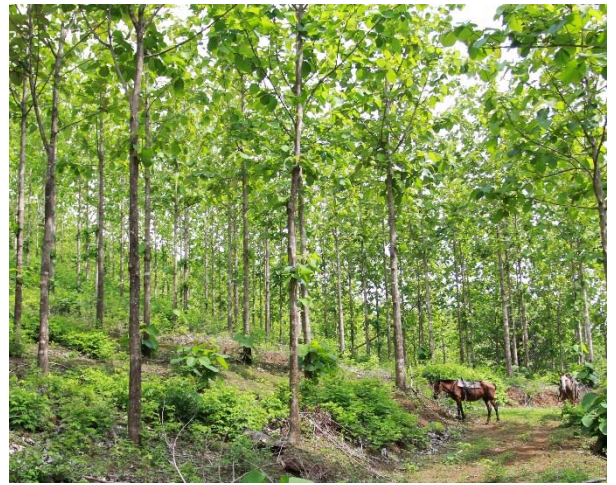


Bauers Family Tree Farm News

Miramar Costa Rica

7/15/2016

Issue No. 17



Farm Update May 2016

A large amount of work was accomplished on the farm during the dry season this year. Although Costa Rica is in the northern hemisphere and there is less daylight during the dry season (January-April) Costa Ricans call this season summer, or verano in Spanish. During the Costa Rican summer the tropical monsoon rains stop for a few months and weather conditions become sunnier, the temperature is hotter and the air is dryer. Just the opposite of the weather conditions we experience in

the United States during these months. Even though the working conditions are hotter it is much easier to



accomplish work during the summer months as there is far less mud, undergrowth, venomous animals and torrential rain to deal with.

Three major tasks were accomplished on the farm this year's dry season. First a survey (which will be discussed in further detail in the following article) to determine the growth rates, average girth/height of the trees and overall health of the plantation was conducted. Second a major pruning of



nearly all the trees was accomplished, and finally a minor thinning of unhealthy/underperforming trees was done.

When the teak trees were first planted and the trees were small, the majority of the maintenance performed on the farm was to machete down all the undergrowth that was competing with the trees. But now that the trees are very large and they have basically completely shaded out the undergrowth there is very little need to cut any undergrowth. In fact, the undergrowth that is remaining is a good thing and helps with erosion control. So now the major maintenance that takes place on the farm is to prune the trees so they grow straight and tall. Last year no pruning was

performed in order to give the teak trees a full year to build girth/height and canopy out further from the pruning that was performed two years ago. Teak trees have a tendency to quickly put out suckers and branch out if nothing is done to them. Therefore, during the last growing season the trees not only grew taller/wider they also branched out more and grew suckers from their bottoms. So just like two years ago a team of workers went onto the farm for several months and pruned all branches off of the trees below the twenty to twenty-five feet mark. This was accomplished by workers using twenty-foot pole saws to saw off the higher branches and machetes to cut off the lower suckers growing from the bottom of each tree. Now all of the trees on the farm are

straight like telephone poles and free of lower branches with a mushroom like canopy top. This of course is only a temporary situation as the teak trees will once again want to start branching and suckering out and the whole process will once again need to be repeated in the near future.

A minor thinning was performed during the Costa Rican summer this year as well. Approximately 300-500 trees (approximately 1% of the total tree population) were cut down during the dry season. These trees that were cut down were either unhealthy, extremely small or were so curvy that they basically had no commercial value and did not need to be competing with the larger healthier trees on the farm.





Now that it is May the monsoon rains have returned to Costa Rica and all of the teak trees are green, leafed out and starting their next year of growth. We are very pleased with the overall growth of the trees and maintenance

performed on the farm. We feel that the survey (discussed in the following article) that was conducted this year also confirms the overall healthy condition of our tree plantation.

Farm Study and Growth Study

In April of this year we had a group of independent consultants that specialize in tree plantation management conduct a study and survey of the trees on the farm. The study was done for a number of reasons. First, it gives us and our farm management team a number of data points to work from in the management of the farm. In addition, the study gives a baseline such that the measurements can be repeated on an annual basis going forward such that year by year growth rates in different areas of the farm can be determined. The data gathered from this initial study and ongoing studies will guide the timing and amount of thinning, pruning and harvesting to be done. In addition, we will be better able to hone in projections of future volumes of wood to be

taken out of the farm over the next 16 years.

The study was performed by breaking the farm into 10 distinct areas then within those areas 24 measurement areas were designated. Each measurement area is 500 square meters and measured by creating a circle with a 12.62-meter radius. Then every tree within the circle is counted, a circumference of

the trunk is taken at chest height (1.3 meters off the ground) and the total tree height and the height of the tree that would be available for the commercialization of wood is taken. Several further calculations are made from this data including the density of each parcel (how many trees are in a given area), the volume of each tree and the commercial wood available in each tree. The



data is then extrapolated out to estimate the number of trees per hectare and the volume of wood per hectare.

The basic and general result of the survey was that the farm

is growing as expected. Out of the 10 areas on the farm we had 3 areas growing better than expected, 4 areas growing as expected and 3 areas growing slightly below expectations. Additional

measurements are expected to be taken in March or April of 2017. After those measurements are taken and growth patterns are evaluated some initial thinning schedules may be determined.

Why Invest in Timberland

Timberland provides numerous benefits that distinguish it from other investments. It is a good component for a balanced portfolio and is well suited for the long-term investor desiring a stable real asset with multiple value propositions. The primary investment characteristics of timberland include:

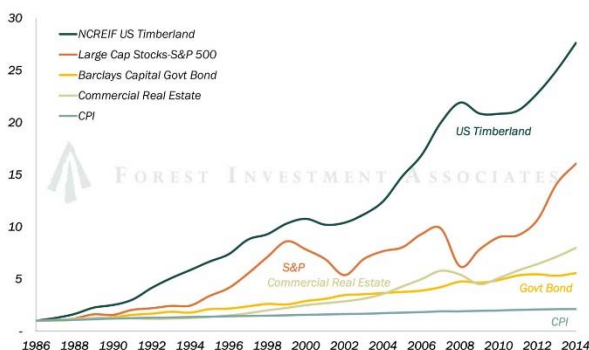
Competitive Returns

Timberland investments provide competitive performance, meeting portfolio diversification needs while enhancing overall portfolio performance. Over the long-term, timberland returns have done well compared to other major assets.

Diversification

Timberland has demonstrated low correlation with selected major asset classes, providing portfolio diversification while minimizing volatility. For the period 1987-2010, the Sharpe Ratio for timberland was 0.92 compared to that of the S&P 500 which was 0.36.

Value of One USD (\$) Invested in 1987
(Since NCREIF Inception)



Timberland vs. Financial Assets (1987-2010):

- Attractive returns
- Lower volatility
- Higher Sharpe ratio

Financial Assets	Returns (1987-2010)	Standard Deviation	Sharpe Ratio	Correlation w/ TL*
Large Cap Stocks ¹	9.60%	18.60%	0.36	0.24
Small Cap Stocks ²	9.80%	19.20%	0.35	0.02
Int'l Equities ³	6.40%	20.80%	0.16	0.17
Corporate Bonds ⁴	8.30%	7.80%	0.68	0.07
Comm. Real Estate ⁵	7.02%	8.66%	0.46	0.03
TIMBER ⁶	13.50%	11.40%	0.92	1.00

Source: ¹S&P 500 Composite with dividends reinvested; ²Dimensional Fund Advisors Small Company Fund 1982-March 2001; ³MSCI EAFE per Ibbotson; ⁴Citigroup long-term, high-grade corporate bond total return index (formerly Salomon Brothers); ⁵NCREIF

* Based on Annual Returns

Inflation Protection

Few assets have the intrinsic and proven long-term ability to preserve capital in the face of rising consumer prices. Dr. Jack Lutz of Forest Research Group writes that “our analysis shows that U.S. timberland returns appear to lead the U.S. Consumer Price Index by a year and those returns are highly positively correlated with inflation. Timberland is an asset that will preserve capital in the face of rising consumer prices.”

Biological Growth

We often say that “trees don’t read the Wall Street Journal,” and even during the most difficult economic times, trees grow, compounding in both volume and value. The simple but powerful component of biological growth, which is independent of all factors typically impacting other investments, is timberland’s most distinguishing trait and underpins the investment thesis.

Inflationary Environment	Time Period	CPI ¹	Timberland ²
High	1973 - 1981	8.30%	17.10%
Moderate	1982 - 1996	3.30%	8.40%
Low	1956 - 1965	1.50%	4.40%
Recent	1998 - 2010	2.30%	7.0% ³

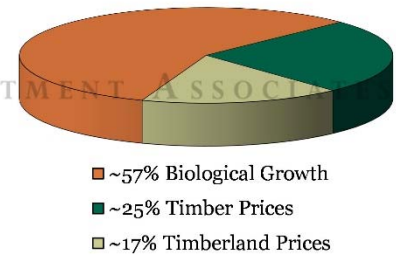
¹Bureau of Labor and Statistics CPI – All Urban Consumers
²Southern Timberland Index
³NCREIF Total Timberland Index

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Biological Growth Drives Return

- **Biological growth (~57%)**
 - Independent of all other factors
 - Largest component
 - Highly predictable
- **Timber prices (~25%)**
 - Consistently trended above inflation over the last century
- **Timberland prices (~17%)**
 - Annual rate of change during display period around 11%

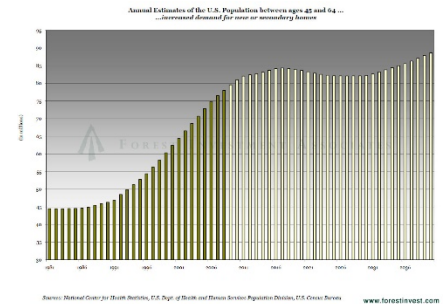
Return Drivers of a Timberland Investment 1992-2007



Sources: (1) Caulfield, J.P. 1998. Timberland return drivers and investing styles for an asset that has come of age. *Real Estate Finance*, Vol. 14, No. 4.
(2) Clutter, M. and R. Mei. 2008. Return drivers and investing styles in timberland investment. Internal FLA publication.

Promising Future

In spite of today’s challenging economic environment, the long-term supply and demand fundamentals of timberland bode well for the patient investor who thinks in terms of decades and not quarters. A growing U.S. and global population with a rising standard of living will continue to increase demand on a finite supply of timberland.



Thank You,

Jake, Joe and Jaime