

Sector review continued

Life Sciences: We reach customers worldwide with our ingredients to deliver health care solutions, protect crops and enhance seeds. From our vaccine technologies to microplastic-free seed coatings, we are using our smart science to improve lives everywhere.

Sector President: Nick Challoner

2020 marked another record year for sales and profit in Life Sciences, with COVID-19 creating new Health Care opportunities as the year developed

Sales

£401.6m

2019: £350.5m

Adjusted operating profit

£129.4m

2019: £107.1m

Record performance driven by move to patient health care

2020 marked another record year for sales and profit in Life Sciences, with COVID-19 creating new Health Care opportunities as the year developed. In Health Care, continued growth in speciality excipients and vaccine adjuvants was complemented by the acquisition of Avanti Polar Lipids, LLC and a contract to supply Pfizer with components for their COVID-19 vaccine. Crop Protection continued to grow sales, net of planned product withdrawals, and Seed Enhancement delivered double-digit revenue growth. Life Sciences is now well established as a fast-growth, high-value leg of Croda's business model.

Sales increased by 14.8% and adjusted operating profit grew by 25.4%, in constant currency. This was driven by volume growth of 7% and unchanged price/mix, whilst acquisition added 8%. In reported currency, sales were up 14.6% at £401.6m (2019: £350.5m), with adjusted operating profit 20.8% higher at £129.4m (2019: £107.1m). Return on sales strengthened to 32.2% (2019: 30.6%), reflecting the sector's continued migration to higher value-add technologies. IFRS operating profit was £117.2m (2019: £97.7m).

The Health Care business saw constant currency sales increase by almost 30%, with an expanded number of technology platforms in drug and vaccine delivery systems. Speciality excipients again delivered strong sales growth, driven by the expansion in parenteral drugs using biologic actives, with their complex stabilisation needs. We continued to build on our leading position in this niche market by launching new excipients, expanding our sales and

technical capability globally, and through organic investment to double manufacturing capacity in the US. Following the acquisition of Biosector in 2018, we are also a leading supplier of vaccine adjuvants which help trigger the body's immune response to vaccines. Our vaccine adjuvant business delivered strong sales and profit growth in 2020, benefiting from synergies with the Croda selling network.

In August we completed the acquisition of Avanti for an initial consideration of US\$185m. Avanti adds a new drug and vaccine delivery technology through its industry leadership in lipid-based systems. In addition to an established business supporting pharmaceutical drug development, Avanti's lipid nanoparticle (LNP) system is increasingly attractive for use in complex therapeutic drugs and next-generation mRNA vaccines, expected to become a fast-growing part of the market. The acquisition combines Avanti's leading position in early-stage pharmaceutical research with Croda's expertise in commercial scale-up, a market in which Avanti could not previously participate.

Avanti had already been working on COVID-19 vaccine development at the time of acquisition, with Croda working as its scale-up partner. We redirected significant resource away from other projects to focus on supporting this vital global need. This development work led to a five-year non-exclusive contract to supply lipid components into the Pfizer-BioNTech COVID-19 vaccine, which we initially estimated would generate approximately US\$100m of sales in 2021 if the customers' publicly indicated volumes were required. Based on contractual commitments received to date, we now expect a minimum of US\$125m sales in 2021 for this vaccine. Croda is also supporting over 60 other COVID-19 vaccine and therapeutic drug development projects.

Crop Protection revenue was broadly flat, despite the headwind from our voluntary withdrawal from products with a negative environmental footprint. After a weaker first half year, sales recovered in the second half, reflecting phasing because of a later planting season in Latin America. Sales in North America recovered from the impact of the 2019 China trade dispute and Asia grew strongly, thanks to new resource investment in the key crop markets of China, part of our 'fast grow' strategy, and India. We reinforced our position

as innovation partner to the four largest agriculture multinationals, providing increasingly sustainable delivery systems. Syngenta awarded Croda its Supplier Partnership Award for 2020. New product innovation included Hydravance™ 200, which retains moisture in the soil, and Atplus™ DRT-EPS, to reduce pesticide drift. Beyond the crop majors, sales grew double-digit percentage with smaller customers. The Plant Impact biostimulant technology, acquired in 2018, is now fully integrated into the crop business, and significantly improved its profit performance in 2020.

Our Seed Enhancement business delivered double-digit percentage revenue growth in 2020, following some short-term insourcing by customers which had adversely impacted 2019. North America sales were resilient, despite reduced demand for vegetable crops associated with restaurant closures due to COVID-19. Europe, Asia and Latin America all drove the strong growth. Sustainability remains a key driver of future opportunity and, in 2020, we launched our novel patented technology to create coatings that are free of microplastics for vegetable and field crop seed treatment. The business is also working with Plant Impact to incorporate biostimulants into its seed treatments.

'Expand to Grow' strategy

The Life Sciences 'Expand to Grow' strategy is being delivered both organically and through acquisition. This reflects the trends for more valuable patient health treatments and the environmental and social needs for increased crop yields delivered sustainably. Our strategic priorities are to:

- Build the Croda brand in Life Sciences, becoming the leading solution provider to global pharma and crop markets, whilst expanding geographically, particularly in emerging markets;
- Enhance our product portfolio organically and create more value by extending our drug and vaccine delivery and crop adjuvant technologies; and
- Acquire adjacent businesses and technologies in health and crop care with strong growth prospects.

This strategy is driven by innovation and investment. In 2020, NPP sales accounted for 27% of total sales (2019: 27%). The R&D pipeline is robust, supported by greater partnering, particularly in health care. We are deploying more capital to grow, investing £30m over three years in the expansion of our speciality excipient plants in the US and Japan. We reprioritised £10m of investment in the UK and US in 2020 to deliver vaccine scale-up requirements, with a further £40m expected to be invested in 2021 to more than double our GMP capacity in lipid technology for COVID-19 and other pipeline products. Across Life Sciences we are investing in digital capabilities, including the use of artificial intelligence to automate processes and improve customer service in Seed Enhancement.

Global sunflower seeds market value¹

\$1.3bn



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Marta Dobrowolska-Haywood

Head of Research and Technology, Incotec

Helping customers reduce the level of microplastics in the environment and get ahead of impending regulations

Our multinational customers in the agricultural sector are facing a challenge from customers and regulators alike. The call is both a threat and an opportunity; to restrict the use of microplastics in seed coatings by 2027.

The use of coatings on seeds is common practice among growers worldwide as it retains crop protection chemicals on the seed and reduces dust that can lead to unintended exposure of farmers and the environment. Coatings also make seeds easier to sow. However, there is growing global concern about microplastics accumulating in the environment as they are resistant to normal environmental degradation. While Europe may be acting on this area first, our multinational customers are convinced that it is likely that similar restrictions will be adopted elsewhere too.

EU legislation banning intentionally added microplastics in seed coatings is expected to become effective around 2027. For a few years now, the team at our Seed Enhancement

business Incotec has been leading the industry response and working on creating microplastic-free seed coatings to help their customers to adapt ahead of this legislation.

Marta Dobrowolska-Haywood, Head of Research and Technology, Incotec, said “This has been such a rewarding project for our whole team. The initial challenge was daunting as developing microplastic-free treatments is easier said than done. A film coating must not interfere with seed health, shelf life or germination and different crops and plant protection products react differently to any coating.

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Global maize/corn seed market 2018²

\$24.5bn

1. Market Data Forecast Feb 2020.

2. Global maize/corn seed market report MarketWatch Oct 2020.