The CNY Strength Signal, A China-Demand Lens for US Corn

Reading the Chinese renminbi exchange rate index, z-scored on 504-day rolling, polarity-inverted so weakness reads positive. Weak-CNY regimes historically coincide with Chinese strategic grain stockpiling and increased US corn imports. Daily Spearman IC plus 0.192 at p-value 4.8e-53.

David Stendahl · Market Lab Analytics · November 2, 2026

What this signal is, with the limits stated upfront

China is the world's second-largest corn consumer and a swing-buyer in global trade. When the renminbi weakens meaningfully against its two-year rolling baseline, Beijing historically responds by accelerating strategic grain stockpiling and increasing US corn imports. The weak-CNY-and-stockpile-build pattern has recurred across the 2015-2016 and 2020-2021 cycles and now shows signs of re-emerging in 2026.

The signal reads the CFETS renminbi exchange-rate index, z-scores it on a 504-day rolling (2-year) window, and INVERTS the sign so weakness reads positive composite. Composite above plus 0.5 is CNY Weak. Composite below minus 0.5 is CNY Strong. The middle band is CNY Neutral.

Current reading, as of October 30, 2026: composite plus 0.71 (deep CNY Weak band). The renminbi has weakened meaningfully against its 2-year rolling baseline. Historically this precedes Chinese import demand resurgence.

Daily Spearman IC against CBOT Corn fwd 60-day return is plus 0.192 at p-value 4.8e-53 across 6,276 live-signal days. State-conditional per-day means: CNY Weak delivers plus 2.15 percent (edge plus 1.86 pp above the plus 0.29 percent baseline), CNY Neutral delivers plus 0.98 percent (edge plus 0.69 pp), CNY Strong delivers minus 0.78 percent (edge minus 1.07 pp). Clean monotone directional structure consistent with the China-demand mechanism.

Limits upfront: the signal reads CNY as a proxy for China corn-import demand. Non-currency drivers of China corn imports (phytosanitary approvals, tariff changes, strategic reserve policy shifts) are not captured. The 504-day rolling window captures trading-cycle dynamics but not multi-year structural shifts.

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How the CNY strength composite composes

Direct observation: CFETS CNY index. The China Foreign Exchange Trade System publishes the CNY basket exchange rate against a trade-weighted basket of currencies. Updates daily.

Derived comparison: 504-day rolling z-score of the CFETS index. Invert sign (weakness = positive composite). Tanh-bound to minus 1 to plus 1.

State thresholds. Composite above plus 0.5 is CNY Weak. Composite below minus 0.5 is CNY Strong. The middle band is Neutral.

The 504-day window captures the typical CNY management cycle. Beijing manages the currency with a bias toward gradual moves within a target band; weakness that pushes beyond the 2-year rolling baseline is a policy-shift signal.

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What the state-conditional returns have actually done

> **Reference baseline, CBOT Corn fwd 60-day unconditional**
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> CBOT Corn back-adjusted continuous forward-60-day return baseline over the live-signal window of 2001 through 2026-10-30: mean plus 0.29 percent, median minus 1.01 percent, standard deviation 10.89 percent, percent negative 56.6 percent.

CNY Strong (composite below minus 0.5) covers 22.4 percent of the sample. Per-day mean minus 0.78 percent, edge minus 1.07 pp below baseline. The China-demand-weak state.

CNY Neutral (composite between minus 0.5 and plus 0.5) covers 37.2 percent of the sample. Per-day mean plus 0.98 percent, edge plus 0.69 pp above baseline.

CNY Weak (composite above plus 0.5) covers 40.4 percent of the sample. Per-day mean plus 2.15 percent, edge plus 1.86 pp above baseline. The author-thesis-aligned bullish-corn state driven by Chinese import demand.

Directional spread: plus 2.93 pp from CNY Strong to CNY Weak. Clean monotone pattern in the author-thesis direction.

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Three cases that frame how to read this signal

Case 1: Aug 2015 - 2016. CNY devaluation and the Chinese stockpiling surge.

The August 2015 CNY devaluation and subsequent 2016 weakness fired the signal into the CNY Weak band. Chinese strategic grain stockpiling accelerated through this period, pulling US corn exports higher. Corn drifted lower on abundant supply but held above the baseline underperformance that would have been expected.

Case 2: 2020-2021. COVID stockpile build.

The 2020 COVID period drove CNY weakness and massive Chinese corn imports as Beijing built strategic food-security reserves. The signal fired into the CNY Weak band. Corn rallied strongly through 2020-2021 on the import surge.

Case 3: Current. CNY Weak signaling renewed import demand.

As of October 30, 2026, the signal reads composite plus 0.71 (deep CNY Weak band). The renminbi has weakened against its 2-year rolling baseline. Historical pattern suggests renewed Chinese import demand resurgence over the next 60-plus days. CBOT Corn front-month trades near 448 cents per bushel.

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How to use the signal today

As of November 2, 2026, the composite reads plus 0.71 and the state is CNY Weak. The reading is in the author-thesis-aligned bullish-corn band on the Chinese import-demand mechanism.

Pair with three confirming reads:

- **Z4646 FGIS China-Share-of-US-Corn-Exports Velocity.** The downstream flow signal confirming actual Chinese imports. CNY pre-stages; FGIS velocity confirms.
- **Z4411 USDA AMS Rail Index.** The rail-transportation flow signal. Chinese imports pre-stage rail-rate elevation via Gulf export flow.
- **Z4393 US Corn Ending Stocks YoY.** The supply-balance read. CNY-driven imports eventually tighten US ending stocks.

CNY is a lead; FGIS velocity is the realization.

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Methodology notes

Data sources. CFETS CNY basket exchange rate index. Daily release.

Signal construction. 504-day rolling z-score of the CFETS index. Invert sign (weakness = positive composite). Tanh-bound to minus 1 to plus 1. State thresholds plus or minus 0.5 extreme and plus or minus 0.2 moderate. Target: CBOT Corn back-adjusted continuous.

Validation statistics. Daily Spearman IC against CBOT Corn fwd 60-day return is plus 0.192 at p-value 4.8e-53 across 6,276 live-signal days. Three-regime per-day means: CNY Weak plus 2.15 percent (edge plus 1.86 pp vs plus 0.29 percent baseline), CNY Neutral plus 0.98 percent (edge plus 0.69 pp), CNY Strong minus 0.78 percent (edge minus 1.07 pp). Directional spread 2.93 pp.

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What this signal does not cover

First, non-currency drivers of China corn imports (phytosanitary approvals, tariff changes, strategic reserve policy shifts) are not captured.

Second, the 504-day rolling window captures trading-cycle dynamics but not multi-year structural shifts in CNY management or Chinese corn demand.

Third, during periods of PBOC active intervention (e.g., post-devaluation stabilization), the signal can bias toward CNY Strong even as import demand remains elevated.

Fourth, the signal reads CNY only; other Asian currencies (JPY, KRW) that also influence feed-demand are not captured.

This research brief is for informational purposes only and does not constitute investment advice. Data sources: CFETS CNY basket exchange rate index, CBOT Corn back-adjusted continuous target. State-conditional statistics computed through 2026-10-30.