

## Agro Chemicals

**Ride on food security tailwinds!**



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# Agrochemicals - Structural growth story intact

As we slowly emerge out of the pandemic, the need to secure food supply is set to be top priority for every nation. Consequently, we believe that the structural growth story of agrochemical industry remains intact led by a) rising domestic demand; b) substantial opportunity to explore products going off-patent in the next decade; c) stringent environmental norms in China, providing domestic players an edge and d) strategic tie-ups with global giants.

## Domestic industry expected to post 8-10% CAGR in the next few years

- **Improving farm economics** - Govt.'s thrust on doubling farmer's income by 2022 via (a) higher MSPs for crops (average increase of 35% across crops in the last 5 years); (b) increased irrigation coverage (area under irrigation currently at ~52% of net sown area as against ~40% few years back; implies improved crop yield); (c) better procurement efficiencies and (d) higher agricultural credit, bodes well for the sector. We believe efforts to boost crop yields and farmer's awareness of crop protection benefits will drive domestic demand of agrochemicals.
- **China+1 strategy to fuel growth**- Stringent environmental norms has led to closure of environmentally non-compliant agrochemical manufacturing facilities in China. We believe, India is likely to emerge as an alternative procurement base for global agrochemical industry primarily led by a) available resources; b) favorable cost dynamics; and c) availability of technically skilled & cheap labor.
- **Off patent molecules to power growth** – Agrochemicals worth ~USD6bn are going off-patent globally by 2030. We believe, generic companies especially in developing countries (where they have limited R&D facility as well as lower balance sheet strength to carry these cost) would be major beneficiaries as a) these molecules already come along with better efficacy to fight against pest and have better market and target crop, hence it becomes easy for generic players to leverage on their distribution network; b) generic players breaks the exclusivity of molecules/ companies, hence there remains no pricing edge for product and becomes more easier for farmers to adopt to that product. We believe, it augurs well for domestic agrochemical players, as it would result into opening up of huge opportunity for domestic companies both on domestic formulation as well on exports front.
- **Global Consolidation to revitalize the domestic players**- In the last few years global agrochemical industry has witnessed drastic shift in consolidation of their functional and operational strategies. The industry is currently being controlled by four big players (as against six players earlier) commanding a lion's share of 55-60% in the global agrochemical market. Consolidation in the global agro chemical industry offers additional opportunity to domestic players led by a) enhanced demand in case of down trading (purchasing generic product for the same molecular composition) by global farmers; b) rising R&D spends amidst increasing costs in developing new active ingredients would result into higher outsourcing of CRAMS towards cost effective nations like India.
- **We initiate 9 companies in this report, recommending 'BUY' on Bayer Crop science, Dhanuka Agritech, PI Industries, Sharda Cropchem, Sumitomo chemical, and UPL. While, we initiate coverage with an 'ACCUMULATE' rating on Rallis India and Godrej Agrovet on account of limited upside and we have 'HOLD' rating on Insecticides India.**

# Improving farm economies

## Govt.'s impetus to double farmers income augurs well for agronomics

- Contribution of agriculture to the GVA is above 20% which is highest in the last decade.
- Incessant focus of the Govt. on agriculture through higher budgetary allocation under various schemes like Crop insurance, interest subsidy, PK-Kisan, PMKSY etc. augurs well for the overall farm economics.
- With the focus on doubling of farmer's income through increasing MSP's of crops supports the overall argument (MSP's up 35% in the last 5 years).
- With decline in arable land coupled with rising population; increasing yield through agrochemicals use is the way ahead.

## Declining arable land; increasing yield through better agri-input is the way ahead

Year	Food Grains		
	Area (Mn ha)	Production (Mn Mt)	Yield (kg/ha)
1990-91	127.8	176.4	1,380
1995-96	121.0	180.4	1,491
2000-01	121.1	196.8	1,626
2005-06	121.6	208.6	1,714
2010-11	126.7	244.5	1,930
2011-12	124.8	259.3	2,078
2012-13	120.8	257.1	2,129
2013-14	125.0	265.0	2,120
2014-15	124.3	252.0	2,028
2015-16	122.7	252.2	2,056
2016-17	129.2	275.1	2,129
2017-18	127.6	284.8	2,233
2018-19	124.2	283.4	2,281
2019-20	127.6	296.7	2,325

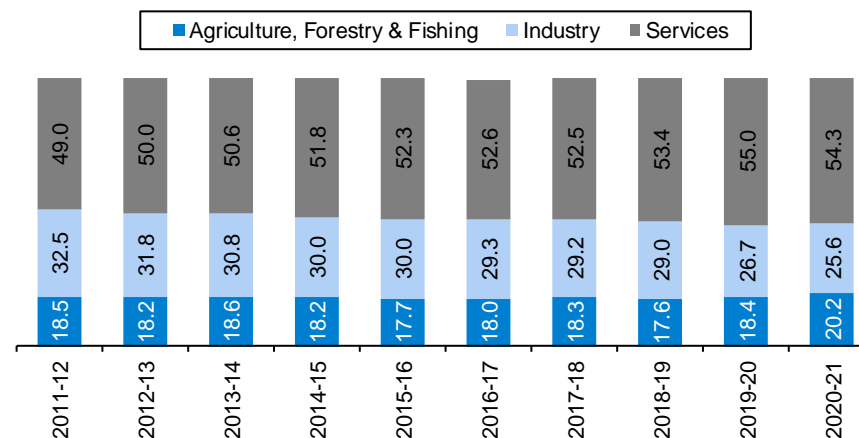
Source: GOI, PL

## Budgetary allocation in the increasing trend bodes well for the sector

Particulars (INR bn)	Actual 2018-19	Actual 2019-20	Revised 2020-21	Budget 2021-22
Crop Insurance Scheme	119	126	153	160
Interest Subsidy for short term credit to farmers	115	162	198	195
Market Intervention scheme and Price support scheme	14	20	10	15
Pradhan Mantri Annadata aay sanrakshan Yojna	47	3	3	4
PM-Kisan	12	487	650	650
PMKSY	29	27	26	40
National Food security mission	16	18	19	21

Source: GOI, PL

## Agriculture contributes to >20% of the GVA- Highest in the last decade

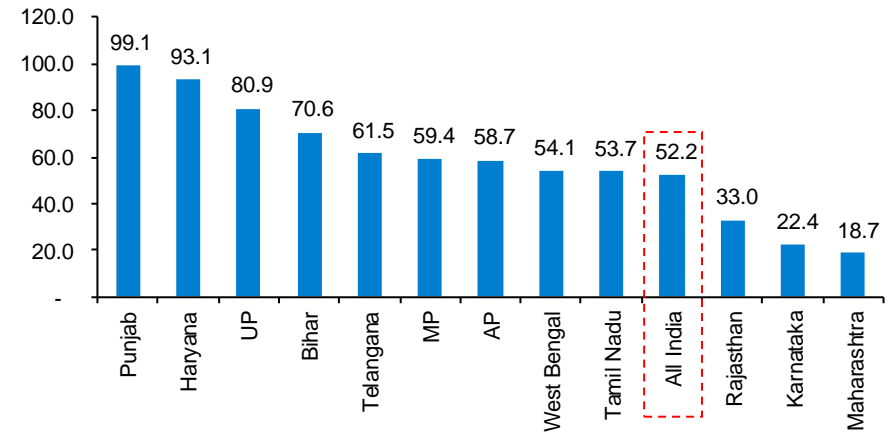


Source: GOI, PL

## Wider area under irrigation >> enhanced agri-input usage >> better yield

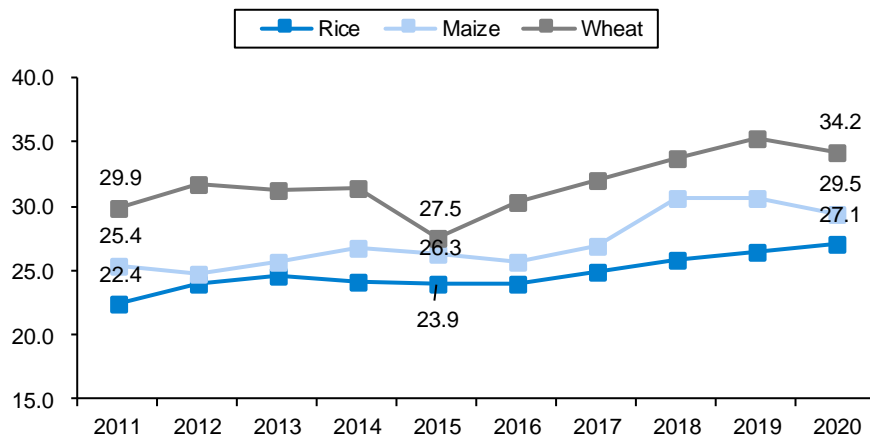
- Area under irrigation currently at 52% of net sown area and is in the increasing trend led by enhanced awareness/spending by the Govt. on water use efficiency through sprinkler and drip irrigation (per drop more crop).
- We believe, higher area under irrigation bodes well for the overall agriculture sector led by a) cropping intensity to improve; b) higher consumption of agri inputs; c) better yields; c) reduced dependency on rainfall and crop failure.
- Crop yields for major crops like Rice, Wheat and Maize has been in the northward trend.
- While remunerative soft commodity prices in the domestic market supports the entire argument.

## 52% of the India's agricultural land is under irrigation facilities



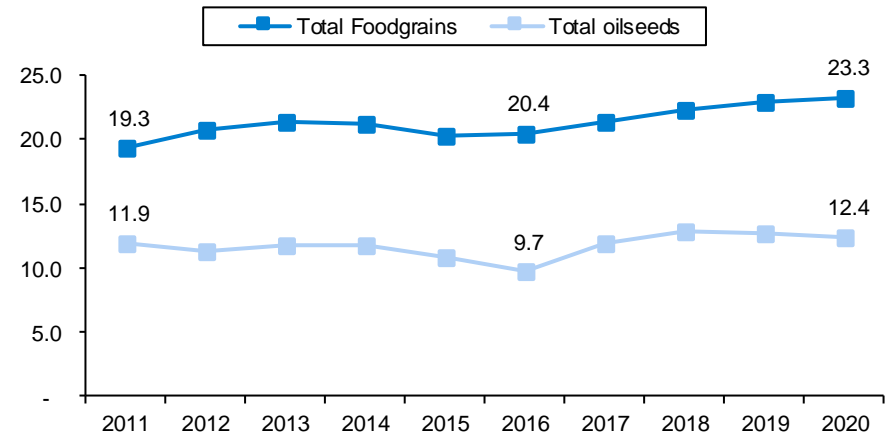
Source: Industry, PL

## Crop Yields have been constantly improving over the years (Qtl/ha)



Source: Industry, PL

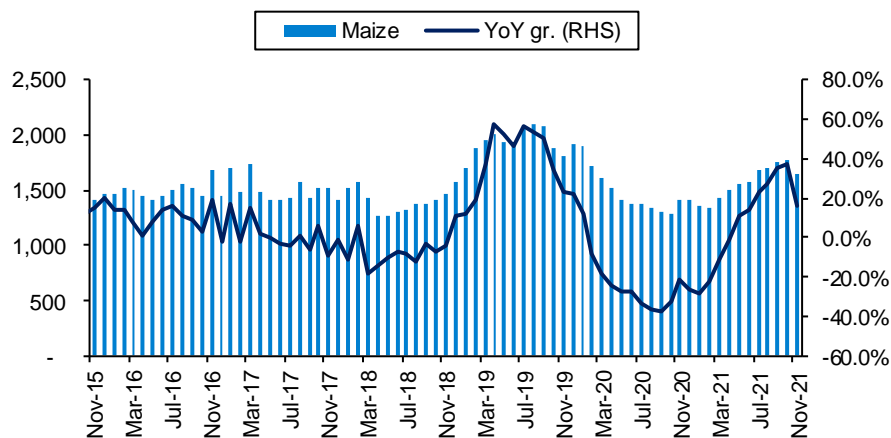
## Food grain and oilseed yield trend over the years (Qtl/ha)



Source: Industry, PL

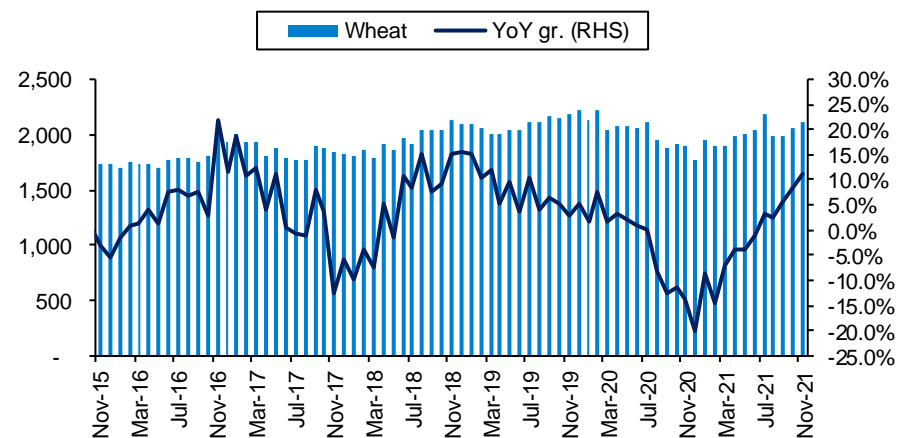
# Prices of major crops continues to trend above MSP's

All-India Average Monthly Prices- Maize (INR/Qtl)



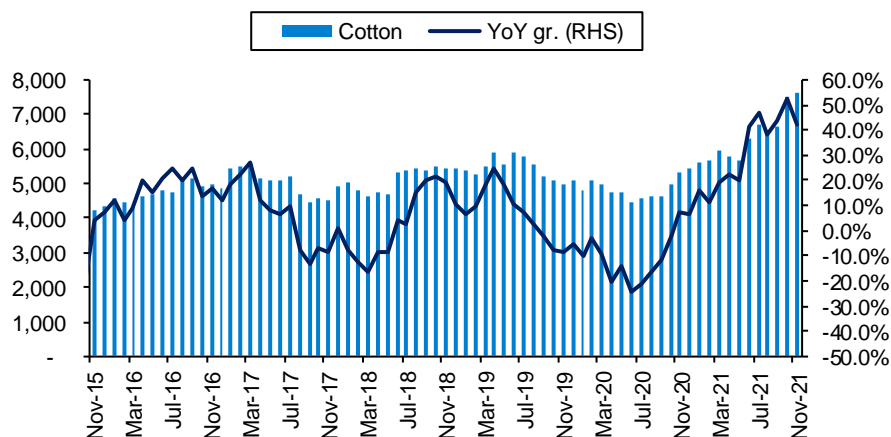
Source: GOI, PL

All-India Average Monthly Prices- Wheat (INR/Qtl)



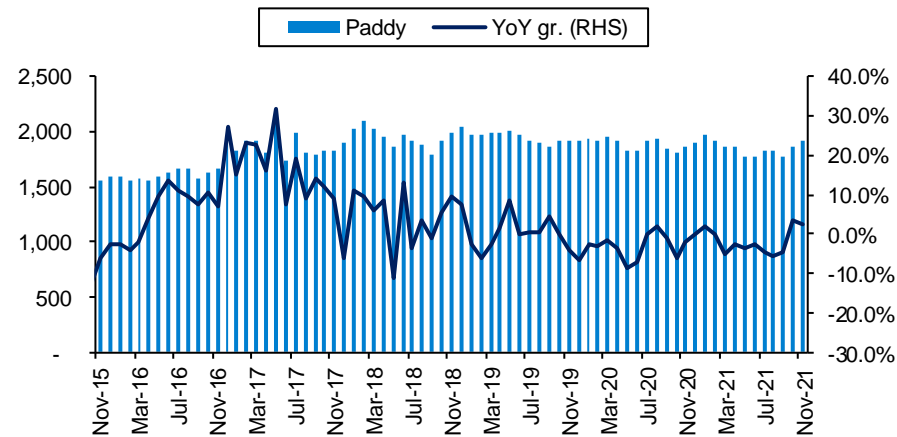
Source: GOI, PL

All-India Average Monthly Prices- Cotton (INR/Qtl)



Source: GOI, PL

All-India Average Monthly Prices- Paddy (INR/Qtl)



Source: GOI, PL

# How Crop MSP's have moved over the years...!!

Commodity	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	CAGR 13-22 (%)
<b>Kharif Crops</b>											
Paddy Common	1,250	1,310	1,360	1,410	1,470	1,550	1,750	1,815	1,868	1,940	5.0
Paddy (F)/Grade'A'	1,280	1,345	1,400	1,450	1,510	1,590	1,770	1,835	1,888	1,960	4.8
Jow ar-Hybrid	1,500	1,500	1,530	1,570	1,625	1,700	2,430	2,550	2,620	2,738	6.9
Jow ar-Maldandi	1,520	1,520	1,550	1,590	1,650	1,725	2,450	2,570	2,640	2,758	6.8
Bajra	1,175	1,250	1,250	1,275	1,330	1,425	1,950	2,000	2,150	2,250	7.5
Maize	1,175	1,310	1,310	1,325	1,365	1,425	1,700	1,760	1,850	1,870	5.3
Ragi	1,500	1,500	1,550	1,650	1,725	1,900	2,897	3,150	3,295	3,377	9.4
Tur (Arhar)	3,850	4,300	4,350	4,625	5,050	5,450	5,675	5,800	6,000	6,300	5.6
Mbong	4,400	4,500	4,600	4,850	5,225	5,575	6,975	7,050	7,196	7,275	5.7
Urad	4,300	4,300	4,350	4,625	5,000	5,400	5,600	5,700	6,000	6,300	4.3
Groundnut	3,700	4,000	4,000	4,030	4,220	4,450	4,890	5,090	5,275	5,550	4.6
Sunflow erSeed	3,700	3,700	3,750	3,800	3,950	4,100	5,388	5,650	5,885	6,015	5.5
Soyabean Black	2,200	2,500	2,500	-	-	-	-	-	-	-	-
Soyabean Yellow	2,240	2,560	2,560	2,600	2,775	3,050	3,399	3,710	3,880	3,950	6.5
Sesamum	4,200	4,500	4,600	4,700	5,000	5,300	6,249	6,485	6,855	7,307	6.3
Nigerseed	3,500	3,500	3,600	3,650	3,825	4,050	5,877	5,940	6,695	6,930	7.9
Medium Staple Cotton	3,600	3,700	3,750	3,800	3,860	4,020	5,150	5,255	5,515	5,726	5.3
Long Staple Cotton	3,900	4,000	4,050	4,100	4,160	4,320	5,450	5,550	5,825	6,025	5.0
<b>Rabi Crops</b>											
Wheat	1,350	1,400	1,450	1,525	1,625	1,735	1,840	1,925	1,975	2,015	4.6
Barley	980	1,100	1,150	1,225	1,325	1,410	1,440	1,525	1,600	1,635	5.9
Gram	3,000	3,100	3,175	3,500	4,000	4,400	4,620	4,875	5,100	5,230	6.4
Lentil (Masur)	2,900	2,950	3,075	3,400	3,950	4,250	4,475	4,800	5,100	5,500	7.4
Rapeseed/ mustard	3,000	3,050	3,100	3,350	3,700	4,000	4,200	4,425	4,650	5,050	6.0
Safflow er	2,800	3,000	3,050	3,300	3,700	4,100	4,945	5,215	5,327	5,441	7.7
<b>Commercial Crops</b>											
Jute	2,200	2,300	2,400	2,700	3,200	3,500	3,700	3,950	4,225	4,500	8.3
Sugarcane	170	210	220	230	230	255	275	275	285	290	6.1
Copra (Milling)	5,250	5,250	5,550	5,950	6,500	7,511	9,521	9,960	10,335		
Copra (Ball)	5,500	5,500	5,830	6,240	6,785	7,750	9,920	10,300	10,600		

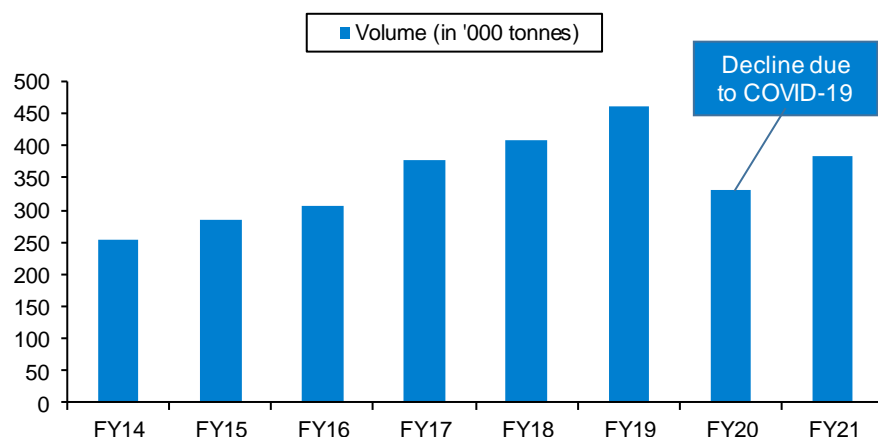
**Average increase in MSP's across crops has been 35% in the last 5 years.**

# China+1 strategy to fuel growth

## Opens up additional opportunity for the domestic players

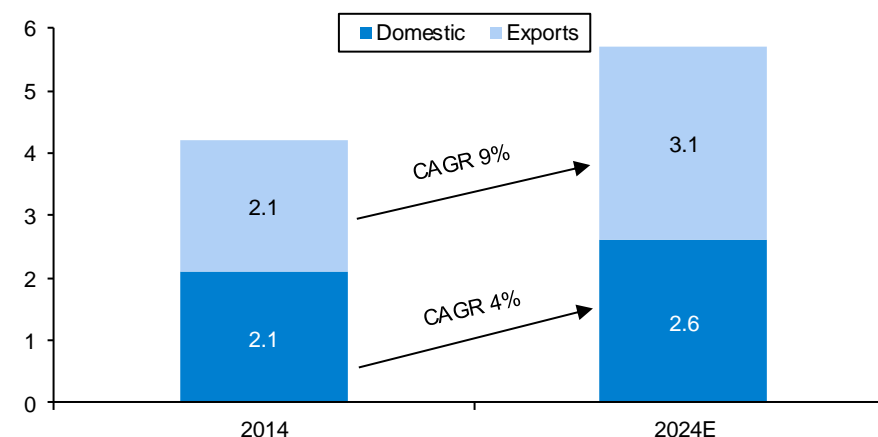
- The Chinese government's environmental clampdown led to closure of environmentally non-compliant agrochemical manufacturing facilities, resulting in short supply of key technical and intermediates over the few years and sharp price increase in the international market.
- Consequently, domestic industry has witnessed exponential surge in generics exports and contract manufacturing in the last few years with exports contribution reaching to ~50% of the total market size currently.
- India's agrochemical export have grown at a CAGR of 6% (by volumes) over 2014-21. While, going forward the export revenues is estimated to grow at a much expedite rate (of 9% by FY24) with total exports share likely to be 55% of revenues pie to USD5.7bn by 2024.
- We believe, India is likely to emerge as an alternative procurement base for global agrochemical industry primarily led by a) available resources; b) favorable cost dynamics; and c) availability of technically skilled & cheap labor.

## Exports volumes have grown at CAGR of 6% over FY14-21...



Source: Industry, PL

## ...while the exports is anticipated to grow at 9% by FY24



Source: Industry, PL



# Off-patented molecules to power growth

- Agrochemicals worth ~USD6bn are going off-patent by 2030
- India is the fourth largest producer of agrochemicals after U.S., Japan, and China and has emerged as 13th largest exporter of pesticides. It is a major hub of generic pesticides production. The fact that 22 such molecules are going to come out of their patent period will substantially expand the offerings of Indian companies and may help fetch extra revenue.
- Industry data suggest that ~30-40% of the off-patented molecules are taken up by generic manufactures, while balance ~60-70% are not adopted by generic players primarily led by a) limited market and applicability in regions; b) unavailability and lower capability to manufacture the intermediates.

## What does it mean for the Generic players?

- Generic companies especially in developing countries (where they have limited R&D facility as well as lower balance sheet strength to carry these cost) would be major beneficiaries of the molecules going off-patent.
- As these molecules already come along with themselves with a better efficacy to fight against pest and already have a better market and target crop, hence it becomes easy for generic players to leverage on their distribution network.
- Generic players breaks the exclusivity of molecules/ companies. Hence there remains no pricing edge for that particular product and becomes more easier for farmers to adopt to that product.
- We believe, it augurs well for domestic agrochemical players, as it would result into opening up of huge opportunity for domestic companies both on domestic formulation as well on exports front.

## 22 molecules going Off-patent by 2030 worth USD6bn

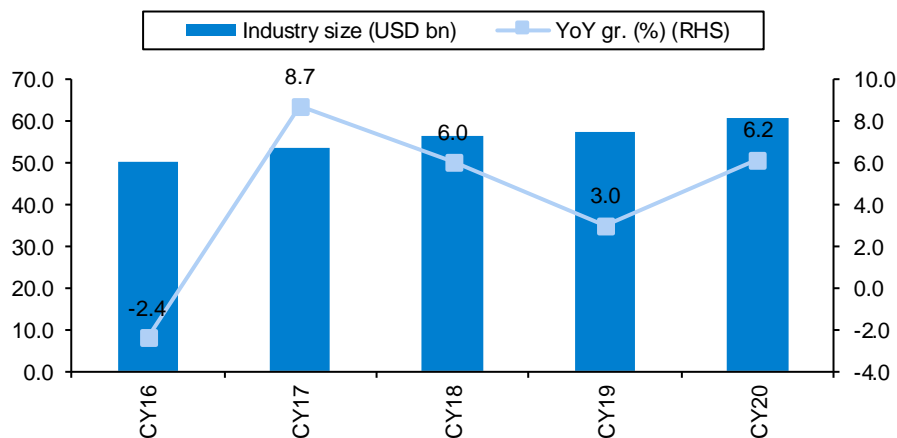
Sr. No.	Name of Molecule	Name of Inventor	Market Size USD Mn, 2019	Patent Expiry Usage
1	Bixafen	Bayer Crop Science	276	2023 Broad spectrum fungicide for cereals.
2	Chlorantraniliprole	Corteva/FMC	1750	2024 Chewing insects of soybean, F&V, rice, cotton, maize, pome fruit, sugarcane potato, and cereals.
3	Cyantraniliprole	Corteva/FMC/Syngenta	120	2026 Effective against the larval stages of lepidopteran insects; and also on thrips, aphids, and some other chewing and sucking insects on a variety of crops.
4	Fenpyrazamine	Sumitomo Chemical	11	2022 Highly effective against grey mold, stem rot, and brown rot in fruits and vegetables.
5	Flubendiamide	Bayer Crop Science	507	2024 Mainly effective for controlling lepidopteron pests including resistant strain in rice, cotton, corn, grapes, other fruits, and vegetables.
6	Fluopicolide	Bayer Crop Science	45	2024 Fungicide for grapes, potatoes, fruits, and vegetables.
7	Fluopyram	Bayer Crop Science	87	2024 Used against fungal diseases such as gray mold (Botrytis), powdery mildew, apple scab, Alternaria, Sclerotinia, and Monilinia.
8	Fluxapyroxad	BASF SE	491	2022 Broad spectrum fungicide for cereals, soybean, specialty crops, and turf.
9	Isopyrazam	Syngenta AG	129	2023 Broad spectrum fungicide. Controls a wide range of fungal pathogens including Septoria tritici, Puccinia recondita, and Puccinia striiformis on wheat.
10	mandipropamid	Syngenta AG	179	2023 Late blight of potato and tomato. Also used in tobacco, F&V, and vine.
11	Penflufen	Bayer Crop Science	170	2024 Potato: Black Scurf (Rhizoctonia solani), Silver Scurf (Helminthosporium solani), Dry rot (Fusarium spp.). Cereals: Root rot (Rhizoctonia spp.), Smut, (Rape, Soybean, Cotton), and a number of seed-borne pathogens.
12	Penthiopyrad	Corteva Agriscience	85	2024 It offers unique RootingPower™ that results in stronger, healthier roots for higher crop productivity.
13	Pinoxaden	Syngenta AG	421	2026 Highly selective systemic herbicide used to control monocotyledonous grass weeds in crops such as wild oats, rye-grass, and black grass in winter and spring wheat and winter and spring barley.
14	Pyriofenone	Ishihara	5	2024 Fungicide developed for the control of powdery mildew in cereals and grape vines.
15	Pyroxulam	Corteva Agriscience	215	2024 Broad spectrum grass and broadleaf weeds of cereals.
16	Sedaxane	Syngenta AG	108	2024 Long-lasting protection against difficult-to-control seed-, soil-, and air-borne pathogens such as: Rhizoctonia spp., Ustilago spp. (on cereals), Tilletia caries, Urocystis occulta, Pyrenophora graminea, Microdochium nivale, Typhula spp.,
17	Thiencarbazone-methyl	Bayer Crop Science	155	2024 Herbicide used for the selective control of grasses and broadleaf weeds primarily in corn.
18	Valifenalate	Ishihara	25	2024 Used to control mildew in many crops including grapes, potatoes, and tomatoes.
19	Benzovindiflupyr	Syngenta AG	419	2028 Control broad range of fungal diseases-blight, mildew, rust, scab, leafspot on corn, soybean, ornamentals, turf, etc.
20	Sulfoxaflor	Corteva Agriscience	190	2027 Sucking pests of turf, soybean, cotton, cereals, and F&V.
21	Saflufenacil	BASF	225	2024 Broadleaf weeds of soybean, maize, sugarcane, cereals, non-crop, and orchards.
22	Aminopyralid	Corteva Agriscience	160	2021 Broad spectrum weedicide for pasture, rangeland, oil palm, rubber, F&V, and cereals.

# Global Consolidation to revitalize the domestic players

## Consolidation in the global agrochemicals offers additional opportunity for the domestic industry as well

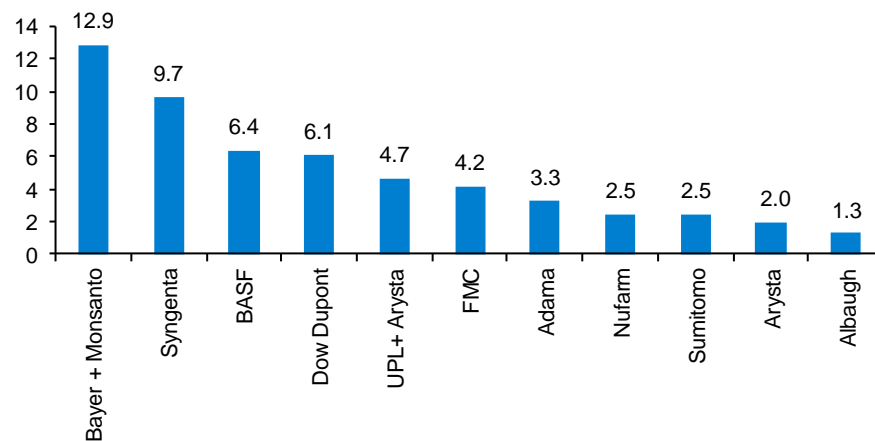
- In the past few years, number of agrochemical companies from global agrochemical industry have acquired or merged their business operations in order to counter fluctuating demand conditions, currencies and crop prices which had adversely affected their sales and profit margins. The merged entities bring along a combined portfolio of agrochemicals and seeds with enhanced geographical reach and superior R&D expertise for moving up into the value chain from being 'a pure agri-input company' to 'an agri-science company' (as they have been addressing end to end needs of farmers beyond agro-inputs).
- With consolidation largely in place over last 5 years, global agrochemical and seed industry is now being controlled by four big players (as against six players earlier) commanding a lion's share of 55-60% in the global agrochemical market. Such an oligopolistic structure in the global industry will likely result into a) more pricing power; b) concentrated product portfolio; c) revenue and cost synergies arising from extended distribution network, cross-selling of products and removal of duplicity spend on operational overheads.
- Consolidation in the global agro chemical industry also offers additional opportunity to domestic players, led by enhanced demand in case of down trading (purchasing generic product for the same molecular composition) by global farmers. This coupled with rising R&D spends amidst increasing costs in developing new active ingredients would result into higher outsourcing of CRAMS towards cost effective nations like India.

## Performance of global industry post consolidation from CY16 onwards



Source: Industry, PL

## Top-4 players controls 55-60% of global agrochemical industry (USD bn)



Source: Industry, PL

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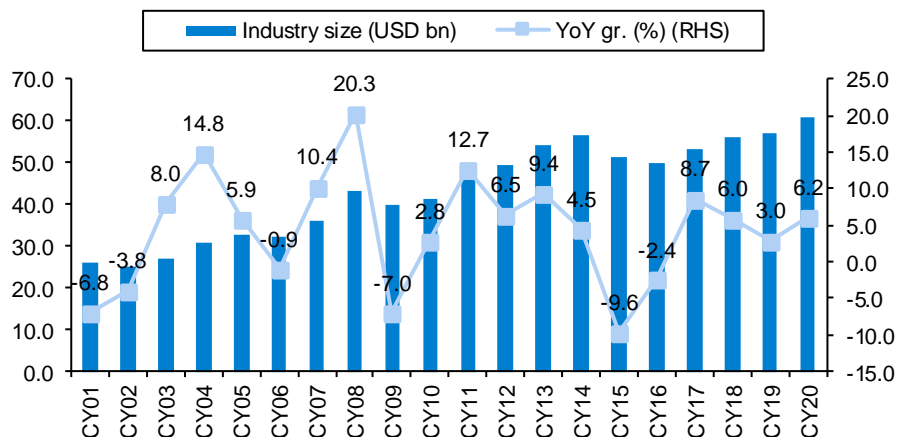
# Global Agrochemical Industry

# Global Agrochemical Industry

## Oligopolistic structure of the industry

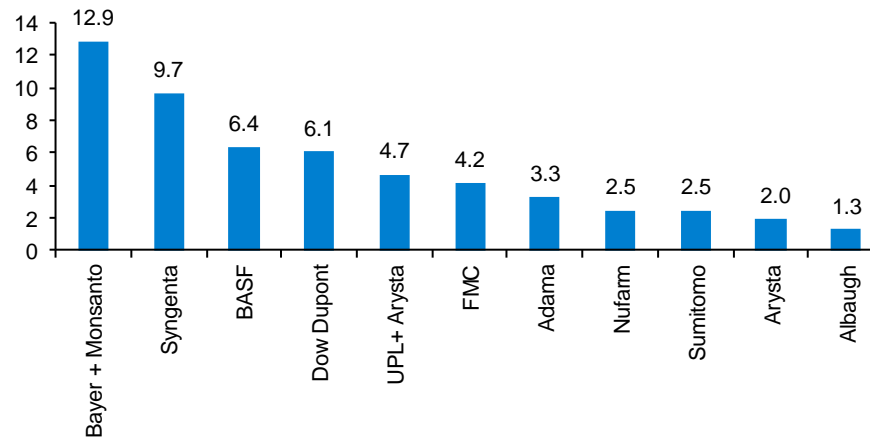
- In the last 5 years, number of global agrochemical companies have acquired or merged their business operations in order to counter fluctuating demand conditions, currencies and crop prices which had adversely affected sales and profit margins.
- Despite, several challenges and uncertainties in the past, the global agriculture industry has managed to grow at a CAGR of 6% over CY01-20 to reach USD60bn. While it is expected to grow at a healthy pace, going forward.
- With consolidation in the industry largely in place, the global agrochemical and seed industry is now being controlled by four big players (as against six players earlier) commanding a lion's share of 55-60% in global agrochemical market.
- The oligopolistic structure in the global industry is likely to result into a) superior pricing power; b) concentrated product portfolio; c) revenue and cost synergies arising from extended distribution network, cross-selling of products and removal of duplicity spend on operational overheads.

## Global Agrochemical Industry Growth trend (%)



Source: Industry, PL

## Oligopolistic structure of industry controlled by Big-4's



Source: Industry, PL

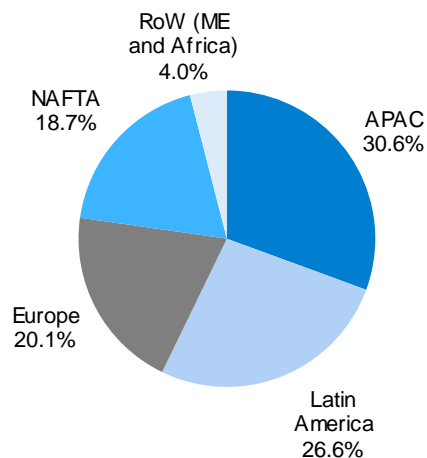
## Enhanced focus of every nation to secure the food security is likely to keep the sector's outlook bright

- We believe that the sector's long term prospects of increasing yields remains intact led by a) growing demand for food; b) declining arable land and water resources; c) stagnant yield. Ultimately, higher consumption of food drives demand of agri-inputs i.e. seeds, fertilizers, agrochemicals and irrigation.
- Superior growth is expected from developing nations like APAC, LATAM, Africa and ROW which are expected to grow at a rate of 17%/15%21%/16% respectively. Substantial growth in emerging and low-income countries is expected on account of better resource availability and larger investments in agri technology.
- Of overall agrochemicals sector growth, herbicide segment is likely to grow at a much faster rate than other categories primarily led by a) increasing agricultural wage rate; b) lower availability of farm labor; c) changes in farm policies in various emerging economies like LATAM.
- Global agrochemical industry can be broadly categorized into innovators and generics players. As per Philips McDougall, revenue share of patented and generics molecules stands at 20:80. Innovators are R&D based patented product players, while off-patented products players are termed as generic players.
- Geography-wise contribution stands at Europe, Latin America, Asia, NAFTA and Middle East/Africa constitutes 20%, 27%, 31%, 19% and 4% respectively of global agrochemical market.
- While on category-wise break-up- Herbicides, insecticides, fungicides and others constitutes 44%, 27%, 25% and 4% respectively in global agrochemical market.

# Global agriculture - Break-up of market segment

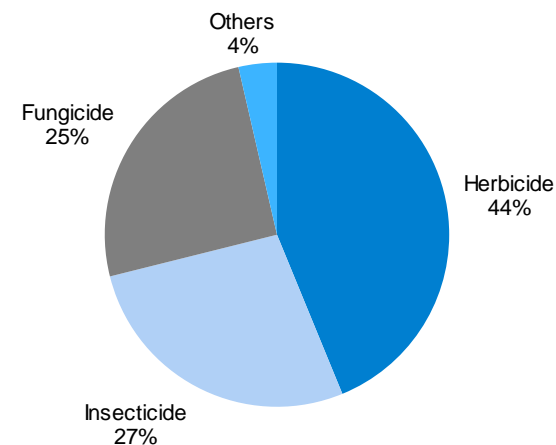
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- Global agrochemical industry can be broadly categorized into innovators and generics players. As per Philips McDougall, the revenue share of patented and generics molecules stands at 20:80.

**APAC and LATAM drives >50% of the market**



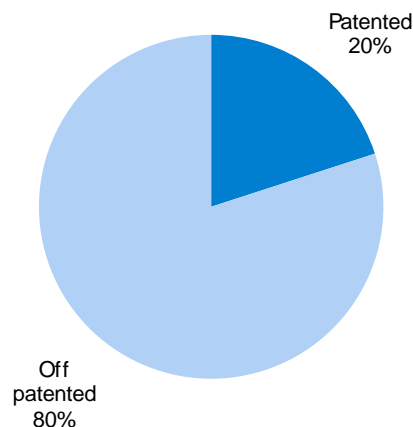
Source: Industry, PL

**Herbicides continues to dominate the industry**



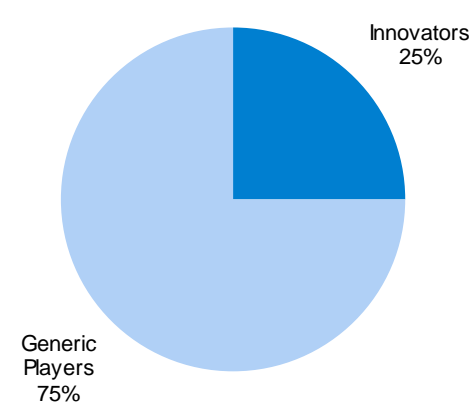
Source: Industry, PL

**Off-Patented molecules enjoys 80% of the market**



Source: Industry, PL

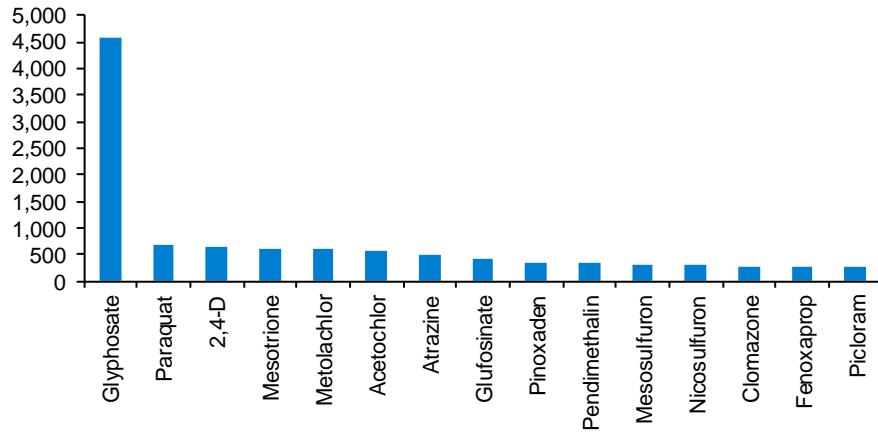
**Generic players rules 75% of the global market**



Source: Industry, PL

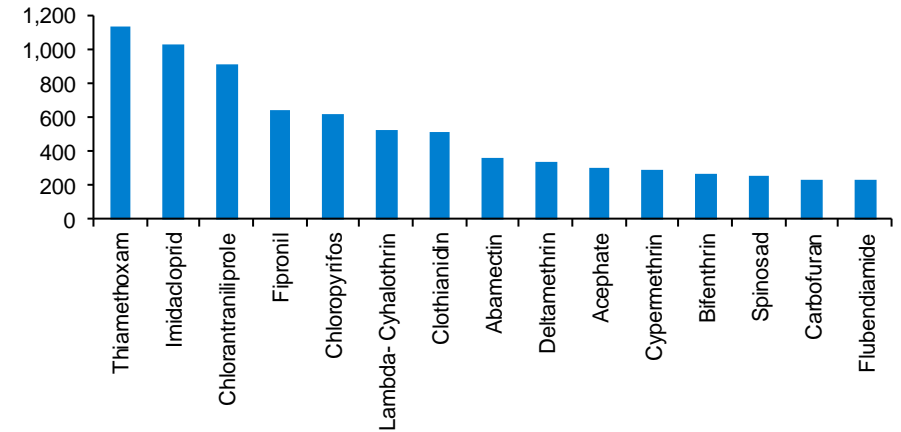
# Global Agriculture - Top Selling Molecules

Top Selling Herbicide Globally (USD Mn)



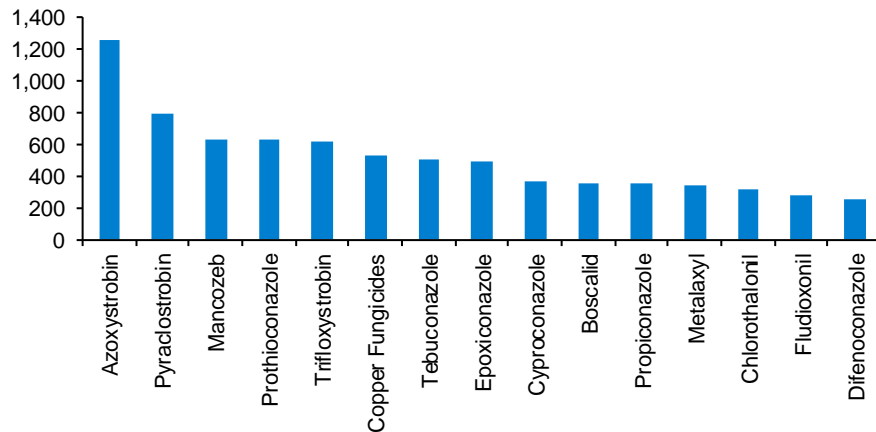
Source: Industry, PL

Top Selling Insecticide Globally (USD Mn)



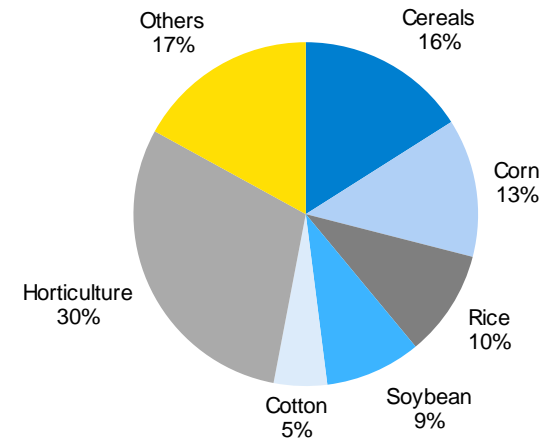
Source: Industry, PL

Top Selling Fungicide Globally (USD Mn)



Source: Industry, PL

Global Crop Protection market segmentation by crop type (%)



Source: Industry, PL



# Global Bio-pesticides industry - Evolving growth driver in the space

- The increase in demand for sustainable agriculture practices, integrated pest management, organic farming, and growing need to curb post-harvest crop losses have encouraged development of agricultural biologicals.
- Global bio-pesticides market is projected to grow at a CAGR of 14.7 from USD 4.3bn in CY20 to reach USD 8.5bn by CY25. With rising concerns on health and environment depletion use of bio-pesticides is evolving as a rising trend.
- The Bio-insecticide market is likely to lead the bio-pesticides segment with major usage coming in from the horticulture segment (Fruits and Vegetables).

## Key Drivers

- Increasing demand for organic food and growing organic agriculture across the globe would be the key demand driver for the global bio-pesticide market. As consumers are increasingly becoming aware of chemicals used in food production and potential hazards of chemical residue on food, they are supporting chemical free production alternatives, pushing growers for organic farming and thereby driving demand for bio-pesticides.
- High cost associated with development of synthetic crop protection products which requires an extensive R&D activities and has to go through regulatory approvals as opposed to bio-pesticides, which are relatively less expensive and have quick development processes. Hence, due to its cost-effectiveness, smaller companies/start-ups are venturing into this market with limited research budgets. This in turn has resulted into intense competition for major players in agricultural biologicals market.

## Limitations

- Biological products have a short or limited shelf life and high probability of contamination.

## Key Players in the global market

- The major players in the Bio-pesticide market includes names like Bayer crop science AG, Marrone Bio innovation, Certis USA, Dow chemicals, Isagro SPA, Camson Bio-technologies, Andermatt Biocontrol AG, BASF Corporation.

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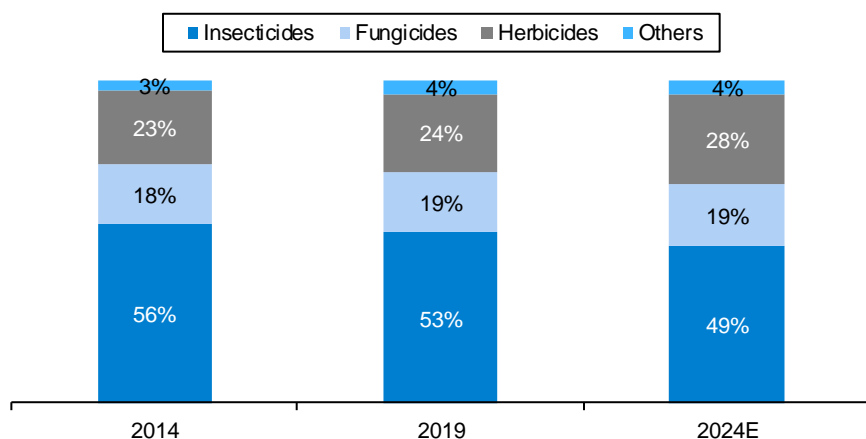
# Domestic Agrochemical Industry

# Domestic agrochemical Industry

## Long term growth story intact

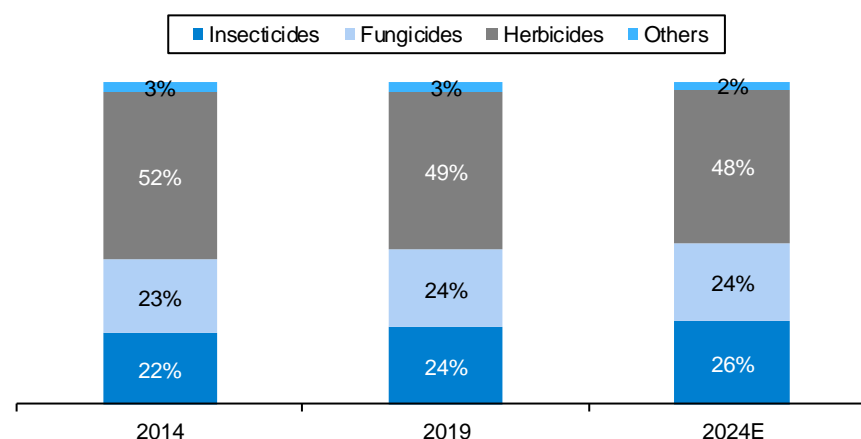
- The share of agriculture to India's GDP is ~20% in FY21 to INR446bn (highest in the last 17 years).
- Domestic agrochemical industry has been witnessing structural changes, driven by a) rising domestic demand; b) tighter supply from China; c) substantial opportunity to explore from products going off-patent; and d) strategic partnerships with global giants.
- With >50% of population dependent on farming and muted growth in their income over last few years, government's thrust on doubling the farmers' income through higher MSPs for crops, increased irrigation coverage, better procurement and higher agricultural credit augur well for the sector.
- India is 4th largest producer of agrochemicals after USA, Japan and China. Domestic agrochemical market have grown at CAGR of 9% during 2015-20 and is worth USD4.2bn, currently equally distributed between domestic and export revenues.
- The export revenues is estimated to grow at a much expedite rate with total share likely to be 55% of total revenues to USD5.7bn by 2024.
- With rising labor cost globally; we expect India is likely to follow the global trend of higher herbicide consumption in the medium to longer term.

## India's pesticide consumption largely skewed towards insecticides (%)



Source: Industry, PL

## Herbicides dominates the global agrochemicals space (%)

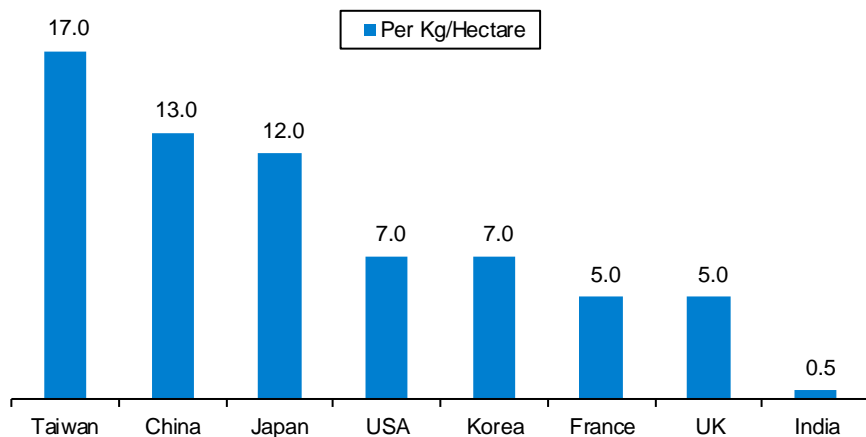


Source: Industry, PL

# Per-capita consumption much below global averages

- India is the leading producer (in terms of cropped area) for rice, wheat and cotton, however the area treated under agrochemicals remains very low as compared to global averages (~35-40% of area is treated with agro chemicals).
- India's share in global agricultural output is 12%, but India's share in global pesticides use is just around 1%.
- While, domestic consumption of agro chemicals is substantially below the global standards at ~0.58 kg/hectare.
- The Top-5 states (AP, Punjab, MH, Karnataka and Gujarat) consumes >60% of the total agrochemicals in India.
- While, Paddy and cotton are major agrochemicals consuming crops (consumes >60% of the total agrochemical consumption).

## Per-capita consumption of agrochemicals much below global averages



Source: Industry, PL

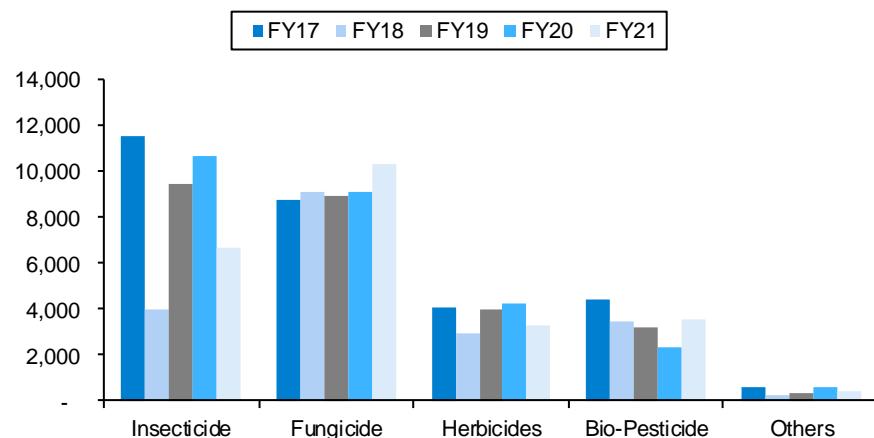
## Country-wise – Value of Agri-output, Pesticides usage and AI registrations

Country	Value of Agri Output (USD bn)	Pesticides Use (tonne)	No. of AI's registered
China	968	17,63,000	681
India	401	50,410	279
EU	239	3,68,588	489
USA	193	4,07,779	323
Brazil	94	3,77,176	477
Japan	57	51,006	583
Australia	36	50,922	561
World	3,342	41,16,832	NA

Source: Industry, PL

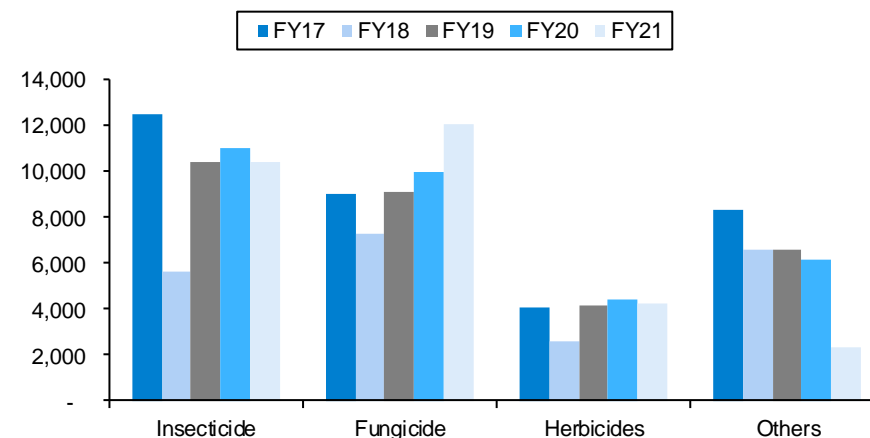
# Industry largely skewed towards the insecticides segment

Category-wise consumption of Pesticides over the years (in MT)



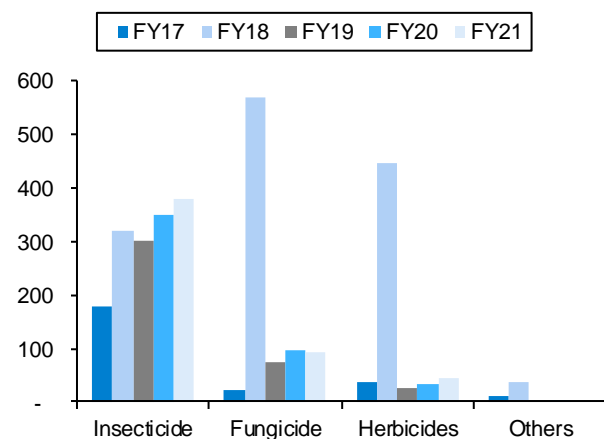
Source: GOI, PL; **Note: During FY21 only 11 states have provided data**

Demand for Indigenous Pesticides over the years (in MT)



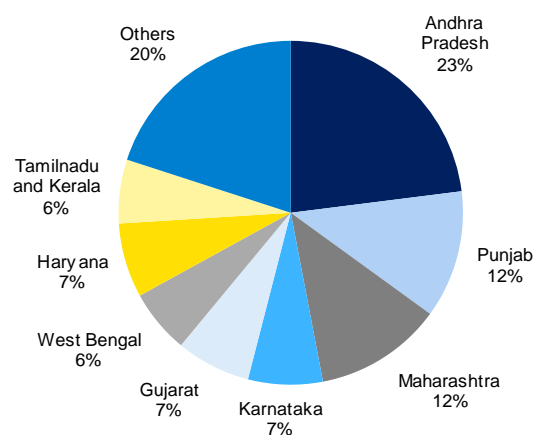
Source: GOI, PL; **Note: During FY21 only 11 states have provided data**

Demand for Imported Pesticides over the years (in MT)



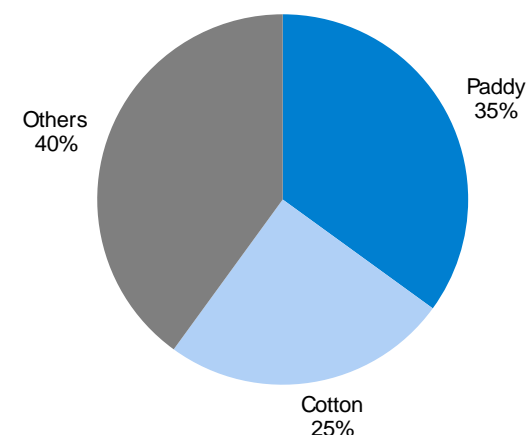
Source: GOI, PL

Top-5 states contributes >60% consumption



Source: Industry, PL

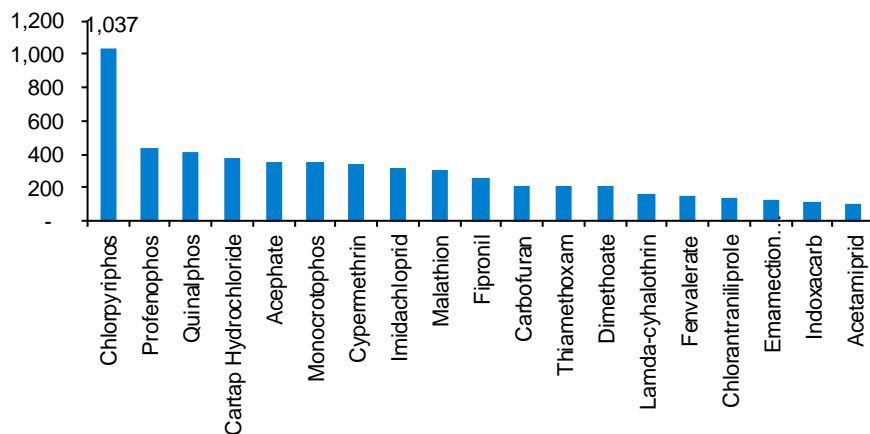
Paddy and Cotton dominates the domestic market



Source: Industry, PL

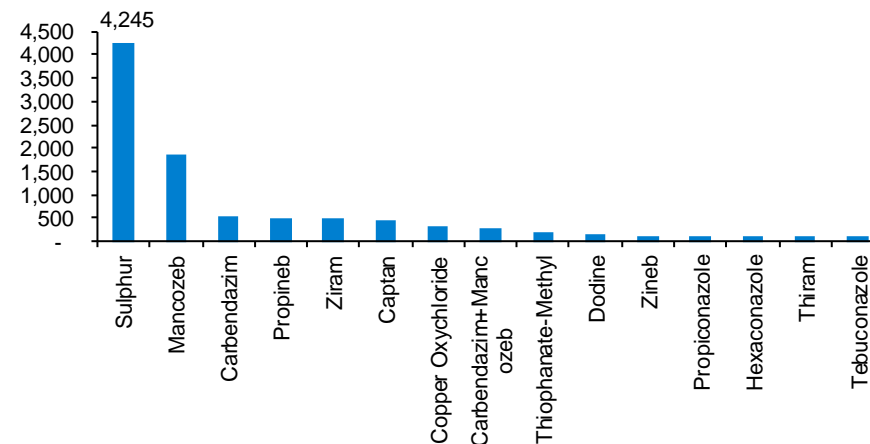
# Domestic agrochemicals- Consumption trend by Category

Most Consumed Insecticide in India in FY21 (in MT)



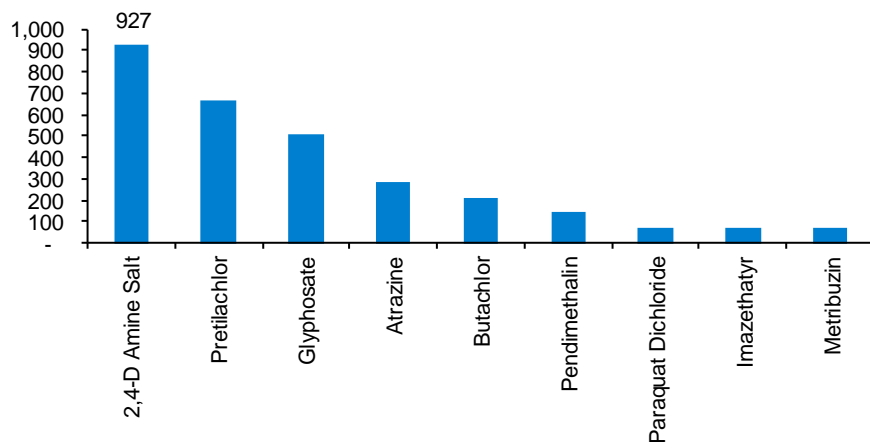
Source: GOI, PL; **Note: During FY21 only 11 states have provided data**

Most Consumed Fungicide in India in FY21 (in MT)



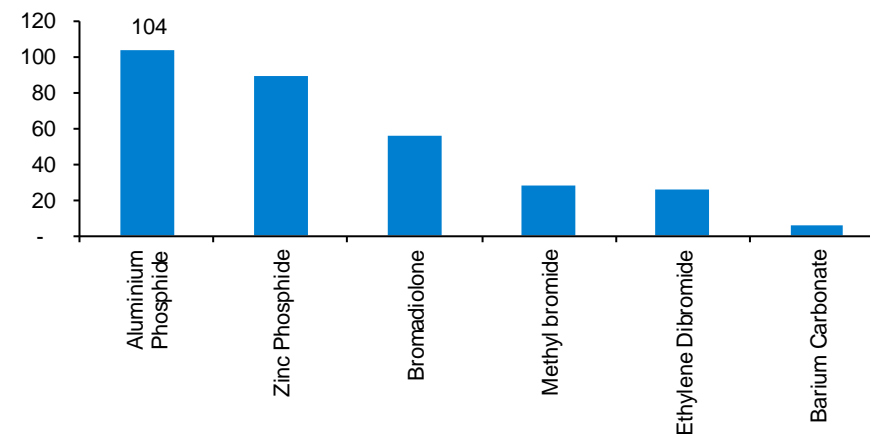
Source: GOI, PL; **Note: During FY21 only 11 states have provided data**

Most Consumed Herbicide in India in FY21 (in MT)



Source: GOI, PL; **Note: During FY21 only 11 states have provided data**

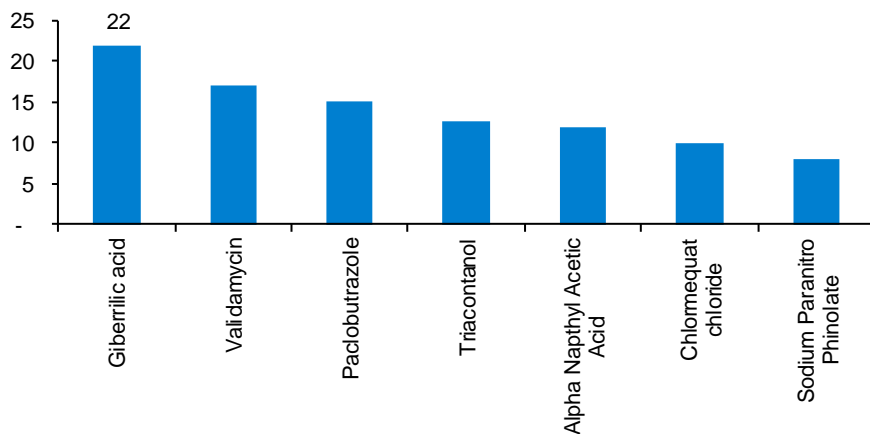
Most Consumed Rodenticide in India in FY21 (in MT)



Source: GOI, PL; **Note: During FY21 only 11 states have provided data**

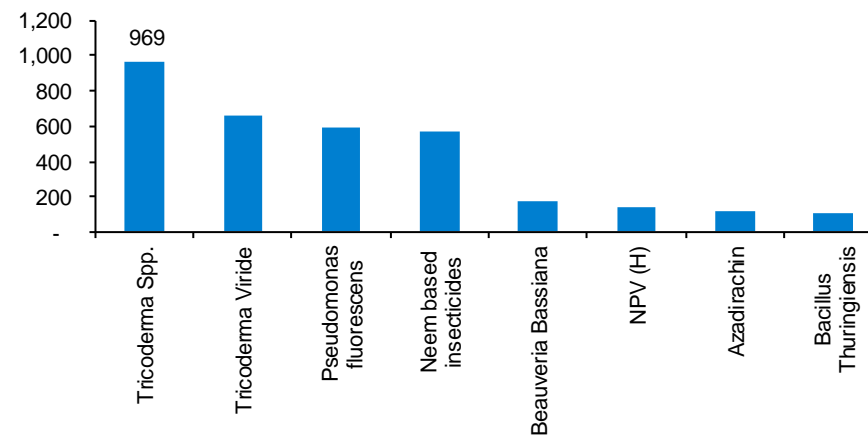
## Contd...

Most Consumed PGR in India in FY21 (in MT)



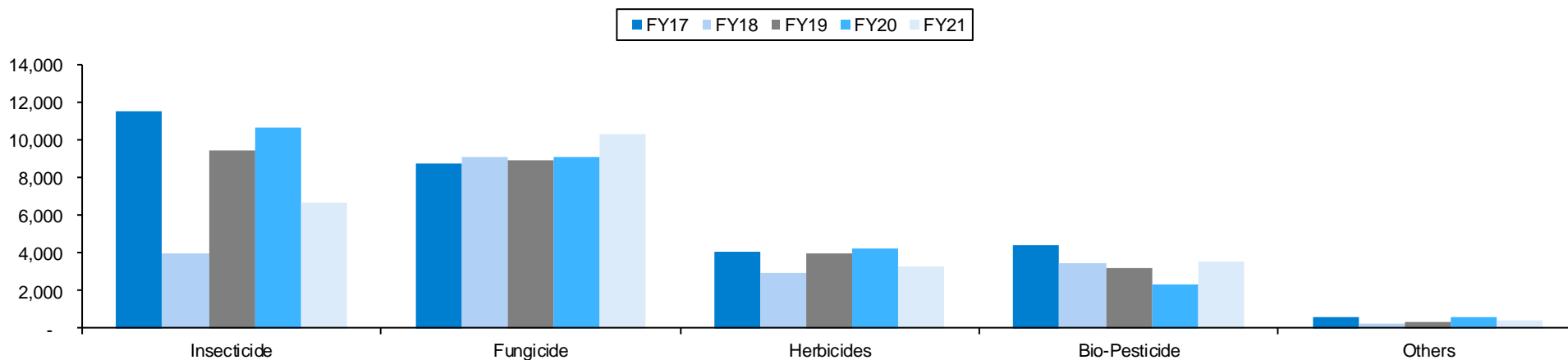
Source: GOI, PL; **Note: During FY21 only 11 states have provided data**

Most Consumed Bio-Pesticide in India in FY21 (in MT)



Source: GOI, PL; **Note: During FY21 only 11 states have provided data**

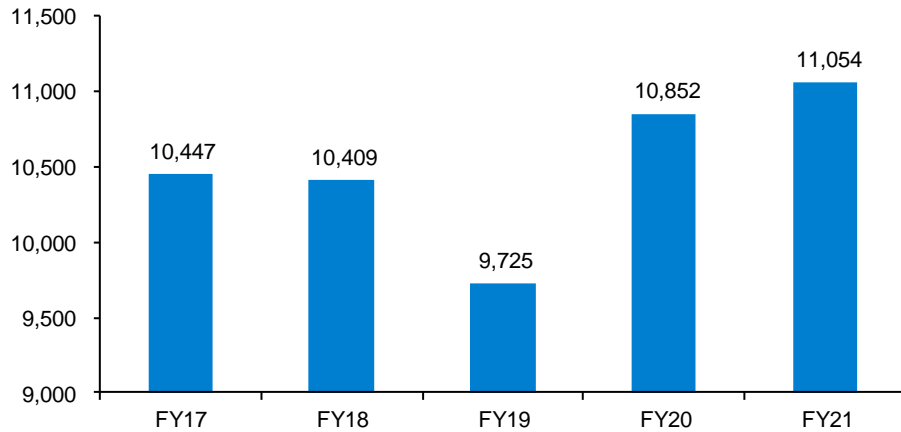
Category-wise agrochemical consumption in the last 5 years (in Mt)



Source: GOI, PL; **Note: During FY21 only 11 states have provided data**

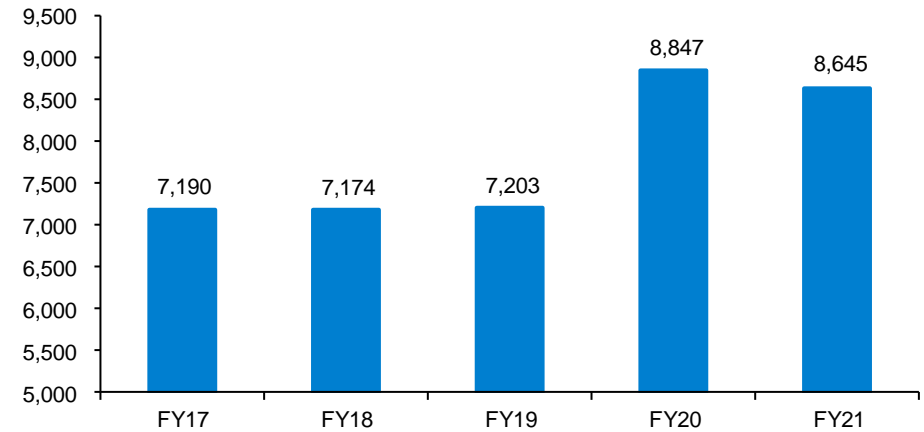
# Domestic Bio-pesticides market - The evolving opportunity in the space

Domestic demand trend of Bio-pesticides over the years (in MT)



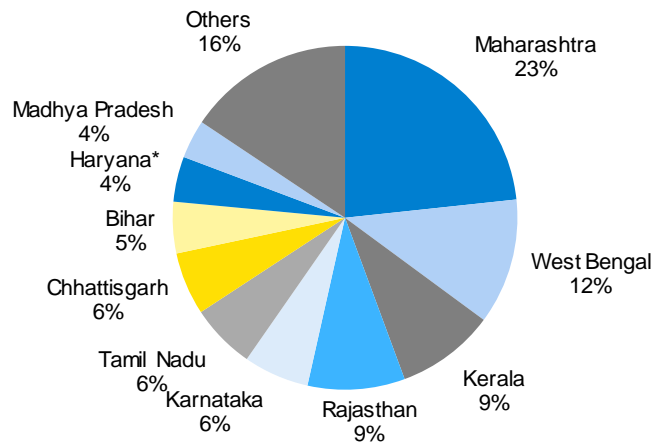
Source: Industry, PL

Domestic Consumption trend of Bio-pesticides over the years (in MT)



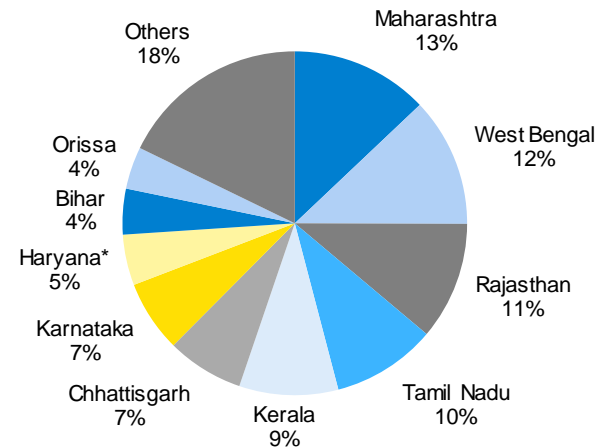
Source: Industry, PL

Top-5 states contributes to 60% of the Bio-pesticide demand



Source: Industry, PL

Top-5 states contributes to 55% of the Bio-pesticide consumption



Source: Industry, PL



# Easing regulatory environment

Activity	9(4)- ME-Too registration	9(3) and 9(3b)-Fresh Registration
Documentation & Form I & Other documents Verification by Legal	0.5 month	1 Month
CIB&RC Analysis, Covering:	1-3 Months	6-12 Months
Chemistry		
Bioefficacy		
Toxicology		
Packaging		
Sample Submission, collection & Analysis	3-6 Months	3-6 Months
MRL- Fixation (MoH)	1-3 Months	3-12 Months
Registration Certificate Issuance	2 Months	2 Months
Overall Process	Minimum 6 months	Minimum 12-36 Months

## Favorable regulatory environment and robust global agrochemical demand to benefit local manufacturers

- Since pesticide production was included in the Make in India initiative, increasing self-reliance in production and R&D of pesticides has been encouraged.
- Domestic registration policy was amended to reduce imports and boost domestic manufacturing.
- Further, robust demand scenario in agrochemical products both in global and domestic front is likely to benefit the local manufacturers.

# Regulatory and product approval process

## Agrochemical product registrations in India

- The agrochemicals registration process in India (imports, Indigenous manufacture and sales) are regulated under the Insecticides Act 1968. Under the Act, there is a compulsory registration of pesticides at central level and license of their manufacture, import and sales are dealt at state levels.
- The Pesticide regulations in India is governed by two Govt. bodies: Central Insecticides Board & Registration committee (CIBRC) and Food Safety and Standard Authority of India (FSSAI).
- Technical grade product registrations can be obtained in three (3) ways: (a) Registration u/s 9(3b)- for new molecule introduced for the first time in India (usually granted for a period of 3-4 years); (b) Regular registration u/s 9(3)- subject to submission of complete data; (c) 'Me-Too' registration u/s 9(4)- after exclusivity lapse of 9(3) registration of a molecule, any other applicant can apply for the registration.
- If technical is being registered for the first time in India, the applicant has to obtain registration under section 9(3); while if the product to be registered are identical in its use or already marketed/registered with any other applicant earlier in the country, then the applicant needs to get the product registered under section 9(4).
- After registration Committee approves the product, registration certificate is issued and only then can the product can be marketed in India. The entire registration process takes 6-36 months depending on type of registration applied, number of crops applied for etc.
- Cost of registration varies on the type of technical to be registered i.e higher for 9(3) molecules and lower for the Me-Too 9(4) molecules. Hence, the 9(3) molecules brings along better margin profile for companies with certain exclusivity period with them.

## Shortcomings

- The registration time in India is time consuming and takes around 6-36months for CIBRC to approve the product. The decision making is sometimes affected by non-availability of board members as well.
- Registration process is mainly pertinent to insecticides, as the name suggests and powers invested in the state are quite negligible in comparison.
- The act controls import, manufacture, sale, transport, distribution and use of insecticides with a view to preventing risk to humans and animals, and for other matters connected therewith. However, the legislation does not explicitly recognize environmental hazards of pesticides or threat they pose to biodiversity.

# Draft Order to ban 27 molecules; CCFI defends 17 out of the 27 products

## Draft order to ban 27 molecules, CCFI defends 17 out of the 27 products from being banned

- The central government (CG) in May'20 have issued a draft order to ban 27 agrochemical products citing risk to human being and animals, which is applicable to exports of pesticides as well. As per industry sources, these 27 molecules cumulative have over 130 formulations and combination products (both for the domestic and exports market together) having a market size of ~INR155bn (domestic and exports combined).
- Industry strongly believes that govt. will roll back this decision on the back of (a) proposed products contribute >20% of domestic market ; b) only 3 out of the 27 products fall under the red triangle category (considered most hazardous) ; (c) most of products are being used in other countries globally; d) substitute products available in the market are at much premium rate.
- We believe that Govt. would reconsider the order as a) it covers few sizeable lower value generic molecules, which command decent chunk of the domestic market; b) no immediate replacement available; however can be replaced with expensive imports and c) doesn't fit with Govt.'s impetus on doubling farmer's income and Make in India initiatives.
- Recently, CCFI (Crop care Federation of India) members have defended 17 out of the 27 molecules proposed under the ban, citing no scientific rationale and adverse impact on domestic agrochemicals market and farmers.

## Origin of draft order

- In July'13, Department of Agriculture, government of India, constituted an expert committee under the leadership of Dr. Anupam Verma, to review use of neonicotinoid pesticides registered in India.
- Later the committee also reviewed 66 pesticides which were at that time banned / restricted / withdrawn for usage in one or more countries, but were being sold and used in India. After deliberation and reviewing available scientific data, the committee recommended out of those 66 pesticides, 18 to be continued for usage, 6 to be phased out by 2020, 13 to be completely banned in the country and 27 to be reviewed again in 2018 after completion of recommended studies.
- This report was submitted in the year 2015 is the base of draft notification, which the government issued in May'20, banning use of those 27 pesticides, which were to be reviewed again in year 2018.

# Proposed 27 molecules under ban

Sr. No.	Technical Name	Red Label - Yes/No	Technical Manufacturer/Importer	Brand Name (Company)
1	Acephate	x	Cheminova, UPL, IIL, Heranba, IIL, Gharda, Meghmani, Sudarshan, Bayer, Adama	Hunk (Rallis), Lancer (UPL), Oval (PI Ind), Megastar (Monsanto), Acefex (Excel crop), Asataf (Tata), Miltaf (IIL), Ortain (Coromandel), Topsis (Atul), Pace (Nagarjuna), Starthene (SWAL), Orthene (Arysta), Asataf (Rallis), Banjo super (IIL)
2	Atrazine	x	Rallis India, Nagarjuna agrichem, IIL, Pesticide India, Meghmani Organics, Crystal	Milzine (Monsanto), Atrataf (Rallis), Solaro (PI Ind), Atracel (Excel crop), Zinguard (Gharda), Atrafil (Indofil), Dhanuzine (Dhanuka), Strike (IIL),
3	Benfuracarb	x	Coromandel International	Chemclor (Coromandel), Irio (Atul), Milchlor (IIL)
4	Butachlor	x	IIL, Coromandel, Bharat Rasayan, Sudarshan Chemicals	Milchlor (IIL), Milfast (IIL)
5	Captan	x	Rallis India, IIL, Punjab chemicals	Captaf (Rallis), Captra (Indofil)
6	Carbendazim	x	BASF, Atul, Meghmani, Gharda, Bayer Crop, Sudarshan chemicals	Bavistin (BASF), Benfil (Indofil), Sten (Coromandel), Dhanustin (Dhanuka), Sahara (IIL), Crop care (NACL),
7	Carbofuran	✓	Atul Ltd, Rallis India	Furadan (FMC), Starfuron (SWAL), Sumo 3G(IIL)
8	Chlorpyrifos	x	Excel, Gharda, Punjab chemicals, Coromandel, Meghmani, Bharat Rasayan, IIL, Sudarshan chemicals, Cheminova, Dow agrosiences, Adama, FMC corp	Starban(SWAL), Megaban(Monsanto), Chloroban(UPL), Tricel(Excel), Lethal (IIL), Tafaban(Rallis), Trishul (Coromandel), Predator(Dow),
9	2,4-D	x	Atul, IIL, Bharat Rasayan, Meghmani, Excel crop,	Hit-44 (IIL), Twister (IIL), Weedcel Super (Excel), Weedmar Super (Dhanuka), Zura (Atul), Rugo (Atul), Weedor(Crystal)
10	Deltamethrin	x	Bayer Cropscience, Isagro asia, Meghmani, IIL	Decis (Bayer Crop)
11	Dicofol	x	Indofil industries, Dow Agrosiences, Hindustan insectides	Tik Tok(UPL), Starkel(SWAL)
12	Dimethoate	x	Rallis, Sudarshan chem., Coromandel, Cheminova,	Rogor(Cheminova), Nugor(UPL), Tara 909(SWAL)
13	Dinocap	x	Dow Agrosiences	Karathane(DoW)
14	Diuron	x	Dupont, Adama, Bayer, Atul, Bharat Rasayan, Meghmani, IIL	Daron(Tropical)
15	Malathion	x	Rallis, Coromandel, Excel crop	Cythion(Coromandel)
16	Mancozeb	x	UPL, Indofil, Coromandel, Punjab chemicals, Dow Agrosiences	Tata M45(Rallis), Uthane M45 (UPL), Eurofil NT 35(Infolil), Dhanuka M45(Dhanuka), Crop man(NACL), Crystal M45 (Crystal)
17	Methomyl	✓	Dupont	Lannate (Dupont), Dunet (Dhanuka), Dash (Indofil)
18	Monocrotophos	✓	Coromandel, UPL, Bharat rasayan, IIL, Meghmani, Cheminova, Sudarshan chemicals, syngenta	Phoskill (UPL), Monostar(SWAL), Megamono(Monsanto), Crotoce(Excel), Monocil(IIL), parryfos(Coromandel), Lumphos(Crystal)
19	Oxyfluorfen	x	Dow Agrosiences	Goal (Dow), Oxygold(Indofil), Honcho(Rallis), Zargon(Dhanuka), Orbit(IIL),
20	Pendimethalin	x	BASF, Rallis, Meghmani, Bharat rasayan, UPL, Punjab crop, Coromandel, Shivalik Rasayan	Stomp(BASF), Tata Pinada (Rallis), Dhanutop(Dhanuka), Swalpendi(SWAL), Pendilin(Monsanto), Bunker(PI Industries), Excel Plus(Excel), Pendamil(IIL), Eezkil(Coromandel), Xyrl(Atul)
21	Quinalphos	x	Cheminova, Sudarshan, Meghmani, Hikal, Gharda, Bhagiradha chemicals, Novartis	Ekalux (Syngenta), Starlux (SWAL), Flash(Indofil)
22	Sulfosulfuron	x	Monsanto, UPL, Atul, Meghmani, Bharat rasayan, Excel crop, Indofil, IIL	Unik(SWAL), Lalkar(Excel), SF 10(UPL), Fateh(Rallis), Sultop(Dhanuka), Kaiser/Guru( IIL)
23	Thiodicarb	x	Bayer crop, IIL, Meghmani, Bharat Rasayan	Larvin(Bayer)
24	Thiophanate methyl	x	BASF, Rallis, Sudarshan, IIL, Indofil	Thiovit(Syngenta), Miltop(Monsanto), Prism(IIL), Hexastop(Coromandel)
25	Thiram	x	Bayer, UPL, Bharat Rasayan	Tagthiram(Tropical)
26	Zineb	x	Dow, FMC, Indofil	Indofil Z-78(Indofil)
27	Ziram	x	Syngenta	Cuman L (Syngenta), Crop Ziram (NACL)

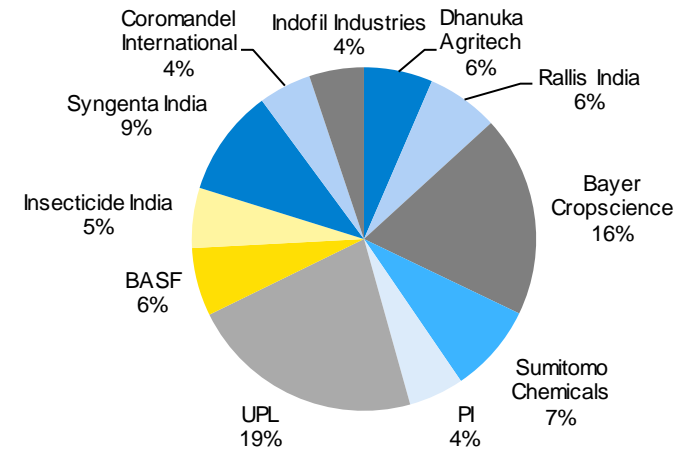
# Competitive positioning of domestic agrochemical companies

## Business model of agrochemical companies and contribution of revenue from various segments

Company/ Segments	Agrochemicals/ Agri-inputs					Other segment Segment name
	Domestic			Exports		
	Technical Mfg.	Branded Formulations	In-licensing tie-up	CRAMS	Exports	
Bayer Crop Sc.		88%			7%	Seeds- 5%
Dhanuka Agritech		52%	48%			
Insecticides India		63-68%	15-20%			
PI Industries		39%		61%		
Rallis India		56%			27%	Seeds- 16%
Sharda Cropchem					88%	Belts- 12%
UPL		18%			82%	

Source: Company, PL

## Market share of domestic agrochemical companies



Source: Company, PL **Note: Considered the domestic formulation revenues only; the above data is for indication purpose; actual numbers may differ.**

## Competitive positioning of domestic companies

Categories	Bayer Crop Science	Rallis India	Dhanuka Agritech	PI Industries	UPL Ltd	Insecticides India	Sharda Cropchem
Business Model	Innovator	Inlicensing & Generics	Inlicensing & Distribution	CSM & Inlicensing	Generic Giant	Inlicensing & Generics	Generics Registration
Brand Value/Recall	★★★★★	★★★★	★★★★	★★★★	★★★★	★★★	★★
Pricing	★★★★	★★★	★★★	★★★	★★★★	★★★	★★
Distribution Network	★★★★★	★★★★	★★★★	★★★	★★★★	★★★	★★★★
Product Mix	★★★★	★★★★	★★★	★★★	★★★★	★★★	★★★★
New Product launches	★★★★	★★★★	★★★★	★★★	★★★★	★★★★	★★★★

Source: Company, PL

## Remain positive on the structural growth of the sector

- As the industry is in a structural shift, we believe backward integrated players with strong domestic presence, robust product pipeline, tie-ups with global innovators for newer products and growing export market are better placed in the entire value chain.
- From near to medium term perspective in the domestic agrochemicals space, we would prefer export oriented players over pure-play domestic guys primarily on the back of (a) favorable weather conditions globally; (b) remunerative soft commodity prices; (c) all global majors have increased/maintained their growth guidance for CY21 citing better demand scenario across regions and (d) moderate growth in kharif season in FY22 (industry growth of ~5% in 1HFY22). Additionally, our channel checks suggest a bumper rabi season (6-8% YoY growth in 2HFY22 (despite higher base of last year-2HFY21) in domestic markets. However, we are of the view that despite better outlook for rabi season, overall FY22 numbers for domestic companies will likely be muted as kharif contributes >60% of the total revenues.
- We have covered 9 companies in this report, recommending 'BUY' on Bayer Crop science, Dhanuka Agritech, PI Industries, Sharda Cropchem, Sumitomo chemical, and UPL. While, we initiate coverage with an 'ACCUMULATE' rating on Rallis India and Godrej Agrovet on account of limited upside and we have 'HOLD' rating on Insecticides India.
- **We prefer Sumitomo Chemical India and UPL Ltd in agrochemicals space, as we believe in the near term exporters are in a better-off position than pure-play domestic guys.**

# Recommendation Synopsis

## Bayer Crop Science – Market dominance likely to sustain; BUY

- **Merger synergies yet to fully unlock value:** We believe, long term growth prospects of BYRCS remain intact post merger with Monsanto India primarily led by (a) complementary product offering; (b) innovative products from parent; and (c) leadership position in Maize and paddy hybrid seeds.
- **Market dominance in the domestic agrochemicals:** Strong brand recall coupled with superior product offering has helped BYRCS to have dominant position in the domestic agrochemicals market with market share of >15%, while having ~40-45% markets share in rice hybrids segment.
- **Outlook & Valuation:** Post merger with Monsanto, the merged entity brought along superior product mix coupled with innovative products and better operating leverage, which in turn should support revenue growth and margins in medium term. BYRCS is likely to post 9%/11% revenue/PAT CAGR over FY21-FY24E. It has robust earnings growth trajectory, debt-free balance sheet and strong cash flows. Initiate coverage with BUY; TP INR5700 set at 30x FY24E EPS.

## Dhanuka Agritech – New product launches to propel growth; BUY

- **Asset light business model with extensive distribution network:** DAGRI has a unique asset-light business model (having 3 formulation facilities; with focus on new products supported by tie-ups with global giants) reinforced by an extensive marketing network (8,800 dealers/distributors selling to 80,000 retailers), giving it an edge over competitors.
- **Foray into technical manufacturing space to aid sustainable growth:** DAGRI has recently announced a major capex of INR3bn (to be spent over FY22-24; funded through internal accruals) for setting up technical manufacturing plant of pesticides in Dahej, Gujarat (has revenue potential of INR2bn in FY24 and INR3bn from FY25 onwards).
- **Outlook & Valuation:** We believe, successful execution and ramp up of Dahej project would put DAGRI in the next leg of growth which in turn would lead to re-rating in the stock over longer term. DAGRI has strong distribution led business model with robust RoE (>28%) as well as balance sheet. We expect the company to clock revenue/PAT CAGR of 8%/9% over FY21-FY24E, led by healthy demand scenario and new product launches. We initiate coverage on DAGRI with 'BUY' and TP of Rs930 based on 15x FY24E EPS.

## Rallis India –Testing times; worst seems behind; ACCUMULATE

- **Capacity enhancement to drive the next leg of growth:** Rallis is expected to incur capex of INR8bn over next 2-3 years (as against INR6.4bn over FY12-21) largely funded through internal accruals on enhancing existing and new capacities in both domestic and exports segment. We estimate 14% export revenue CAGR over FY21-FY24E (11% over FY11-FY21).
- **Achieve deeper penetration by expanding distribution network:** Rallis targets for 4,000 distributors and 65,000 retailers in crop protection business, while on seeds business intends to target 2,700 distributors and 35,000 retailers in FY22.
- **Outlook & Valuation:** Post change in the management resulting into realignment of trade policies and new product introductions, the company has been able to re-gain lost market share in domestic markets. However performance was impacted led by subdued growth in exports segment led by pricing and volume pressure in Metribuzin. We believe, gradual recovery in both domestic and exports segment coupled with enhanced capacity would lead to sustainable growth in the medium term. We Initiate coverage with 'ACCUMULATE'; TP Rs270 set at 18x FY24E EPS.

## PI Industries – Foray into the pharma CSM to add feather on the cap; BUY

- **CSM likely to grow at +20% CAGR over next few years-** We expect CSM segment to post a revenue CAGR of 21% over FY21-24 (28% CAGR over FY11-21) on the back of (a) CSM order book of USD1.4bn as on Sept'21; (b) capacity enhancement in existing and new molecules and c) healthy demand environment globally.
- **Enhanced opportunity in CSM pharma to de-risk the CSM model:** PI is also venturing into CSM pharma space, both through the organic and inorganic route (have raised INR20bn through QIP in FY21 for any inorganic growth opportunities). Additionally the company is in various stages of development in pharma CSM space, which will likely reap benefits in the near-medium term.
- **Outlook & Valuation:** We believe a) leading R&D and complex chemistry capabilities coupled with robust order book, b) growing innovation capex and c) additional delta from Isagro's acquisition (completed in Q4FY20), PI appears set to deliver market leading growth (Revenue/PAT CAGR of 18%/21% over FY21-24E) supporting our positive stance. Initiate Coverage with BUY, TP of Rs3,470 based on 40x FY24 EPS.

## Insecticides India – Successful delivery of capex to be the key; HOLD

- **Backward integration to secure input supply:** IIL is reviewing to backward integrate the entire value chain (planned capex of INR1.1bn over next 2 years in setting up SEZ unit, synthesis facilities and backward integration plant in Gujarat and Rajasthan) and thus reducing dependence on China amid supply side shortages.
- **New product launches to offset revenue loss of banned molecules:** IIL has been focusing on developing new combination molecules through their in-house R&D capabilities as well as tie-ups with global partners.
- **Outlook & Valuation:** We expect IIL to post revenue/PAT CAGR of 8%/9% over FY21-24E primarily led by (a) pick-up in revenue from new products; (b) ramp-up in exports revenues as large part of the capex is done by now, which would reap benefits in the near/medium term. Initiate coverage with '**HOLD**' rating and TP of Rs680 based on 10x FY24 EPS.

## Godrej Agrovet – Diversified business with decent opportunity; ACCUMULATE

- **Bright prospects in the animal feed business:** GOAGRO is the largest pan-India cattle feed player with 12% market share. We believe growth prospects are bright led by (a) widening demand-supply gap in green fodder availability; (b) increasing animal protein consumption (growing at >10% CAGR) and (c) formalisation of dairy industry.
- **Astec Lifesciences-Strong product pipeline and capacity enhancement to aid growth :** Commercialisation of new products coupled with commencement of new herbicides plant and 15+ new launches in branded business (including 6 in licensed) over next 5 years will drive growth for the CP segment. Astec has rich product pipeline for next 5-7 years in CRAMS and non-CRAMS segment.
- **Outlook & Valuation:** We Initiate coverage on GOAGRO with an '**ACCUMULATE**' rating and SOTP based TP of Rs615. The target multiples assigned for each business is broadly in-line with the industry averages. At 22x FY24 PE and 13x FY24 EV/EBITDA, the stock prices in major positives.



## Sharda Cropchem – Risk reward favourable; BUY

- **Strong presence in highly regulated market bodes well:** SHCR's heavy dependence of RM procurement from China amid RM volatility has adversely impacted their margins in the past. Gross margins have contracted sharply from 35.9% in FY17 to 31.7% in FY21 primarily on account of (a) sharp uptick in RM cost specially from China (b) declining share of Europe from 55% to 51% over FY16-21. Going forward, we anticipate that gross margin is likely to revive in the near-medium term led by superior geographical mix (higher share of Europe and NAFTA).
- **Outlook & Valuation:** SHCR's performance has suffered in past on account of multiple factors like (1) adverse climatic condition, (2) inferior geographical mix, (3) sharp uptick in RM cost and (4) higher capitalization cost. However going by the improvement in quarterly performance of SHCR in the recent past, we believe that these concerns are largely overdone and the situation will likely improve in near-medium term. We initiate coverage with 'BUY' and TP of Rs450 based on 13x FY24E EPS.

## Sumitomo Chemical India – A compounding story; BUY

- **Strong parental advantage to support growth-** Strong parental support from Sumitomo Chemical Corporation (SCC) gives SCIL unique advantages like (a) access to SCC's portfolio; (b) technical and R&D expertise for developing proprietary products; and c) financial strength and larger market reach.
- **SCIL to be the 'Go to guy' for generic exports for SCC globally-** SCIL is the only technical and generic grade manufacturing site for SCC group based outside Japan. SCIL intends to enhance exports by leveraging SCC's global supply chain and marketing network. We expect export revenue to grow at a CAGR of 28% over FY21- 24E (FY18-21 CAGR 4%) on the back of SCC's intent to maximize synergies from integration of Nufarm's distribution business in LATAM and SCIL's export business.
- **Outlook and Valuation-** These traits equip SCIL to post revenue/ EBITDA/PAT CAGR of 14%/16%/16% over FY21-24E (FY18-21 CAGR of 11%/ 31%/33%), respectively. Further, the company has healthy RoE/Pre-tax ROCE of 25%/33% and net cash balance sheet in FY21. We initiate coverage with 'BUY' and TP of Rs440 based on 40x FY24 EPS.

## UPL Ltd – Diversified play on the global agrochemicals; BUY

- **LATAM remains the key region for UPL (~40% of revenues):** Brazil remains the fastest growing geography for UPL (estimated revenue of ~USD1.3bn in FY21; ranked 4th largest player in Brazil). Brazil contributes >50% of the LATAM revenues and is expected to grow at 2x of industry growth over few years on the back of strong product pipeline and widening distribution reach.
- **'Glufosinate' the next Big force in the CP business:** Glufosinate (herbicide) is one of the key products of UPL. Glufosinate prices in the recent past have shot up by ~2x in global market led by tight market situation despite correction in RM cost. In line with this, UPL has increased its product prices in global market. Based on Industry data, BASF (post acquisition from Bayer), Lier Chemical followed by UPL are the key players globally in Glufosinate.
- **Outlook & Valuation:** We anticipate that UPL will continue to perform well led by healthy demand across market coupled with better commodity prices. We expect UPL to clock Revenue/PAT CAGR of 10%/18% over FY21-24E. Initiate coverage with 'BUY' and TP of Rs910 based on 14x FY24E EPS.

# Valuation Snapshot

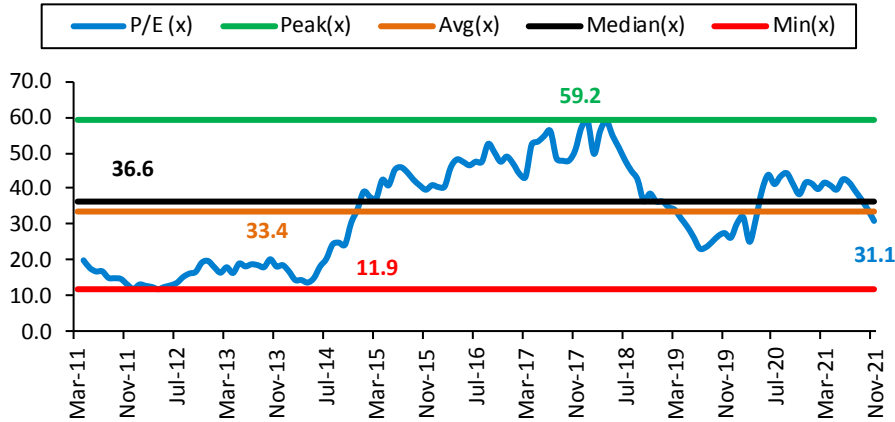
Company	CMP (Rs)	TP (Rs)	M Cap (Rs mn)	Rating	Target Multiple (x)	Revenue					EBITDA					Adjusted PAT				
						FY21	FY22E	FY23E	FY24E	CAGR FY21-24(%)	FY21	FY22E	FY23E	FY24E	CAGR FY21-24(%)	FY21	FY22E	FY23E	FY24E	CAGR FY21-24(%)
BYRCS	4,823	5,700	2,16,566	BUY	30x	42,613	46,022	50,624	55,687	9.3	8,117	7,502	8,910	10,469	8.9	6,162	5,736	7,114	8,528	11.4
DAGRI	735	870	34,214	BUY	15x	13,875	14,499	15,949	17,544	8.1	2,691	2,653	3,030	3,368	7.8	2,106	2,099	2,415	2,706	8.7
GOAGRO	534	615	1,02,570	ACC	23x	62,667	71,157	76,983	83,912	10.2	5,638	7,383	7,844	8,970	16.7	3,137	4,151	4,441	5,219	18.5
INST	657	680	12,964	HOLD	10x	14,202	15,172	16,386	17,697	7.6	1,523	1,699	1,901	2,159	12.3	982	1,009	1,151	1,347	11.1
PI	2,903	3,470	4,39,839	BUY	40x	45,770	53,736	63,258	74,554	17.7	10,122	11,796	14,600	17,973	21.1	7,339	8,473	10,619	13,127	21.4
RALI	257	270	50,037	ACC	18x	24,294	26,411	29,944	33,742	11.6	3,229	2,991	3,732	4,489	11.6	2,286	1,914	2,358	2,890	8.1
SHCR	340	450	30,630	BUY	13x	23,956	32,130	35,901	40,118	18.8	4,168	5,368	6,193	7,159	19.8	2,293	2,437	2,713	3,092	10.5
SUMICHEM	361	440	1,80,341	BUY	40x	26,449	29,246	33,817	39,244	14.1	4,869	5,294	6,425	7,653	16.3	3,454	3,731	4,532	5,453	16.4
UPL	747	910	5,71,340	BUY	14x	3,86,940	4,33,865	4,70,271	5,10,369	9.7	85,590	93,715	1,04,870	1,15,854	10.6	30,662	35,512	42,793	49,678	17.5

Company	Adjusted EPS (Rs)				Net Debt (INR Mn)				Net debt/Equity (x)				RoE(%)				RoCE(%)			
	FY21	FY22E	FY23E	FY24E	FY21	FY22E	FY23E	FY24E	FY21	FY22E	FY23E	FY24E	FY21	FY22E	FY23E	FY24E	FY21	FY22E	FY23E	FY24E
BYRCS	137.2	127.8	158.4	189.9	(12,617)	(17,153)	(21,774)	(27,527)	(0.5)	(0.6)	(0.6)	(0.7)	24.1	20.9	22.4	22.8	31.6	27.5	29.2	29.8
DAGRI	45.2	45.1	51.9	58.1	(1,808)	(2,317)	(2,996)	(4,131)	(0.2)	(0.2)	(0.3)	(0.3)	28.0	23.9	22.9	21.5	37.5	31.8	30.5	28.7
GOAGRO	16.3	21.6	23.1	27.2	8,883	3,273	841	(364)	0.4	0.1	0.0	(0.1)	16.1	19.0	17.9	18.6	15.0	19.5	20.9	22.7
INST	47.5	51.1	58.3	68.3	107	347	(395)	(1,085)	0.0	0.0	(0.0)	(0.1)	12.7	11.6	11.9	12.4	14.0	14.5	14.8	15.7
PI	48.4	55.9	70.1	86.6	(20,700)	(26,832)	(32,410)	(39,835)	(0.4)	(0.4)	(0.5)	(0.5)	18.4	14.8	16.1	17.1	21.8	18.4	20.3	21.6
RALI	11.3	9.8	12.1	14.9	(2,976)	(1,920)	(2,518)	(3,552)	(0.2)	(0.1)	(0.1)	(0.2)	15.2	11.6	13.2	14.7	19.0	15.2	17.3	19.3
SHCR	25.4	27.0	30.1	34.3	(2,757)	(2,405)	(3,451)	(5,334)	(0.2)	(0.1)	(0.2)	(0.2)	15.2	14.2	14.0	14.2	19.3	19.6	19.8	20.1
SUMICHEM	6.9	7.5	9.1	10.9	(5,169)	(5,734)	(7,421)	(9,824)	(0.3)	(0.3)	(0.3)	(0.4)	25.0	22.0	22.2	22.1	32.8	29.9	30.3	30.2
UPL	40.1	46.4	55.9	64.9	2,18,700	2,04,697	1,79,487	1,46,307	1.2	1.0	0.8	0.5	17.9	18.6	19.5	19.5	12.7	14.1	15.9	17.4

Company	PE(x)				Price/Book Value (x)				EV/EBITDA (x)			
	FY21	FY22E	FY23E	FY24E	FY21	FY22E	FY23E	FY24E	FY21	FY22E	FY23E	FY24E
BYRCS	35.1	37.8	30.4	25.4	8.5	7.4	6.3	5.4	18.8	19.8	16.1	13.2
DAGRI	16.2	16.3	14.2	12.6	4.3	3.6	3.0	2.5	12.7	12.7	10.9	9.5
GOAGRO	32.7	24.7	23.1	19.7	5.0	4.4	3.9	3.4	19.8	14.3	13.2	11.1
INST	13.8	12.9	11.3	9.6	1.7	1.4	1.3	1.1	9.0	7.8	6.6	5.5
PI	56.5	49.0	39.1	31.6	7.8	6.8	5.9	5.0	38.9	32.9	26.2	20.9
RALI	22.8	26.1	21.2	17.3	3.1	2.9	2.7	2.4	14.6	16.1	12.7	10.4
SHCR	13.4	12.6	11.3	9.9	1.9	1.7	1.5	1.3	6.7	5.3	4.4	3.5
SUMICHEM	52.2	48.3	39.8	33.1	11.7	9.7	8.1	6.7	36.0	33.0	26.9	22.3
UPL	18.6	16.1	13.4	11.5	3.2	2.8	2.4	2.1	9.2	8.3	7.2	6.2

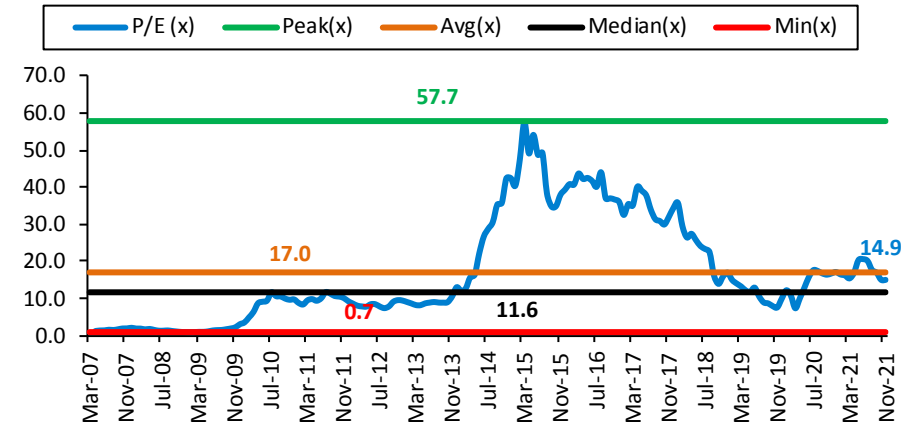
# One year forward Price / Earnings

## Bayer Crop Science



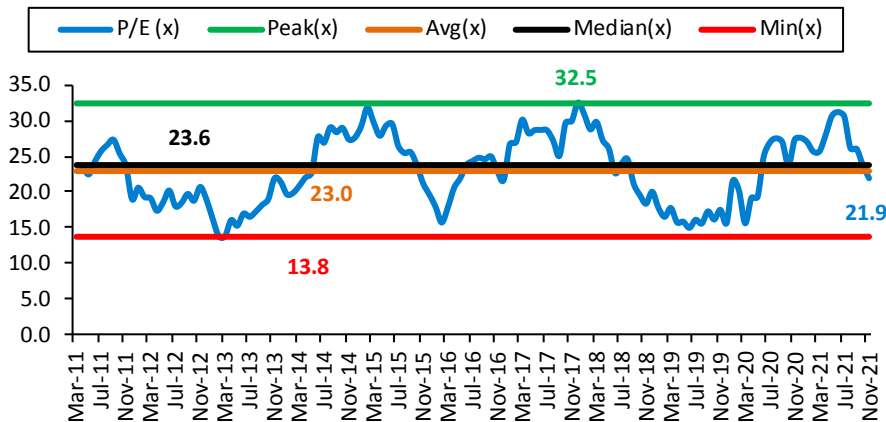
Source: Bloomberg; PL

## Dhanuka Agritech



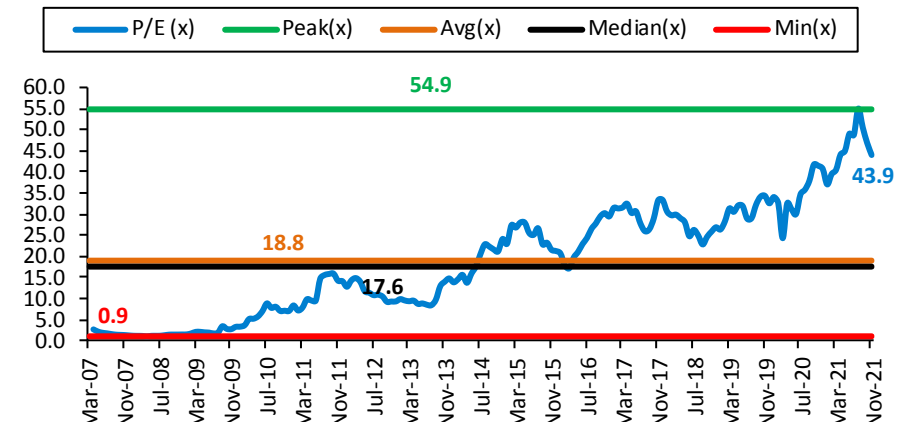
Source: Bloomberg; PL

## Rallis India



Source: Bloomberg; PL

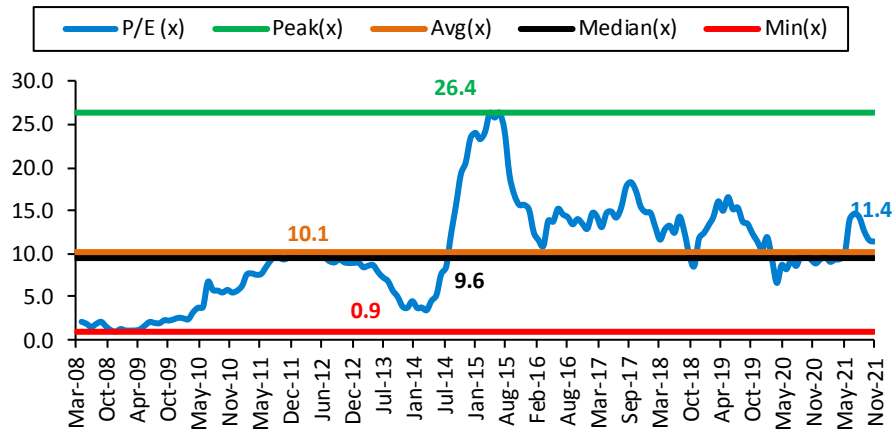
## PI Industries



Source: Bloomberg; PL

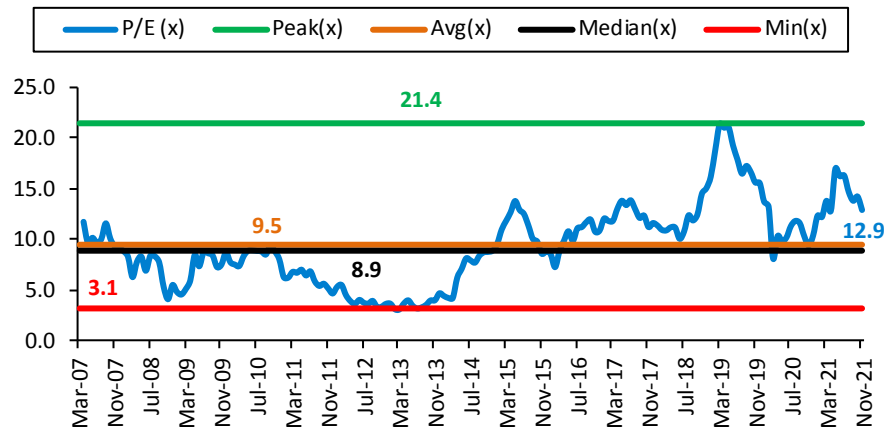
# Contd...

## Insecticides India



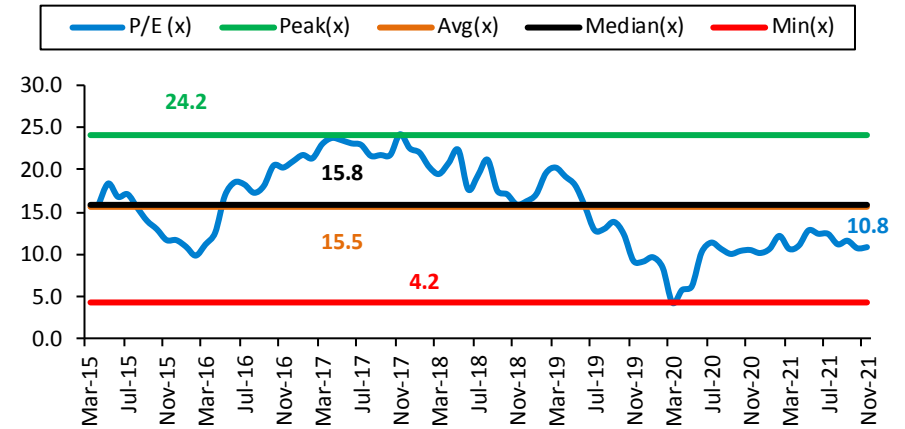
Source: Bloomberg; PL

## UPL Ltd



Source: Bloomberg; PL

## Sharda Cropchem



Source: Bloomberg; PL

# Financial Snapshot

Company	Rating	CMP (Rs)	TP (Rs)	Mcap (Rs bn)	Year	Financials (Rs mn)					Growth (%)				PE(x)
						Revenue	EBITDA	EBITDA Margin(%)	PAT	EPS	Revenue	EBITDA	PAT	EPS	
Bayer Crop Sciences	BUY	4,823	5,700	217	FY20	36,094	7,264	20.1	5,787	128.9	14.0	51.0	71.7	31.1	37.4
					FY21	42,613	8,117	19.0	6,162	137.2	18.1	11.7	6.5	6.5	35.1
					FY22E	46,022	7,502	16.3	5,736	127.8	8.0	-7.6	-6.9	-6.9	37.8
					FY23E	50,624	8,910	17.6	7,114	158.4	10.0	18.8	24.0	24.0	30.4
					FY24E	55,687	10,469	18.8	8,528	189.9	10.0	17.5	19.9	19.9	25.4
Dhanuka Agritech	BUY	735	870	34	FY20	11,201	1,735	15.5	1,415	29.7	11.4	18.8	25.7	25.7	24.7
					FY21	13,875	2,691	19.4	2,106	45.2	23.9	55.1	48.8	52.0	16.2
					FY22E	14,499	2,653	18.3	2,099	45.1	4.5	-1.4	-0.3	-0.3	16.3
					FY23E	15,949	3,030	19.0	2,415	51.9	10.0	14.2	15.0	15.0	14.2
					FY24E	17,544	3,368	19.2	2,706	58.1	10.0	11.2	12.0	12.0	12.6
Rallis India	ACCUMULATE	257	270	50	FY20	22,518	2,594	11.5	1,871	9.2	13.5	7.6	20.4	15.6	27.9
					FY21	24,294	3,229	13.3	2,286	11.3	7.9	24.5	22.2	22.0	22.8
					FY22E	26,411	2,991	11.3	1,914	9.8	8.7	-7.4	-16.2	-12.6	26.1
					FY23E	29,944	3,732	12.5	2,358	12.1	13.4	24.8	23.2	23.2	21.2
					FY24E	33,742	4,489	13.3	2,890	14.9	12.7	20.3	22.6	22.6	17.3
PI Industries	BUY	2,903	3,470	440	FY20	33,665	7,178	21.3	4,558	33.1	18.5	24.5	11.1	11.1	82.8
					FY21	45,770	10,122	22.1	7,339	48.4	36.0	41.0	61.0	46.6	56.5
					FY22E	53,736	11,796	22.0	8,473	55.9	17.4	16.5	15.4	15.4	49.0
					FY23E	63,258	14,600	23.1	10,619	70.1	17.7	23.8	25.3	25.3	39.1
					FY24E	74,554	17,973	24.1	13,127	86.6	17.9	23.1	23.6	23.6	31.6
Insecticides India	HOLD	657	680	13	FY20	13,632	1,559	11.4	851	41.2	14.2	-16.7	-29.7	-29.7	16.0
					FY21	14,202	1,523	10.7	982	47.5	4.2	-2.3	19.9	19.9	13.8
					FY22E	15,172	1,699	11.2	1,009	51.1	6.8	11.6	-2.2	-2.2	12.9
					FY23E	16,386	1,901	11.6	1,151	58.3	8.0	11.9	14.1	14.1	11.3
					FY24E	17,697	2,159	12.2	1,347	68.3	8.0	13.6	17.0	17.0	9.6
Godrej Agrovet	ACCUMULATE	534	615	103	FY20	69,641	4,885	7.0	3,062	15.9	18.6	19.5	63.2	63.2	33.5
					FY21	62,667	5,638	9.0	3,137	16.3	-0.1	15.4	-0.8	-0.8	32.7
					FY22E	71,157	7,383	10.4	4,151	21.6	0.1	31.0	32.3	32.3	24.7
					FY23E	76,983	7,844	10.2	4,441	23.1	0.1	6.2	7.0	7.0	23.1
					FY24E	83,912	8,970	10.7	5,219	27.2	0.1	14.3	17.5	17.5	19.7
Sharda Cropchem	BUY	340	450	31	FY20	20,030	2,970	14.8	1,647	18.3	0.3	-9.1	-6.6	-6.6	18.6
					FY21	23,956	4,168	17.4	2,293	25.4	19.6	40.4	39.2	39.2	13.4
					FY22E	32,130	5,368	16.7	2,437	27.0	34.1	28.8	6.3	6.3	12.6
					FY23E	35,901	6,193	17.3	2,713	30.1	11.7	15.4	11.3	11.3	11.3
					FY24E	40,118	7,159	17.8	3,092	34.3	11.7	15.6	14.0	14.0	9.9
Sumitomo Chemical	BUY	361	440	180	FY20	24,247	3,332	13.7	2,356	4.7	8.8	14.6	31.1	-25.0	76.6
					FY21	26,449	4,869	18.4	3,454	6.9	9.1	46.1	46.6	46.6	52.2
					FY22E	29,246	5,294	18.1	3,731	7.5	10.6	8.7	8.0	8.0	48.3
					FY23E	33,817	6,425	19.0	4,532	9.1	15.6	21.4	21.5	21.5	39.8
					FY24E	39,244	7,653	19.5	5,453	10.9	16.0	19.1	20.3	20.3	33.1
UPL	BUY	747	910	571	FY20	3,57,560	71,040	19.9	22,869	29.9	63.7	56.0	0.5	0.5	25.0
					FY21	3,86,940	85,590	22.1	30,662	40.1	8.2	20.5	34.1	34.1	18.6
					FY22E	4,33,865	93,715	21.6	35,512	46.4	12.1	9.5	15.8	15.8	16.1
					FY23E	4,70,271	1,04,870	22.3	42,793	55.9	8.4	11.9	20.5	20.5	13.4
					FY24E	5,10,369	1,15,854	22.7	49,678	64.9	8.5	10.5	16.1	16.1	11.5
Coromandel Int'l	BUY	745	960	219	FY20	1,31,367	17,310	13.2	10,650	36.3	-0.7	20.0	47.8	42.8	20.5
					FY21	1,42,135	20,158	14.2	13,292	45.3	8.2	16.5	24.8	24.6	16.4
					FY22E	1,85,834	20,895	11.2	14,236	48.5	30.7	3.7	7.1	7.1	15.4
					FY23E	1,64,925	24,605	14.9	16,772	57.2	-11.3	17.8	17.8	17.8	13.0
					FY24E	1,78,034	25,825	14.5	17,526	59.7	7.9	5.0	4.5	4.5	12.5

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# Company Initiation

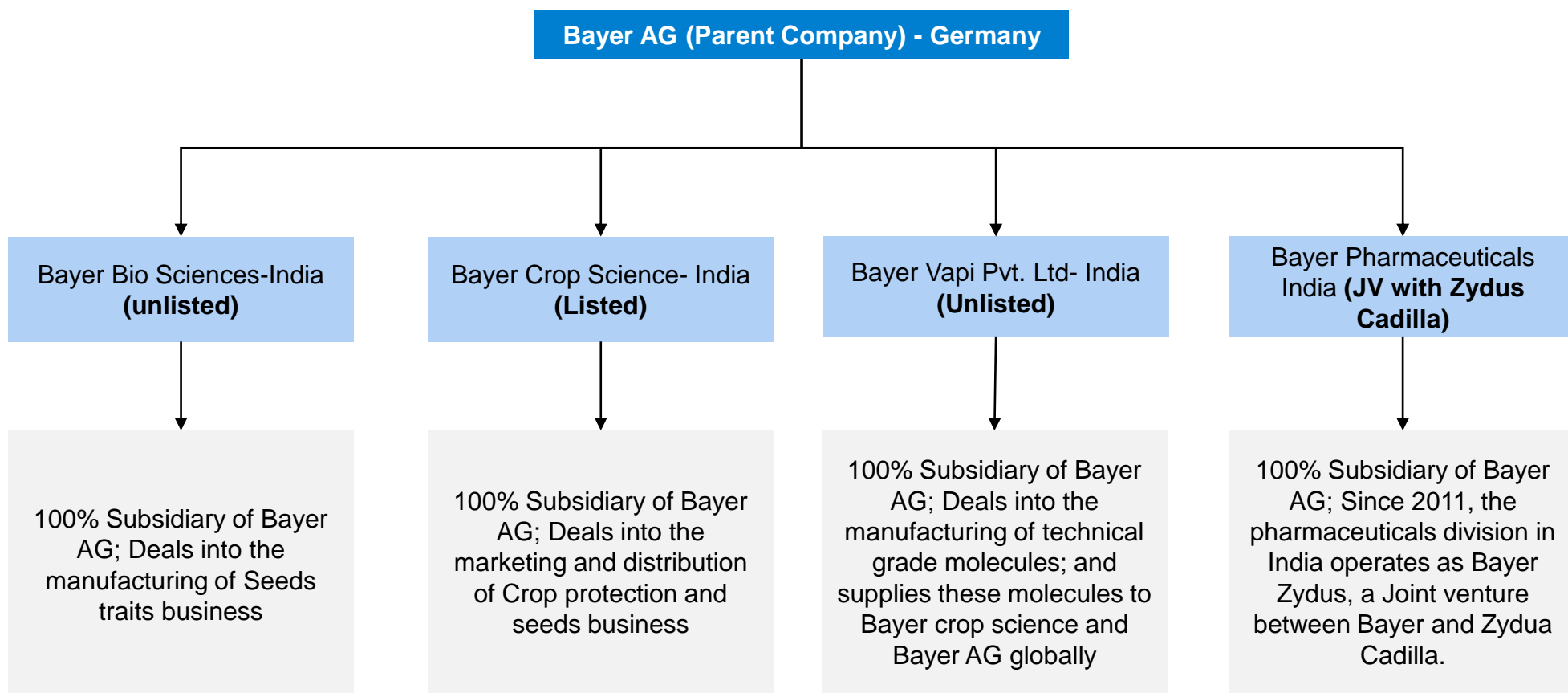
# Bayer Crop Science – Market dominance likely to sustain

Rating: BUY | CMP: Rs4,823 | TP: Rs5,700 | Mcap: Rs216.6bn

- **Merger synergies yet to fully unlock value:** We believe, long term growth prospects of BYRCS remain intact post merger with Monsanto India primarily led by (a) paired product offering; (b) innovative products from parent; and (c) leadership position in Maize and paddy hybrid seeds.
- **Market dominance in the domestic agrochemicals:** Strong brand recall coupled with superior product offering has helped BYRCS to have dominant position in the domestic agrochemicals market with market share of >15%, while having ~40-45% markets share in rice hybrids segment.
- **New product launches to propel growth:** BYRCS is on track to launch several new and innovative products from the parent company in next few years (launched >20 products from FY15-21). This in turn would support the overall growth, going forward. While, the company has bagged 8 registrations in FY21 which will likely to reap benefits in future.
- **Higher brand re-call & extensive distribution keeps BRYCS ahead of the curve:** BYRCS has highest brand re-call and most extensive distribution network (~80,000 distributors) in India which provides it a distinct edge over other players.
- **Outlook & Valuation:** Post merger with Monsanto, the merged entity brought along superior product mix coupled with innovative products and better operating leverage, which in turn should support revenue growth and margins in medium term. BYRCS is likely to post 9%/11% revenue/PAT CAGR over FY21-FY24E. It has robust earnings growth trajectory, debt-free balance sheet and strong cash flows. Initiate coverage with BUY; TP INR5700 set at 30x FY24E EPS.
- **Key Risk:** Poor monsoons and ban of glyphosate (contributes ~9-10% of FY21 revenues) can pose a risk to earnings.

	Y/e March	2021	2022	2023	2024
Income Statement (Rs m)	Net Sales	42,613	46,022	50,624	55,687
	Growth (%)	18.1	8.0	10.0	10.0
	EBITDA	8,117	7,502	8,910	10,469
	Growth (%)	11.7	-7.6	18.8	17.5
	Margin (%)	19.0	16.3	17.6	18.8
	EBIT	7,382	6,850	8,197	9,709
	Net Interest	126	126	126	126
	Other Income	638	630	1,050	1,350
	PBT	6,663	7,354	9,121	10,933
	Total Tax	1,732	1,618	2,007	2,405
Balance Sheet (Rs m)	Adj. PAT	6,162	5,736	7,114	8,528
	Growth (%)	6.5	-6.9	24.0	19.9
	Gross Block	7,206	7,706	8,206	8,706
	Investments	822	822	822	822
	Inventories	13,251	14,586	15,907	17,347
	Trade receivables	7,549	8,826	9,709	10,680
	Cash & Bank Balance	12,095	16,631	21,252	27,005
	Equity Share Capital	449	449	449	449
	Total Netw orth	25,503	29,347	34,299	40,394
	Borrow ings	-	-	-	-
Cash Flow (Rs m)	Trade payables	8,303	9,139	9,967	10,870
	Net cash from Op. activities	6,867	6,298	6,234	7,336
	Net Cash from Inv. activities	67	130	550	850
	Net cash from Fin. activities	-5,558	-1,892	-2,162	-2,433
	Net change in cash	1,376	4,536	4,622	5,753
	Free Cash Flow	6,555	5,798	5,734	6,836
Key Ratios	EPS (Rs)	137.2	127.8	158.4	189.9
	Growth (%)	6.5	-6.9	24.0	19.9
	BPVS (Rs)	568.0	653.6	763.9	899.6
	DPS (Rs)	115.0	35.0	40.0	45.0
	RoCE (%)	28.8	25.0	25.8	26.0
	RoE (%)	24.1	20.9	22.4	22.8
	Net Debt : Equity (x)	-0.5	-0.6	-0.6	-0.7
	Net Working Capital (Days)	107.0	113.2	112.8	112.5
	PE (x)	35.1	37.8	30.4	25.4
	P/B (x)	8.5	7.4	6.3	5.4
	EV / EBITDA (x)	25.1	26.6	21.9	18.1
	Dividend Yield (%)	2.4	0.7	0.8	0.9

# Group companies of Bayer AG in India

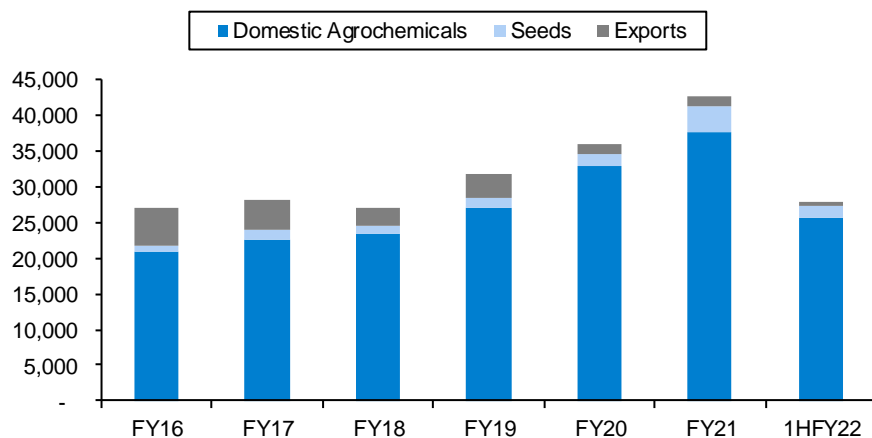


- **Bayer Crop Science (Listed Entity) is more of a marketing and distribution company, which has both its manufacturing (Bayer Vapi Pvt. Ltd) and seeds (Bayer Bio Sciences) business housed under 100% subsidiary of Bayer AG which is the Parent company of Bayer Crop Science.**



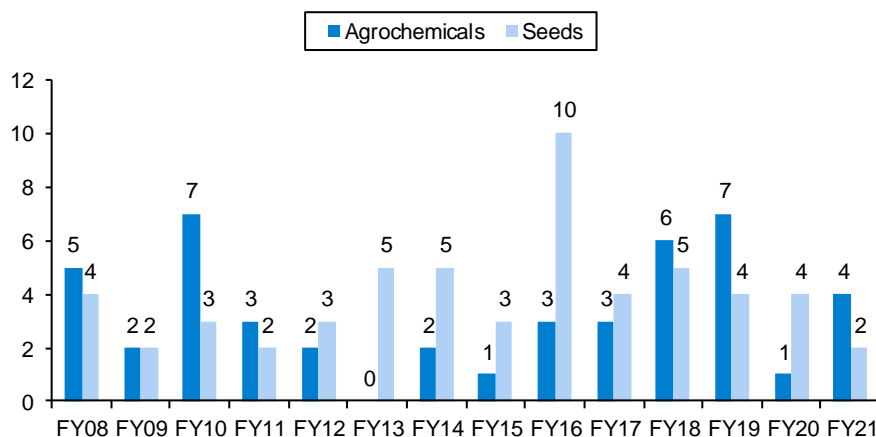
# Story in Charts

## Strong performance in CP offset by declining exports (INR Mn)



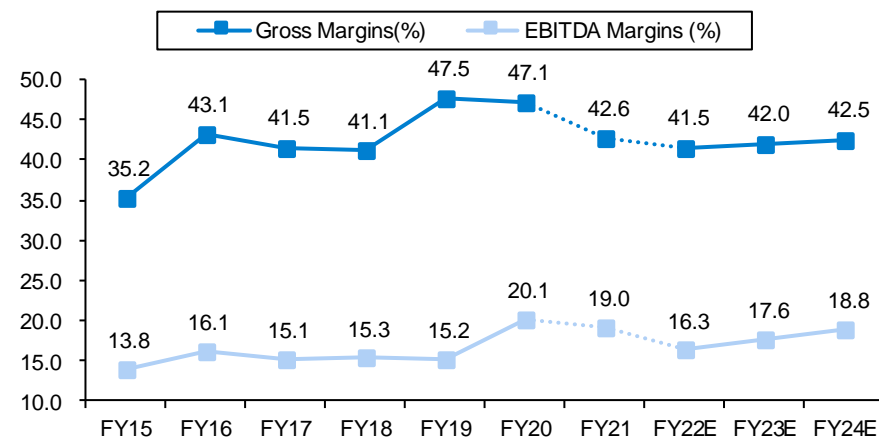
Source: Company, PL

## Launched over 20 products from FY17-21 (Nos.)



Source: Company, PL

## Margins impacted in FY21 led by lower corn seed sales (%)



Source: Company, PL

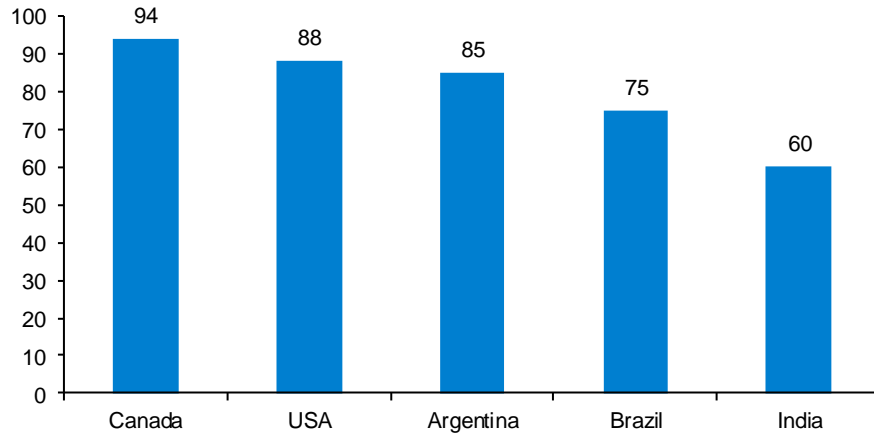
## 11 new product registrations received (FY21-YTDFY22)

	Technical Name	Registration Section	Remarks
FY21	Fipronil Technical 90% w/w min	9(4)	Technical Import
	Tetraniliprol Technical 90%	9(3)	For Exports Only
	Cyclanilide technical 97% w/w min	9(3)	Technical Import
	Ethiprole technical 94.5% min	9(3)	Indigenous manufacture
	Cyclanilide technical 97% w/w min	9 (3)	Technical import
	Tetraniliprole technical 89% w/w min	9 (3)	Technical import
	Tetraniliprole 18.18% w/w SC	9 (3)	Indigenous manufacture
	Pyroxasulfon 85% WG	9 (4)	Technical import
YTDFY22	Thidiazuron technical 98% w/w min	9(3)	Technical Import
	Fipronil Technical 95.0% w/w min	9(4)	Import
	Imidacloprid 17.1% SL	9(3)	Indigenous manufacture

Source: CIBRC, PL

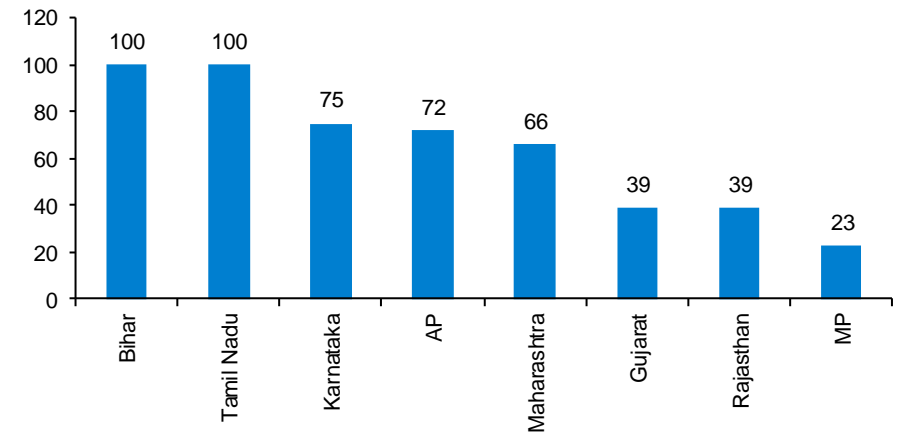
# Only 60% maize hybridization in India; scope for further improvement

Global Maize hybridization trend (%)



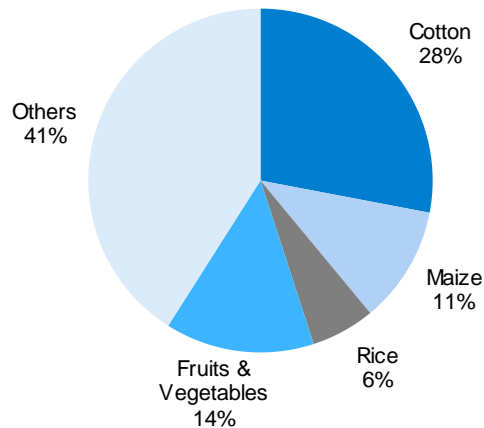
Source: Industry, PL

Bihar and Tamil Nadu has reached 100% maize hybridization (%)



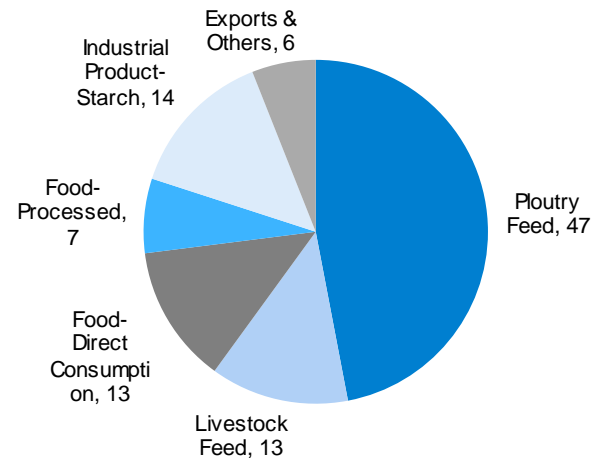
Source: Industry, PL

Maize accounts for 11% of total seed industry (%)



Source: Industry, PL

Feed industry consumes >60% of Maize (%)

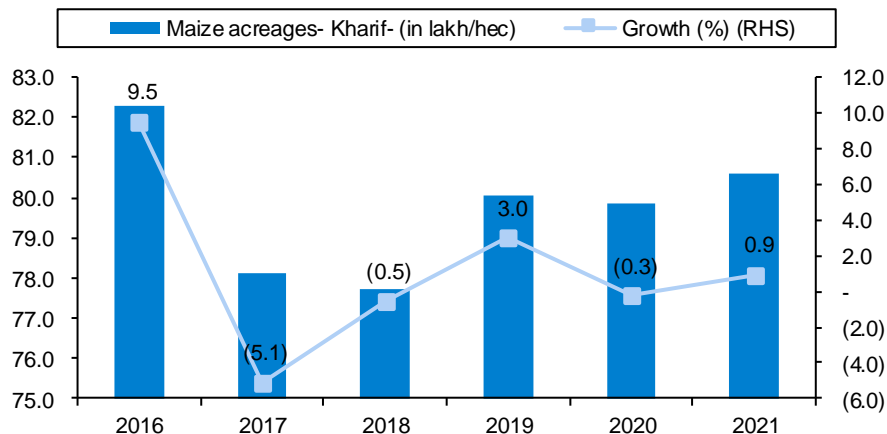


Source: Industry, PL

- The domestic seed industry is estimated to be ~INR190bn; of which Maize seeds commands a 11% share.
- More than 2/3rd of the maize produced in India is consumed for feed and other industrial uses. Feed industry in India is growing a CAGR of 9% representing huge opportunity for maize players.
- Top-7 states contribute 3/4th of the total maize production in India.
- Top-5 states- Karnataka, AP, MH, Rajasthan and Bihar contributes to 2/3rd of the total maize production.
- Only 2 states Bihar and Tamil Nadu have reached 100% hybridization of maize. Hybridization has direct and positive co-relation with yield enhancement.

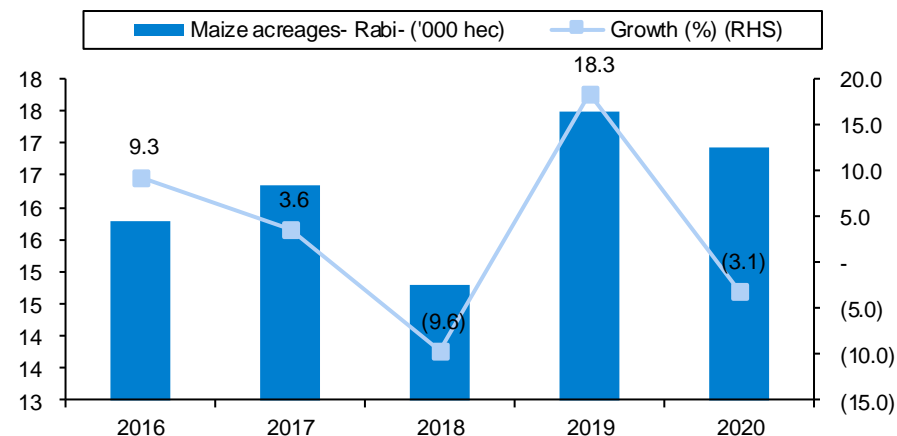
# Muted maize acreages + subdued prices = Weak Performance

## Muted Kharif maize acreages in FY21 and FY22..



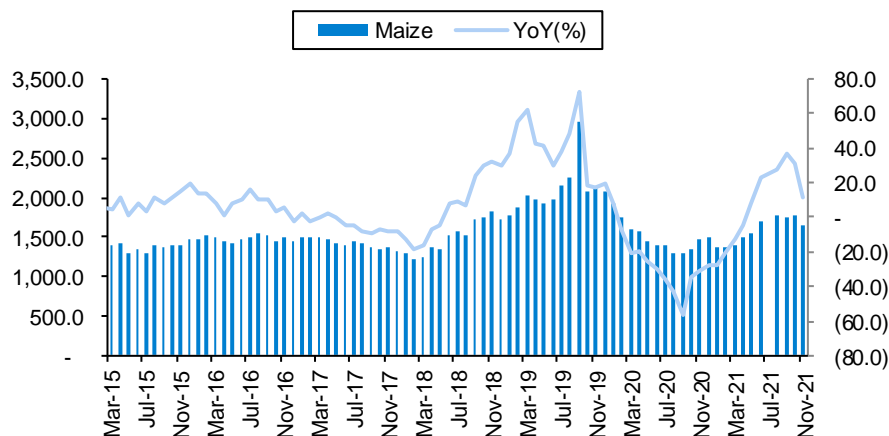
Source: GOI, PL

## ..followed by lower acreages in Rabi FY21



Source: GOI, PL

## Subdued maize prices in the recent past; showing initial signs of recovery



Source: GOI, PL

- 'Dekalb'- maize hybrids is the top selling product for Bayer Crop science. Currently Maize followed by Rice are the two major crops for the merged entity.
- The strong performance in the CP business in FY21 and 1HFY22 was offset by lower sales in maize hybrids (Lower acreages) resulting into pressure on overall margins profile.
- We believe, with pick-up in domestic Maize prices (up 12% YoY in Nov'21), coupled with lifting up of maize sowing restriction by Telangana Govt. should support growth in the near/medium term.

# Dhanuka Agritech – New product launches to propel growth

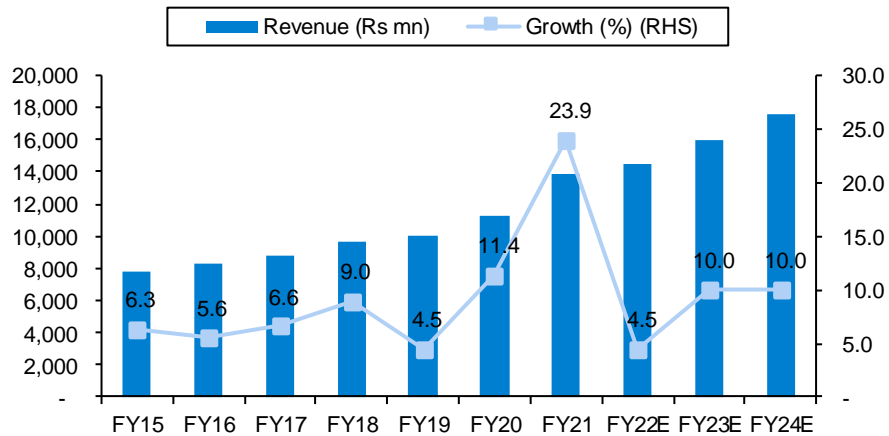
Rating: BUY | CMP: Rs735 | TP: Rs870 | Mcap: Rs34.2bn

- **Asset light business model with extensive distribution network:** DAGRI has a unique asset-light business model (having 3 formulation facilities; with focus on new products supported by tie-ups with global giants) reinforced by an extensive marketing network (8,800 dealers/distributors selling to 80,000 retailers), giving it an edge over competitors.
- **Foraying into technical manufacturing space to aid sustainable growth:** DAGRI has recently announced a major capex of INR3bn (to be spent over FY22-24; funded through internal accruals) for setting up technical manufacturing plant of pesticides in Dahej, Gujarat (has revenue potential of INR2bn in FY24 and INR3bn from FY25 onwards). The formulation unit is to be operational by FY23, while technical unit by FY24 onwards. It will largely take care of generics requirement through backward integration.
- **New product launches to propel growth:** DAGRI intends to launch at least one new 9(3) product each year with few more in-licensed products in coming years. Revenues from in-licensed products stood at 40% in FY21, while it is likely to remain in the same range going forward. DAGRI launched 6 new products in FY21 with Innovation turnover index (ITI) at 10.5%. Going forward, DAGRI remains confident to improve it to 12% by FY22E led by robust pipeline of new launches.
- **Outlook & Valuation:** We believe, successful execution and ramp up of Dahej project will put DAGRI in the next leg of growth which would lead to re-rating in the stock over the longer term. DAGRI has strong distribution led business model with robust RoE (>28%) as well as balance sheet. We expect the company to clock revenue/PAT CAGR of 8%/9% over FY21-FY24E led by healthy demand scenario and new product launches. We initiate coverage on DAGRI with 'BUY' and TP of Rs870 based on 15x FY24E EPS.
- **Key Risk:** Poor monsoons and adverse price movement of RM's can pose a risk to earnings.

	Y/e March	2021	2022	2023	2024
<b>Income Statement</b> (Rs m)	Net Sales	13,875	14,499	15,949	17,544
	Growth (%)	23.9	4.5	10.0	10.0
	EBITDA	2,691	2,653	3,030	3,368
	Growth (%)	55.1	-1.4	14.2	11.2
	Margin (%)	19.4	18.3	19.0	19.2
	EBIT	2,539	2,483	2,847	3,175
	Net Interest	27	30	25	25
	Other Income	337	354	407	468
	PBT	2,849	2,807	3,229	3,618
	Total Tax	744	707	814	912
<b>Balance Sheet</b> (Rs m)	Adj. PAT	2,106	2,099	2,415	2,706
	Growth (%)	48.8	-0.3	15.0	12.0
	Gross Block	2,339	2,489	2,639	2,789
	Investments	2,780	3,080	3,080	3,080
	Inventories	2,955	3,151	3,439	3,771
	Trade receivables	2,427	2,781	3,059	3,365
	Cash & Bank Balance	15	440	1,119	2,254
	Equity Share Capital	93	93	93	93
	Total Netw orth	7,963	9,614	11,524	13,669
	Borrow ings	84	-	-	-
<b>Cash Flow</b> (Rs m)	Trade payables	1,086	1,158	1,264	1,386
	Net cash from Op. activities	2,311	1,807	2,152	2,402
	Net Cash from Inv. activities	-1,266	-820	-943	-682
	Net cash from Fin. activities	-1,291	-562	-530	-586
	Net change in cash	-246	425	679	1,134
	Free Cash Flow	2,311	1,807	2,152	2,402
<b>Key Ratios</b>	EPS (Rs)	45.2	45.1	51.9	58.1
	Growth (%)	52.0	-0.3	15.0	12.0
	BPVS (Rs)	171.0	206.4	247.4	293.5
	DPS (Rs)	2.0	8.0	9.0	10.0
	RoCE (%)	33.4	28.1	26.9	25.2
	RoE (%)	28.0	23.9	22.9	21.5
	Net Debt : Equity (x)	-0.2	-0.2	-0.3	-0.3
	Net Working Capital (Days)	113.0	120.2	119.8	119.6
	PE (x)	16.2	16.3	14.2	12.6
	P/B (x)	4.3	3.6	3.0	2.5
	EV / EBITDA (x)	12.0	12.0	10.3	8.9
	Dividend Yield (%)	0.3	1.1	1.2	1.4

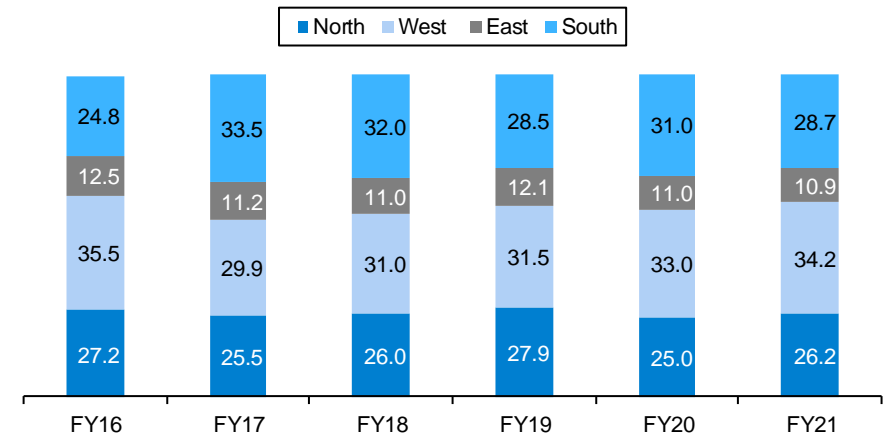
# Story in Charts

Revenue and revenue growth trend(%)



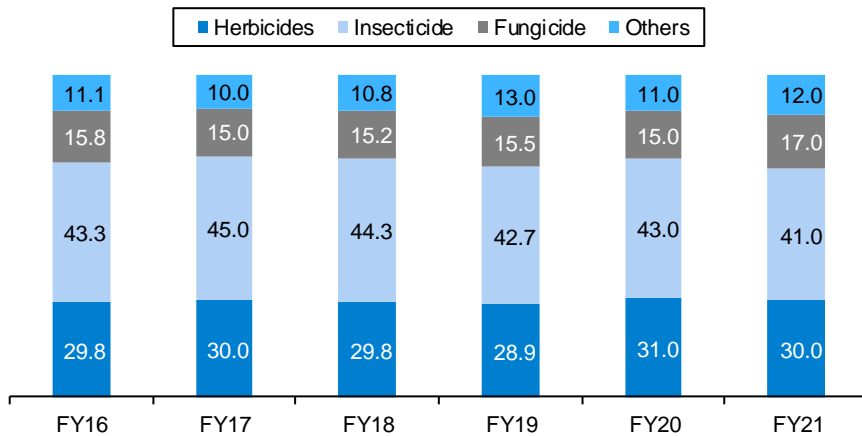
Source: Company, PL

West and South contributes to >60% of the total revenues (%)



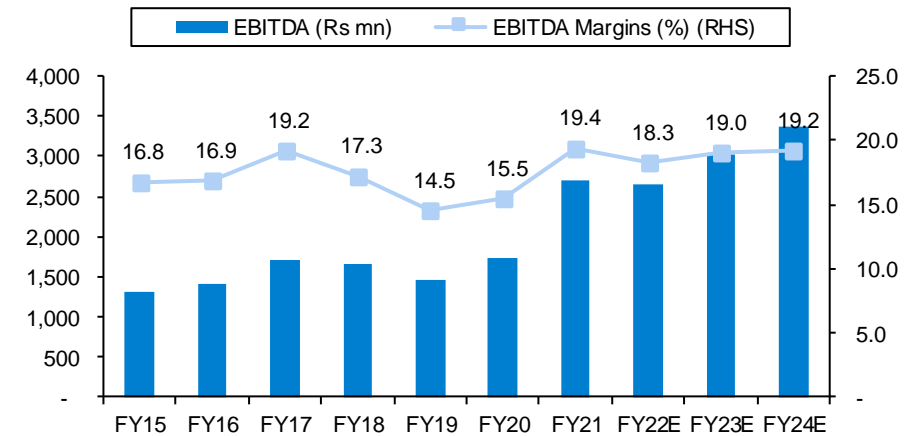
Source: Company, PL

Herbicides and Insecticides contributes >70% of total revenues (%)



Source: Company, PL

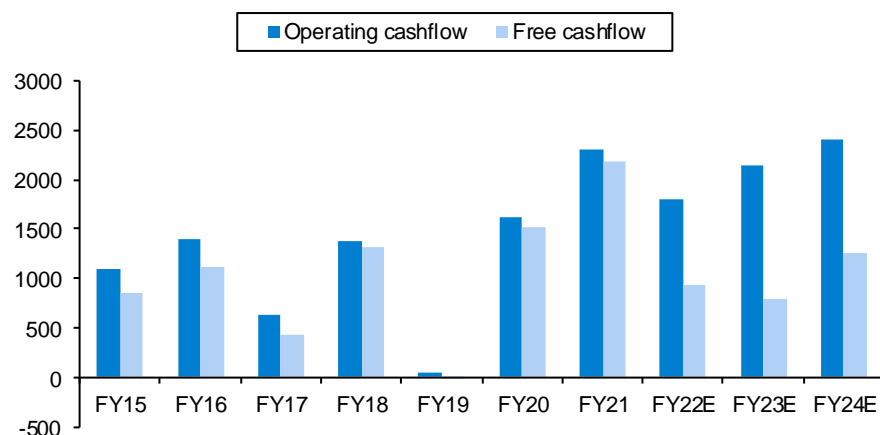
EBITDA and EBITDA Margin trend (%)



Source: Company, PL

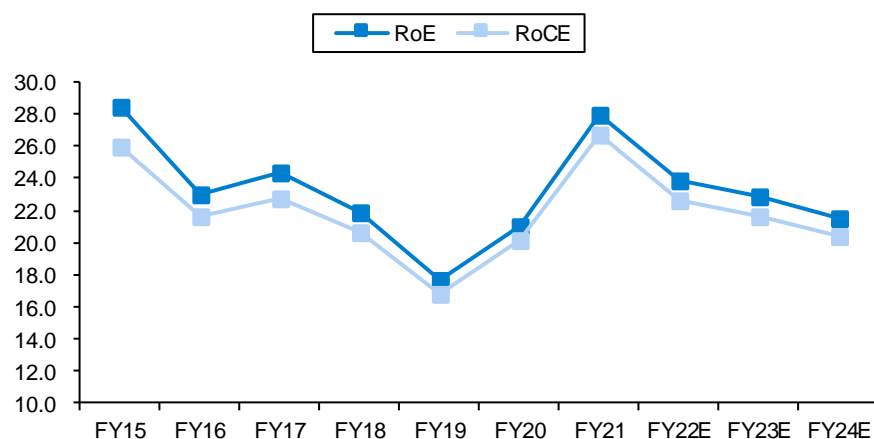
# Story in Charts

## Likely to generate INR5.1bn of free cash over FY21-24E (INR Mn)



Source: Company, PL

## Return ratios likely to remain upwards of 20% going forward (%)



Source: Company, PL

## 28 new product launched in the last 5 years (FY17-21)

FY15	Sakura - 9(3)	Weedicide
	Mortar	Insecticide
	Pager	Insecticide
	Jackal	Insecticide
FY16	Dhanvarsha	Plant Growth Enhancer
	Dozo	Herbicide
	Goldy - 9(4)	Fungicide
	Cover	Insecticide
FY17	Thiram	
	Maxx-Soy	Herbicides
	Conika	Fungicide
	Fujita	Fungicide
	Hi-Dice Super	Fungicide
	Bullon	Insecticide
	Aashito	Insecticide
	Delight	Fungicide
FY18	Dumil	Herbicides
	Fenox - 1000	Herbicides
	Godiwa	Fungicide
	Godiwa Super	Fungicide
	Marker Super	Insecticide
	D-one	Insecticide
	Suelo	Soil Health Enhancer
	Domar	Insecticide
FY19	Apply	Insecticide
	Largo	Thripicide
	Chempa	Herbicide
FY20	Mycore	Soil Health Enhancer
	Zapac	Insecticide
	Pro-rin	Insecticide
	Prodhan	Insecticide
FY21	Dabooch	Herbicide
	Dozo Maxx	Herbicide
	Kirari	Fungicide
	Nissodium	Fungicide
	Craze-D	Herbicide
	Ripple	Insecticide

Source: Company, PL

# Rallis India – Testing times; worst seems behind

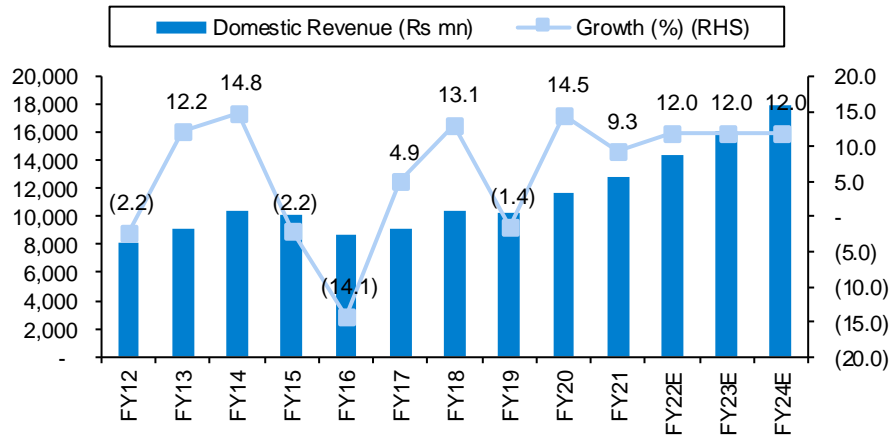
Rating: Accumulate | CMP: Rs257 | TP: Rs270 | Mcap: Rs50.0bn

- **Focus on Strategic initiatives and new product launches to revive growth:** Rallis is expected to gain market share primarily led by a) Revamping of trade policies; b) strong innovative product pipeline and better distribution; c) likely to launch 3-5 new products every year for the next few years. We anticipate 12% domestic revenue CAGR over FY21-FY24E (5% CAGR FY11-FY21).
- **Capacity enhancement to drive next leg of growth:** Rallis is expected to incur capex of INR8bn over next 2-3 years (as against INR6.4bn over FY12-21) largely funded through internal accruals on (a) INR1bn for domestic formulation of new plant; (b) Metribuzin capacity expansion for INR0.4bn; (c) INR3.5bn for de-bottlenecking of existing plants and setting up new plants for B2B export molecules and (d) INR3.5bn for backward integration, especially in triazoles. We estimate 14% export revenue CAGR over FY21-FY24E (11% over FY11-FY21).
- **Achieve deeper penetration by expanding distribution network:** Focus on enhancing its marketing and distribution network (targets for 4,000 distributors and 65,000 retailers in CP business and 2,700 distributors and 35,000 retailers in seeds business) in FY22.
- **Outlook & Valuation:** Post change in the management that resulted into realignment of trade policies and new product introductions, the company has been able to re-gain lost market share in domestic market. However, the performance was impacted led by subdued growth in exports segment on the back of pricing and volume pressure in Metribuzin. We believe, gradual recovery in both the domestic and exports segment coupled with enhanced capacity would lead to sustainable growth in the medium term. We initiate coverage with ACCUMULATE; TP Rs270 set at 18x FY24E EPS.
- **Key Risk:** Poor monsoons and pricing pressure in exports market can pose a risk to the earnings.

	Y/e March	2021	2022	2023	2024
<b>Income Statement</b> (Rs m)	Net Sales	24,294	26,411	29,944	33,742
	Growth (%)	7.9	8.7	13.4	12.7
	EBITDA	3,229	2,991	3,732	4,489
	Growth (%)	24.5	-7.4	24.8	20.3
	Margin (%)	13.3	11.3	12.5	13.3
	EBIT	2,588	2,286	2,846	3,522
	Net Interest	52	50	50	50
	Other Income	405	324	356	392
	PBT	2,941	2,559	3,152	3,864
	Total Tax	749	645	794	974
<b>Balance Sheet</b> (Rs m)	Adj. PAT	2,191	1,914	2,358	2,890
	Growth (%)	22.0	-12.6	23.2	22.6
	Gross Block	7,580	10,080	11,080	12,080
	Investments	2,835	2,035	2,035	2,035
	Inventories	7,632	8,276	9,331	10,477
	Trade receivables	4,063	5,065	5,743	6,471
	Cash & Bank Balance	551	295	893	1,927
	Equity Share Capital	195	195	195	195
	Total Netw orth	15,908	17,120	18,658	20,612
	Borrow ings	378	378	378	378
<b>Cash Flow</b> (Rs m)	Trade payables	5,961	7,157	8,070	9,061
	Net cash from Op. activities	2,169	1,687	2,141	2,854
	Net Cash from Inv't. activities	-2,677	-2,498	-1,753	138
	Net cash from Fin. activities	-352	1,314	-850	-3,024
	Net change in cash	-859	502	-462	-32
<b>Key Ratios</b>	Free Cash Flow	-1,718	1,005	-924	-64
	EPS (Rs)	11.3	9.8	12.1	14.9
	Growth (%)	22.0	-12.6	23.2	22.6
	BPVS (Rs)	81.8	88.0	95.9	106.0
	DPS (Rs)	3.0	3.0	3.5	4.0
	RoCE (%)	16.7	13.5	15.6	17.6
	RoE (%)	14.6	11.6	13.2	14.7
	Net Debt : Equity (x)	-0.2	-0.1	-0.1	-0.2
	Net Working Capital (Days)	86.1	85.5	85.4	85.3
	PE (x)	22.8	26.1	21.2	17.3
	P/B (x)	3.1	2.9	2.7	2.4
	EV / EBITDA (x)	14.6	16.1	12.7	10.4
	Dividend Yield (%)	1.2	1.2	1.4	1.6

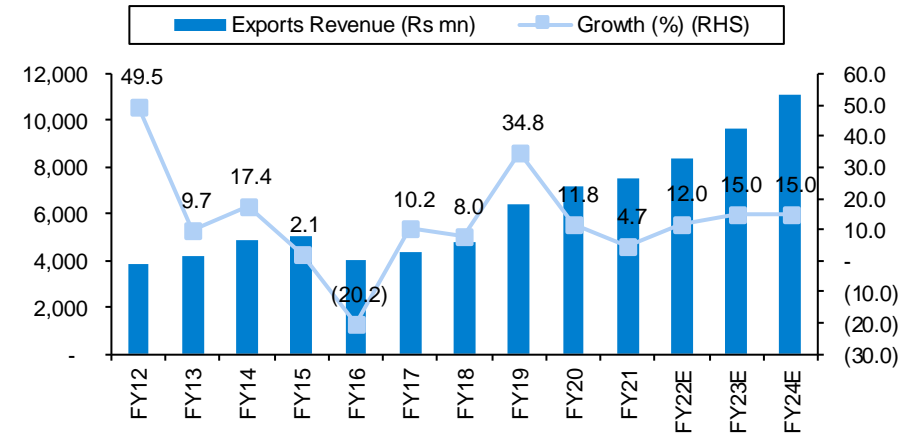
# Story in Charts

## Gradual improvement in domestic revenues post re-alignment of policies



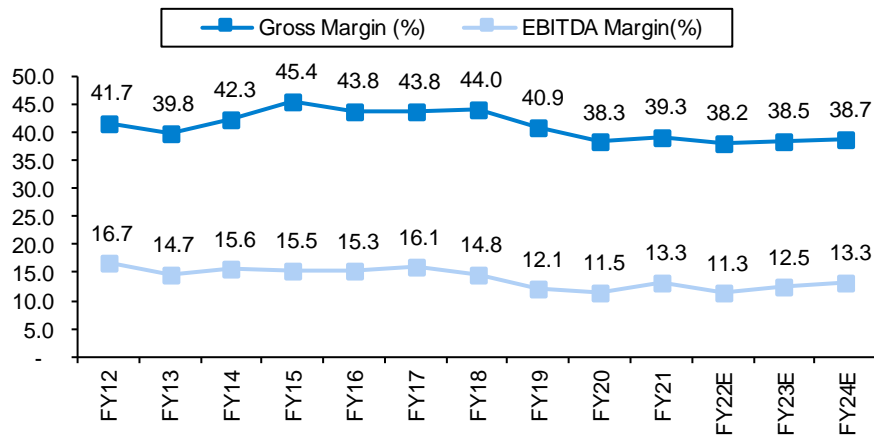
Source: Company, PL

## Enhanced capacity in exports to drive growth



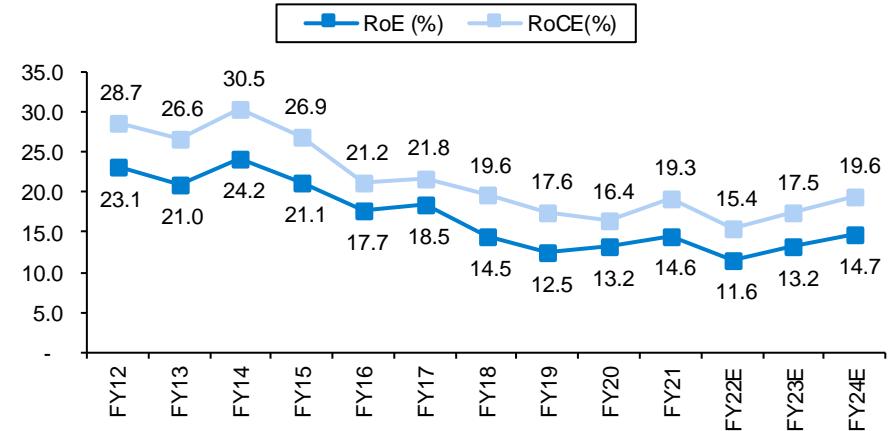
Source: Company, PL

## Gross and EBITDA margins trend (%)



Source: Company, PL

## Steady RoE and RoCE profile (%)

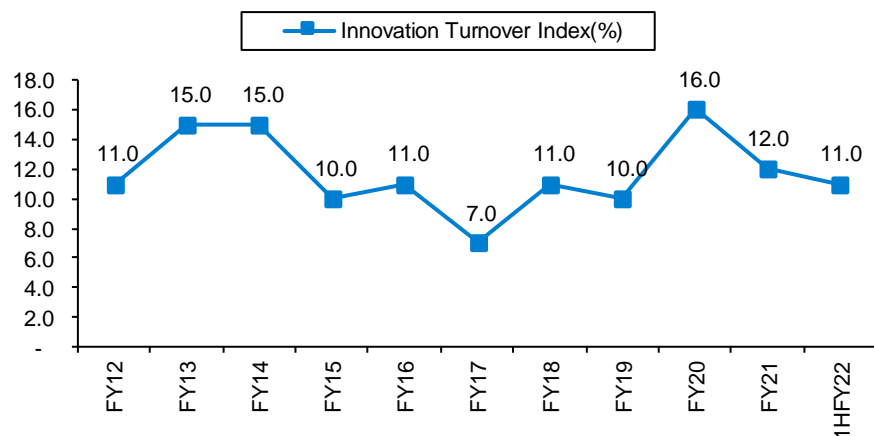


Source: Company, PL



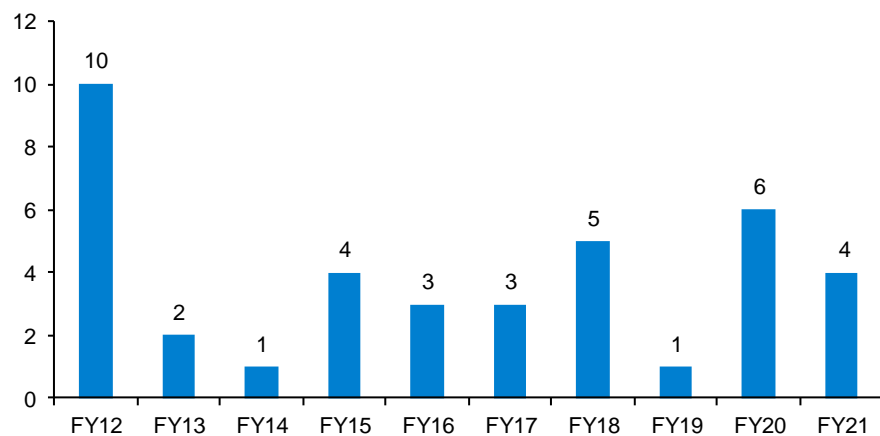
# Story in Charts

## Innovation Turnover Index (ITI)- Showing initial signs of improvement (%)



Source: Company, PL

## Consistently launching new products (Nos.)



Source: Company, PL

## 20 product launches in the last 5 years (FY16-21)

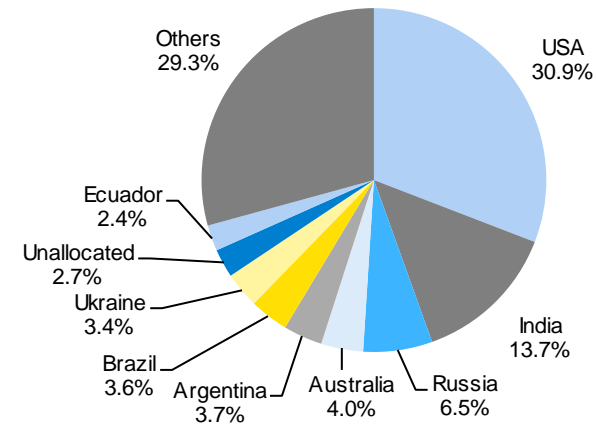
FY16	Mark	Co-marketing	Pre-emergent herbicide	Control of weeds
	Panida Grande	9(4)	Broad spectrum formulation	Control of weeds
	Zeeny	9(3)	Insecticide	Okra
FY17	Epic	9(3)	Advanced WDG formulation	Paddy
	Neonix	9(3)	Seed treatment	Ground nut & wheat crops
	Summit	Co-marketing	Insecticide	Catering to thrips / caterpillar pests
FY18	Cenator	Co-marketing	Ready mix formulation	Paddy
	Jashn Super	9(4)	Insecticide	Control of lepidopteron pests
	Odis	9(3)	Herbicide	Cotton and Paddy
	Pulito	9(4)	Fungicide	Wide Spectrum diseases
	Rice Up	Co-marketing	Broad spectrum herbicide	Paddy
FY19	Oliver	Co-marketing	Herbicide	Post emergence control of grass
FY20	Ayaan	9(3)	Fungicide	Multiple crops
	Cameo	Co-marketing	Insecticide	Paddy
	Impeder	Co-marketing	Herbicide	Wheat
	Sarthak	9(3)	Herbicide	Grape
	Trimbo	Co-marketing	Herbicide	Maize
	Zygant	9(3)	Insecticide	Paddy
FY21	Kriman	9(3)	Herbicide	Grape
	Trot	9(4)	Seed treatment insecticide	Multiple crops
	Eevee	9(3)	Insecticide + Fungicide	Paddy & Vegetables

Source: Company, PL

# Metribuzin- Rallis Enjoys ~15-20% of global market share

- Metribuzin is a triazinone herbicide having global market size of USD227mn (Rallis enjoys ~15-20% of the global market share) that control weeds by inhibiting photosynthesis. Metribuzin is labeled to use on soybeans, potatoes, alfalfa, carrots, corn, and tomatoes.
- Metribuzin was launched in 1970 by Bayer under the trade name Sencor and also is sold by DuPont under the trade name Lexone for control of certain broadleaf weeds and grassy weed species.
- Metribuzin is sold in more than 75 countries, with top 10 countries contributing to >70% of total sales.
- As per the data available from Bloomberg; Triazinone herbicide category global market size was ~USD900mn in 2015.
- Metribuzin has global capacity of 6,000MT and Rallis has capacity of 1000MT. Rallis has expanded its capacity by 500MT in June 2019 and 500MT In Dec 2019. Both this capacities are asset turnover of 2-2.5x and payback period of 3 years.

Geography-wise consumption of Metribuzin (%)



Source: Industry, PL

# PI Industries – Foray into the pharma CSM to add feather on the cap

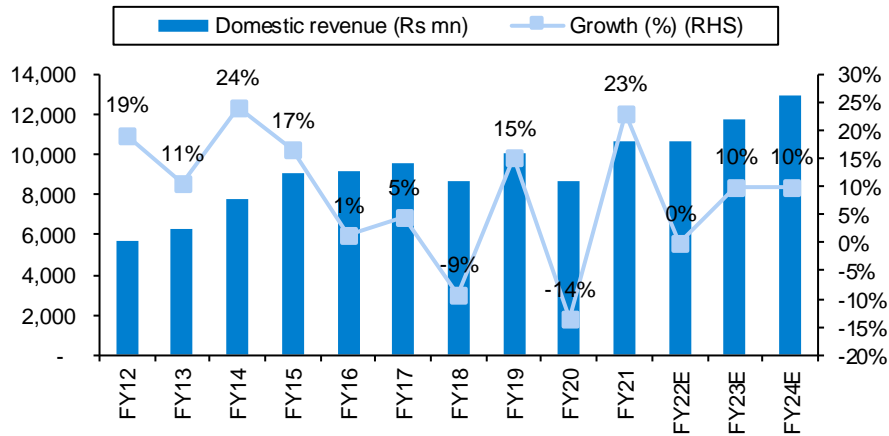
Rating: BUY | CMP: Rs2,903 | TP: Rs3,470 | Mcap: Rs439.8bn

- Leading Custom Synthesis and Manufacturing (CSM) player with an enviable domestic portfolio:** PI industries is one of the leading agrochemicals and CSM player, on strong long-term growth prospects and proven ability to capture them. The domestic business is seeing a structural demand growth driven by better agronomic situation. While, CSM business has a strong order book of ~USD1.4bn, it provides revenue visibility for next 3-4 years. We believe, PI has reaped market share through its differentiated business model and this trend is likely to continue.
- CSM likely to grow at +20% CAGR over the next few years:** We expect CSM segment to post a revenue CAGR of 21% over FY21-24 (28% CAGR over FY11-21) on the back of (a) CSM order book of USD1.4bn as on Sept'21; (b) capacity enhancement in existing and new molecules to drive growth; both in agrochemicals and Pharma segment and (c) Healthy demand environment globally.
- Enhanced opportunity in CSM pharma to de-risk the CSM model:** PI is also venturing into the CSM pharma space through organic as well as inorganic route (raised Rs20bn) through QIP for inorganic growth opportunities which would fuel growth and de-risk the CSM business.
- New product launches to fuel growth:** On domestic side, the company has been launching newer products by diversifying its crop exposure from paddy to other crops to support growth over longer term.
- Outlook & Valuation:** We believe a) leading R&D and complex chemistry capabilities coupled with robust order book, b) growing innovation capex and c) additional delta from Isagro's acquisition (completed in Q4FY20), PI appears set to deliver market leading growth (Revenue/PAT CAGR of 18%/21% over FY21-24E) supporting our positive stance. Initiate Coverage with BUY, TP of Rs3,470 based on 40x FY24 EPS.
- Key Risk:** Poor monsoons and delay in utilization of QIP funds for inorganic growth opportunities in the pharma space.

	Y/e March	2021	2022	2023	2024
Income Statement (Rs m)	Net Sales	45,770	53,736	63,258	74,554
	Growth (%)	36.0	17.4	17.7	17.9
	EBITDA	10,122	11,796	14,600	17,973
	Growth (%)	41.0	16.5	23.8	23.1
	Margin (%)	22.1	22.0	23.1	24.1
	EBIT	8,374	9,809	12,335	15,410
	Net Interest	282	154	51	52
	Other Income	1,249	1,079	1,175	1,281
	PBT	9,341	10,734	13,459	16,640
	Total Tax	2,002	2,261	2,840	3,513
Balance Sheet (Rs m)	Adj. PAT	7,339	8,473	10,619	13,127
	Growth (%)	61.0	15.4	25.3	23.6
	Gross Block	27,370	29,798	33,799	37,801
	Investments	7,133	7,333	7,533	7,733
	Inventories	10,528	9,698	12,217	13,307
	Trade receivables	7,035	8,877	10,458	12,336
	Cash & Bank Balance	16,195	19,773	25,351	32,776
	Equity Share Capital	152	152	152	152
	Total Netw orth	53,424	60,984	70,600	82,633
	Borrow ings	2,574	-	-	-
Cash Flow (Rs m)	Trade payables	7,960	7,902	9,225	10,856
	Net cash from Op. activities	7,249	9,131	9,660	11,493
	Net Cash from Inv. activities	-24,073	-1,932	-3,027	-2,922
	Net cash from Fin. activities	16,904	11,178	-1,055	-1,146
	Net change in cash	150	18,377	5,578	7,425
	Free Cash Flow	2,859	6,340	5,658	7,490
Key Ratios	EPS (Rs)	48.4	55.9	70.1	86.6
	Growth (%)	46.6	15.4	25.3	23.6
	BPV/S (Rs)	352.6	402.5	466.0	545.4
	DPS (Rs)	-	-	-	-
	RoCE (%)	19.2	16.8	18.7	20.1
	RoE (%)	18.4	14.8	16.1	17.1
	Net Debt : Equity (x)	-0.4	-0.4	-0.5	-0.5
	Net Working Capital (Days)	76.6	72.5	77.6	72.4
	PE (x)	59.9	51.9	41.4	33.5
	P/B (x)	8.2	7.2	6.2	5.3
	EV / EBITDA (x)	41.4	35.0	27.9	22.3
	Dividend Yield (%)	-	-	-	-

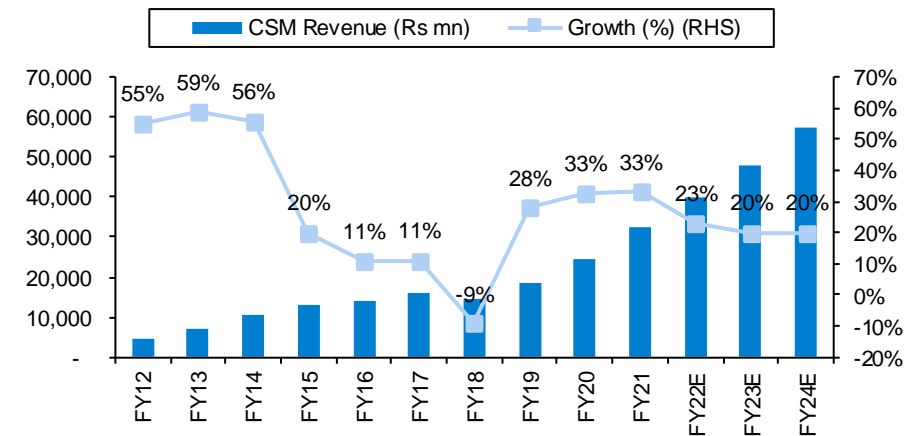
# Story in Charts

Domestic revenue and growth trend (%)



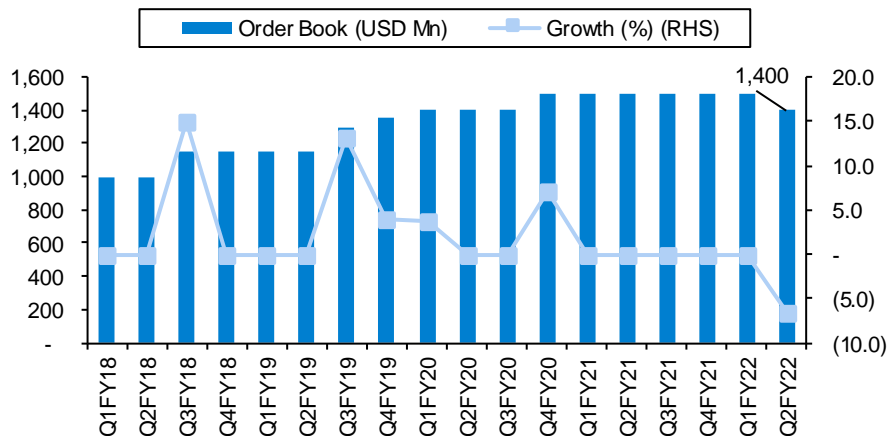
Source: Company, PL

Remains confident to grow at 20% in CSM over the next few years (%)



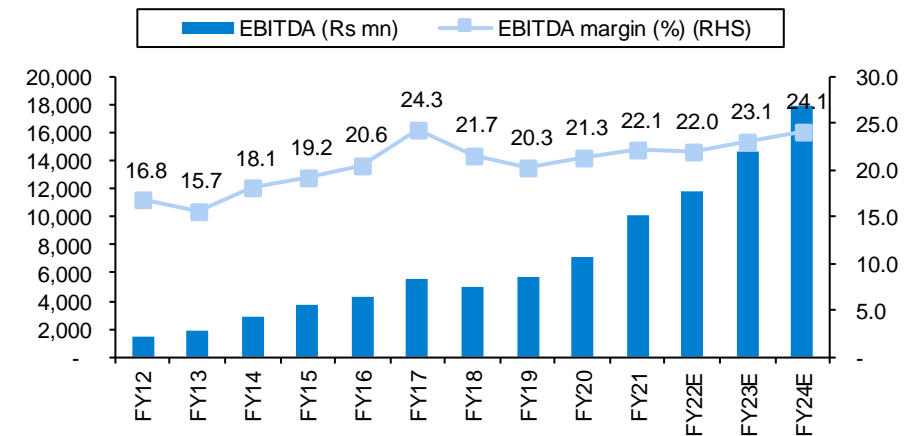
Source: Company, PL

Healthy CSM order book of USD1.4bn



Source: Company, PL

Better product mix would aid margins (%)



Source: Company, PL

# Story in Charts

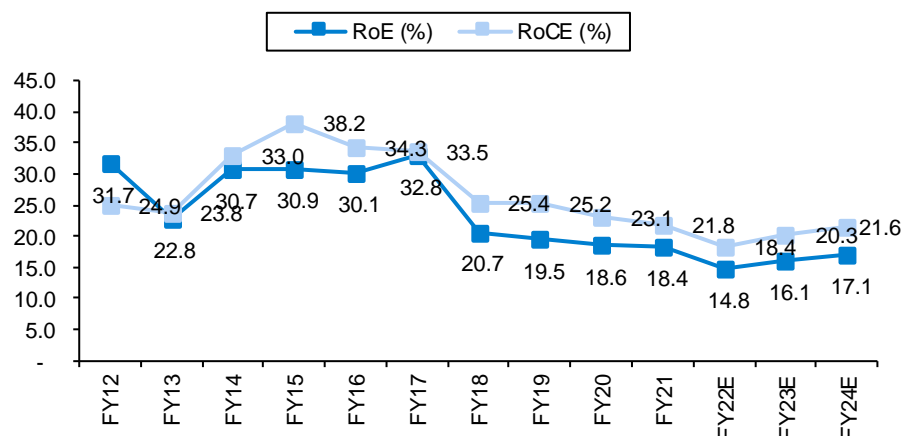
- Kuimai Chemicals, Japan is the largest client for PI Industries in the CSM segment. Contributes to ~INR1.2bn of revenues.
- Top-5 products and customers in the CSM segment contributes to ~60% of the revenues.

## Top- Products in the CSM segment

Sr. No.	Technical
1	Pyroxasulfone Technical
2	Metominostrobin TG
3	AE 747 Ether 2-chloro-4-(Methylsulfonyl)
4	Tefuryltrione
5	2-6-Dimethylinfanone (DMI)
6	1-(3-chloro-4 5 6 7- Tetrahtdropyrazolo
7	Methidathion Technical
8	AE-473 (2-(2-Chloro-4-Mesyl
9	2-Cyanimino, 1,3 Thiazolidin (CIT)
10	Roket 44EC
11	Others

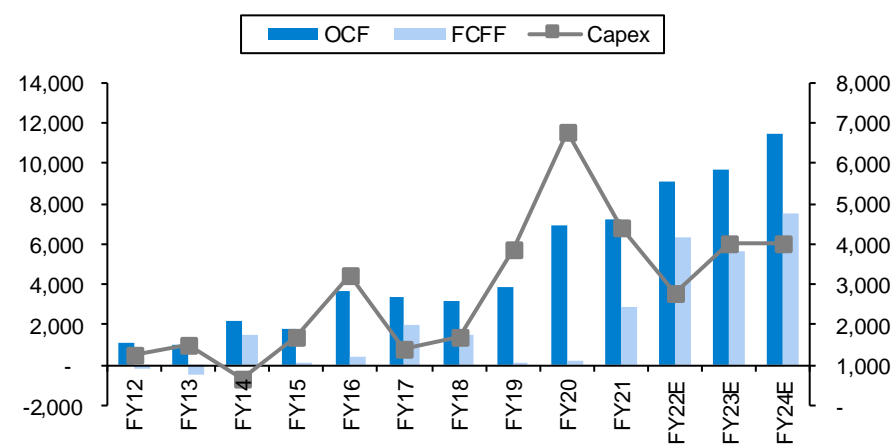
Source: Industry, PL

## Stable RoE and RoCE profile (%)



Source: Company, PL

## FCFF generation of INR8bn over FY12-21 (INR Mn)



Source: Company, PL

## Top-5 products contribute ~45-50% of the domestic revenues

Sr. No.	Formulation	Technical	Category	Crops
1	Nominee Gold	Bispyribac Sodium 10% SC	Herbicides	Rice
2	Osheen	Dinotefuran 20% SG	Insecticide	Rice, cotton
3	Keefun	Tolfenpyrad 15% EC	Insecticide	Rice
4	Foratox	Phorate 10 % CG	Insecticide	Bajra, barley, maize, rice, soybean, sorghum, wheat, black gram, pea, sugarcane, cotton, groundnut, mustard, vegetables, fruits, chilli, onion, coffee
5	Biovita	Seaweed (Ascophyllum nodosum)	Specialty nutrients	Cotton, rice, maize, mustard, soybean
6	Roket	Profenofos 40%+Cypermethrin 4%EC	Insecticide	Cotton
7	Fosmite	Ethion 50% EC	Insecticide	Cotton, tea, soybean, chilli, gram, pigeon pea
8	Kitazin	Kitazin 48% EC	Fungicide	Rice, chilli, tomato, potato, onion, pomegranate, grapes
9	Carina	Profenofos 50% EC	Insecticide	Tea, cotton
10	Awkira	Pyroxasulfone	Herbicides	Wheat

# Insecticides India – India–Successful delivery of capex to be the key

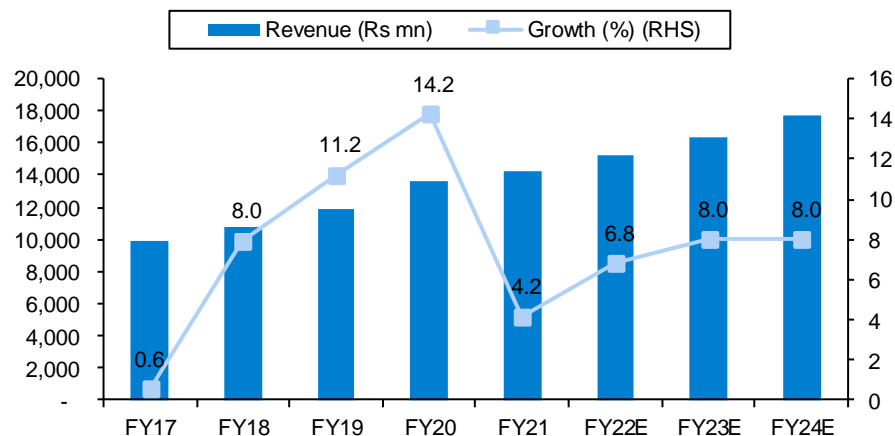
Rating: HOLD | CMP: Rs657 | TP: Rs680 | Mcap: Rs13.0bn

- **Backward integration to secure input supply:** IIL is reviewing to backward integrate the entire value chain (planned capex of INR1.1bn over the next 2 years in setting up SEZ unit, synthesis facilities and backward integration plant in Gujarat and Rajasthan) and thus reducing dependence on China, amid supply side shortages. This in turn would result into uninterrupted supply of key RM's and as well as improvement in gross margins led by better operating leverage.
- **Focus remains on growing exports pie:** IIL is currently working on grabbing registrations in new countries with 100+ exports agreements. The company is continuously increasing its footprint in newer geographies (currently exporting to 20+ counties) and intends to take it to 50+ countries and 100+customers by end of FY23.
- **New product launches to offset the revenue loss of banned molecules:** IIL has been focusing on developing new combination molecules through their in-house R&D capabilities as well as tie-ups with global partners. The company has launched 7 new products in FY21, while they intend to launch 5-6 new products in FY22. The introduction of new combination molecules (low volume- high margins) will offset the phasing out of generic products (high volume- low margin).
- **Outlook & Valuation:** We expect IIL to post revenue/PAT CAGR of 8%/9% over FY21-24E primarily led by a) pick-up in revenue from new products; b) ramp-up in exports revenues as large part of the capex is done by now which would reap benefits in the near/medium term. Initiate coverage with HOLD rating and TP of Rs680 based on 10x FY24 EPS.
- **Key Risk:** Irregular monsoon; delay in ramp-up of new facilities can be a potential risk to our estimates.

	Y/e March	2021	2022	2023	2024
Income Statement (Rs m)	Net Sales	14,202	15,172	16,386	17,697
	Growth (%)	4.2	6.8	8.0	8.0
	EBITDA	1,523	1,699	1,901	2,159
	Growth (%)	-2.3	11.6	11.9	13.6
	Margin (%)	10.7	11.2	11.6	12.2
	EBIT	1,277	1,396	1,544	1,773
	Net Interest	67	89	51	28
	Other Income	77	40	45	55
	PBT	1,287	1,348	1,538	1,800
	Total Tax	305	339	387	453
Balance Sheet (Rs m)	Adj. PAT	982	1,009	1,151	1,347
	Growth (%)	15.5	2.7	14.1	17.0
	Gross Block	3,141	4,247	4,456	4,956
	Investments	144	131	132	133
	Inventories	6,609	6,651	7,183	7,758
	Trade receivables	2,546	2,910	3,143	3,394
	Cash & Bank Balance	833	577	919	1,359
	Equity Share Capital	207	197	197	197
	Total Netw orth	8,184	9,149	10,238	11,576
	Borrow ings	940	924	524	274
Cash Flow (Rs m)	Trade payables	3,620	3,159	3,412	3,685
	Net cash from Op. activities	1,554	575	1,061	1,219
	Net Cash from Inv. activities	-1,126	-647	-164	-445
	Net cash from Fin. activities	-1,040	534	-555	-333
	Net change in cash	-613	462	342	440
	Free Cash Flow	1,071	-112	852	719
	EPS (Rs)	47.5	51.1	58.3	68.3
	Growth (%)	15.5	7.6	14.1	17.0
	BPVS (Rs)	396.0	463.7	518.9	586.7
	DPS (Rs)	2.0	5.1	5.8	3.4
Key Ratios	RoCE (%)	14.0	14.5	14.8	15.7
	RoE (%)	12.7	11.6	11.9	12.4
	Net Debt : Equity (x)	0.0	0.0	-0.0	-0.1
	Net Working Capital (Days)	142.2	154.0	154.0	154.0
	PE (x)	13.8	12.9	11.3	9.6
	P/B (x)	1.7	1.4	1.3	1.1
	EV / EBITDA (x)	9.0	7.8	6.6	5.5
	Dividend Yield (%)	0.3	0.8	0.9	0.5

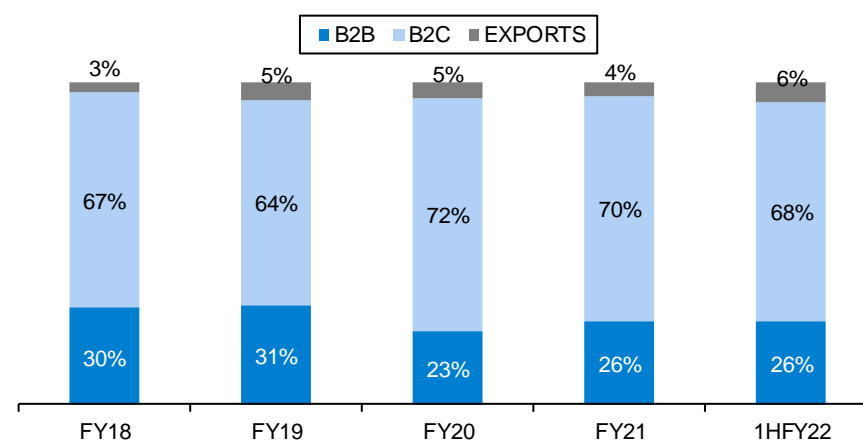
# Story in Charts

Revenue and revenue growth (%)



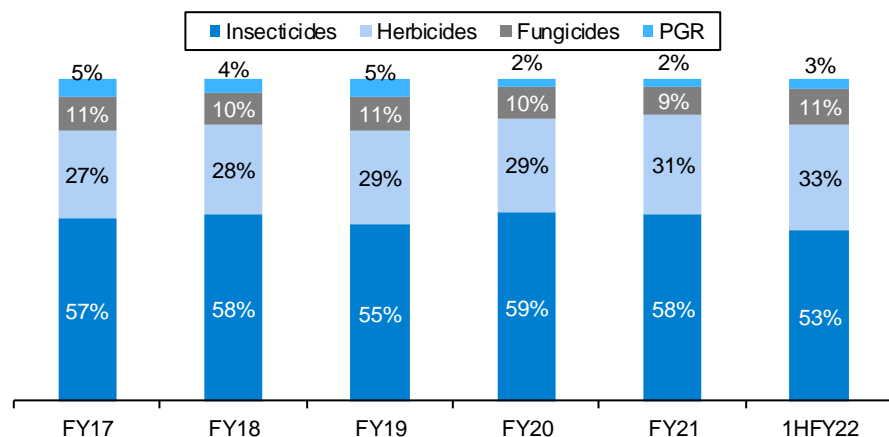
Source: Company, PL

Formulations revenues (B2C) contribute 70% of total revenues (%)



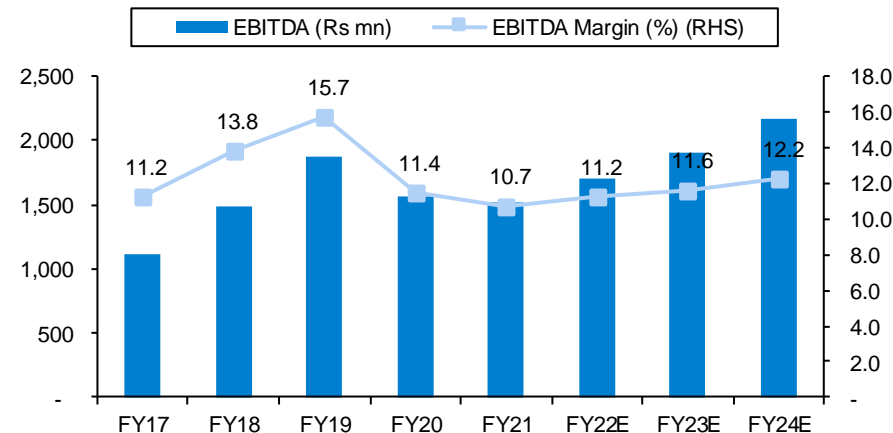
Source: Company, PL

In-line with industry; portfolio largely skewed towards insecticides (%)



Source: Company, PL

EBITDA and EBITDA margin trend (%)

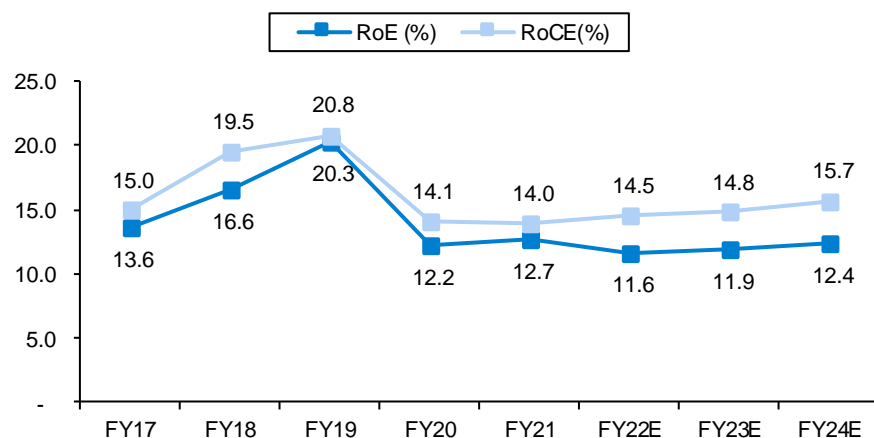


Source: Company, PL



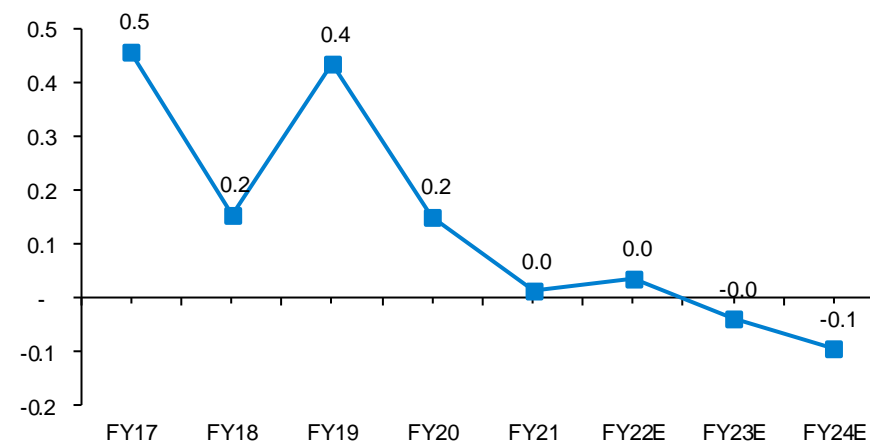
# Story in Charts

## Return ratios likely to bottom out in FY22E



Source: Company, PL

## Debt/Equity (x)



Source: Company, PL

## 30 new product launched over the last 5 years; Amongst the highest in the domestic industry

FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	1HFY22
Hakama	Xplode	Myocraja	Prime Gold	Green Label	Kayakalp	Encounter	Super Racer	Dominant	Hachiman
Nuvan	Logo/ Gama	Blaster	Focus	Suzuka	Bhima	Aikido	Lethal Gold	Tadaaki	Oxim
Pulsor	Selector	Lethal Advance		Glusto	Hijack Super	Sofia	Chaperone	Avval	
Wego Super	Trick			Victor Gold	Green Mix	Hercules	Kunoichi	Sofia	
Hawk	Profit Super			Agrospred Max	Root bead	Durion	Uno		
						Durion Tech	Tozo		
						Athelete	Rockstar		
						Stroke	Bhima Super		

Source: Company, PL

# Godrej Agrovet – Diversified business with decent opportunity

Rating: Accumulate | CMP: Rs534 | TP: Rs615 | Mcap: Rs102.6bn

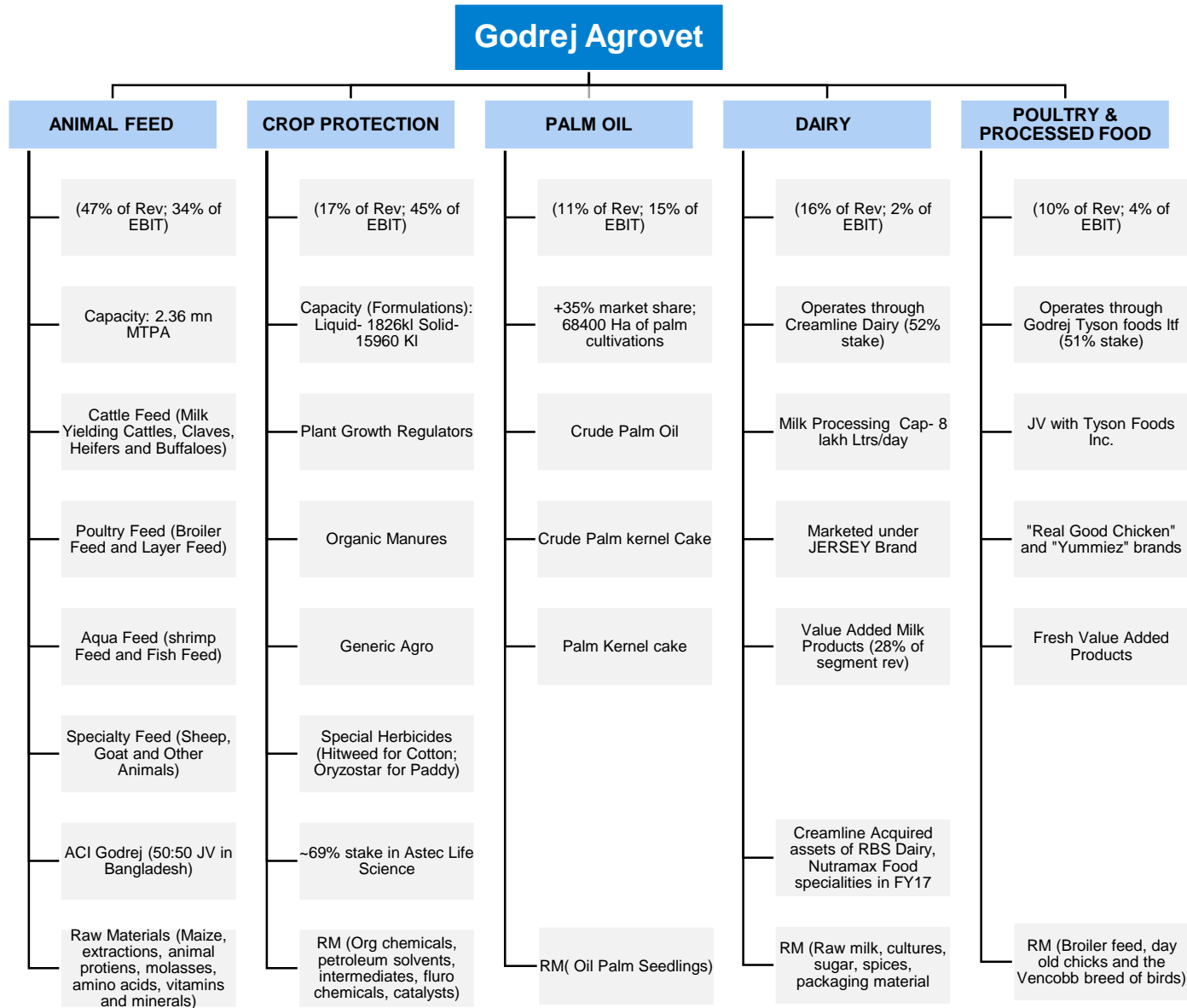
- Animal Feed business to remain a cash cow:** GOAGRO is the only and largest pan-India cattle feed player with 12% organized market share (MS). Widening demand-supply gap in green fodder availability, increasing animal protein consumption (growing at 10-15% CAGR) and formalization of dairy industry is likely to aid 10% volume CAGR for the segment. The segment will continue to remain a cash-cow for GOAGRO with robust cash flows, as it is largely a cash & carry business and runs on negative working capital.
- Prime position in oil palm development to continue:** GOAGRO is the largest palm oil producer with 35% MS and having +20% (68,400 Ha) of India's oil palm plantation area. With ~65% of the plantation being in pre-harvest and growth phase, we expect sustainable healthy growth in FFB for the next decade. GOI's thrust on boosting domestic oil palm production to cut reliance on imports (Oil Palm & Vegetable oil imports at USD 6bn & USD 10bn per annum) augurs well for GOAGRO.
- Astec Lifesciences-Strong product pipeline and capacity enhancement to aid growth:** Commercialization of new products coupled with commencement of new herbicides plant and 15+ new launches in the branded business (including 6 in-licensed) in next 5 years is likely to drive growth for CP segment. Astec has rich product pipeline for next 5-7 years in CRAMS and non-CRAMS segment. Setting up of new R&D facility will enhance its abilities in rolling out new products.
- Outlook & Valuation:** We initiate coverage on GOAGRO with an 'ACCUMULATE' rating and SOTP based TP of Rs615. The target multiples assigned for each business is broadly in-line with the industry averages. At 22x FY24 PE and 13xFY24 EV/EBITDA, the stock prices in major positives.
- Key Risk:** Poor monsoons, Palm oil inflation can pose a risk to the earnings.

	Y/e March	2021	2022	2023	2024
Income Statement (Rs m)	Net Sales	62,667	71,157	76,983	83,912
	Growth (%)	-10.0	13.5	8.2	9.0
	EBITDA	5,638	7,383	7,844	8,970
	Growth (%)	15.4	31.0	6.2	14.3
	Margin (%)	9.0	10.4	10.2	10.7
	EBIT	4,098	5,622	5,873	6,833
	Net Interest	465	417	203	119
	Other Income	396	443	496	536
	PBT	4,029	5,648	6,166	7,250
	Total Tax	1,055	1,423	1,554	1,827
Balance Sheet (Rs m)	Adj. PAT	3,137	4,151	4,441	5,219
	Growth (%)	2.5	32.3	7.0	17.5
	Gross Block	26,204	29,572	32,572	34,572
	Investments	1,493	1,522	1,545	4,073
	Inventories	9,804	9,377	10,240	11,161
	Trade receivables	8,226	8,968	9,702	10,575
	Cash & Bank Balance	509	1,178	1,410	2,016
	Equity Share Capital	1,921	1,921	1,921	1,921
	Total Netw orth	20,511	23,181	26,326	29,857
	Borrow ings	9,428	4,487	2,287	1,687
Cash Flow (Rs m)	Trade payables	7,326	12,076	13,188	14,375
	Net cash from Op. activities	2,169	1,687	2,141	2,854
	Net Cash from Inv. activities	-2,677	-2,498	-1,753	138
	Net cash from Fin. activities	-352	1,314	-850	-3,024
	Net change in cash	-859	502	-462	-32
	Free Cash Flow	-1,718	1,005	-924	-64
Key Ratios	EPS (Rs)	16.3	21.6	23.1	27.2
	Growth (%)	2.4	32.3	7.0	17.5
	BPVS (Rs)	106.8	120.7	137.1	155.5
	DPS (Rs)	8.0	6.0	6.5	7.0
	RoCE (%)	15.0	19.5	20.9	22.7
	RoE (%)	16.1	19.0	17.9	18.6
	Net Debt : Equity (x)	0.4	0.1	0.0	-0.1
	Net Working Capital (Days)	62.3	32.2	32.0	32.0
	PE (x)	32.7	24.7	23.1	19.7
	P/B (x)	5.0	4.4	3.9	3.4
	EV / EBITDA (x)	19.8	14.3	13.2	11.1
	Dividend Yield (%)	1.5	1.1	1.2	1.3

# SOTP - Valuation

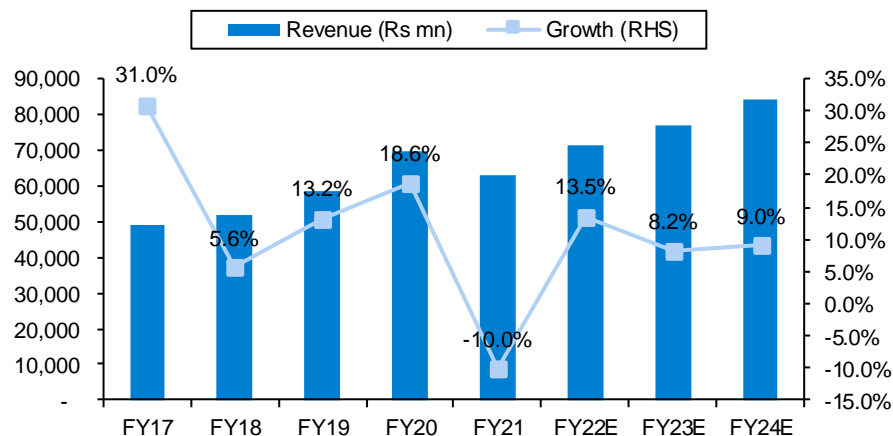
Particulars	FY24 EBITDA	Multiple (x)	Segment EV
Animal Feed	3,070	16	49,270
Plam Oil	1,491	14	20,879
Crop Protection	3,074	15	46,116
Dairy	(90)	8	(718)
Others	276	8	2,208
<b>Total</b>			<b>1,17,756</b>
Net Debt FY24			(328)
Target Mcap			1,18,084
O/s Shares			192
<b>Target Price</b>			<b>615</b>
Derived EV/EBITDA			12.9
Derived P/E			22.3

# Business Segments- Diversified play in the domestic agri space



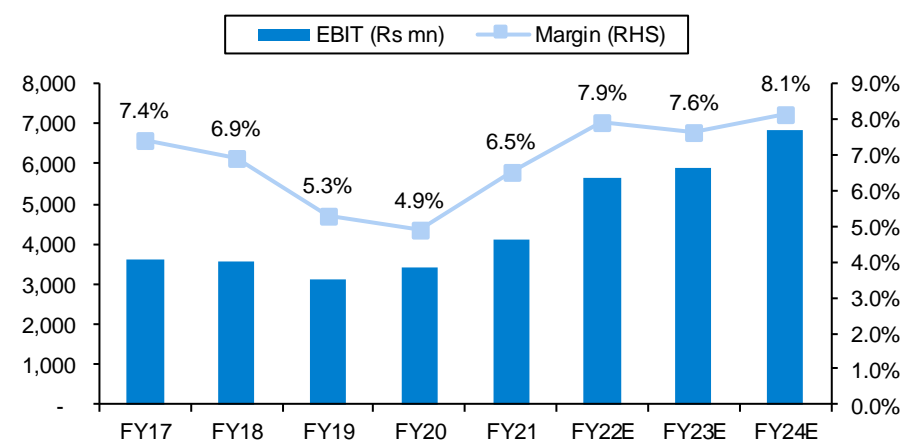
# Story in Charts

Revenue and Revenue Growth (%)



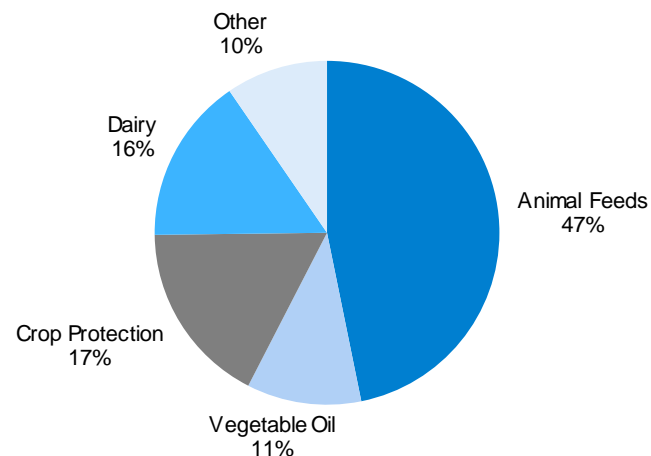
Source: Company, PL

EBIT and EBIT Margin (%)



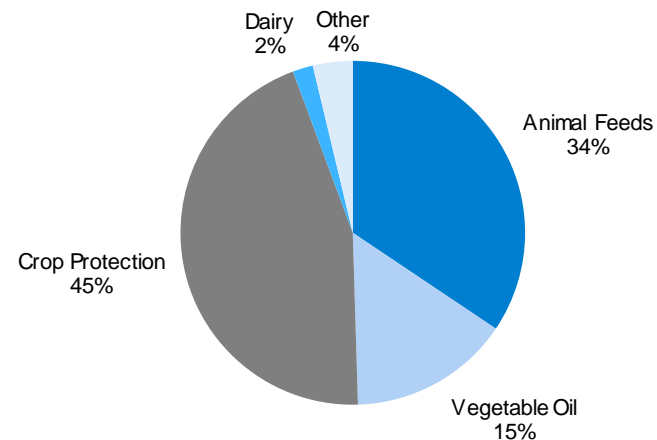
Source: Company, PL

Animal feed and CP contributes 65% of the total revenues in FY21..



Source: Company, PL

..while animal feed and CP contributes to 80% of the total EBIT



Source: Company, PL

# Sharda Crop Chem – Risk reward favourable

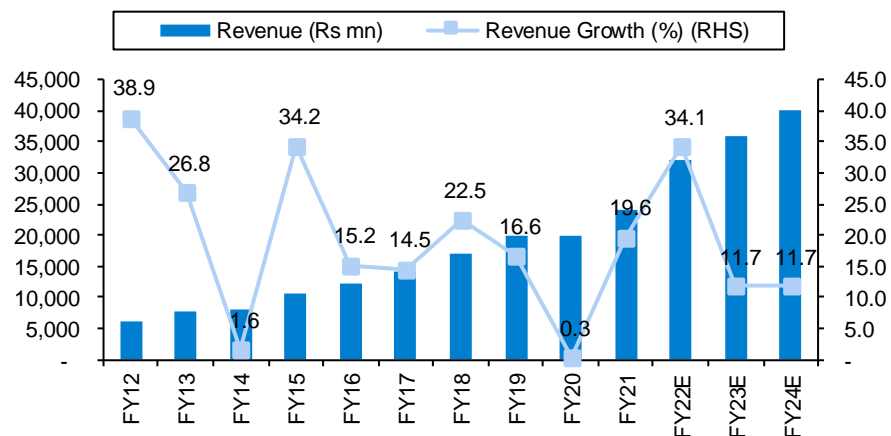
Rating: BUY | CMP: Rs340 | TP: Rs450 | Mcap: Rs30.6bn

- SHCR, is an unique asset light business model focusing on product registrations and outsourced manufacturing. Its ability in identification of generic molecules, preparing dossiers and seeking registrations enables to broad base its offering across crops and product segments.
- Strong presence in highly regulated market bodes well:** SHCR has a strong presence in the highly regulated European and NAFTA region (contributing to 48% and 37% of FY21 revenues). Europe followed by NAFTA (Gross margins of 37%/24% in FY21) enjoys the highest margins as these markets are more stringent in terms of regulations and hence limit competition.
- Growth in Europe and NAFTA to support margins:** SHCR's gross margins have corrected sharply from 35.9% in FY17 to 31.7% in FY21 which we believe was primarily on account of sharp uptick in RM cost specially from China and lower agrochemical revenue share of Europe in FY21. However, we anticipate that gross margin is likely to revive in the near-medium term led by superior revenue growth in Europe and NAFTA. SHCR expects gross margins to remain in the range of 31-32% in FY22.
- Outlook & Valuation:** SHCR's performance has suffered in past on account of multiple factors like (a) adverse weather conditions, (b) inferior geographical mix, (c) sharp uptick in RM cost and (4) higher capitalization cost. However going by the improvement in quarterly performance of SHCR in the recent past, we believe that the concerns are largely overdone and the situation is likely to improve in near term. Initiate coverage with BUY and TP of Rs450 based on 13x FY24E EPS.
- Key Risk:** Adverse weather conditions, adverse currency movements, regulatory risk, increase in price of Chinese imports and high dependence on Chinese suppliers.

	Y/e March	2021	2022	2023	2024
Income Statement (Rs m)	Net Sales	23,956	32,130	35,901	40,118
	Growth (%)	19.6	34.1	11.7	11.7
	EBITDA	4,168	5,368	6,193	7,159
	Growth (%)	40.4	28.8	15.4	15.6
	Margin (%)	17.4	16.7	17.3	17.8
	EBIT	2,464	3,098	3,428	3,899
	Net Interest	28	20	20	20
	Other Income	658	505	581	668
	PBT	3,095	3,583	3,989	4,547
	Total Tax	802	1,147	1,277	1,455
Balance Sheet (Rs m)	Adj. PAT	2,292	2,437	2,713	3,092
	Growth (%)	39.2	6.3	11.3	14.0
	Gross Block Investments	10,758	13,758	16,758	19,758
	Inventories	830	830	830	830
	Trade receivables	5,255	6,144	6,846	7,617
	Cash & Bank Balance	11,626	15,592	17,423	19,469
	Equity Share Capital	2,605	1,575	2,621	4,504
	Total Netw orth	902	902	902	902
	Borrow ings	16,143	18,200	20,478	23,135
	Trade payables	678	-	-	-
Cash Flow (Rs m)		8,068	11,059	12,322	13,710
	Net cash from Op. activities	2,486	2,523	3,900	4,650
	Net Cash from Inv. activities	-2,839	-2,495	-2,419	-2,332
	Net cash from Fin. activities	434	-1,059	-435	-435
	Net change in cash	1,827	-1,031	1,046	1,883
Key Ratios	Free Cash Flow	152	-477	900	1,650
	EPS (Rs)	25.4	27.0	30.1	34.3
	Growth (%)	39.2	6.3	11.3	14.0
	BPVS (Rs)	178.9	201.7	227.0	256.4
	DPS (Rs)	3.0	3.5	4.0	4.0
	RoCE (%)	16.0	17.7	17.7	17.9
	RoE (%)	15.2	14.2	14.0	14.2
	Net Debt : Equity (x)	-0.2	-0.1	-0.2	-0.2
	Net Working Capital (Days)	134.3	121.3	121.5	121.7
	PE (x)	13.4	12.6	11.3	9.9
	P/B (x)	1.9	1.7	1.5	1.3
	EV / EBITDA (x)	6.7	5.3	4.4	3.5
	Dividend Yield (%)	0.9	1.0	1.2	1.2

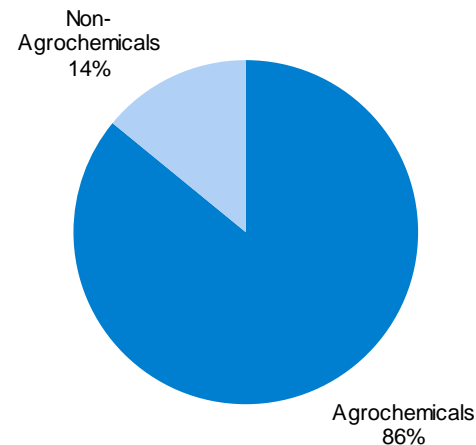
# Story in Charts

Revenue and Revenue Growth (%)



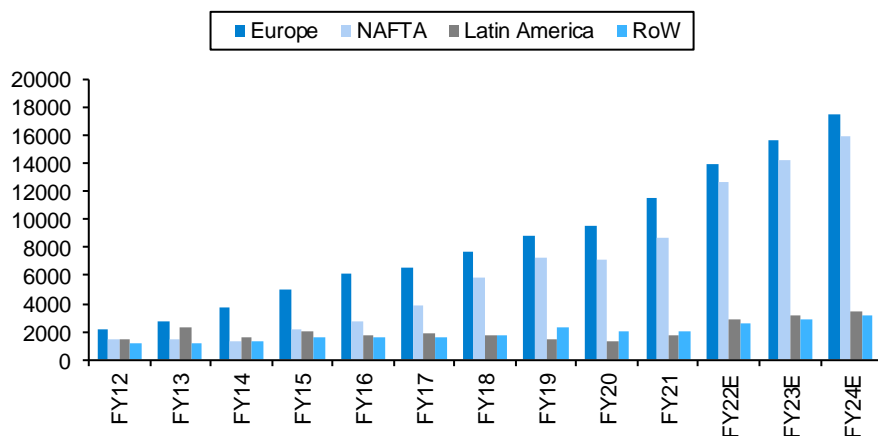
Source: Company, PL

Agrochemicals contributes 86% of the total revenues - FY21 (%)



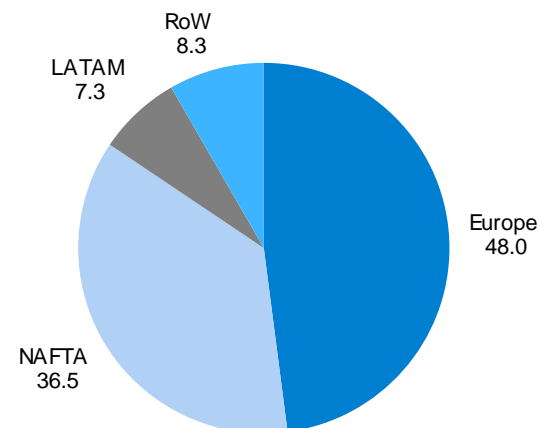
Source: Company, PL

NAFTA's revenue share has doubled in the last 4 years (INR Mn)



Source: Company, PL

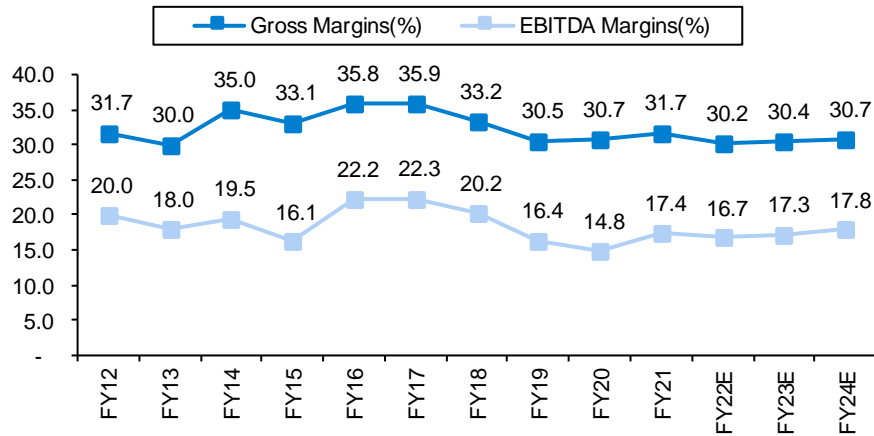
Europe and NAFTA combined contributes to 85% of the revenues - FY21 (%)



Source: Company, PL

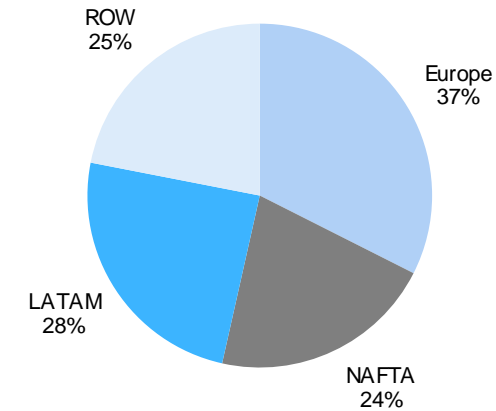
# Story in Charts

Gross margin and EBITDA margin trend (%)



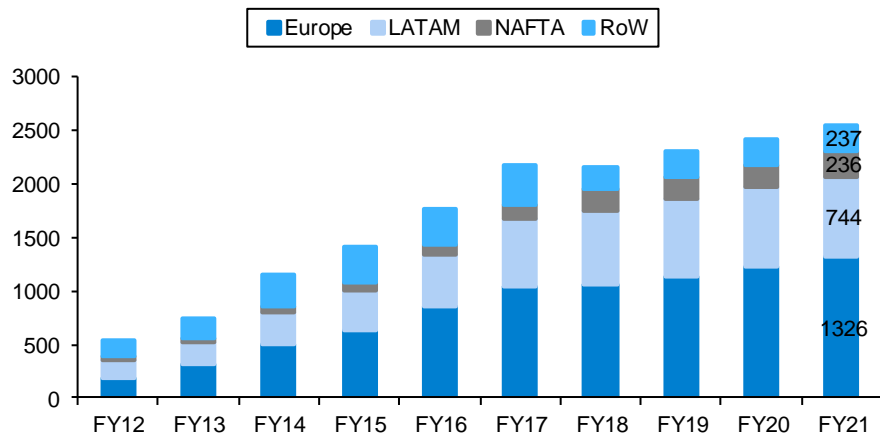
Source: Company, PL

Europe being the major region for margins - FY21 (%)



Source: Company, PL

Consistently banking on registrations; CAGR of 19% over FY12-21 (Nos.)



Source: Company, PL

Key Products (FY21)- Contributes to ~40-45% of the revenues

Products	Category
Tebuconazole	Fungicide
Dicamba	Herbicide
Quizalofop	Herbicide
Bentazone	Herbicide
Tefluthrin	Insecticide
Azoxystrobin	Fungicide
Deltamethrin	Insecticide
Imidachlorpid	Insecticide
Prothioconazole	Fungicide
Diquat	Herbicide

Source: Company, PL



# Sumitomo Chemicals – A compounding story

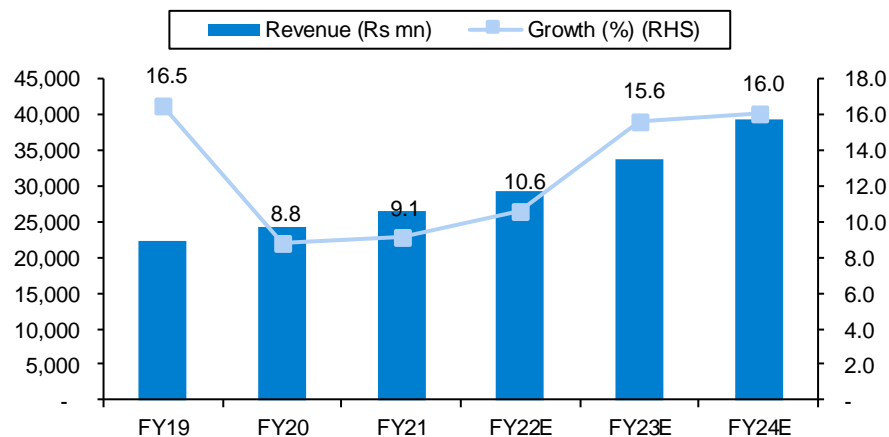
Rating: BUY | CMP: Rs361 | TP: Rs440 | Mcap: Rs180.3bn

- Strong parental advantage to support growth:** Strong parental support from Sumitomo Chemical Corporation (SCC) gives SCIL unique advantages like a) access to world class portfolio across geographies; b) greener chemistries and R&D expertise for developing proprietary products; and c) financial strength and larger market reach.
- SCIL to be the 'Go to guy' for generic exports for SCC globally:** SCIL is the only technical and generic grade manufacturing site for SCC group based outside Japan. SCIL intends to enhance exports by leveraging SCC's global supply chain and marketing network (received approval for 5 molecules recently). We expect export revenue to grow at a CAGR of 28% over FY21- 24E (FY18-21 CAGR 4%) on the back of SCC's intent to maximize synergies from integration of Nufarm's distribution business in LATAM and SCIL's export business.
- SCIL's merger with ECC- boon for both:** With merger of Excel Cropcare (ECC), SCIL is among the Top-3 players in the domestic agrochemicals market (MS of ~7-8%). Further, the merger brings along benefits like (a) integrated production facilities both in formulations and technicals; (b) enhanced distribution reach of <13,000 distributors and 40,000 dealers; (c) higher focus on the specialty/branded molecules; (d) Healthy product pipeline of specialty molecules.
- Outlook and Valuation:** Citing the above attributes, SCIL is poised to post revenue/ EBITDA/PAT CAGR of 14%/16%/16% over FY21-24E (FY18-21 CAGR of 11%/ 31%/33%), respectively. Further, the company has healthy RoE/Pre-tax ROCE of 25%/33% and net cash balance sheet in FY21. We initiate coverage with 'BUY' and TP of Rs440 based on 40x FY24 EPS.
- Key Risk:** Poor monsoons and ban of glyphosate (contributes ~13-14% of the overall FY21 revenues) can pose a risk to the earnings.

	Y/e March	2021	2022	2023	2024
<b>Income Statement</b> (Rs m)	Net Sales	26,449	29,246	33,817	39,244
	Growth (%)	9.1	10.6	15.6	16.0
	EBITDA	4,869	5,294	6,425	7,653
	Growth (%)	46.1	8.7	21.4	19.1
	Margin (%)	18.4	18.1	19.0	19.5
	EBIT	4,403	4,805	5,801	6,891
	Net Interest	56	61	62	64
	Other Income	186	297	386	541
	PBT	4,533	5,041	6,124	7,369
	Total Tax	1,079	1,311	1,592	1,916
<b>Balance Sheet</b> (Rs m)	Adj. PAT	3,454	3,731	4,532	5,453
	Growth (%)	68.7	8.0	21.5	20.3
	Gross Block Investments	4,613	6,363	8,113	9,863
	Inventories	2,904	2,904	2,904	2,904
	Trade receivables	7,544	7,181	8,123	9,359
	Cash & Bank Balance	8,482	8,814	10,191	11,827
	Equity Share Capital	2,421	2,832	4,519	6,922
	Total Net worth	4,991	4,991	4,991	4,991
	Borrowings	15,412	18,540	22,348	26,897
	Trade payables	153	-	-	-
<b>Cash Flow</b> (Rs m)		5,983	5,985	6,769	7,799
	Net cash from Op. activities	4,254	2,957	4,223	5,121
	Net Cash from Inv. activities	-2,577	-1,727	-1,750	-1,750
	Net cash from Fin. activities	-471	-818	-786	-968
	Net change in cash	1,207	412	1,687	2,403
<b>Key Ratios</b>	Free Cash Flow	3,826	1,230	2,473	3,371
	EPS (Rs)	6.9	7.5	9.1	10.9
	Growth (%)	68.7	8.0	21.5	20.3
	BPVS (Rs)	30.9	37.1	44.8	53.9
	DPS (Rs)	0.8	1.0	1.2	1.5
	RoCE (%)	31.5	28.2	28.4	28.0
	RoE (%)	25.0	22.0	22.2	22.1
	Net Debt : Equity (x)	-0.3	-0.3	-0.3	-0.4
	Net Working Capital (Days)	138.6	124.9	124.6	124.5
	PE (x)	52.2	48.3	39.8	33.1
	P/B (x)	11.7	9.7	8.1	6.7
	EV / EBITDA (x)	36.0	33.0	26.9	22.3
	Dividend Yield (%)	0.2	0.3	0.3	0.4

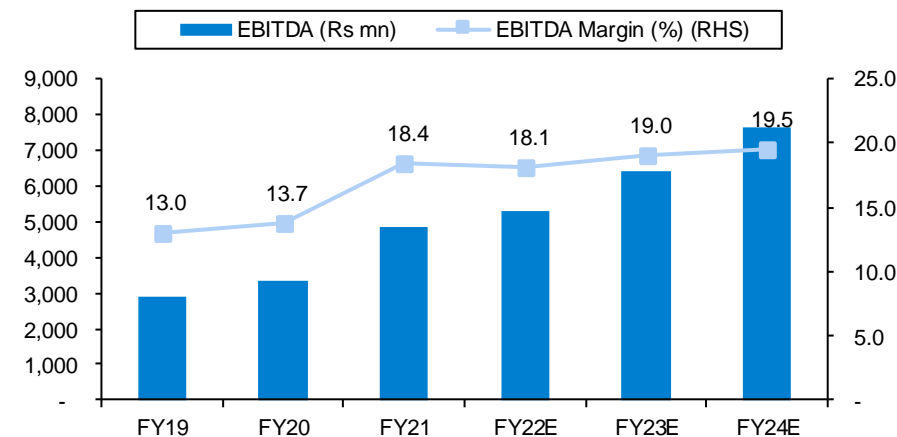
# Story in Charts

## Revenue growth to be largely driven by exports revenue



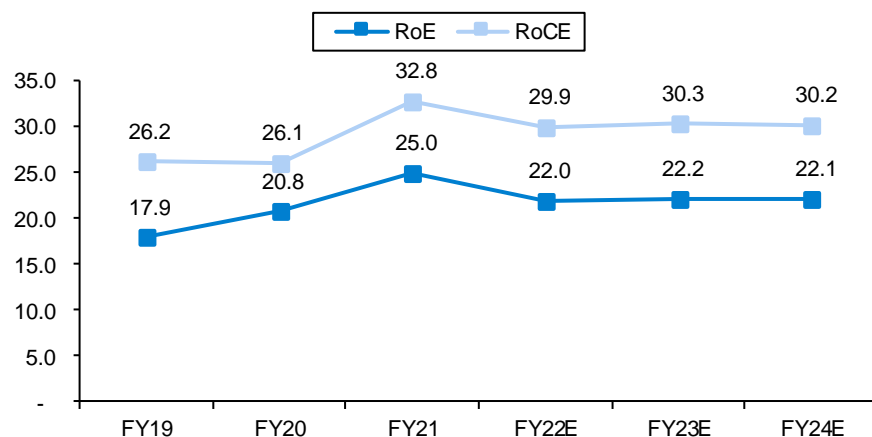
Source: Company, PL

## Higher contribution of specialized molecules to boost margins



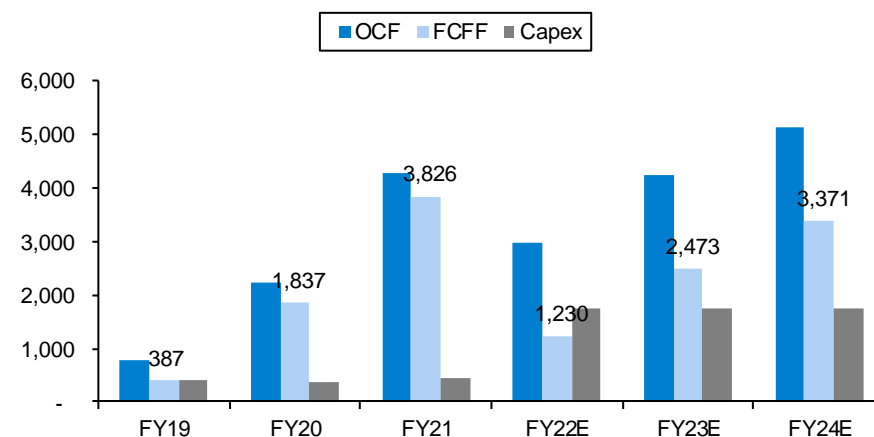
Source: Company, PL

## Stable return ratios upwards of 25%



Source: Company, PL

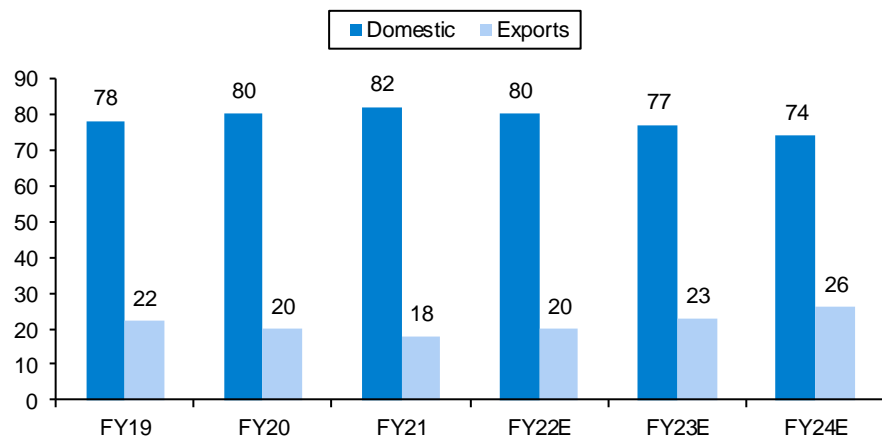
## Likely to generate Rs11bn of Free cash over FY21-24



Source: Company, PL

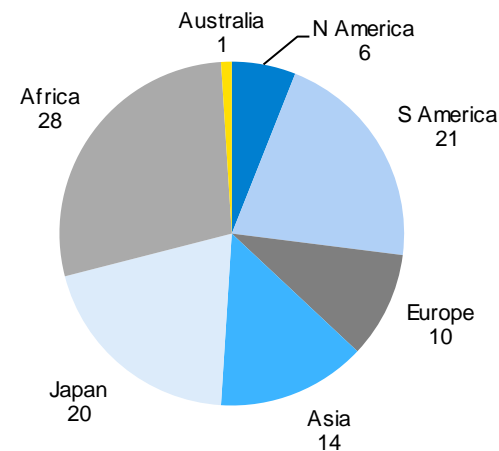
# Story in Charts

Share of exports to the overall revenue pie likely to improve (%)



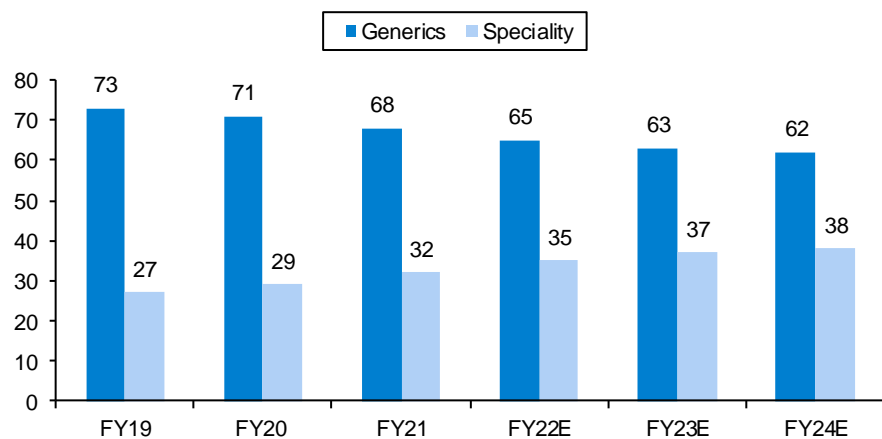
Source: Company, PL

Region-wise exports revenue- FY21



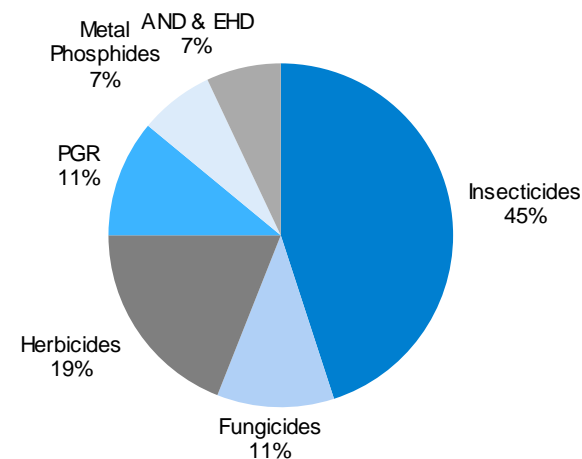
Source: Company, PL

Steady increase of Specialty revenues to the overall sales



Source: Company, PL

Inline with industry trend; Insecticides category dominates the segment



Source: Company, PL

# Higher focus on speciality molecules to drive growth

## Consistently banking on registrations; grabbed 15 new 9(3) registrations in the last 5 years

Year	Name of the Company	Technical Name	Registration Section
FY21	Sumitomo Chemical India Ltd.	Clothianidin Technical 95% w/w min	9(3)
FY21	Sumitomo Chemical India Ltd.	Cartap hydrochloride technical 98% w/w min	9(4)
FY21	Sumitomo Chemical India Ltd.	Gibberellic acid 0.1% GR	9 (3)
FY21	Sumitomo Chemical India Ltd.	Clothianidin 0.5% w/w GR	9 (3)
FY20	Excel Crop Care Ltd.	Paclobutrazole 40% w/w SC	9(3)
FY20	Excel Crop Care Ltd.	Flumioxazine Technical 96% w/w min	9(3)
FY19	Sumitomo Chemical India Pvt. Ltd.	Flumioxazin 50% SC	9(3)
FY19	Sumitomo Chemical India Pvt. Ltd.	Metofluthrin 0.32% w/w LV	9(3)
FY19	Excel Crop Care Ltd.	Zinc Phosphide 40% Powder	9(3)
FY18	Excel Crop Care Ltd.	Profenofos 40% + Fenpyroximate 2.5% EC	9(3)
FY18	Sumitomo Chemical India Pvt. Ltd.	Flumioxazin Technical 98 %	9(3)
FY17	Excel Crop Care Ltd.	Tebuconazole 10% + Sulphur 65%	9(3)
FY17	Excel Crop Care Ltd.	Azoxystrobin Technical 96% min.	9(3)
FY17	Excel Crop Care Ltd.	Azoxystrobin 12.5% + Tebuconazole 12.5% SC	9(3)
FY16	Excel Crop Care Ltd.	Difenoconazole Technical 95% min	9(3)
FY16	Sumitomo Chemical India Pvt. Ltd.	Gibberellic acid 40% w/w WSG	9(3)
FY16	Excel Crop Care Ltd.	Acetamiprid Technical (Purity 99% min.)	9(4)

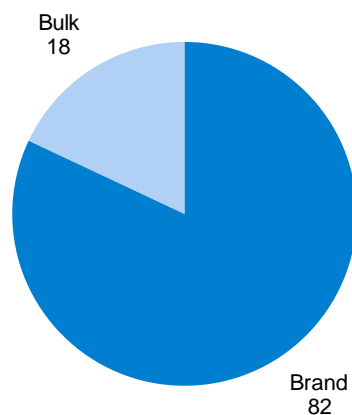
Source: CIBRC, PL

## Key products for SCIL

Key products	Category	Use
Glyphosate	Herbicides	Tea gardens, non cropped
Profenophos	Insecticides	Cotton, Soybean
Dantosu	Insecticides	Vegetables
Tebuconazole	Fungicides	Wheat, soybeans, chillies
Progibb	PGR	Citrus fruits
Aluminium Phosphide	Fumigant	Warehousing of food grains
Chlorpyrifos	Insecticides	Paddy beans, gram
DL-Methionine	Animal Nutrition	Poultry

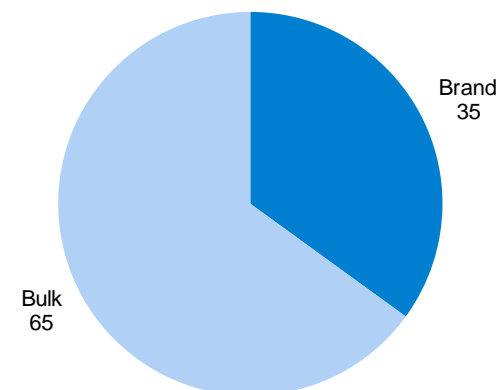
Source: Company, PL

## Domestic- Bulk and Branded break-up (%)



Source: Company, PL

## Exports- Bulk and Branded break-up (%)



Source: Company, PL

# UPL – Diversified play on the global agrochemicals

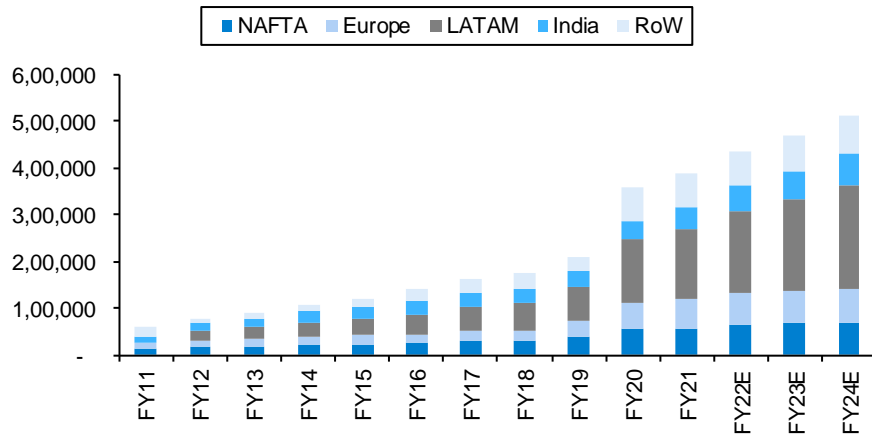
Rating: BUY | CMP: Rs747 | TP: Rs910 | Mcap: Rs571.3bn

- **Top generic player globally:** UPL is among Top-5 agrochemical player globally. It is the top global generic player having a well-balanced product portfolio across geographies and crops.
- **LATAM remains the key region for UPL (~40% of revenues):** Brazil remains the fastest growing geography for UPL (estimated revenue of ~USD1.3bn in FY21; ranked 4th largest player in Brazil). Brazil contributes >50% of LATAM revenues and is expected to grow at 2x of industry growth over next few years on the back of strong product pipeline and widening its distribution reach.
- **Glufosinate' the next Big force in the CP business:** Glufosinate (herbicide) is one of the key products of UPL. Its prices in the recent past have shot up by ~2x in global market led by tight market situation despite correction in RM cost. In line with this, UPL has increased its product prices in global market. Based on industry data, BASF (post acquisition from Bayer AG), Lier Chemical followed by UPL are the top players of Glufosinate globally.
- **Balance sheet de-leveraging remains the key:** As on September 30, 2021, Gross debt stood at INR301bn (including perpetual bond of ~INR29bn; considered as equity), down INR44bn YoY. Net debt stood at INR272bn. UPL guided for net debt/EBITDA below 2x by March 2022 (March 21, 2.2x). We estimate for net debt of Rs204bn by March'22.
- **Outlook & Valuation:** We anticipate that UPL will continue to perform well led by healthy demand across market supported with better commodity prices. We expect UPL to clock Revenue/PAT CAGR of 10%/18% over FY21-24E. Initiate coverage with 'BUY' and TP of Rs910 based on 14xFY24E EPS vs global peers of 6x-16x.
- **Key risks:** Volatility in commodity prices globally coupled with adverse weather and forex impact can negatively impact the performance.

	Y/e March	2021	2022	2023	2024
<b>Income Statement</b> (Rs m)	Net Sales	3,86,940	4,33,865	4,70,271	5,10,369
	Growth (%)	8.2	12.1	8.4	8.5
	EBITDA	85,590	93,715	1,04,870	1,15,854
	Growth (%)	20.5	9.5	11.9	10.5
	Margin (%)	22.1	21.6	22.3	22.7
	EBIT	63,860	69,741	78,929	87,944
	Net Interest	20,600	20,025	16,650	15,550
	Other Income	510	25	-20	-20
	PBT	43,770	49,741	62,259	72,374
	Total Tax	7,288	7,461	11,207	13,027
<b>Balance Sheet</b> (Rs m)	Adj. PAT	30,662	35,512	42,793	49,678
	Growth (%)	34.1	15.8	20.5	16.1
	Gross Block	2,68,360	2,92,360	3,16,360	3,40,360
	Investments	6,180	6,180	6,180	6,180
	Inventories	94,220	1,00,229	1,07,763	1,16,683
	Trade receivables	1,30,260	1,46,057	1,58,313	1,71,811
	Cash & Bank Balance	48,530	37,533	37,743	45,923
	Equity Share Capital	1,530	1,530	1,530	1,530
	Total Netw orth	1,79,010	2,03,304	2,34,879	2,73,339
	Borrow ings	2,67,600	2,42,600	2,17,600	1,92,600
<b>Cash Flow</b> (Rs m)	Trade payables	1,25,250	1,35,603	1,45,797	1,57,624
	Net cash from Op. activities	72,960	67,222	75,098	81,968
	Net Cash from Inv. activities	-21,010	-23,975	-24,020	-24,020
	Net cash from Fin. activities	-67,130	-54,243	-50,868	-49,768
	Net change in cash	-15,180	-10,997	210	8,180
<b>Key Ratios</b>	Free Cash Flow	72,960	67,222	75,098	81,968
	EPS (Rs)	40.1	46.4	55.9	64.9
	Growth (%)	34.1	15.8	20.5	16.1
	BPV/S (Rs)	234.0	265.8	307.0	357.3
	DPS (Rs)	10.0	10.0	10.0	10.0
	RoCE (%)	13.8	15.6	17.6	19.2
	RoE (%)	17.9	18.6	19.5	19.5
	Net Debt : Equity (x)	1.2	1.0	0.8	0.5
	Net Working Capital (Days)	93.6	93.1	93.4	93.6
	PE (x)	18.6	16.1	13.4	11.5
	P/B (x)	3.2	2.8	2.4	2.1
	EV / EBITDA (x)	9.2	8.3	7.2	6.2
	Dividend Yield (%)	1.3	1.3	1.3	1.3

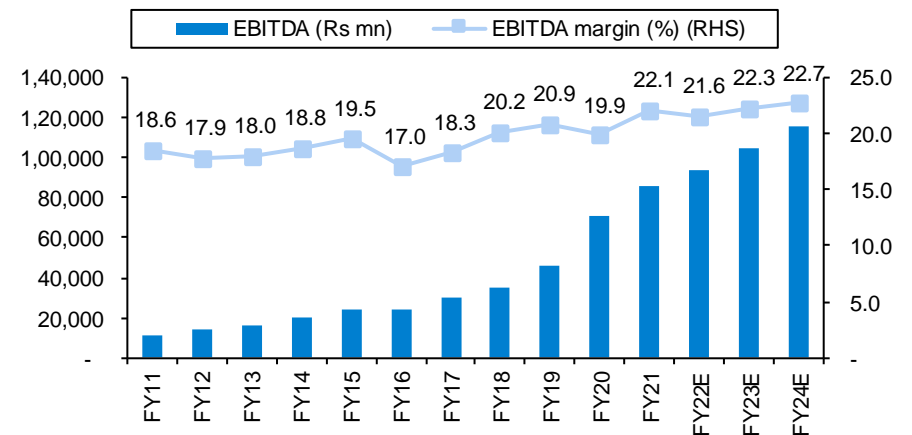
# Story in Charts

## 40% of the revenues derived from LATAM (Rs Mn)



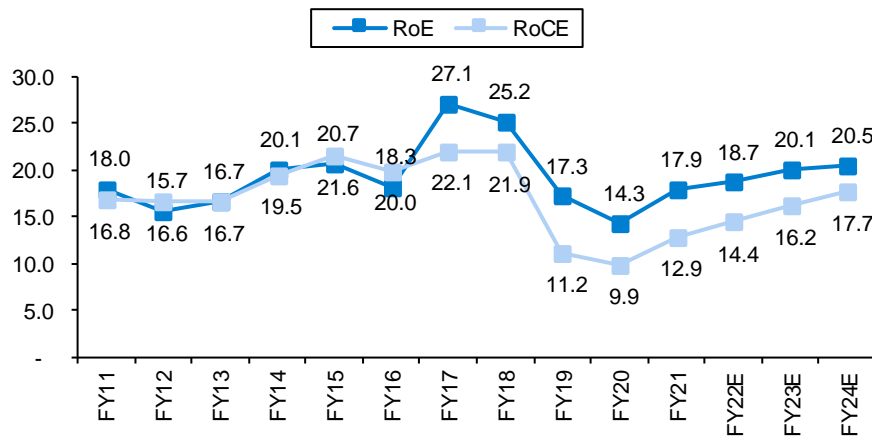
Source: Company, PL

## Higher focus on differentiated products likely to support margins (%)



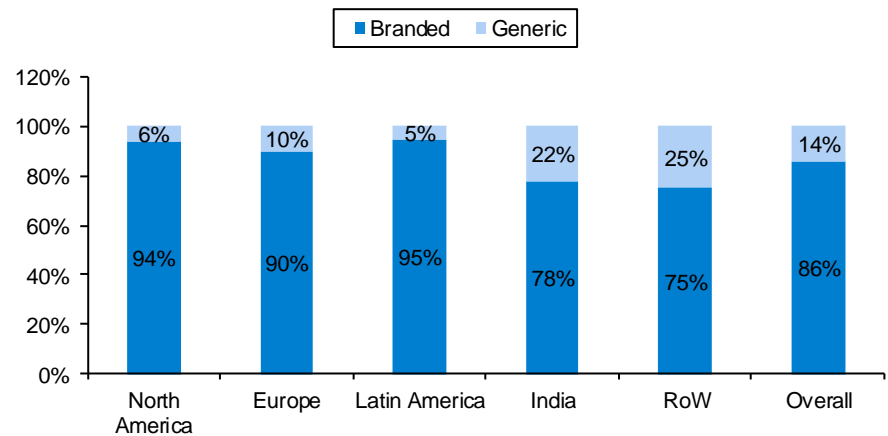
Source: Company, PL

## Consistent improvement in return ratios (%)



Source: Company, PL

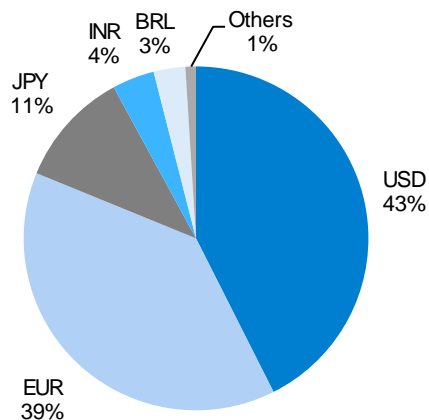
## Rising share of Branded to the overall portfolio (%)



Source: Company, PL

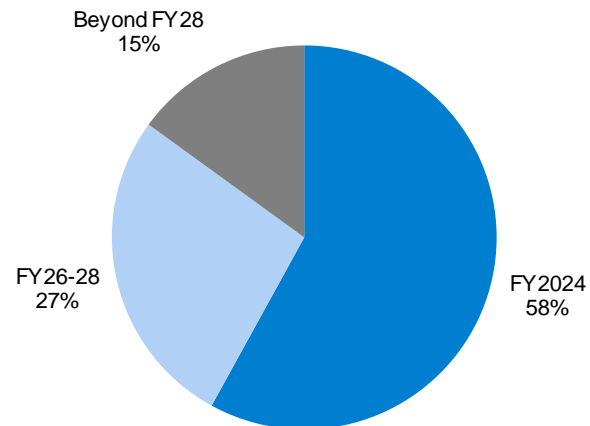
# Debt Profile

Debt Profile by Currency (%)



Source: Company, PL

Debt Profile by Maturity (%)



Source: Company, PL

Quarterly Variation in Debt (Rs Mn)

Particulars	Q1FY19	Q2FY19	Q3FY19	Q4FY19	Q1FY20	Q2FY20	Q3FY20	Q4FY20	Q1FY21*	Q2FY21*	Q3FY21*	Q4FY21*	Q1FY22*	Q2FY22*
Gross Debt	74,310	83,880	84,400	2,91,510	2,92,470	3,08,580	3,16,120	3,16,550	3,55,730	3,45,680	3,07,480	2,67,600	2,80,850	3,01,330
Cash	27,250	20,380	13,360	28,510	21,980	19,770	19,580	67,520	1,04,620	79,750	35,920	48,530	36,320	28,680
Net Debt	47,060	63,500	71,040	2,63,000	2,70,490	2,88,810	2,96,540	2,49,030	2,51,110	2,65,930	2,71,560	2,19,070	2,44,530	2,72,650

Source: Company, PL

Note: "\*" includes perpetual bonds in gross debt & net debt

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<b>Buy</b>	:	<b>&gt; 15%</b>
<b>Accumulate</b>	:	<b>5% to 15%</b>
<b>Hold</b>	:	<b>+5% to -5%</b>
<b>Reduce</b>	:	<b>-5% to -15%</b>
<b>Sell</b>	:	<b>&lt; -15%</b>
<b>Not Rated (NR)</b>	:	<b>No specific call on the stock</b>
<b>Under Review (UR)</b>	:	<b>Rating likely to change shortly</b>

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