

Bill's Building Blocks

Way Too Far Upstream

The *NY Times* newspaper carries an amazing number of supply chain relevant articles. I read a hardcopy of the *NY Times* every morning, and as a baby boomer love to spread the paper all over the kitchen table while drinking my coffee. Lately there have been troubling articles about our Midwest American farmers. While written by different authors from different perspectives, when put together in a supply chain context, they raise alarm. Living in the Northeast, having no personal experience working on a farm, and rarely thinking about the agricultural raw material front ends of food supply chains, these articles are easy to skip over. Their content seems just way too far upstream.

The *APICS Dictionary* definition for supply chain (which I authored) is: "A supply chain is the global network used to deliver products and services from raw materials to end customers through engineered flows of information, material, and cash."

Information flow is used to communicate weather forecasts, buyer demand, inventory replenishment, and seller invoicing. Chinese market demand for American soybean has shifted from the US to South America due to current trade war tariffs.

Material flow connects sellers and buyers with physical inventory flowing downstream. Here extreme weather and flooding has created a number of issues. Some grains from earlier planting seasons stored in silos, awaiting optimum market pricing, is instead rotting due to silo flooding. Flooded fields cannot be planted. Cattle have died due to flooding. Hundreds of barges carrying fertilizer for the next planting season have been stuck with undetermined delivery lead times on unnavigable portions of the Mississippi and other rivers again due to flooding in the shipping lanes.

Cash flow connects buyers and sellers with cash payments flowing upstream. While the US government has tried to act to provide financial relief to farmers, funding is not available until a field has been planted. This is impossible to do with fields under water past their planting window. In some cases cattle that have survived the flooding have had to be sold because their owners cannot afford to feed them long enough to produce offspring. This cash flow becomes once and done and a financial catastrophe.

The confluence of extreme weather and a trade war is devastating on American farmers. We will likely see its impact on future grocery prices and supply shortages.

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