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Is it 2008 All Over Again? Chinese Supply Crunch Hits Crop Protection Players

They say that if you want to know the price of agricultural chemicals, look at the sky in China.

November 9, 2017
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If the sky is blue, the price is up. Dennis Pfeiffer got off a plane last week from Southeast China, where the umbrella company of the company he leads, Tide International USA, is based.

The skies were blue — in fact, bluer than he can remember them being.

It's a sign of the times. The supply chain meltdown that's hit every brand of smokestack industry is perhaps just part of the price China is paying for its breakneck industrial expansion. With around half of U.S. agrichemicals sourced out of China, few will be left unscathed.

"(China) reminds me of the '70s in Cleveland when the river would catch fire. And you'd fly into LA and the sky was brown. They're having that problem now. There's no doubt about it; they are serious about cleaning it up," Pfeiffer assures.

"As India comes online and becomes more competitive, I think that we would see restabilization over the next 18 to 24 months." – Brian Heinze, President and CEO, Willowood USA

Brian Heinze has been in the agchem biz for 25 years now, and he's never seen anything quite like it, either.

Through all of those years, the founder and CEO of fast-growing post-patent player Willowood USA recalls a single case of a company not honoring a contract. That would be five fewer than he had fall through on one trip to China alone in late October 2017.

"Basically, (Chinese suppliers of active ingredients) are claiming force majeure. They are saying, 'The government has forced our shutdown; we can't get raw materials.' There is a legit out, but that's not good for us or anybody else," Heinze says, adding, "I think this is going to haunt the Chinese eventually."

To point to some examples, imidacloprid technical was $13.50 a kilogram a year ago, and is now $36 and rising. Same story with lambda-cyhalothrin: The price has more than doubled. Tebuconazole, formerly a commodity-type product, is almost nonexistent, and glufosinate supplies aren't much better. Clethodim is proving to be Tide International USA's biggest problem.

As necessary and long overdue as the environmental clean-up is, Heinze predicts many won't make it through this bout of supply disruptions, which has people drawing comparisons to 2008 when phosphorous and glyphosate prices sprinted Usain Bolt-style in the lead-up to the Beijing Olympics. "Not to fault any entrepreneurs, but some more fly-by-night generics that have operating cash flow-related issues are going to be in a much tougher position to survive."

The squeeze has him turning to Indian suppliers to source actives like sulfentrazone, propiconazole, propanil, and tebuconazole, and concentrating on diversifying Willowood's portfolio. Where he can't get imidacloprid, lambda-cyhalothrin — and to a lesser extent tebuconazole and glufosinate — he's shifting to products he knows he can get more reliably, such as mesotrione and sulfentrazone.

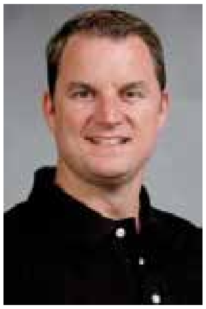
India, as one of the last truly growing agrichemical markets, is home base for Willowood's first AI manufacturing plant, but it will not be operational for another two to three years. Why India? Tax incentives, Heinze says. The company currently pays 6.5% in duty from China.

Sourcing has also become a year-round affair, instead of the one-and-done October deals standard up until just two to three years ago. Now, Heinze says, Willowood is negotiating formulating slots much earlier and buying starting in May, before the shutdown for maintenance in hot periods in both India and China for the subsequent year's production.

"If we're going to lose $10 to $20 million because we can't participate in these high-priced markets, we're going to have to make up that revenue up elsewise," Heinze says. "The bigger point is, we're launching eight new products in 2018. My personal philosophy in founding and running day-to-day operations as the president and CEO of Willowood USA is either you're growing or you're stagnating. If you look at our product mix five years ago, the crown jewels then are commodities today."

Key Words: 'When I Get the Product'

The instability and uncertainty rumbling through the industry over



"I hope that because of what's going on, the landscape opens itself to more opportunities in that a retailer can see more of what's available in purchasing from post-patent companies."

— TROY BETTNER, HELM AGRO USA

"As India comes online and becomes more competitive, I think that we would see restabilization over the next 18 to 24 months."

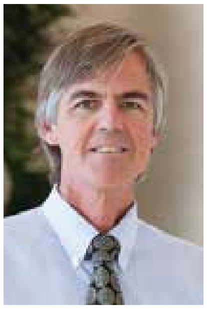
— BRIAN HEINZE, PRESIDENT AND CEO, WILLOWOOD USA

the last few months could be seen as triggered not only by pervasive plant shutdowns but also by the unknowns post-M&A feeding frenzy, in which, of course, China has played a pivotal role via ChemChina dropping $60 billion for Adama and Syngenta. Then there are the conspiracy theories circulating of how the government there has deliberately fed the supply shortages by letting factories that sourced for those companies continue while putting a stranglehold on the rest.

Pfeiffer puts the current supply situation simply. "Everybody has the same strategy: 'I'll tell you the price when I get the product.'"

Tide International USA is unique among generic manufacturers in that it formulates and packages 100% of its products in China in its own plant; it does zero toll manufacturing. It gives the company an advantage, because it knows the supply and price a little bit further back in the chain, Pfeiffer says. Yet, it isn't enough to promise customers the supply it had last year.

AMVAC CEO Eric Wintemute says, "If someone guarantees a price for a year on a supply, I'd be wary because I don't think anybody can guarantee prices. We manufacture a lot of our products (in the U.S.), and that's a plus, but there are a few of our 43 active ingredients and some raw materials that we do source out of China. Obviously, you need to be prepared that supply on a number of products is going to be difficult."



ERIC WINTEMUTE, CEO, AMVAC

Southern California-based AMVAC has been closely studying and adjusting its playbook for the Chinese supply matter since August, when the country's government began its crackdown on industrial parks. If one player is found to be out of compliance, the whole park gets shut down. Each manufacturer in that park then has to schedule time with a national enforcement team to show they are in compliance with all regulations, a process that can take weeks or months, a period during which there is no production. "There's a fair amount of chaos going on now," Wintemute says.

The company's biggest-volume product is metam sodium soil fumigant, the raw materials for which are sourced entirely in the U.S. But for some other products it expects to see an impact, notably bifenthrin, acephate, and chlorothalonil.

"We think the effect on companies might not happen until we get into the season next year, so maybe more of a second-quarter or second-half effect in 2018 going into 2019," AMVAC Chief Operating Officer Bob Trogele says.

All is not gloom and doom — on the contrary, he sees opportunity, bolstered by its strong U.S. manufacturing base.

"We have really worked hard on proper inventory management in the channel here in the U.S. and we're very focused on how we can help our customers retain margins. We are known for supply reliability," he adds.

"I hope that because of what's going on, the landscape opens itself to more opportunities in that a retailer can see more of what's available in purchasing from post-patent companies." –Troy Bettner, HELM Agro USA

A More Open Market Ahead?

Troy Bettner, Marketing and Business Development Leader with HELM Agro US, says the opportunity for ag retailers, in particular, is apparent.

The supply environment "is forcing retailers to evaluate different strategies and options moving forward," he says. "Retailers are opening their eyes and ready to investigate more of what's out there."

By the same token, Bettner says, one has to take into account the risks with a more unfamiliar supplier, not to mention the loyalty programs backed by many products and countless other factors. "Retailers and growers are going to say, 'Who am I going to trust?'"

Bettner touts HELM's position as a 115-year-old family-run company that is not beholden to shareholders. It is financially strong with $8 billion in annual sales, and values its relationship with its retail, distributor, and grower partners above all else. In ways, it's what many of his competitors increasingly are not.

Rattled by so much uncertainty in agchem of late, Bettner says, "if I'm going to look to other (supplier) options as possibilities, I want to feel comfortable with what those options are. In our world, do all the post-patent companies out there research compounds thoroughly; do they look at the formulations in the field before bringing them to market; do they do adequate testing to know that they're going to be no surprises in the field? If there is an issue in the field, will that company be there to walk the field with me and back me? I say that from a retailer perspective."

He adds, "When you're walking with the retailer, you're walking with the farmer."

Heinze recalls an article he read recently that discussed how Bayer-Monsanto could control 40% of inputs, and the resulting loss of supplier and product optionality for farmers.

From where he's sitting, it's a phenomenal time for post-patent companies and their partners to give those options back to them.

When supplies restabilize — and he believes they will within 18 to 24 months, perhaps sooner — the grower's needs will not have changed much. "The one thing that we know is that next year there will be somewhere around 90 million acres of corn planted, 70 million acres of soy, and between 30 and 40 million acres of cereals," Heinze says. "We're of no benefit to you long-term if we're not solvent. Growers are either going to use a preemergent or a postemergent herbicide to control weeds in their crops; the ones that are less predictable are insecticides and fungicides," Heinze says. "Your growers are going to have to protect their crops." ■

THE SHETH BROTHERS FOUNDED AGROSTAR IN 2012.

How AgroStar Is Leading the Way to Simplify India's Distribution

September 21, 2017
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India has some 120 million growers and a predominantly generic agrichemical market. A strong and efficient distribution network is essential for crop protection.

Yet, the country's industry has been plagued by problems arising out of supply chain inefficiencies, a lack of transparency, spurious products, and inadequate infrastructure, which result in post-harvest losses estimated at INR 45,000 crore ($7 billion) every year, according to a Tata Strategic Management Group/FICCI report.

This also makes it difficult for agrichemical companies to reach the farmers to promote their products and educate them about their usage and benefits. Indian farmers deal with layers upon layers of agents, dealers, and distributors to get to the farm inputs they want to buy.

Enter a Rising Start-Up Called AgroStar

The Pune-headquartered firm, founded in 2012, skips all the layers and goes straight to the farmer via their cellphone.

As the motto splashed on its homepage goes: "Our mission is to simplify the agribusiness experience for farmers in rural India."

The Accel-backed start-up raised $10 million in Series B funding earlier in 2017 and currently operates in the three states of Maharashtra, Gujarat, and Rajasthan with a staff of over 200 people.

Commenting on the investment, Prashanth Prakash, Partner, Accel India, said: "There is a huge scope to implement technology to solve the inherent problems faced by farmers in India. In a mobile first country like India, AgroStar has clearly demonstrated that farmers in India are ready to adapt the latest in technology that can make their lives simpler and improve their productivity."

Co-founder and CEO Shardul Sheth and co-founder and Director Sitanshu Sheth break down the process:

A farmer expresses his interest to transact with AgroStar either through a missed call on a toll-free number or through the company's Android app.

AgroStar's intelligent, predictive dialer connects qualified customer relations executive with the farmer. The executive understands his query and provides him with personalized agronomy and product solutions based on his crop cycle and places an order on behalf of the customer with the aid of a smart CRM.

The products are dispatched from the central warehouse through one of the delivery channels viz. India Post, local entrepreneurial logistics partners or through field sales executives and are delivered at farmer's doorstep.

The focus is on four consumer-centric pillars: genuine and quality products, fair pricing, advisory solutions, and quality service, say the Sheth brothers, and the model is catching on: "Farmer interest has been growing multi-factor every year. The business has been growing 2x to 2.5x in the last three years through continuous innovations in farmer engagement, product range, and last-mile delivery. More than 1.4 million farmers have been serviced with over 4 lakh farmers transacting on platform," they tell AgriBusiness Global.

The key challenges, the Sheths say, include convincing less literate farmers to trust an alternate channel of commerce and ensuring timely last-mile delivery. The current platform, too, is not yet perfected. Delivery speed can still be improved, and logistics challenges still stand in the way of speedy deliveries of bulk products, according to the Sheths.

Precision ag plays no small part in the founders' vision.

"AgroStar has also been at the forefront in acquiring a huge amount of data pertaining to millions of calls, lakhs of farmers and transactions, and thousands of products across the geographies. The farmer-specific data is used to provide more customized services, loyalty programs and recommend more relevant products. The operational data is used for building efficiency in the system.

"While the intent to be able to provide site-specific crop management services is very much there, and steps toward crop image-based recommendations are being taken, the challenges the Indian landscape provides with regard to small and fragmented holdings still makes it a difficult proposition to have precision agriculture done at scale," the Sheths point out.

The company aims to spread throughout India within the next two years. Partners include more than 160 brands, including multinationals such as Monsanto, Dow, and BASF to provide raw materials, seeds, fertilizers, and other inputs.

"There is a continuous effort to on-board more relevant brands and expand the portfolio to cover more crops and agri-products across the states," the Sheths say. ■

The Top 10 Crop Protection Companies, Post Mega-Mergers

August 16, 2017
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Everyone loves a good Top 10 list. In fact, some prominent celebrities such as David Letterman spent much of their careers cataloguing various Top 10 lists. In the crop protection company arena, the Top 10 list has been in a bit of a flux lately. Several of the so-called Big Six players have been actively merging their businesses, which has created an entirely new Top 10 ranking – or at least, a new one once 2018 rolls around. At the recent AgriBusiness Global Trade Summit in Las Vegas, NV, Jim DeLisi, Owner of Fanwood Chemical, presented a paper detailing how the new Top 10 Crop Protection Companies for the world will shake out once the dust settles from the current round of mega-mergers. The clear No. 1 in this new world will be the combined Bayer/Monsanto, with just over $27 billion in annual sales. Virtually tied for second place will be Syngenta/ChemChina ($17.4 billion) and Dow/DuPont ($17.2 billion).The rest of the top five will consist of BASF at No. 4 and FMC Corp. at No. 5, by virtue of its acquisition of much of DuPont crop protection products/research.

Sorry, there are no polls available at the moment.As for the rest of the Top 10, this is likely to include the following players, in no particular order: Australia's NuFarm, India's United Phosphorous Ltd., Japan's Sumitomo Agrochemicals, and two U.S. companies – AMVAC and Albaugh.

A possible six member of this group, added DeLisi, would be the Platform Ag from the U.S., which is the merger of Chemtura, Arysta, and Agriphar. However, industry rumors indicate that Platform Ag could end up in a merger with one of the other "next five" companies in the coming months.

So the merger mania currently gripping the crop protection marketplace might continue for at least a little while longer . . .

Flying Under the Radar No More, FMC Goes Bigs

JACKIE PUCCI INTERVIEWS MARK DOUGLAS AT FMC'S PHILADELPHIA HEADQUARTERS IN 2015. PHOTO CREDIT: IREDIA EKHATO

April 12, 2017
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Describing FMC as "under the radar," admittedly, is probably a stretch. But in a snap of the fingers, FMC upped its game and aligned itself with the biggest names in ag.

It's not only buying up DuPont's crown jewel insecticides and cereal herbicides, but the game-changer: its robust pipeline and R&D capabilities.

"Probably a year or 18 months ago, once we became aware of the mega-mergers and those came to fruition, we made it very clear we wanted to play a part. We have wanted to grow our ag business for some time. We asked, 'how could we get back into basic discovery given our size?' Lo and behold, the DuPont assets came up for sale," Mark Douglas, President, FMC Agricultural Solutions, said in an interview.

No doubt FMC has been stepping up R&D spending in recent years, but it has, until now, sat on the sidelines when it came to discovery, deferring to other players for its new molecules. While the nine actives in FMC's current pipeline are late-stage, the 15 it is gaining from DuPont are nearly all early-stage, with a significant chunk of them being herbicides and fungicides, rounding out its portfolio and securing longer-term revenue sources. DuPont's library of 1.8 million compounds now at FMC's disposal is also of no small significance.

"I think (accelerated R&D) is going to be the nature of consolidation which is taking place in the industry — we are going to have companies that will be more and more innovative bringing new technology. This was the way for us to be competitive under the new market structure," Paul Graves, FMC Executive Vice President and Chief Financial Officer, said.

FMC has been spending slightly under 6% of annual revenue on R&D. The DuPont asset acquisition will bump it up to more than 8% going forward, which would translate to nearly $300 million a year, Chief Executive Pierre Brondeau said on a conference call.

It made sense that it was FMC that flipped the script, according to industry insiders, who pointed out the Philadelphia company's ambitious strategy and nimble maneuvering throughout the ag downturn. Case in point: in 2016, the Ag Solutions business managed to boost profits by 10% as it focused on maintaining price and terms rather than volume. This came on the heels of its $1.8 billion purchase of Cheminova in 2015, which furnished it with direct market access in key countries in Europe and improved its customer reach in India, Australia, and Latin America.

By contrast, the somewhat more plodding DuPont has struggled with its crop protection business for years. One source, who asked to remain anonymous, commented that the deal is a major win not just for the company but for growers and retailers, the majority of whom he said would "prefer to deal with FMC" than DuPont for this very reason.

Jim Borel, who retired in 2016 from DuPont, where he oversaw DuPont Pioneer, Crop Protection and Nutrition & Health businesses, believes the Dow-DuPont merger is a good thing not only for the manufacturing industry and crop protection players, but also farmers. "This is going to create an even stronger global competitor in the crop protection industry, which is a very competitive market. The great news is, the merger is one that will continue to be very committed to research. And when coupled with the FMC deal, it will assure what farmers need: a stream of new products."

RETAILER PERSPECTIVE

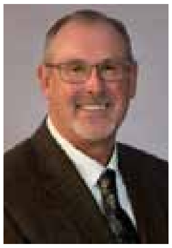
From an ag retailer's perspective, Karl Hensley, Senior Vice President

Agronomy with Central Valley Ag, said he views Dow and DuPont spinning off crop protection assets to appease European regulators fortuitously, in the sense that he expects it to benefit both the future of chemistry and the customer-facing side of business.

FMC "probably has a leg up on the mega-mergers," he added, because it won't need to struggle to reestablish relationships and manage shuffling of various customer-facing functions as much as say, a ChemChina-Syngenta, which carries the burden of merging divergent corporate cultures.

"I feel like DuPont has run their chemistry business and marketing program fairly tight as far as representation in our geography," Hensley said. "As a retailer, I think our relationship is probably better with FMC than it has been with DuPont. I look at it as an opportunity for us."

As the industry has dwelled on seed traits and technology spending for the last several years and pulled back on research outright feeling the pinch of the ag economy, a renewed push in chemistry R&D is long overdue.


HENSLEY

"It's been a long time since we've had entries into the marketplace with new chemistries. So, hopefully after the mergers and spin-offs are all completed, we will see a reemphasis on new products and development, especially in new chemistry and means of controlling hard-to-control weeds to give us different options," Hensley said.

On the international side, the deal is also poised to support FMC's supply chain and manufacturing capabilities, as it will add four active ingredient manufacturing facilities in China and North America and 10 formulation sites in key markets.

Brondeau noted that the deal will more than double FMC's revenue in India and China and increase the number of countries where it has revenue of at least $100 million from three to 10. "It will also give us a meaningful position in cereals and enhance our position in crops such as vegetables, rice, and soybeans."

Another bonus for FMC lies in the revenue ramp ahead. Rynaxypyr's patent protection doesn't expire until 2022 and Cyazypyr's in 2024. These two plus indoxacarb are expected to command $1.2 of the $1.5 billion FMC sees the deal adding to revenue in the first year, with cereal herbicides accounting for the balance.

"It fits so well for us," Douglas commented on the DuPont portfolio additions. Not only do the new actives give it a better balance of pre- and post-emerge as well as selective and broad-spectrum applications, but it also expands its offering from a geographic standpoint, particularly in Asia. "This improves our geographic balance with each of our four regions contributing approximately 25% of annual revenue, which will help us smooth out regional volatility."

Douglas added, "This is an important move for FMC and the crop protection industry given the large consolidations taking place. With FMC, growers will have another choice with a top-tier, research-based company bringing them novel crop protection technologies."

Some Pesticide Prices Climb 30% in One Month

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In just one month. the prove of glyphosate technical shot up from \$3,614/MT to \$4,066/MT, while glufosinate-ammonium increased from \$24,849/MT to \$26,355-27,108U/MT, according to China-based firm Siembo Consulting Co. Ltd.

The increase in technical is far ahead than that of previous years; furthermore, many technical products are facing tight supply situations, Siembo stated. However, it isn't just technical suppliers that are affected: Formulation producers are also facing supply challenges, with some companies cancelling inventory plans for winter.

"Recently, some new formulation companies issued internal notices that required salespeople to restrain customers' inventory purchasing, once their inventory volume exceeds the company's supply. Salespeople would then suggest customers to switch to other products. The companies mentioned in the notices that if the total volume from different customers exceeds the available volume that the company can afford, the contract date would prevail, which means the earlier contracts enjoy the priority shipments," according to Siembo.

Most companies chose payment policy by product type instead of quantity, influenced by the rising technical products' supply challenges, Siembo said.

Long Yang, general manager from branch office of Beijing Yanhua Yongle Biotechnology Co., Ltd., said it is difficult for companies to price formulation products due to increasing fluctuation of technical products. Tight technical supplies and company relocations complicate the situation. Yanhua Yongle adjusted its policy to include no winter inventory this year.

Siembo noted that prices have been rising since the end of last year, with glyphosate and chlorpyrifos technical soaring 50% or more compared to last year. Supplies of technical have been short since early 2017 but with winter inventory approaching, orders are increasing.

"In September in previous years, companies got supplies prepared, while this year, upstream manufacturers' operation rate stayed at a low position. Currently the operation rate of technical producers is only 20%, and even formulation companies can't find supplies," sales director Linghui Rui in Guangxi Huifeng Biotech Co., Ltd. said.

To prevent this from happening, Guangxi Huifeng remitted payment very early, while delivered goods were only 60%. Although the current inventory is adequate to deal with winter inventory orders, the company won't accept selling on credit during the period, considering the unpredictable, changing market.

Xianfeng Zeng, vice president of Qingdao Hansen Biologic Science Co., Ltd., said technical companies will choose larger, more stable clients as a priority to maintain solid relationships with older customers. Meanwhile, they will receive some overseas orders to keep the market abroad.

"Nowadays, so many companies are facing the same trouble," Yannan Gui, deputy general manager of Guangdong Zhenge Biotech Co., Ltd., said. "For now, we use the 'guarantee on goods instead of pricing,' meaning payment goes first, and the company delivers the goods according to the status of the payment, with the price going with the market."

The 'Perfect Storm' for Distribution Channel Change

September 26, 2017
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You don't have to be the ultimate observer to realize the U.S. ag retail marketplace is undergoing some massive changes in 2017.

Dozens of retailers, particularly cooperatives, have recently exited the industry via sale or acquisition. The number of product suppliers, likewise, is shrinking. Perhaps worst of all, the price of goods handled in the ag retail supply chain continues to rise while commodity prices and margins seem to be stuck in continuing downward spirals.

All-in-all, says Dave Coppess, Executive Vice President of Sales and Marketing, for Heartland Co-op, West Des Moines, Iowa, this is adding up to make life "a bit difficult" for today's average ag retailer. "We are definitely in a period of change in the market," says Coppess. "There are new business models beginning to pop up and they are threatening to destroy, or at least radically alter, the old ones. Everyone in this business will need to adapt to these new market realities — or they probably won't be around for very much longer."

As for how the U.S. ag retail industry has found itself in this "new market reality," the list of impactful variables is a fairly long one. Yet, it all starts at the same place as it traditionally has — commodity prices. For several years between 2009 and 2013, commodity prices for corn and soybeans stood at all-time highs. For corn, this meant growers were getting more than $8 per bushel; for soybeans, the number stood at approximately $16 per bushel. As many market observers have noted for this time period, "making money with these prices being that high wasn't very hard to do."

Then, starting in 2014, record crop plantings/harvests for corn and soybeans began to depress prices. By the end of 2016, growers were only receiving $3 per bushel of corn and less than $9 per bushel of soybeans — essentially the same prices they had been getting for their crops at the start of the 21st century.

Jim DeLisi of Fanwood Chemical speaking at the AgriBusiness Global Trade Summit — Americas.

According to V.M. (Jim) DeLisi, Owner of Fanwood Chemical, the impact of this decline was keenly felt by the nation's growers. "The agricultural market lost $15 billion in value between 2008 and 2016," says DeLisi.

Naturally, with their chief source of income dropping, grower-customer revenues also fell during this same time frame. According to USDA data, grower incomes fell more than 50%, from slightly more than $100 billion in 2013 to slightly less than $50 billion by the end of 2016. (Somewhat on the bright side, the early data for 2017 shows grower income should rebound a bit to just over $63 billion). Perhaps more significantly, USDA says farm profits are down nearly 50% since 2013. At the same time, their expenses have only fallen 1.4%.

Pressure on Suppliers

With revenues in decline for their end-users, agricultural suppliers have increasingly looked to merge their operations to grow market share while decreasing costs. During the past few years, this trend has been particularly pronounced within the crop protection products/seed supplier sector. Here, multiple large companies have entered into merger agreements, including Syngenta/ChemChina, Dow and DuPont, and Bayer and Monsanto.

As DeLisi points out, the reason for all these mega-mergers ties back to one overriding factor — money. "New product development costs for both seeds and chemicals are in the range of $300 million to $500 million in development and registration globally," he says. "Only the largest companies have the resources and leverage to both finance and then recapture this level of investment."

For example, the newly merged DowDuPont is hoping to be able to cut $1.3 billion from the company's combined agricultural operations within the next year or so through staff reductions and eliminating redundant costs. At the same time, a recent Texas A&M university study found that companies such as DowDuPont and Bayer-Monsanto might be able to charge higher prices for their seed brands after combining, with an average 2% increase for both corn and soybean seeds.

And it is little wonder why larger crop protection product/seed companies are looking at seeds to boost their profits. According to most market watchers, crop protection products are increasingly seeing pressure from new producers/suppliers as more and more active ingredients (a.i.s) come off-patent.

"In 2016-17, the number of generic products in the crop protection products marketplace will be exploding, both in terms of the chemistries available to produce and the number of companies that will likely start making their own versions of these popular products," says Kevin Fry, Co-Owner of Fry Brothers, a Nebraska-based products wholesaler. "There are at least one dozen such a.i.s getting ready to come off-patent, including mesotrione, flumioxazin, and imazamox, to name a few.

"By the same token, there are fewer

new molecules coming out to replace the older ones," he continues. "This aligning low crop prices with lower priced off-patent products means we are seeing all kind of factors favoring some kind of alternative market distribution."

Even the industry's most popular a.i., glyphosate, is seeing more competition to attract customers. For instance, Xingfa Group — China's largest producer of glyphosate — is setting up shop in the U.S. with the opening of Xingfa USA Corp. in Schaumburg, IL, just outside of Chicago. According to J. Bryan Kitchen, President, North America, Xingfa USA will begin offering its brand of glyphosate to the U.S. marketplace "shortly."

The Alternative Distribution Chain

Of course, all this pressure on crop protection product prices from the supplier level has found its way down to the ag retail level. In fact, according to Heartland Co-op's Coppess, profit margins for retailers on these inputs have dropped from 2% to 3% "into negative territory" since the end of 2013. "When you are working with a less than 1% profit margin on something, there's not much room for error on the seller's part," he says. "That's why you are seeing more retailers using their rebates from the crop protection companies to make their numbers add up."

Putting all these market trends together, and agricultural market watchers say the time is right for some form of an alternative distribution model to take hold in the U.S. Already such models have been employed by growers in such places as India and Canada. According to Jason Mann, President/CEO of AgraCity in Saskatchewan, his company was viewed by many observers as a "market disruptor" in its early years for selling products directly to growers and by-passing the traditional ag retail distribution chain.

"With increased pressure on farmgate net revenues caused by weather, higher cost land and rents, equipment and technology costs, labor, and tightening of credit for farmers, our low-cost and efficient product offering and business model has bolstered our market position as a leading generic crop protection supplier," says Mann. "We have been successful because our model resonates well with our stakeholders, the farmers, and the manufacturers looking for market access."

In the U.S., recent start-ups such as Farm Trade and Farmers Business Network (FBN) are following a similar business model as AgraCity — selling products directly to growers at a set cost via the Internet. According to some market analysts, there are approximately 15% to 20% of growers who might be looking "only for the lowest cost on products" that could embrace this way of getting crop protection inputs.

"Firms like this could flatten the supply chain and might be the beginning of the 'Amazoning' for grower suppliers," says Fanwood Chemical's DeLisi, alluding to the Internet-centered retail giant and how its growth has impacted traditional "brick-and-mortar" retailers in recent years. "These companies have proven they can not only get these products, but move them all over the country to where they need to be, which hasn't been the case for crop protection products over the past 25 years. There's no doubt the Internet is coming to agricultural chemicals in a much bigger way."

However, Fry Brothers' Fry doesn't believe the FBNs of the world will have the same effect on traditional ag retailers that Amazon did in the consumer retail space. "I see another viable alternative to the retail distribution for farmers developing and growing, but it will be difficult for this to succeed on a large scale because of the localization of the market," he says. "Sure, there will be some market penetration by these companies, but there's still a certain amount of knowledge and trust in agriculture that will be needed, and that can only come from established ag retailers. For many of these, a 'slam, bam, thank you, ma'am' approach with product suppliers that offer no guarantees on performance and won't accept returns if there's a problem just won't cut it."

Despite this fact, other market watchers believe that companies such as FBN have "opened a door into the retail marketplace based on low prices/little support that will never be closed again."

Furthermore, ag retailers will need to "do their part" to keep grower-customers firmly in their corners. "The market is 100% the ag retailers' to lose at this point," says one analyst. "And if they don't defend it, outfits like FBN will definitely make some inroads." ■

Crop Protection Market Pressure Leading to Supplier Consolidation

October 10, 2017
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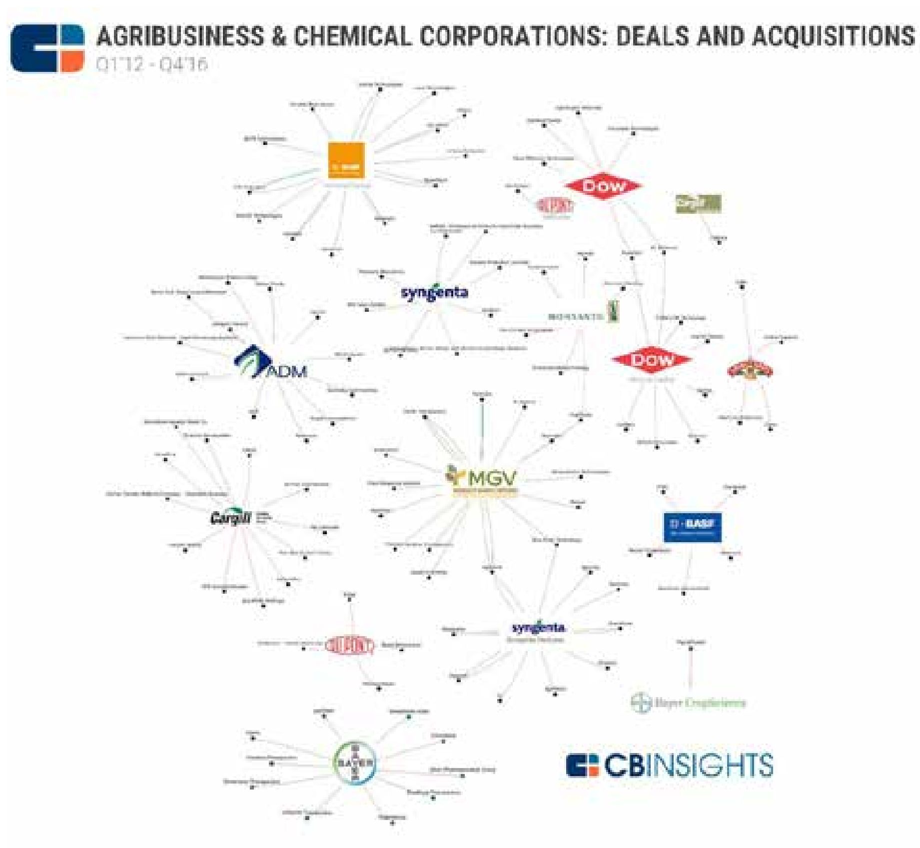
Unless you've been completely out of touch with the agricultural marketplace the past two years, you know that one of the major trends impacting today's crop protection supplier industry is consolidation. From the Big Six companies that dominated the crop protection supplier landscape at the start of the 2010s, there will soon be only a Big Four left in their place, with several other smaller players jockeying for position.

While this might seem completely unprecedented in its scope, V.M. (Jim) DeLisi, Owner of Fanwood Chemical (which provides detailed agrichemical import and export reports, technical marketing of custom manufacturing services, and regulatory services), said the crop protection products marketplace has seen this kind of "consolidation" on a semi-regular basis for many decades now. "Major mergers in this sector have occurred about every 15 years since 1970," said DeLisi, speaking at the 2017 AgriBusiness Global Trade Summit in Las Vegas, NV. "In fact, 40 to 60 agrichemical companies that were doing business during in 1970 disappeared or ended up part of one of the current mega companies since As for why the industry is witnessing this latest round of mergers in 2017, you need look no further than current conditions in the overall agricultural market. "The largest driver of agriichemical mergers is the market price for crops such as corn and soybeans," said DeLisi. "Corn prices in 2008 were $8 per bushel. In 2016, they were $3 per bushel. So in essence, the agricultural market lost $15 billion in value between 2008 and 2016. These kinds of losses have impacted ALL the suppliers to this market. And it's put most growers in a kind of 'survival mode' when it comes to spending money and looking for ways to increase their profits."

In many cases, this means growers are looking to crop protection/seed companies for new innovations/products to help manage increasingly aggressive/resistant pests/weeds, he said. "New product development costs, for both seeds and chemicals, are in the range of $300 million to $500 million in development and registration globally," said DeLisi. "Only the latest companies have the resources and leverage to both finance and then recapture this level of investment in an attempt to 'stay ahead of the weeds and bugs.' Mergers were chosen as the path to increased revenues to allow for more research and development expenditures while protecting shareholder value."

The New Big Players

With this latest round of mergers now several years in the making, said DeLisi, the new big crop protection suppliers have begun to take form. By far the biggest player will be the combination of Bayer CropScience and Monsanto, which will have sales of more than $27 billion (not counting a few anticipated divestitures that will be required by regulatory agencies around the world). Virtually tied for second place will be the combination of Syngenta and ChemChina ($17.4 billion) and the DowDuPont "merger of equals" ($17.2 billion).



The Path Ahead for M&A

Bayer AG's proposed $66 billion takeover of Monsanto would create, by far, the industry giant capturing more than a quarter of the world's seed and ag-chem market.

December 29, 2017
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The reason for the mergers is not driven by any one company's need to carry out their internal strategy as much as it is about shareholders demanding continued growth and improved earnings per share."

— GARRETT STOERGER, VERDANT PARTNERS

"THE REASON FOR THE mergers is not driven by any one company's need to carry out their internal strategy as much as it is about shareholders demanding continued growth and improved earnings per share." --Garrett Stoerger, Verdant Partners

"The reason for the mergers is not driven by any one company's need to carry out their internal strategy as much as it is about shareholders demanding continued growth and improved earnings per share." –Garrett Stoerger, Verdant Partners

Based on size alone, "it's hard for people to be dismissive of it," says Garrett Stoerger, Partner at M&A advisory and consulting firm Verdant Partners. If it does go through, and it appears chances are good as overlap of the two businesses is limited to a few select crops, there are other questions — such as how to unify two disparate company cultures.

Dr. Werner Antweiler, Associate Professor at the University of British Columbia's Sauder School of Business, recalled one very famous mega-merger of American and German companies from back in 1998, and the culture-clashing chaos that ensued. "Will this deal realize its full potential, or will it go the way of Daimler-Chrysler and flounder?"

"It's far from clear to me the two cultures will be able to merge into a new approach that satisfies both sides. Without strong leadership from Bayer, they are at risk of repeating the same mistakes," Antweiler tells AgriBusiness Global.

"Moreover, the Monsanto brand is more liability than asset, while the rich Monsanto R&D pipeline and patents, and Monsanto's expertise on the agri-tech-IT ('smart farming') side are the most promising gains for Bayer."

Commenting on the broader agchem backdrop of late, "There is a lot of skepticism; so many things are going on at the same time," Rob Dongoski, Partner, Global Agribusiness Leader with Ernst & Young, says.

He's right: The year felt like one long merger announcement, one of the last (at least for 2016, but we could be wrong) being the Agrium-Potash tie-up.

And then the U.S. election further confounded things.

According to analysts we spoke with, it's anyone's guess whether a Trump presidency will prove friendlier to the mergers or move in the direction of slowing down foreign takeovers. While there is an element of uncertainty, it's clear that the new administration's focus will be on corporate tax and trade policy.

"We are waiting with baited breath to see how aggressive (Trump's) policy initiatives will be as respects global trade and preservation of U.S. jobs," says Kenneth S. Zuckerberg, Executive Director, Senior Research Analyst with Rabobank's Food & Agribusiness Research and Advisory group.

Desirable Assets

It's no secret that appeasing antitrust watchdogs will entail asset divestitures. All told, $12.8 billion worth of assets at minimum could hit the market because of consolidation, according to estimates by analyst Christian Faitz with Kepler Cheuvreux.

As Bayer CEO Liam Condon told the German daily Die Tageszeitung in late November, "In North America the combined market share in cotton is indeed quite high. We anticipate that parts of this business may have to be divested." U.S. government data shows Monsanto and Bayer had about 70% of U.S. cottonseed sales last year.

He added, "Another strong market position in North America will emerge in canola."Xianfeng Zeng, vice president of Qingdao Hansen Biologic Science Co., Ltd., said technical companies will choose larger, more stable clients as a priority to maintain solid relationships with older customers. Meanwhile, they will receive some overseas orders to keep the market abroad.

"Nowadays, so many companies are facing the same trouble," Yannan Gui, deputy general manager of Guangdong Zhenge Biotech Co., Ltd., said. "For now, we use the 'guarantee on goods instead of pricing,' meaning payment goes first, and the company delivers the goods according to the status of the payment, with the price going with the market." ■

China's New Pesticide Rules Change How Products Are Brought to Market

Bayer AG's proposed $66 billion takeover of Monsanto would create, by far, the industry giant capturing more than a quarter of the world's seed and agchem market.

October 30, 2017, By Bo Yang, Jose Carvalho and Xiaohua He, Dr. Knoell Consult Shanghai Co., Ltd

China's Ministry of Agriculture (MoA) has been implementing considerable changes regarding the use of agricultural pesticides, particularly in the field of environmental safety and defining the protection goals for risk assessment of pesticides.

The new Chinese regulations on the Management of Pesticides (State Council Decree No.677) entered into force on June 1, 2017 with a main supporting guidance document released soon after, on Aug. 1, the Pesticide Registration Management Measures (MOA Order [2017] No.3). This guidance document brings about major changes for registrants: 1) by introducing risk assessment approaches to assess the environmental safety of pesticides ahead of approval decisions; 2) encouraging companies to bring to the Chinese market more innovative and environmentally friendly products.

Another pertinent document, Data Requirements for Pesticide Registration, was released on Sept. 29, 2017 (MOA announcement No.2569; entering into force on Nov. 1, 2017), laying down the four types of pesticide registration that will require an Environmental Risk Assessment (ERA report):

1) First registration for new formulated products (including chemical pesticides, bio-chemical pesticides, microbial pesticides, botanical pesticides, and pesticides for non-crop use;

2) eRgistration to add new uses to products already approved, i.e., label expansion for an existing product;

3) Registration to change the application method of a product;

4) Registration to change the application/dose rate.

ICAMA (Institute for the Control of Agrochemicals, Ministry of Agriculture, China) started the research work leading to the new regulations and guidance documents back in 2008, in a cooperative project between China and The Netherlands on Pesticide Environmental Risk Assessment. To date, seven protection goals are defined in the technical guidance on Environmental Risk Assessment, including aquatic ecosystem (fish, daphnia, and aquatic plants), birds, honeybees, silkworms, groundwater, non-target arthropods (parasitic and predatory), and soil organisms (earthworm and soil microorganisms).

The risk characterization for each protection goal will be expressed as a Risk Quotient (RQ), calculated by dividing the Predicted Environmental Concentration (PEC) by a Predicted No Effect Concentration (PNEC).

Similar to Europe, the new China ERA will follow a tiered approach in order to minimize costs but also to encourage the use of low-risk products. Only if ERA fails at Tier I assessment, would further lab/field data be required for a higher-tier assessment.

For Tier I assessment, three environmental fate and exposure models were developed to simulate PEC values for the environmental compartments: surface water, groundwater, and soil.

The TOP-RICE is a groundwater and surface water exposure model for paddy field in South China; ChinaPEARL predicts the groundwater concentrations for dryland north of Yangtze River; and the third model PRAESS, developed by Nanjing Institute of Environmental Sciences, simulates the PEC values in all three compartments for both dryland and paddy field. The models are still being refined, as technical issues still arise when running the models for some applications, particularly when assessing microbial pesticides or non-crop uses of chemical pesticides.

In addition, more exposure scenarios are needed to model the fate of chemical pesticides, to allow for covering more crops/applications, thus reflecting the diversity of China agriculture practices and use pattern of products. This is a work in progress.

Options for higher-tier assessment are also under development. The Chinese authorities are engaged in developing guidance to support higher-tier risk assessment and its implementation for registration purposes. Guidance documents should be expected in the near future providing guidance to conduct laboratory chronic studies, semi-field and field studies on birds and honeybees, and environmental fate field studies. The goal of such effort by the Chinese authorities is to make environmental risk assessment more comprehensive, transparent and realistic.

In summary, the new approach to Environmental Risk Assessment of pesticides is likely to catalyze ongoing changes in the Chinese agchem market. This year we have seen a considerable number of regulatory documents being released, some currently under commenting phase, and much more are expected to see the light in the coming months.

For further information or details on China Environment Risk Assessment please contact knoell in China (Dr. Xiaohua He, xhe@knoell.com, +86 21 6199 2001).

It's India's Time: Reforms to Shake Up the Sector

June 21, 2017
By: Jackie Pucci
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"People are going to have to go through the process and think very carefully about how this affects them, directly and indirectly — both as customers, formulators, manufacturers. (Make in India) has some potentially interesting and opportune downstream effects."

— STEPHEN PEARCE, ARYSTA LIFESCIENCE

Broad and ambitious, the "Make in India" campaign of Prime Minister Narendra Modi's government is poised to bring potentially huge changes in the dynamics of the agrichemical industry. It won't happen overnight, but the gears are in motion.

Eyeing stronger global competitiveness of the Indian manufacturing sector, the new National Manufacturing Policy is the most comprehensive and significant policy initiative of its kind undertaken by the Indian government. Far-reaching in scope, the reforms span regulation, infrastructure, skill development, technology, availability of finance, exit mechanism and other pertinent factors related to growth of the sector. The vision is to boost manufacturing sector growth to 12% to 14% per year over the medium term, and create 100 million additional manufacturing jobs by 2022.

What it means for agrichemical companies is that they will no longer be issued new import registrations for products that have a manufacturing registration in India.

If it is implemented as stated, Make in India effectively spells the end of the rising tide of Chinese exports to the country, which make up 55% of the $925 million India imports worth of technical, intermediates, and finished products each year, according to a Rabobank report. What's more, the proportion of finished products had been steadily rising and growth was expected to continue given the cost advantages of Chinese producers.

"People are going to have to go through the process and think very carefully about how this affects them, directly and indirectly — both as customers, formulators, manufacturers. (Make in India) has some potentially interesting and opportune downstream effects. It also poses issues around ensuring that supply chains are de-risked and that the appropriate diligence goes into the downside risk assessment," Stephen Pearce, Global Head of Procurement and Strategic Sourcing for Arysta LifeScience, says. "The whole scenario where India has typically been the place to shop for insecticides and some fungicides, and China being the primary place for herbicides, might also change," Pearce says, adding: "As companies look to de-risk their supply chains, other regions may also start to look attractive."

The growth rate for Chinese exports to India will likely plummet by 80% as a result of the new regulation, according to the Rabobank report by Vaishali Chopra. This implies exports will increase at a rate of around 1.2% annually to 2022, while a large proportion of imports will shift from formulated products to raw materials.

"It is a very important move which could enhance manufacturing in India to a great extent," Chopra tells AgriBusiness Global. Capacity utilization of India's agrichemical manufacturers could rise from the current 55% to almost 100%, supported by this initiative. "We need to wait and watch on what will be final dictate of the Central Insecticides Board and Registration Committee (CIBRC) on this," Chopra says.

In short, the changes mean there will be a lot for companies to think about, in India and beyond.

Pearce sums it up this way: "There'll certainly be winners and sadly some losers, but one thing is for sure: Now is the time for many companies to take a good hard look at their supply and value chain footprint and use this as an opportunity to both fine-tune and reassess the areas of assurance of quality supply, supplier selection in terms of geographical footprint, and regulatory strategy based on new, emerging manufacturing trends that may evolve."

Priority Treatment

Manufacturers, on the whole, argue that any short-term drawbacks of "Make in India" are outweighed by the prospect of long-lasting positive effects on the country's agchem industry.

"Indian generic pesticides manufacturing was stifled over the last last 10 years due to CIBRC's policy of allowing the import of ready-made pesticide formulations without registering its technical. This allowed the importer to get unlimited monopoly protection and stop any 'me-too' registrations of

Indian generic manufacturers," Elizabeth Shrivastava, Managing Director of Mumbai-based AIMCO Pesticides, says.

After Pesticides Manufacturers and Formulators Association of India (PMFAI) went to Gujarat High Court against the unfavorable conditions for Indian generic manufacturers, and won the case in court — underpinned by the Make in India reforms — CIBRC crafted the new regulation.

In addition to the new rule, CIBRC is reviewing the registrations of the existing players by putting a condition for reviewing and renewing all current registrations every five years.

ELIZABETH SHRIVASTAVA, MANAGING DIRECTOR, AIMCO PESTICIDES

"The new policy will encourage Indian generic pesticide manufacturing and provide protection from undue dumping from imports. We firmly believe that by formulating this regulation, the government of India has signaled that products made in India will have priority treatment, and this will encourage foreigners to invest in Indian manufacturing facilities," Shrivastava says.

In the longer term, Dr. Bipul Saha, Senior Vice President of R&D with Hyderabad-based manufacturer Nagarjuna Agrichem Limited, believes Indian manufacturing will also benefit from a lack of availability of Chinese raw materials and intermediates eliminated due to environmental crackdowns there. "Agrichemical companies from all over the world will approach Indian companies to meet their needs," he says. "We have already seen this happening in India."

But even if India's producers have ample capacity, most of those interviewed said that they are not ready to immediately handle the demand for technical products previously imported heavily from China. "They may still need depend on imports to an extent, as the export component is increasing at double the rate of domestic growth. So, imports from China will continue but the growth rate will be slowed down because of this move," Rabobank's Chopra says.

VAISHALI CHOPRA, RABOBANK

Saha, as well as others we interviewed, expect the Indian government may listen to the demands of industry associations and relax regulations, at least for a short period.

"The cost is likely to go up in the short term," Saha says, but prices should stabilize after the country's capacities rise in the next two to four years.

Given how reliant India has been and continues to be on China for base chemistries, one source, who asked to remain anonymous, says he is certain the reforms may drive additional competitive dynamics based on a potential shift of basic power of seller versus buyer, "especially if certain downstream markets are not available to them to sell into."

In addition, the source expects that Chinese will use the opportunity to leapfrog India by selling direct into other markets the Indians rely on for exports using China-originated material.

Companies relying on registration access from China into India "may also need to quickly re-think and restructure," he says.

Are They Ready?

Somnath Nandi, Business Development Manager for International Trade with Saraswati Agrochemicals India Pvt. Ltd., based in Delhi, expects it to take at least five years for Indian technical manufacturers to satisfy domestic needs, if everything moves well.

While Indian technical manufacturers have adequate capacity for pyrethroid manufacturing, other products need import support, he says, adding: "I wonder that if I even accept that Indian manufacturers now have enough capacity for technical manufacturing, why Indian formulators are so dependent on imported technical, which the new policy doesn't support. It should be either because Indian products are not cost-effective while synthesizing technical, or due to the fact that the quantity does not satisfy the requirement."

Because Saraswati Agrochemicals just started its export business a few months prior to the rule implementation, it hasn't felt an impact, Nandi explains. "But, as we are sharing our prices with some trading partners based on the rising technical prices in the Indian market, our customers are hardly accepting them," he says.

While backward-integrated companies will benefit, the companies that will take the biggest hits due to the new policy are clearly the Indian trading firms that rely heavily on Chinese imports. "They will have to change their strategy and start procuring from India. Some multinational companies, including Chinese companies, may form joint ventures with Indian companies to manufacture products they need," he adds.

Another aspect of the reforms is that companies possessing a manufacturing certificate for indigenous manufacturing of a given pesticide will not be permitted to import.

"The great loss will be to those companies that import technical heavily

Chinese Exports to India in 2016: Ranking of Active Ingredients

No.	Active Ingredient	Value (million USD)	Change (%)
1	chlorantraniliprole	29.7	-3.82
2	imidacloprid	24.74	+28.85
3	cartap	16.13	-38.6
4	fipronil	14.95	3.17
5	carbendazim	14.04	-3.11
6	pretilachlor	11.01	+15.89
7	acephate	9.62	-0.72
8	glyphosate	8.64	+108.7
9	abamectin-amino-methyl	8.26	-1.90
10	bifenazate	6.48	/

Source: REACH24H Consulting Group

and manufacture, but have low capacity. Because they have to surrender their import certificate at the cost of their manufacturing certificate, other small importers who have only import licenses can continue to use the same," Nandi explains.

A Vested Interest

In a very competitive market that is already awash with Chinese companies selling formulated products, India bringing its own actives and formulations into the space will no doubt heighten the competition between its own and Chinese suppliers, but how far and how long it will take for the changes rattle down the chain remains to be seen. Sources said India must sustain its investment long enough to show the world the prices can stay competitive, and even then, it will not be an easy task to seduce companies to start registrations with India as the source.

Pearce points out: "We all have a vested interest in serving our end user. Being able to work together on these scenarios, and make sure we're going hand-in-hand on de-risking supply chains, capitalizing opportunities, and doing it with a degree of transparency and diligence is good for everybody. It reduces the possibility of too much disruption. It means there will be fewer losers (and winners), but it takes out the flux and uncertainty of everything." ■