The Near-Marketing-Weight Placements Number, Read as the Three-Month Forward Supply Pipeline

Why the heavy-weight placements signal carried the highest information coefficient in the six-specialist cattle stack through 2016, what the data-source transition is hiding today, and the engine patch that will restore live operation.

David Stendahl · Quant Trading Lab · October 27, 2026

What this signal is

A calf placed on feed at 650 pounds finishes in roughly 150 days. A heavier feeder placed at 950 pounds finishes in roughly 90 days. The USDA breaks placements into weight-class buckets precisely because the finishing timeline depends on entry weight. This signal reads the heavy-weight bucket (cattle placed at 800 pounds or heavier), inverted year-over-year, as a direct three-month-forward supply read.

In its live-data years (2000 through December 2016), this signal was the single most informative member of the six-specialist Cattle on Feed stack: Spearman rank correlation of plus 0.169 against Live Cattle 60-day forward returns at p = 7.8e-44, a 5.42 percentage-point spread between its two extreme regime bands (Tight Near-Term Supply at plus 2.41 percent fwd 60d, Abundant Near-Term Supply at minus 2.01 percent), and the cleanest monotonic edge in the stack.

On December 2, 2009, as heavy placements ran below the trailing norm and the near-term pipeline was thin, the composite entered Tight Near-Term Supply at plus 0.847 and Live Cattle rallied 13.00 percent over the next 60 trading days. On November 3, 2008, as heavy placements had surged ahead of the September-October 2008 financial-crisis demand collapse, the composite was at the saturated Abundant Near-Term Supply floor at minus 1.000 and Live Cattle fell 12.14 percent over the next 60 trading days. On November 4, 2003, three weeks before the first US BSE discovery triggered the Japan-Korea-Mexico export ban, the composite was reading Tight Near-Term Supply at plus 0.528 (correctly on the supply side) and Live Cattle collapsed 17.36 percent over the next 60 days as the demand shock overrode the supply signal.

Here is the twist. The USDA reclassified the heavy-weight placements bucket from a single “800 pounds and heavier” category into separate “800-899” and “900-999” buckets starting January 2017. The engine’s SQL filter still targets the discontinued pre-2017 category. The engine has been reading a

frozen series for roughly nine years. The current composite at zero is not an informational signal; it is an artifact of the data-source transition.

This brief documents the strong historical edge, the mechanism, and the engine-patch requirement that will restore the signal to live operation. In the interim, readers should treat the current reading as uninformative and rely on the Placements signal and the Marketings signal for the active supply-side regime read.

Read on for the three cases that frame how to read this signal, the state-conditional evidence from the sixteen-year live-data window, and the four caveats that mark the limits of the lens.

• • •

How the inputs compose

The USDA National Agricultural Statistics Service runs the Cattle on Feed Weight Class survey monthly and breaks placements into six entry-weight buckets. The pre-2017 reporting used a single "800 pounds and heavier" category (`GE 800 LBS` in the database). Starting January 2017, USDA reclassified this into two separate buckets: `800-899 LBS` and `900-999 LBS`. The 800-plus heavy bucket (whether as the pre-2017 aggregate or the post-2017 sum) typically runs 300,000 to 700,000 head per month on the seven-state series. The low end hits during cycle troughs when fewer heavy feeders are available; the high end during cycle expansion when backgrounders push heavy feeders through, or during drought years when grass fails and heavy feeders are pushed to feedlots prematurely.

The engine is designed to pull this heavy-weight series, forward-fill to daily frequency, compute year-over-year growth, trailing z-score the growth over 1,260 trading days with a 60-day minimum window, flip the sign so below-trend heavy placements is positive (meaning tight near-term supply), and bound with tanh. A composite above plus 0.5 means heavy placements are roughly two standard deviations below the trailing norm (Tight Near-Term Supply regime). A composite below minus 0.5 means they are roughly two standard deviations above (Abundant Near-Term Supply regime).

Mechanistically, cattle placed at 800 pounds or heavier finish in 90 to 120 days. The composite reads directly on the three-to-four-month forward supply pipeline. A thin heavy-placement pipeline today means a thin marketings book 90 days from now.

The engine's current SQL filter targets only the pre-2017 bucket, which is why the series freezes at December 2016. The patch to UNION the current USDA buckets with the historical series is documented and pending. Four confirming features run alongside the primary composite: five-day velocity, 20-day over 252-day volatility regime, 63-day correlation with Live Cattle returns, 63-day autocorrelation.

• • •

Three cases that frame how to read this signal

Case 1: December 2, 2009. The clean constructive case. Thin pipeline delivers.

Firing date: the composite entered Tight Near-Term Supply at plus 0.847 on December 2, 2009. Live Cattle close: 82.10. Forward 60-day return: plus 13.00 percent. Live Cattle rallied from 82.10 to 92.76 by late February 2010.

Heavy placements had run below the trailing norm through late 2009 as the post-financial-crisis recovery had not yet brought feeder cattle back into the pipeline at pre-recession levels. The economic recovery was pulling retail beef demand higher; the supply side had not yet caught up. Thin heavy-weight placements means thin December-through-February marketings, which the market priced through December 2009 and into early 2010. This is the signal's cleanest in-sample constructive-regime case where the mechanism (thin near-term pipeline into recovering demand) delivered the signal's rated edge without demand-side override.

The lesson is that Tight Near-Term Supply backed by a visible mechanism (post-crisis demand recovery, drought-constrained heavy feeders, cycle trough) delivers the signal's rated edge cleanly. The 2009 case is the single clearest demonstration in the live-data window.

Case 2: November 3, 2008. The financial-crisis amplifier.

Firing date: the composite had entered Abundant Near-Term Supply by early November 2008 at minus 1.000, the saturated tanh floor. Live Cattle close: 93.33. Forward 60-day return: minus 12.14 percent.

Heavy placements had surged through the summer and early fall of 2008 as drought in parts of the Plains pushed heavy feeders forward to feedlots sooner than normal. The already-elevated near-term supply met the September-October 2008 financial-crisis demand collapse. Weekly federally inspected cattle slaughter fell as consumer spending contracted. Boxed beef cutout prices dropped. The feedlot pipeline, already loaded with heavy-weight animals that could not easily be held longer, had no slack to absorb the demand shock. Prices collapsed.

The signal's engine label (abundant near-term supply, bearish Live Cattle) matched the realized direction. The mechanism was demand-shock-amplified-by-supply-overhang, the same shape as the Cattle on Feed Total signal's December 2003 BSE case and the Live Cattle broader supply-overhang-amplifier pattern.

Lesson: Abundant Near-Term Supply tail readings flag conditions where even unrelated demand shocks resolve sharply because the pipeline cannot easily absorb. Readers should pair this lens with a demand-side indicator (boxed beef cutout, retail-wholesale spread, export shipments) and news-event monitoring. The combination of saturated-abundant signal plus any demand-side stress indicator is the clearest conditional bearish setup in the Live Cattle fundamental stack.

Case 3: November 4, 2003. The paradox pre-BSE entry.

Firing date: the composite entered Tight Near-Term Supply at plus 0.528 on November 4, 2003 (mid-POS, not the saturated extreme). Live Cattle close: 92.60. Forward 60-day return: minus 17.36 percent.

Heavy placements had run slow through the fall of 2003, consistent with the broader cycle rebuild. The signal correctly read the near-term supply pipeline as thin. On December 23, 2003, the USDA announced the first US BSE case in Mabton, Washington. Japan, South Korea, Mexico, and approximately 50 other countries immediately banned US beef imports. Export beef demand collapsed. Live Cattle traded under 80 cents per pound by February 2004.

The signal was reading its own lane correctly on the supply side. The BSE demand shock was unrelated to heavy-placements dynamics. The export ban drove the bearish outcome. Lesson: Tight Near-Term Supply tail readings do not protect against unrelated demand shocks. The signal is a supply-side specialist and cannot anticipate export bans, disease shocks, or consumer-spending collapses. Readers should pair the signal with demand-side indicators and news-event monitoring.

• • •

What the state-conditional returns have actually done

The SPY forward-60-day return baseline (unconditional) is mean plus 2.31 percent, median plus 3.13 percent. Standard deviation 7.23 percent. Percent negative 29.8 percent. State-conditional means below are expressed as edges relative to this baseline.

The Live Cattle forward-60-day return baseline (unconditional, 6,689 observable post-2000 trading days) is mean plus 1.39 percent, median plus 2.29 percent. Standard deviation 8.41 percent. Percent negative 39.6 percent.

> **Reference baseline (6,689 Live Cattle post-2000 observable trading days)**
>
> Live Cattle forward-60-day return baseline (unconditional): mean plus 1.39 percent, median plus 2.29 percent. Standard deviation 8.41 percent. Percent negative 39.6 percent. Baseline source: Z4727 engine parquet joined with LC20040BD CSI back-adjusted continuous closes, post-2000 trading-day subset. State-conditional means below include post-2016 state-days where the engine composite is frozen at zero (Baseline band), which inflates the Baseline-band sample and does not materially distort the two extreme tails' statistics (both of which draw exclusively from the pre-2017 live-data window).

The Tight Near-Term Supply state (composite above plus 0.5), 1,268 trading days, delivered a mean fwd-60-day Live Cattle return of plus 2.41 percent, median plus 3.28 percent. That is plus 1.02 percentage points above the baseline mean and plus 0.99 percentage points above the baseline median. Percent negative was 34.7 percent versus 39.6 percent baseline, a 4.9-point improvement. All 1,268 state-days are drawn from the 2000-2016 live-data window.

The Moderately-tight state (composite plus 0.2 to plus 0.5), 533 trading days, delivered mean plus 2.11 percent, median plus 2.07 percent. The band is informative in the constructive direction, attenuated versus the Tight tail.

The Baseline state (composite minus 0.2 to plus 0.2), 2,479 trading days, delivered mean plus 2.42 percent, median plus 3.50 percent. This figure is above the unconditional baseline; the band's sample includes the post-2016 frozen-engine period which happened to span the 2017-2026 Live Cattle bull cycle. Readers should treat the Baseline-band figure as mechanically inflated by the frozen-engine coincidence rather than as an informational finding.

The Moderately-abundant state (composite minus 0.5 to minus 0.2), 1,245 trading days, delivered mean plus 1.17 percent, median plus 2.71 percent. The band is modestly informative in the bearish direction.

The Abundant Near-Term Supply state (composite below minus 0.5), 1,164 trading days, delivered mean minus 2.01 percent, median minus 1.66 percent. That is minus 3.40 percentage points below the baseline mean and minus 3.95 percentage points below the baseline median — the strongest negative state-conditional edge among the six NASS cattle specialists. Percent negative 58.8 percent versus 39.6 percent baseline, a 19.2-point degradation. All 1,164 state-days are drawn from the 2000-2016 live-data window.

The spread between the Tight and Abundant extreme bands is plus 4.42 percentage points on the mean (plus 1.02 pp minus minus 3.40 pp equals 4.42 pp when read as the full absolute spread it is

4.42 points, or using signed, the Tight minus Abundant is 4.42 points). The Spearman information coefficient of the composite against Live Cattle 60-day forward returns is rho = plus 0.1686 (p = 7.8e-44, n = 6,689). This is the highest IC among the six NASS cattle specialists. The shorter forward-lead window (90-120 days vs 150-180 days for all-weight placements) is what amplifies the edge: the composite reads closer to the actual slaughter window.

• • •

How to use the signal today

This is the strongest-edge specialist in the NASS cattle stack, when it is reading live data. Three best uses, each conditional on the engine patch landing.

First, as the shortest-lead supply specialist in the Live Cattle fundamental composite. The Placements signal projects five months forward; this signal projects three months forward. For traders working the near-month Live Cattle contract, this is the direct read. Once patched, the signal is expected to resume Tight Near-Term Supply readings consistent with the 2024-2026 structural cycle.

Second, as the conditional-bearish amplifier. Saturated Abundant Near-Term Supply tail readings in historical cases (2008 crisis, 2003 pre-BSE) coincided with the deepest Live Cattle drawdowns in the sample. When this signal reads Abundant and any demand-side stress indicator (boxed beef cutout contraction, export ban, consumer-spending softening) is also live, the combination has historically produced the clearest conditional bearish setup in the stack.

Third, as a check on the Placements signal. The Placements signal reads the full 100-180 day forward window. This signal narrows to the 90-120 day window. If Placements reads tight supply and this signal reads abundant near-term supply, the market is signaling that the near-contract supply is loaded (bearish near-month) while the deferred-contract supply is thin (constructive deferred-month). That is a calendar-spread signal, not a flat-price signal.

For allocators considering Live Cattle exposure today, the engine freeze means this specialist is not currently informational. The brief is being published alongside the engine-patch request and the historical performance figures. Once the patch lands, the signal will re-engage.

• • •

Methodology notes

The signal's full-sample Spearman information coefficient against Live Cattle 60-day forward returns is rho = plus 0.1686 (p = 7.8e-44, n = 6,689). This is the highest IC among the six NASS cattle specialists. State-conditional means at the two extreme tails (Tight at plus 2.41 percent, Abundant at minus 2.01 percent) deliver a 4.42 percentage-point spread, nearly double the all-weight Placements signal's 2.59 point spread.

The 2000-2016 live-data window carries 196 monthly observations and roughly 4,160 daily reindex points. The post-2016 period reflects the engine freeze. Direct database query confirms the current USDA buckets (`800-899 LBS` and `900-999 LBS`) have been populated continuously since January 2017, with 129 monthly observations each as of September 2026. The engine patch to UNION the historical pre-2017 series with the current post-2017 bucket sum is pending.

The 1,260-day z-score window captures roughly one cycle phase. The 60-day minimum population ensures the composite does not fire on insufficient history. The tanh bound ensures the chart composite stays between plus and minus one. The sign flip (`zsc = -zsc`) is empirically correct: low heavy placements year-over-year coincides with constructive Live Cattle forward returns, consistent with the thin-near-term-pipeline mechanism.

Three complete sample Tight Near-Term Supply episodes anchor the constructive-tail calibration (all in the 2000-2016 live window): December 2009 (fwd 60d plus 13.00 percent, post-crisis recovery), May 2008 (fwd 60d plus 6.15 percent, pre-crisis), April 2006 (fwd 60d plus 7.05 percent, mid-cycle). Three Abundant Near-Term Supply episodes anchor the opposite tail: November 2008 (fwd 60d minus 12.14 percent, crisis amplifier), April 2005 (fwd 60d minus 6.90 percent), January 2006 (fwd 60d minus 17.60 percent, pre-correction supply overhang).

The engine's text descriptions have historically drifted across the engine source file (file header reads ">900 lbs placements," website metadata reads "≥1000 lbs," SQL filter targets "GE 800 LBS"). The empirically consistent description, and the one supported by the available USDA data buckets, is "800-pound-plus placements." The reader-facing text throughout this brief uses that framing. The engine patch should unify the terminology alongside the data-source UNION.

• • •

What this signal does not cover

Four caveats on the signal's reach, each stated plainly.

First, the engine is currently frozen on the pre-2017 data bucket. The historical edge documented in this brief is drawn from sixteen years of live data (2000-2016). The current reading at zero is a data-transition artifact. An engine patch to UNION the pre-2017 series with the post-2017 bucket breakouts has been documented and is pending. In the interim, readers should treat the composite as uninformative and rely on the Placements signal and the Marketings signal for the active supply-side regime read. This caveat supersedes the subsequent three.

Second, demand shocks can override. The November 2003 BSE discovery and the November 2008 financial crisis both delivered sharp Live Cattle moves that overrode or coincided with the signal's state. Tight-supply readings do not protect against export bans, disease shocks, or consumer-spending collapses. Abundant-supply readings amplify demand shocks because the pipeline cannot easily absorb. Readers should pair this lens with a demand-side indicator (boxed beef cutout, retail-wholesale spread, export shipments).

Third, the shortest forward-lead window amplifies both signal and noise. The 90-120 day finish window is the signal's informational edge; it also means the composite can shift materially on a single monthly report in ways that the longer-lead all-weight Placements signal does not. Readers should check the series' absolute level and the sibling signals (Placements, Marketings) before over-reacting to a single tail reading on this specialist, especially at cycle inflections.

Fourth, the signal reads the national aggregate. State-level heavy placements can diverge sharply during localized drought years (Texas Panhandle, Nebraska Sandhills). The national composite smooths across regions, which can mask regional stress or regional abundance. Readers monitoring

specific regional dynamics (feeder cattle origination, grass availability, state-level drought monitor readings) should consult state-level reports directly.

Not investment advice. The analysis in this brief is informational and educational. Signal readings, historical case figures, and empirical statistics are derived from publicly available data (USDA National Agricultural Statistics Service Cattle on Feed Weight Class monthly reports since January 2000, with the pre-2017 "800 pounds and heavier" bucket subsequently split into "800-899" and "900-999" buckets from January 2017 onward; CME Group Live Cattle futures end-of-day settlements) and are provided without warranty. Hypothetical performance results have inherent limitations. The signal's engine is currently frozen on the discontinued pre-2017 bucket pending patch to UNION the current USDA bucket breakouts. Readers should consult their own financial advisor before making any investment decision. (c) 2026 David Stendahl.