

PURDUE

AGRICULTURAL ECONOMICS REPORT

Title	Dairy Consumption, Production, and Reflections on the Formula Fiasco of 2022
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Summary	Anticipated strength in demand for U.S. dairy products have led to raised expectations for 2023 milk prices, now forecast at \$22.70/cwt. Total production is expected to increase in 2023, with growth in yield per cow and a slight increase in cow numbers. The infant formula situation in the U.S. continues to be closely watched; imports remain up significantly year-over-year, and we continue to explore the market and policy implications of the situation that developed in 2022.

Taken all together the all U.S. all-milk price forecasts for 2023 has been raised, up 10 cents from the November 2022 forecast to \$22.70/cwt, according to the latest [USDA Economic Research Service Situation and Outlook report](#) (Dec 2022). The 2023 production forecast for 2023 is up slightly as well (by 0.3 billion pounds), coming from both slighter higher cow numbers (up 5000 head, to 9.420 million head total) and growth in milk (yield) per cow.

Strength in 2023 dairy prices relies heavily on the anticipated stronger demand for U.S. dairy products in 2023. Projections for domestic use are up 0.4 billion pounds to 222.0 billion pounds forecasted in total.

After significant increases in September of 2022, October 2022 imports of “preparations suitable for infant and young children, put up for retail sale”, which includes infant formula, decreased 1.0 million pounds. The 1.0 million-pound decline from September to October is notable, but so is the 5.7 million-pound increase from the year prior (October 2021). Continued year-over-year imports evidence a sustained – and continued - challenge in terms of recovery for the formula market in the U.S.

The Formula Fiasco

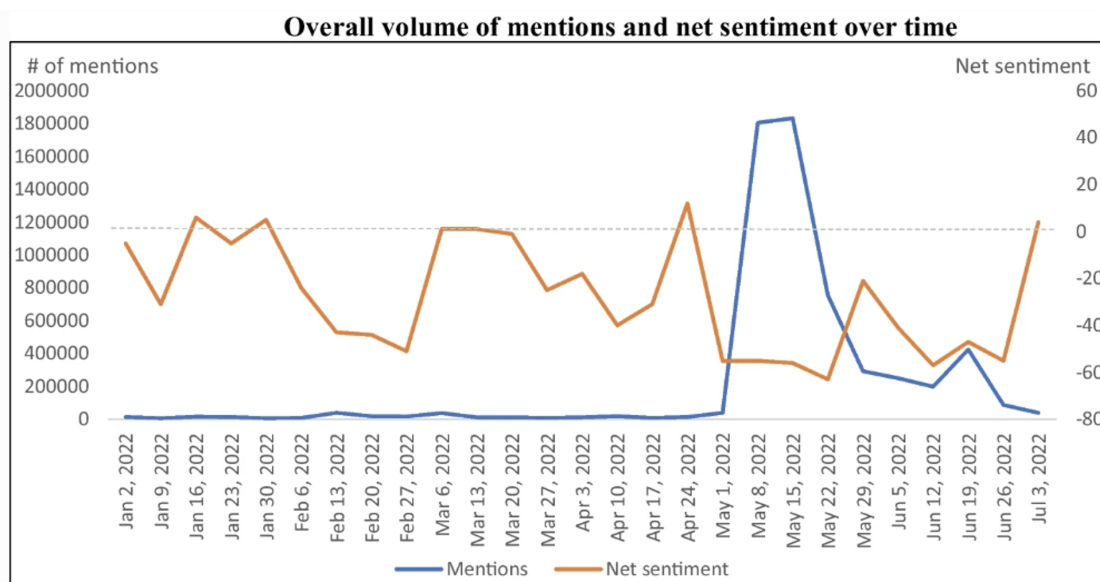
U.S. consumers are guilty of calling things ‘shortages’ when there is less of it than we would like and prices rise. However, it isn’t often (or really, mostly, ever?) that U.S. consumers face legitimate product shortages in the sense that products cannot be found on supermarket or retail shelves for purchase, even with currency in hand and a willing spender. Even more rare is a shortage on a product for which we legitimately have no substitutes. Most products, in fact, nearly all, have substitutes available for replacement of missing or hard-to-source products. But, in the case of specialty and infant formulas, there are few legitimate substitutes, and mostly in the form of another brand and/or container size and not in the form of a substitute or alternative product. You simply cannot ‘replace’ formula in an infant’s diet. With this context – both the uniqueness of the product and the market situation – one can reflect on the legitimate panic faced

by parents and those reliant on formulas for their nutrition during the late Spring, entirety of Summer, and even into the Fall of 2022.

You have undoubtedly heard about, experienced, witnessed or participated in the uncertainty and ultimately panic of the recent U.S. baby formula shortage. What you might not have realized was that months before the May and June 2022 panic, there were warnings (alarm bells, one might say) which went unheeded.

In February of 2022 there was a voluntary recall issued; the FDA announced the recall and released information to consumers about how to identify recalled products ([FDA recall document](#)). However, there was not significant uptick in online media about infant formula until May 2022, and, even then, the sudden attention on baby formula dissipated within three weeks, despite a continuous rise on out-of-stock rates in late May through mid-June (Fig 1). Shortages of formulas continued into the fall of 2022, although media attention continued to lessen over time.

Adapted from Fig 1. **Volume of mentions and net sentiment over time** from: [The Curious Case of Baby Formula in the United States in 2022: Cries for Urgent Action Months after Silence in the Midst of Alarm Bells.](#)

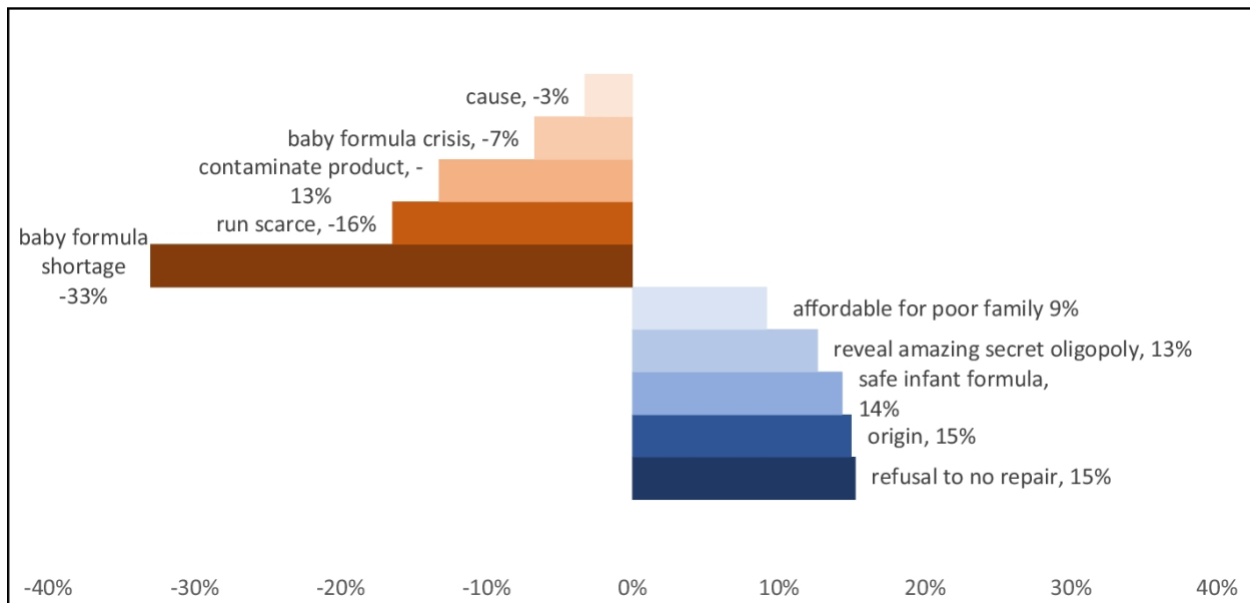


The deterioration of online media attention while threats persist is a known phenomenon. Yet, in this case, one may remain surprised to learn that the first public recognition of the threat was woefully late, and public attention fell rapidly even as physical product shortages were still being widely faced.

As stated in [our recent article](#), “The infant formula situation could have been somewhat mitigated if the supply chain warning in the FDA’s recall announcement would have been heeded by the public, related industries, and the government when the recall was first issued.” And “The lack of timely response, or even timely coverage and educational campaigns to help parents prepare, arguably worsened the panic when physical shortages occurred, seemingly without warning for many people.”

When panic struck and online media interest spiked there were most commonly negative sentiments surrounding terms like scarcity, shortage, and crises (Fig 2). Some positive sentiments surrounded attempts to improve affordability or find safe product, but the overwhelming majority of conversations were negative during this time period, as evidenced by the rapid fall in net sentiment in Fig 1.

Adapted from Fig 2. **Sentiment drivers for the infant formula shortage search** from: [The Curious Case of Baby Formula in the United States in 2022: Cries for Urgent Action Months after Silence in the Midst of Alarm Bells](#)



Given today's rapid dissemination of information and rampant (over-) sharing on social media platforms, how was such an impactful recall largely 'missed' for months? These were valuable months that could have been used to be sure of supplies (if and where possible), or at the very least to inform and educate parents ahead of experiencing physical product shortages. Arguably, we need to learn, in a public policy and communication arena, from [The Curious Case of Baby Formula in the United States in 2022: Cries for Urgent Action Months After Silence in the Midst of Alarm Bells](#).

We recently published (December 6th, 2022) an article with additional details and citations exploring the formula crisis; that article is freely available for download: Jung, J., Widmar, N.O. & Ellison, B. The Curious Case of Baby Formula in the United States in 2022: Cries for Urgent Action Months after Silence in the Midst of Alarm Bells. Food ethics 8, 4 (2023). [Open/Freely Available Access to the Journal Article Available HERE](#)