



TREE GLOBAL

# Growing high-performance trees for the rest of the world

Firm aims to tap multibillion-dollar market by growing trees better than anyone else in the world

Pav Jordan

**G**regory and Jonathan Hess have a tall ambition: to grow trees better than anybody else. By “better,” they mean faster, thicker, stronger, taller, higher-yielding and more likely to survive than average trees, even in hostile soils.

A former international development and humanitarian professional, Gregory Hess latched on to trees as the answer to his search for a business venture that could be profitable, scalable, and that would serve his fellow man.

“I asked myself, ‘where are the big business opportunities that can also have a big impact on development outcomes ... Financially viable and attractive businesses with what you would call a social purpose?’” he said in a Skype interview from Ulan Bator, the capital of Mongolia and home to him and his family since they moved there in August to run Tree Global Mongolia.

“If we can grow trees better than anybody else and consolidate that into a service, then that’s a pretty interesting business opportunity,” he said.

Tree Global custom-grows



Staff work in the state-of-the-art nursery Tree Global has built in Mongolia. It produced some 500,000 trees there - including pine, birch, poplar, and some species unique to the Gobi desert - in its first year of operation.

Photo: Tree Global Inc.

## FEEDING THE NEED FOR TREES

Tree Global bases its business model on the premise that billions of trees are required around the world every year for environmental protection, agricultural production and energy production.

The company uses a proven growing system to produce high performance trees that beat regular nursery trees on key metrics, from survivability to rate of growth, time to yield, soil restoration and even rates of carbon sequestration.

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trees to the needs of specific industries, from mining companies who need to reforest lands to governments dealing with desertification and farmers who want to improve yields.

The company bills itself as the first ever international tree nursery service. It's a bet that ever-increasing industrialization in emerging nations, from Asia to Africa and Latin America, will drive massive demand growth for food, bio-fuels and global reforestation. Other industries are making the same bet and the world's largest commodities producers are lining up multibillion-dollar investments in agribusiness ventures and inputs such as potash, a mined crop nutrient.

Between now and 2050, the world's population is seen rising by close to a third, to over 9 billion people, even as the amount of arable land holds static. That fact is not lost on large private investors from around the world who are buying up agricultural lands as a long-term bet food demand will rise dramatically.

Tree Global is the brainchild of Gregory Hess, a Toronto native who worked at the United Nations before launching a humanitarian aid consulting business in 1999, and his brother Jonathan Hess, a former investment banker at Bank of Nova Scotia. Gregory, 41, is the chief executive officer and Jonathan, 39, is vice-president of corporate development.

Seeing a market for increasing productivity and efficiencies in tree farming, they assembled a

### FOLLOWING ARE THE KEY MARKET SEGMENTS FOR TREES:

**ENVIRONMENTAL CONSERVATION AND RESTORATION:** Valued at some \$40 billion, this is the market for reforestation, restoration of damaged lands from mining and industrial uses, carbon credit projects and large landscape architecture projects, including the development of new cities in Asia as rapid economic growth sees mass migration from the countryside.

**COMMERCIAL PLANTATION:** Valued at about \$100 billion, this is the market for maximizing financial return in yield-bearing species from citrus trees to coffee, cocoa, palm oil, high-value hardwoods and rubber, among others. Millions of hectares of farmland in poor countries are sold every year to speculators betting on growing demand for food as the world population grows

**BIOMASS:** This is a multibillion-dollar market that is growing fast as more countries set renewable energy targets and seek an alternative to increasingly expensive fossil fuels. Tree Global claims its growing system can increase yield per hectare, allowing traditionally slower growing, denser woods to grow faster and make them more economically viable.

team of experts in reforestation, nursery methodologies and plantation management, including a director of operations with 35 years of experience. They then developed a unique growing system to produce high performance trees by maximizing the drivers behind tree growth, from light and water inputs to soil types and the designs of pots and containers where seedlings are raised.

“Our growing team has put together a system that combines both best practices and some

unique innovations in terms of pot designs and equipment designs and growing media mixes to generate significantly better results than the average nursery or even farmers in our agricultural markets,” said Hess, who moved his family from Geneva. The method also helps improve soil quality, making it especially appealing in areas with soils depleted of their nutrients.

In Mongolia, where it established a subsidiary funded in part by local investors, Tree Global cites World Bank data

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in claims its trees have survival rates several times that of trees in the country's northern forests, or around 80% compared to 12%. It says its trees grow as much in one year as traditionally grown trees grow in three or four.

Mongolia is home to Tree Global's first projects since its launch in 2011. Among them is Oyu Tolgoi, the massive gold and copper ore deposit discovered a decade ago by Canada's Ivanhoe Mines in the Gobi desert. Another customer is Canadian miner Centerra Gold Inc., which hired Tree Global to help it re-establish trees and shrubs on its Boroo project.

"Boroo Gold has committed to developing the most successful reclamation program achievable at all our operating facilities," the project's environment director Steve McIntosh said in an e-mailed statement. "The entrance of Tree Global on the re-vegetation market in Mongolia offered Boroo the chance to work with tree planting experts with

international expertise that could address this need."

Tree Global supplies the Mongolia mines and other reforestation initiatives from a central nursery built on government lands where it has a 15-year lease. It produced some 500,000 trees there—including pine, birch, poplar and some species unique to the Gobi desert—in its first year of operation. It expects to be producing up to 10 million trees per year there in five years time.

The company is also looking at projects from Madagascar to Kenya, Israel, Guatemala and Brazil, in applications ranging from commercial agriculture to biomass energy production.

"Because of their process, they can make these trees grow in a lot of places," said Tim Logan, a "seed" investor in Tree Global who is also the chief investment officer at Foster Asset Management in Toronto. "I got involved because I like the technology. I see the opportunities to leverage in many different industries, environmental, renewable

power, agriculture, timber, and in soils and lands that would be perhaps useless otherwise. I looked at it and thought it could be a real game changer."

Tree Global estimates the markets it is targeting might be worth \$180 billion a year globally,

with most of that coming from commercial replacement of plantations of citrus, coffee, cocoa, palm oil, rubber and cashew nuts trees, to name a few target species. It says it has a list of more than 100 investors that are buying lands for agricultural purposes and want to launch quickly into development.

"To have to go out and acquire that expertise is fairly significant, and we have a service that is ready made, turn-key," said the younger Mr. Hess in an interview from offices in uptown Toronto. "We've had very good feedback approaching these different players."

The biomass industry is worth about 25% of the total and experts say it is on the verge of huge growth as the costs of fossil fuels rise. Environmental restoration is also a key growth area. A 2012 UN report found that about 130 million hectares of forest were lost in the past decade alone.

The report said forest loss and degradation cost the global economy up to \$4.5 trillion a year. Some 350 million of the world's poorest people, including 60 million indigenous, use forests for subsistence and survival.

Tree Global plans to remain a private concern for now, relying on capital from high-net-worth individuals to finance operating needs. It hopes to add some institutional investors to its roster in the new year as it funds expansion, but the brothers Hess say a public market listing is still a few years out.

