

# Bauers Family Tree Farms News

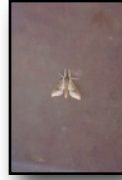
A Semi-Annual Newsletter

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## Farm Update - September 2010

The Bauers Family Tree Farm is in the middle of its fourth growing season, and Costa Rica is enjoying another very rainy monsoon season. By the end of the last growing season, the teak trees had really shot up, and many trees had reached 30 ft in height. Although the trees were very tall, most of them had not branched out -- they looked like telephone poles with giant leaves hanging off. This year the trees have started spending more of their energy on branching out and gaining girth.

As usual, the rainy season in Costa Rica started in May, and for the last several months the rains have been coming hard and often. There have been many reports of mild flooding and bridges washing out due to high rivers through out the region. This is no reason for alarm at the farm however. The farm sits quite high on a mountain, and the sloping terrain of the farm drains rapidly, preventing flooding even in the most intense rain storms.

Much like the past three years, this year's growth has been staggering. Teak trees have developed a competitive advantage in the jungles by rapidly rising above the other plant life and then growing a canopy over the other plants. For the past three years the trees have been on a vertical journey toward the sun. Now that the trees have grown high enough to not be out-competed for light, they are branching out and really gaining girth. Most of the trees on the farm are now 5-7 inches in diameter and rapidly growing up as well as out.

The maintenance on the farm this year is in a transitional period. For the past three years workers on the farm have had to machete down competing plant growth around the trees in order to give the teak trees the most water, nutrition and breathing room. This year the workers have continued to machete on the undergrowth on the farm, but they are also going to prune some of the lower branches on the trees to keep them growing tall and straight. In a year or two the trees will have completely canopied the farm and the undergrowth will lessen significantly. At that point pruning will be the main maintenance activity on the farm and the need to machete the undergrowth will cease.



Dimas (BFTF Farm Manger) with a 40" tree



Dimas's son showing girth of the trees

## Guest House

After two and a half long years the Guest House is finally complete! Although it was a long arduous process, the time and effort spent should prove to be well worth the effort. The house turned out better than we expected, with tons of light from windows looking out to great views of the farm, a beautiful modern look with lots of exposed concrete and metal beams, and a fantastic covered patio that runs the length of the house and provides plenty of outdoor space.



Guest House Complete September 2010

The plus side of the building process delay was that we were able to get electricity brought to the house. With grid power we eliminated the need for a generator and were able to reconfigure the appliances in the house to accommodate the power source. All this will make for a much nicer experience for all that visit.

We also just completed the caretaker's house that sits on the property line behind the main house. Prior to completion of this structure, our caretaker and his family were living adjacent to our property in a house he had built long ago. This house had no windows, screens, electricity and only limited running water. The new house will give the caretaker all the amenities you and I are used to here in the States. As we frequently say, the work that we are doing on the tree farm does quite a bit of social good. This is another great example of that.

## Costa Rican Moths

Every time we are fortunate enough to visit Costa Rica and the tree farm we are blown away by the interesting animals, plants and bugs that we run into. On the latest trip down, the moths sparked our curiosity. Costa Rica is home to more 8000 varieties of moths, which is

hard to believe when you think how few varieties we see here in Colorado (mostly just Miller Moths). Moths are most prevalent in the rainy season so now is a good time to see them.

In Costa Rica's forests and jungles moths have a huge amount of predators out to get them. Everything from birds to lizards to small mammals to other insects are constantly on the

lookout for a tasty treat. Because of these predators, Costa Rican moths have evolved to have a wide array of different camouflage patterns. The camouflage helps them keep cover in the light a day as they hide from hunters. One of the big differences between moths and butterflies is that moths keep their wings lying flat when they are stopped; butterflies on the other hand put their wings up and closed in a vertical position. Moths' vertical wing position gives way to quite a variety of camouflage or disguise patterns. One of the most prevalent camouflage patterns is the leaf shape. These moths that hide themselves as leaves come in all sort of shape, sizes and colors. Many disguise themselves as dead brown leaves and can hide on the forest floor or against a tree trunk; others come in shades of green that



Caretaker's House





are more suited to hide on living plants. Another common tropical moth tactic is to mimic something that their predators would not want to come near. In this category there are moths that mimic bees with black and yellow stripes, moths that mimic wasps, and moths that mimic biting flies.

Because moths are active at night, one of their biggest predators is bats. Unlike butterflies, many moths have ears, which are tuned to the usual range of bat frequencies (40 kHz). These ears make it possible for moths to detect bats over a distance of 100 feet. Moths with ears hear bats before bats can detect their presence. If a bat is detected, some moths just change their flight direction, while

others close their wings and drop to the ground. The moth ears appear to be quite effective -- research suggests they reduce the success rate of bats by approximately 50% in comparison with moths without ears.

## How to make money in Timber

The defining attribute of timber is its steady, long-term biological growth, and teak trees deliver excellent growth patterns. Teak grows on average about 6% per year in terms of volume and increases in diameter one to two inches per year on average.

Additionally, trees get more valuable the bigger and more mature they are. As trees grow, the quality of the wood and the increased size and expanded uses make the larger trees more valuable on the market.

Studies have shown that biological growth accounts for approximately 60% of returns from timber. In challenging

times like these, it is reassuring to know that you can invest in an asset that derives most of its return from something completely unrelated to macroeconomic events, financial market conditions, political influence or anything else that litters the headlines.

So, we like to say that when times are rough, we can be comforted by the fact that our trees are growing a bit bigger every day. This steady long term growth leads to long term returns, as demonstrated in the graph below. We took the graph from a paper written by the International Woodland Company in March of 2009.

### Thank You

Here is to another great growing season. This is the year to make it to the farm.

Jake, Joe, Jaime

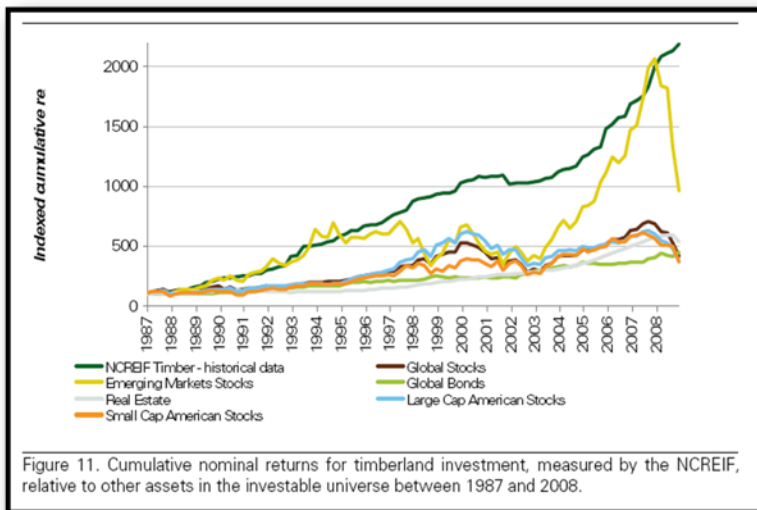


Figure 11. Cumulative nominal returns for timberland investment, measured by the NCREIF, relative to other assets in the investable universe between 1987 and 2008.