

## Survival Rates

Factors that significantly influence how many trees survive to year two include:

- 1) Species Matching to the site: the most critical factor is to plant a species well adapted to your site. Plant the wrong species guaranteed failure. Without a soil test, there is no way to determine which species is the right tree for you.
- 2) Water Availability and Management: Both under and over water bring about the same result, your trees die. Using effective irrigation techniques such as drip irrigation and choosing drought-resistant trees are critical. With the addition of soil moisture sensors and water timers that can provide information and be controlled from your phone reduce the swing of too dry or too wet. You can maintain a constant moisture level critical in the first five years of establishment. A prolong state of either condition will result in death even if it looks like the tree is recovering.
- 3) Site Preparation and Planting technique: Proper handling of the seedlings is critical, knowing the right depth, keeping roots moist, correct positioning, firm but not over packing. The planting step takes time to learn. Just as with the other two steps your tree will die or live depending on the detail you put into the tree.
- 4) Competition Control: This is an area that is important, but what is the best way? You can use ground fabric, coconut rings, wet cardboard, chemical control between trees or a cover crop. There is a long list of pros and cons for each. A lot of research to determine which one or combination works best in your application.
- 5) Environmental Stressors: There is not a lot in your control, heatwaves impact can be reduced with your water program. Severe storms and sudden cold snaps, not much you can do to mitigate the impact. Providing extra nutrients may soften the damage.
- 6) Post-Planting Care: Ongoing maintenance, mulching, weeding and protecting from livestock, wildlife and pests will have a large payback. Mulching and water control can increase the survival rate to as high as 98%.

What we can do as planters to help ensure the best return on our investment. Know your soil, amend as required, an extra \$75 to improve the water system by upgrading the water timer and adding a moisture monitor. All these things set you up for success, following through with mulching and monitoring the ground moisture by balancing the water gets us into the second half of the game. How we handle the planting and providing for the tree's safety from outside sources is what will mean success or failure. Good luck with making a difference.