Tuesday, September 9, 2025

HALLGARTEN + COMPANY

Sector Coverage

Joshua Mayfield
jmayfield@hallgartenco.com

Growth Minerals Review

China & India in a Fertilizer Love-In

September 2025

Growth Minerals Sector

China & India in a Fertilizer Love-In

+ An India fertilizer tender demonstrates dynamic patterns for global fertilizer trading
+ China and Russia are both exporting more fertilizers this year
+ The US wants to make potash an even more critical mineral than before with USGS blessings
+ Junior potash producers and developers possibly hold the key to opening U.S. potash market to diversification

× India and China are bringing the issues over fertilizer supplies and pricing trends back into the geopolitical complex
× U.S. tariff escalations will mean that the Trump Administration expects more investments into domestic U.S. fertilizer production
× Ukraine and Turkey have taken decisive measures to make a point about geopolitical events
× Fertilizer importers and traders should be worried about the Eastern Mediterranean's role in the Middle East conflict

Global fertilizer trade flows: from stability to dynamic

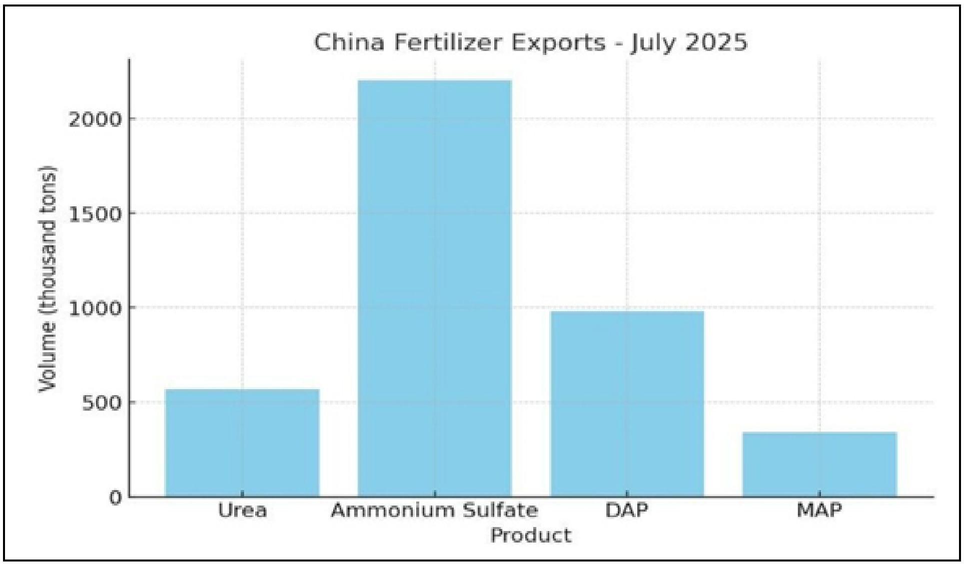
The fertilizer market was full of good tidings after China announced the lifting of fertilizer export restrictions to India in August. This was an important event in the lead up to a crucial tender for India on September 2 that will likely disrupt fertilizer trade flows for the remainder of 2025. Stability has been the key theme for fertilizer trading since the beginning of summer, so traders would like to see prices become more volatile after the India buying-spree closes on October 31.

This India tender sought two million tons of fertilizers, of which will presumably be made up of urea fertilizers from China. China will restrict fertilizer exports once again during October, so there's going to be a very short window of time for India to make up its mind on other fertilizer suppliers for the rest of the year.

India will have to make more deals for urea fertilizer supplies in the short term, since one of the country's domestic urea fertilizer plants owned by Ramagundam Fertilisers and Chemicals Limited (RFCL) has been suspended due to maintenance problems (or possibly because of the U.S. secondary tariffs). Thus, it is no wonder that China has suddenly appeared in the doldrums of India's fertilizer panic to save the day for Indian farmers.

The PRC's foreign minister Wang Yi met his counterparts in New Delhi on August 19 to ensure that fertilizers from China would be resumed after nearly one year of export restrictions to India. India has tried to turn this into a political issue between the two countries, but China has in fact restricted fertilizer exports to the global markets since the Global Covid-19 Pandemic to ensure its own domestic agriculture needs.

China's fertilizer exports have risen nearly 50% higher since July 2024, mainly because of ammonium sulfate exports. From Jan-July 2025, China's fertilizer imports were down from a year ago, but the import value of USD $2.4 billion is still a large market for fertilizer producers. Potash producers have a keen eye on China's potash demand. Laos potash mining is uncertain, at best, and Thailand's potash projects are still years away from production. There aren't any other viable potash developers in the Asia-Pacific region at present. India is also a key buyer of potash fertilizers, so any upcoming potash tenders for India will also be insightful for deals with other countries in the global potash market going into the 2025-2026 calendar year.



Source: FSHOW/Linked-In: https://genesisfertilizers.com/market-report/phosphate-fertilizer-prices-soar-near-historic-highs/

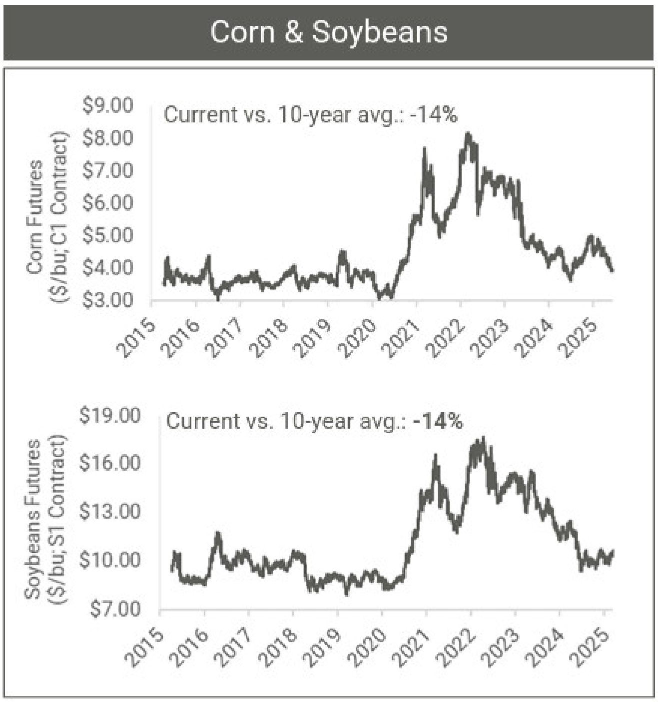
The global fertilizer demand and trade flow disruptions will support Russia’s ambitions to export more fertilizers to global markets in the future. Once again, Russia took a valuable opportunity to boast about its fertilizer exports during a high-profile international event. This time, during the Shanghai Cooperation Organization (SCO) Summit, the Head of Russian Association of Fertilizer Producers Andrey Guryev shared that Russian fertilizer suppliers have already met India’s demand for 2.5 million tons of fertilizers, with another 2.5 million tons headed to India before the end of 2025. It was also noted that Russia supplies around 40% of China’s potassium chloride (KCl) market.

China’s fertilizer export restrictions have included all varieties of nitrogen and phosphate fertilizers, while Beijing seemingly uses its leverage over high nitrogen and phosphate prices for political outcomes, notably with India and Pakistan, Russia has swept in to fill the void. Since Russia will supply nearly 5 million tons of fertilizers to India this year, it makes the results from India's September 2 tender even more important to fertilizer trade dynamics. China has the benefit of producing some of its own potash from domestic sources in Qinghai Province—not a muriate of potash (MOP) source, however—but India doesn't have its own production capacity for SOP or MOP. This means that China will be in a better negotiating position with potash producers going forward. For example, China locked in a potash supply contract with Russian potash producer Uralkali at USD $346 cfr this year. Depending on the number of tons, this potash deal could be another disruptor to global trade flows in the East of Suez markets. China has found itself in a position where it has needed to increase potash purchases since last year, as a result of offloading its own strategic reserves in the aftermath of the Laos potash mining disaster.

India will be happy to pay lower benchmark prices for potash, compared with nitrogen and phosphate prices which have been going higher this year. The looming concerns for India's fertilizer imports revolves around the U.S. secondary tariffs, which have been put in place on India for buying Russian oil. It remains to be seen what the secondary tariffs could do for India's fertilizer imports. Another indication of volatility in potash prices will be the amount of potash tons that India will buy from Russia, or India could abandon some Russian fertilizer supplies due to the threat of U.S. secondary tariffs, in which India would then buy more Belarusian and Canadian potash sources.

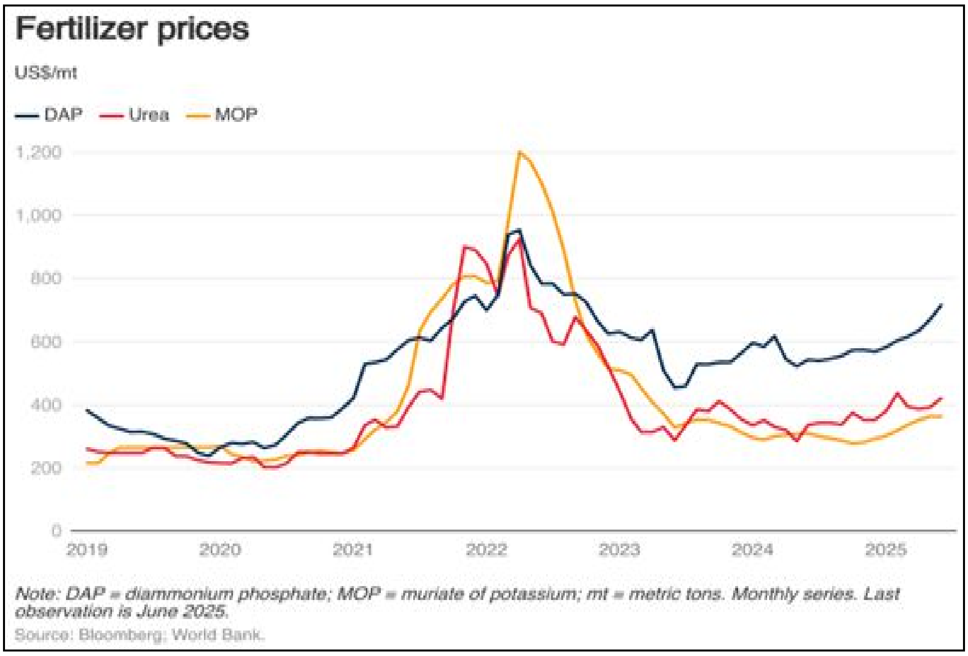
Near-Term U.S. Agriculture/Fertilizer Market Concerns

Prices for U.S. corn and soybean crops have been on the decline as evidenced by the price charts at right sourced from Intrepid Potash. The U.S. planted more corn this year, only to find that there weren't any export markets for the surplus this summer. At the same time, prices for phosphate fertilizers, such as DAP, are a major source of frustration for U.S. farmers. Prices for NOLA DAP have been reported at USD $820/mt.



In the U.S. fertilizer market, there is a concern about the decline in fertilizer affordability that will impact purchasing volumes by farmers for the autumn harvest. These fears are reasonable. A decline in fertilizer affordability will mean the U.S.

farmers will produce less agricultural commodities, and hence less food will be available for global markets. Instead of lowering prices to meet the domestic demand, U.S. farmers will continue to lobby the Trump Administration for trade deals around U.S. agriculture for export markets. This means that U.S. farmers could delay fertilizer purchases until fertilizer prices come down or a trade deal is executed that will allow U.S. farmers to export large volumes of agricultural commodities.



Source: Bloomberg/World Bank: https://blogs.worldbank.org/en/opendata/fertilizer-prices-gain-momentum-amid-strong-demand-and-geopoliti

This appears to have been the case with the recent U.S.-Japan Agreement. According to the White House press release, Japan has agreed to increase purchases of corn, soybeans and fertilizers from the U.S market. The American Soybean Association (ASA) was thrilled to have a trade deal with Japan, given that the country is one of the U. S's top five trading partners for agriculture. The important detail around this trade agreement is that the Government of Japan will make an expedited implementation of a 75 percent increase in rice procurements, within the so-called Minimum Access rice scheme, from U.S. rice producers.

In addition, U.S. tariff escalations will mean that the Trump Administration expects more investments into domestic U.S. fertilizer production, but in the short to medium term, this means that U.S. farmers will pay higher prices for fertilizers. On the other hand, U.S. farmers could refuse to buy more fertilizers and wait for agricultural commodities prices to go higher (i.e. wait-and-see approach). Fertilizer import flows from the Middle East and North Africa should be the focus for the nitrogen and phosphate fertilizer supplies in the short to medium term (i.e. Saudi Arabia, UAE, Qatar, Algeria, Oman, Israel, Jordan).

China's fertilizer restrictions on DAP fertilizers have hit the phosphate fertilizer market hard. It's obvious that there had never been any expectations for China to basically exit this crucial global fertilizer market. The world is already scrambling for phosphate supplies, and even Syria is becoming a country that sounds attractive in this regard; however, Syria would be exporting phosphate rock, as does Egypt at this time. Saudi Arabia, Israel and Jordan are still the primary phosphate suppliers from the Middle East region. Morocco was put out of the U.S. market due to the countervailing duties (CVDs) case, so while OCP Group's phosphate supplies are currently not relevant to the U.S. fertilizer market, the case for the EU and other parts of the world is likely to see an increase in the dependence on Morocco for phosphate fertilizer supplies. The latter is not an attractive prospect for global phosphate prices, as Morocco imports massive amounts of ammonia and sulfur to produce MAP, DAP and TSP fertilizer products.

USGS critical minerals list gives a boost to junior potash developers

Potash producers can produce at lower operating costs than nitrogen or phosphate producers, which is one of the reasons why the U.S. has given a lot more attention to its domestic potash production scenarios this year. U.S. President Trump declared potash to be a critical mineral in an executive order entitled "Immediate Measures to Increase American Mineral Production". At the time, the news was largely dismissed by the wider public—until now.

The U.S. Department of the Interior announced in its draft of the 2025 List of Critical Minerals that potash should be added to USGS critical minerals list. This also opens the door for junior potash explorers and developers in the near term. The U.S. does not have sufficient reserves of MOP or SOP, so even in the long term, the U.S. market will have to search for overseas markets. Canada continues to supply most potash to the U.S. market, despite U.S.-Canada trade concerns.

Names to Conjure With

Brazil Potash, Sage Potash and Karnalyte Resources will benefit the most from having new sources of potash for the U.S. market.

Brazil Potash (NYSE:GRO) achieved another significant milestone for the Autazes Potash Project with a new offtake agreement. The company signed a ten-year binding agreement with Keytrade AG subsidiary, Keytrade Fertilizantes Brasil Ltda, to purchase up to 900,000 tons of potash per year from Brazil Potash's subsidiary Potássio do Brasil Ltda. This latest offtake agreement will go straight to the local source for Brazilian agriculture producers. More importantly, it gives Brazil Potash a reason to celebrate the project's commercial success: the company now has 60% of its potash production under offtake agreements.

Sage Potash (TSX: SAGE) has also entered the discussions for further potash exploration and development in the U.S. market. The company's Sage Plain Potash Project is in the Paradox Basin of Utah. Sage received a USD $14 million grant from the United States Department of Agriculture (USDA) to assist with financing the potash mine construction. Sage's potash project intends to produce 300,000 tones per year. The potash will be produced using solution-mining methods for the extraction of potash sulfate (SOP) in the Paradox Basin. Sage is currently putting together a Preliminary Economic Assessment (PEA) for publication by the end of 2025.

Carnalite Ahoy

Saskatchewan-based Karnalyte Resource (TSX:KRN) has emerged from the shadows of potash mining and exploration. The company has a solution mining facility near Wynyard, Saskatchewan, where it intends to develop a carnallite-sylvite mineral deposit that will produce 625,000 tonnes of potash per year, increasing to 2.125 million tonnes through advancements in the development project.

This isn't the company's first public appearance in the potash mining market. Neither is it our first rodeo with this story as we wrote it up back in 2017. In late April 2015, the company had made a unanimous decision to write down the Wynyard Project to its salvage value, a decision which was strongly supported by Karnalyte's independent auditors. The board also unanimously determined that it would not be possible to finance and profitably construct and operate a production facility at the Wynyard Project due to the price environment for potash and magnesium at that time.

One of the most important aspects of the Wynyard Project is that it already has an influential offtake agreement from India's Gujarat State Fertilizers & Chemicals (GSFC). In March 2013, Karnalyte closed a non-brokered private placement financing GSFC for $44,745,994 in exchange for 5,490,306 common shares which at that time, represented a 19.98% ownership stake in the company.

Along with the financing, GSFC committed to an off-take agreement for the purchase of approximately 350,000 tonnes per year of potash increasing to 600,000 tonnes per year for a period of 20 years from the commencement of commercial production. It is worth noting that at the time of this transaction reaching conclusion, now Prime Minister of India, Narendra Modi, was the Chief Minister of Gujarat state.

In this context, Karnalyte has emerged with new ambitions to carry out a new strategy for its potash and magnesium projects, including details for a NI 43-101 compliant technical report. On 13 August 2025, the company released a statement about the strategic review, which is that the company will expand into magnesium chloride production at the Wynyard Project by developing magnesium resources alongside the potash. This is about co-production of the two resources—potash and magnesium—of which are both relevant to producing fertilizers for the global markets. Magnesium is also a critical mineral in Canada.

Two fertilizer resources that have the attention of the U.S. market are magnesium sulfate (SOPM), also known as langbeinite, and glauconite, a new type of deposit that combines phosphate and potash minerals for organic fertilizer products. Karnalyte is one of the few companies that has an advantage in producing SOPM from one resource base in Saskatchewan. It will be an important part of the company's strategy to push back into the fertilizer markets, while also making the company an attractive sell to U.S. farmers.

Geopolitical Risk - Soaring to Uncomfortable Heights

There is so much geopolitical tension around agriculture and fertilizer markets right now. Ukraine is finally talking about introducing a new regulation around the mineral fertilizers import ban. The Ukrainian Agri Council (UAC) has shared concerns about a food crisis within Ukraine, which will continue if the country doesn't start importing fertilizers again to boost crop yields. This is particularly an issue related to the import of nitrogen fertilizers. One of the main reasons for the import ban was due to Russia's influence in the natural gas and nitrogen fertilizer market of Ukraine. The only way to overcome Russia's influence was to simply ban all nitrogen fertilizer imports from global sources.

Now, it appears that that import ban strategy is failing to provide for the country's most important economic driver in agricultural commodities. Both the Prime Minister of Ukraine Yulia Svyrydenko and the Head of the Odesa Regional Military Administration Oleh Kiper are working on the regulatory process to allow fertilizer imports into Ukraine again. We have already covered all of the pertinent details for the Black Sea in our previous monthly: The Black Sea as the Fertilizer Epicentre.

Ukraine's attack on the Druzbha oil pipeline was a reminder that the tit-for-tat war on critical infrastructure is largely intact between Russia and Ukraine. Hungary and Slovakia were furious about the attack. Hungarian and Ukrainian officials even took to social media platforms to express their antagonisms. Hungarian FM Szijjarto said: "This latest strike against our energy security is outrageous and unacceptable."

In response, Ukrainian Foreign Minister Andrii Sybiha blamed Hungary for its dependence on Russia: "It is Russia, not Ukraine, who began this war and refuses to end it. Hungary has been told for years that Moscow is an unreliable partner. Despite this, Hungary has made every effort to maintain its reliance on Russia."

This attack served as the backdrop to another critical event in world affairs, when Turkey announced the closure of its airspace and maritime space to Israel. The Turkish government had already announced regulations to halt Israeli-linked vessels from entering the country's ports on 21 August 2025. It was said to be in response to the Israeli escalation of attacks on Gaza. The initial target was to restrict all explosives and military equipment, but also industrial products such as fertilizers and construction equipment.

However, the shipping regulations from Turkey have already transformed into an all-out ban on any trade connections with Israel. At the end of August, Turkey even announced an airspace closure to Israeli government planes and any cargo of arms for the Israeli military. The regulation was announced by Turkish Foreign Minister Fidan at parliamentary debate on the Gaza situation.

It is important to remember what happened during the 4 August 2020 Beirut port blast. The deadly explosion was caused by a warehouse fire with ammonium nitrate fertilizer supplies. Ammonium nitrate is an explosive, but it is also combined with nitrogen to produce a fertilizer product—AN. It has been called one of the largest non-nuclear explosions, where more than 220 people died because of the blast in Beirut.

Certain fertilizer materials are thus considered to be hazardous but also linked to military explosives. Turkey made a powerful move to block any shipments with links to Israel, and it is indeed a sign of further escalation in the Middle East conflict. Fertilizer importing countries were extremely concerned about Iran's potential closure of the Strait of Hormuz during the military escalation with Israel in June. Should they fear Turkey's military influence over the Eastern Mediterranean now?

Conclusion

All fears aside for now. Fertilizer exports are making their way through various shipping channels, and without the need for military escorts at present. Countries will always need to grow food for their populations, so fertilizer strategies will always be part of the geopolitical risk framework. Countries like Turkey, Russia and Belarus have not given in to the idea that Silicon Valley controls the world, nor that Big Tech companies will cause international politics to be aligned with some grand technological era vision for the world. The production of food and fertilizers require significant amounts of energy, and all that energy will have to come from somewhere. OPEC+ is increasing supply availability for this reason—and we all know that they could restrict supply as well.

Soil is also an important part of the agro-industrial food complex, which is why agronomists are always conducting soil tests to know which kind of fertilizers will help to boost crop yields for farmers, although this is only one part of the fertilizer strategy. Food prices would come up without the availability of fertilizers, because there simply would not be enough production for large-scale industrial farms to make return on investment. It shall not be the case that consumers would decide to block food supplies from overseas markets if food insecurity is a concern for them, which is why Israel's blockade of the Gaza Strip is so controversial. When countries are not allowing food to flow freely from the global markets, this has a knock-on effect on the entire global food system. Turkey might also be contributing to this problem by blocking Israeli-linked vessels, and surely many people would assume that placing sanctions on Russia and Belarus contributed to high fertilizer prices and a lack of available food supplies on global markets after 2022.

If this is the world that governments want to live in, whereby food and fertilizers are mish-mashed into a complex set of geopolitical risk factors, then everyone will have to be prepared to pay higher prices for food on global markets. Let's just hope that the results from the India tender are a positive sign that fertilizer supplies will be available for the foreseeable future. India wants to buy more fertilizers from China, but China has its own ideas for how it will carry out a fertilizer strategy. Let this be a lesson for all of us about food and fertilizers in the future. Peace sells, but who's buying?

GROWTH MINERALS STOCKS

	Security	Ticker	Rating	Currency	Price	Market Cap. mns	Status	Country
Potash	Kore Potash	KP2.L	Neutral	GBP	0.0316	£138	Developer	Congo
	Millennium Potash	MLP.v	LONG	CAD	2.26	$242	Developer	Gabon
	Brazil Potash	GRO	Neutral	USD	1.86	$71	Developer	Brazil
	Nutrien	NTR.to, NYSE: NTR	Neutral	CAD	78.16	$38,477	Producer	Canada
	Intrepid Potash	NYSE: IPI	Neutral	USD	28.43	$379	Producer	USA
	Verde Agritech	NPK.to	Neutral	CAD	0.47	$25	Producer	Brazil
	Sage Potash	SAGE.v	Neutral	CAD	0.42	$44	Developer	USA
	South Harz Potash	SHP.ax	Neutral	ASX	0.04	$5	Developer	Germany
	Peak Minerals		Neutral	Private			Developer	USA
	Karnalyte Resources	KRN.to	Neutral	CAD	0.11	$6	Developer	Canada
	American Critical Minerals	CSE: KCLI	Neutral	CAD	0.335	$18	Explorer	USA
	Gensource Potash	GSP.v	Neutral	CAD	0.09	$34	Developer	Canada
	The Mosaic Company	MOS	Neutral	USD	32.45	$10,340	Producer	Canada/US
Phosphate	First Phosphate	CSE: PHOS	LONG	CAD	0.51	$63	Developer	Canada
	Aguia Resources	AGR.ax	Neutral	AUD	0.03	$50	Developer	Brazil
	Minbos	MNB.ax	LONG	AUD	0.07	$64	Developer	Angola

Important disclosures

I, Joshua Mayfield, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.

Hallgarten's Equity Research rating system consists of LONG, SHORT and NEUTRAL recommendations. LONG suggests capital appreciation to our target price during the next twelve months, while SHORT suggests capital depreciation to our target price during the next twelve months. NEUTRAL denotes a stock that is not likely to provide outstanding performance in either direction during the next twelve months, or it is a stock that we do not wish to place a rating on at the present time. The information contained herein is based on sources that we believe to be reliable, but we do not guarantee their accuracy. Prices and opinions concerning the composition of market sectors included in this report reflect the judgments of this date and are subject to change without notice. This report is for information purposes only and is not intended as an offer to sell or as a solicitation to buy securities.

Hallgarten & Company or persons associated do own securities described herein (i.e. Millennial Potash). Additional information is available upon request.

Web access at:

Research: www.hallgartenco.com