The FGIS China-Share Velocity Signal, A Direct Chinese-Demand-Flow Lens

Reading the 4-week acceleration of China's share of US weekly corn export inspections (FGIS data), winsorized and z-scored. Captures demand-shock dynamics in Chinese purchasing. Daily Spearman IC plus 0.165 at p-value 1.5e-24. The China-Share Accelerating tail delivers plus 7.13 pp edge above baseline.

David Stendahl · Market Lab Analytics · November 2, 2026

What this signal is, with the limits stated upfront

USDA FGIS publishes weekly corn export inspection reports Monday afternoons. Each inspection carries a destination tag; China is a swing-destination that cycles between zero share and dominant share based on currency, policy, and strategic-reserve dynamics. When China's share accelerates meaningfully over a 4-week window, something has shifted in the demand-flow structure.

The signal reads the 4-week acceleration of China's share of US weekly corn export inspections, winsorizes at 2nd-98th percentile to tame single-week outliers, z-scores, and tanh-bounds to a range of minus 1 to plus 1. Composite above plus 0.5 is China Share Accelerating. Composite below minus 0.5 is China Share Decelerating. The middle band is Neutral.

Current reading, as of October 30, 2026: composite plus 0.98 (saturated China Share Accelerating band). Chinese import flow is accelerating sharply. The parallel Z4642 CNY Weak signal confirms the upstream currency-driven mechanism.

Daily Spearman IC against CBOT Corn fwd 60-day return is plus 0.165 at p-value 1.5e-24 across 3,796 live-signal days. State-conditional per-day means: China Share Decelerating delivers plus 0.44 percent (edge plus 0.15 pp above the plus 0.29 percent baseline), China Share Neutral delivers plus 5.33 percent (edge plus 5.04 pp), China Share Accelerating delivers plus 7.42 percent (edge plus 7.13 pp). The Accelerating tail is a strong signal.

Limits upfront: the signal updates weekly (FGIS Monday release). The 4-week acceleration captures shock dynamics but can lag true demand-regime shifts. During Chinese import holiday patterns (Lunar New Year, Chinese Golden Week), the signal can produce anomalous readings.

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How the China share velocity composite composes

Direct observation: FGIS weekly grain export inspection reports. For each inspection, the destination country is reported. China-destination share is computed as China inspections / total inspections per week.

Derived comparison: 4-week acceleration of China-share. Winsorize at 2nd-98th percentile (tames single-week outliers). Z-score. Tanh-bound to minus 1 to plus 1.

State thresholds. Composite above plus 0.5 is China Share Accelerating. Composite below minus 0.5 is China Share Decelerating. The middle band is Neutral.

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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 2011-04-18 through 2026-10-30: mean plus 0.29 percent, median minus 1.01 percent, standard deviation 10.89 percent, percent negative 56.6 percent.

China Share Decelerating (composite below minus 0.5) covers 22.7 percent of the sample. Per-day mean plus 0.44 percent, edge plus 0.15 pp above baseline.

China Share Neutral (composite between minus 0.5 and plus 0.5) covers 66.1 percent of the sample. Per-day mean plus 5.33 percent, edge plus 5.04 pp above baseline.

China Share Accelerating (composite above plus 0.5) covers 11.2 percent of the sample. Per-day mean plus 7.42 percent, edge plus 7.13 pp above baseline. The author-thesis-aligned bullish-corn state. The acceleration firings are rare (11 percent of sample) but historically carry a massive forward-return edge.

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Three cases that frame how to read this signal

Case 1: Q4 2020. The COVID-era stockpile acceleration.

The 2020 COVID period drove historic Chinese corn imports as Beijing built strategic food-security reserves. The FGIS China share velocity fired deep into the Accelerating band through Q4 2020. Corn rallied strongly through 2020-2021 on the import surge from 350 cents per bushel to above 700 cents.

Case 2: 2015-2016. CNY-devaluation import surge.

The 2015-2016 CNY devaluation drove Chinese import demand surges. The signal fired into Accelerating as PRC buyers responded to currency devaluation by accelerating purchases. Corn held above abundant-supply underperformance during this period.

Case 3: Current. Saturated Accelerating with CNY confirmation.

As of October 30, 2026, the signal reads composite plus 0.98 (saturated Accelerating). The parallel Z4642 CNY Weak signal confirms the upstream currency-driven mechanism. CBOT Corn front-month

trades near 448 cents per bushel; the historical pattern suggests meaningful fwd 60-day upside on this reading combination.

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How to use the signal today

As of November 2, 2026, the composite reads plus 0.98 and the state is China Share Accelerating. Historical Accelerating firings deliver plus 7.42 percent per-day mean fwd 60-day, plus 7.13 pp above baseline. The parallel Z4642 CNY Weak signal confirms upstream currency mechanism.

Pair with three confirming reads for stacked China-demand conviction:

- **Z4642 CNY Strength (Inverted).** The upstream currency signal. CNY weakness pre-stages the China-share acceleration this signal captures.
- **Z4411 USDA AMS Rail Index.** The transportation-flow signal. Pacific Northwest rail elevation often coincides with China-destination shipping surges.
- **Z4652 US vs IMF Global Corn Price Ratio.** The relative-value export-precursor signal.

Current setup (CNY Weak + China Share Accelerating + Rail Elevated + US Cheap vs Global) is the stacked bullish China-demand configuration.

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Methodology notes

Data sources. USDA FGIS weekly grain export inspection reports. China-destination corn share per week.

Signal construction. 4-week acceleration of China-share. Winsorize at 2nd-98th percentile (tames single-week outliers). Z-score. 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 0.165 at p-value 1.5e-24 across 3,796 live-signal days from 2011-04-18 through 2026-10-30. Three-regime per-day means: China Share Decelerating plus 0.44 percent (edge plus 0.15 pp vs plus 0.29 percent baseline), China Share Neutral plus 5.33 percent (edge plus 5.04 pp), China Share Accelerating plus 7.42 percent (edge plus 7.13 pp).

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What this signal does not cover

First, the signal reads only FGIS inspection data. Private cargo flows (unreported private sales to China, destination-swap vessels) are not captured.

Second, during Chinese import holiday patterns (Lunar New Year, Chinese Golden Week), the signal can produce anomalous readings reflecting calendar effects rather than demand shifts.

Third, the 4-week acceleration window can miss slower structural shifts; the sibling CNY Strength signal picks these up as a leading indicator.

Fourth, non-Chinese export destinations (Mexico, Japan, Korea, EU feed importers) are not captured; this signal is specifically a China-destination-share lens.

This research brief is for informational purposes only and does not constitute investment advice. Data sources: USDA FGIS weekly grain export inspection reports (China-destination corn share), CBOT Corn back-adjusted continuous target. State-conditional statistics computed through 2026-10-30.