

COMPARING WHOLE SOYBEAN PHYSICAL FACTORS: SOYBEAN MOISTURE

Soybean moisture content is closely watched prior to harvest as it has many implications. Moisture has implications for storage efficacy and preserving the quality of the soybean. **At high moisture levels, soybeans are susceptible to mold development, seed coat rupture and even potential germination in warmer temperatures.** Storage conditions and length of storage determine if these quality deteriorating conditions develop. When these conditions develop, they are irreversible in the damage caused to soybeans.



Based on data¹ collected from soybeans exported from the U.S. and Brazil, **Brazilian soybeans have higher moisture content compared to U.S. soybeans.** Seasonal conditions impact crop quality, as seen by the difference in moisture levels within years (2020 and 2021). Higher moisture content in Brazilian soybeans is due to higher harvest temperatures and precipitation levels before and during harvest. Soybeans that cannot be dried naturally are harvested at high moisture levels. The soybeans are then dried to more acceptable levels as shown below, but at the risk of damaging the soybean due to imprecise drying methods. Ultimately this impacts the quality of the soybean meal produced from the soybean.

¹Data summarize soybean quality results from U.S. and Brazilian soybean exports. U.S. data are from the USDA FGIS public database. Brazilian data are collected from different surveyors. The data is based on limited samples and is not meant to reflect a statistically significant sample size of the overall soybean crop. Due to lack of soybean supplies in Brazil in December 2020 and January 2021, no data were available for those two months.

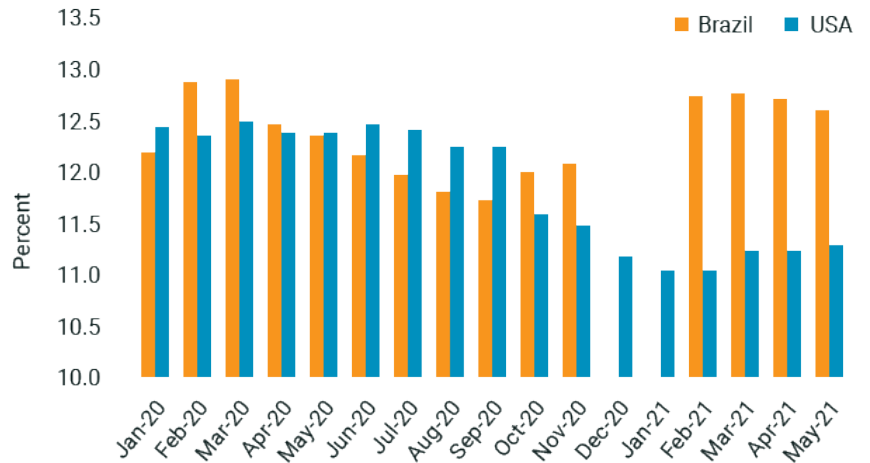
THE MOISTURE CONTENT IS CONSIDERED A DISPLACEMENT OF ALL THE NUTRIENTS IN THE SOYBEAN AND ULTIMATELY THE RESULTING SOYBEAN MEAL.

Lower moisture soybeans means the buyer is paying for less water and more nutrients.

When soybean prices are over \$500 per metric ton, a 1% reduction in moisture is worth \$5.00 per metric ton.

Deterioration in the quality of the soybean will also present challenges to soybean processors when processing the bean.

LOWER MOISTURE AND BETTER STORAGE CONDITIONS GIVE U.S. SOYBEANS A QUALITY ADVANTAGE.



	Brazil	USA	USA Benefit, %
2020	12.25	12.12	-1.1%
2021	12.72	11.18	-12.1%



To learn more about how U.S. Soy can enable your business, please contact your U.S. Soybean Export Council (USSEC) region or country representative; or submit your contact details via <https://ussec.org/contact/>.

ABOUT THE U.S. SOYBEAN EXPORT COUNCIL (USSEC)

Soybeans are the United States' number one food and agricultural export. The U.S. Soybean Export Council (USSEC) is devoted to building preference, improving the value, and enabling market access for the use of U.S. Soy for human consumption, aquaculture, and livestock feed in 82 countries across the world. USSEC is a dynamic partnership of U.S. soybean producers, processors, commodity shippers, merchandisers, allied agribusinesses, and agricultural organizations; and connects food and agriculture industry leaders through a robust membership program. USSEC is farmer-funded by checkoff funds invested by the United Soybean Board, various state soybean councils, the food and agriculture industry, and the American Soybean Association's investment of cost-share funding provided by U.S. Department of Agriculture's (USDA) Foreign Agricultural Service (FAS). To learn more, visit www.ussoy.org and www.ussec.org, and engage with us on LinkedIn, Twitter, Facebook, Instagram and YouTube.