

Chemical Sector

21 December, 2022

Tailwinds from Rabi sowing; decline in costs and freight

We see healthy outlook for the Indian Crop Protection Chemical (CPC) sector in 2HFY23 on the back of robust growth in area under crops and the decline in chemical prices as well as container rates - key freight indices are down 77-90% as per the latest trends. This is likely to offset the headwinds posed by carryover of higher cost inventory and the muted pre-season booking of pesticides. We are positive on the CSM leader PI Industries and CPC companies UPL and Sumitomo Chemical India (SCIL), with new product launches, pricing power and long runway for growth. Potential catalysts are a likely PLI scheme for Agrochemicals and concessions related to tariff restructuring to support value addition CPC. Key 'BUYs' are PI Industries and UPL in large caps and SCIL in midcaps- on dips. Coromandel International (CRIN) is a value Buy, with potential upside from new launches and the Rs1bn MPP start-up expected by Jan'23.

We have also discussed Glyphosate prices, and in Annexure -1 the changes in Brazil CPC distribution.

Sector positives: Healthy farm incomes, good soil moisture and high-water storage levels augur well for the Rabi season. There are signs of a decline in some chemical input prices, which the industry expects to support volume growth and margin expansion. Also, shortage of containers and its impact on freight rates may be abating as we have seen container rates showing a declining trend of late, as per Drewery and Freightos.

The declining trend in international prices of key chemical intermediates seen in 2QFY23 continued in 3QFY23. Acetic Acid, Benzene and Methanol - 3QFY23 prices are down 52.2%/11.7%/11.5% YoY, as per Bloomberg data. Acetic Acid and Benzene prices are also down by 2.9%/16% QoQ but Methanol price is up 4.5% QoQ. The price of Ammonia, used in fertilizers, declined by 8% QoQ in 3QFY23, but it was up 29.8% YoY.

China prices of key herbicides - Glyphosate and Glufosinate - have declined by 44%/55% YoY as per third-party data. This decline in prices is positive for the CPC sector, which will benefit from rising demand, as CPC prices are cut to pass on the fall in input prices. Further, there is potential for expansion in gross margins if the CPC industry is able to retain part of the savings from lower input costs. We understand that the industry may pass on the lower costs to boost volume, which implies operating leverage gains, and hence is positive for topline/EBITDA growth for leaders.

We also see further momentum in the declining trend in global container freight index, which could reduce freight costs. We also learn from consultants that global container shipping industry is facing excess capacity amid a slowdown in demand and could be forced to operate near marginal cost.

Crop area cultivation in the ongoing Rabi season is up 4.7% YoY at 57.81mn hectares (ha) on the back of cumulative area sown (for all crops) as of last Friday (16th Dec'22), as per Government agency CWWG's data. This compares with the growth in cumulative cropped area of 12.25%/3.86% YoY in the previous two weeks. Area under Wheat/Rice/Pulses is up 3%/13.6%/4.2% YoY and that under Oilseeds/Coarse Cereals is up 7.9%/7.7% YoY.

Copius rains support sowing. All-India cumulative rainfall for the period (1st Oct-14th Dec) was 24% above the LPA, while the trend for the week (8th Dec-14th Dec) was down 95% YoY. Moisture content in the soil is good, with water levels at 140.13BCM - 79% of storage capacity at full reservoir level. This is at 103% of last year's storage and 119% of average storage for the last 10 years.

Infestations and diseases in crops are lagging the 'economic threshold' levels, barring a few instances in certain crops/states, as per the minutes of 16th Dec, 2012 meeting of government agency CWWG.

Freightos Asia-US container rates for the week ended 16th Dec: Asia-US West Coast prices (FBX01 Daily) increased 1% to US\$1,415/FEU - but declined 90.5% YoY; Asia-US East Coast prices (FBX03 Daily) dipped by 3% to US\$3,252/FEU, but declined 80.7% YoY (Source: <https://fbx.freightos.com>).

Drewry World Container Index as on 15th Dec'22, down 77% YoY. The composite index declined by 1% this week - 42nd consecutive weekly drop. The latest Drewry WCI composite index of US\$2,127 per 40-foot container is 79.5% below the peak of US\$10,377 the index touched in Sept'21. But it remains 51% above the average of 2019 rate (pre-pandemic) of US\$1,420. The YTD average composite index is at US\$6,547 per 40-ft container, up US\$3,855 vs. 10-year average of US\$2,692 (Source: <https://www.drewry.co.uk/>).

Exhibit 1: Quarterly YoY and QoQ change in chemical prices

Chemical name (currency)	1QFY23	2QFY23	3QFY23
China Methanol spot price (CNY/te)	2660	2517	2629
QoQ	0.2	-5.4	4.5
YoY	10.8	-1.1	-11.5
Soda Ash FOB China Physical spot (US\$/te)	370	354	328
QoQ	9.4	-4.4	-7.1
YoY	33.0	-6.6	-37.6
Benzene CFR China Physical spot (US\$/te)	1256	1005	844
QoQ	15.4	-20.0	-16.0
YoY	31.7	-0.8	-11.7
Acetic Acid China spot price (CNY/te)	4561	3334	3238
QoQ	-7.8	-26.9	-2.9
YoY	-38.8	-47.5	-52.2
India Ammonia CFR spot price	1115	945	870
QoQ	18.8	-15.2	-8.0
YoY	93.2	41.4	29.8

Source: Bloomberg, Nirmal Bang Institutional Equities Research

Ramesh Sankaranarayanan

Research Analyst

ramesh.s@nirmalbang.com

+91-22-6273 8145

Top Chemical picks

Stock	EPS Sept'24E Rs	PE Sept'24E (x)	TP Rs	Rating
UPL	85.5	8.8	1154	Buy
PI	117	30.2	4213	Buy
SCIL	15.5	31.2	543	Buy
CRIN	73.3	12.6	1173	Buy

Leverage to freight/revenue: UPL 4%, SCIL 2.1% and PI 1%. CRIN has the highest at 5.4%, but this is predominantly in the Nutrients segment and hence CRIN's benefit may be confined to the share that its CPC segment has in freight cost.

Concerns: Impact of volatile energy costs, raw material prices and product prices on gross margins, new products, working capital and channel inventory are weighing on the sector. (i) Periodic covid lockdowns in China and the drought/high energy prices in Europe are hurting the energy-intensive sectors like Fertilizers and other chemicals. This is causing worries for the global chemical supply chain as well as demand.

Overall intensity of pests & diseases below Economic Threshold Level, except for the following:

- South East Asian Thrips on Capsicum in Haryana
- Pink boll worm and Jassids on Cotton in Maharashtra
- Black thrips on Chili in Maharashtra
- Virus Complex (Leaf curl virus, Mosaic virus) on Chili in Andhra Pradesh
- Pink stem borer on Wheat in Punjab
- Yellow stem borer on Paddy in Odisha
- FAW on Maize, Gram pod borer, Wilt on Gram in Maharashtra, Helicoverpa, Marucaspp
- Pod borer complex, Wilt on Pigeon pea in Maharashtra

Source: Crop Weather Watch Group (CWWG) minutes dated Dec'16, 2022 - <https://agricoop.nic.in>

Exhibit 2: Comparison of freight index this year vs last year

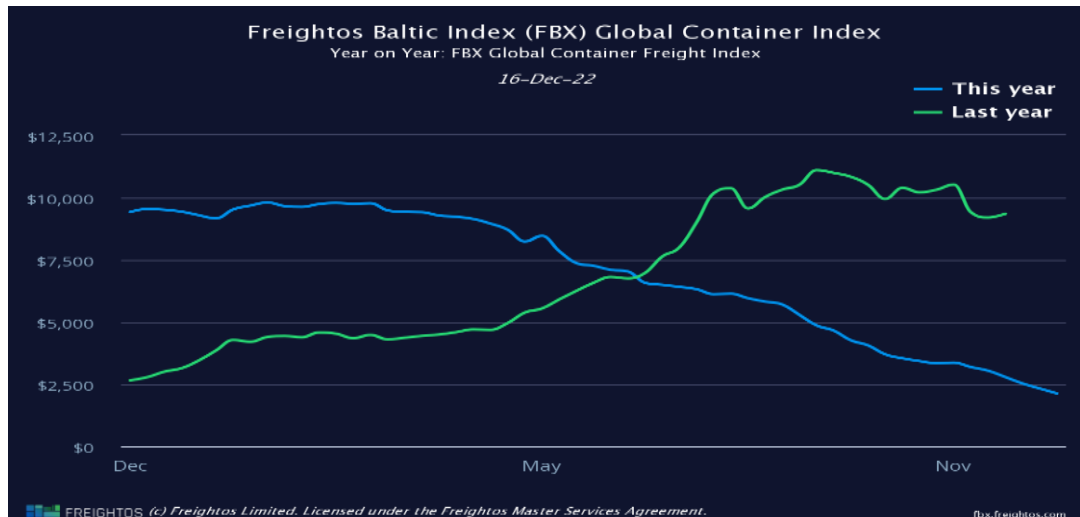


Exhibit 3: Global freight index

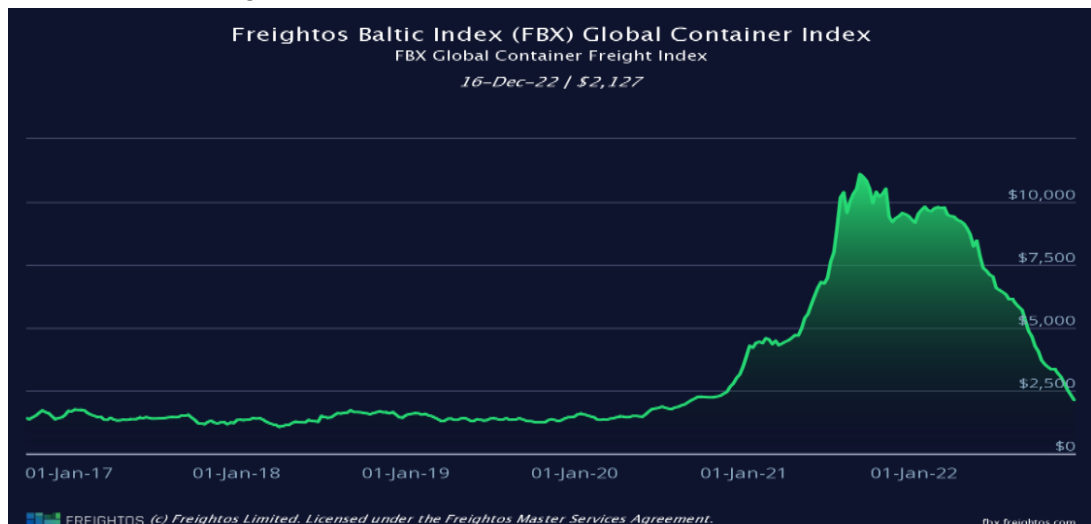


Exhibit 4: Latest trend in freight rates across routes

FBX Lane-East Coast	Global	Asia – US West Coast	Asia – US East Coast	Asia – North Europe	North Europe – US East Coast
This Week	US\$2127	US\$1415	US\$3252	US\$2168	US\$5792
Last Week	-8.5%	0.9%	-3.2%	-33.5%	-4.2%
This Week CY21	-77.6%	-90.5%	-80.7%	-85.0%	-20.1%

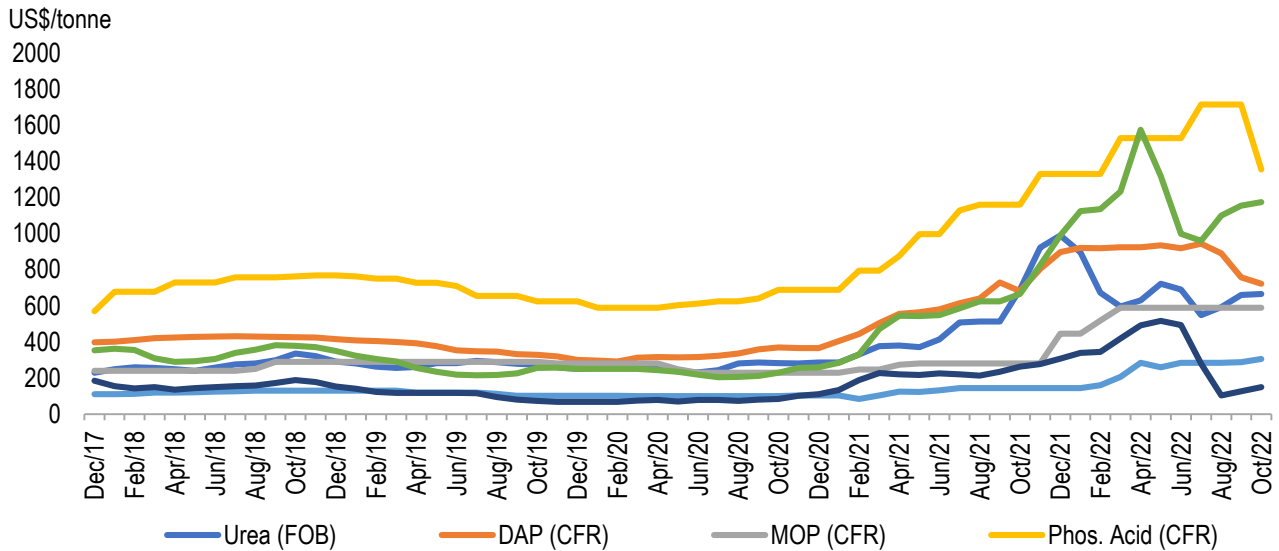
Source: Freightos Ltd, Nirmal Bang Institutional Equities Research

Exhibit 5: Rabi acreage data as on 16th December, 2022

S.No.	Crops	Cumulative Area Sown (mn Ha)		Inc/(Dec) Area Over 2021 mn Ha	Inc/(dec) Over 2021 %
		2022	2021		
1	Wheat	28.65	27.83	0.82	3.0
2	Rice	1.26	1.11	0.15	13.6
3	Total Pulses	13.97	13.40	0.57	4.2
(i)	Gram	9.79	9.50	0.29	3.1
(ii)	Lentil	1.69	1.59	0.11	6.6
(iii)	Pea	0.84	0.89	-0.05	-6.1
(iv)	Kulthi	0.35	0.32	0.04	12.1
(v)	Urad	0.46	0.39	0.07	16.8
(vi)	Moong	0.17	0.10	0.07	68.7
(vii)	Lathyrus	0.33	0.33	0.00	0.9
(viii)	Other Pulses	0.34	0.29	0.05	16.9
4	Total Coarse Cereals	4.13	3.84	0.30	7.7
(i)	Jowar	2.03	2.09	-0.05	-2.6
(ii)	Bajra	0.01	0.02	0.00	-13.3
(iii)	Ragi	0.04	0.03	0.01	40.0
(iv)	Maize	1.35	1.10	0.25	22.7
(v)	Barley	0.70	0.61	0.09	15.3
5	Total Oilseeds	9.76	9.05	0.71	7.9
(i)	Rapeseed and Mustard	9.00	8.32	0.68	8.2
(ii)	Groundnut	0.36	0.32	0.04	12.9
(iii)	Safflower	0.07	0.06	0.00	6.3
(iv)	Sesamum	0.02	0.02	0.00	10.0
(v)	Sunflower	0.06	0.09	-0.03	-33.7
(vi)	Linseed	0.26	0.21	0.05	22.4
(vii)	Other Oilseeds	0.03	0.03	0.00	-9.1
	Grand Total	57.81	55.23	2.58	4.7

Source: CWWG, Nirmal Bang Institutional Equities Research

Exhibit 6: Trend in fertilizer prices



Source: Department of Fertilizer, Nirmal Bang Institutional Equities Research

Sulphur price for Oct'22 is down 43.3% YoY at US\$149/te and has bucked the trend.

This along with Urea, which is down 3.6% YoY at US\$665/tonne, has bucked the trend of steep rise in the prices of fertilizers and other key inputs YoY. Phos acid also declined a tad YoY.

DAP/MOP prices are up 5.9%/110.7% YoY and rock and ammonia prices are up 111.8%/76.7% YoY

However, there has been some relief in this trend between Sept'22 and Oct'22 – Phos. Acid price is down 32.9% at US\$1,150/te as per contract for 3QFY23 while DAP price is down 4.7% at US\$722/te

Exhibit 7: Fertilizer price chart (US\$/tonne)

Fertilizer	Oct-21	Oct-22	Ch YoY (%)	Sep-22	Ch MoM (%)	2QFY23	Ch QoQ (%)
Urea (FOB)	690	665	-3.6	661	0.6	601	10.6
DAP (CFR)	682	722	5.9	758	-4.7	865	-16.5
MOP (CFR)	280	590	110.7	590	0.0	590	0.0
Phos. Acid (CFR)	1160	1150	-0.9	1715	-32.9	1715	-32.9
Rock Phos. (CFR)	144	305	111.8	287	6.3	285	7.0
Ammonia (CFR)	665	1175	76.7	1156	1.6	1072	9.6
Sulphur (CFR)	263	149	-43.3	126	18.3	169	-12.0

Source: Department of Fertilizer, Nirmal Bang Institutional Equities Research

*Note: The contract price for Phosphoric acid imports was fixed at US\$1150. Note we are considering Oct'22 prices as representative for 3QFY23 since latest data available from DOF is for Oct'22 only

Glyphosate supply and price trends

The global glyphosate market is worth ~US\$5.6bn, according to a recent study published in agropages.com. This product has a high degree of concentration of production with high market volatility. The **ever-growing global demand for food, sustained expansion in GMO crop planting area and glyphosate's better cost performance** over other "burndown herbicides" are likely to support promising prospects for herbicide workhorse in the next 5-10 years.

Industry channel checks reveal that leading Chinese glyphosate producers had decided to alternately shut down plants for planned maintenance from mid-Nov'22. **The objective was to cut production by a third**, according to information from the Chinese glyphosate industry group.

This is in line with China's energy consumption control and carbon emission reduction policies, which aim to utilize limited phosphate resources to achieve a safe, green and sustainable development of the glyphosate industry. **The above shut down will cut the monthly glyphosate production by ~20,000 tonnes/ month - this cuts 20% of global capacity. This is likely to help the industry improve its pricing power.**

Glyphosate represents the world's largest pesticide and also China's single largest production as well as export product among all the pesticides.

According to trade data, China exports 90% of its annual production of glyphosate raw powder estimated at ~580,000 tonnes - utilisation of 72%.

The global production capacity of glyphosate is ~1.2mn tonnes, including 380,000 tonnes by Bayer AG (~31.7% share).

The overall glyphosate capacity in China is reported at 800,000 tonnes - two-thirds of the global capacity.

This includes leading glyphosate producers in China, as given below.:

Producers	Capacity (In tonnes)
Xingfa Group	2,30,000
Fuhua	53,000
Wynca	80,000
Jiangshan	70,000
Hebang Biotechnology	50,000
Anhui Guangxin	50,000

The rise in raw material prices & food prices and the continuous expansion of the planting area under GMO crops have supported the glyphosate market. Still, it suffered a depressed market as herbicide for many years.

In CY21, there was a boom in glyphosate industry **as its price in China soared 187%** from the lowest point of RMB20,000/tonne in Jan'21 to RMB83,000/tonne in Dec'21.

However, **in CY22, the price of glyphosate technical crashed 34%** from RMB79,000/tonne in January'22 to RMB52,000/tonne in mid-Nov'22.

Industry analysts believe that glyphosate prices in China will remain subdued as a result of the increased stocks, weakened resistance to prices, lack of confidence from the downstream industry and the "wait and see" approach of international buyers.

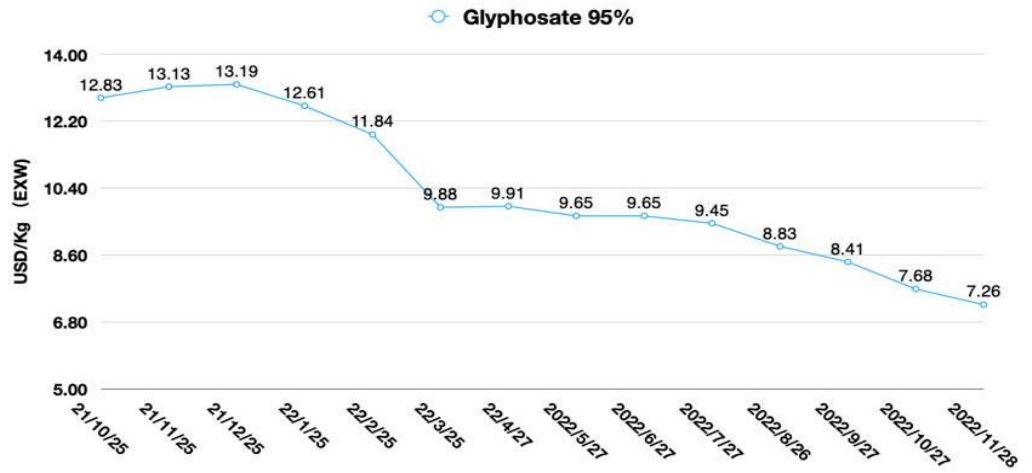
The price of Fungicides like **Tebuconazole** and **Prothioconazole** are likely to be subdued, according to an analysis by industry website AgriBusiness.

Tebuconazole is headed for stable low-pricing level in CY23 - the price is expected to be flat without any big fluctuation due to weak demand and normal supply.

Prothioconazole supply is smooth and over capacity is hurting its price. Hence, in CY23, Prothioconazole prices will see a downward trend.

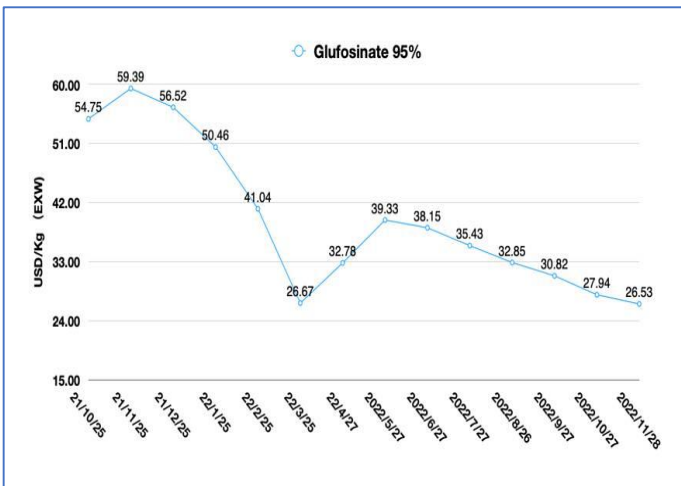
China AI prices in charts

Exhibit 8: Glyphosate price trend



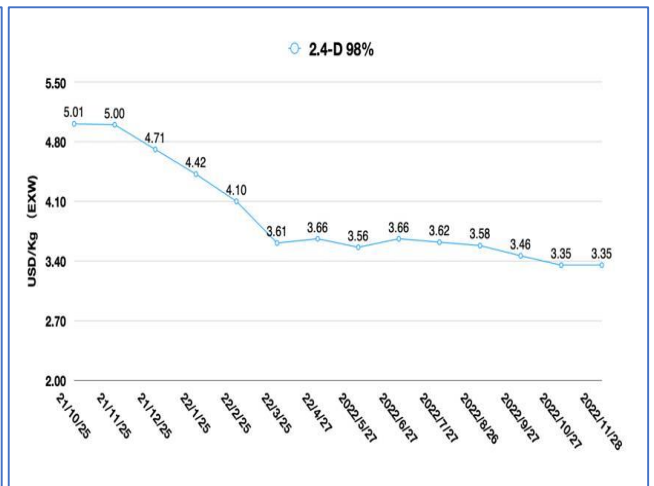
Source: agribusinessglobal.com, Nirmal Bang Institutional Equities Research

Exhibit 9: Glufosinate price trend



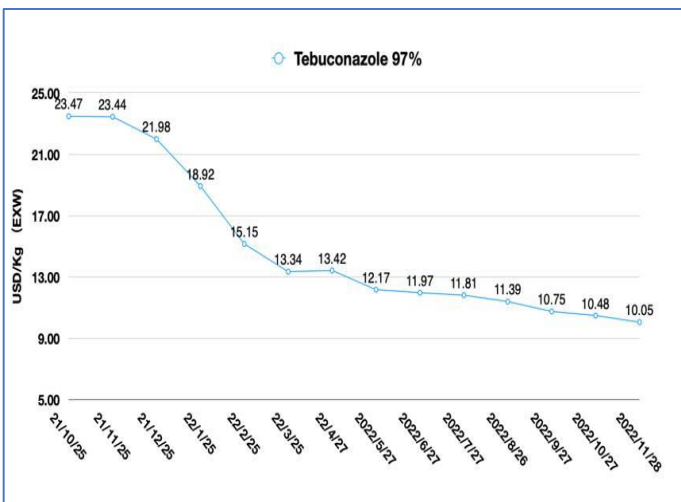
Source: agribusinessglobal.com, Nirmal Bang Institutional Equities Research

Exhibit 10: 2,4-D price trend



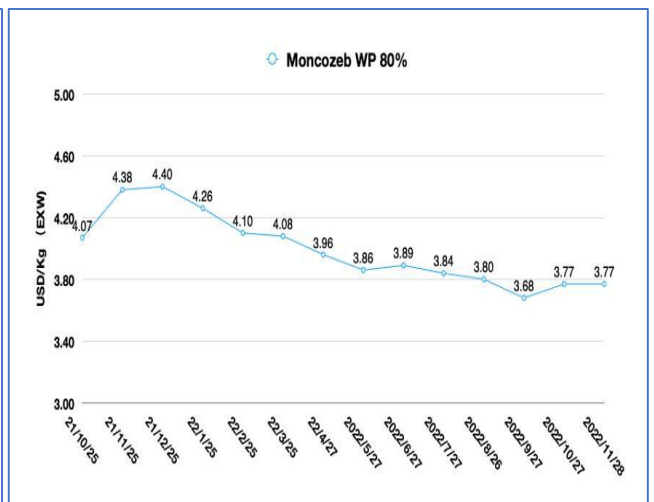
Source: agribusinessglobal.com, Nirmal Bang Institutional Equities Research

Exhibit 11: Tebuconazole price trend



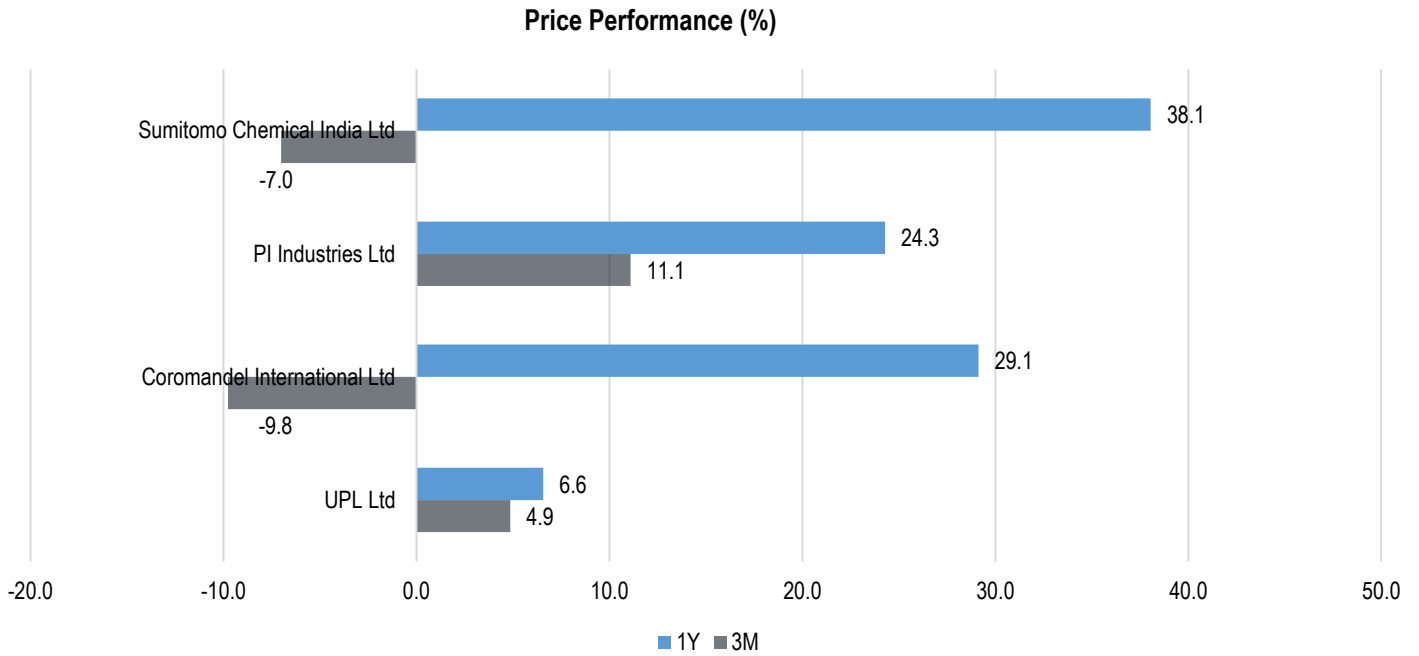
Source: agribusinessglobal.com, Nirmal Bang Institutional Equities Research

Exhibit 12: Mancozeb price trend



Source: agribusinessglobal.com, Nirmal Bang Institutional Equities Research

Exhibit 13: Price performance Chart



Source: Nirmal Bang Institutional Equities Research

Annexure -1 Brazil CPC distribution moving away from trade

Brazilian market is one of the biggest markets in terms of agriculture. The crop protection chemical (CPC) market in Brazil is estimated at US\$13.3bn as of crop year CY21 ~ a YoY growth of 9.9%, according to a recent study on the Brazil CPC industry done by agropages.com

In terms of key crops

Soyabean harvest in Brazil is 125mn tonnes in CY22 and is expected to increase by 21.3% to 152mn tonnes in CY23.

Corn production is estimated at 119mn tonnes as of CY22 and is expected to increase by 5.7% to 126mn tonnes in CY23. Brazil is also a leading exporter of Soyabean with exports of ~95.87mn tonnes in CY22.

The impact of the Brazilian market is evident from the China-Brazil partnership over the years. Brazil produces food for almost 20% of the world's population while 60% of global pesticide technicals are supplied by China. Brazil is China's largest pesticide technical export destination.

Trade shift over the years:

In 1990s, there were thousands of producers in China but there was little direct business with Brazilian customers due to the lack of knowledge of the international market and country-specific risks; most negotiations were done through trading companies. There were 2,500 dealers and 400 traditional cooperatives in Brazil, with product registrations owned by foreign companies very limited while 85% of registered products were sold through dealers.

In 2020, product registration was done by the manufacturers themselves, leading to increase in the products registered. Sales became more direct i.e traders were getting phased out or consolidated.

- In the 1990s, Brazil's CPC sector had 2,500 dealers and 400 traditional cooperatives
- By CY22, the number of dealers/cooperatives declined to 1600/220, as per consultant Connection Adviser & Management
- Manufacturers are setting up their own distribution channels in Brazil
- Direct sales by CPC companies have now increased to 40% from a mere 15% in 1990
- This is estimated to touch 45% by CY30
- As the number of distributors declines to less than 500 and cooperatives to ~100

This integration will likely yield the following benefits:-

- Improve the credit system as proper documents will be required for verification
- Improve supply chain and reduce black-market operations due to limited role of intermediate traders
- Companies could also educate farmers through direct dealing. Improved communication and digitalisation will lead to less confusion
- Ultimately, it will be a win-win situation for both the manufacturers as well as farmers

Exhibit 14: Surge in the share of direct sales in Brazil CPC

CY	1990	2022	2030
Dealers	2500	1600	500
Cooperatives	400	220	100
Direct Sale %	15	40	45

Source: Connection Adviser & Management

DISCLOSURES

This Report is published by Nirmal Bang Equities Private Limited (hereinafter referred to as “NBEPL”) for private circulation. NBEPL is a registered Research Analyst under SEBI (Research Analyst) Regulations, 2014 having Registration no. INH000001436. NBEPL is also a registered Stock Broker with National Stock Exchange of India Limited and BSE Limited in cash and derivatives segments.

NBEPL has other business divisions with independent research teams separated by Chinese walls, and therefore may, at times, have different or contrary views on stocks and markets.

NBEPL or its associates have not been debarred / suspended by SEBI or any other regulatory authority for accessing / dealing in securities Market. NBEPL, its associates or analyst or his relatives do not hold any financial interest in the subject company. NBEPL or its associates or Analyst do not have any conflict or material conflict of interest at the time of publication of the research report with the subject company. NBEPL or its associates or Analyst or his relatives do not hold beneficial ownership of 1% or more in the subject company at the end of the month immediately preceding the date of publication of this research report.

NBEPL or its associates / analyst has not received any compensation / managed or co-managed public offering of securities of the company covered by Analyst during the past twelve months. NBEPL or its associates have not received any compensation or other benefits from the company covered by Analyst or third party in connection with the research report. Analyst has not served as an officer, director or employee of Subject Company and NBEPL / analyst has not been engaged in market making activity of the subject company.

Analyst Certification: I, Ramesh Sankaranarayanan, research analyst and the author of this report, hereby certify that the views expressed in this research report accurately reflects my personal views about the subject securities, issuers, products, sectors or industries. It is also certified that no part of the compensation of the analyst was, is, or will be directly or indirectly related to the inclusion of specific recommendations or views in this research. The analyst is principally responsible for the preparation of this research report and has taken reasonable care to achieve and maintain independence and objectivity in making any recommendations.

Disclaimer

Stock Ratings Absolute Returns

BUY > 15%

ACCUMULATE -5% to 15%

SELL < -5%

This report is for the personal information of the authorized recipient and does not construe to be any investment, legal or taxation advice to you. NBEPL is not soliciting any action based upon it. Nothing in this research shall be construed as a solicitation to buy or sell any security or product, or to engage in or refrain from engaging in any such transaction. In preparing this research, we did not take into account the investment objectives, financial situation and particular needs of the reader.

This research has been prepared for the general use of the clients of NBEPL and must not be copied, either in whole or in part, or distributed or redistributed to any other person in any form. If you are not the intended recipient you must not use or disclose the information in this research in any way. Though disseminated to all the customers simultaneously, not all customers may receive this report at the same time. NBEPL will not treat recipients as customers by virtue of their receiving this report. This report is not directed or intended for distribution to or use by any person or entity resident in a state, country or any jurisdiction, where such distribution, publication, availability or use would be contrary to law, regulation or which would subject NBEPL & its group companies to registration or licensing requirements within such jurisdictions.

The report is based on the information obtained from sources believed to be reliable, but we do not make any representation or warranty that it is accurate, complete or up-to-date and it should not be relied upon as such. We accept no obligation to correct or update the information or opinions in it. NBEPL or any of its affiliates or employees shall not be in any way responsible for any loss or damage that may arise to any person from any inadvertent error in the information contained in this report. NBEPL or any of its affiliates or employees do not provide, at any time, any express or implied warranty of any kind, regarding any matter pertaining to this report, including without limitation the implied warranties of merchantability, fitness for a particular purpose, and non-infringement. The recipients of this report should rely on their own investigations.

This information is subject to change without any prior notice. NBEPL reserves its absolute discretion and right to make or refrain from making modifications and alterations to this statement from time to time. Nevertheless, NBEPL is committed to providing independent and transparent recommendations to its clients, and would be happy to provide information in response to specific client queries.

Before making an investment decision on the basis of this research, the reader needs to consider, with or without the assistance of an adviser, whether the advice is appropriate in light of their particular investment needs, objectives and financial circumstances. There are risks involved in securities trading. The price of securities can and does fluctuate, and an individual security may even become valueless. International investors are reminded of the additional risks inherent in international investments, such as currency fluctuations and international stock market or economic conditions, which may adversely affect the value of the investment. Opinions expressed are subject to change without any notice. Neither the company nor the director or the employees of NBEPL accept any liability whatsoever for any direct, indirect, consequential or other loss arising from any use of this research and/or further communication in relation to this research. Here it may be noted that neither NBEPL, nor its directors, employees, agents or representatives shall be liable for any damages whether direct or indirect, incidental, special or consequential including lost revenue or lost profit that may arise from or in connection with the use of the information contained in this report.

Copyright of this document vests exclusively with NBEPL.

Our reports are also available on our website www.nirmalbang.com

Access all our reports on Bloomberg, Thomson Reuters and Factset.

Team Details:			
Name		Email Id	Direct Line
Rahul Arora	CEO	rahul.arora@nirmalbang.com	-
Girish Pai	Head of Research	girish.pai@nirmalbang.com	+91 22 6273 8017 / 18
Dealing			
Ravi Jagtiani	Dealing Desk	ravi.jagtiani@nirmalbang.com	+91 22 6273 8230, +91 22 6636 8833
Michael Pillai	Dealing Desk	michael.pillai@nirmalbang.com	+91 22 6273 8102/8103, +91 22 6636 8830

Nirmal Bang Equities Pvt. Ltd.

Correspondence Address

B-2, 301/302, Marathon Innova,
 Nr. Peninsula Corporate Park,
 Lower Parel (W), Mumbai-400013.

Board No. : 91 22 6273 8000/1; Fax. : 022 6273 8010