

Managing the Supply **STRAIN**

Supply volatility in the
essential nutrient space

A Ravensdown briefing paper
Spring 2021



Managing the Supply Strain

Supply volatility in the essential nutrient space

Summary

Supply for essential nutrients is flowing but facing unprecedented and interconnected risks. In a nutshell, the supply chain is under strain.

This document summarises the 10 disruptive trends and what Ravensdown is doing about them.

Through soil testing and modelling, our trained advisors identify the right nutrient approach with our customer-owners. Then, as a co-operative scouring the world for the right nutrients, Ravensdown does all it can to assure a dependable supply of quality fertilisers in the amounts and locations that farmers and growers need.

The co-operative exists to shield New Zealand farmers from the worst of the volatility, but some impacts in terms of price and availability are inevitable.

In the event of restricted options, our teams can advise on suitable solutions. In these ways, we work with shareholders and everyone involved in the surety of supply of inputs that can be so essential to food creation.

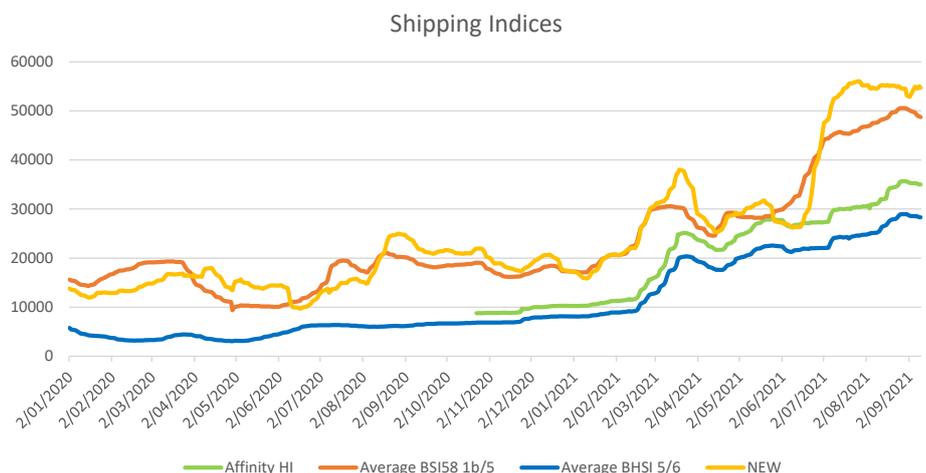


Planet-to-paddock integration: Ravensdown is the only co-operative that tests for, advises about, buys, manufactures, ships, stores, spreads, measures and maps nutrients and fertiliser in a truly integrated way)

10 DISRUPTOR TRENDS	ISSUE	MITIGATION
 Source country risk	Limited selection of exporting countries in face of increased demand.	Strong, enduring relationships and alternative suppliers where possible.
 Political turmoil	Political and environmental pressures increasing in certain countries.	Robust due diligence with Supplier code of conduct.
 Covid-19 catch-up	Pent up food supply and demand as societies and economies catch up after Covid-19.	Maintain operations as Permitted Activity under Alert Levels. Maintain biosecurity.
 Strong food & commodity prices	Challenging procurement environment with large tenders from populous countries distorting demand.	Active monitoring / intelligence gathering. Buying power of the co-operative larger than fragmented purchasing / spot deals.
 Shipping capacity	Shipping reliability index at its lowest – shipping companies focus on more lucrative routes.	Shipping joint venture improves logistics effectiveness for vessel availability and backhaul shipments.
 Port congestion	Berthing times at historic highs. Alert Level restrictions.	Close collaboration with ports and transporters for efficient offload and intake.
 Route choke points	Narrow shipping passages easily disrupted through incident or piracy.	Ravensdown Shipping Services optimises route scheduling to mitigate risk.
 Container dislocation	Global rise in container use disrupted by Covid-19 and different countries' rates of economic recovery.	Focus on bulk and good relationships with containerised logistics partners.
 National trucking capacity	Driver shortages, Alert Levels/ Covid risk and geographic limitations at peak times.	Open communications with customers, stores and transporters. Use of coastal shipping where needed.
 Available storage	Long lead times and shipping unreliability means inventory turnover is down to make best use of limited space.	Accurate forecasting and earlier shipments across large network of stores. Prioritised allocation in extreme cases.

Shipping price trends

Shipping and logistics challenges are leading to tightened availability as well as longer lead times and increased cost (shipping costs have risen between 200 - 400%).



10 Supply Chain Disruptors and how Ravensdown mitigates them

1. Source country risk

Issues

- 🌐 China has begun to prioritise domestic food production over nutrient export (impacts NPK).
- 🌐 UN struggling for a resolution to situation in Western Sahara (impacts P).
- 🌐 EU sanctions on Belarus (impacts K).

Ravensdown Mitigations

Strong relationships with long-term partners meant our phosphates and nitrogen suppliers prioritised our needs whilst not offering product to spot market. Our Moroccan supplier shipped their phosphate rock at short notice - this rock is lower in cadmium and silica. On potassium, we sourced product from Malaysia via containers, Korea and Russia, with granular coming from Belarus and Canada.

2. Political turmoil

Issues

- 🌐 Governments concerned about feeding populations.
- 🌐 Environmental regulation gathers pace and curtails production eg China restricting magnesium and phosphate supply.

Ravensdown Mitigations

Experienced procurement team with an established Supplier Code of Conduct closely monitors potential impacts and cultivates alternative sources where possible. Continued support for government as they seek trade agreements and rules-based flow of goods.

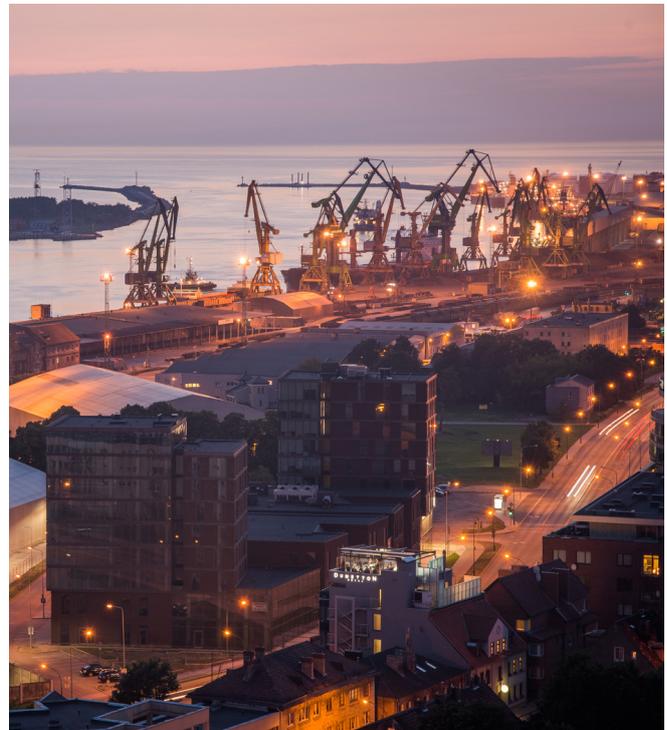
3. Covid-19

Issues

- 🌐 Food security: for the first time in six years the "prevalence of undernourishment" actually went up - climbing around 9.9% in 2020 from 8.4% a year earlier (FAO).
- 🌐 Pent up demand for food in affluent / vaccinated countries.
- 🌐 Increased Covid-19-related demand for shipping accompanied by serious delays (see below).

Ravensdown Mitigations

We collaborate with suppliers whose businesses have been disrupted by Covid-19, expecting and planning for delays. We remind stakeholders of the strategically essential role of nutrients and demonstrate resilience to continue operating as a permitted activity under government Alert Levels. Our biosecurity system remains assured by MPI.



Limited supply options: While potassium is essential for all plants and assists clover growth, source countries are severely limited. Klaipeda is a port in Lithuania that depends on the export of potash from neighbouring Belarus.

4. Strong food / commodity prices

Issues

- ⑤ 31% increase in global Food Price Index in year up to July 2021 (FAO).
- ⑤ Seasonal demand for nutrients driven by strong price on back of low inventories eg grain.
- ⑤ Contracting power of "Goliath" buyers representing growers in high-population countries such as Brazil, India or China.

Ravensdown Mitigations

After seeing unprecedented potash demand from Brazil and others in the face of restricting supply, the enduring relationship with BCP and other partners meant we were able to source product in a particularly tight market.

5. Shipping capacity

Issues

- ⑤ Trend is towards fewer, larger ships putting strain on port and land-based infrastructure (wharves, ship access, clearing stock off port).
- ⑤ Premium prices on trade between Asia, Europe and the Americas has prompted reduced availability into Australasia.
- ⑤ Lack of investment in the downturn limits capacity.
- ⑤ Staffing - fewer people prepared to work as seafarers.

Ravensdown Mitigations

Now in its 11th year, the Ravensdown Shipping Services (RSS) joint venture improves logistics effectiveness in areas such as vessel availability and selection as well as in scheduling and organising backhaul shipments.

6. Port congestion

Issues

- Ⓜ Less efficient working arrangements at Alert Level restrictions and untracked vaccination levels among port staff. Worsening container storage issues.
- Ⓜ Sailing schedules are disrupted - shipping reliability index at lowest point, being 40% vs 80% at this stage last year (Sea Intelligence).
- Ⓜ Berthing wait-times at historic highs combining with weather disruption.

Ravensdown Mitigations

RSS helps with reliability and availability. We work closely with suppliers, ports and transport providers to expedite offloading safely and efficiently to our port stores and manufacturing plants.



Shipping blips: As a joint venture, Ravensdown Shipping Services gives more logistics control in a world of rising costs and stretched capacity.

10 Supply Chain Disruptors continued...

7. Route choke points

Issues

- ⊗ Iran continues to provoke in Persian Gulf (Strait of Hormuz).
- ⊗ Tensions in South China Sea (Malacca Strait - only 2.5km wide).
- ⊗ Impacts of the Suez Canal blockage earlier this year are still being felt.
- ⊗ Growing incidents of piracy/ kidnapping (195 last year).

Ravensdown Mitigations

The RSS joint venture optimises route scheduling and expedites insurance.

8. Container dislocation

Issues

- ⊗ Sharp rise in container use as consumers bought online during Covid and caught up in the aftermath.
- ⊗ Container revenue is so high between China and Europe that shipping lines are prioritising empty container movements into China over product into Australasia.
- ⊗ No containerised availability for Reactive Phosphate Rock from Egypt in face of dwindling supply - earliest availability in late October.

Ravensdown Mitigations

We are less exposed to container issues due to focus on bulk shipments. After spring containerised supply of Nitrophoska was threatened, positive collaboration with supplier (Eurochem) and shipping joint venture assured August arrival on a bulk vessel. Great relationships with Toll Global Forwarding and Maersk.



Keeping on trucking on: At peak times, regional transport in New Zealand can struggle even without Covid Alert Levels.

9. National trucking capacity

Issues

- ⊖ Driver shortages and wellbeing (long hours etc).
- ⊖ Geographic variations in demand on limited capacity at peak times.
- ⊖ Under Alert Level 4, many businesses we rely on for truck backloads are closed, limiting available capacity.
- ⊖ Alert Levels and border delays – letters to travel, testing etc.

Ravensdown Mitigations

Maintaining open communications with trucking and transport providers combined with use of coastal shipping where needed and available. Efficient despatch for faster throughput.



Working hard on your behalf: The friendly and knowledgeable team at Ravensdown stores work hard to ensure the products keep flowing.

10. Available storage

Issues

- ⊖ Lead times remain long - from order to ship arrival can take over six months.
- ⊖ Extensive network of stores only holds finite amount and most common used products need prioritised space.
- ⊖ Space needed for incoming product, so inventory management is critical.

Ravensdown Mitigations

Despite accurate forecasting of our own shareholders' needs, we monitor others' challenges in case they impact on local demand. In situations of severe restricted availability and as a last resort, managed allocation and prioritisation may be needed.

For more information about how the Ravensdown team is managing the strain in the supply chain in your area, please call 0800 100 123 to arrange your 1-2-1 briefing with the farm nutrient and environmental experts.



NZ's Nutrient Network: Investment in stores network allows bulk availability.

ravensdown 

0800 100 123
ravensdown.co.nz

Sep 2021