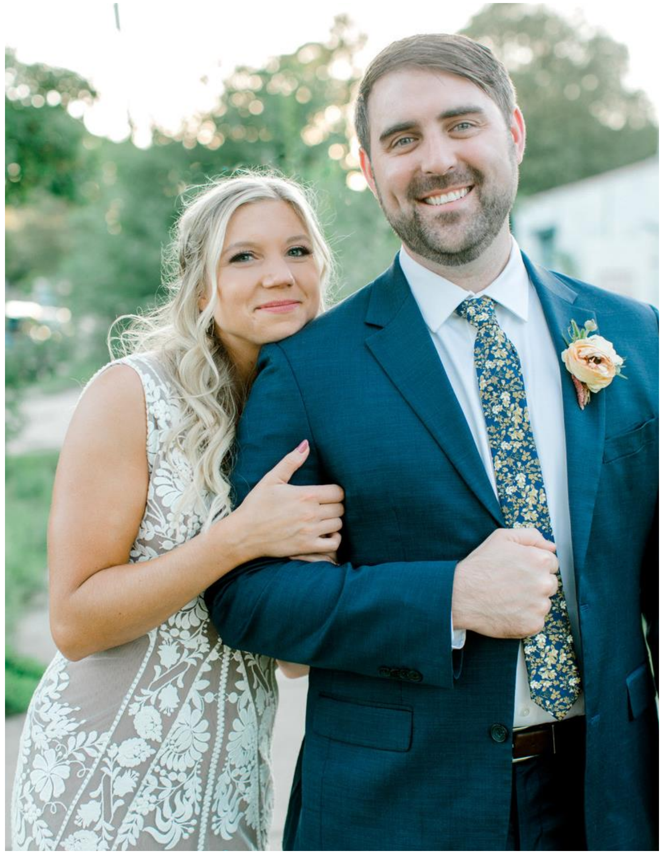
Global Ag Supply Chain Update

Joe Nelson

September 2021

WinField United

Joe Nelson Introduction



- Grew up on a farm in southwestern Minnesota
- Graduated from the University of Minnesota
  - We held out better against the Buckeyes than I thought we would!
- Have worked at Land O'Lakes 7+ years
  - 5 years working with local cooperatives
  - 2 years working within Winfield United global procurement
- Just got married last weekend!

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The State of Ag

- Supply and pricing volatility here to stay
- Disruption does not use a calendar invite
- Consolidation will speed up – alliances will be difference maker

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Issues We experienced in 2021 With Product Supply

Vended Brands

All vended manufacturers experienced shortages and delayed production

- 157 brands reported as supply constrained
- 187 brands reported as stocked out

Proprietary Brands (HIF, STAMPS)

14 materials under force majeure

42% of raw materials supply constrained

76% of finished goods volume impacted by material constraints

Contributing Factors

Transportation delays
- Shipping container and vessel availability delayed imports, hampering domestic supply recovery
- Port delays extended import transit times
- Inland freight delays complicated material availability

Gulf Region weather event
- All plants in region lost power, damages caused extensive repairs and restart delays

Packaging Issues
- 60% of packaging vendors had supply constraints
- Cartons and labels delayed due to paper shortages/increased in season demand
- Steel and poly shortages limited tote tank availability

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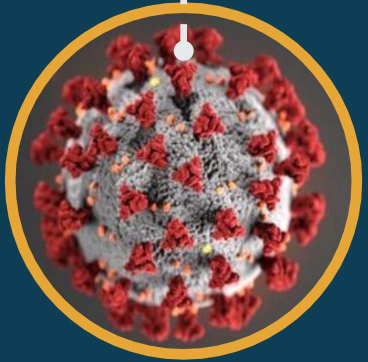
Continuous Disruption – The New Norm

2016 | 2017 | 2018 | 2019 | 2020 | 2021



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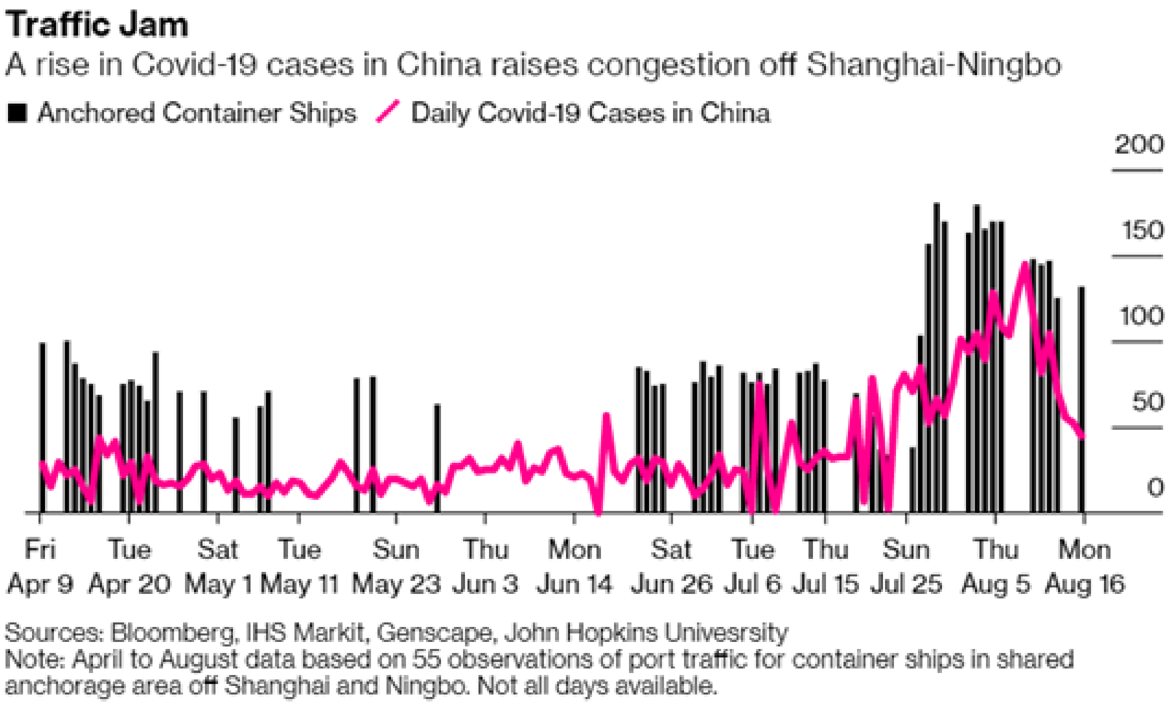
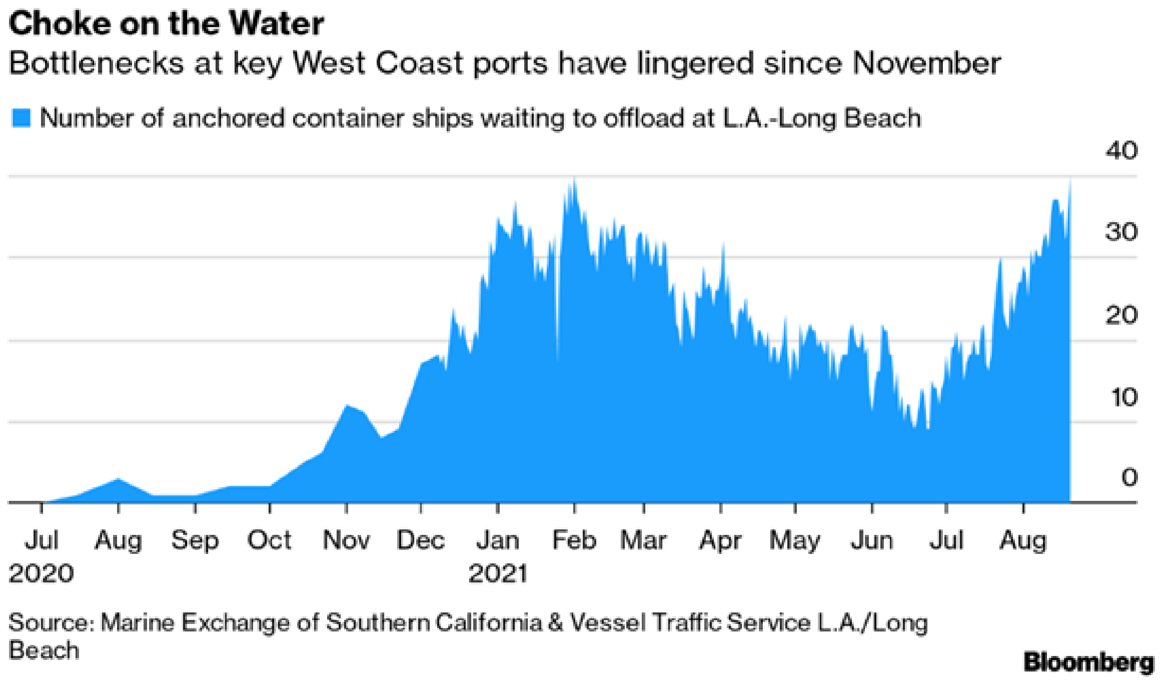
International Supply Chain Disruption and Rate Increases

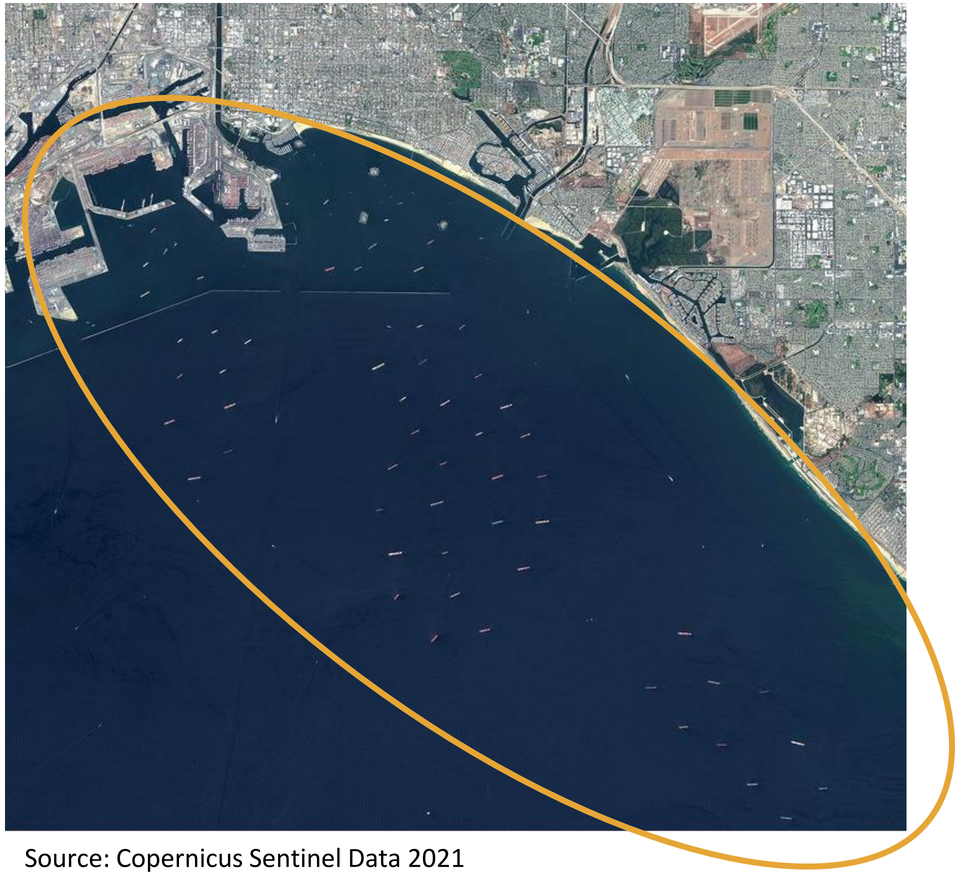
- **Significant imbalance in container flow**
  - Strong demand for U.S. imports
  - Suez Canal blockage
- **Dozens of ships sitting at anchor unable to be unloaded**
  - COVID issues impacting labor: Asia manufacturing, ports/longshoremen, drivers
- **Steamship lines are capitalizing**
  - Maersk doubled 2021 guidance from $4-6B to $9-11B
- **Capacity tightness and rate increases are forecasted to last 18 months into late 2022**

Increasing foreign & domestic port congestion





Port congestion at Los Angeles and Long Beach ports, on Aug. 26



Source: Copernicus Sentinel Data 2021

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Port of LA/Long Beach stats YOY – August 2021

Loaded Imports		Loaded Exports		Returned Empties	
Up 26%	Up 32%	Down 12%	Down 1%	Up 47%	Up 58%
LA	Long Beach	LA	Long Beach	LA	Long Beach

Ports of LA/Long Beach account for over 50% of Chinese imports to the US

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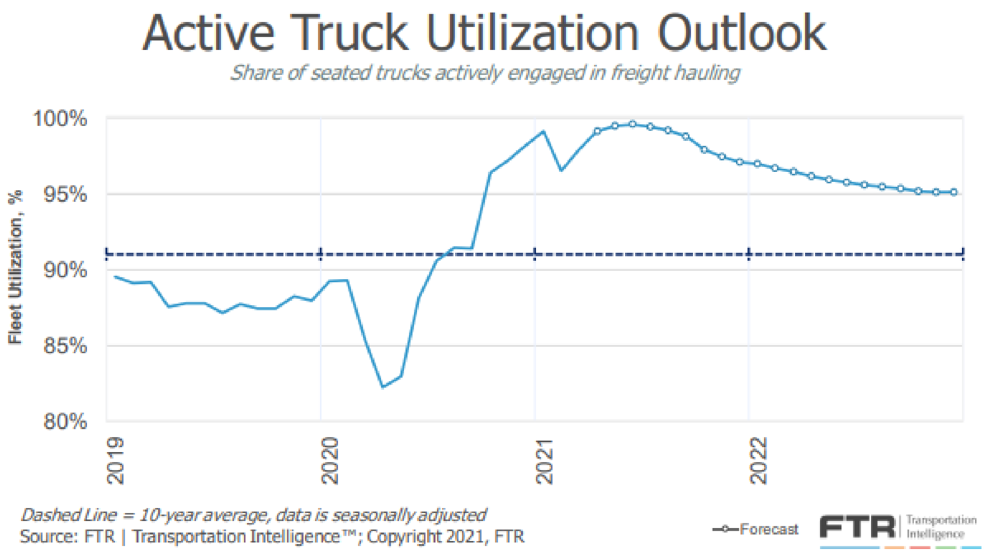
Domestic Supply Chain Disruption and Rate Increases

- **Drivers and trucks are fully utilized**
  - No excess in industry to cover last minute shipment
- **Five loads for every available truck in U.S.**
- **Strong demand across industry**
  - Consumer spending, manufacturing, housing starts
- **COVID and other forces impacting driver force**
  - Government subsidies
  - Retail and service industries increasing wages
  - If given choice, people are leaving the driver force



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Supply Outlook 2022 (Vended & Proprietary Crop Protection Products)

- **Production rates will likely improve. However, supply constraints are expected to linger, and prices will continue to trend higher into 2022 due to the following issues:**
  - China and India implementing new environmental standards
  - China hosting the Winter Olympics in February
  - COVID related plant closures in China
  - Backlog of packaging and intermediate components
  - International Logistics imbalance to continue throughout 2022
  - Driver shortages will continue to provide trucking challenges into 2022
  - USD has lost 10% of its value against the Yuan making tech more expensive in the U.S.

Continued.

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Keys to 2022 Supply Planning

Plan early

- Work with your trusted advisor on your 2022 crop plan
- Step up your planning cycle timing earlier
- Create contingency plans
- Stock early
- Develop plans to work through known chemistry shortages; glyphosate, glufosinate & 2,4-D
- Agronomic solutions such as pre-herbicides will help mitigate risks while also providing a solid agronomy solution

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Thank you!