

2015: a year of strategic turn-arounds

Following the merger between chemicals groups Dow and DuPont in 2015, the new entity will begin operations in 2H 2016. It will create 3 world giants in agrochemicals, speciality chemicals and materials and profoundly affect the sector. Its creation could also encourage the ambitions of activist shareholders and other companies in the US chemicals sector (where activist shareholders are particularly demanding) could be pushed into changing their development plans and portfolios. There were other large scale mergers (some worth \$1 billion+) and acquisitions in 2015, even if they were much smaller than the Dow-DuPont operation. The Apollo fund sold OMG to Platform Specialty (which also acquired Alent). Kraton acquired Arizona Chemical. Acquisitions by European companies in 2015 declined by number but not by value. Solvay bought Cytec for \$5.5 billion and Air Liquide launched a \$13 billion takeover bid on Airgas. Meanwhile some of the world players on the chemicals market made vast changes to their portfolios. FMC sold its sodium carbonate business to Tronox whereas Solvay combined its chlorovinyls operations with those of Ineos to create Inovyn. Lanxess combined its rubbers business with that of Saudi Aramco and Dow merged its chlorine business with that of Olin. Bayer's MaterialScience division became a new company called Covestro. Some major deals failed, particularly in the fertilisers and agrochemicals sector. Although \$8 billion deal between CF Industries and OCI seems to be going ahead, PotashCorp's raid on K+S was abandoned. Syngenta fought off a \$47 billion hostile takeover bid from Monsanto but the US group recently renewed its effort. Meanwhile Chinese group ChemChina made a bid of its own. Syngenta was weakened by its refusal to accept Monsanto's bid and some of the Swiss group's frustrated shareholders forced the removal of its president in autumn 2015. The group now seems more interested in being taken over. With Dow and DuPont creating a new world leader in agrochemicals, it would be astonishing if the sector's other giants (Syngenta, Monsanto, Bayer and BASF) made no changes. 2015 was also marked by energy problems, sustainable devel-

opment and a disappointing economic climate. The year was also marked by the alleged terrorist attack at Air Products' site. **CBNB**

2015 was a problematic year in the chemicals industry

In 2015, a \$5.6 M (£3.7 M) settlement with the US government was agreed by Bayer CropScience over a 2008 blast at its pesticide facility in Institute, WV, USA. The bankruptcy case of Freedom Industries was approved in October after a spill of (4-methylcyclohexyl) methanol in 2014. In October 2015, an Ohio jury concluded that the presence of DuPont's perfluorooctanoic acid (PFOA) in drinking water in the 1990s play a role in the development of kidney cancer in a woman. A blast at a para-xylene facility in Fujian Province, China, in April 2015 hurt around 12 people. Two explosions at a chemical warehouse of Rui Hai International Logistics in the north-eastern city of Tianjin killed 173 people. The warehouse contained potassium nitrate, ammonium nitrate, calcium carbide, and sodium cyanide. A fire occurred at an adiponitrile facility of Runxing Chemical in Zibo, Shandong. A blast at a factory of Shandong Binyuan Chemical in Dongying killed 13 workers and injured 25. A warehouse containing chemical ingredients for pharmaceuticals and plastics exploded in October 2015. Chemours, a spin-off of DuPont, has launched a 'five-point transformation plan' in order to cut \$350 M in costs by 2017. The scheme includes shutting down its titanium dioxide facility in Edge Moor, DE, USA. The company's aniline plant in Texas will be purchased by Dow Chemical for around \$140 M. In December 2015, Chemours announced the closing of its reactive metals business, halting sodium and lithium production at a site in Niagara Falls. Apollo Global Management was interested in acquiring Chemours and Tronox. In 1H 2016, Tronox targeted to decrease workforce costs by \$45 M. In October 2015, DuPont announced its plan to accelerate a cost-cutting scheme intending to save \$1.3 billion by end-2016. Dow Chemical and DuPont finalised to a gigantic merger deal in mid-December 2015. Other merger

and acquisition activities in 2015 are the Rockwood Holdings takeover by Albemarle, Merck KGaA's acquisition of Sigma-Aldrich, the \$13 billion takeover of Airgas by Air Liquide, and the \$160 billion merger between Allergan and Pfizer. Germany's BASF recorded a weaker than expected sales for 3Q 2015 because of the Brazilian recession. The German company has recently established a new acrylic acid and superabsorbents facility in Camacari. Earnings of Netherlands-based DSM in 3Q 2015 decreased by around €5 M (£3.6 M) due to the weakening of the Real. Performance of Bayer's CropScience business is declining in Latin America. The company's highest sales were recorded in the Asia-Pacific region. The company is restructuring its life sciences businesses. The company will have three divisions starting January 2016: consumer health, crop sciences and pharmaceuticals. Bayer MaterialScience has been renamed to Covestro, which was floated on the stock market in October 2015.

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Agreements, mergers, acquisitions and takeovers

Agrochem firm's links to Japan drive fast growth

Belgium-based agrochemical company Belchim is targeting to be one of the fastest growing in the industry by expanding its portfolio of new products. The firm aims to double its size in five years at roughly 20%/y growth rate in the UK with the introduction of two potato products. The firm's growth is expected to be driven by its connection with Japanese producers that provided it access to various molecules, like in its novel Kunshi potato blight fungicide (fluazinam plus cymoxanil). Belchim forecast its sales to increase from the current €400 M to €800 M by 2020. Of the 35 agrochemicals in the industry's near-term portfolio, 19 are coming out of Japan, where Belchim has collaboration relationship with Ishihara Sangyo Kaisha (ISK), according to the company's founder. The firm will also launch Praxim, which contains the residual metobromuron pre-emergence herbicide. Belchim also secured an emergency clearance for another ISK product,

Tepeki (flonicamid), as a non-neonicotinoid insecticide for the management of turnip yellows virus-carrying aphid in oilseed rape crops. The company exhibited novel potato herbicide pyraflufen-ethyl, which will be available in spring 2016, and is supplied by Japanese-owned firm Nichino Europe. The company is scheduled to release a maize herbicide and an insecticide in 2017-2018 while an oilseed rape fungicide for managing sclerotinia is set for launching in 2019. Belchim also partnered with Japan-based Mitsui. Its collaboration with US-based firm FMC, however, ended in 2015 as FMC plans to focus more on generics than with novel products. These collaborations represent approximately 60% of Belchim's sales from new chemistry products, while generics account for 20% and older reregistered products represent the remaining 20%. Belchim's portfolio comprises 40% fungicides, 40% herbicides and 20% insecticides.

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Bayer's agrochemicals division investing in home location

Bayer CropScience is making its Monheim site resistant to international competition. Additional investment of over €80 M will go on developing the site by the end of 2016. A total of around €114 M is to be spent there in the period 2012-2016. One of the most important single projects is the recently begun construction of a new glasshouse and associated laboratory and office buildings for insecticide research.

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Chinese company ChemChina interested in acquiring Syngenta

Chinese state-owned chemicals giant China National Chemical Corp (ChemChina) reportedly increased its takeover bid for Swiss agrochemicals group Syngenta to SFR 470 per share (total of SFR 43.7 billion) and targets a shareholding of 70% in the company with the option to acquire the remaining 30% at a later stage. ChemChina's previous takeover bid amounted to SFR 449 per share. ChemChina has a workforce of almost 120,000 employees and

generated a turnover of Yuan 255 billion in 2014. The chemicals group specialises in speciality chemicals, commodity chemicals, petrochemicals, rubber products and the manufacture of appliances for chemicals manufacture. ChemChina already acquired 60% of shares in Israeli chemicals company Adama in 2011 for \$2.4 billion. Adama considers itself the world's leading manufacturer of patent-free crop protection chemicals. **CBNB**

UK's Croda buys Dutch Incotec Group for €155 M

UK-based speciality chemicals producer Croda is buying the Netherlands-headquartered seed enhancement specialist Incotec Group for €155 M. This transaction was finalised on 4 December 2015. Incotec is a developer and provider of proprietary and sustainable technologies for field crops and vegetable seeds. For the year ended 30 September 2015, its unaudited revenues reached €71 M.

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Dow to sell herbicides to Gowan

Dow is to sell its dinitroaniline-based (DNA) herbicide activity to its US compatriot Gowan. Gowan is based in Yuma, AZ and specialises in crop protection chemicals. The acquisition includes the Treflan (trifluralin), Edge and Sonalan (ethalfluralin), Team (benfluralin) and Bonalan (benfluralin) brands as well as intellectual property rights. It includes a formulation and packaging facility in Sturgeon, AB. The deal was scheduled for completion at the end of 2015. No financial details have been published. The herbicides acquired by Gowan have marketing approval in 22 countries. They are used to treat a wide range of crops. Dow wants to focus its investment on innovative products. **CBNB**

Dow and DuPont merge and plan creation of 3 giant groups

The rumours of a merger between Dow and DuPont that had appeared in the Wall Street Journal were confirmed on 11 December 2015. The new company is called DowDuPont and has a market capitalisation of €130 billion. With a

\$83 billion turnover, it replaces BASF as the world's leading chemicals group in terms of sales. However, within 18-24 months DowDuPont will split into 3 groups specialising in agrochemicals (\$19 billion sales), materials (\$51 billion) and specialities (\$13 billion). The specialities group will include DuPont's nutrition and health, industrial biosciences, safety and protection and electronics and communications operation and Dow's electronics materials. It will be the world market leader in electronics chemicals. This division will rank second on the material sciences market after BASF. The new group will include DuPont's performance materials operations and Dow's performance plastics, performance materials and products, solutions infrastructures and consumer solutions. The agriculture group will strengthen DuPont's plant health products business and expand Dow's presence on the seeds market. It will be the world market leader in agrochemicals, overtaking the current leaders Monsanto, Swiss group Syngenta and German group Bayer. BASF will rank sixth on the market. The merger between Dow and DuPont will be effected through a share exchange to create a 50:50 joint venture (DowDuPont). Shareholders in Dow will receive 1 share in the new group for each share they hold in Dow. DuPont's shareholders will receive 1.282 shares for each share they have in DuPont. The partners estimate that this deal will increase their market capitalisation by \$30 billion. The merger should also generate cost synergies of \$3 billion and growth synergies of \$1 billion. The merger should be finalised in 2H 2016. It is subject to the approval of shareholders and the competition authorities. The latter could impose strict conditions in order to avoid creating a monopoly on the world agrochemicals market. The main reason for the merger seems to be agrochemicals. There have been few changes at the top of the market since the merger between Novartis' and AstraZeneca's operations in 2001 (which created Syngenta). Subsequent consolidation has been concentrated in small and medium-sized deals. Monsanto's \$47 billion takeover bid on Syngenta failed and the Swiss group entered into talks with other potential buyers. According

to the journal Chemical Week, Chinese group ChemChina is believed raised its offer for the group from \$42 billion to \$44 billion. The economic climate has recently made consolidation more attractive. Commodity prices have fallen, harvests have reached record levels and the economic situation in S America has been very poor (particularly in Brazil). The creation of DowDuPont is expected to have a major impact on the sector. A second factor leading to the merger was pressure from a group of activist shareholders. **CBNB**

Dow-DuPont merger to create Rup 11,600 crore chemical giant in India

The DuPont and Dow Chemical merger will form a Rup 11,600 crore speciality chemicals major in India. In 2014, DuPont posted net sales of Rup 5100 crore with 4000 employees, while Dow Chemical reported revenues of Rup 6500 crore with 900 employees. Both firms recorded flat sales in 2015 as a result of weakening rupee. Analysts indicated that the planned merger might not make a huge impact on India's Rup 15,000 crore agrochemicals market, where Clariant Chemicals, Monsanto, and domestic companies dominate. (1 crore=10 M, 1 lakh=100,000). **CBNB**

Insecticides India looks to product innovation to drive growth

Insecticides India Ltd has entered the export market as it aims to improve its 7% share in India's insecticides industry, which is worth Rup 15,000 crore and is growing 10-12%/y. The company's R&D activity focuses on reverse engineering to create new, off-patent products. (1 crore=10 M, 1 lakh=100,000). IIL will also build an R&D facility plus a production unit for its bio-products brand. The firm is set to introduce 3-4 new products related to plant nutrients and soil fertility following the 2014 launch of Mycoraja, a mycorrhizae-based agent that offers crops disease immunity, drought tolerance and better nutrient absorption. (For more information: www.insecticidesindia.com) **CBNB**

IIL to set up plant for bio-products

Insecticides India (IIL) intends to build a bio-products manufacturing facility and is currently introducing 3-4 new biotechnology products that deliver soil fertility and plant nutrition. In 2014, IIL unveiled Mycoraja, its first bio-product that is mycorrhiza-based, which enhances the absorption of nutrients through plant roots, and also provides drought tolerance and immunity against diseases. The firm also intends to launch a biotechnology R&D hub focused on bio-products. (For more information: www.insecticidesindia.com) **CBNB**

Monsanto cuts 16% of workforce

Monsanto is to cut a further 1000 jobs which will make a reduction of 16% of its workforce by 2018. It plans to close sites as a result of a fall in genetically-modified seeds. The group also produces the herbicide Roundup (glyphosate). Monsanto announced in October 2015 that it would cut 2600 jobs (13% of workforce) and could close sites in a bid to reduce costs by \$500 M/y. The group has not specified the regions or jobs involved. The major restructuring programme could cost up to \$1.2 billion (including \$510 M for redundancy costs). Around \$811 M has already been included in the group's accounts; \$493 M in 4Q 2014/2015 and \$318 M in 1Q 2015/2016 ended November 2015. Monsanto had a net loss of \$253 M for its 1Q 2015/2016 with a 13.7% fall in genetically modified seeds. Its turnover was \$2.22 billion (-23% on 1Q 2014/2015) which was below the forecast of \$2.39 billion. Monsanto has been affected by the fall in agricultural raw material prices and the increasing strength of the dollar making its products more expensive in emerging markets. (For more information: Monsanto Co, 800 N Lindbergh Boulevard, St Louis, MO 63167, USA; Tel: +1 314 694 1000; Website: <http://www.monsanto.com>) **CBNB**

Neogen acquires rodenticide assets

On 23 December 2015, Neogen Corporation announced that it has acquired

the complete rodenticide assets of Virbac Corporation, the North American affiliate of the France-based Virbac Group, a global animal health company. **CBNB**

Nufarm closes Canadian site

Nufarm is to close its site at Calgary, Canada. The facility produces herbicide and fungicide formulations. Activities will be moved to Chicago Heights, IL over a period of 9 months. The firm has invested in a new seed treatment unit and the complete modernisation of the herbicide plant in Chicago. These will offer more capacity and will give a better service to Nufarm's Canadian clients. Nufarm is in the process of closing its sites at Otahuhu, New Zealand, Lytton, Australia and Botlek, the Netherlands. It has completed a restructuring programme at Laverton, Australia which has led to job losses. Nufarm has set a target of \$116 M for its net ebit by 2018. **CBNB**

Syngenta ready to negotiate, even with Monsanto

Swiss agrochemicals company Syngenta in Basel is reported to be ready for acquisition negotiations with several companies including Monsanto which made a takeover bid for Syngenta in mid-2015 worth up to \$46 billion or SFR 470 per share. At the time Syngenta rejected the takeover bid as inadequate and refused to enter negotiations with Monsanto. However the situation changed since the recent merger between Dow Chemical and DuPont. Previously Syngenta had been interested in a merger with DuPont and is now considering alternative solutions. **CBNB**

UPL announces merger of seed firm Advanta

Key agrochemical firm UPL Ltd, formerly United Phosphorus Ltd, has merged with its Advanta seed firm. After the transaction, the geographical coverage of UPL would increase and lead to Rup 90 crore/y of cost savings. UPL has a 48.44% stake in Advanta that would be negated upon conclusion of the merger. Each Advanta shareholder will receive one UPL share each, whereas non-resident Advanta share-

holders will have three compulsory convertible preference shares in UPL instead of one share in the seed firm. (1 crore=10 M, 1 lakh=100,000). (For more information: UPL online.com)

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Company performance

Monsanto Company delivers better than expected IQ 2016 results

Monsanto Company has released its financial results for 1Q 2016. Net sales decreased to \$2.2 billion, while gross profit on an as-reported basis also decreased to \$901 M. Selling, general and administrative (SG&A) costs were \$543 M and R&D expenses were \$364 M. Total operating expenses, excluding pre-tax restructuring charges of \$266 M, were 9% lower than 1Q 2015. The EPS was a loss of \$0.11 on an ongoing basis, ahead of the company's outlined guidance of a loss in the range of \$0.23-0.33. The EPS was a loss of \$0.56 on an as-reported basis, which was better than its outlined guidance of a loss in the range of \$0.86-1.13. As-reported results include \$0.46 for restructuring charges, driven by the finalisation of the company's plans to reach its previously outlined target of \$500 M of annual savings by the end of FY 2018. Free cash flow was a source of more than \$1.0 billion compared to a source of \$969 M for 1Q 2015. Net cash provided by operating activities was a source of \$1.4 billion, compared to a source of \$1.3 billion in 1Q 2015. Net cash required by investing activities was \$336 M, compared to \$380 M for 1Q 2015. Net cash required by financing activities was \$2.4 billion, compared to net cash required by financing activities of \$107 M for 1Q 2015. (For more information: Monsanto Co, 800 N Lindbergh Boulevard, St Louis, MO 63167, USA; Tel: +1 314 694 1000; Website: <http://www.monsanto.com>)

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Monsanto's Seeds and Genomics delivers better than expected IQ 2016 results

Sales for Monsanto's Seeds and Genomics segment in 1Q 2016 were \$1.4 billion. The company continues to build on the momentum of Intacta RR2 PRO soybeans in South America as the company remains on track to reach its target of 30 M acres in FY 2016. With greater than four bushel per acre yield advantage and ability to reduce insecticide use, grower interest and adoption of the technology continues to grow. The company also is making progress on pre-commercial activities for its Roundup Ready 2 Xtend Crop System in soybeans, which is expected to be the largest biotech trait launch on more than 3 M acres in FY 2016. In cotton, Bollgard II XtendFlex is expected to reach 1.5 M acres in just the technology's second year of commercialisation. Monsanto continues to expect the Climate platform to expand to more than 90 M acres in 2016 with more than 12 M of these acres using its premium offerings. (For more information: Monsanto Co, 800 N Lindbergh Boulevard, St Louis, MO 63167, USA; Tel: +1 314 694 1000; Website: <http://www.monsanto.com>)

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Monsanto's Agricultural Productivity delivers better than expected IQ 2016 results

Sales for Monsanto's Agricultural Productivity segment in 1Q 2016 reached \$820 M. Monsanto continues to expect Agricultural Productivity segment gross profit to be in the range of \$900 M to \$1.1 billion in FY 2016 with the expectation that timing related declines in volumes from 1Q 2016 will be recovered in the latter half of the year. The company continues to expect to sell approximately 300 M gal of glyphosate for the full year at a premium close to that of generics. (For more information: Monsanto Co, 800 N Lindbergh Boulevard, St Louis, MO 63167, USA; Tel: +1 314 694 1000; Website: <http://www.monsanto.com>)

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Starpharma Holdings: Appendix 4C – quarterly cashflow report

Starpharma Holdings Ltd released its Appendix 4C - Quarterly Cashflow report for the period ended 31 December 2015. The cash balance as at 31 December 2015 was \$54.7 M, compared with a cash balance of \$26.1 M at 30 September 2015. The increase in cash for the quarter includes the net proceeds of \$30.7 M from the share placement completed in December 2015. Since the end of the quarter, the company has also received a further \$1.9 M in proceeds from the Share Purchase Plan. The strong cash balance allows Starpharma to accelerate the development and commercialization of its drug delivery, VivaGel, and agrochemicals programmes. Receipts from partners and grants during the quarter totalled \$6.6 M including the R&D tax incentive of \$3.4 M associated with the previous financial year's R&D expenditure. Partner receipts comprised milestones, research fees and royalties, including a \$2 M payment related to the multi-product drug delivery licence with AstraZeneca. This represents the first receipt of the potential \$126 M in milestone payments under the licence for the initial compound, plus royalties receivable. During the quarter AstraZeneca also selected a second DEPTM candidate under the licence agreement, with potential milestones of up to \$93 M for this candidate (and other follow-on candidates) plus royalties. AstraZeneca pays for all development costs associated with these programmes. The net operating and investing cash outflows of \$1.4 M for the quarter reflect the AstraZeneca receipt, R&D tax incentive and other receipts from partners; offset by expenditure on the Phase 3 clinical trial programme for VivaGel recurrent BV, the DEP docetaxel programme and the other programmes across Starpharma's portfolio. (For more information: Starpharma, website: <http://www.starpharma.com/>)

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