Analysts have claimed for years that Brazil will become the world leader in soybean production, but pioneering farmers face many challenges there. Nevertheless, U.S. growers should take heed. BY DEBORAH HUSO

RICARDO MANOEL ARIOLI SILVA farms more than 6,400 acres, nearly 5,000 of it in soybeans, near Campo Novo de Parecisin in the state of Mato Grosso in west-central Brazil. Like many producers there, he was drawn by the opening of vast tracts of the country's savannah and rainforest to cultivation. Silva has been farming in the state since 1987.

Back then, whether or not the region would provide good ground for soybeans and corn (another common crop here) was "a big question mark," says Silva. Thirty years later, however, he's able to produce two crops a year, and Mato Grosso is the largest soybean, corn, sunflower and cotton producing state in Brazil. Brazil itself is the world's largest exporter of soybeans.

Nevertheless, Mato Grosso remains a largely undeveloped region of thick forest. Seven percent of the land in the state is currently under cultivation, according to Brazil's agriculture minister and Mato Grosso's former governor, Blairo Maggi. The state is twice the size of California.

A not-irrelevant aside—Maggi once held controlling interest in the largest soybean operation in Brazil, though his "soy king" title has since fallen to one of his cousins.

Brazil's Uphill Battle to Be King

Once upon a time, American soybean growers were largely unchallenged as the world's top producers. In the 1960s, they controlled 80% of the global soybean market. Today, the U.S. and Brazil together are responsible for 80% of the world's soybean exports, according to 2016 data from the USDA.

U.S. growers, however, have yet to feel much pain

By the Numbers 13 million: Acres cultivated in soybeans in state of Mato Grosso, Brazil /// 9.8 million: Acres cultivated in soybeans in state of Illinois in 2015

from South American competition in their pocketbooks, and the talk of pressure from the southern continent has been going on for more than a decade. So, how real is the threat?

After all, Brazil is in the midst of its longest recession in more than 100 years, and some large soybean producers there who borrowed billions of dollars over the last two decades to open up Brazil's thick forest—or "Cerrado" in Portuguese—to farming are going bankrupt. Generally speaking, those with more than 10,000 acres are in the worst trouble and at the highest risk of default.

Many lenders are pulling back from investment in commodities due to uncertain futures, and the Brazilian government, as in the United States, has tightened lending standards. As a result, the annual increases in soybean production Brazil has seen over the last 30 years is likely to slow significantly.

Economic woes in South America, Brazilian drought and record rainfall in Argentina have created ideal (if temporary) conditions for U.S. soybean growers, who still rank No. 1 in world production. According to the latest estimates from the USDA, global consumption of soybeans is going to exceed production for the second straight year in a row, and plenty of farmers have transitioned land they intended for corn into soybean cultivation. All that is leading to a potential bumper crop this season and lagging prices, according to the Chicago Board of Trade.

Brazil faces even larger long-term challenges. Rainforest covers half of Mato Grosso, and, under Brazilian law, only 20% of it can be developed. Not to mention that BR163, the 1,100-mile frontier highway that runs from the Port of Santarem all the way to the Amazon, is a reportedly poorly maintained highway (200 kilometers of its 1,400 remain unpaved, with much of the paved portion full of potholes), and Brazil has yet to develop the rail infrastructure the U.S. has.

Will the South Rally?

Tom Kentner, a director with the Illinois Soybean Association (ISA) in Vermilion County and longtime AGCO owner and operator, says these are all temporary setbacks, however. Brazil already represents real competition to North American soybean producers, never mind the country's recession. Kentner farms 550 acres, half of it in soybeans, and believes demand for soy is only going to grow.

Last winter, Kentner traveled to China, where soybeans have become a major source of protein in the Asian diet. "China's demand is going to continue

> to grow," he adds, and, thus far, Brazilian soybeans routinely have higher protein content than those produced in North America. >>

/// 84.4 million: Estimated total acres planted in soybeans in U.S.A. for 2016 /// 5.5 million: Estimated total acres planted in soybeans in Canada for 2016

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Silva believes Brazilian growers benefit from a tropical climate with more sunlight. Other factors include use of different varieties and growing practices.

Whatever leads to the higher protein content, ISA is trying to figure it out. "We have an HY+Q program," explains Kentner, "that is a program for high yield and high quality. We're trying to track protein levels down to each county to see what climate and soil has to do with it."

Kentner believes U.S. farmers need to be proactive if they want to maintain and grow soybean market share. "[The ISA] is continuing to reach out to markets and find out what end users need," he says.

In addition to a perhaps friendlier growing climate, Brazilian producers have another advantage over North Americans—land that is less expensive overall. (See "By The Numbers," below.) Still, a major stumbling block for Brazil is infrastructure. "During the last 30 years, many farmers went broke trying to survive the bad logistics for transportation, a lack of crop insurance as Americans and Europeans have,

and bad support from local and federal governments," explains Silva. "The pioneering price was very high." Silva says the vast majority of the harvest in <u>Mato Grosso</u> ships to Brazilian ports by truck. "We don't have any railroads or

> waterways available as U.S. farmers do," he adds. "The transportation cost can be 30% of the port price."

How to Hold the Competitive Edge

Will North American soybean growers find themselves eclipsed by continued production expansion in South America in the coming years and decades?

Kentner believes that as long as American farmers remain proactive they'll continue to hold a competitive edge. "The U.S. is able to supply the beans when countries are looking for them," he explains. "The U.S. is a global leader in soybean production. Half the soybeans produced in Illinois go to the export market."

He feels American soybeans represent "a stable, reliable supply of high quality." The U.S. also benefits from a "vast infrastructure system," Kentner notes, though he's quick to point out that system needs upgrading. "We've not been putting money into locks



66 We need to be funding infrastructure improvements to keep ahead of our competition.**99**

<u>—Tom Kentner</u> Illinois Soybean Association

and dams on the Illinois and Mississippi rivers," he adds. "We need to be funding infrastructure improvements to keep ahead of our competition." USDA studies from 2014 and 2015 suggest the U.S. could lose another 18.5% in global soybean market share if infrastructure sees no improvements.

Maintaining a strong and reliable transportation system and increasing protein levels, along with yields, in American soybeans are key to remaining competitive, in Kentner's view. He says Illinois has growers producing in excess of 100 bushels of beans per acre. He also notes that more and more growers, himself included, are raising non-GMO soybeans something many consumers want, including China's tofu market. That's something Brazil has yet to offer.

Despite Brazil's recent economic troubles and farmer bankruptcies, it's a competitor that's within striking distance. "We all expect a better transportation system in the coming years," Silva says. "New river ports and waterways are in development right now in the north and northeast region. We believe we will have better freight prices and more competition after these new corridors are in place." In the meantime, Silva says favorable exchange rates are softening the blow of a difficult economy.

"Everybody believes Brazil will be No. 1 in the world's soybean production," Silva remarks. "Brazil is the only place that [can] increase production area over pastureland. It's just a matter of time." **F**L



By the Numbers Land Prices: \$2,400 to \$5,000 per acre; land rents for \$50 to \$100 per acre in Brazil /// \$7,650 per acre, land rents \$228 per acre in Illinois