

TIMBER TIPS

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FIELD BASED TIPS

Navigating to Plot Center using GPS

When navigating to cruise plots, most of us know that we shouldn't try to follow our GPS all the way to the target. To avoid bias, particularly on plots that fall near the edge of a unit, practice the ASP method. Set the target on your GPS unit for the location of the next plot, then:

- **Approximate:** stop about a chain away from your target
- **Stabilize:** find an opening in the canopy and let your location stabilize. This can mean stepping into a small natural opening, an old cut, or a road.
- **Place marker:** take the distance and bearing from your GPS unit and pace your way to the plot, and place your marker.

This method will work with any GPS software. In Two Trails the "Where is" feature will get you this information. If you're using TerraSync it can be found by setting a navigation target.

Quick Stand Volume Estimation

Need a quick idea of how much volume is in a stand? Swing a few variable radius plots. The approximate cubic foot volume is given by $F^3 = 0.37 H BA$, where H is average stand height and BA is your estimate of stand basal area.

This tip was successfully used last summer on the Sulphur Ranger District of the Arapaho Roosevelt National Forest to determine which units to keep and which to drop from a timber sale during a quick walkthrough, and could be a useful thing to keep in mind during sale layout. Tip comes from John Bell and Associates Inventory and Cruising Newsletter No. 16, October 1991.

Forgot your Prism?

Determine the BAF of your thumb by holding it out at arm's length and walking away from a tree of known dbh until it is at the limiting distance. The BAF of your thumb is $75.625 \times (dbh/D)$, where dbh is the diameter of the tree in inches and D is your distance from the tree in feet. Just like with a prism, keep your thumb in one spot and move around it to get a good estimate. This should go without saying, but this technique isn't for use on production cruises!

From the Archives

Saved by Safety Pin

"Inside my cruiser's vest I carry three safety pins of various sizes for the purpose of unplugging paint guns. When marking timber or running lines, it saves grumbling and mess, and can make an otherwise gloomy day sunny!", exclaims Paul Pierce of the Menominee State Forest, Mich. Dept. Nat. Resources, Stephenson, Mich. Issue 77, Nov. 1969

Warm Tatum

"Avoid cold hands when scaling or cruising with a metal tatum or card holder," says Bruce Rynearson of the La Grande R.D., Wallowa-Whitman Forest (R-6).

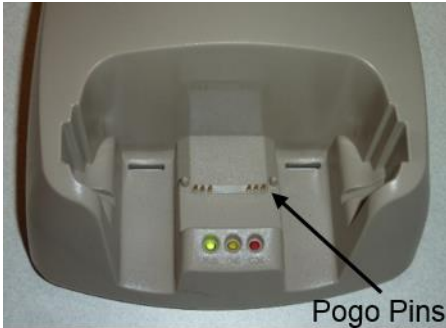
"Glue indoor-outdoor carpet on the metal. It's thin enough *one-eighth of an inch) for easy handling and makes your work more comfortable!" Issue 80, May 1970.

Clear Cruise Data

"How do you record your cruise data? Are they clear enough to stand in court when an appeal is made? Will they contribute to the court's respect of your professional judgement?" asks Al Sump (TM Appraisals, W.O.). Issue 27, July 1961.



TECHNOLOGY



Repairing the Cradle for your Allegro Data Recorder

Has the dock for your Allegro CE, CX, or MX data recorder stopped working? The pins can easily get burnt out, bent or damaged, but they can also be easy replaced. Ordering an entire replacement dock will set you back almost \$200, but a new set of Pogo pins will cost you just \$27. Try this quick fix before you toss your broken dock. Use your purchase card to order this part on the [Juniper website](#). Thanks to Karen Jones, R3 Measurement Specialist, for this tip!

Scrub Seeder

“In the mid-1980s the Ocala National Forest was trying to shift away from dense sand pine stockings that often resulted from broadcast seeding in order to manage for a greater variety of species, especially oaks.

The first new seeding tool they tried was the “Bracke” seeder, a scarifier/spot seeder developed in Scandinavia and later in similar forests in North America. Using a scarifying wheel, this machine dug through the heavy duff layer of the boreal forest and dropped seeds on mineral soil. It was a heavy duty machine designed for rocky and other rough areas. The fairly expensive machine (\$25,000 to \$35,000 in 1987) had to be pulled with a cable log skidder, making it difficult and expensive to operate. In addition, repairs were difficult and costly, and the 8 inch planting depth was unnecessary in the sand.



After multiple unsuccessful experiments with different seeders and scarifiers provided by the Missoula Tehcnology and Development Center in the early '90s, we partnered with a local forestry contractor, Gerald Sherrer (shown in the photo to the left), known for his ability to fix and fabricate forestry machinery. We wrote a contract that specified the performance we expected the seeder to accomplish and he designed and built our first “Scrub Seeder” in 1992 for \$2500. It was a spot seeder, dropping seeds on a 6 by 8 foot spacing,

and it could be pulled with a farm tractor. It was inexpensive to pull—our contract cost has stayed around \$10/acre from 1992 until the present—and has been relatively easy to maintain and repair. It has been highly effective and yielded consistently successful sand pine reforestation through seeding. In 2007, we purchased a second scrub seeder, built with the same basic design and a few improvements. With both seeders, we have the capability to seed 6,000 to 8,000 acres per year.”

-Janet Hinchee, Silviculturist, Ocala National Forest

ON THE HORIZON

Up and Coming Timber Sale Technology

Virtual Timber Marking in the 4FRI



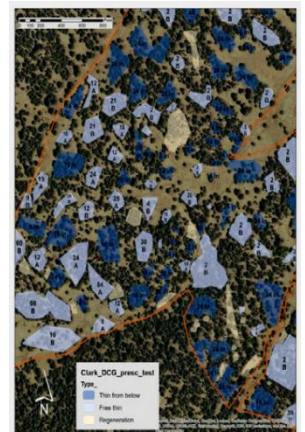
The USFS and The Nature Conservancy (TNC) have partnered together with an aim to increase the efficiency in planning and implementation of the Four Forest Restoration Initiative (4FRI). Current efforts to do so include digitally “marking” trees using handheld tablets, as well as guiding harvester operators to determine cut and leave trees using in-cab GPS-enabled tablets in the absence of paint. The project stems from an emphasis on speeding up the process by forgoing timber marking with extensive use of Designation by Prescription (DxP), a designation process wrought with uncertainties that make it hard to verify that the complicated, spatially-explicit, prescriptions common to the 4FRI are actually being met on the ground.

Using iPads with off-the-shelf receivers, marking crews use the Collector App, a product of ESRI’s ArcGIS online (AGOL), to do the actual digital “marking” by collecting feature data in the field. In the context of these patchy prescriptions, the feature data includes the location of polygons and specific treatment information associated with each polygon. So instead of a paint gun, the marker is using a stylus to designate timber.

To provide an even greater level of information for operators, the digitally marked polygons from handheld tablets can be further labeled before being uploaded to GPS-enabled in-cab tablets. The operator then uses this digitally-marked map to navigate within a stand, helping the operators execute these spatially-explicit prescriptions.



Using XPLORE ruggedized tablets with higher grade receivers mounted to the top of the cab, operators use the TimberGuide program, a product of Genesis Industries, to display the digitally-marked map. TimberGuide not only displays the unit map, aerial imagery with the polygons, and boundary information, it also records productivity information and the UTM coordinates of each cut tree. Another useful feature is the built-in warning system within TimberGuide that alerts the operator when they are near a known unit/polygon boundary, helping ensure spatially-explicit patchy prescriptions are met. All cuts are occurring within unit boundaries, so running past a virtual polygon does not result in cutting outside of designated cutting units. Contact Karen Jones¹ or Travis Woolley² for more information regarding up-to-date operational results from the 4FRI and stay tuned for updates from Region 2, where a project using virtual cutting unit boundaries is in the works.



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REGIONAL SUCCESS STORY

This issue's success story comes to us from Region 6. Collaborative groups in eastern Oregon have had great successes in restoring dry forests while building community consensus and supporting industry. The 8 minute video clip covers the origins and successes of collaborative groups along with some basic dry forest ecology, beautiful cinematography, and soothing music. [Click here](#) to check it out!

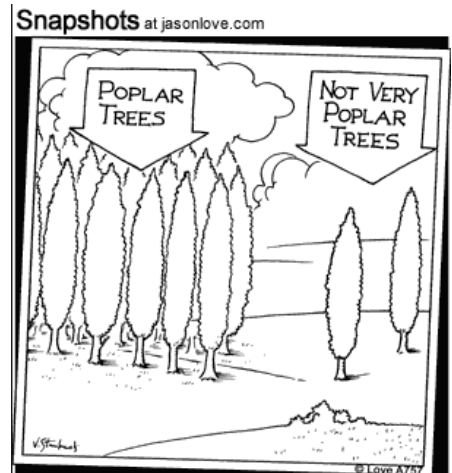
Thanks to Lindsay Buchanan, Collaborative Forest Landscape Restoration Program Coordinator for sending us the link to this video produced by EcoTrust with support from the Oregon Department of Forestry and USFS.



COMING UP

In the next issue of Timber Tips you'll find

- Trainings highlight: some places to find what you're looking for
- Regen surveys without fixed plots
- Strike team success stories
- Drones and the Forest Service
- Farm Bill and Good Neighbor Authorities
- And more!



Please forward ideas, tips and success stories for future utilization to Ken Cormier at kcormier@fs.fed.us or to the following physical address:

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