

Bauers Family Tree Farms News

A Semi-Annual Newsletter

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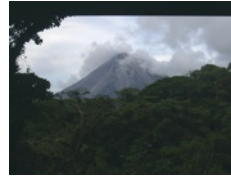
Farm Update

Two seasons of great growth. *Page 1*



Arenal Volcano

A quick Look
Page 2



Timber

A sea of calm in a choppy market.
Page 3



Farm Update - March 2009

To the farms good fortune, Costa Rica has enjoyed two bountiful rainy seasons and the trees are doing exceptionally well. Thanks to a record year of rain in 2007, our trees went from seedlings in February '07 to 5-10 foot tall by December '07.

April of 2008 marked the beginning of the rainy season and with the help of many tropical depressions and daily cumulonimbus build up the farm saw consistent rains all the way until the end of November.



December 2007

During the dry season (December-March) Teak trees loose their leaves, harden up

and don't grow much. However, when the rains start in April, Teak trees start their aggressive growth again. Teak trees have honed their competitive skills over millions of years in the most competitive circumstances (The Jungle). What they have evolved into are very fast growing trees that shoot straight for the sky so they can rise above the rest of the plant life and receive tremendous amounts of energy from the Sun.

During the 2008 rainy season the Teak trees grew and average of about a foot per month! As you can see by the pictures taken at the end of the 2007 rainy season compared to the end of the 2008 rainy season the growth rate is staggering.

The farm has had very little Teak tree fatalities in the first two years. Normally after three good growing seasons Teak trees start to become very robust and can handle a lot of punishment such as drought and heavy winds. We are positively expectant that the 2009 growing season will be a great one and our trees will be on there way to tropical grandeur.

Arenal Volcano Overview

Joe was lucky enough to spend six weeks in Costa Rica in November and December of last year. He spent the first few days in and around the beautiful area in and around the Arenal volcano. He was fortunate to catch the stunning photo of the volcano at the bottom of the second



December 2008

page of this newsletter (most of the time it hides behind the tropical clouds in the area.) Costa Rica's volcanic activity is a big contributor to the fertility of the soil in the country and what makes it a large exporter of fruit, vegetables, flowers, sugar and coffee. It also gives us wonderful soil to grow our trees on. Below we have included some facts and history on the volcano.

About the Volcano

Volcano Formation

Arenal Volcano is the youngest Volcano in Costa Rica and the most active. It is a stratovolcano (also known as a composite volcano) like Mt. Fuji in Japan, Mt. Mayon in the Philippines, and Mt. Agua in Guatemala. The 5,437 ft volcano tow-



ers above Lake Arenal's Eastern shores. It was originally formed by successive eruptions of an older volcano, Chato, which still contains a 500-meter wide summit crater and lies just to the northwest. Arenal's earliest known eruptions took place 7,000 years ago, and the two neighboring volcanoes remained concurrently active until Chato's activity ended, about 3,500 years ago.

In profile, stratovolcanoes are characteristically symmetrical (except where smaller volcanoes are built on the slopes of a larger cone.) The major slope section of some stratovolcanoes may appear to possess an almost constant gradient, with angles between 10 and 35°. Typically, the slope angle gets steeper towards the summit. Towards the base, the gradient decreases and eventually merges with the surrounding topography, as is the case for Arenal.

Growth of Arenal has been characterized by periodic, major eruptions at several-hundred-year intervals and periods of lava effusion that have armored the cone. Volcan Arenal's current eruptive period began with a major eruption in 1968. Daily eruption activity, accompanied by slow lava effusion and occasional pyro-

clastic flows (avalanche of hot gases, rocks and ashes that can travel at 80 km per hour), has continued to occur from vents located at the summit and upper western flank.

How the Volcano Works

Plate Tectonic Theory

Plate tectonics is the theory that Earth's outer layer is made up of plates, which have moved throughout Earth's history. The theory explains dynamics of mountain formation, earthquakes, and yes, even volcanoes! It also explains how similar animals came to live on what are now widely separated continents.

You probably wouldn't recognize the Earth if you could see it 225 million years ago. Back then, all the major continents formed one giant supercontinent, called Pangaea. Then around 200 million years ago, Pangaea began to rift, or split apart. A build up of heat underneath Pangaea may have initiated this splitting. The ocean filled areas between the new subcontinents, and the landmasses continued to move apart, riding on separate plates, until they reached the positions they currently occupy. Today, these continents are still on the move.

Exactly what drives plate tectonics is not known. One theory is that convection, within the Earth's mantle, pushes the plates in much the same way that air, heated by your body, rises up and gets deflected by the ceiling. Another theory is that gravity pulls the colder and heavier ocean floor with more force than it pulls the newer, light seafloor, enabling these top layers to drift.

Regardless of what drives the movement, plate tectonic activity takes place at four types of boundaries: divergent boundaries, where new crust is formed; convergent boundaries, where crust is consumed; collisional boundaries, where two land masses collide; and transform boundaries, where two plates slide against each other.

The size of the Earth has not changed significantly in the past 600 million years. It probably hasn't changed much since a short time after its formation, 4.6 billion years ago. As Harry Hess surmised, the Earth's unchanging size implies that its crust must be destroyed at about the same rate as it is created. Along the convergent boundaries, where crust is destroyed (recycled), the plates are moving toward each other. Sometimes one plate sinks (becomes subducted) under the other. This plate sinking occurs along a location called the subduction zone.



If by magic we could pull a plug and drain the Pacific Ocean, we would see a most amazing sight: an ocean floor cut by narrow, curving trenches that run thousands of kilometers long and 8 to 10 km deep. These trenches are the deepest parts of the ocean, and they are created by the processes of subduction (when one plate sinks under another.)

At a depth between 190 and 430 miles (300 and 700 kilometers,) the rock of a descending plate starts to melt. Most of this molten ocean floor becomes part of the Earth's mantle, perhaps to reappear at a distant divergent boundary. However, some makes its way to the Earth's surface, producing volcanoes!

The type of convergence that occurs depends on the kind of lithosphere involved. Convergence can occur between an oceanic plate and a largely continental plate (as in the case of Arenal Volcano Costa Rica), or it can occur between two oceanic plates or between two continental plates.

Continental plates, which are composed of less dense material, generally override oceanic plates. Magma, generated from the melting subduct plate, rises and squeezes into cracks. Eventually, it



reaches the surface as a volcanic eruption.

Approximately 85% of stratovolcanoes are located around the Pacific Ocean, forming the "Ring of Fire". They occur at the convergent margins of tectonic plates, where large sections of Earth's crust are moving together and one plate subducts.

Stability Among Turbulent Markets

Unless you have been living in the pre-verbal cave you have seen and are living in the toughest financial markets most of us have seen in our lifetimes. Not much



elaboration is needed here, we've all seen and heard it day after day. Furthermore hardly a single asset class has been spared the wrath of the current recession, but good for all of us reading this newsletter one asset class that has held up better than most is timber. An article printed in The Wall Street Journal on January 26, 2009 was titled "For Some, Sound of Profit is Timber!" The subtitle is "While Other Investments Wither, Forest's Land's Value Keep Growing." The article touches on many reasons we have said we like timber in the past. The two most prominent ones are that most of the value created by timber comes from organic growth. This is highlight by a quote from the article that reads "As long as the sun is shines, the trees will grow." Another quote highlights the same point, but in a slightly different way. It reads "Trees keep grow-

ing at 4% per year, no matter what happens to inflation, interest rates or market trends." Another important point we like to point out about timber is that it can be harvested on a flexible schedule. If we hit down markets such as this one in the future harvests can be delayed so that our timber is only being sold into "good" markets. As an additional benefit not



only can value be delayed temporarily the trees will continue to grow during this time adding to their value. The article highlights this by saying "One allure of Timber is that it isn't closely correlated with other asset classes. That's because it is highly flexible. Other organic commodities like corn or pork have to come to market in season, or they will rot."

Another interesting article printed in The Wall Street Journal on February 14, 2009 touch on the value of holding timber in down markets. The article was titled "1930s Lessons: Brother, Can You Spare a Stock." With help from the Center for Research in Security Prices (CRSP) the author looks back to see what industries performed best during the early years of the 1930s. This is the period that followed one of worst crashes in history, the Crash of 1929. According to the CRSP, only one industry had positive returns from 1930 through 1932: **logging**.

Thank You

Thank you for your support.
Grow, grow, grow!

- Jake, Joe and Jaime