March 30, 2020

Nick Westcott
Director of Advance
Office of the Secretary
United States Department of Agriculture
Via email: nick.westcott@usda.gov

Dear Nick:

Thank you so much for reaching out to the Council for Responsible Nutrition (CRN) earlier this week to inquire about potential disruptions in the food supply chain for our members. As you know, CRN represents dietary supplement and functional food marketers, manufacturers and ingredient suppliers, so the experience of our members may differ from the reports you receive from traditional food manufacturers. We appreciate the opportunity to contribute to your analysis of the food industry.

CRN has surveyed its 120 voting members for their concerns about actual and anticipated supply chain disruptions. The accompanying spreadsheet summarizes the issues they raised. In particular, we note recurring concerns about:

- Ingredient and supplies from China—The closures associated with the pandemic in China have
  closed many factories. Our members raise concerns about raw ingredients as well as packaging
  materials coming from China. Several members noted that China appears to be coming back
  "online" but they anticipate long production and transportation delays resulting in a need for
  much longer planning and procurement timeframes.
- India shutdown—Reports last week that India has essentially shut down manufacturing and transportation countrywide to control COVID-19 has alarmed our members who import ingredients from India. Several report issues with obtaining supply and express worries of availability of materials and disruptions and delays in transporting materials to the U.S.
- Australia / New Zealand—While manufacturing does not appear to be significantly impacted in Australia and New Zealand, members report difficulties in getting ingredients from these countries because of the distance and reduced availability of cargo flights and shipping vessels. Higher transportation costs are expected.
- Increased consumer demand for supplements—Coronavirus has dramatically increased U.S.
  consumer demand in many dietary supplements, whether it is for improved nutrition during the
  crisis, assistance with sleep and stress relief, or supporting a strong immune function to improve
  general resistance to health threats. Increased sales have created a supply chain not equipped
  to handle the surge in demand. Many suppliers are not able to guarantee supply above original
  forecasted needs from before the pandemic, despite increased demand. Transportation is
  impacted by staff shortages, less available freight capacity and increased costs dues to less
  supply.

We hope these insights help the Department of Agriculture to better understand the challenges faced by dietary supplement and functional food producers at this time and allow you to better fashion programs that address these needs. Should you have additional questions, feel free to contact me again.

Sincerely yours,

Steve Mister President & CEO

## Council for Responsible Nutrition (CRN) Member-Identified Supply Chain Disruptions for Dietary Supplements

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COUNTRY	ITEM	PROBLEM/WORK AROUND
GENERAL	All DS Ingredients	Supply chain definitely is not equipped to handle the surge in demand we've seen. Many suppliers are not able to guarantee supply above our original forecasted needs from before the Pandemic, and our demand has increased significantly.
GENERAL	All DS Ingredients	Freight issues that we are facing. Capacity has declined and accordingly costs are rising. I think dry and bulk capacity will be the biggest issues, and therefore things are slowing down. Air freight is very difficult to secure, and road freight is affected by staff shortages.
GENERAL	Contract Manufacturers Capacity and Constrained Materials	
GENERAL	Domestic Raw Materials- Various Sugars and Tapioca	Supply disruptions
GENERAL	Indirect Materials to Support Our Production Facility: Cleaning & Sanitation Supplies, PPE, Masks	Supply disruptions
GENERAL	Labor disruptions	Labor is a daily variable that continues to inject risk into manufacturing capability and throughput. These variables are fluid and change daily based on geography, Government policy, and situational for each supplier's workforce
GENERAL	Overall Limitations on Logistics Impacting the Flow of Raw Materials and Finished Goods Throughout the Supply Chain	Supply disruptions
GENERAL	Packaging Materials (Plastics Caps, Cap Liners, Labels, Cartons)	Supply disruptions
GENERAL	Raw materials and Packaging	Due to demand increases across the market on immune related products, demand is exceeding supply on immunity related ingredients (botanicals and vitamins) as well as supporting material such as packaging. We expect this to worsen as safety stocks in market place are being depleted.
GENERAL	Raw materials and Transportation	Manufacturing capacity constraints and logistical backlogs on transportation.
GENERAL	Surgical masks, gloves, shoe covers and beard covers	Shortages; have had to source from new suppliers.
GENERAL	USP Grade alcohol	USP Grade alcohol for the Hand Sanitizer
BRAZIL	Bovine Collagen – Raw Material	Fluctuating availability in market  Delivery delays due to logistics delays in Brazil and HS
CHINA	All DS ingredients	Planning for a month delay out of China for materials. General rule that we are applying.  This means that we need to start our material planning and procurement process a month
CHINA	All DS ingredients	Ongoing residual impacts on production and connectivity; Delay in export and import clearances; Continued delays on cargo/port flights due to backlogs
CHINA	Biotin - Raw Material	Very short supply, really high price and long lead time due to shutdown in China.
CHINA	Botanicals - Berberine	Supply disruption
CHINA	CoQ10	Production changes at the major global manufacturer and not directly due to COVID-19
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CHINA Packaging & components materials  CHINA Packaging & components materials  CHINA Packaging, specifically glass bottles and lids from china Si  CHINA Regional Raw Material Ingredients  EUROPE EUROPE EUROPE EUROPE Regional Raw Material Ingredients EUROPE Regional Raw Material Ingredients FRANCE EUROPE EUROPE Regional Raw Material Ingredients FRANCE Bovine Collagen – Raw Material FRANCE INDIA All DS ingredients All DS ingredients INDIA All DS ingredients INDIA All DS ingredients INDIA All DS ingredients INDIA Botanicals - Acumin Turmeric INDIA Botanicals - Supplipid INDIA Botanicals - Supplipid INDIA Botanicals - Turmeric Root Powder INDIA Regional Raw Material Ingredients INDIA Regional Raw Material Ingredients Sh INDIA INDIA Regional Raw Material Ingredients Sh INDIA INDIA Regional Raw Material Ingredients Sh INDIA Regional Raw Material Ingredients Sh INDIA IN	CHINA	Glass Bottles	PROBLEM/WORK AROUND  Glass bottles from China were impacted and we experienced some delays but we are receiving large containers soon that will enable bottle production to pick back up.
Packaging, specifically glass bottles and lids from china  Regional Raw Material Ingredients  All DS ingredients  Regional Raw Material Ingredients  Regional Raw Material Ingredients  Regional Raw Material Ingredients  Bovine Collagen – Raw Material  Botanicals – Acumin Turmeric  Botanicals – Acumin Turmeric  Botanicals – Acumin Turmeric  Botanicals – Gugulipid  Botanicals - Turmeric Root Powder  Regional Raw Material Ingredients  Regional Raw Material Ingredients  Regional Raw Material Ingredients	CHINA	Packaging & components materials	Slight delay. Plant reopened ~3/3/20 and is now operating at full capacity.
Regional Raw Material Ingredients  All DS ingredients  Regional Raw Material Ingredients  Regional Raw Material Ingredients  Bovine Collagen – Raw Material  Bovine Collagen – Raw Material  All DS ingredients  All DS ingredients  All DS ingredients  All DS ingredients  Botanicals - Acumin Turmeric  Botanicals - Berberine  Botanicals - Gugulipid  Botanicals - Turmeric & Boswellia  Botanicals - Turmeric Root Powder  Regional Raw Material Ingredients  Regional Raw Material Ingredients	CHINA	Packaging, specifically glass bottles and lids from china	Signi
Regional Raw Material Ingredients  All DS ingredients  All DS ingredients  Regional Raw Material Ingredients  Bovine Collagen – Raw Material  W Alpha Lipoic Acid  All DS ingredients  All DS ingredients  All DS ingredients  All DS ingredients  Botanicals - Acumin Turmeric  Botanicals - Berberine  Botanicals - Gugulipid  Botanicals - Turmeric & Boswellia  Botanicals - Turmeric Root Powder  Regional Raw Material Ingredients  Regional Raw Material Ingredients  Regional Raw Material Ingredients			Supp
Regional Raw Material Ingredients  All DS ingredients  Regional Raw Material Ingredients  Bovine Collagen – Raw Material  All DS ingredients  All DS ingredients  All DS ingredients  All DS ingredients  Botanicals - Achwagandha  Botanicals - Gugulipid  Botanicals - Turmeric & Boswellia  Botanicals - Turmeric & Boswellia  Botanicals - Turmeric Root Powder  Regional Raw Material Ingredients  Regional Raw Material Ingredients	CHINA	Raw materials and Packaging	shipments from China were disrupted due to the shut down in China, and are just beginning to resume. The back up also impacted air freight, and the ongoing and growing lack of air freight capacity does not give us the ability to easily expedite goods to mitigate out of stocks.
All DS ingredients  Regional Raw Material Ingredients  Bovine Collagen – Raw Material  IV Alpha Lipoic Acid  All DS ingredients  All DS ingredients  All DS ingredients  All DS ingredients  Botanicals - Acumin Turmeric  Botanicals - Berberine  Botanicals - Gugulipid  Botanicals - Turmeric & Boswellia  Botanicals - Turmeric Root Powder  Regional Raw Material Ingredients  Regional Raw Material Ingredients	CHINA	Regional Raw Material Ingredients	ddnS
All DS ingredients  Regional Raw Material Ingredients  Bovine Collagen – Raw Material  IY Alpha Lipoic Acid  All DS ingredients  All DS ingredients  All DS ingredients  All DS ingredients  Botanicals - Acumin Turmeric  Botanicals - Berberine  Botanicals - Gugulipid  Botanicals - Turmeric & Boswellia  Botanicals - Turmeric Root Powder  Regional Raw Material Ingredients  Regional Raw Material Ingredients	ELIBOBE	All DS ingredients	Planning for a month delay out of Europe for materials. General rule that we are applying. This means that we need to start our material planning and procurement process a month
Regional Raw Material Ingredients  Bovine Collagen – Raw Material  IY Alpha Lipoic Acid  All DS ingredients  All DS ingredients  All DS ingredients  All DS ingredients  Botanicals - Acumin Turmeric  Botanicals - Berberine  Botanicals - Gugulipid  Botanicals - Turmeric & Boswellia  Botanicals - Turmeric Root Powder  Regional Raw Material Ingredients  Regional Raw Material Ingredients		All DS ingredients	Ongoing residual impacts on production
CE Bovine Collagen – Raw Material  IANY Alpha Lipoic Acid  All DS ingredients  All DS ingredients  All DS ingredients  Botanicals - Acumin Turmeric  Botanicals - Berberine  Botanicals - Gugulipid  Botanicals - Turmeric & Boswellia  Botanicals - Turmeric Root Powder  Regional Raw Material Ingredients  Regional Raw Material Ingredients	EUROPE	Regional Raw Material Ingredients	clearances; Continued delays on cargo/port flights due to backlogs Supply disruptions
All DS ingredients  All DS ingredients  All DS ingredients  All DS ingredients  Botanicals - Acumin Turmeric  Botanicals - Berberine  Botanicals - Gugulipid  Botanicals - Turmeric & Boswellia  Botanicals - Turmeric Root Powder  Regional Raw Material Ingredients  Regional Raw Material Ingredients	FRANCE	Bovine Collagen – Raw Material	Delive
All DS ingredients  All DS ingredients  All DS ingredients  Botanicals - Acumin Turmeric  Botanicals - Berberine  Botanicals - Gugulipid  Botanicals - Turmeric & Boswellia  Botanicals - Turmeric Root Powder  Regional Raw Material Ingredients  Regional Raw Material Ingredients	GERMANY	Alpha Lipoic Acid	Short
All DS ingredients  All DS ingredients  All DS ingredients  Botanicals - Acumin Turmeric  Botanicals - Berberine  Botanicals - Gugulipid  Botanicals - Turmeric & Boswellia  Botanicals - Turmeric Root Powder  Regional Raw Material Ingredients  Regional Raw Material Ingredients	INDIA	All DS ingredients	Supply of ingredients sourced from India may be impacted due to Indian manufacturers are shut down until they get clarity or approval from government to work under food grade or essential business category. This could impact our ability to manufacturer food/dietary in the near future if supply is not maintained.
All DS ingredients All DS ingredients Botanicals - Acumin Turmeric Botanicals - Ashwagandha Botanicals - Berberine Botanicals - Gugulipid Botanicals - Turmeric & Boswellia Botanicals - Turmeric Root Powder Regional Raw Material Ingredients Regional Raw Material Ingredients	NO.	All DS ingredients	Production has been halted; No inland vehicle movement until 31 <sup>st</sup> March; Delay in export and import clearances as 50% staff at Customs and Central Govt are working; Major impact
All DS ingredients  Botanicals - Acumin Turmeric  Botanicals - Ashwagandha  Botanicals - Berberine  Botanicals - Gugulipid  Botanicals - Turmeric & Boswellia  Botanicals - Turmeric Root Powder  Regional Raw Material Ingredients  Regional Raw Material Ingredients	INDIA	All DS ingredients	Coun
Botanicals - Acumin Turmeric  Botanicals - Ashwagandha  Botanicals - Berberine  Botanicals - Gugulipid  Botanicals - Turmeric & Boswellia  Botanicals - Turmeric Root Powder  Regional Raw Material Ingredients  Regional Raw Material Ingredients	INDIA	All DS ingredients	Count
Botanicals - Ashwagandha  Botanicals - Berberine  Botanicals - Gugulipid  Botanicals - Turmeric & Boswellia  Botanicals - Turmeric Root Powder  Regional Raw Material Ingredients  Regional Raw Material Ingredients	INDIA	Botanicals - Acumin Turmeric	Short
Botanicals - Berberine Botanicals - Gugulipid Botanicals - Turmeric & Boswellia Botanicals - Turmeric Root Powder Regional Raw Material Ingredients Regional Raw Material Ingredients	INDIA	Botanicals - Ashwagandha	Short US.
Botanicals - Gugulipid Botanicals - Turmeric & Boswellia Botanicals - Turmeric Root Powder Regional Raw Material Ingredients Regional Raw Material Ingredients	INDIA	Botanicals - Berberine	Shor
Botanicals - Turmeric & Boswellia Botanicals - Turmeric Root Powder Regional Raw Material Ingredients Regional Raw Material Ingredients	INDIA	Botanicals - Gugulipid	Short
Botanicals - Turmeric Root Powder Regional Raw Material Ingredients Regional Raw Material Ingredients	INDIA	Botanicals - Turmeric & Boswellia	Coun
Regional Raw Material Ingredients Regional Raw Material Ingredients	INDIA	Botanicals - Turmeric Root Powder	Short
Regional Raw Material Ingredients	INDIA	Regional Raw Material Ingredients	Logist
cleara	INDIA	Regional Raw Material Ingredients	Supply disruptions Cargo flights are ex
			companies have materials which are at the airport in the secure facility which are pending clearance and departure, lack of manpower and planes again is making this a challenge.

COUNTRY	ITENA	
	IICM	PRODUCINI/ WORK AROUND
ITALY	Botanicals - Black Elderberry	Short demand or we are having issues obtaining
ITALY	Botanicals - Boswellia, Curcuma, Silybin	We're seen a longer lead time. This is also transportation-related from what we are being told, as XXX is still producing product.
ITALY	Raw material - Quatrefolic	Short demand or we are having issues obtaining
MEXICO	Saccharomyces spp	Short demand or we are having issues obtaining
	All DS ingredients	Boats appear to be more scarce and it's harder to get a booking. We have been told that
NZ	Q. Caralle	there are simply less boats arriving to New Zealand.
NZ	Probiotics	There are less flights and ships available to utilize
NZ + AU	All DS ingredients	There are less flights and ships available to utilize
SPAIN	Botanicals - Echinacea	Short demand or we are having issues obtaining
SPAIN	Botanicals - Resveratrol	Disruption
		Major impact on staffing due to shelter in place; Increased freight related costs due to
	All DS ingredients	availability; Supplier/Distributors are running low on inventory levels due to import
US		constraints.
	Lab (3rd party) partners	Testing delays secondary to staffing challenges with third-party lab partners are also causing
S		issues both on the raw material side as well as with finished products
		Due to staffing challenges secondary to "stay-at-home" orders, our manufacturing partners
	Manufacturing partners	in the US Mid-Atlantic are experiencing substantial delays in production of our finished
SN		products.
		Domestic transportation disruptions are limited but occurring. This is a combination of an
	Transportation disruptions	increased shortage of drivers, and a shortage of empty shipping containers as a result of the
SU		disruption in the number of containers arriving from China.