

**India**
**REDUCE** (no change)

Consensus ratings\*: Buy 1 Hold 0 Sell 3

Current price:	Rs1,380
Target price:	Rs989
Previous target:	Rs1,073
Up/downside:	-28.3%
InCred Research / Consensus:	-24.9%
Reuters:	ASTE.NS
Bloomberg:	ASTEL IN
Market cap:	US\$327m
	Rs27,057m
Average daily turnover:	US\$0.7m
	Rs59.5m
Current shares o/s:	19.6m
Free float:	33.2%

\*Source: Bloomberg



Source: Bloomberg

Price performance	1M	3M	12M
Absolute (%)	9.8	(6.0)	(27.4)
Relative (%)	11.5	(9.3)	(35.4)

Major shareholders	% held
Promoter & Promoter Group	66.8
ICICI Prudential Asset Mgt	5.2
Nippon Life India Asset Mgmt	3.7

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# Astec Lifesciences Ltd

## Illiquidity premium in valuation; REDUCE

- Multiple one-off events like channel-filling in Brazil/USA and the macrophomina phaseolina fungus attack in Turkey led to higher SBI triazole exports in FY22.
- Channel destocking and structural headwinds in triazoles will lead to a fall in FY24F exports. Sadly, the company's expansion is coming in similar products.
- Debt to rise & the stock trades at a higher value due to illiquidity premium. But non-fundamental reasons can't sustain stock price for long. Retain REDUCE.

### Exports to fall; FY22/23 growth was led by multiple one-off events

Astec Lifesciences primarily relies on exports, with a strong focus on the USA market, making it susceptible to the repercussions of a decline in USA exports, impacting both gross profit and earnings. The company's export dynamics are largely driven by triazoles. We have shown in the analysis of SBI triazoles that their sales peaked in 2014 and since then they are on the declining trajectory. When a product goes in a declining trajectory, inventory in the supply chain remains at a minimal level. A sudden change in demand or channel-filling creates a big jolt across the supply chain and hence, price as well as the volume rises. The same happened with Astec Lifesciences in 2022, and since then it hasn't been repeated. Most of the propiconazole and tebuconazole exports in 2022 were driven by channel-filling in USA and Brazil, respectively. Prothioconazole exports were led by a sudden rise in demand in Turkey as crops were attacked by macrophomina phaseolina, a soil-borne fungus.

### Astec Lifesciences' new products expansion carries uncertainty

Astec Lifesciences is gearing up to establish a new capacity of 26,700t across various agrochemicals and intermediates. Potential revenue expected from this expansion project stands at approximately Rs7.3bn. It's worth noting that the revenue estimate in respect of the central nervous system (CNS) active pharmaceutical ingredients or APIs like PCS-II and DCBP carry some uncertainty. For sales projections, we have adopted the growth trajectory observed by Ami Organics. Within this expansion, the highest capacity allocation (1,440t) is dedicated to the production of imazethapyr herbicide, which comes under the pure generic category. However, considering the capacity allocated to imazethapyr, it's unlikely that Astec Lifesciences can utilize even a fraction of this capacity effectively.

### Sustains higher valuation due to illiquidity; retain REDUCE rating

Astec Lifesciences exhibits a significant concentration in both its product portfolio and geographical presence, resulting in notable fluctuations in earnings. The stock trades at a valuation of 200x FY24F EPS, mainly driven by illiquidity. Debt in the balance sheet is also likely to rise, While the stock's high valuation may partly be attributed to the illiquidity premium, it's important to note that non-fundamental factors tend to have limited longevity in supporting the stock's performance. We valued the stock at 50x one-year forward EPS to arrive at our lower target price of Rs989 (Rs1,073 earlier). Retain REDUCE rating. Upside risk: A sudden surge in triazole demand, like that in 2022, can lead to a higher EPS.

Financial Summary	Mar-22A	Mar-23A	Mar-24F	Mar-25F	Mar-26F
Revenue (Rsm)	6,766	6,282	6,282	6,910	7,601
Operating EBITDA (Rsm)	1,541	763	556	519	463
Net Profit (Rsm)	899	256	115	251	525
Core EPS (Rs)	45.9	13.1	5.9	12.8	26.8
Core EPS Growth	38.0%	(71.6%)	(54.9%)	117.8%	108.7%
FD Core P/E (x)	30.06	105.68	234.41	107.65	51.57
DPS (Rs)	2.8	0.8	0.4	0.8	1.7
Dividend Yield	0.21%	0.06%	0.03%	0.06%	0.12%
EV/EBITDA (x)	19.34	39.92	54.00	58.86	66.29
P/FCFE (x)	224.00	118.65	36.95	16.33	1,434.26
Net Gearing	69.9%	80.8%	64.5%	71.8%	68.8%
P/BV (x)	6.82	6.45	5.88	5.59	5.08
ROE	25.5%	6.3%	2.6%	5.3%	10.3%
% Change In Core EPS Estimates			(0.88%)		
InCred Research/Consensus EPS (x)					

SOURCE: INCRED RESEARCH, COMPANY REPORTS

## Illiquidity premium in valuation; REDUCE

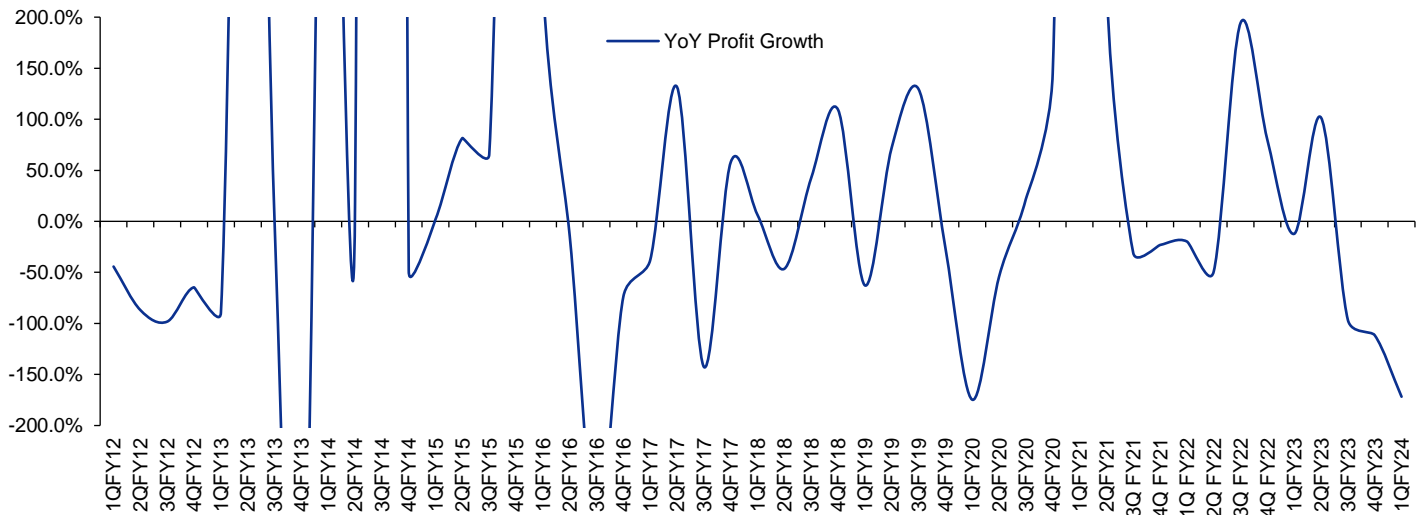
Like most of the mid-cap and small-cap chemical companies, Astec Lifesciences has a limited institutional ownership and is thus highly illiquid. This illiquidity forces investors to hold the stock. Having said that, this greater fool theory doesn't work for long in the market and fundamentals take over. Repeated earnings disappointment and a weak business model gets punished eventually. We like to caution the investors that Astec Lifesciences may not achieve its peak earnings witnessed in FY22 for many more years. We retain our REDUCE rating on the stock.

### High product and geography concentration

Astec Lifesciences has a high product and geography concentration, which leads to extremely volatility in earnings. The earnings predictability is very difficult, and the company frequently swings into losses.

### Highly volatile earnings ➤

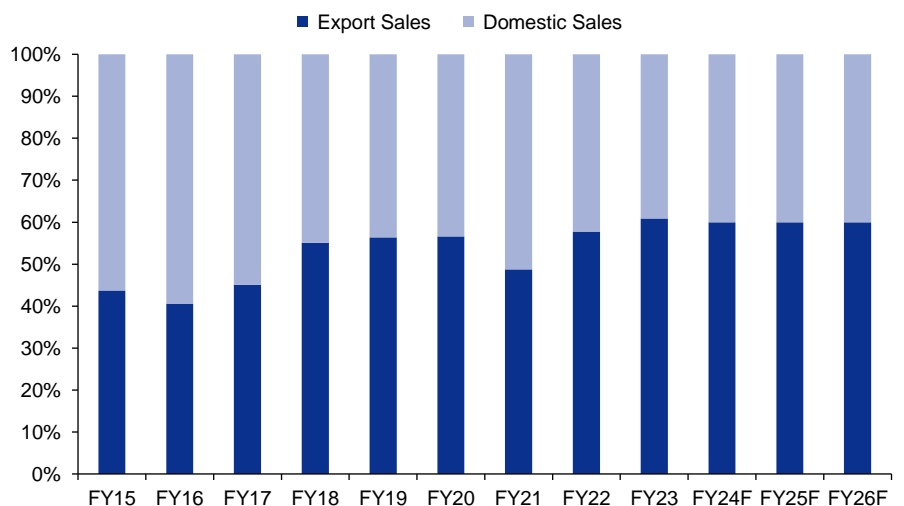
**Figure 1: The earnings volatility is visible in the graph; it's indeed surprising that despite technical reasons (Illiquidity), the stock trades at 200x FY24F EPS**



SOURCE: INCRED RESEARCH, COMPANY REPORTS

### Astec Lifesciences is mainly an export-driven company... ➤

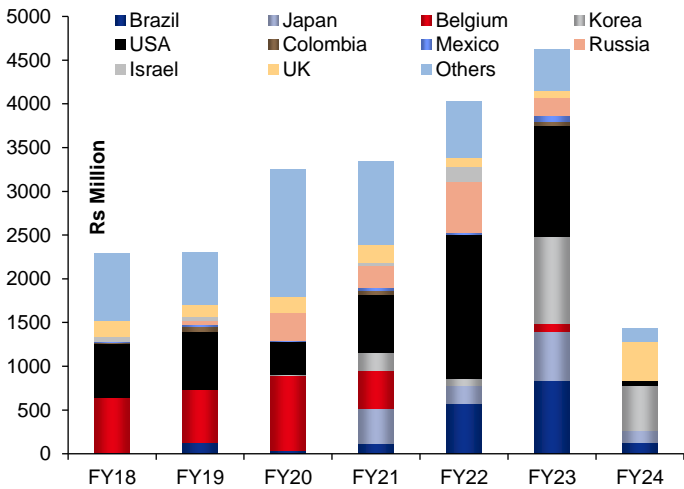
**Figure 2: Astec Lifesciences is mainly an export-driven company**



SOURCE: INCRED RESEARCH, COMPANY REPORTS

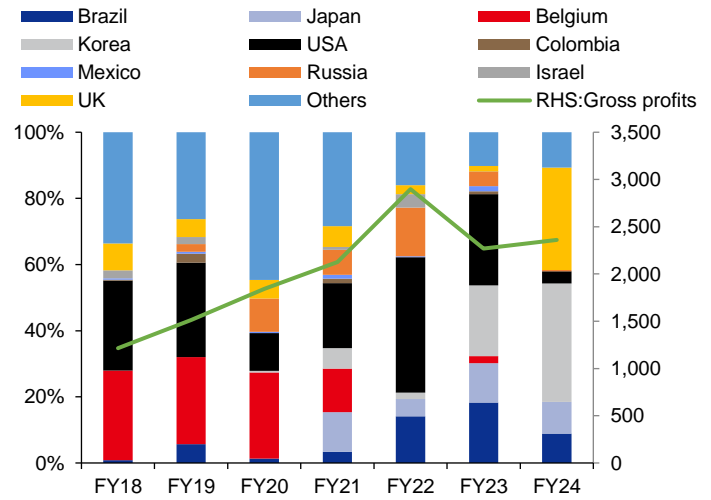
...and the exports are mostly to USA ➤

Figure 3: The company's exports are mostly to USA



SOURCES: INCRED RESEARCH, COMPANY REPORTS

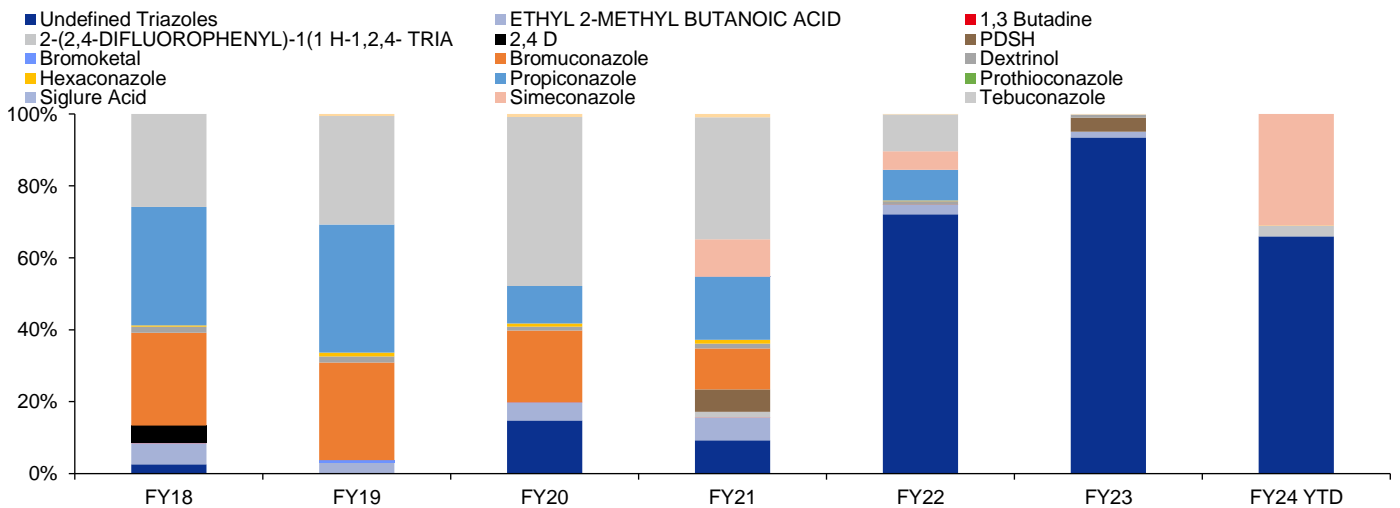
Figure 4: Any decline in USA exports has an adverse impact on gross profit and hence, earnings



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Product concentration in exports is also quite high ➤

Figure 5: Exports are mostly driven by triazoles

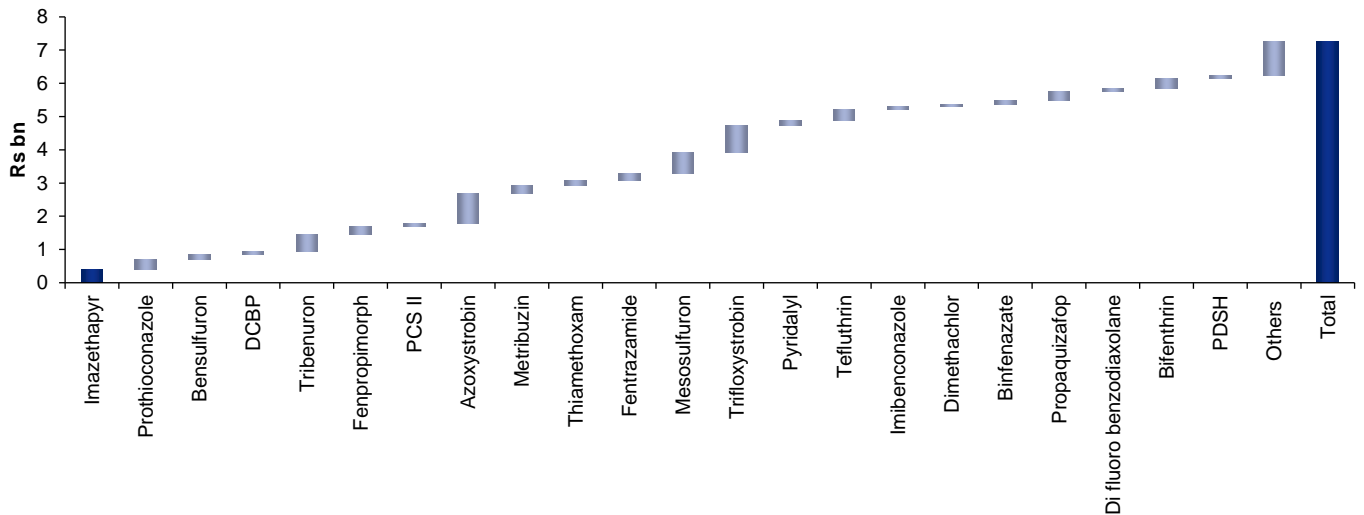


SOURCE: INCRED RESEARCH, COMPANY REPORTS

## Even the expansion projects are coming into similar products

Astec Lifesciences is planning to expand its capacity by 26,700t in both agrochemicals as well as API intermediates for anti-psychotic drugs. We have done a detailed analysis of all the molecules that can come for potential capacity expansion. The maximum revenue from the same, in our view, is likely to be Rs7.3 bn.

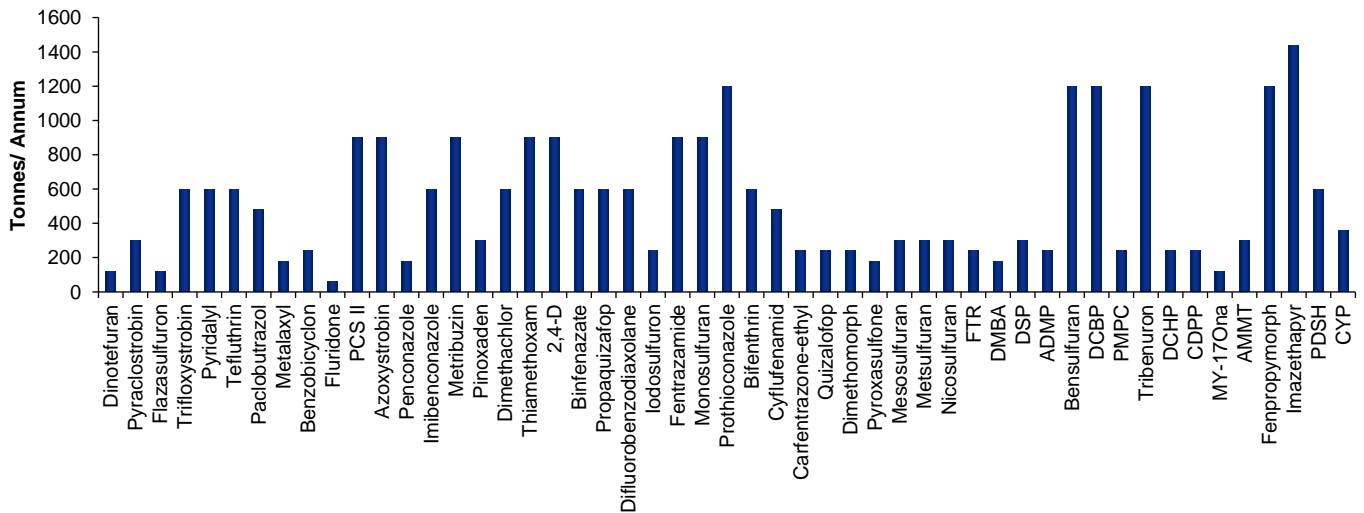
**Figure 6: We feel potential revenue from the expansion projects can be ~Rs7.3bn; please note that PCS-II and DCBP are central nervous system APIs and hence, exact estimates are not possible; we have used Ami Organics' growth trajectory for our sales estimates**



SOURCE: INCRED RESEARCH, COMPANY REPORTS

## Astec Lifesciences is planning to set up 26,700t of new capacity in various agrochemicals and intermediates ➤

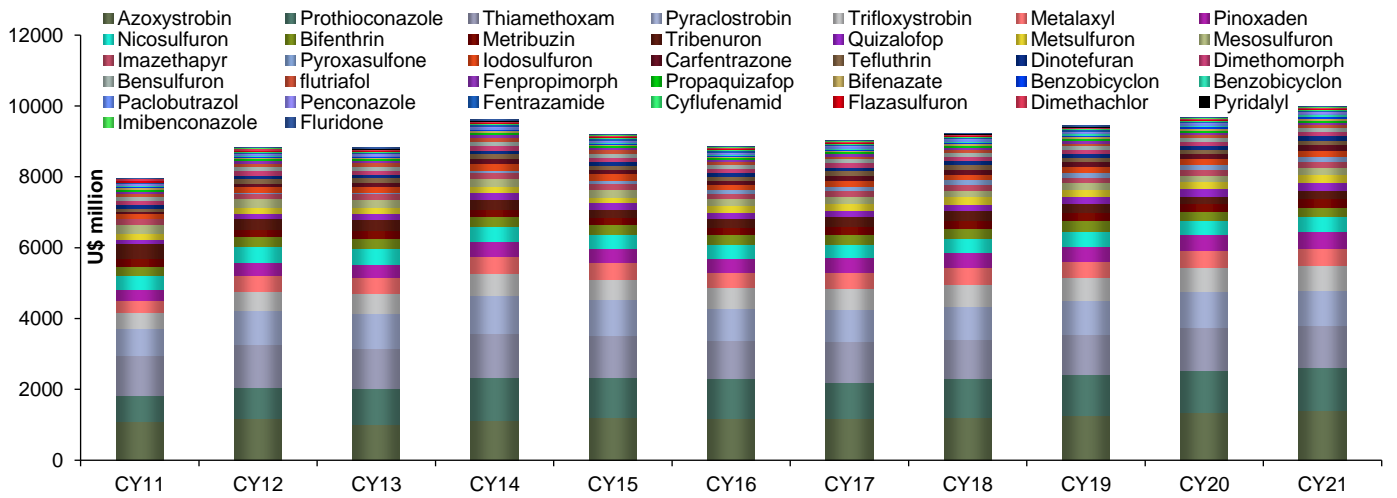
**Figure 7: The overall new capacity planned is 26,700t**



SOURCE: INCRED RESEARCH, COMPANY REPORTS

The planned agrochemicals business expansion is in generic molecules having anaemic growth

Figure 8: Overall sales growth in new agrochemicals (Astec Lifesciences is planning to set up new capacity for these molecules) has been ~2% over the last decade



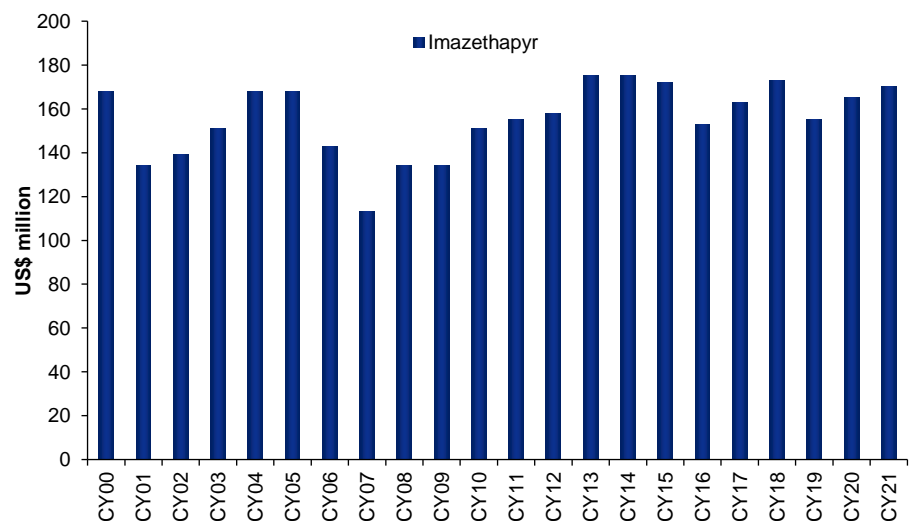
SOURCE: COMPANY REPORTS, INCRED RESEARCH

Out of all the molecules, Astec Lifesciences is planning to have highest capacity (1,440t) in imazethapyr herbicide, which is a pure generic

Imazethapyr herbicide was commercialized in 1987, and it went off-patent in 2002. BASF was the innovator of the chemical. However, Adama and Nortox are also significant producers of this molecule.

At one time, it was a leading soybean herbicide worldwide, although its sales were impacted by the uptake in Roundup Ready (RR) soybean. Its recent growth has been driven by good acceptance of a co-formulation with a glyphosate, Extreme, for use on RR soybean. The market share captured by seed+herbicide manufacturers led to a decline in its overall sales, and in the last 21 years its sales growth was 0%.

Figure 9: In the last 21 years, sales growth of imazethapyr herbicide was 0%; the Roundup Ready seed revolution by Monsanto led to stagnancy in all other herbicides apart from glyphosate



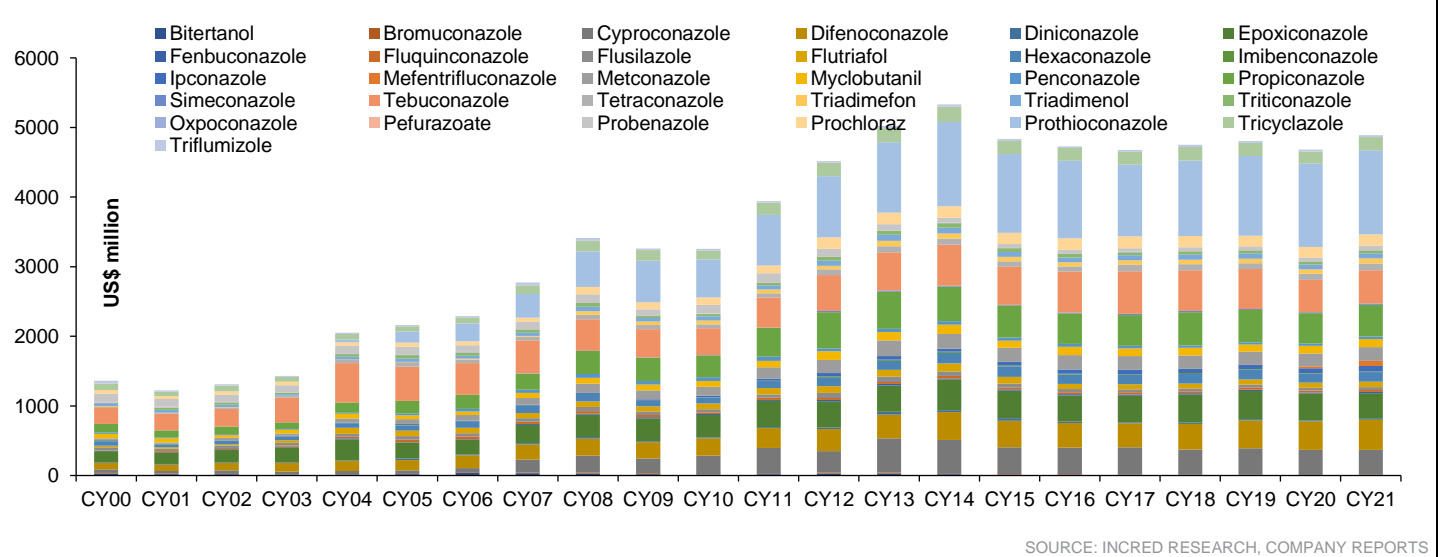
SOURCE: COMPANY REPORTS, INCRED RESEARCH

**While imazethapyr capacity is 1,440t, it's unlikely that Astec Lifesciences can even use 10% of this capacity ➤**

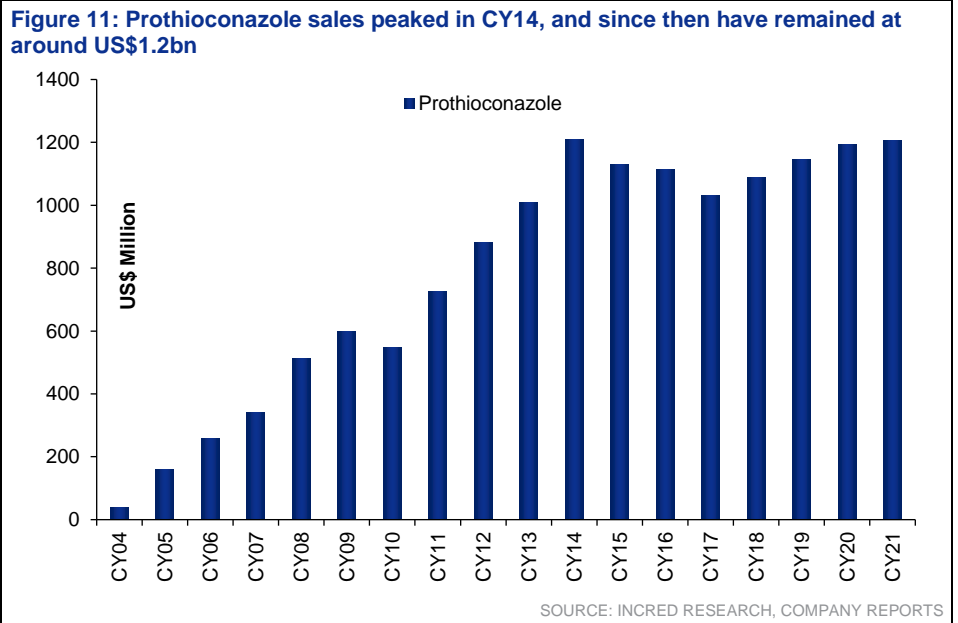
1. On an average, the selling price of imazethapyr in CY22 was Rs6,500/kg or ~ US\$80/kg.
2. At this rate, 100% capacity utilization of Astec Lifesciences' capacity can generate US\$120m in revenue, which will be approximately 70% of overall imazethapyr's global sales.
3. There are multiple manufacturers like BASF, Adama, Nortex, Dhanuka, Insecticides, Helm Agro USA, Corteva Agrosiences, FMC and many Chinese players.
4. Given this high capacity, it's unlikely that Astec Lifesciences can even use 10% of its capacity.
5. In our view, likely revenue generation from this can be ~Rs0.41bn.

**Astec Lifesciences' another planned capacity is for prothioconazole, which belongs to the stagnant SBI-azole category ➤**

**Figure 10: SBI-azole category's sales have hardly grown in the last 10 years, as it is being abandoned and replaced by the SDHI group of fungicides**



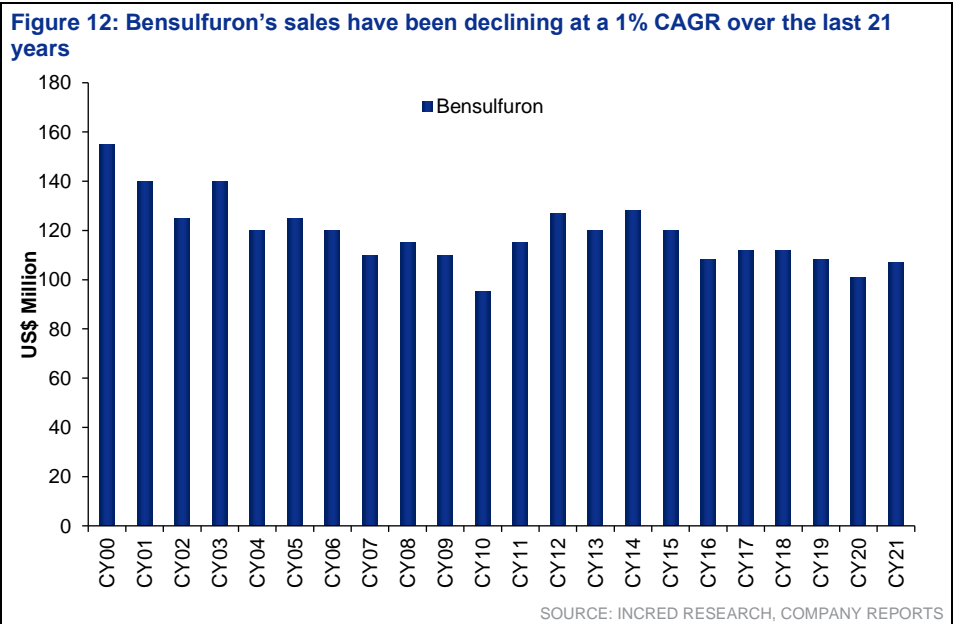
**Even prothioconazole sales have gone nowhere in the past few years ➤**



**But given the low capacity (0.6% of global sales), it's possible for Astec Lifesciences to utilize 100% of its capacity and garner Rs0.28bn in sales ➤**

Based on India average export price (US\$5/kg) in 2022, global demand for prothioconazole is ~2,40,000t. This means 100% utilization of 1,440t capacity, and Astec Lifesciences must garner a 0.6% market share from the existing players. This seems quite possible and revenue for Astec Lifesciences can be ~US\$3.6m or ~ Rs0.28bn.

**Bensulfuron (planned capacity is 1,200t) sales have been declining over the last two decades ➤**



**Given CY21 import prices in India, global sales appear to be ~ 3,000t ➤**

Global sales of bensulfuron stood at US\$107m in CY21, and its average price was ~ US\$35/kg. Hence, its market size appears to be 3,000t.

**Competition for the product is intense; UPL has the rights outside Asia while Kumiai has the rights in Asia ➤**

The competition in this market is intense. This product was commercialized in 1984 and turned off-patent in 1999. The innovator of this molecule is DuPont (now Dow-DuPont). Many other Chinese companies manufacture this molecule, and it is used primarily as a rice herbicide in Japan.

1. At one time, bensulfuron was one of the largest-selling sulfonylurea herbicides and the leading rice herbicide worldwide.
2. The product is still the cornerstone of many of the leading 'one-shot' rice herbicides in Japan.
3. Marketing covers most rice-growing nations, although sales are in a phase of decline, exacerbated by the reduction in Japan's rice acreage and increased competition from new launches. Some competition from the generic material from China has also been witnessed.
4. The rights for this molecule outside Asia were acquired by UPL from DuPont in 2006.
5. In Sep 2019, it was announced that Kumiai will acquire Corteva's bensulfuron-methyl business in the Asia Pacific region, excluding China.

**As per our estimate, PI Industries has a better chance on this molecule than Astec Lifesciences ➤**

Given the close relationship that PI Industries has with Kumiai, we expect PI Industries to have a better chance to bag a significant outsourcing contract for this molecule than Astec Lifesciences. However, the best possible revenue is Rs0.15bn.

**Dichloro butyrophenone or DCBP (planned capacity is 1,200t) is an antipsychotic medication, a field of Ami Organics ➤**

Dichloro butyrophenone (also known as haloperidol) is a medication that belongs to the class of antipsychotic drugs. It is primarily used to treat various psychiatric disorders, including schizophrenia, acute psychosis, manic episodes in bipolar disorder, and Tourette syndrome.

Haloperidol works by blocking certain receptors in the brain, which reduces the activity of certain neurotransmitters, such as dopamine. This leads to a decrease in psychotic symptoms, such as hallucination, delusion, and disorganized thinking.

In addition to its psychiatric uses, haloperidol may also be used to treat severe agitation and aggression, particularly in hospital or emergency settings. It may also be used in combination with other medications to treat nausea and vomiting in certain situations.

**Dichloro butyrophenone's global market size is ~US\$70m and the main market is USA ➤**

A 10mg tablet of haloperidol fetches a price of ~US\$0.20. On this basis, the overall market for haloperidol is ~1,000kg globally (linear extrapolation gives a market size of 350kg; while linear extrapolation is not the right way to do so for the bulk market, at least it gives a broad idea of the market).

**Given its agrochemicals background, going in for haloperidol will be a big thing and not easy to achieve but still in a best-case scenario, it may garner Rs0.1bn in revenue ➤**

Astec Lifesciences has no experience of handling APIs (active pharmaceutical ingredients) and directly manufacturing haloperidol is a big task. The probability of its success is extremely low, in our view. In any case, to arrive at a best-case sales scenario, we have assumed Rs0.1bn in sales for Astec Lifesciences.



## PCS-II or 1-(4-chlorophenyl)-2-pentanone is an intermediate of drugs for the central nervous system (CNS) ➤

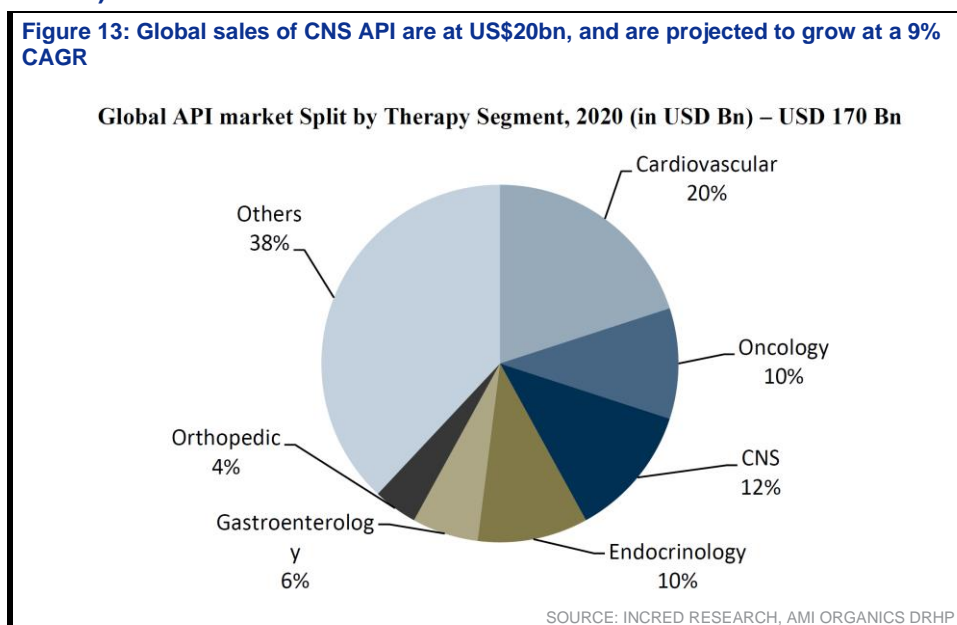
1-(4-chlorophenyl)-2-pentanone, also known as 4-chloro- $\alpha,\alpha$ -dimethylphenethyl acetone or 4-CDMA, is a chemical compound that can have various usages, depending on the specific application.

In the pharmaceutical industry, 1-(4-chlorophenyl)-2-pentanone can be used as a building block for the synthesis of other compounds, particularly in the development of the central nervous system (CNS) drugs. It has been used as an intermediate in the synthesis of drugs such as Nefopam, which is a non-opioid analgesic used for the relief of moderate to severe pain.

1-(4-chlorophenyl)-2-pentanone is also a controlled substance and is listed as a precursor chemical for the production of illicit drugs such as amphetamines and methamphetamines. Due to its potential for abuse, 1-(4-chlorophenyl)-2-pentanone is strictly regulated in many countries, and its use is closely monitored by law enforcement agencies.

## Global sales of CNS API at US\$20bn (Source: Ami Organics' DRHP) ➤

Figure 13: Global sales of CNS API are at US\$20bn, and are projected to grow at a 9% CAGR



It's a good area to be in this business but as of now, determining potential sales is very difficult. Using Ami Organics' experience with such a drug, may be Astec Lifesciences can start small at Rs0.1bn and can grow its revenue over time.

## Even PDSH (2-chloro-4-fluoro-5-[3-methyl-2,6-dioxo-4-(trifluoromethyl)-1,2,3,6-tetrahydropyrimidin-1-yl]benzenethiol) is an intermediate of CNS drugs ➤

The manufacturing of PDSH is multi-step process and it's used as a CNS drug intermediate as well. As it is a controlled substance, we don't know the market size. However, going by Ami Organics' experience in these kinds of drugs, we estimate that initial sales of these molecules can be anywhere between Rs0.1-0.2bn.

## Difluorobenzodioxolane is a multi-purpose compound ➤

Difluorobenzodioxolane is a compound that can be used for various purposes. Given below are some the examples of of its usage:

1. **Chemical synthesis:** Difluorobenzodioxolane can be used as a reagent in chemical synthesis reactions to introduce fluorine atoms into molecules.

2. **Pharmaceutical research:** The compound has been studied as a potential scaffold for the development of new drugs, particularly those with antiviral or anticancer properties.
3. **Fluorine-18 labelling:** Difluorobenzodioxolane can be labelled with the radioactive isotope fluorine-18, which is used in positron emission tomography (PET) imaging in medical diagnosis.
4. **Material science:** Difluorobenzodioxolane has been used as a building block for the synthesis of novel polymers and materials.

**The difluorobenzodioxolane market is small as its prices are quite high >**

Difluorobenzodioxolane prices can vary depending on several factors such as the purity, quantity, and the supplier. The price ranges from approximately US\$100 to US\$500/gm, depending on the supplier and the quantity purchased. It is important to note that prices may vary over time and between suppliers, and so it's best to check with chemical suppliers directly for up-to-date pricing information.

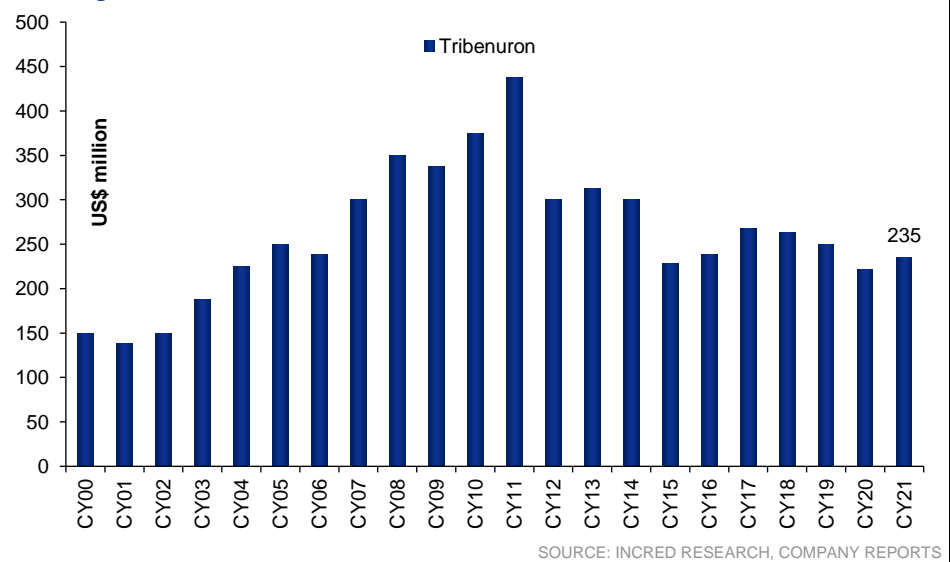
**600t difluorobenzodioxolane sales are not possible, may be the company can garner US\$2-3m in sales initially >**

Initial potential sales, in our view, can be Rs0.1-0.15bn.

**Tribenuron (planned capacity is 1,200t) is another herbicide of DuPont that hasn't shown any growth in the past few years >**

Tribenuron is a short-persistence selective sulfonylurea herbicide for the control of broad-leaved weeds in cereals, mainly used in combination with other sulfonylureas and with metribuzin. The product has received full Annex-1 re-registration in the EU but sales in the region have been affected by competitive launches, with China now being the most significant country market.

**Figure 14: Tribenuron has grown rapidly in the initial phase but weed resistance and lack of tolerant seeds stemmed its rise and for the past decade, its sales have been declining at a 6% CAGR**



**Given the high price of US\$100/kg, this product registers only 2,400t in sales >**

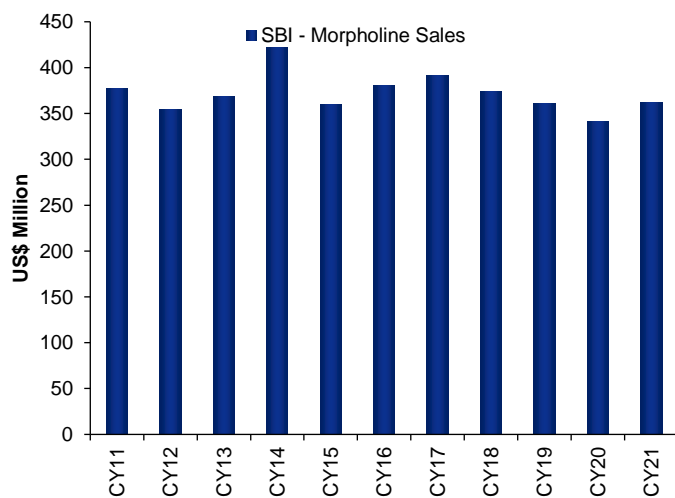
CY21 sales of the product stood at US\$235m and hence, overall sales volume is limited to 2,400t. We still don't understand why Astec Lifesciences is planning to install 1,200t capacity.

**Is there a chance of a big outsourcing contract for Astec Lifesciences for tribenuron? Unlikely, in our view, but the best-case scenario sales can be Rs0.5bn ➤**

While DuPont (now Dow-DuPont) is the innovator of the chemical, in the recent past most of the market share has been taken up by Chinese companies. While DuPont may give a part of the contract to Astec Lifesciences, any significant contract is unlikely. But to estimate a best-case scenario for Astec Lifesciences, we can assume 250t in sales, which means the company will garner a 17% market share and can post a revenue of Rs0.5bn.

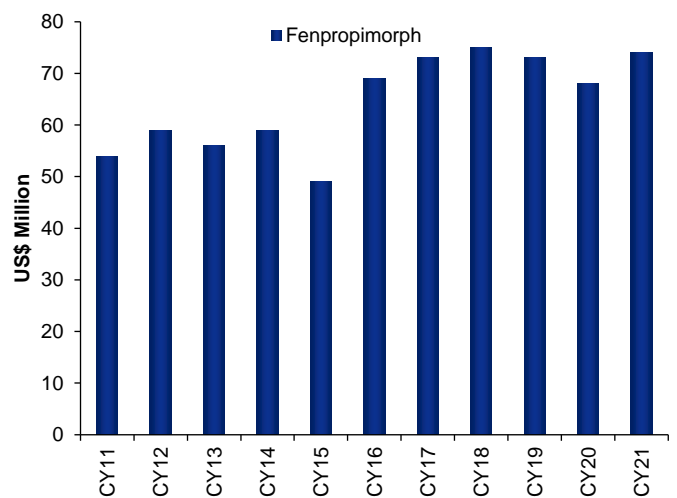
**Fenpropimorph belongs to the SBI-morpholine group of fungicides; SBI-morpholine has gone nowhere since the last decade while fenpropimorph’s growth is miniscule ➤**

**Figure 15: SBI-morpholine’s sales have been stagnant since the last decade and, in fact, are declining at a 0.6% CAGR**



SOURCE: INCRED RESEARCH, COMPANY REPORTS

**Figure 16: Fenpropimorph’s sales are comparatively better but their growth is miniscule, at a 3% CAGR**



SOURCE: INCRED RESEARCH, COMPANY REPORTS

**Fenpropimorph’s patent expired in 1995 and because of health concerns, some countries have banned it ➤**

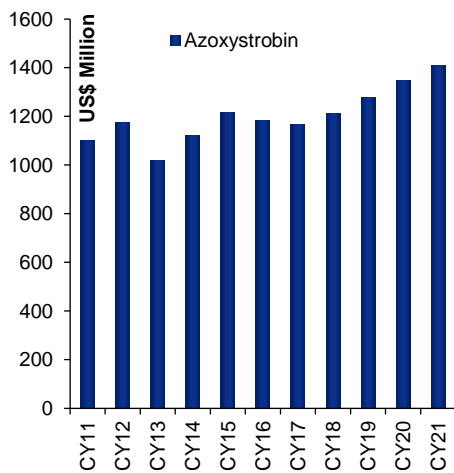
1. BASF is the principal manufacturer of the fungicide whose patent expired in 1995.
2. Morpholine offers curative control of powdery mildew in cereals. It is widely used in many mixture formulations, notably with strobilurins and triazoles. Sales have been affected by more recently introduced competitive products as well as generic competition.
3. Introduced as a wood preservative and known as Wolsin in USA. Re-registration in the EU has been achieved, with the approval extended until Apr 2019. In 2017, BASF launched Versatilis (fenpropimorph) in Brazil for the control of soybean rust; the product label was later expanded for its use on bananas in the country.
4. In Aug 2020, Turkey issued phase-out dates for 16 pesticide active ingredients, including fenpropimorph. The import ban was imposed on 30 Jun 2020.

**Estimating fenpropimorph’s sales of Astec Lifesciences is like shooting in the dark, but it may garner a 5-10% market share ➤**

One can take a guess that Astec Lifesciences may be able to sell US\$7m worth of fungicides over the next few years. In INR terms, overall sales can be Rs0.25 bn.

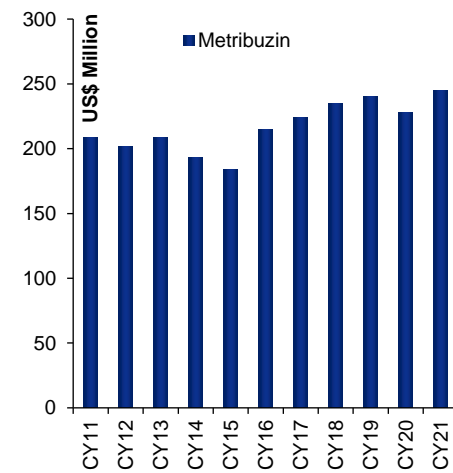
## Azoxystrobin, metribuzin and thiamethoxam - these are highly competitive generic pesticides ➤

**Figure 17: Azoxystrobin sales have been increasing at a 3% CAGR**



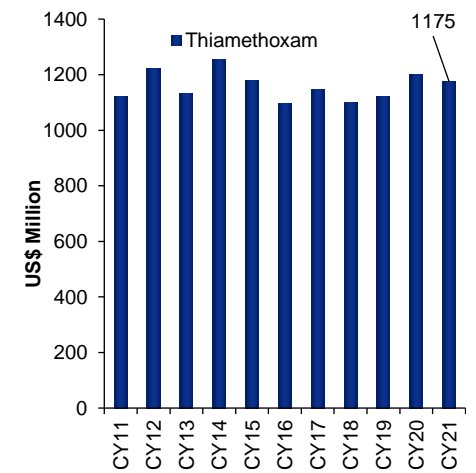
SOURCE: INCRED RESEARCH, COMPANY REPORTS

**Figure 18: Metribuzin sales have been increasing at a 2% CAGR**



SOURCE: INCRED RESEARCH, COMPANY REPORTS

**Figure 19: Thiamethoxam sales have been stagnant**



SOURCE: INCRED RESEARCH, COMPANY REPORTS

### Azoxystrobin - we expect Rs0.90bn in revenue for Astec Lifesciences

1. Broad-spectrum Strobilurin fungicide is now the leading fungicide globally. Major crop markets include soybean, F&V, cereals, rice, maize and potato.
2. There are multiple companies present in the generic space as its patent expired in 2012.
3. As of now, multiple companies are present in the space which includes Syngenta (innovator), FMC, UPL and several Chinese companies.
4. Azoxystrobin is a high-priced fungicide and normally costs US\$60/kg. Based on 2021 sales, the likely sales volume will be around 24,000t.
5. With a 900t capacity, it is possible for Astec Lifesciences to garner a 0.4% market share.
6. On full-scale operations, we can expect Rs0.90bn in revenue from azoxystrobin.

### Metribuzin – we expect Rs0.25bn in revenue for Astec Lifesciences

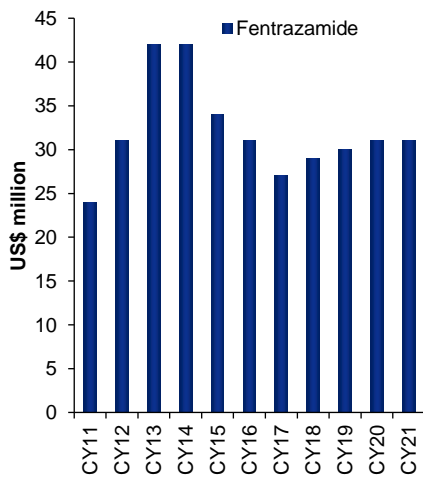
1. It is a mature cross-spectrum herbicide. Primary usage is on potato followed by soybean, although sales in the soybean sector are down from their peak level due to competition from more recently introduced products and the introduction of herbicide-tolerant varieties.
2. The product was commercialized in 1971, and its patent expired in 1986. Bayer is the innovator and as Bayer has acquired Monsanto, it has entered Bayer's Roundup ready seed program. The prices are likely to remain depressed for the chemical.
3. There is huge competition in the market with Bayer, FMC, Adama, UPL, Rallis, Meghmani and multiple Chinese companies present.
4. It is an approximately US\$15/kg product and in this regard, the global market size is ~16,000t.
5. It is possible for Astec Lifesciences to be able to utilize all 900t of its capacity at peak utilization level.
6. We can assume that metribuzin can contribute Rs0.25bn in revenue to the company.

### Thiamethoxam - we expect Rs0.14bn in revenue for Astec Lifesciences

1. The largest-selling neonicotinoid insecticide has significant foliar (Actara) and seed treatment (Cruiser) uses. Utilized in many mixtures in seed treatments, primarily as a component of Syngenta's Cruiser Maxx range.
2. This product was launched in 1999, and its patent expired in 2014.
3. Syngenta is the key manufacturer. Apart from Syngenta, it is being manufactured by Tagros, Bharat Rasayan, Punjab Chemicals, UPL, Rallis and multiple other Chinese as well as Indian companies.
4. It's a cheap insecticide and costs US\$4/kg and hence, overall global sales of the same is ~300,000t.
5. It's easy for Astec Lifesciences to find a market for 900t of thiamethoxam.
6. One can expect a revenue of Rs0.14bn from thiamethoxam sales.

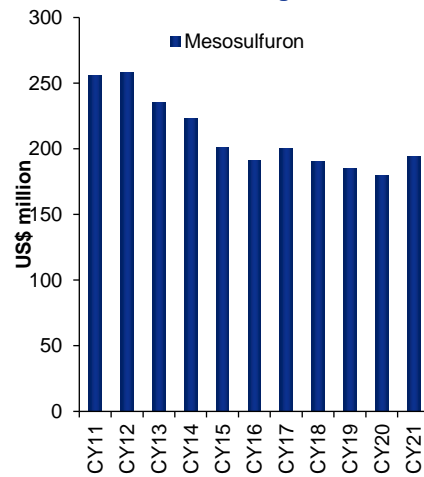
### Fentrazamide, mesosulfuron, trifloxystrobin, pyridalyl, tefluthrin, imibenconazole, dimethachlor, binfenazate, propaquizafop and bifenthrin sales➤

Figure 20: Miniscule herbicide with sales at US\$31m, growing at a 3% CAGR



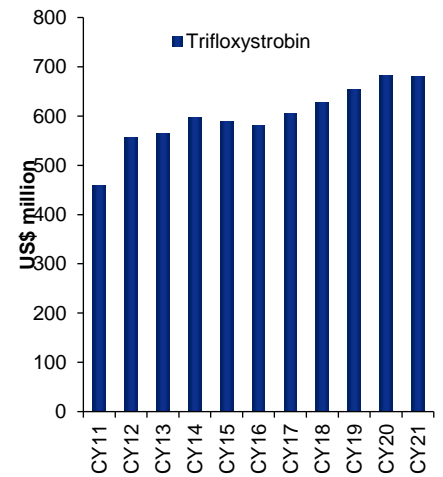
SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 21: A generic herbicide whose sales are declining at a 3% CAGR; good candidate for outsourcing



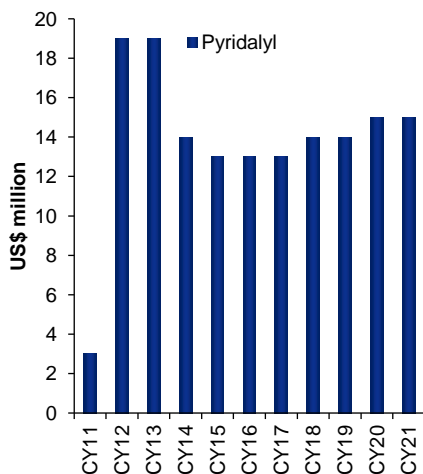
SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 22: A growing molecule which has sales potential for of ~Rs0.8bn for Astec Lifesciences



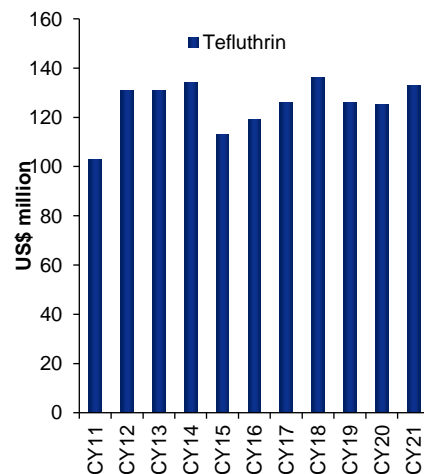
SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 23: Very costly fungicide by Sumitomo; sales potential is Rs 0.15bn



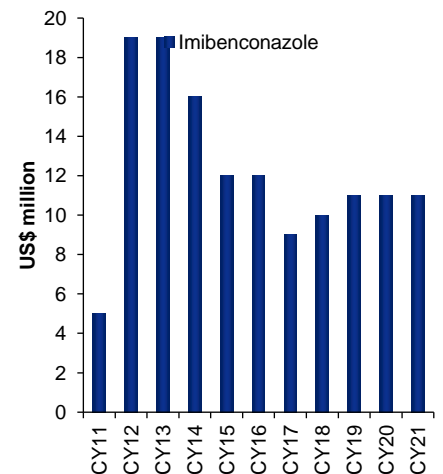
SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 24: A stagnant pyrethroid group of insecticide whose sales are not growing



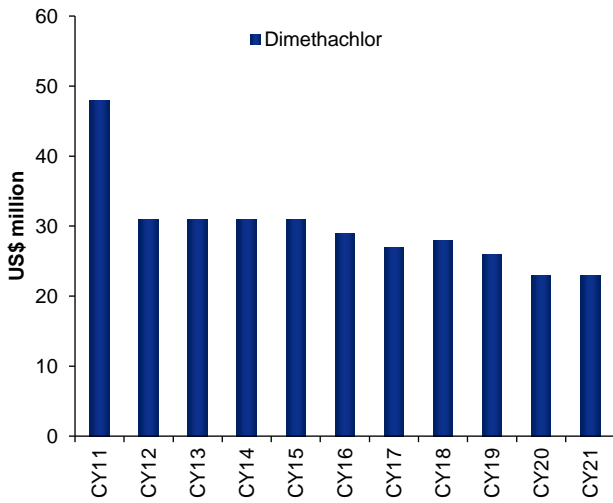
SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 25: SBI-triazole group of fungicide whose sales are likely to be Rs0.1bn for Astec Lifesciences



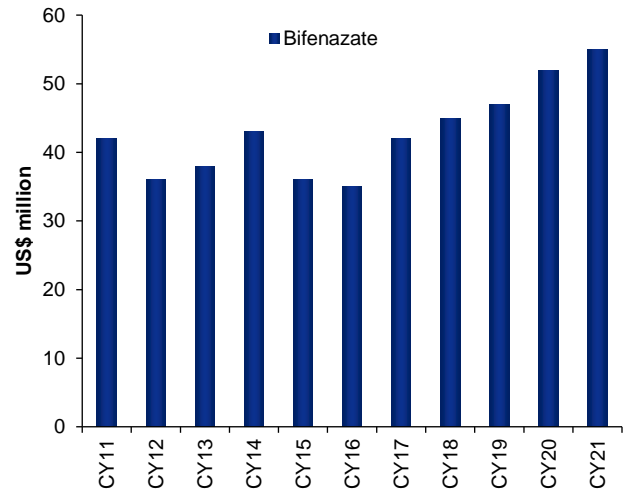
SOURCE: INCRED RESEARCH, COMPANY REPORTS

**Figure 26: Dimethachlor is a very old and declining herbicide whose sales potential for Astec Lifesciences is ~Rs0.06bn**



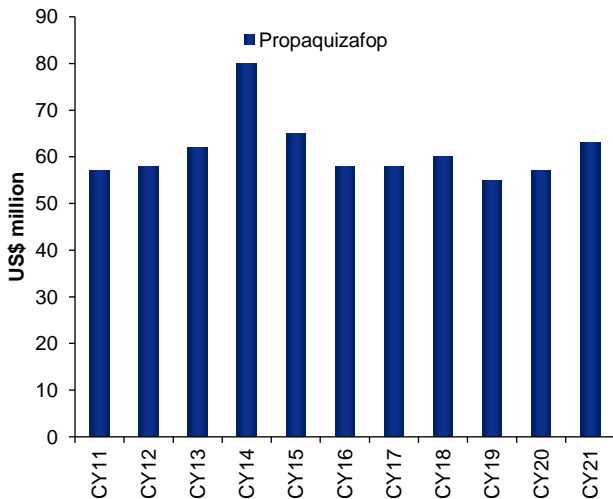
SOURCE: INCRED RESEARCH, COMPANY REPORTS

**Figure 27: Bifenazate (insecticide) has grown at a 3% CAGR; UPL is the innovator; sales possibility for Astec Lifesciences is Rs0.1bn**



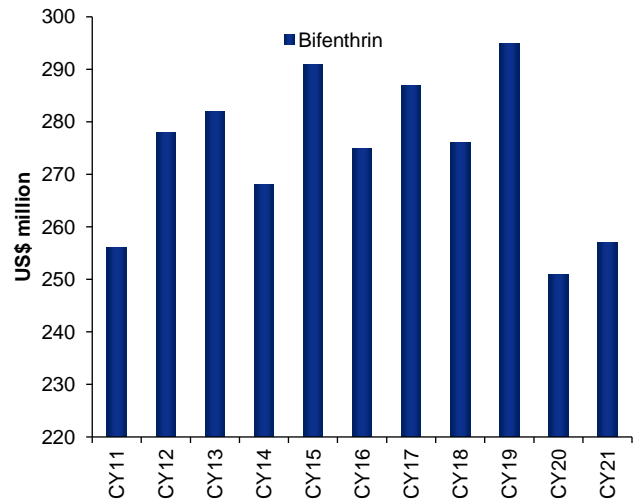
SOURCE: INCRED RESEARCH, COMPANY REPORTS

**Figure 28: Herbicide with anaemic growth; growing at a 1% CAGR over the last decade; Rs0.28bn likely sales for Astec Lifesciences**



SOURCE: INCRED RESEARCH, COMPANY REPORTS

**Figure 29: Belongs to a now declining pyrethroid group of insecticide; sales stagnant since the last decade; Rs0.3bn likely sales for Astec Lifesciences**



SOURCE: INCRED RESEARCH, COMPANY REPORTS

**Fentrazamide - we expect sales of not more than Rs0.20bn**

1. Fentrazamide is applied in transplantation for providing broad-spectrum weed control, with long-lasting efficacy.
2. The application timing complements Bayer’s seedling box fungicide and insecticide application strategy with carpropamid and imidacloprid.
3. Introduced in Thailand, Vietnam, Malaysia and the Philippines in 2000, followed by Japan in 2001 as Innova, a mixture with bensulfuron-methyl. Became one of the leading rice herbicides in South Korea, but now superseded by more recent introductions, although still used in a number of one-shot combinations in Japan.
4. In fiscal year 2018 (ended Oct 2018), Kumiai registered the product Avanti (triafalone + fenquinotriene + fentrazamide).
5. The price of this herbicide is ~US\$6-7/kg and hence, sales are limited to 5,000t globally.
6. It’s very unlikely that anyone can put incremental capacity of this chemical and hence, it’s possible that Astec Lifesciences can get the CSM contract for the same.

7. 600t in sales can garner not more than Rs0.20bn in revenue for Astec Lifesciences.

### **Mesosulfuron – likely sales at Rs0.65bn for Astec Lifesciences**

1. It was developed by Aventis and is now a part of the Bayer portfolio. After initial success, this herbicide faded off and its last sales declined @3% CAGR.
2. It was introduced in 2002, mainly in mixtures with iodosulfuron in combination with the safener mefenpyr-diethyl, as Atlantis. The patent expired in 2017.
3. Main usage is for wild oat and Phalaris (canary grass) control in wheat, also suppression of brome and annual ryegrass. It has gained significant market share in the European wild oat control sector, with the product being widely used in France, the UK, Germany and Italy.
4. The average price of this herbicide has been ~US\$20/kg and on that basis, sales have been 9,700t.
5. Seeing the sales profile and prices, it's a good candidate for outsourcing and its possible for Astec Lifesciences to generate Rs0.65bn in revenue on full-scale utilization of its 600t capacity.

### **Trifloxystrobin - likely sales at Rs0.81bn for Astec Lifesciences**

1. Trifloxystrobin was developed by Novartis and divested to Bayer on the formation of Syngenta in 2000. The product has particular strength against powdery mildew, septoria and rhynchosporium on cereals, particularly competitive in the early spray season.
2. Since then, Bayer has been very active with the fungicide and has launched multiple products based on it. The price of this fungicide is ~US\$50/kg. This means global demand for this product is ~14,000t.
3. It's a growing fungicide and more over in recent times, Bayer has been successful in marketing a mixture of this fungicide for application on soybean's Asian rust.
4. It is possible to garner a small pie (0.6%) in this growing fungicide market as an outsourcing deal.
5. One can expect a revenue of Rs0.81bn for Astec Lifesciences at full capacity utilization.

### **Pyridalyl - likely sales at Rs0.15bn for Astec Lifesciences**

1. It's a relatively costly fungicide (priced at nearly US\$130/kg).
2. Sumitomo is the innovator, and the molecule was commercialized in 2005. Patent expired in 2019.
3. It is highly active against the larvae of lepidopteran pests, including strains resistant to other insecticides. Launched in Japan, Korea, and Thailand in 2004, followed by Australia and India in 2005.
4. The global sales are only 120t, which makes it impossible for Astec Lifesciences to utilize more than 5% of its capacity. Even if it's able to utilize 5% of its capacity, it can have a 25% market share.

### **Tefluthrin - likely sales at Rs0.32bn for Astec Lifesciences**

1. It's a pyrethroid group of insecticide which went off-patent in 2003. Key manufacturer of this molecule is Syngenta.
2. Given the nature of this chemical and stagnant sales, it becomes an idea for outsourcing.
3. The price of the chemical is quite high at US\$150/kg, which makes it a very low-volume product. Global sales are only ~900t.
4. We don't expect Astec Lifesciences to be able to use more than 10% of its capacity in this product and garner a revenue of Rs0.32bn.

### **Imibenconazole - likely sales at Rs0.1bn for Astec Lifesciences**

1. It's an SBI-triazole group of fungicide, which is any way stagnating.
2. The key manufacturer of this fungicide is Hokko. There are no other major manufacturers of this fungicide.
3. It appears that Bharat Rasayan is already doing toll manufacturing of this molecule for Hokko.
4. The price of this chemical is quite high at US\$200/kg, which means global sales of only 50t.
5. Astec Lifesciences will be lucky to get even a 10t contract. We have worked out 12t in sales at peak capacity utilization and arrived at a revenue of Rs0.1bn.

### **Dimethachlor- likely sales at Rs0.06bn for Astec Lifesciences**

1. A relatively old chloroacetanilide herbicide that demonstrates good selectivity on oilseeds.
2. Dimethachlor controls annual grass weeds, including alopecurus myosuroides (black-grass), apera spica-venti and poa annua as well as some broad-leaved weeds.
3. This chemical was developed by Syngenta in 1976, and it turned off-patent in 1991.
4. This molecule has registered nothing in sales in the past few years. In fact, over the last decade its sales have declined by a 7% CAGR.
5. The global sales based on 2022 prices is ~7,000t. It's possible for Astec Lifesciences to garner a 10% market share in this dying herbicide and get a revenue of Rs0.06bn.

### **Bifenazate - likely sales at Rs0.1bn for Astec Lifesciences**

1. This molecule was developed Arysta Lifesciences 1999, and it turned off-patent in 2014. This is an insecticide and belongs to a broader category of acaricide.
2. Last decade's global sales grew at a 3% CAGR. However, given the size of the molecule (US\$55m), it is a weak growth.
3. UPL is the leader in this chemical (after the acquisition of Arysta) and hence, there can be a chance for toll manufacturing of bifenazate for this company.
4. The average selling price of this molecule is US\$55/kg, which means by utilizing 20% capacity (12% market share), Astec Lifesciences can garner Rs0.1bn in sales.

### **Propaquizafop - likely sales at Rs0.28bn for Astec Lifesciences**

1. This herbicide was developed by Adama in 1990, and it turned off-patent in 2005.
2. The herbicide's sales haven't grown much. In fact, its stagnant since the last decade (CAGR of 1%).
3. It's a relatively cheap herbicide (US\$13/kg), which is used on rape, F&V, soybean, and sugar beet.
4. Total global sales are at 4,850t, and it's possible that Astec Lifesciences may utilize its full capacity.
5. The overall revenue possible for Astec Lifesciences is ~Rs0.28bn.

### **Bifenthrin - likely sales at Rs0.3bn for Astec Lifesciences**

1. It's a stagnant pyrethroid group of insecticides, which is manufactured globally by various players.
2. Key manufacturer is FMC and given the propensity of FMC to outsource, Astec Lifesciences can get the contract.



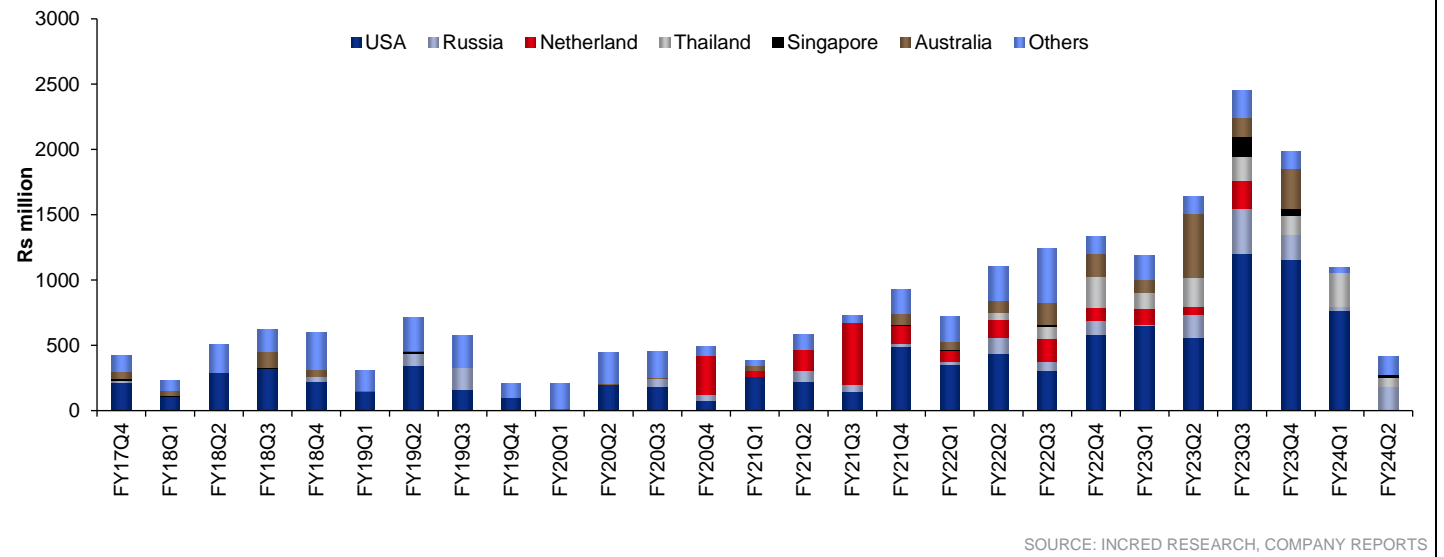
- It's a relatively cheap insecticide at US\$30/kg. We can expect Astec Lifesciences to generate Rs0.3bn in revenue by utilizing 50% of its capacity.
- Global sales are at ~8,000t.

### Slowdown in exports to hit near-term earnings

As shown earlier, Astec Lifesciences is primarily dependent on SBI-triazole exports for its revenue and even the expansion is coming in the same area. We have shown in the analysis of SBI triazoles that their sales peaked in 2014, and since then they are on the declining trajectory. When a product goes in a declining trajectory, then inventory in the supply chain remains at a minimum level. A sudden change in demand or channel-filling creates a big jolt across the supply chain and hence, the price as well as volume rises. The same happened with Astec Lifesciences in 2022, and since then it hasn't repeated.

### Most propiconazole exports in 2022 were driven by channel-filling in USA ➤

Figure 30: USA was the biggest importer of propiconazole in 2022



### Most tebuconazole exports in 2022 were driven by channel-filling in Brazil ➤

Figure 31: Tebuconazole sales peaked at the end of CY21/1HCY22...

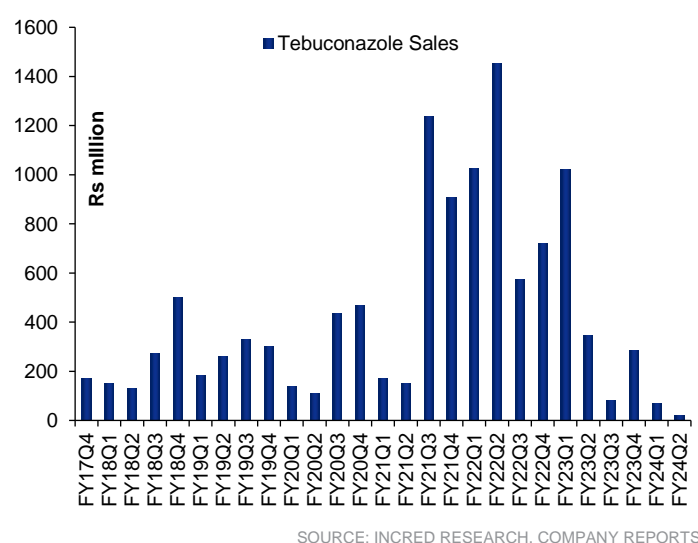
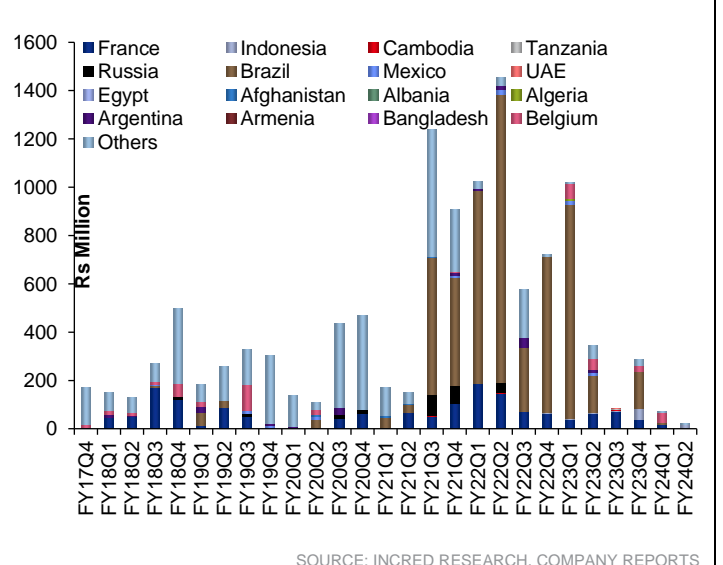


Figure 32: ...as channel-filling in Brazil got over

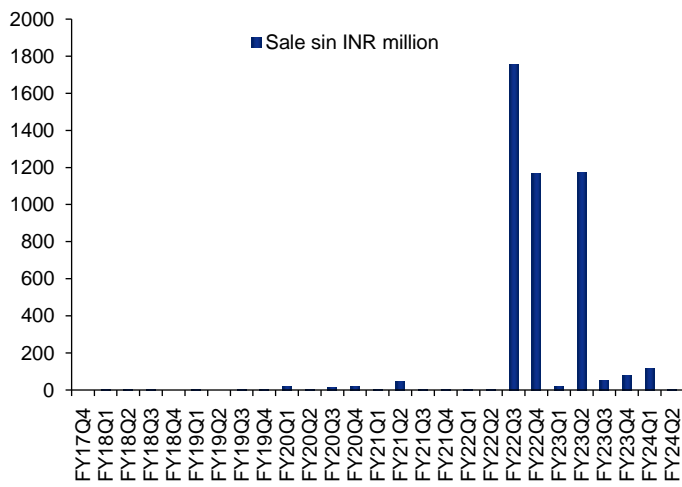


**The prothioconazole story is no different vis-à-vis exports from India- a flash-in-the-pan kind of rise and then collapse ➤**

This growth was driven by increased imports of the chemical by Turkish companies towards the end of FY22. Since then, exports have collapsed. The reason for the rise in imports of prothioconazole was a fungal disease that affected crops in Turkey towards the end of 2021. The disease was identified as macrophomina phaseolina, a soil-borne fungus that can infect a wide variety of crops, including wheat, barley, corn, soybean, and cotton. The disease causes the roots and stems of the plants to rot, which can lead to wilting and death.

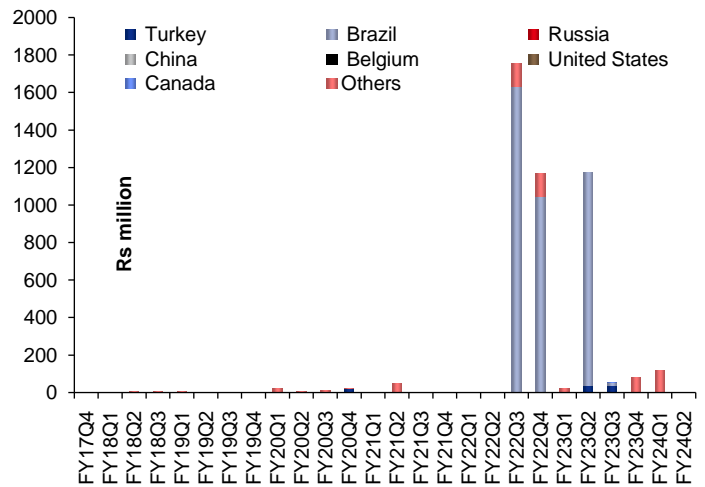
Prothioconazole is a generally very toxic fungicide and hence, it was used to kill macrophomina phaseolina. However, since then the demand has died down.

**Figure 33: Exports of prothioconazole peaked in 3QFY23**



SOURCE: INCRED RESEARCH, COMPANY REPORTS

**Figure 34: Turkish imports have died down; in 3QFY22, they had increased because of the macrophomina phaseolina disease**

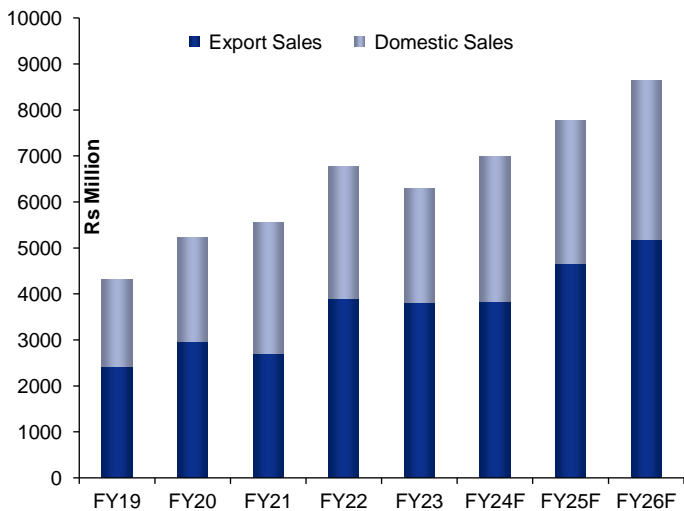


SOURCE: INCRED RESEARCH, COMPANY REPORTS

**EPS to decline by ~55% in FY24F, and the overseas as well as the domestic market likely to remain weak ➤**

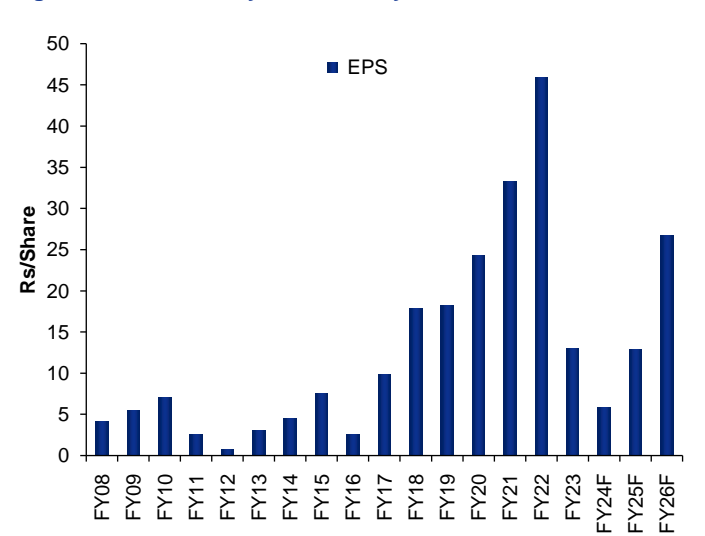
The start to FY24 hasn't been good for the company and 2Q is also not going well on the export front. It's likely that EPS will decline by 50% in FY24F and recover in FY25F and FY26F, but it's nowhere near the expectations of investors.

**Figure 35: In a best-case FY24F scenario, revenue can remain around FY22 level**



SOURCE: INCRED RESEARCH, COMPANY REPORTS

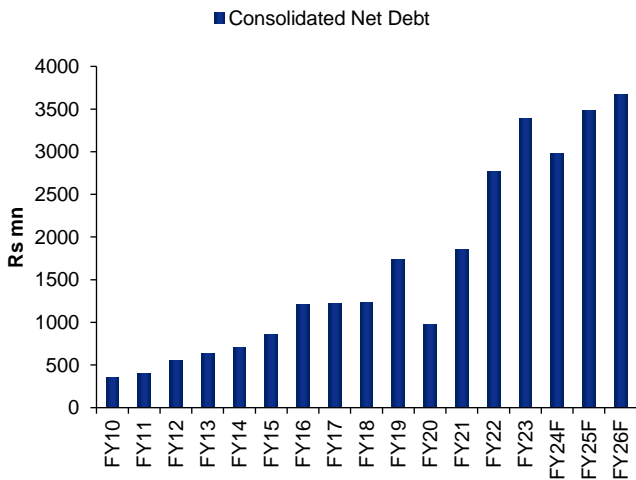
**Figure 36: EPS is likely to decline by 55% in FY24F**



SOURCE: INCRED RESEARCH, COMPANY REPORTS

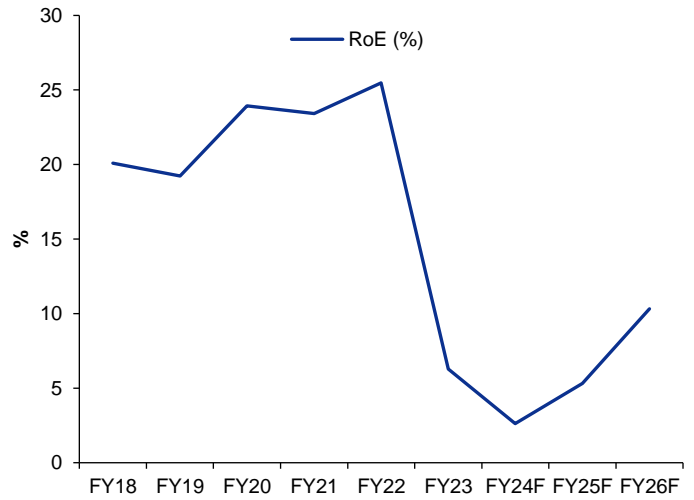
**Debt to increase and RoE to decline** ➤

**Figure 37: Consolidated net debt to increase**



SOURCE: INCRED RESEARCH, COMPANY REPORTS

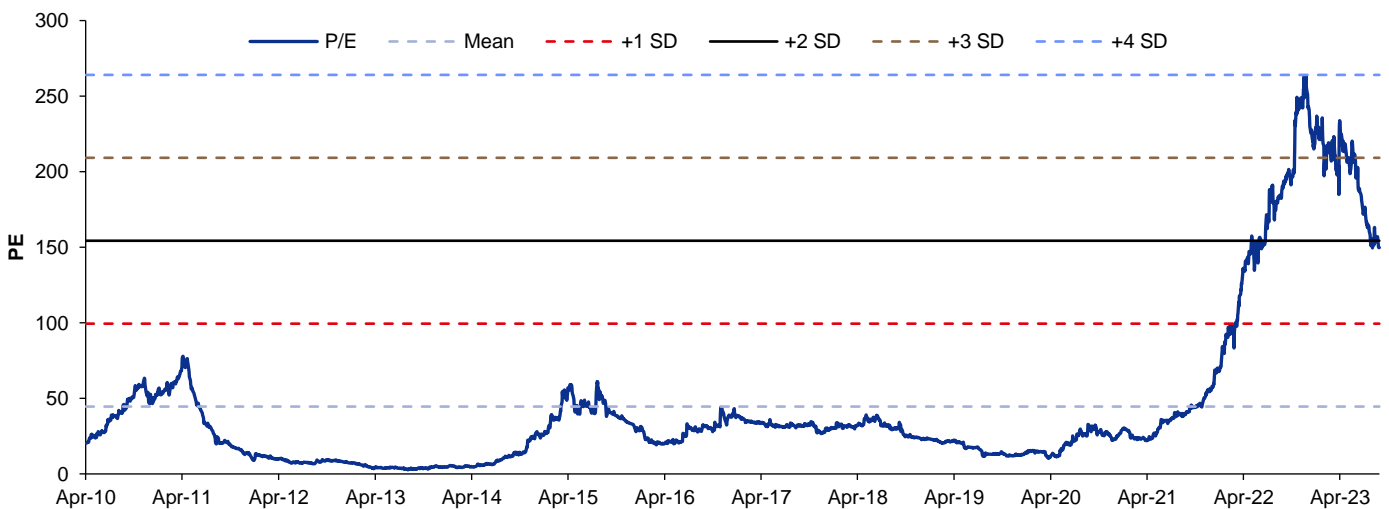
**Figure 38: ROE is unlikely to touch the FY22 peak in the next three years**



SOURCE: INCRED RESEARCH, COMPANY REPORTS

**Higher valuation sustains because of illiquidity in the stock** ➤

**Figure 39: At the peak, even NVIDIA's valuation was lower than that of Astec Lifesciences**



SOURCE: INCRED RESEARCH, COMPANY REPORTS

**While below 10% RoE and growth headwinds make it not even worth 20x P/E, because of illiquidity in the stock we have assigned it 50x P/E** ➤

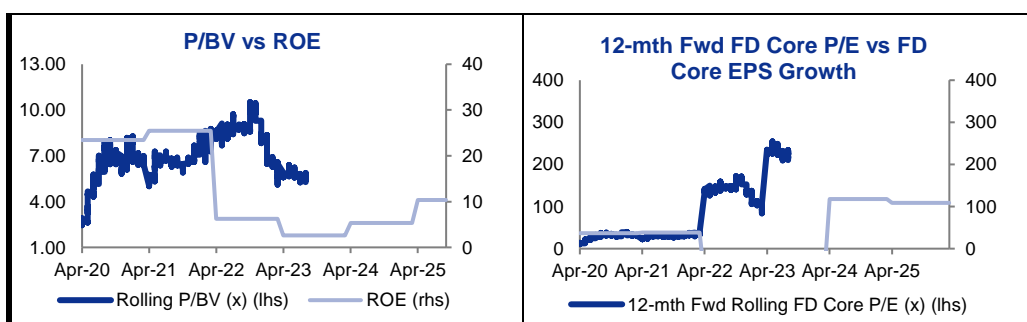
**Figure 40: We value the stock at 50x one-year forward EPS to arrive at our target price of Rs989 and retain REDUCE rating on it**

**Target Price Methodology**

Item	Unit	Valuation
FY25F EPS	Rs/share	12.8
FY26F EPS	Rs/share	26.8
Sep 2025F EPS	Rs/share	19.8
P/E multiple	x	50
<b>Target price</b>	<b>Rs/share</b>	<b>989</b>

SOURCE: INCRED RESEARCH, COMPANY REPORTS

BY THE NUMBERS



Profit & Loss

(Rs mn)	Mar-22A	Mar-23A	Mar-24F	Mar-25F	Mar-26F
<b>Total Net Revenues</b>	<b>6,766</b>	<b>6,282</b>	<b>6,282</b>	<b>6,910</b>	<b>7,601</b>
<b>Gross Profit</b>	<b>2,898</b>	<b>2,269</b>	<b>2,356</b>	<b>2,591</b>	<b>2,850</b>
<b>Operating EBITDA</b>	<b>1,541</b>	<b>763</b>	<b>556</b>	<b>519</b>	<b>463</b>
Depreciation And Amortisation	(344)	(337)	(442)	(535)	(622)
<b>Operating EBIT</b>	<b>1,197</b>	<b>426</b>	<b>114</b>	<b>(16)</b>	<b>(159)</b>
Financial Income/(Expense)	(91)	(207)	(113)	(147)	(180)
Pretax Income/(Loss) from Assoc.					
Non-Operating Income/(Expense)	105	131	154	499	1,040
<b>Profit Before Tax (pre-EI)</b>	<b>1,211</b>	<b>349</b>	<b>154</b>	<b>336</b>	<b>701</b>
Exceptional Items					
<b>Pre-tax Profit</b>	<b>1,211</b>	<b>349</b>	<b>154</b>	<b>336</b>	<b>701</b>
Taxation	(312)	(94)	(39)	(85)	(177)
Exceptional Income - post-tax					
<b>Profit After Tax</b>	<b>899</b>	<b>256</b>	<b>115</b>	<b>251</b>	<b>525</b>
Minority Interests					
Preferred Dividends					
FX Gain/(Loss) - post tax					
Other Adjustments - post-tax					
<b>Net Profit</b>	<b>899</b>	<b>256</b>	<b>115</b>	<b>251</b>	<b>525</b>
Recurring Net Profit	899	256	115	251	525
<b>Fully Diluted Recurring Net Profit</b>	<b>899</b>	<b>256</b>	<b>115</b>	<b>251</b>	<b>525</b>

Cash Flow

(Rs mn)	Mar-22A	Mar-23A	Mar-24F	Mar-25F	Mar-26F
<b>EBITDA</b>	<b>1,541</b>	<b>763</b>	<b>556</b>	<b>519</b>	<b>463</b>
Cash Flow from Invt. & Assoc.					
Change In Working Capital	(1,101)	(59)	(58)	(272)	(309)
(Incr)/Decr in Total Provisions					
Other Non-Cash (Income)/Expense	(17)	(39)	482	(4)	1
Other Operating Cashflow	195	338	762	646	1,220
Net Interest (Paid)/Received	(91)	(207)	(113)	(147)	(180)
Tax Paid	(291)	(49)	(39)	(85)	(177)
<b>Cashflow From Operations</b>	<b>236</b>	<b>747</b>	<b>1,590</b>	<b>657</b>	<b>1,019</b>
Capex	(1,040)	(1,173)	(858)	(1,000)	(1,000)
Disposals Of FAs/subsidiaries	1	8			
Acq. Of Subsidiaries/Investments	(3)	(1)			
Other Investing Cashflow	3	41			
<b>Cash Flow From Investing</b>	<b>(1,039)</b>	<b>(1,125)</b>	<b>(858)</b>	<b>(1,000)</b>	<b>(1,000)</b>
Debt Raised/(repaid)	923	606		2,000	
Proceeds From Issue Of Shares					
Shares Repurchased					
Dividends Paid	(29)	(29)	(7)	(16)	(32)
Preferred Dividends					
Other Financing Cashflow	(89)	(199)	(113)	(147)	(180)
<b>Cash Flow From Financing</b>	<b>805</b>	<b>378</b>	<b>(121)</b>	<b>1,838</b>	<b>(212)</b>
Total Cash Generated	2	(1)	612	1,495	(194)
<b>Free Cashflow To Equity</b>	<b>121</b>	<b>228</b>	<b>732</b>	<b>1,657</b>	<b>19</b>
<b>Free Cashflow To Firm</b>	<b>(712)</b>	<b>(171)</b>	<b>846</b>	<b>(196)</b>	<b>199</b>

SOURCE: INCRED RESEARCH, COMPANY REPORTS

**BY THE NUMBERS...cont'd**

<b>Balance Sheet</b>					
<b>(Rs mn)</b>	<b>Mar-22A</b>	<b>Mar-23A</b>	<b>Mar-24F</b>	<b>Mar-25F</b>	<b>Mar-26F</b>
Total Cash And Equivalents	21	22	444	1,939	1,745
Total Debtors	2,736	1,549	1,549	1,704	1,874
Inventories	1,869	2,948	2,948	3,243	3,568
Total Other Current Assets	530	469	541	554	570
<b>Total Current Assets</b>	<b>5,157</b>	<b>4,989</b>	<b>5,483</b>	<b>7,440</b>	<b>7,757</b>
Fixed Assets	3,628	4,134	4,549	5,014	5,392
Total Investments					
Intangible Assets					
Total Other Non-Current Assets	183	672	177	182	182
<b>Total Non-current Assets</b>	<b>3,811</b>	<b>4,806</b>	<b>4,727</b>	<b>5,196</b>	<b>5,574</b>
Short-term Debt	2,794	3,303	3,303	5,303	5,303
Current Portion of Long-Term Debt					
Total Creditors	1,898	1,772	1,772	1,949	2,144
Other Current Liabilities	214	187	200	214	220
<b>Total Current Liabilities</b>	<b>4,906</b>	<b>5,262</b>	<b>5,275</b>	<b>7,466</b>	<b>7,667</b>
Total Long-term Debt		109	109	109	109
Hybrid Debt - Debt Component					
Total Other Non-Current Liabilities	10	13			
<b>Total Non-current Liabilities</b>	<b>10</b>	<b>122</b>	<b>109</b>	<b>109</b>	<b>109</b>
Total Provisions	85	214	215	216	217
<b>Total Liabilities</b>	<b>5,001</b>	<b>5,599</b>	<b>5,599</b>	<b>7,791</b>	<b>7,993</b>
Shareholders Equity	3,965	4,194	4,602	4,837	5,330
Minority Interests	2	2	2	2	2
<b>Total Equity</b>	<b>3,967</b>	<b>4,196</b>	<b>4,604</b>	<b>4,839</b>	<b>5,332</b>

<b>Key Ratios</b>					
	<b>Mar-22A</b>	<b>Mar-23A</b>	<b>Mar-24F</b>	<b>Mar-25F</b>	<b>Mar-26F</b>
Revenue Growth	21.9%	(7.2%)		10.0%	10.0%
Operating EBITDA Growth	38.1%	(50.5%)	(27.1%)	(6.7%)	(10.6%)
Operating EBITDA Margin	22.8%	12.1%	8.9%	7.5%	6.1%
Net Cash Per Share (Rs)	(141.47)	(172.92)	(151.36)	(177.14)	(187.01)
BVPS (Rs)	202.32	213.90	234.71	246.74	271.84
Gross Interest Cover	13.22	2.06	1.00	(0.11)	(0.88)
Effective Tax Rate	25.8%	26.8%	25.2%	25.2%	25.2%
Net Dividend Payout Ratio	6.2%	6.2%	6.2%	6.2%	6.2%
Accounts Receivables Days	124.29	124.50	90.01	85.91	85.91
Inventory Days	138.26	219.14	274.12	261.66	261.66
Accounts Payables Days	148.45	166.93	164.73	157.24	157.24
ROIC (%)	17.7%	4.7%	1.1%	(0.2%)	(1.4%)
ROCE (%)	20.2%	5.8%	1.4%	(0.2%)	(1.5%)
Return On Average Assets	12.3%	4.4%	2.0%	3.2%	5.1%

SOURCE: INCRED RESEARCH, COMPANY REPORTS

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