gear suppliers – WorkWizer and BushPro.

http://www.workwizer.com

http://www.bushpro.ca

Planting Bags

Carrying trees over difficult terrain is tough work. Having properly adjusted bags will help keep you balanced and comfortable. It will also significantly reduce your risk of injury. Poorly fitted bags can put a lot of strain on your shoulders, hips and back that can become very noticeable and painful. Straps and padding that are kept out of place can rub your skin raw. Rookie planters are encouraged to start off with new bags that can be properly fitted. Used bags tend to be formed to the contours of the previous owner and are more difficult to fit to a different body.

To get your bag fitted properly make sure to:

- Adjust the front and rear shoulder strap attachment points until the padded hip belt lines up with your hips.
- Keep the two sides of the harness level and lined up to the chest buckle to cross your chest several inches below your arm pits
- Attach the front chest buckle and keep it just snug enough to line up the shoulder straps comfortably across your shoulders

- If you have a small waist or hips, your waist belt will be done up quite tightly causing the side two side bags to come toward the front of your body. In this case you may want to adjust the side bags back (they are adjustable).
- You can also wrap a sweater around your hips and rest your bags on that (then you always have a warmer layer available in case it starts to rain)
- If your waist or hips are larger, the waist belt will be more open causing the side bags to come toward your backside. In this case you may want to adjust the side bags forward.
- Adjust the waist belt padding to line up with your hips
- Carry 70-80% of the weight on your hips. Keep the weight balanced between your shoulders and hips.

Shovel

Nothing becomes more personal than your shovel. Considering it will likely meet the ground no fewer than 100,000 times per season you will want to make sure it is properly suited to you and to the terrain. Using a shovel that is customized to you will greatly reduce your risk of injury and help increase your speed.

The D-Handle is the traditional and most common grip for tree planting shovels. These grips often have a thin layer of padding to offer some shock absorption each time blade strikes earth. Most new shovels come ready-built with the most popular features:

- Blade width – The blade should be as wide as the hand. WorkWizer and BushPro (speed spade) shovels come with blades 4”-4½” in width.
- Blade length – Stock blade length is what new planters should start with. Many vets like to cut their blade length down to reduce weight. This is typically only done when the vet has another shovel available to use for larger stock (longer plugs). Don’t get keen and start off with 2 shovels. Get used to the one before considering getting another.

- Handle type – The D-handle is the most common handle out there. Planters are recommended to offset the handle to a neutral wrist position. The e-handle (shown here) is a recent innovation designed to keep the wrist in a neutral position, reducing the risk of repetitive strain injury. Handles are easily interchangeable.
- Shovel weight – Shovel blades are made of either stainless or carbon steel. The major difference between the two is weight. The stainless steel shovel is lighter. While a lighter shovel may seem like the preferred choice, the heavier carbon steel shovel can be of greater use and can often be more easily driven into stiff soils.

- Shovel length – A well-sized shovel should just touch the ground when held with arms hanging to the side. The adjacent picture shows the optimal range where the shovel handle should be when the blade is just touching the ground. Shovels can be ordered to certain length or easily cut down to size in camp with a hacksaw.
- Kickers – Standard shovels come with both kickers. Some planters will cut off one or both kickers to reduce weight and eliminate the chance of the kickers becoming caught on roots. New planters are advised to start off using a shovel with both kickers and to only cut off one of them

when they figure out, through planting, which side they prefer. A kicker-less shovel is only recommended if the planter has a backup shovel with a kicker to use in compacted or rocky soils.

Gloves

Often the most overlooked, but by far the most important tool – your hands. Your hands hold the shovel, put the tree in the ground, brush away debris, close holes, rip piece of flagging tape and more. Take good care of your hands. Protect them:

Shovel hand: There are a wide variety of gloves that can be worn on the shovel hand. Something with good padding and shock absorption is preferred. The glove does not just protect your palm; it will also keep the elements off the back of your hand.

Tree hand: A thinner glove is highly recommended to allow your hand to better feel the tree when you are grabbing it from your bag and planting it. A good sense of the tree ensures you are holding it in the right position and placing it in the ground properly. Considering pairs of thin nitrile gloves can be purchased for as little as $2.00/pair they are still a wise investment. Certain types of gloves are also ambidextrous – they can be worn on either hand.

Tools are only as effective as the person using them. And an essential part of pounding trees is maintaining your body – its health and its energy levels – so that the brain and motor behind the shovel keep running at prime. The daily exertion of planting trees demands that you keep your body properly nourished with the enough foods, liquids and rest. For specifics on what to eat/drink and when take a look at the Fit To Plant website. To understand a bit more on what you need for gear take a look here:

Block Clothing

The clothes you wear on the block needs to be good enough to hold up to any kind of weather condition. We will be working whether it is raining, hailing, or 40 degrees C outside (don`t be surprised if you get all three within an hour. You will need comfortable clothes, and the ability to change layers quickly during your bag-ups. You should also be prepared that anything you wear out on the block will be destroyed in a couple of shifts (don`t be afraid to get cheaper clothes at the thrift store)

- Rain Gear, don`t cheap out here – get good rain gear, but keep in mind when you are working really hard this is not usually the best option unless it is raining consistently all day.
- Polar fleece sweater – For brief (though often intense) rain storms it is often better to just throw on a sweater than to put on your rain coat. Even on cool days if it is dry out if you are cold enough to wear a sweater you are not working hard enough!
- In cool rainy weather stick with wool or polypro underwear and clothing (no cotton on cold days), this clothing will wick moisture (i.e. sweat, because if you are not sweating you are not working hard enough) away from your skin so you don`t get too cold.

- In hot weather cotton is great because it holds moisture (i.e. sweat) next to your skin so it evaporates close to you and cools you down.

Lunch & Water

You will be expected to pack your own lunch and water to the block each day (there will be a lunch table full of food for you to make your lunch from every morning). Getting them from camp to the block seems simple enough, but you will want to make sure they make it there intact.

- Use sturdy, rugged containers to store your water. Jugs or bottles with thin walls and/or weak plastic are inadequate in tree planting are liable to break in transport. For safety reasons your water containers need to go in the cargo box of the crew vehicle. 2L pop bottles and 1-gallon water jugs are rugged and have a solid track record for surviving the abuse they get in the cargo box.
- Jerry cans are neither a safe nor acceptable water container. They are not allowed to be used as such.
- Lunches should be packed in a rugged container for the same reasons your water should be. Nothing fancy is needed – but if you have an old lunch box or a sturdy Tupperware container lying around it would be helpful in keeping the contents of your lunch from becoming puréed.
- If you have not planted before bring a lunch 3x bigger than you think you need.
- For more information see Daily tips for eating – Dr. Delia Roberts

Camp Gear

Planting trees is hard enough to do after a full night's rest. It becomes near impossible if you haven't been getting good sleep. You don't need to spend a small fortune to be comfortable, but going $10 cheaper on one item might end up costing much more than that in pain and discomfort.

Remember that when going planting the focus should be on comfort and functionality more than on portability. Planting is not the same as camping. Packing very light is not as much of a concern given the camp locations and availability of company vehicles to haul extra gear. Pack conservatively, but do not sacrifice comfort.

Tent

Getting your tent setup correctly is as important as choosing the right tent. Some things you will want to consider when getting your living space settled:

- Don't hesitate to ask for help from others when you're setting up your tent. Vet planters are friendly and are eager to help. Management is very busy at project startup and may not have the time to lend a hand.
- Set up only in the designated area. The tenting boundary will be clearly marked off. Areas outside of that have not had hazards assessed. If you set up outside of the boundary you will be required to move your tent and belongings.
- Avoid setting up in depressions and areas where water might pool

- Lay out your ground sheet so it occupies only the area directly beneath your tent floor. If it stretches out any further it will collect water underneath your tent.
- Facing the morning sun and shaded from the afternoon rays.
- In the early parts of the season it's best for the tent to be situated on the southern side of obstalces (trees, hill, etc.) The opposite is true during the warmer months (June & July) when it is best to setup tents on the northern side.
- While the area is cleared of hazard trees be aware of your surroundings, avoid suspect trees and report them to the supervisor.

Sleeping bag

Evenings can get quite cold during the season and many nights will be below freezing. It's not uncommon to see frost on the ground in morning as late as July. Do not skimp on your sleeping bag. Get one that is rated to at least -10°C. Liners are optional items that can help keep you even warmer and also keep some of the Grimes out of your sleeping bag.

Mattress

Different people have different opinions on what makes for a good sleeping surface. Most would agree the ground is not one of them. Mattresses do more than just provide soft cushioning, they are also essential for insulating against the cold. The following are options, each with their pros and cons:

- Air mattress: Relatively inexpensive and quite comfortable. They also quickly become worthless with even the smallest defect or puncture. Not recommended.
- Cot: On the higher side of cost but also comfort. Cots keep you high off the cold ground. They are also bulky and tougher to pack around. Cots are best combined with a foamy to provide added insulation.
- Blue foamy: You get way you pay for with these. They are one of the cheapest option and durable but provide little comfort.
- Camping inflatable: A good compromise between air and foam mattresses. These offer durability and comfort at a decent price. Good value and the preferred option for most.

Good sleep is of tremendous importance. Select bedding that is the best suited to get you a good night's sleep. Consider doubling up and combining two of these. Air mattress + blue foamy.

Hygiene

You will want to bring with you all of the usual hygiene products you would use at home including soap, shampoo and toothpaste + toothbrush + floss amongst others. It's also recommended that you bring with you a pair of tweezers.

All toiletries – and other scented items - must be kept out of the tenting area. There is shelving in the mess tent designated for such personal belongings. A simple plastic bag can be used to group all of these items in. Make sure to whatever container it is you do use. Theft is planting camps is rare, but it is possible for someone to mistake your items for theirs. Be sure to mark them accordingly.

Female planters should remember to bring up feminine hygiene products as they may be in the bush for extended periods of time.

While toilet paper is provided it is highly recommended that you also have some Wetnaps[tm] and baby powder on hand. If your tush prefers the softer stuff (greater than 1 ply paper) we recommend you bring your own.

NEVER keep scented items in the tenting area for the risk of attracting wildlife, including bears.

Footwear

You should have a pair of Caulk boots (spiked boots for walking in rough terrain) It is a WCB requirement that you have a pair of Caulk boots with you in the field.

For most planting a good, sturdy pair of hiking boots (ankle height) is well suited for the job.

Put on a pair of clean, dry socks each morning before throwing on boots. Constantly wet feet or dry dirty socks can lead to trench foot or other painful exposure injuries.

Rucksacks, Backpacks, Etc.

A small backpack is needed for use during the daytime (carry lunch, extra gear, etc).

A duffle bag (or similar) is the best option for packing camping gear and clothes into. Take weight into account. You may want extra space for extra gear/clothes you pick up during the season.

Garbage bags are not suitable for transporting gear unless they are themselves placed into another duffle bag/sac. A loaded garbage bag may be accidentally mistaken for actual garbage and tossed out! Clear plastic bags, on the other hand, can be useful to both show the contents and keep them dry.

First Aid

Planters should bring their own small first aid kit for minor cuts and injuries. This kit can include:

- Standard band aids
- Anti-bacterial liquid soap
- Disinfecting wipes
- Ibuprofen (anti-inflammatory)
- Knuckle bandages
- Fingertip bandages
- Moleskin
- Reusable icepack
- Wrist brace (that fits!)
- Knee brace (that fits!)
- Baby powder

ON THE BLOCK – WHAT TO EXPECT IN THE FIELD FOR NEW PLANTERS

The morning routine is simple. Wake up, eat breakfast, pack a lunch then leave at a designated hour (usually sometime between 6:30 – 7:30) to the block. If you are late to the truck you will be left in camp! Once at the block your crew bosses will hold a short tailgate meeting to brief the crew. Immediately after planting pieces are assigned and everyone heads to their cache (where trees are) to load trees into their bags before heading out into their section of land to start the day.

This section goes into the details of your average planting day.

BAGGING UP

Putting seedlings into a bag does not sound complicated and it need not be. There are, however, some simple rules you should follow every time you 'bag up'.

- ALWAYS bring your shovel with you to the cache.
- Empty out loose soil at the bottom of the bags as you return to the cache. Never leave piles of plug soil at or near the cache.
- Throw away bundle wrappers and other plastic garbage in the designated garbage bag/box.
- Bag-up no less than an hour's worth of trees. You will quickly learn your own pace and know this number. It will increase as you improve. Your improvement will be hampered if you have too much weight for too long.
- Count your bundles as you bag them up. Keep track! You are paid for what you plant. Keep an accurate record of what you are bagging up and actually planting. All planters are given tally books to use of this exact purpose. The daily tally is torn out of the book each day and handed in to the crew boss. A yellow carbon copy remains in the tally book for your own records.
    - Totals will be separated by block (sometimes by piece) and by species (request key)
    - Tallies have to be multiples of the bundle sizes (typically 15 or 20)
    - Do not split bundles
- Unless specifically requested to do otherwise, lay the bundles on their side. Cris-cross the bundles on your shovel side. For your planting side (draw bag) unbundle the trees and lay them down with the plugs facing forward.
- Trees must be placed in the silvicool insert. Roll down the silvicool around the rim to minimize obstruction.
- Only unbundle trees that you are certain you can plant in that bag-up and before the end of the day.
- Always respect stock handling. Do not throw, shake, hit or in any way violently disturb the boxes, bundles or individual trees. An abused tree is dead before it is even planted.
    - Notify your crew boss of stock that is damaged or infected (fungus or disease ridden trees are often very evident). Do NOT bag them up. Set them aside under the tarp in a separate box away from the others. Let other planters using that cache know to also not bag them up.
    - NEVER lay the trees out onto the ground as you are bagging up. Each bundle that is removed from the box should go straight into your bags.

- Time at the cache should be spent putting away garbage, bagging up and refueling (quick bite and drink) before getting back into your piece. Do not waste time. Do not lose momentum. Bag-up quickly, effectively and put that shovel back to work.
- Refuel at each bag-up. Eat carb-rich foods and drink fluids – even if you are not thirsty. To maximize your time, eat while you bag up. Do not stop to eat. Avoid full meals – they will slow you down and cause discomfort while planting. You need to be heading back to your piece to continue planting immediately after bagging up. See the Fit to Plant guide for a great nutrition guide – tailor designed for tree planters.
- Follow proper technique when putting on loaded bags.
    - Facing away from the bags, bend down at the knees and buckle in.
    - Do not sling loaded bags from shoulder to shoulder.
- Always bag out at the end of the day. **Never** leave trees in your bag at the end of the day. Bundles should be returned to the proper box (same seedlot). If by any reason you have loose trees left over, re-bundle them neatly and box them.
- Try to keep your bags balanced. Transfer bundles from one side to the other from time to time to keep the weight evenly distributed.

STOCK HANDLING – WE WILL EXPECT THIS LEVEL OF STOCK HANDLING FROM ALL PLANTERS

Poorly handled trees will damage them. When you first handle a seedling it may not seem fragile. Sometimes the soil plug may crumble a bit more easily than others but for the most part they seem fairly sturdy. However, they are sensitive to shock, friction and/or temperature. Precautions need to be taken to minimize exposure. A tree that is not well handled is condemned before it is even planted.

A special reflective and insulated material – commonly known by its brand name Silvicool – is used to make both cache tarps and planting bag inserts. The function of this material is to maintain tree temperature and moisture. Trees that are not kept cool or allowed to dry out have a greatly reduced chance of survival.

Caches

A tree planting cache is a temporary storage place for trees. On the block the final storage place for trees before they go in your bags is a tree cache. This cache consists of little more than a reflective tarp covering boxes filled with trees. Some key things to know about your cache:

- Boxes must ALWAYS be left under the cache except for when they are pulled out for bagging up
    - Individual trees, bundles or boxes must not be exposed to direct sunlight for longer than they need to be.
- Loose trees or bundles of trees should never be left out of the box. Trees are either in a box under the cache or in your bags
- The tarp should cover the entirety of the boxes and be laid out white-side-up.
    - For the spring plant – May and most of June – heavy objects (rocks or logs) must be laid out across each side of the tarp to prevent it from being blown away.

- For summer plant – typically starting June 21st – the tarps are secured onto an A-frame built from surrounding logs and branches. All tree boxes must be kept underneath the shade provided by the tarp.

- The last person to access the cache, planter or crew boss, is responsible for ensuring it is properly re-tarped. If you come across an improperly tarped cache, please take the time to fix it.

Garbage

The cache also serves as a collection point for tree-related garbage (**NOT** food garbage). Boxes and bundle wrappers are neatly gathered at the cache to be later picked up by the crewboss and brought out of the block. Planters are responsible for keeping their garbage neatly piled:

- Plastic garbage should be packed away in as few boxes as possible. Care must be taken each to keep the garbage box closed up to prevent loose garbage from flying away.
- Tree boxes must be broken down after they have been emptied. The last person to take trees out of the box is responsible for breaking it down. There are two different ways the boxes can be broken down: flat and accordion. Your crew boss will let you know which way the box should be broken down.
- Food garbage, or anything with a scent, must be brought out by the planter and disposed of in camp. Pack out what you pack in. Leaving any scented object in the tree-related garbage runs the risk of attracting unwanted wildlife.
- Do NOT bury garbage. Ever. This is for the same reason as for why food garbage must be packed out. Other forestry workers will be on that block long after you are gone and do not want to deal the wildlife that leftover garbage, buried or not, will end up attracting.

Boxes

A box of trees should be treated like a box of puppies – handle with care.

- Do NOT throw, drop, hit, kick or in any way treat the boxes roughly.
- Do NOT leave boxes exposed to the sun.
- The "Keep Cool" printed on most boxes refers to the trees, not just your state of mind.

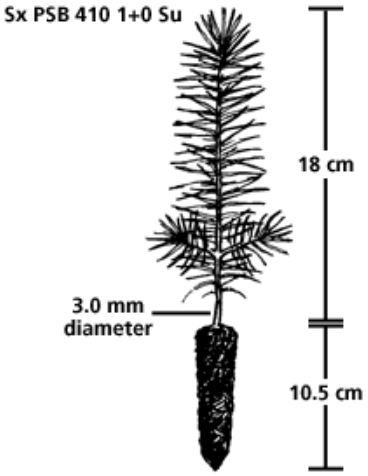
QUALITY- MUST BE UNDERSTOOD BY ALL PLANTERS

Fundamental to tree planting is not just knowing how to put a tree in the ground – it is knowing how to put a good tree in the ground - a tree that will have a high chance of survival. This section focuses on the quality aspect of tree planting.

The exact specifications for what defines a good tree vary from region to region, forester to forester, contract to contract. Quality is contract dependent. They also involve more than just what medium the tree should be planted in. Spacing, from one another and from competitive vegetation is equally important. While there is some variety in quality expectations there are several common, if not universal ones, for how a tree it to be planted.

Quality specifications vary from contract to contract. The trees that you will be expected to plant are outlined in the *contract pre-work* – an initial meeting held by your crewboss or project supervisor that details all of the expectations for that specific contract. **Plant to the current specifications even if they seem contrary to what was expected in previous contracts**.

Take extra care at the start of each contract to get calibrated with the specs. Monitor yourself more than usual until you are confident you have the quality side down.



Good Trees

The definition of a well planted tree includes:

- Straight tree – not leaning in any direction.
- Straight plug
- Laterals exposed (not buried)
- Tree planted to an acceptable depth (varies by contract)
- Plug in acceptable planting medium (varies by contract)
- Plug in optimal microsite (varies by contract)

At times other specifications may be tagged on. These will be explained in detail by your crewboss before commencing work. Additional specs typically require a bit more time and result in a higher tree price.

Good microsites

- Optimal microsites vary from contract to contract. General microsite considerations include:
    - Planting medium
    - High/low spots
    - Obstacles

  - Moisture
- Certain microsites are never acceptable and must always be avoided:
  - *Chunky* red rot (decomposing logs)
  - Squirrel cache (husked cones)
  - Underneath an overhead obstacle
  - Stick mat
  - Overhangs (suspended acceptable medium with an air gap underneath)
  - Ground with a layer of water

Good Density

Density refers to the number of trees in a given area. Planters are told the target density for a block in terms of what they will find in a plot. Planters are asked to 'plant 7's and 8's' or to 'hit 6's'. These numbers refer to the number of trees that should be in a plot. Density is measured in the field by plots (covered in next section). Each plot is a sample of $50m^2$ or $1/200^{th}$ of a hectare. Therefore, calculating per hectare density from a plot is as simple as multiplying the number of trees in the plot by 200.

For example, a plot containing 10 trees would indicate a density of 2,000 stems per hectare (SPH). A plot of 6 trees would indicate a density of 1,200 SPH. Statistically speaking, many plots are needed to get an accurate idea of density, but a combination of experience and throwing plenty of plots – at least 2 per bag up – will develop the skill to 'eye out density'.

If for example, a certain block has its density targeted to 1,800 stems (*stems is another word used for seedlings or trees*) per hectare. This means that each hectare should have on average 1,800 trees. While there is some leniency, often only 50 – 100 trees per hectare, it is important to 'hit density'. Going too far under density leaves the block with not enough trees and you may have to go back and fill in. Go too far above density and you may have to take some back out.

Acceptable density is not just reaching the calculated target. Acceptable density is getting *consistent* density across the block. A planter cannot make up for 5's by planting 9's when the target density calls for 7's. Not every plot will always be 7 but most of them definitely should be.

After each plot take a look at the trees within it and their spacing to get a feel for what that density actually looks like.

Plots are samples. Select your spots randomly. The survey plots thrown by the mill and Summit are taken randomly as well and can land anywhere. If you only throw plots in the clearest and most easily accessible areas you will not give yourself an accurate gauge for the entire piece.

Be careful to make sure you take the time to find and count all of the trees in the plot. A plot is just a sample and gives a general sense of quality and density. If in 3 plots you find low density and 20% of the

trees to be unacceptable, fixing the trees in those plots does not fix the piece – it points to a bigger issue that may require you to fix the area and adjust your planting to get back on track.

Directly related to density is the spacing between trees. The inter-tree spacing increases as the target density decreases – fewer trees means more space in between them. Each contract also has an allowable minimum spacing (the closest two trees can be to each other).

The ground on blocks is rarely uniform, meaning you have to adjust your spacing accordingly to meet the two key objectives: achieving target density AND planting in optimal microsites. All this must take place while respecting the set minimum spacing – often between 1.5 – 2.0 meters.

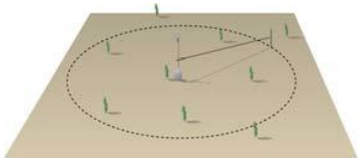
Plots

Proper density is determined through small, simple surveys that are also used to gauge the overall quality. These surveys – or plots – are used to sample planted blocks and arrive at its overall quality and density. Plot data are used by both Summit and the mill to assess the quality and survivability of each block. Just as important, plots are used by planters to assess the quality and density of the piece they are currently working. Planters are required to throw their own plots – at least two per bag up – since ultimately each planter is responsible for the quality and density of their piece. Good planters know when to adjust their spacing and technique. And this can only be known by self-monitoring through plots.

Need-to-Know

Crew boss will explain the specs for each block. The quality specs rarely change on any given contract but the density often varies from one block to the next. For each block you must be sure to know:

- Target density (and target spacing)
- Minimum spacing
- Acceptable planting medium
- Required microsites
- Tree depth
- Stock
    - Types
    - Stock specific microsites and planting areas
- Distance from:
    - Roads
    - Burn piles
    - Tree line & drip line
- Flagging colours:
    - Allowable colours for planting
    - Block boundaries
    - RP, WTP, MFZ and other boundaries
- Allowable planting areas (roads, seismic lines, etc.)
- Acceptable naturals



If you are uncertain about any of these specs be sure to **STOP & ASK!**

Replanting

To be a tree-planter you must plant good quality trees fast. Planting slow to maintain quality is not acceptable.

Pieces with poor quality and/or density have to be fixed. You are paid to plant trees to the standards set by the client, not to fix them after the fact. Get your quality and density down first. Make the small investment in time to monitor yourself and make small adjustments to ensure most of your trees are planted properly. Summit does not expect perfect quality. Summit does expect all planters to meet the specifications laid out by the client. Your crewboss and the Summit checkers will let you know ahead of time what acceptable is. Plant to or above the standard that is set and you will never have to replant. Throw plots – two per bag up – to achieve target density.

Your crewboss will make the effort each morning to check your work early on and help identify any quality issues so they are corrected at the start of the day.

Consistent quality and/or density problems can lead to more serious consequence down the road.

For more information on the general standards of tree planting quality and density take a look at one of BC's most common quality inspection standards – the FS 704. It gets fairly in depth and not something you should concern yourself with now unless feeling extra keen.

Know the specs. Know your density. Know your quality.

You cannot improve on what you do not know.

HOW TO PLANT A TREE

Planting looks easy enough from an outside perspective, but once the observer is put to task it soon becomes apparent how much is actually involved in getting seedlings into the ground properly *and* quickly. Planters, especially rookies, must keep focused and aware.

The planting of each tree involves over a dozen separate motions that can be further divided into dozens of different styles and techniques. The focus here is on the general motions of planting trees. Specific techniques can come later once the new planter is familiar with the basics.

Tips: If you can, learn how to plant with the shovel in either the left or the right hand. This way if you start to get any sort of repetitive use injury you will be able to easily switch hands and continue planting

All planters need to learn it right the first time. Improper posture and motion can lead to injury, poor quality and low production. Bad habits are hard to break and should be prevented.

Optimal microsite

- Find the best place to plant the tree. In order of priority the microsite should be:
  1. To spec for contract, location, medium and spacing
  2. Easy to access: do not jump over a log or dive into stick mat or otherwise spend any amount of time or energy trudging into an area that could far more easily be covered with *smart spacing*.
  3. Easy to plant: do not struggle with screefing or tough medium when a cream spot is a few inches away. *Manage spacing* to get to target density.
     - Pay attention to terrain features. Over time they will reveal what lies beneath:
       - Lumps and bumps
       - General contours of the ground
       - Vegetation (mosses, grasses, etc)
       - Stumps
     - Look at the side of the road when entering the block. The turned over earth of berms and ditches can say a lot about what to *generally* expect.

Always focus on finding the easiest spot to plant your tree given the contract requirements

Holding the shovel

- Hold the shovel with a neutral wrist (if you relax your arm by your side the position of your wrist is neutral – there is no flexing of your forearm up or down). Ergonomic ('e'-handle) shovels are specifically designed to keep the wrist positioned in a natural pose.
  - If using a D-handle, offset the handle enough to create a neutral grip (your crewboss or trainer will show you how to do this)
  - Do not flex your wrist up or down at any time while planting
- Keep a loose grip on the shovel – only hold on tight enough to keep control. Grip too tightly and you may get 'The Claw (see glossary) or tendonitis.

Opening the hole (<1 second for most ground)

- Insert the shovel blade vertically into the microsite
- Get the blade down into acceptable medium at least one inch more than the length of the plug. Use the kicker *if necessary**.
- Use a forward-down-back motion to open the hole. Quickly mastered, this technique is performed in under a second. This motion is difficult to explain on paper and will be demonstrated for you by your trainer/crewboss.
- Open the hole wide enough to easily fit hand and plug.

*Unless the ground is uniformly hard the better option is generally to move the shovel over a bit to get around the rock, roots, log or other debris that is obstructing the blade.

Planting the tree (~1 second)

You should never have to let go of your shovel

- Hold the plug lightly in hand as to keep it from going beyond the fingertips.
- The tree will fit the contours of the hand nicely to press against the back of the blade. The middle finger must be lower than the bottom of the plug to prevent an unfelt bending of the root.
- The plug should never need to be squeezed into the hole at risk of numerous quality faults (J-root, compressed plug, shallow, broken plug, etc).
- Place the plug along the side of the hole at proper depth – typically half an inch below the top of the acceptable medium – using the back of the blade as a 'guide'.

Closing the hole (~1 second)

- Once the tree is in place remove the blade from the ground while switching the grip on the tree to hold it in place.
- **Timing here is critical, <u>as you put the tree into the hole you will also pull the shovel out of the hole.</u>**
    - If you pull the shovel out too soon the tree will likely be shallow (the soil will fall back in too soon)
    - If you pull the shovel out too slowly it will tear the tree out of the hole or damage the roots.
- With the blade out of the ground slide the hand up the plug keeping just enough pressure to keep the tree in place. Once the hand is out use a fist to firmly press the hole closed. In harder ground a slight twist while 'punching' will help loosen the dirt and make the hole easier to close.
- There is a wide range of hole closing techniques that involve different motions with the shovel blade, fingers, heel, toe or palm. Each have their benefits and drawbacks. We will discuss two of the best for most ground conditions. Learn both, but you will likely choose one that you use most of the time.
    - *<u>The knuckle/fist</u> – you basically just punch the ground in front of the tree. The ground will have to be soft enough to do this.*
        - *Benefits: This close method is good for getting soil around most of the plug.*
        - *Use: Better in ground with loose soil, on contracts where the client wants soil around the whole plug.*
        - *Limits: There may be a small slit at the top of the tree that will have to be twisted closed after to ensure a well planted tree.*
        - *Limit: very hard on the hand and knuckles on rocky and hard ground*
    - *<u>The Pinch</u> – with the pinch you are pinching <u>and</u> twisting the ground around the stem. <u>Especially</u> in areas with organic top layers (root mat, grass mat, moss) you will <u>have</u> to twist as well.*
        - *Use: Better on contracts where the client needs <u>only</u> a seal for the top of the plug but does not require tight soil around the plug itself*

- *Benefits: Very quick method for closing organic layers (humus layers and moss) around the plug*
- *Limitation: It takes a lot of hand strength to close the hole deeper than the top few cm's*
- *Limitation: Harder on the wrist and hand tendons in harder soil.*

- *If you learn to use both techniques you will be able to switch based on ground conditions for each tree.*

Flagging the tree (<1 second)

- The piece of flagging used to mark your tree, should have been torn off as you were walking to this planting spot
- When marking a tree always flag as close to the tree as possible. Learn to look for the tree, not just the flagging. Flagging tape can get blown around by the wind.
- There are times when flagging may be used to mark off an area that has been planted or a large obstacle that may obstruct the view of trees planted nearby it.

Walking away

- As soon as the tree is planted the planting hand should be reaching into the draw-bag to grab the next tree.
- Do not spend extra time landscaping around the tree or 'gardening' it. The tree must be good enough to `pass` but do not waste time if the tree is already acceptable (in medium, microsite and quality). Move on.
- You are walking away from the tree (you do not stand up then walk away).
- At no point in the planting cycle should you be standing straight up in one place.

Moving on to the next tree (1 – 5 seconds)

- While walking to the next tree tear a small piece of flagging tape (~3 inches) and hold it with the tree.
- A tree should already be 'loaded' in hand while stepping on to hit the next microsite.
- Be aware. Look to the adjacent line of trees – both directly beside the current line and where it leads. Look ahead to the general area where the next tree could go. While approaching that general area look more closely for optimal microsites. The next spot will depend on:
  - Spacing of the trees in the adjacent line from *each other*
  - Spacing of the trees in the adjacent line from the *current line*
  - Spacing from the tree that was just planted
  - Available microsites
  - Obstacles

Always be looking one tree ahead, before you get to your next planting spot – you should know where you will be walking to after you plant this tree!

Keep aware. Keep moving. Keep trying. Keep learning.

MANAGING LAND

In order to maximize planting time on a piece you must manage your land. When working any piece, a planter always wants to arrange bag ups to:

- Cover land completely (leave no holes)
- Minimize dead walking (dead walking = walking without planting trees)
- Respect fellow planters, both the one sharing your piece and those in pieces around you. **Planters always plant in pairs**

Cutting a piece

- Listen to the foremen's directions. Repeat them to ensure they were properly understood.
- Many foremen make copies of the block map. If none is available, make sure to at least see one to orientate and get bearings.
- Most lines are cut by selecting a large object (marker) along the back boundary and flagging a line towards it
- After each tree planted along the first line look up to keep straight with the marker. Keeping calibrated with the market prevents the line from becoming crooked or curving off.
- As you plant your first line you will tie flagging on high sticks / branches so it is clearly visible for any planters coming in another direction.
- Flag each tree on the first line

Covering ground

- Start planting as close to the cache as possible
- Always follow the last line of trees
- Plan bag ups to know how much ground will be covered. Sometimes it may help to add a couple of bundles.
- Upon reaching the back of the piece, plant along the back boundary, moving back and forth (back filling)
- When possible save enough trees to plant back to the cache.
- Avoid cutting yourself off (cutting yourself off is worse than walking a short distance back to the cache, it is easier to walk with empty bags than it is with full ones)

Keeping track

- Get a rough idea of how many bundles it takes to reach the back of the piece. How many it takes for each line of back filling and how many may be needed to fill a pocket
- If there is ever any uncertainty over boundaries and pieces **STOP & ASK** your crewboss
- Know roughly how much ground has been covered and how much remains

PLANTING FASTER

1. Walk faster – Simple enough, the faster each tree goes in the ground, the more you plant in a day. Push yourself incrementally. Ratchet up the effort a small bit with each bag-up.
2. Set goals – time bag ups – know your pace – work to increase it.
    a. Time your bag-up with a known number of trees.
    b. Next time add another bundle and do it in the same amount of time.
    c. Once you get to a point where it does not make sense to carry more trees (the weight of the trees will start to slow you down) then start to do your bag-ups in a shorter amount of time.
3. Eat & drink the right stuff, in the right amounts at the right time – This point cannot be overemphasized, tree planting is an extreme sport and elite planters treat their bodies as athletes do. See the Fit to Plant Program for research-backed info and tips. http://selkirk.ca/research/faculty-research/tree-planting/. Booklets are also available in the Camp Document Box
4. Work to exhaustion every day and bodily limits will be furthered all the time.
5. Quit smoking. Seriously. Smoking not only limits your body it takes time and time on the block is literally money – you might as well be rolling your smokes with $20 bills!
6. Minimize time spent not planting – you can eat while you bag up and drinking doesn't take long, otherwise you should be looking to plant your next tree.
7. *Rest!* Rest on nights and days off – fat, drunk and stupid is no way to go through life. Drinking excessively on the night off and suffering through your whole day off is unhealthy; your body requires that day of rest to continue operating at full throttle for the next shift and the remainder of the season.
8. Don't be afraid to experiment or try different techniques. Listen to other planters, rookie or seasoned highballer, try any tricks they might suggest, it might just work for you. You should be trying to continually improve.
9. Try other shovels (ask crewboss for advice)
10. Awareness – follow trees, look ahead, know what to expect to manage your land effectively. As an example, if you have a huge wetland in your piece and will need more spruce, you should be prepared (have more spruce) before you actually begin planting that part of the piece.
11. Watch faster planters. Note their technique and rhythm.
12. Learn to follow trees – after your boundaries are established, you should have an idea of which direction your lines take.
13. Area plant – many planters find that planting small, planter-defined areas is more efficient than simply planting single-file lines all the time. This is part of the finesse of good planting and will take time to develop. Look for areas that are tricky to get into or which may pinch on the next line and prevent the problem.
14. Look for trees! – This may sound simple enough but with the surging practice of flagging every tree, it is possible to fall into a bad pattern of seeing only the flags. This is problematic as the flags are invariably unreliable, they could be badly placed, blown around by wind or if following the previous day's line the luster of the flagging may have faded overnight. Use the flag as a reference to find the actual tree you are trying to space off of.
15. Don't flag all of your trees. There are lots of times where flagging a tree is completely unnecessary. Trenches are an obvious example. Another is when planters are working a line side by side and

communicating well, often flagging the inside line is redundant. Another common tactic is to not flag trees while area-planting, if a small well-defined area will be planted all at once and the planter can momentarily remember where the last few trees went, there is no need to flag them. There are many such instances and learning to quickly recognize them quickly will make you a faster planter.

16. Try to get a read on the ecology of your piece upon arrival and during your first bag-up. Different types of ground will require different styles of planting. Rocky ground will require a greater focus on stump spots, steeper ground will require you to space trees a bit wider.
17. Planting up-hill vs downhill –planting uphill is easier and faster than planting downhill, you won't have to bend down as far or turn around as much. If you have a steep piece, focus on planting as much facing uphill and plant the piece from *side-to-side*.
18. Bag up sizes – a good rule of thumb is to plan bag-ups to last about 1 to 1.5 hours. This is a good amount of time to be away from food/water and helps you maintain a good momentum throughout the day. Many people bag up as much as they can fit in their bags; this works well for some, and slows other down. Find your own groove.
19. Planting with partner – for the sake of safety, block organization and sometimes emotional stability most planters work in pairs. It is important when working a piece together to have clear communication with what each person has done and what they want to do with the piece.

HEALTH

Most people who come out tree planting for the first time are young and healthy. Many are also quite active and already take good care of their health. Regardless, tree planting taxes the body and mind as much, if not more, than some of the most rigorous sports out there. Taking good care of yourself while out in the bush is essential to reducing the wear and tear pounding trees will have on you.

BODY

Independently funded research has shown that tree planters exert as much energy as an elite athlete in training. The stresses placed on the body are significant, but manageable if mitigated with proper preparation, form and diet.

All planters are given a pre-season exercise training program as soon as they are hired. The program itself spans eight weeks and should be followed through up until just prior to planting. The exercises get the body up to the level of performance that will be demanded of it when you go from a relatively sedentary lifestyle to a job that burns upwards of 7,000 calories per day (2,000 calories is the rough average for most people). Most importantly the exercises will calibrate the body to the repetitive motions planters make two, three, four and more thousand times per day.

Those thousands of motions per day can lead to repetitive strain injuries (RSI) very quickly if the proper technique is not followed. The foremen will go through ergonomic training before the start of planting. Get a head start by reading "A Tree Planter's Guide to Reducing Musculoskeletal Injuries" that will be emailed to you by your foremen. The document is also available for download on our website

(http://www.summitplanting.com). Within its pages you will also find a lot of photos which will give you both the dos and don'ts plus a good idea of what the job and terrain look like.

MIND AND SOUL

You will hear it said as often as the variations there are of saying it: tree planting is as much about mind as it is about body.

TRAINING PROGRAM

A lot of tree planting is learned on-the-job. Persistence and hard work do pay off. There is no substitute for experience. However, we do want to prepare our rookies as best we can for the demanding work that lays ahead. Trainers – often former foremen – are hired for the first week of the season to help bring rookie planters up to speed. During and beyond that time your crewboss will provide coaching and support. Experienced planters on the crew will also be a great help in offering their advice and knowledge.

Tree planting is full of little tricks and tips that could take up an entire book. Our goal in training is to build a solid foundation from which you can more easily develop the intricacies that make the difference between a decent planter and a highballer.

PRE-SEASON

Training for the planting season starts months ahead of the first day of planting. New planters should understand the Expectations and be comfortable with them. They should know what they are getting into and not hesitate to ask their crewboss about anything they are uncertain of. Tree planting is not for everyone.

For those who know tree planting is a job they are committed to, time should be taken during the pre-season to prepare physically for its strains and demands on the body. A detailed 'Fit to Plant' program can be found on the Selkirk College website. Scientific research backs the claim that planters who follow this program greatly reduce their risk of injury and substantially increase their earnings. Learn more at: http://www.selkirk.ca/treeplanting

INITIAL ORIENTATION

The first few days upon arrival in camp are important for getting settled, becoming familiar with the camp and getting an initial introduction to safety rules. Rookie planters are required to be in camp two days before the scheduled start of planting.

NEW PLANTER (ROOKIE) ORIENTATION AND FIELD TRAINING

For Further information on how your first week or two planting will be organized please refer to the document: "First Year Planter Steps to Success"

ADDITIONAL SUPPORT & COACHING

The first shift of the contract is intentionally kept to 3 days (as opposed to the 4 day norm) to allow time for everyone to rest and recover. The intensity of tree planting can be a shock to the system even after weeks of physical preparation. The tree planting season begins in earnest for the rookie planters on Day 1 of the second shift. This is when they join their crews and begin planting directly under the supervision and guidance of their crew boss. This is also when they need to prove their mettle and ratchet up their numbers to meet their goals.

Through the first and second shift an hour after dinner will be devoted to mini training sessions aimed at developing specific skills needed to transition from first year planter to vet, lowballer to highballer.

The crew bosses provide continued training and coaching to all of their planters with the bulk of that attention given to first year planters. The intention is to promote good technique and quality while giving tips and tricks to bring up overall speed. In addition, crew bosses carefully select experienced planters to pair plant with a first year planter –to offer advice and motivation.

GLOSSARY

412B	One of a series of characters that can be found on tree boxes. These refer to the dimensions (in cm) of the plug. The first digit (4) refers to the plug diameter. The next two numbers (12) refer to the plug length. The letter (B) is used to distinguish between different types of plug and is not always present. For example, a 310 pine has a plug three centimeters in diameter and ten centimeters in length.
Burn	The burn is the piece of ground on and around which a slash pile used to stand until it was burned in the winter.
Cache	A temporary seedling storage area. All caches are tarped.
Checker	Another term for support staff. Refers to one of their main tasks – checking quality and density
Client	The organization which contracts tree planting projects and has obligations to restock harvested land. In other words, the company that hires Summit. Clients are also known as licensees and 'the mill'.
Cluster f***	May happen towards the end of finishing a large block when there is only a few pieces to plant and many people around to plant them. Foremen plan and organize their days to avoid cluster plants as much as possible.
Cold storage	Essentially a warehouse sized refrigerator used to keep trees frozen. Trees are thawed 5-10 days before delivery to the general area where they will be planted.
Contract	A planting project undertaken for a client

Cooks Purveyors of nutrition, health, bliss and sanity. Treat them well!

Corridor Often refers to a 'Skidder trail'

Cream Generally cleaner, easier and therefore faster land.

Cream out Planting out the creamy section of land, often with a disregard to the way a given piece should be planted. Not cool. Plant your piece normally, don't cream out your partners.

Dead walking Walking through a piece without planting trees. Wise management of a piece often makes dead walking avoidable.

Dripline The area located directly under the outer circumference of the tree branches.

Duff Loose organic debris that is only partially decomposed. Not considered a suitable planting medium.

EMS Environmental Management System

Excess When plotted density of a block is higher than the determined maximum, it is considered excess and if over a certain percentage will result in fines. Excess cannot be balanced by simple density compensation. That is to say, planting the remaining half of a block in 5's when the rest of the block is 9's will not correct the excess. The overall density will round out to 7's, but half of the block will still be planted to excess – and the other half will be considered insufficiently stocked.

Flagging Coloured light plastic ribbon. Flagging comes in rolls and is generally used to mark off areas and boundaries. In planting it is used to mark off individual trees and cut pieces. Summit provides flagging tape. Please don't waste it.

Foreman Outdated term for Crew supervisor or Crew Boss

Forester In general terms this is the person hired by the mill to coordinate silviculture operations.

Ghost line A line of trees that does not serve as a boundary or any other useful purpose. In other words, planted line of trees not where it should be – always follow trees. Ghost lines are frustrating, irritating and confusing.

Highball To plant lots of trees. Used in relation to other planters. A lesser planter can pound and still be highballed by a more skilled planter.

Hole In terms of a piece a hole is an area in an active piece that has been left unplanted.

MFZ Machine Free Zone. Almost always a plantable area if within the block boundary.

Laterals Laterals are the prominent 'branches' at the base of the seedling, just above the plug. A lateral becomes the leader (trunk of the tree) if the main stem is damaged or destroyed. Laterals must never be buried when the tree is planted.

Mill	Another word for client. The mill refers more specifically to the nearby mill that owns the license, and therefore obligations, for crown land across the region.
Mill checker	Employees of the client who are responsible for assessing quality and reporting it back to *their* supervisors.
Mounds	A form of site prep.
Natural	A young tree that grew naturally.
NP	'Non-productive'. Can also be taken to mean 'Not-plantable'. These areas are marked out on the block maps.
Pay plots	The surveys/plots taken by the mill checkers and used to determine the overall quality of the block. These surveys determine the payment amount to Summit. Blocks are always expected to receive 100% payments. Anything less is unacceptable.
Piece	The section of land a planter is responsible for planting. Foremen typically direct their planters to 'cut' their piece by forming a boundary with a line of trees.
Pound	Planting very hard, maximum effort.
Pre-work	Gathering of everyone concerned with a given planting project with an end to finding consensus of acceptable specifics for quality, density, safety procedures, etc. Always pay close attention during the pre-works.
Project	Another word for 'Contract'
Project supervisor	Supervisor of camp operations
Raw	Ground that has not been prepared after harvesting.
Red rot	Decomposing logs that become red. Red rot can vary from lightly decomposed (chunky) to heavily decomposed (smearable). Chunky red rot is never an acceptable planting medium. Smearable red rot sometimes is acceptable, depending on the contract specs.
Reefer	Short for 'refrigerated trailer'. The reefer is a commercial trailer used to transport and store boxes of seedlings
Replanting	Something no one ever wants to end up doing; the result of poor quality and/or density.
Request Key	A subcategory of the seedlot. Seedlots may differ in size, age, plug size, etc. The request key is used to make distinction.

Residual Looks similar to a WTP but is considered to be part of the block and therefore needs to be planted unless instructed otherwise by the client.

Rookie Outdated term for first year planter

RZ Riparian zone.

SMS Safety Management System

Schnarb Ugly, difficult to plant land. The opposite of cream.

Seedling The formal term for a small tree intended for planting.

Seedlot The seedling species and region from where its seed was taken from.

Seismic line A seismic line or road is typically a straight swath that has been cut through the terrain. From the air seismic lines look like narrow strips that have been cut out of the forest. While they may sometimes be confused as roads, seismic lines are created by geological exploration companies to survey the ground formation beneath. Seismic lines may or may not be planted – depending on the contract.

Site prep Short for Site Preparation. Site prepped ground has been primed for planting by heavy machinery. The decision to site prep and the type used depends on a number of factors including topography, vegetation, accessibility, ground type, soil depth, budget, climate and target species for planting.

Skidder trail A corridor approximately 5 meters wide carved into the forest by a skidder (massive 4 -wheel vehicle used in harvesting to drag mature trees off the block). The tire tracks can be mistaken for trenches.

Slash Organic debris left behind from the harvesting operation. Slash is mainly made up of sticks and branches. On properly cleaned blocks most slash is collected into burn piles.

Slash pile The large pile of wood debris cleaned up at the end of a harvesting operation. Piles are formed alongside the in-block roads and can become massive – dozens of meters long and several meters high. Slash piles are burned in the winter and the subsequently freed ground is typically planted the following year.

Specs Short for specifications.

Spring Plant The planting period in the Canadian interior defined largely by time period and stock. Spring trees are trees that were grown the year before and frozen over the fall and winter. The spring plant typically takes place between mid April to late June. Spring trees are dormant (i.e. not actively growing) therefore have a different biological state than summer trees, which are actually growing. This affects the way the trees are stored and treated – from cold storage all the way to being planted into the ground.

Stop & Ask What you should do if you're uncertain about anything. Stop work and ask your direct supervisor for clarification.

Summer Plant The planting period in the Canadian interior that takes place from late June into August. Summer trees differ from spring trees in that they are still growing. Summer stock is ordered days in advance of actual planting and is 'hot lifted' from the nursery – the trees are bundled and processed while still growing. Because summer trees are 'alive' special consideration must be taken to treat them much the same way any living plant would be treated and given adequate watering and air circulation. Most summer stock is kept under shade tents which protect the trees for desiccation (drying out) but give them just enough light, air and water to stay healthy.

Support staff Assistant to the project supervisor

The Claw The tightening around the hand that can develop from holding the shovel handle too tightly. The range of motion in the fingers is reduced making it difficult to open the palm.

Trench A type of site prep where the ground is literally trenched by heavy machinery. Disc blades or a plow carve shallow trenches, flipping the soil and exposing plantable medium

Underplant A planting block with a juvenile or mature stand of trees that stand overhead. Also known as understory planting. Underplants are common in older plantations where disease, pestilence or fire have severely damaged or killed most of the existing stock.

Veteran (Vet) Someone too cool to even pick up this document let alone let an idle glance even touch upon it

WTP Wildlife Tree Patch. An area of preserved timber that was not cut down during the harvest. The WTP is always considered NP (Not Plantable) and is not considered to be part of the block even though it may be within the block boundary.

The Usual Suspects

From left to right: