Immediate 24 February 2022

Genus plc

Unaudited half year results for the six months ended 31 December 2021

GOOD STRATEGIC PROGRESS and INVESTING FOR GROWTH

	Adjusted results[1]				Statutory results		
	Actual currency			Constant currency change[2]	Actual currency		
Six months ended 31 December	**2021**	**2020[3]**	**Change**		**2021**	**2020[3]**	**Change**
	£m	**£m**	**%**	**%**	**£m**	**£m**	**%**
Revenue	**281.2**	285.7	(2)	1	**281.2**	285.7	(2)
Operating profit exc JVs	**35.0**	43.8	(20)	(18)	**23.9**	34.2	(30)
Operating profit inc JVs exc gene editing	**43.3**	53.4	(19)	(17)			
Profit before tax	**37.0**	47.1	(21)	(19)	**24.4**	37.4	(35)
Free cash flow	**(16.1)**	26.6	n/m[4]	n/m[4]			
Basic earnings per share (pence)	**42.4**	55.3	(23)	(21)	**30.4**	46.4	(34)
Dividend per share (pence)					**10.3**	10.3	-

Group performance impacted by PIC China; strong progress in the rest of the business

- Total Group revenue up 1% in constant currency (2% lower in actual currency), adjusted profit before tax ('PBT')[1] down 19% in constant currency (21% in actual currency)
- Excluding PIC China; Group adjusted PBT up 28% in constant currency (25% in actual currency), and revenue up 7% in constant currency (4% in actual currency)
- R&D investment increased 10%[2] as planned
- Statutory PBT decreased by 35% to £24.4m, due to the lower adjusted profit and net IAS 41 biological asset valuation decrease

Challenging market conditions for PIC in China as expected, strong PIC performance elsewhere

- China pig prices currently under 13RMB/kg, down from 35RMB/kg in December 2020
- PIC volumes 2% lower, revenue 4%[2] lower. Royalty revenue 1%[2] lower excluding a customer refund in China[5]. Consequently, PIC's Adjusted operating profit declined 15%[2]
- Strong market share gains in North America and Latin America; PIC's volumes up 7% excluding China
- Excluding China, PIC's revenue up 8%[2], royalty revenue up 4%[2], adjusted operating profit up 13%[2]

Good revenue growth of 4%[2] and volume growth of 4% in ABS, building on a very strong prior year

- Continued Sexcel® success with sexed volumes up 24% and NuEra® beef with volumes up 13%
- Continued shift in ABS's product mix with 24% of global volumes sexed genetics and 32% beef
- Strong growth in Brazil, India and China
- ABS's adjusted operating profit up 21%[2]

Lower cash generation and earnings than prior year, dividends maintained

- Free cash outflow[1] of £16.1m, reflecting expected higher working capital outflows and planned capital investment
- Net debt[1] increased to £143.3m, net debt to EBITDA[1] ratio of 1.4x, within 1.0x-2.0x targeted range
- Adjusted earnings per share[1] down 21%[2]
- Recommended interim dividend maintained at 10.3p with 2.8x adjusted earnings cover[6]

Good strategic progress

- With our leading porcine and bovine genetics, Genus continued to win customers globally
- Accelerating genetic improvement and supply availability in our porcine elite farms. Investments include a new elite genetics farm, Ankang, in China and Atlas, in Canada, where the first animals have arrived
- New third party IntelliGen technology customer wins, including a significant government tender win in India
- Investments in our new industry leading bull facilities delivering strong efficiency gains

For footnote references, please refer to the end of the About Genus section

- PRRSv resistant pigs programme is progressing to plan with hundreds of third generation gene-edited animals today
- On 22 February 2022 PIC entered a strategic collaboration with Olymel, the largest porcine producer in Canada, to acquire their elite porcine genetics for CAD$25m (£14.5m), and for the long-term provision of products and services through their AlphaGene genetics programme

Commenting on the interim results, Stephen Wilson, Chief Executive, said:

"As expected, the Group performed strongly other than in the porcine business in China and continued to make good strategic progress while investing for the future. Our strategic collaboration with Olymel announced today will further strengthen PIC's North America business.

"Building on record volume growth in the first half of last year, ABS continued to grow volumes and expand margins, driven by the success of Sexcel, strong growth across all regions of our proprietary NuEra beef genetics and continued operating leverage.

"PIC's adjusted operating profits (excluding PIC China) achieved strong growth, underpinned by market share gains in key customers in North America and Latin America. However, as previously announced in November 2021, the current porcine market in China has had an adverse impact on our trading in China during the first half of the 2022 fiscal year. Since November, the live pig price in China has remained below the cost of production and declined further to below 13RMB/kg since the beginning of January. The significant impact of PIC China's trading has consequently decreased PIC's and the Group's adjusted operating profit.

"China live pig prices need to improve and be sustained for producer confidence to return and lead to improved demand for porcine genetics. Industry expectations are that prices will improve later in the year, however there is uncertainty on the timing and extent of a recovery. Consequently, we expect the China porcine market will continue to impact on the Group's performance in the second half of the 2022 fiscal year. Importantly, following the investments in our porcine elite supply chain, Genus is well placed to support Chinese producers needs when market conditions improve, and we remain confident in the future growth prospects of PIC China.

"The Board remains confident in the Group's strategy, the many opportunities for Genus and medium-term growth expectations remain unchanged."

Results presentation today

A pre-recorded analysts and bankers briefing to discuss the interim results for the six months ended 31 December 2021 will be held via a video webcast facility and will be accessible via the following link from 7:01am today:

https://webcasting.buchanan.uk.com/broadcast/61f900ee12956e448c9972f7

This will be followed by a live Q&A session to be held by invitation via Zoom Webinar at 10:30am.

Enquiries:

Genus plc (Stephen Wilson, Chief Executive Officer / Alison Henriksen, Chief Financial Officer)	Tel: 01256 345970
Buchanan (Charles Ryland / Chris Lane / Sophie Wills)	Tel: 0207 466 5000

About Genus

Genus advances animal breeding and genetic improvement by applying biotechnology and sells added value products for livestock farming and food producers. Its technology is applicable across livestock species and is currently commercialised by Genus in the dairy, beef and pork food production sectors.

Genus's worldwide sales are made in over 80 countries under the trademarks 'ABS' (dairy and beef cattle) and 'PIC' (pigs) and comprise semen, embryos and breeding animals with superior genetics to those animals currently in farms. Genus's customers' animals produce offspring with greater production efficiency and quality, and our customers use them to supply the global dairy and meat supply chains.

Genus's competitive edge comes from the ownership and control of proprietary lines of breeding animals, the biotechnology used to improve them and its global supply chain, technical service and sales and distribution network.

Headquartered in Basingstoke, United Kingdom, Genus companies operate in over 24 countries on six continents, with research laboratories located in Madison, Wisconsin, USA.

[1] Adjusted results are the Alternative Performance Measures ('APMs') used by the Board to monitor underlying performance at a Group and operating segment level, which are applied consistently throughout. These APMs should be considered in addition to, and not as a substitute for or as superior to statutory measures. For more information on APMs, see APM Glossary.

[2] All growth/decline rates quoted are in constant currency unless otherwise stated. Constant currency percentage movements are calculated by restating the results for the six months ended 31 December 2021 at the average exchange rates applied to adjusted operating profit for the year ended 30 June 2021.

[3] Results restated following an April 2021 IFRIC Interpretation Committee agenda decision that resulted in previously capitalised software assets being expensed lowering profit by £1.3m in FY21 H1.

[4] n/m = not meaningful

[5] Commercial terms with a customer changed in the period to align with long term interests resulting in a one-time £3.7m refund related to historic royalties.

[6] Calculated on a rolling 12-month basis.

Group Performance

As expected, tough porcine market conditions in China resulted in a decrease in PIC China's performance, which had an impact on the overall performance of the Group in the first half of the year, with adjusted profit before tax declining by 19% in constant currency (21% in actual currency) to £37.0m. Without PIC China, adjusted profit before tax would have grown by 28% in constant currency, due to robust growth across the rest of the Group and prudent cost management.

Revenue increased by 1% in constant currency (down 2% in actual currency) to £281.2m (2020: £285.7m). PIC revenue declined by 4% and, excluding a customer refund in China, royalty revenue was down 1% year on year. When all of PIC China's results are excluded, the rest of PIC's business achieved, in constant currency, revenue growth of 8% and royalty revenue growth of 4% reflecting further market share gains, particularly in North America and Latin America. ABS revenue grew by 4% in constant currency and achieved volume growth of 4%, with the strategically important sexed genetics and beef genetics up 24% and 13% respectively.

Adjusted operating profit, including joint ventures and excluding gene editing, was £43.3m (2020: £53.4m), down 17% (in constant currency), but was up by 26% when the PIC China results are excluded. Our medium-term objective continues to be to achieve 10% CAGR growth in this measure, noting that 37% growth was achieved in FY21. Adjusted operating profit, including joint ventures and after the costs of gene editing, fell by 18% in constant currency. Within this, Genus's share of adjusted joint venture operating profits was £4.9m (2020: £5.9m), with a strong performance from the PIC Agroceres joint venture in Brazil not enough to offset the decline in profits from our joint ventures in China. Net finance costs were £2.7m (2020: £2.6m).

Statutory profit before tax was £24.4m (2020 restated: £37.4m), reflecting the adjusted profit decline during the period and a £6.8m non-cash decrease (2020: £3.5m increase) in the net IAS 41 biological asset fair value. This was partially offset by lower share-based expense and an exceptional net credit balance of £1.7m (2020: £5.1m expense) that includes a £3.6m non-refundable cash receipt for the assignment of rights to a legacy legal claim in Brazil. In the prior year, a non-cash Guaranteed Minimum Pension ('GMP') equalisation charge of £3.3m in respect of legacy pension schemes had been recognised due to a High Court ruling in 2020.

The tax charge on adjusted profits for the period was £9.3m (2020: £11.1m), which represented a tax rate on adjusted profits of 25.1% (2020: 23.6%). The Group tax rate increased by 150 basis points, due to the reduced share of Group profits arising from China where there is a benefit from the availability of tax relief on owned production agricultural activities. The statutory profit after tax was £18.9m (2020 restated: £29.0m).

The effect of exchange rate movements on the translation of Genus's overseas profits was an adverse impact of £0.6m compared with the prior period, primarily from stronger Sterling against the Brazilian Real and Euro.

Free cash outflow of £16.1m (2020: £26.6m inflow) reflected lower operating cashflows from expected increases in working capital and high planned capital expenditure in the six months. Cash generated by operations of £22.2m (2020 restated: £42.8m) represented 63% conversion (2020 restated: 98%) of adjusted operating profit of £35.0m (2020 restated: £43.8m) into cash. This was impacted by expected working capital outflows, including performance related payments to employees in the period relating to the strong prior year results and the employee special COVID-19 bonus paid in July 2021. Our medium-term objective is to achieve annual conversion of at least 90%, and we remain committed to this target. Capital expenditure of £27.8m (2020 restated: £9.7m) included continued investment in the ABS supply chain with state-of-the-art new bull housing in Wisconsin and expansion of PIC supply chain capacity through construction work on a new elite genetics farm in Canada.

Net debt increased to £143.3m (June 2021: £105.6m), reflecting the increase in capital expenditure and expected working capital outflows. The net debt to EBITDA ratio of 1.4x (June 2021: 0.9x) as defined in the debt facility agreement reflects a decline in EBITDA and higher net debt levels. This level of leverage is comfortably within our medium-term objective of having a ratio of net debt to EBITDA of between 1.0 – 2.0 times.

The Board has declared an interim dividend of 10.3 pence per share, the same as last year's interim dividend, which is payable on 31 March 2022 to shareholders on the register at 4 March 2022.

Strategic Progress

Genus continued to make good strategic progress. We have sustained our genetic leadership in all species, we are winning share with leading pork, dairy and beef farmers globally, and our supply chain investments are increasing supply and resilience, to position us for further growth.

Our porcine business continues to deliver rapid genetic improvement as investments in genomic selection, expanding nucleus populations and other initiatives have further improved the quality of animals selectively bred in our proprietary herds. We are in the process of implementing digital phenotyping technologies, which increase the volume and accuracy of data used in breeding selection to accelerate the rate of genetic progress delivered to customers.

In China, where the porcine industry has experienced severe volatility, we remain well positioned for the opportunity and currently serve over one third of leading Chinese pig producers. We have a local team of over 170 people, including technical services teams that are supporting customers through these challenging times. Our focus on making China a home market includes joint US-China product development projects, engagement with Chinese academic institutions and our Porcine Reproductive and Respiratory Syndrome virus (PRRSv) resistant development collaboration with BCA, which is progressing as planned.

We are growing and strengthening our porcine supply chain and by FY23 will have increased our elite genetics capacity by over 80% compared with FY19. We are building a new elite genetics farm, Ankang, in China which will increase in-country access to our most elite lines. These lines will be multiplied and disseminated through our growing supply network in China, which has grown fivefold to over 130,000 sows in the past three years. Atlas, our new elite genetics farm in Canada to support global customer growth, is now being stocked and will be completed in 2022, and in Brazil, our joint venture with Agroceres is building a new elite genetics farm to support local growth, with the potential to serve as an export facility in the future. In February 2022 PIC strengthened further its position in North America through entering a strategic collaboration with Olymel, the largest porcine producer in Canada, to acquire their elite porcine genetics and for the long-term provision of products and services through their AlphaGene genetics programme.

Genetic progress in our proprietary dairy herds has sustained our strong global position in dairy genetics. Our proprietary beef-on-dairy genetics are also achieving strong trial and field results, proving the economic difference our genetics can achieve. We are making progress in changing the way we engage with and support dairies with comprehensive, multi-annual product and service packages that include tailored technical and genetic services. The uptake in key markets is encouraging, and in EMEA over 25% of our sales volumes in direct markets are contracted.

We continue to invest in R&D and made good progress in a number of portfolio initiatives in gene editing, reproductive biology and biosystems engineering. In the period we achieved new IntelliGen third-party customer wins and extensions in New Zealand, North America and Europe, which includes the first deal for our second generation IntelliGen instruments. Subsequent to the reporting close, we have also won a significant national tender in India. Our PRRSv resistant programme continues to progress well, consistent with the timelines we have previously communicated. We now have hundreds of third generation animals on which data is being collected for the next phase of our regulatory submissions. Matings of this generation are planned in the summer, with fourth generation births expected by the end of the 2022 calendar year.

Sustainability Focus

Our primary focus is the use of animal genetic improvement to drive increased animal efficiency through the reduction of production inputs which result in lower use of carbon, energy, water and land in animal protein production. Our vision is 'Pioneering animal genetic improvement to help nourish the world': the use of our genetics directly helps our customers in their transition to lower-carbon production. To further this objective Genus became a founder member of the Greener Cattle Initiative announced at COP26 to conduct research into ways of reducing methane from cattle.

As a responsible business, we are targeting carbon reduction within internal operations which are aligned with international (COP26) climate goals: Genus will reduce its carbon emissions by 25% (per tonne animal weight from 2019 levels) by 2030 and aims to be a carbon 'net zero' business by 2050. We have established a carbon reduction trajectory and contributory reduction opportunities as part of our ‘Delta C’ programme. We are targeting ‘least cost mitigation’ measures for emissions from manures and have enhanced our measurement and reporting of our emissions and ‘sinks’ (including soils which we are targeting for carbon sequestration in South Dakota, Saskatchewan and Yorkshire). We have commissioned a new solar farm to power almost all our electricity needs in our Leeds and Dekorra operations in the US and are reviewing new opportunities in other countries. We have commenced conservation management of soils on our estate and are further targeting greenhouse gas reduction using among other things, methane capture and renewable natural gas power generation and electric vehicles.

People

To achieve our vision of ‘Pioneering animal genetic improvement to help nourish the world’, we need to attract, retain and develop outstanding people. We completed our biennial all-employee engagement survey during the second half of 2021 and engagement remains high, with 83% of employees completing the survey, 82% (2019: 79%) agreeing with the statement “I would recommend to a friend to work at Genus” and 89% (2019: 85%) agreeing with the statement “I enjoy working at Genus”. We also saw good progress against some of the themes we focused on from the 2019 survey, which included the development of people managers and the areas of reward and recognition. It was encouraging that our people remain highly committed to Genus despite it being a very challenging period during the COVID-19 pandemic.

Outlook

As expected, the Group performed strongly other than in the porcine business in China and continues to make good strategic progress while investing for the future. The Board is monitoring closely the potential risks to Genus and its employees of the geopolitical situation in Russia and the Ukraine. We are taking risk management actions where appropriate.

As referenced in the November 2021 AGM Trading Update, the current porcine market in China has had an adverse impact on our trading in China during the first half of the 2022 fiscal year. Since November, the live pig price in China has remained below the cost of production and declined further to below 13RMB/kg since the beginning of January. The impact of PIC China’s trading has consequently decreased PIC’s and the Group’s adjusted operating profit, despite robust performance from the rest of the Group.

China live pig prices need to improve and be sustained for producer confidence to return and lead to improved demand for porcine genetics. Industry expectations are that prices will improve later in the year, however there is uncertainty as to the timing and extent of recovery. Consequently, we expect the China porcine market will continue to impact on the Group’s performance in the second half of the 2022 fiscal year. Importantly, following the investments in our porcine elite supply chain, Genus is well placed to support Chinese producers needs when market conditions improve, and we are confident in the future growth prospects of PIC China.

The Board remains confident in the Group's strategy, the many opportunities for Genus and medium-term growth expectations remain unchanged.

Genus PIC – Operating Review

Six months ended 31 December	Actual currency			Constant currency change
	2021	2020	Change	
	£m	£m	%	%
Revenue	**143.5**	152.9	(6)	(4)
Adjusted operating profit exc JV	**52.2**	63.0	(17)	(15)
Adjusted operating profit inc JV	**57.0**	68.9	(17)	(15)
Adjusted operating margin exc JV	**36.4%**	41.2%	(4.8)pts	(4.8)pts

Market

Global pork markets were negatively impacted throughout the period due to oversupply in China leading to low prices and the continued impact of African Swine Fever (ASF) and COVID-19, resulting in challenges both in relation to supply and demand.

This was particularly evident in China's porcine market, where there was a 63% decline in live pork prices in the first half of 2021, from 35RMB/kg in December 2020 to 13RMB/kg in mid-June. Prices remained suppressed throughout the remainder of the year, ranging between 10RMB/kg and 18RMB/kg and are currently below 13RMB/kg. These prices are below the cost of production when combined with the high feed costs also incurred throughout the period. After posting losses for much of the second half of 2021, producers sought to reduce their sow herds or exit the market entirely. Investments in new and replacement breeding animals declined and will continue to be depressed over the coming months until a sustained price rise is achieved, and market confidence returns. The emergence of the Delta and Omicron variants of COVID-19 in China caused a further slowdown in the industry as localised transport restrictions were implemented. Consumer demand for pork has also been affected by lower spending due to lockdowns, a less buoyant economy and some shift in consumer consumption to other proteins. Chinese imports of pork dropped 9% compared with the same prior year period and the expectation is that imports will remain depressed through the early part of 2022. ASF continued to be a major challenge for producers in China and across southeast Asia, with eradication proving challenging.

In Europe, further waves of the COVID-19 pandemic, the latest being the Omicron variant, and localised ASF outbreaks had a disruptive and negative impact on the market. The impact of the pandemic caused supply chain constraints with significant labour shortfalls in both live production and processing facilities. Average slaughter prices dropped to their lowest in nine years, due to oversupply caused in part by the loss of key exports to China following reduced demand and ASF outbreaks in Eastern Germany and across parts of Eastern Europe. ASF has also recently been found in Italy. Moreover, increasing commodity prices across grain and oil markets, along with inflation in other costs of production, also had a negative impact on production margins for most European pig producers, resulting in a small reduction of the European sow herd through 2021 which is expected to continue into 2022.

In the United States, 2021 was a profitable year for pork producers, notwithstanding uncertainty and volatility in the industry. Lean hog and primal pork prices peaked near record highs during the summer of 2021 due to robust demand and lower pig numbers, before reducing slightly in late Autumn. Current lean hog futures indicate another profitable year for US pork production in 2022, with prices over $100/cwt for the summer months. Furthermore, the United States Department of Agriculture is forecasting stable production volumes through the year, while exports are projected to grow by 4%.

In Latin America, key markets experienced a mixed year. In Mexico, a sharp increase in pig prices to 45MXN/kg in the early part of 2021 following supply disruptions was followed by a decline to 35MXN/kg, which, when combined with high imported feed costs, left Mexican producers under margin pressure. In Brazil, exports remained a key driver of the pork market, supporting strong production growth in the period. Large inventory supplies and favourable exchange rates further boosted Brazilian competitiveness. However, the reduced demand from China has recently caused a supply-demand imbalance and through the month of January pig prices have declined by 20%, causing producers to delay breeding projects.

Performance

Genus PIC's adjusted operating profit for the period was £52.2m, down 15% in constant currency on the first half of FY21. Global volumes declined by 2%, revenue by 4% and royalty revenue by 1%, excluding a China customer refund, in constant currencies. However, when all of China's results are excluded, the business achieved a strong performance with revenue and royalty revenue up 8% and 4% respectively. Global volumes, excluding China, rose by 7% and operating profit grew by 13% in constant currency, due to strong performances across the North and Latin American regions and prudent cost management.

In North America, market share gains and positive market conditions contributed to adjusted operating profit growth of 6% in constant currency. Growth in PIC's share of the sireline market during the period contributed to 7% volume growth, while royalty revenue also increased by 5% in constant currency. Key account wins involving damline products and strong sales growth for the PIC800 boar continued to build momentum across the US and Canada. On 22 February 2022, we entered a long-term strategic collaboration with Olymel, the largest porcine producer in Canada, to acquire all intellectual property in Olymel's elite porcine genetics for CAD$25m (£14.5m) and for the provision of genetic products and services. This will provide significant benefit to customers of Olymel's AlphaGene genetics through their porcine production pyramid.

Latin America's adjusted operating profit grew by 13% in constant currency, with all key trading countries generating double-digit growth. Volumes increased by 10% and royalty revenue rose by 16% in constant currency. Solid revenue and profit growth, despite the varying market conditions discussed earlier, reflected strong product performance and robust customer demand across the region. Initiatives to increase supply, including a new elite genetic farm in Brazil and multiple imports of elite genetics, are underway during FY22.

In Europe, following a very strong performance in the prior year, volatile market conditions caused by the localised ASF outbreaks mentioned earlier resulted in a mixed trading picture. The prior year performance was supported by large key account expansion projects in Russia. These projects continued in the period, however a planned mix shift from gilt sales to boar sales contributed to a revenue decline of 11%, while supporting a volume increase of 1% in Europe. Royalty revenue rose by 5% in constant currency, driven by growth in countries such as Spain, not impacted by ASF and the China import ban, while adjusted operating profit declined 2%. The ongoing expansion projects in Russia and in Spain will support long-term growth with pork producers in these important markets.

Adjusted operating profit in Asia was 78% lower in constant currency than the prior year, while volumes decreased by 36% and royalty revenue declined by 33% in constant currency, excluding a customer refund in China discussed below. The region's results predominantly reflect the performance in China, where sharp declines in pig prices during 2021 resulted in significant losses for producers in the period and a reduction in demand for genetics. This was further exacerbated by disease challenges across the industry and restrictions in the ability to move animals due to COVID-19 lockdowns being imposed in certain regions. PIC China experienced a 51% decline in volumes, and 27% of volumes were under royalty contracts. Commercial terms with a large customer were changed in the period to more closely align the economic interests of a unique outcome-based royalty contract in place. This resulted in a one-time refund of £3.7m, related to historic royalties. PIC China's operating profit decreased by 94% in constant currency due to the reduction in revenues, the customer refund, lower by-product margins, and investments in the local supply chain. Investment in PIC's supply chain in China continued throughout the period with the expansion and refurbishment of one farm and the new construction of the Ankang farm to replace a smaller ageing facility, with the aim of supporting the rapid recovery of sales when market conditions improve.

In Asia more widely, the industry in the Philippines started to show signs of recovery from ASF and demand for PIC's genetics improved, with operating profits increasing by 144% in constant currency compared with the same period in FY21. There were also positive signs from Asian franchises, with operating profit increasing by 22%.

Overall, in the first half of FY22, very weak conditions in China led to lower results for PIC. However, Genus's proven strategy focused on developing product differentiation, ensuring a predictable customer experience and delivering high value through a world-class team positions PIC very well to gain further market share in China and other geographies.

Genus ABS - Operating Review

Six months ended 31 December	Actual currency 2021	2020	Change	Constant currency change
	£m	£m	%	%
Revenue	**130.9**	129.0	1	4
Adjusted operating profit	**22.1**	18.7	18	21
Adjusted operating margin	**16.9%**	14.5%	2.4pts	2.4pts

Market

After nine consecutive quarters of increases, growth in milk supply from the "Big Seven" exporting regions (the EU, USA, New Zealand, Australia, Brazil, Argentina and Uruguay) came to an end in the third quarter of 2021 and contracted in the fourth quarter. This was primarily driven by reductions in production across New Zealand, Australia and the EU. The cost of milk production grew sharply during the second half of 2021, due to rising labour costs and increases in the price of feed. Dairy demand grew during the year and the Global Dairy Trade *Whole Milk Powder* auction price increased by 17%, with China's dairy imports alone rising by 29% during the first three quarters of 2021, before tapering off in the final part of the year as economic uncertainty rose, and regional COVID-19 lockdowns were enforced. In North America, dairy production declined through the period due to margin pressure from increasing feed costs. This is expected to continue into 2022, with the likelihood that it will impact the global dairy market due to its high degree of influence.

In the second half of 2021, downstream parts of the supply chain were affected by several factors, including increases in on-farm commodity costs relating to production, restrictions on movements due to COVID-19, inflationary pressures and a squeeze on margins for food manufacturers, driven by increasing feed and labour costs. These factors are expected to drive dairy price increases in 2022 as producers look to pass on the higher costs to customers. Given these factors dairy producers should benefit from higher prices in 2022, however they will be cautious to increase production whilst input costs rise.

The COVID-19 pandemic continued to affect beef consumption as the emergence of the Omicron variant impacted the hospitality industry, with many consumers continuing to eat at home rather than dine out. A slowdown in US beef production caused some constriction of the global beef market in 2021 leading to an increase in beef prices of around 10% through the year. This constriction looks likely to continue through 2022, with drought in parts of North America leading to reductions in herd size, potentially creating opportunities for beef imports. Brazil remained the world's largest beef exporter through 2021, over half of which was exported to China. Export prices peaked in June 2021 at $5,500/metric ton, but due to a suspension imposed by China on Brazil imports after two atypical BSE cases were detected, declined during the second half of the year to $5,000/metric ton. Trading has now resumed.

Globally, we continued to see genetic suppliers increase investments in R&D and breeding programmes. Further consolidation is expected as suppliers seek to leverage these investments more widely, although few mergers have yet been completed. Nonetheless, we continue to see a ramp up in collaborations between industry players, including on the sourcing of elite genetics, so that they can continue to offer commercially relevant products to their customer base.

Performance

Despite challenging market conditions in some regions, overall demand for ABS products remained strong. Volumes increased by a further 4% against a very strong comparative period in the prior year, revenue by 4% and adjusted operating profit by 21% in constant currencies. Demand from dairy customers for sexed and beef genetics remained high, with sexed volumes up 24% and strong beef volume growth of 13%. This reflects the continued success of Sexcel and the increasing adoption of our NuEra beef genetics in dairy herds.

In Europe, volumes and revenue were marginally lower, by 2% and 1% in constant currency respectively. Operating profit was 15% lower compared with a strong first half in FY21 that benefited from the opening of a new IntelliGen production facility at an external customer site. This production facility continues to operate effectively, and the contract was extended in the period. COVID-19 related lockdowns and restrictions continued to reduce access to customers and create considerable uncertainty within the region. However, sexed volumes rose by 22%, with particularly strong growth in our UK business and with European distributors. Good progress was also made on migrating our customers to partnership-based contracts and we continued to strengthen our service offerings. More than 25% of volumes in direct European markets are now sold under annual or multi-annual partnership contracts, where customers commit to acquiring most/all of their product from ABS under a fee per cow arrangement, for which ABS also provides technical services.

In North America, volumes rose by 2%, while revenue declined by 2% and operating profit by 20% in constant currencies. NuEra beef-on-dairy volumes grew by a record 37% as customers shifted from dairy semen, particularly conventional, due to the buoyant beef market. Customers also continued to adopt Sexcel, driving sexed volume growth of 9%, while conventional volumes declined by 31%. Embryo volumes declined by 20% as a large key account made a short-term tactical change to its breeding strategy to use Sexcel, however this is likely to revert in the future. We invested in strengthening our team in the region, both key account and technical services personnel. This investment will help to further differentiate ABS as the genetics partner of choice for our customers and progress is being made in developing relationships through the strategic account programme.

After record performances in FY21, Latin America continued to grow, delivering an 8% increase in revenue and a 22% rise in operating profit in constant currencies. Performance in Brazil was particularly encouraging, delivering 3% growth in semen volumes, following record volume growth of 31% in the prior year period and despite the temporary Chinese ban on Brazilian beef. This was driven particularly by a series of innovative digital sales campaigns. There was also a 7% rise in embryo volumes, aided by the increasing adoption of advanced reproduction techniques.

In Asia, total revenues in the period rose by 36%, driving operating profit growth of 35% in constant currencies. The region delivered strong growth in sexed volumes, up 37%, as well as increases in dairy conventional and beef volumes (up 1% and 58% respectively). This growth was underpinned by strong demand in China, where volumes rose by 25%, with strong growth across dairy, beef and sexed segments, driving revenue growth of 43% and operating profit growth of 37%. In Australia, volumes also grew sharply by 31%, due to the continuing industry rebound following the intense period of drought and bushfires in 2019/20, as well as strong growth of Sexcel, up 75%, and beef sales, up 59%. Performance in India was stable, with encouraging momentum on new wins with a Government of India tender for sexed semen being secured subsequent to the reporting close.

Research and Development - Operating Review

Six months ended 31 December	Actual currency 2021	Actual currency 2020	Actual currency Change	Constant currency change
	£m	**£m**	**%**	**%**
Porcine product development	**10.3**	10.3	0	2
Bovine product development	**10.5**	9.3	13	16
Gene editing	**3.6**	3.7	(3)	0
Other research and development	**7.0**	5.7	23	23
Net expenditure in R&D[7]	**31.4**	29.0	8	10

Performance

Net research and development investment increased as planned by 10% in constant currency, as we invested to further strengthen our proprietary differentiated offerings and to take advantage of market opportunities. In the second half of the year, we will make further investments in gene editing, IntelliGen production capacity and elite porcine farm nuclei, while continuing to strengthen the research and development pipeline.

During the period, we accelerated differentiation in porcine product development through pioneering scientific techniques. By using genotyping across more of our global elite farm network, we were able to achieve our highest ever rate of global genetic gain. To build on this progress, we are now enhancing genomic evaluation by expanding our phenotyping capabilities through precision digital tools and capturing data that best predicts profit potential for our customers. To meet growing global sales demand, we have also added a new elite contract boar stud in Minnesota to our network and are starting to stock a further elite facility in Canada which will be completed during 2022. Bovine product development delivered a highly competitive dairy and beef germplasm pipeline, which contributed to continued volume growth in ABS. De Novo Genetics, our joint venture with De-Su Holsteins, produced around 50% of new Holstein bulls introduced to market in the period and its strong pipeline of young bulls will help sustain our industry leading position. Global demand for our proprietary NuEra genetics continued to grow and these genetics represented around one third of our total beef volumes in the first six months of FY22. Further validation trials in customers' systems reinforced NuEra's superior performance when compared with competitor genetics.

We continued to expand our sexed production capacity by introducing the second generation of our proprietary sexing technology, opening another production facility in North America at our new Leeds bull stud, increasing bull housing and production capacity, and delivering production efficiency gains. Our new technology and the expansion of capacity is helping us meet increasing global demand for Sexcel and our third party IntelliGen products and services.

We maintained our expenditure on gene editing, primarily through ongoing investment in the PRRSv resistance project. This project progressed as planned and we continued to engage with the Food and Drug Administration in the United States, with whom we continue to have positive engagement. We also held further conversations on regulatory and market acceptance in other key global markets including China and Japan, both directly and through local partners.

Other research and development expenditure increased by 23% as planned. This investment was for research in the field of reproductive biology and to expand data science capabilities, while maintaining work on genome science and the development of our bioinformatics platform. We also continued to collaborate with external partners in a variety of discovery areas. These collaborations are gathering pace as academic institutions begin to move away from focusing on COVID-19 research.

[7] Excluding profit attributable to non-controlling interest

Principal risks and uncertainties

Genus's approach to risk management is to identify, evaluate and prioritise risks and uncertainties so we can take action to mitigate them. The Genus plc Annual Report 2021 (a copy of which is available on the Genus plc website at www.genusplc.com) sets out on pages 46-48 a number of risks and uncertainties that might impact the performance of the Group.

Some of these risks relate to current business operations in global agricultural markets, while others relate to future commercialisation of our leading-edge R&D programmes. We are also exposed to global economic and political risks such as trade restrictions. Additionally, we monitor emerging risks such as changing consumption patterns, environmental sustainability expectations and the evolution of alternative proteins such as lab-based meat.

Other than the risk of conflict in Ukraine and sanctions on Russia increasing existing risks, there has been no material change to the principal risks in the current financial year that might affect the performance of the Group. The Group has a strong market-leading porcine business in Russia with a largely local supply chain, and bovine businesses in both Russia and Ukraine.

GENUS PLC
CONDENSED CONSOLIDATED INCOME STATEMENT
For the six months ended 31 December 2021

	Note	**Six months ended 31 December 2021 £m**	(restated)[1] Six months ended 31 December 2020 £m	Year ended 30 June 2021 £m
REVENUE	2	**281.2**	285.7	574.3
Adjusted operating profit	2	**35.0**	43.8	76.9
Adjusting items:				
– Net IAS 41 valuation movement on biological assets	8	**(6.8)**	3.5	(10.8)
– Amortisation of acquired intangible assets	7	**(3.8)**	(3.7)	(7.4)
– Share-based payment expense		**(2.2)**	(4.3)	(7.7)
		(12.8)	(4.5)	(25.9)
– Exceptional items:	3			
– Litigation		**(1.8)**	(1.7)	(2.5)
– Acquisition and integration		**(0.1)**	(0.1)	(0.3)
– Pension related		**-**	(3.3)	(2.3)
– Other		**3.6**	-	1.8
Total exceptional items		**1.7**	(5.1)	(3.3)
Total adjusting items		**(11.1)**	(9.6)	(29.2)
OPERATING PROFIT		**23.9**	34.2	47.7
Share of post-tax profit of joint ventures and associates retained	10	**3.2**	5.8	13.1
Finance costs	4	**(2.8)**	(2.8)	(5.4)
Finance income	4	**0.1**	0.2	0.4
PROFIT BEFORE TAX		**24.4**	37.4	55.8
Taxation	5	**(5.5)**	(8.4)	(9.0)
PROFIT FOR THE PERIOD		**18.9**	29.0	46.8
ATTRIBUTABLE TO:				
Owners of the Company		**19.9**	30.2	47.3
Non-controlling interest		**(1.0)**	(1.2)	(0.5)
		18.9	29.0	46.8
EARNINGS PER SHARE				
Basic earnings per share	12	**30.4p**	46.4p	72.6p
Diluted earnings per share	12	**30.2p**	46.0p	72.0p

Alternative Performance Measures				
Adjusted operating profit		**35.0**	43.8	76.9
Adjusted operating profit attributable to non–controlling interest		**(0.2)**	-	(0.1)
Pre–tax share of profits from joint ventures and associates excluding net IAS 41 valuation movement		**4.9**	5.9	13.0
Gene editing costs		**3.6**	3.7	7.6
Adjusted operating profit including joint ventures and associates, excluding gene editing costs		**43.3**	53.4	97.4
Gene editing costs		**(3.6)**	(3.7)	(7.6)
Adjusted operating profit including joint ventures and associates		**39.7**	49.7	89.8
Net finance costs	4	**(2.7)**	(2.6)	(5.0)
Adjusted profit before tax		**37.0**	47.1	84.8
Adjusted earnings per share				
Basic adjusted earnings per share	12	**42.4p**	55.3p	100.9p
Diluted adjusted earnings per share	12	**42.1p**	54.9p	100.1p

Adjusted results are the Alternative Performance Measures ('APMs') used by the Board to monitor underlying performance at a Group and operating segment level, which are applied consistently throughout. These APMs should be considered in addition to statutory measures, and not as a substitute for or as superior to them. For more information on APMs, see APM Glossary.

1 See note 1 for details of the prior period restatement.

GENUS PLC
CONDENSED CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME
For the six months ended 31 December 2021

	Six months ended 31 December 2021		(restated)[1] Six months ended 31 December 2020		Year ended 30 June 2021	
	£m	**£m**	£m	£m	£m	£m
PROFIT FOR THE PERIOD		**18.9**		29.0		46.8
Items that may be reclassified subsequently to profit or loss						
Foreign exchange translation differences	**4.6**		(39.4)		(45.2)	
Fair value movement on net investment hedges	**0.2**		-		0.4	
Fair value movement on cash flow hedges	**-**		0.1		0.2	
Tax relating to components of other comprehensive expense	**(1.3)**		6.2		7.6	
		3.5		(33.1)		(37.0)
Items that may not be reclassified subsequently to profit or loss						
Actuarial gain on retirement benefit obligations	**24.1**		0.2		22.3	
Movement on pension asset recognition restriction	**(24.0)**		0.6		(0.1)	
Release/(recognition) of additional pension liability	**-**		1.8		(19.9)	
Gain on equity instruments measured at fair value	**-**		-		6.7	
Tax relating to components of other comprehensive income/(expense)	**-**		(0.5)		(2.0)	
		0.1		2.1		7.0
OTHER COMPREHENSIVE INCOME/(EXPENSE) FOR THE PERIOD		**3.6**		(31.0)		(30.0)
TOTAL COMPREHENSIVE INCOME/(EXPENSE) FOR THE PERIOD		**22.5**		(2.0)		16.8
ATTRIBUTABLE TO:						
Owners of the Company	**23.7**		(0.9)		17.1	
Non-controlling interest	**(1.2)**		(1.1)		(0.3)	
		22.5		(2.0)		16.8

1 See note 1 for details of the prior period restatement.

GENUS PLC
CONDENSED CONSOLIDATED STATEMENT OF CHANGES IN EQUITY
For the six months ended 31 December 2021

	Note	Called up share capital £m	Share premium account £m	Own shares £m	Translation reserve £m	Hedging reserve £m	Retained earnings £m	Total £m	Non-controlling interest £m	Total equity £m
BALANCE AT 30 JUNE 2020		6.5	179.1	(0.1)	29.5	(0.2)	280.7	495.5	(1.0)	494.5
Foreign exchange translation differences, net of tax		–	–	–	(37.7)	–	–	(37.7)	0.2	(37.5)
Fair value movement on net investment hedges, net of tax		–	–	–	0.3	–	–	0.3	–	0.3
Fair value movement on cash flow hedges, net of tax		–	–	–	–	0.2	–	0.2	–	0.2
Gain on equity instruments measured at fair value, net of tax		–	–	–	–	–	5.0	5.0	–	5.0
Actuarial gain on retirement benefit obligations, net of tax		–	–	–	–	–	19.8	19.8	–	19.8
Movement on pension asset recognition restriction, net of tax		–	–	–	–	–	(0.1)	(0.1)	–	(0.1)
Recognition of additional pension liability, net of tax		–	–	–	–	–	(17.7)	(17.7)	–	(17.7)
Other comprehensive (expense)/income for the year		–	–	–	(37.4)	0.2	7.0	(30.2)	0.2	(30.0)
Profit/(loss) for the year		–	–	–	–	–	47.3	47.3	(0.5)	46.8
Total comprehensive (expense)/income for the year		–	–	–	(37.4)	0.2	54.3	17.1	(0.3)	16.8
Recognition of share-based payments, net of tax		–	–	–	–	–	4.9	4.9	–	4.9
Dividends	6	–	–	–	–	–	(19.5)	(19.5)	–	(19.5)
Adjustment arising from change in non-controlling interest and written put option		–	–	–	–	–	–	–	(0.2)	(0.2)
Issue of ordinary shares		0.1	–	–	–	–	–	0.1	–	0.1
BALANCE AT 30 JUNE 2021		6.6	179.1	(0.1)	(7.9)	–	320.4	498.1	(1.5)	496.6
Foreign exchange translation differences, net of tax		**–**	**–**	**–**	**3.5**	**–**	**–**	**3.5**	**(0.2)**	**3.3**
Fair value movement on net investment hedges, net of tax		**–**	**–**	**–**	**0.2**	**–**	**–**	**0.2**	**–**	**0.2**
Actuarial gains on retirement benefit obligations, net of tax		**–**	**–**	**–**	**–**	**–**	**18.8**	**18.8**	**–**	**18.8**
Movement on pension asset recognition restriction, net of tax		**–**	**–**	**–**	**–**	**–**	**(18.7)**	**(18.7)**	**–**	**(18.7)**
Other comprehensive income for the period		**–**	**–**	**–**	**3.7**	**-**	**0.1**	**3.8**	**(0.2)**	**3.6**
Profit/(loss) for the period		**–**	**–**	**–**	**–**	**–**	**19.9**	**19.9**	**(1.0)**	**18.9**
Total comprehensive income/(expense) for the period		**–**	**–**	**–**	**3.7**	**–**	**20.0**	**23.7**	**(1.2)**	**22.5**
Recognition of share-based payments, net of tax		**–**	**–**	**–**	**–**	**–**	**1.5**	**1.5**	**–**	**1.5**
Dividends	6	**–**	**–**	**–**	**–**	**–**	**(14.2)**	**(14.2)**	**–**	**(14.2)**
BALANCE AT 31 DECEMBER 2021		**6.6**	**179.1**	**(0.1)**	**(4.2)**	**–**	**327.7**	**509.1**	**(2.7)**	**506.4**

	Note	Called up share capital £m	Share premium account £m	Own shares £m	Translation reserve £m	Hedging reserve £m	Retained earnings £m	Total £m	Non-controlling interest £m	Total equity £m
BALANCE AT 30 JUNE 2020		6.5	179.1	(0.1)	29.5	(0.2)	280.7	495.5	(1.0)	494.5
Foreign exchange translation differences, net of tax		–	–	–	(33.3)	–	–	(33.3)	0.1	(33.2)
Fair value movement on net investment hedges, net of tax		–	–	–	–	–	–	–	–	–
Fair value movement on cash flow hedges, net of tax		–	–	–	–	0.1	–	0.1	–	0.1
Actuarial gain on retirement benefit obligations, net of tax		–	–	–	–	–	0.2	0.2	–	0.2
Movement on pension asset recognition restriction, net of tax		–	–	–	–	–	0.5	0.5	–	0.5
Recognition of additional pension liability, net of tax		–	–	–	–	–	1.4	1.4	–	1.4
Other comprehensive (expense)/income for the year		–	–	–	(33.3)	0.1	2.1	(31.1)	0.1	(31.0)
Profit/(loss) for the year (restated)[1]		–	–	–	–	–	30.2	30.2	(1.2)	29.0
Total comprehensive (expense)/income for the year		–	–	–	(33.3)	0.1	32.3	(0.9)	(1.1)	(2.0)
Recognition of share-based payments, net of tax		–	–	–	–	–	4.0	4.0	–	4.0
Dividends	6	–	–	–	–	–	(12.8)	(12.8)	–	(12.8)
Adjustment arising from change in non-controlling interest and written put option		–	–	–	–	–	–	–	(0.2)	(0.2)
BALANCE AT 31 DECEMBER 2020		6.5	179.1	(0.1)	(3.8)	(0.1)	304.2	485.8	(2.3)	483.5

1 See note 1 for details of the prior period restatement.

GENUS PLC
CONDENSED CONSOLIDATED BALANCE SHEET
As at 31 December 2021

	Note	**31 December 2021 £m**	(restated)[1] 31 December 2020 £m	30 June 2021 £m
ASSETS				
Goodwill		**102.2**	99.4	101.5
Other intangible assets	7	**55.4**	54.1	56.3
Biological assets	8	**288.2**	294.2	279.9
Property, plant and equipment	9	**142.2**	110.0	123.0
Interests in joint ventures and associates	10	**36.1**	28.4	34.1
Other investments		**15.9**	6.8	14.7
Other receivables	11	**1.8**	2.0	1.8
Deferred tax assets		**5.1**	3.3	8.0
TOTAL NON-CURRENT ASSETS		**646.9**	598.2	619.3
Inventories		**44.3**	35.0	37.0
Biological assets	8	**36.6**	38.2	39.6
Trade and other receivables	11	**118.1**	101.5	106.2
Cash and cash equivalents		**45.9**	50.2	46.0
Income tax receivable		**3.6**	2.9	2.6
Derivative financial assets	15	**0.6**	0.9	0.1
Asset held for sale		**0.2**	0.2	0.2
TOTAL CURRENT ASSETS		**249.3**	228.9	231.7
TOTAL ASSETS		**896.2**	827.1	851.0
LIABILITIES				
Trade and other payables		**(113.1)**	(92.5)	(110.3)
Interest-bearing loans and borrowings		**(10.6)**	(9.8)	(13.9)
Provisions		**(1.6)**	(3.7)	(1.3)
Deferred consideration		**(1.3)**	(1.0)	(1.6)
Obligations under leases		**(8.6)**	(9.0)	(9.0)
Tax liabilities		**(4.3)**	(6.5)	(6.4)
Derivative financial liabilities	15	**(1.2)**	(0.4)	–
TOTAL CURRENT LIABILITIES		**(140.7)**	(122.9)	(142.5)
Trade and other payables		**(1.3)**	(4.8)	(1.4)
Interest-bearing loans and borrowings		**(151.0)**	(105.0)	(109.4)
Retirement benefit obligations	14	**(8.8)**	(15.0)	(11.1)
Provisions		**(10.9)**	(10.9)	(11.1)
Deferred consideration		**(0.6)**	(0.4)	(0.5)
Deferred tax liabilities		**(50.9)**	(60.1)	(53.0)
Derivative financial liabilities	15	**(6.6)**	(5.9)	(6.1)
Obligations under leases		**(19.0)**	(18.6)	(19.3)
TOTAL NON-CURRENT LIABILITIES		**(249.1)**	(220.7)	(211.9)
TOTAL LIABILITIES		**(389.8)**	(343.6)	(354.4)
NET ASSETS		**506.4**	483.5	496.6
EQUITY				
Called up share capital		**6.6**	6.5	6.6
Share premium account		**179.1**	179.1	179.1
Own shares		**(0.1)**	(0.1)	(0.1)
Translation reserve		**(4.2)**	(3.8)	(7.9)
Hedging reserve		**-**	(0.1)	–
Retained earnings		**327.7**	304.2	320.4
EQUITY ATTRIBUTABLE TO OWNERS OF THE COMPANY		**509.1**	485.8	498.1
Non-controlling interest		**2.5**	2.8	3.6
Put option over non-controlling interest		**(5.2)**	(5.1)	(5.1)
TOTAL NON-CONTROLLING INTEREST		**(2.7)**	(2.3)	(1.5)
TOTAL EQUITY		**506.4**	483.5	496.6

1 See note 1 for details of the prior period restatement.

GENUS PLC
CONDENSED CONSOLIDATED GROUP STATEMENT OF CASH FLOWS
For the six months ended 31 December 2021

	Note	**Six months ended 31 December 2021 £m**	(restated)[1] Six months ended 31 December 2020 £m	Year ended 30 June 2021 £m
NET CASH FLOW FROM OPERATING ACTIVITIES	13	**11.6**	35.9	67.5
CASH FLOWS FROM INVESTING ACTIVITIES				
Dividends received from joint ventures and associates		**–**	–	4.1
Joint venture loan payment		**–**	–	(0.4)
Investment in joint venture and associate		**(1.1)**	(0.4)	(2.4)
Disposal of joint venture and associate		**0.1**	–	–
Acquisition of trade and assets		**(0.2)**	–	(6.9)
Acquisition of investments		**(0.1)**	–	(0.9)
Payment of deferred consideration		**(0.5)**	(6.6)	(6.7)
Purchase of property, plant and equipment		**(24.1)**	(9.5)	(28.7)
Purchase of intangible assets		**(3.7)**	(0.2)	(5.1)
Proceeds from sale of property, plant and equipment		**0.1**	0.6	0.3
NET CASH USED IN INVESTING ACTIVITIES		**(29.5)**	(16.1)	(46.7)
CASH FLOWS FROM FINANCING ACTIVITIES				
Drawdown of borrowings		**62.8**	148.3	195.1
Repayment of borrowings		**(25.4)**	(138.0)	(176.1)
Payment of lease liabilities		**(5.2)**	(5.0)	(11.7)
Equity dividends paid		**(14.2)**	(12.8)	(19.5)
Dividend to non-controlling interest		**–**	(0.2)	(0.2)
Debt issue costs		**(0.6)**	(1.9)	(1.9)
Issue of ordinary shares		**–**	–	0.1
NET CASH FROM/(USED IN) FINANCING ACTIVITIES		**17.4**	(9.6)	(14.2)
NET (DECREASE)/INCREASE IN CASH AND CASH EQUIVALENTS		**(0.5)**	10.2	6.6
Cash and cash equivalents at beginning of period		**46.0**	41.3	41.3
Net (decrease)/increase in cash and cash equivalents		**(0.5)**	10.2	6.6
Effect of exchange rate fluctuations on cash and cash equivalents		**0.4**	(1.3)	(1.9)
TOTAL CASH AND CASH EQUIVALENTS AT END OF PERIOD		**45.9**	50.2	46.0

1 See note 1 for details of the prior period restatement.

GENUS PLC
ANALYSIS OF NET DEBT
For the six months ended 31 December 2021

	At 1 July 2021 £m	Net cash flows £m	Foreign exchange £m	Non-cash movement £m	At 31 December 2021 £m
Cash and cash equivalents	**46.0**	**(0.5)**	**0.4**	**-**	**45.9**
Interest-bearing loans - current	**(13.9)**	**3.8**	**(0.1)**	**(0.4)**	**(10.6)**
Lease liabilities - current	**(9.0)**	**5.2**	**(0.1)**	**(4.7)**	**(8.6)**
	(22.9)	**9.0**	**(0.2)**	**(5.1)**	**(19.2)**
Interest-bearing loans - non-current	**(109.4)**	**(40.6)**	**(1.0)**	**-**	**(151.0)**
Lease liabilities - non-current	**(19.3)**	**-**	**(0.2)**	**0.5**	**(19.0)**
	(128.7)	**(40.6)**	**(1.2)**	**0.5**	**(170.0)**
Total debt financing	**(151.6)**	**(31.6)**	**(1.4)**	**(4.6)**	**(189.2)**
Net debt	**(105.6)**	**(32.1)**	**(1.0)**	**(4.6)**	**(143.3)**

	At 1 July 2020 £m	Net cash flows £m	Foreign exchange £m	Non-cash movement £m	At 31 December 2020 £m
Cash and cash equivalents	41.3	10.2	(1.3)	-	50.2
Interest-bearing loans - current	(9.2)	(0.7)	0.6	(0.5)	(9.8)
Lease liabilities - current	(10.0)	5.0	0.5	(4.5)	(9.0)
	(19.2)	4.3	1.1	(5.0)	(18.8)
Interest-bearing loans - non-current	(103.6)	(7.7)	6.3	-	(105.0)
Lease liabilities - non-current	(21.1)	-	1.0	1.5	(18.6)
	(124.7)	(7.7)	7.3	1.5	(123.6)
Total debt financing	(143.9)	(3.4)	8.4	(3.5)	(142.4)
Net debt	(102.6)	6.8	7.1	(3.5)	(92.2)

Net debt is defined as the total of cash and cash equivalents, interest-bearing loans, unamortised debt issue costs and lease obligations.

GENUS PLC
NOTES TO THE CONDENSED SET OF FINANCIAL STATEMENTS
For the six months ended 31 December 2021

1. BASIS OF PREPARATION

The unaudited Condensed Set of Financial Statements for the six months ended 31 December 2021:

- were prepared in accordance with International Accounting Standard 34 '*Interim Financial Reporting*' ('IAS 34') and thereby have been prepared in conformity with the requirements of the Companies Act 2006 and the International Financial Reporting Standards ('IFRSs') adopted in the United Kingdom;
- are presented on a condensed basis as permitted by IAS 34 and therefore do not include all disclosures that would otherwise be required in a full set of financial statements; these should be read, therefore, in conjunction with the Genus plc Annual Report 2021;
- includes all adjustments, consisting of normal recurring adjustments, necessary for a fair statement of the results for the periods presented;
- do not constitute statutory accounts within the meaning of section 435 of the Companies Act 2006; and
- were approved by the Board of Directors on 23 February 2022.

The information relating to the year ended 30 June 2021 is an extract from the published financial statements for that year, which have been delivered to the Registrar of Companies. The auditor's report on those financial statements was not qualified and did not contain statements under section 498(2) or (3) of the Companies Act 2006.

The unaudited Condensed Set of Financial Statements for the six months ended 31 December 2021 has not been reviewed by our Auditor.

The unaudited condensed set of financial statements have been prepared on the basis of the accounting policies set out in the Annual Report 2021. The Genus plc Annual Report 2021 (a copy of which is available on the Genus plc website at www.genusplc.com) sets out on pages 46-48 a number of risks and uncertainties that might impact upon the performance of the Group. There has been no material change to the principal risks that might affect the performance of the Group in the current financial period.

The preparation of the Condensed Set of Financial Statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the balance sheet date, and the reported amounts of revenue and expenses during the period. Actual results could vary from these estimates. The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period or in the period of revision and future periods if the revision affects both current and future periods.

Functional and presentational currency
The principal exchange rates were as follows:

	Average			Closing		
	Six months ended 31 December 2021	Six months ended 31 December 2020	Year ended 30 June 2021	**31 December 2021**	31 December 2020	30 June 2021
US Dollar/£	**1.36**	1.32	1.36	**1.35**	1.37	1.38
Euro/£	**1.17**	1.11	1.13	**1.19**	1.12	1.17
Brazilian Real/£	**7.40**	7.18	7.33	**7.54**	7.10	6.87
Mexican Peso/£	**27.90**	28.07	28.15	**27.76**	27.16	27.57
Chinese Yuan/£	**8.73**	8.90	8.94	**8.60**	8.92	8.93
Russian Rouble/£	**99.50**	100.37	102.04	**101.20**	101.11	101.10

Change in accounting policy - Software-as-a-service (SaaS) arrangements
During 2021, the Company changed its accounting policy related to the capitalisation of certain software costs; following the IFRIC Interpretation Committee's agenda decision published in April 2021 and relating to the capitalisation of costs of configuring or customising application software under 'Software as a Service' (SaaS) arrangements.

The Group's accounting policy was historically to capitalise costs directly attributable to the configuration and customisation of SaaS arrangements as intangible assets in the Balance Sheet, irrespective of whether the services were performed by the SaaS supplier or third party. Following the adoption of the above IFRIC agenda guidance, current SaaS arrangements were identified and assessed to determine if the Group has control of the software. For those arrangements where we did not have control of the developed software, to the extent that the services were performed by third parties, the Group derecognised the intangible asset previously capitalised. Amounts paid to the supplier in advance of the commencement of the service period, including for configuration or customisation, were treated as a prepayment.

Accordingly, in the FY21 Annual report the prior period Balance Sheets at 30 June 2020 and 30 June 2019 were restated in accordance with IAS 8, and, in accordance with IAS 1 (revised). The full impact of the change in accounting policy is detailed in note 2 - basis of preparation in the Genus plc Annual Report 2021.

For the six months ended 31 December 2020, this change in accounting policy has led to a £1.3m increase in operating expenses within administrative expenses, impacting the reported operating profit, basic and diluted earnings per share, statutory and effective tax rate and statutory cashflow, reducing operating cashflow and reducing cash outflow in respect of investing activities. No impact on the overall increase in cash and cash equivalent for the period.

New standards and interpretations
In the current period, the Group has applied a number of amendments to IFRS issued by the International Accounting Standards Board that are mandatorily effective for an accounting period that begins after 1 January 2021 and have been implemented with effect from 1 July 2021. These are:
> Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16 -' Interest Rate Benchmark Reform — Phase 2'; and
> Amendment to IFRS 16 - ' COVID-19-Related Rent Concessions beyond 30 June 2021'.

Their addition has not had any material impact on the disclosures, or amounts reported in the Group Financial Statements.

New standards and interpretations not yet adopted
At the date of the interim report, the following standards and interpretations which have not been applied in the report were in issue but not yet effective (and in some cases had not yet been adopted by the UK). The Group will continue to assess the impact of these amendments prior to their adoption. These are:

> Amendments to IAS 1 - ' Classification of Liabilities as Current or Non-Current';
> Amendments to IAS 16 - ' Property, Plant and Equipment — Proceeds before Intended Use';
> Annual Improvements 2018-2020 Cycle;
> Amendments to IAS 37 - ' Onerous Contracts — Cost of Fulfilling a Contract';
> Amendments to IAS 1 and IFRS Practice Statement 2 - ' Disclosure of Accounting Policies';
> Amendments to IAS 12 - ' Deferred Tax related to Assets and Liabilities arising from a Single Transaction'; and
> Amendments to IAS 8- ' Definition of Accounting Estimates'.

Going Concern
In assessing the appropriateness of adopting the going concern basis of preparing the financial statements, the Board have considered:
> Genus's Budget and Strategic Plan which forms management's best estimate of the future performance and position of the Group.
> Genus's credit facility agreement which consists of a £150m multi-currency RCF, a 125m US dollar RCF and a 20m US dollar bond and guarantee facility. The term of the facility is for four years to August '24 having already exercised the first extension option in August '21. The facility also includes a second extension option to August '25.
> The facility also includes an uncommitted £100m accordion option which can be requested on a maximum of three occasions over the lifetime of the facility to fund the Group's business development plans, and
> The potential use of mitigating actions including reduction in dividends and postponing certain capital spend and investments.

As part of the Directors' consideration of the appropriateness of adopting the going concern basis in preparing the financial statements, the Board considered several key factors, including our business model and our strategic framework. In addition, all principal risks identified by the Group were considered in a downside scenario within the going concern assessment with specific focus paid to those that could reasonably have a material impact within our outlook period, including:
> Growing in emerging markets, which we have modelled through reductions to short term growth expectations, particularly in China.
> Developing products with competitive advantage, modelled through reductions to short term growth expectations as a result of failing to produce best genetics for our customers or to secure elite genetics.
> Managing agricultural market and commodity prices volatility; modelled through reductions in price expectations, particularly in China; and
> Ensuring biosecurity or continuity of supply, which is modelled through one off impacts of disease outbreaks and border closures.

We have considered the position if each of the identified principal risks materialised individually and where multiple risks occur in parallel. In addition, we have overlaid this downside scenario, net of mitigating actions. Based on this assessment our headroom under these sensitivities, including our mitigating actions, remain adequate and the Directors have a reasonable expectation that the Group has adequate resources to continue its operational existence for the foreseeable future and for a period of at least 12 months from the date of this report. Accordingly, the Directors continue to adopt and consider appropriate the going concern basis in preparing the half-yearly report and the Condensed Set of Financial Statements.

Alternative Performance Measures ('APMs')
In reporting financial information, the Group presents APMs, which are not defined or specified under the requirements of IFRS and which are not considered to be a substitute for, or superior to, IFRS measures.

The Group believes that these APMs provide stakeholders with additional helpful information on the performance of the business. The APMs are consistent with how we plan our business performance and report on it in our internal management reporting to the Board and GELT. Some of these measures are also used for the purpose of setting remuneration targets.

For a full list of all APMs please see the Alternative Performance Measures Glossary section at the end of this release.

2. SEGMENTAL INFORMATION

IFRS 8 'Operating Segments' requires operating segments to be identified on the basis of internal reports about components of the Group that are regularly reviewed by the Chief Executive and the Board, to allocate resources to the segments and to assess their performance. The Group's operating and reporting structure comprises three operating segments: Genus PIC, Genus ABS and Genus Research and Development. These segments are the basis on which the Group reports its segmental information. The principal activities of each segment are as follows:
> Genus PIC – our global porcine sales business;
> Genus ABS – our global bovine sales business; and
> Genus Research and Development – our global spend on research and development.

A segmental analysis of revenue, operating profit, segment assets and liabilities and is provided below. We do not include our adjusting items in the income statement segments, as we believe these do not reflect the underlying performance of the segments. The accounting policies of the reportable segments are the same as the Group's accounting policies, as described in the Financial Statements.

Revenue

	Six months ended 31 December 2021 £m	Six months ended 31 December 2020 £m	Year ended 30 June 2021 £m
Genus PIC	**143.5**	152.9	315.6
Genus ABS	**130.9**	129.0	250.1
Genus Research and Development			
Porcine product development	**6.0**	3.0	7.3
Bovine product development	**0.8**	0.8	1.3
Gene editing	**–**	–	–
Other research and development	**–**	–	–
	6.8	3.8	8.6
	281.2	285.7	574.3

Adjusted operating profit by segment is set out below and reconciled to the Group's adjusted operating profit. A reconciliation of adjusted operating profit to profit for the period is shown on the face of the Condensed Consolidated Income Statement.

Adjusted operating profit

	Six months ended 31 December 2021 £m	(restated)[1] Six months ended 31 December 2020 £m	Year ended 30 June 2021 £m
Genus PIC	**52.2**	63.0	122.9
Genus ABS	**22.1**	18.7	36.4
Genus Research and Development			
Porcine product development	**(10.3)**	(10.3)	(21.9)
Bovine product development	**(10.4)**	(9.3)	(19.6)
Gene editing	**(3.6)**	(3.7)	(7.6)
Other research and development	**(7.0)**	(5.7)	(13.3)
	(31.3)	(29.0)	(62.4)
Adjusted segment operating profit	**43.0**	52.7	96.9
Central	**(8.0)**	(8.9)	(20.0)
Adjusted operating profit	**35.0**	43.8	76.9

1 See note 1 for details of the prior period restatement.

Our business is not highly seasonal and our customer base is diversified, with no individual customer generating more than 2% of revenue.

Exceptional items of £1.7m credit (2020: £5.1m expense) relate to Genus ABS (£1.9m expense) and our central segment (£3.6m credit). Note 3 provides details of these exceptional items.

We consider share-based payment expenses on a Group-wide basis and do not allocate them to reportable segments.

Other segment information

	Segment assets			Segment liabilities		
	31 December 2021 £m	(restated)[1] 31 December 2020 £m	30 June 2021 £m	**31 December 2021 £m**	31 December 2020 £m	30 June 2021 £m
Genus PIC	**253.8**	253.9	261.5	**(63.3)**	(52.7)	(57.4)
Genus ABS	**232.9**	198.5	203.1	**(77.7)**	(57.3)	(56.0)
Genus Research and Development						
Research	**18.3**	6.4	17.8	**(5.0)**	(3.7)	(6.1)
Porcine product development	**236.0**	216.7	213.6	**(57.8)**	(51.9)	(55.0)
Bovine product development	**119.0**	130.9	125.0	**(21.5)**	(28.9)	(25.5)
	373.3	354.0	356.4	**(84.3)**	(84.5)	(86.6)
Segment total	**860.0**	806.4	821.0	**(225.3)**	(194.5)	(200.0)
Central	**36.2**	20.7	30.0	**(164.5)**	(149.1)	(154.4)
Total	**896.2**	827.1	851.0	**(389.8)**	(343.6)	(354.4)

1 See note 1 for details of the prior period restatement.

Revenue by type

	Six months ended 31 December 2021 £m	Six months ended 31 December 2020 £m	Year ended 30 June 2021 £m
Genus PIC	**77.4**	82.7	172.6
Genus ABS	**126.5**	125.5	242.2
Genus Research and Development	**6.8**	3.8	8.6
Sale of animals, semen, embryos and ancillary products and services	**210.7**	212.0	423.4
Genus PIC	**66.1**	70.2	143.0
Genus ABS	**0.5**	-	0.6
Genus Research and Development	**–**	-	–
Royalties	**66.6**	70.2	143.6
Genus PIC	**–**	–	–
Genus ABS	**3.9**	3.5	7.3
Genus Research and Development	**–**	-	–
Consulting services	**3.9**	3.5	7.3
Total revenue	**281.2**	285.7	574.3

Revenue from contracts with customers

The Group's revenue is analysed below by the timing at which it is recognised.

	Six months ended 31 December 2021 £m	Six months ended 31 December 2020 £m	Year ended 30 June 2021 £m
Genus PIC	**142.0**	151.5	312.8
Genus ABS	**119.3**	119.1	229.1
Genus Research and Development	**6.8**	3.8	8.6
Recognised at a point in time	**268.1**	274.4	550.5
Genus PIC	**1.5**	1.4	2.8
Genus ABS	**11.6**	9.9	21.0
Genus Research and Development	**–**	–	–
Recognised over time	**13.1**	11.3	23.8
Total revenue	**281.2**	285.7	574.3

3. EXCEPTIONAL ITEMS

Operating credit/(expense)	**Six months ended 31 December 2021 £m**	Six months ended 31 December 2020 £m	Year ended 30 June 2021 £m
Litigation and damages	**(1.8)**	(1.7)	(2.5)
Acquisition and integration	**(0.1)**	(0.1)	(0.3)
Pension related	**-**	(3.3)	(2.3)
Other	**3.6**	-	1.8
	1.7	(5.1)	(3.3)

Litigation and damages
Litigation includes legal fees and related costs of £1.8m (2020: £1.7m) related to the actions between ABS Global, Inc. and certain affiliates ('ABS') and Inguran, LLC and certain affiliates (aka STGenetics ('ST')).

Material litigation activities during the period ended 31 December 2021
In July 2014, ABS launched a legal action against ST in the US District Court for the Western District of Wisconsin and initiated anti-trust proceedings which ultimately enabled the launch of ABS's IntelliGen sexing technology in the US market ('ABS I'). In June 2017, ST filed proceedings against ABS in the same District Court, where ST alleged that ABS infringed seven patents and asserted trade secret and breach of contract claims ('ABS II'). The ABS I and ABS II proceedings in the periods before the year ended 30 June 2021 are more fully described in the Notes to the Financial Statements in previous Annual Reports. ABS has sought judgments as a matter of law ('JMOL') in relation to the invalidity of all three of the patents considered in ABS II, JMOLs in relation to the non-infringement of two of those patents, and a reduction in damages awarded by the jury. The parties await the court's decision.

On 29 January 2020, ST filed a new US complaint against ABS ('ABS III'). ABS has prepared and filed a response to the ABS III complaint, including a motion to dismiss, on the basis that all these issues were fully resolved in either the ABS I or ABS II litigations.

On 10 March 2020, the USPTO issued patent 10,583,439 (the ''439 patent'), and subsequently ST asked the court for permission to file a supplemental complaint in ABS III asserting infringement of the '439 patent. ABS believes that ST's claim for infringement falls short and has filed an opposition to ST's request. On 15 April 2020, ST filed a new complaint ('ABS IV'), asserting the same claim of infringement of the '439 patent alleged in its supplemental complaint and then moved to consolidate the ABS IV and ABS III litigation. ABS has opposed this action and has filed a motion for summary dismissal. On 23 June 2020, the USPTO issued patent 10,689,210 (the ''210 patent'), and on 6 July 2020, ST sought a second supplement of ABS III by adding a claim of '210 patent infringement. ABS has opposed this action. The parties await the court's decision.

On 26 October 2020 and 10 December 2020, ABS filed Inter Partes Reviews ('IPR') against the '439 and '210 patents with the USPTO. On 4 May 2021, the Patent Trial and Appeal Board ('PTAB') instituted the '439 patent IPR, finding a likelihood of success on all challenged claims. The hearing in the '439 patent IPR was completed on 2 February 2022 and the parties await the Board's decision. On 7 June 2021, PTAB declined to institute the '210 patent IPR without examining the merits of the case. PTAB's decision was based on its exercise of its discretion, concluding that the prior art referenced in the IPR was cited during the initial examination, therefore ABS could not demonstrate the examiner made a material error, notwithstanding that the relevant prior art was not addressed by the examiner. A rehearing application was rejected by PTAB.

On 20 December 2021, the Wisconsin Federal Court reached a decision on the ABS III and IV motions, granting ABS's motion to dismiss all claims relating to US patent 8,206,987 and denying ST's motion to amend ABS III to add the '439 and '210 patents. The court dismissed ABS III in its entirety and entered judgment favour of ABS. In relation to ABS IV, the court stayed the case pending completion of the '439 IPR and granted ST leave to amend ABS IV to add the '210 patent. ST has appealed this decision.

Indian Litigation: In September 2019, ST also filed parallel patent infringement proceedings against ABS in India, alleging infringement of the Indian patent 240790 (''790 patent'). The '790 patent is the equivalent of the US patent 7,311,476 asserted in ABS II. ABS had already sought the revocation of the '790 patent in April 2017 before the Indian Patent Office and has now consolidated the revocation petition as a counterclaim in the Indian court proceedings. Progress of these proceedings has been delayed due to the impact of the pandemic.

Acquisitions and integration
During the period, £0.1m (2020: £0.1m) of expenses were incurred in relation to acquisitions during the period.

Other
Included within Other is a £3.6m credit relating to non-refundable cash received for the assignment of rights to a legacy legal claim against the Instituto Brasileiro de Café (IBC) in Brazil. The claim was for reimbursement of unpaid amounts plus interest in respect of coffee shipments made by a group subsidiary to the IBC in the 1990s, when the subsidiary was part of the Dalgety Group. Under the assignment agreement, the subsidiary has assigned any future receipt from the legal claim to an Investment Fund in Brazil, in exchange for an immediate cash amount and a sliding scale earn out payment which decreases over the duration of the period to the eventual receipt of proceeds by the assignee. No amount has been recognised in respect of the earn out payment, as the duration to the eventual settlement of the legal claim cannot be estimated with any certainty.

Included in the prior year was a £2.0m credit resulting from a share forfeiture exercise, in accordance with the Articles of Association. As a three-year liability period ended during the year, the related provision was no longer needed and was therefore released.

Pension related
In the prior year, on 20 November 2020, the High Court ruled that individual transfer payments made since 17 May 1990 would need to be equalised for the effects of Guaranteed Minimum Pension ('GMP'). This judgment followed on from the previous judgment on 26 October 2018, where the High Court ruled that schemes had a legal obligation to pay benefits allowing for GMP equalisation, resulting in an additional liability being recognised. The previous judgment had not considered historic transfer values. Genus's pension schemes were also affected by this ruling, resulting in an aggregate past service charge of £2.3m in the prior period, being £0.9m for the Dalgety Pension Fund ('DPF') and £1.4m for the Milk Pension Fund ('MPF').

4. NET FINANCE COSTS

	Six months ended 31 December 2021 £m	Six months ended 31 December 2020 £m	Year ended 30 June 2021 £m
Interest payable on bank loans and overdrafts	**(1.6)**	(1.4)	(2.8)
Amortisation of debt issue costs	**(0.4)**	(0.5)	(0.9)
Unwinding of discount put options	**(0.3)**	(0.3)	(0.6)
Net interest cost in respect of pension scheme liabilities	**(0.1)**	(0.2)	(0.3)
Interest on lease liabilities	**(0.4)**	(0.4)	(0.8)
Total interest expense	**(2.8)**	(2.8)	(5.4)
Interest income on bank deposits	**0.1**	0.2	0.4
Total interest income	**0.1**	0.2	0.4
Net finance costs	**(2.7)**	(2.6)	(5.0)

5. TAXATION AND DEFERRED TAXATION

Income tax expense

	Six months ended 31 December 2021 £m	Six months ended 31 December 2020 £m	Year ended 30 June 2021 £m
Current tax	**6.6**	8.2	19.6
Deferred tax	**(1.1)**	0.2	(10.6)
Total income tax expense	**5.5**	8.4	9.0

The tax charge for the period of £5.5m (2020: £8.4m) on the statutory profit represents an effective tax rate of 22.5% (2020: 22.5%), including a tax benefit from the exceptional credit receipt of £3.6m which is taxed at a lower tax rate of 14%, offset by the reduced agricultural relief available in China as explained further below.

The tax charge on adjusted profits for the period is £9.3m (2020: £11.1m), which represents a tax rate on adjusted profits of 25.1% (2020: 23.6%). The Group tax rate has increased by approximately 150 basis points due to the reduced share of Group profits arising in China which benefit from the availability of tax relief on owned production agricultural activities. The lower proportion of Group profits arising in China has resulted from a decrease in PIC China's operating profit due to a decrease in demand for breeding animals following the downturn in the Chinese porcine market.

There is a deferred tax liability at the period end of £50.9m (2020: £60.1m) which mainly relates to the recognition at fair value of biological assets and intangible assets arising on acquisition and a deferred tax asset of £5.1m (2020: £3.3m) which mainly relates to future tax deductions in respect of pension scheme liabilities, losses and share scheme awards.

6. DIVIDENDS

Amounts recognised as distributions to equity holders in the period

	Six months ended 31 December 2021 £m	Six months ended 31 December 2020 £m	Year ended 30 June 2021 £m
Final dividend			
Final dividend for the year ended 30 June 2021 of 21.7 pence per share	**14.2**	–	–
Final dividend for the year ended 30 June 2020 of 19.7 pence per share	**–**	12.8	12.8
Interim dividend			
Interim dividend for the year ended 30 June 2021 of 10.3 pence per share	**–**	–	6.7
	14.2	12.8	19.5

The final dividend for the year ended 30 June 2021 was approved at the Company Annual General Meeting on 24 November 2021 and paid on 10 December 2021.

On 23 February 2022, the Directors proposed an interim dividend of 10.3 pence per share payable on 31 March 2022.

7. OTHER INTANGIBLE ASSETS

	Porcine and bovine genetics technology £m	Brands, multiplier contracts and customer relationships £m	Separately identified acquired intangible assets £m	Software £m	Assets under construction £m	IntelliGen £m	Patents, licences and other £m	Total £m
Cost								
Balance at 1 July 2020	52.0	85.9	137.9	18.4	2.0	25.4	4.4	188.1
Additions	–	–	–	0.4	3.8	0.9	–	5.1
Acquisition	–	3.7	3.7	–	–	–	–	3.7
Disposals	–	–	–	(1.1)	–	–	–	(1.1)
Transfers	–	–	–	3.1	(3.1)	–	–	–
Effect of movements in exchange rates	(0.3)	(8.0)	(8.3)	(0.8)	–	(2.7)	(0.1)	(11.9)
Balance at 30 June 2021	51.7	81.6	133.3	20.0	2.7	23.6	4.3	183.9
Additions	**–**	**–**	**–**	**0.1**	**4.1**	**–**	**–**	**4.2**
Acquisition	**–**	**0.3**	**0.3**	**–**	**–**	**–**	**–**	**0.3**
Transfers	**–**	**–**	**–**	**2.5**	**(2.5)**	**–**	**–**	**–**
Effect of movements in exchange rates	**(0.3)**	**1.1**	**0.8**	**0.1**	**–**	**0.5**	**–**	**1.4**
Balance at 30 December 2021	**51.4**	**83.0**	**134.4**	**22.7**	**4.3**	**24.1**	**4.3**	**189.8**
Amortisation and impairment losses								
Balance at 1 July 2020	33.2	68.2	101.4	13.0	–	6.9	3.9	125.2
Disposals	–	–	–	(0.6)	–	–	–	(0.6)
Amortisation for the period	2.8	4.6	7.4	1.4	–	2.2	0.1	11.1
Effect of movements in exchange rates	–	(6.6)	(6.6)	(0.8)	–	(0.7)	–	(8.1)
Balance at 30 June 2021	36.0	66.2	102.2	13.0	–	8.4	4.0	127.6
Disposals	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Amortisation for the period	**1.4**	**2.4**	**3.8**	**0.7**	**–**	**1.2**	**0.1**	**5.8**
Effect of movements in exchange rates	**(0.2)**	**0.9**	**0.7**	**0.1**	**–**	**0.2**	**–**	**1.0**
Balance at 31 December 2021	**37.2**	**69.5**	**106.7**	**13.8**	**–**	**9.8**	**4.1**	**134.4**
Carrying amounts								
At 31 December 2021	**14.2**	**13.5**	**27.7**	**8.9**	**4.3**	**14.3**	**0.2**	**55.4**
At 30 June 2021	15.7	15.4	31.1	7.0	2.7	15.2	0.3	56.3

Included within brands, multiplier contracts and customer relationships are carrying amounts for brands of £0.6m (30 June 2021: £0.7m), multiplier contracts of £0.2m (30 June 2021: £0.3m) and customer relationships of £12.7m (30 June 2021: £14.4m).

Included within the software class of assets is £7.3m (30 June 2021: £5.4m) and included in assets in the course of construction is £0.7m (30 June 2021: £1.1m) that relate to the ongoing development costs of GenusOne, our single global enterprise system.

8. BIOLOGICAL ASSETS

Fair value of biological assets	Bovine £m	Porcine £m	Total £m
Balance at 1 July 2021	**92.0**	**227.5**	**319.5**
Increases due to purchases	**10.1**	**76.5**	**86.6**
Decreases attributable to sales	**–**	**(137.3)**	**(137.3)**
Decrease due to harvest	**(9.4)**	**(12.7)**	**(22.1)**
Changes in fair value less estimated sale costs	**(5.0)**	**76.8**	**71.8**
Effect of movements in exchange rates	**1.6**	**4.7**	**6.3**
Balance at 31 December 2021	**89.3**	**235.5**	**324.8**
Non-current biological assets	**89.3**	**198.9**	**288.2**
Current biological assets	**–**	**36.6**	**36.6**
Balance at 31 December 2021	**89.3**	**235.5**	**324.8**
Balance at 1 July 2020	107.2	242.7	349.9
Increases due to purchases	5.9	57.4	63.3
Decreases attributable to sales	–	(111.6)	(111.6)
Decrease due to harvest	(11.1)	(10.7)	(21.8)
Changes in fair value less estimated sale costs	3.9	77.4	81.3
Effect of movements in exchange rates	(9.0)	(19.7)	(28.7)
Balance at 31 December 2020	96.9	235.5	332.4
Non-current biological assets	96.9	197.3	294.2
Current biological assets	–	38.2	38.2
Balance at 31 December 2020	96.9	235.5	332.4
Balance at 1 July 2020	107.2	242.7	349.9
Increases due to purchases	15.2	134.8	150.0
Decreases attributable to sales	–	(223.0)	(223.0)
Decrease due to harvest	(24.4)	(21.4)	(45.8)
Business combination	-	0.3	0.3
Changes in fair value less estimated sale costs	3.9	118.4	122.3
Effect of movements in exchange rates	(9.9)	(24.3)	(34.2)
Balance at 30 June 2021	92.0	227.5	319.5
Non-current biological assets	92.0	187.9	279.9
Current biological assets	–	39.6	39.6
Balance at 30 June 2021	92.0	227.5	319.5

Bovine biological assets include £7.1m (2020: £8.2m) representing the fair value of bulls owned by third parties but managed by the Group, net of expected future payments to such third parties, which are therefore treated as assets held under finance leases.

There were no movements in the carrying value of the bovine biological assets in respect of sales or other changes during the period.

A risk-adjusted rate of 9.5% (2020: 8.8%) has been used to discount future net cash flows from the sale of bull semen.

Decreases due to harvest represent the semen extracted from the biological assets. Inventories of such semen are shown as biological asset harvest.

In porcine, included in increases due to purchases is the aggregate increase arising during the period on initial recognition of biological assets in respect of multiplier purchases, other than parent gilts, of £39.5m (2020: £23.4m).

Decreases attributable to sales during the period of £137.3m (2020: £111.6m) include £38.0m (2020: £34.7m) in respect of the reduction in fair value of the retained interest in the genetics of animals, other than parent gilts, transferred under royalty contracts.

Also included is £58.2m (2020: £46.0m) relating to the fair value of the retained interest in the genetics in respect of animals, other than parent gilts, sold to customers under royalty contracts in the period.

Total revenue in the period, including parent gilts, includes £104.1m (2020: £109.1m) in respect of these contracts, comprising £38.0m (2020: £38.9m) on initial transfer of animals and semen to customers and £66.1m (2020: £70.2m) in respect of royalties received.

A risk-adjusted rate of 9.3% (2020: 8.8%) has been used to discount future net cash flows from the expected output of the pure line porcine herds. The number of future generations which have been taken into account is seven (2020: seven) and their estimated useful lifespan is 1.4 years (2020: 1.4 years).

Six months ended 31 December 2021

	Bovine £m	**Porcine £m**	**Total £m**
Net IAS 41 valuation movement on biological assets[1]			
Changes in fair value of biological assets	**(5.0)**	**76.8**	**71.8**
Inventory transferred to cost of sales at fair value	**(4.2)**	**(12.7)**	**(16.9)**
Biological assets transferred to cost of sales at fair value	**–**	**(61.7)**	**(61.7)**
	(9.2)	**2.4**	**(6.8)**
Fair value movement in related financial derivative	**–**	**-**	**-**
	(9.2)	**2.4**	**(6.8)**

Six months ended 31 December 2020

	Bovine £m	Porcine £m	Total £m
Net IAS 41 valuation movement on biological assets[1]			
Changes in fair value of biological assets	3.9	77.4	81.3
Inventory transferred to cost of sales at fair value	(10.5)	(10.7)	(21.2)
Biological assets transferred to cost of sales at fair value	–	(56.4)	(56.4)
	(6.6)	10.3	3.7
Fair value movement in related financial derivative	–	(0.2)	(0.2)
	(6.6)	10.1	3.5

Year ended 30 June 2021

	Bovine £m	Porcine £m	Total £m
Net IAS 41 valuation movement on biological assets[1]			
Changes in fair value of biological assets	3.9	118.4	122.3
Inventory transferred to cost of sales at fair value	(21.1)	(21.4)	(42.5)
Biological assets transferred to cost of sales at fair value	–	(90.0)	(90.0)
	(17.2)	7.0	(10.2)
Fair value movement in related financial derivative	–	(0.6)	(0.6)
	(17.2)	6.4	(10.8)

1 This represents the difference between operating profit prepared under IAS 41 and operating profit prepared under historical cost accounting, which forms part of the reconciliation to adjusted operating profit (see APMs).

9. PROPERTY, PLANT AND EQUIPMENT

	Land and buildings £m	Plant, motor vehicles and equipment £m	Assets under construction £m	Total owned assets £m	Land and buildings £m	Plant, motor vehicles and equipment £m	Total right-of-use assets £m	Total £m
Cost or deemed cost								
Balance at 1 July 2020	67.9	87.8	8.2	163.9	21.9	24.0	45.9	209.8
Additions	1.1	5.9	22.3	29.3	2.3	8.1	10.4	39.7
Business combination	–	0.2	–	0.2	–	–	–	0.2
Transfers	4.3	3.5	(7.8)	–	–	–	–	–
Disposals	(0.3)	(2.1)	–	(2.4)	(1.9)	(4.7)	(6.6)	(9.0)
Effect of movements in exchange rates	(6.4)	(7.3)	(0.6)	(14.3)	(1.6)	(1.4)	(3.0)	(17.3)
Balance at 30 June 2021	66.6	88.0	22.1	176.7	20.7	26.0	46.7	223.4
Additions	**–**	**1.5**	**24.5**	**26.0**	**1.7**	**2.5**	**4.2**	**30.2**
Transfers	**11.5**	**8.1**	**(19.6)**	**–**	**–**	**–**	**–**	**–**
Disposals	**(0.5)**	**(0.5)**	**–**	**(1.0)**	**(0.2)**	**(6.1)**	**(6.3)**	**(7.3)**
Effect of movements in exchange rates	**1.2**	**1.1**	**(0.2)**	**2.1**	**0.2**	**0.2**	**0.4**	**2.5**
Balance at 31 December 2021	**78.8**	**98.2**	**26.8**	**203.8**	**22.4**	**22.6**	**45.0**	**248.8**
Depreciation and impairment losses								
Balance at 1 July 2020	24.3	53.1	–	77.4	4.4	10.1	14.5	91.9
Depreciation for the year	3.2	9.8	–	13.0	3.7	7.3	11.0	24.0
Disposals	(0.3)	(1.5)	–	(1.8)	(1.3)	(4.2)	(5.5)	(7.3)
Effect of movements in exchange rates	(2.7)	(4.5)	–	(7.2)	(0.3)	(0.7)	(1.0)	(8.2)
Balance at 30 June 2021	24.5	56.9	–	81.4	6.5	12.5	19.0	100.4
Depreciation for the period	**1.8**	**5.3**	**–**	**7.1**	**1.8**	**3.3**	**5.1**	**12.2**
Disposals	**(0.5)**	**(0.4)**	**–**	**(0.9)**	**(0.2)**	**(6.0)**	**(6.2)**	**(7.1)**
Effect of movements in exchange rates	**0.3**	**0.8**	**–**	**1.1**	**(0.1)**	**0.1**	**–**	**1.1**
Balance at 31 December 2021	**26.1**	**62.6**	**–**	**88.7**	**8.0**	**9.9**	**17.9**	**106.6**
Carrying amounts								
At 31 December 2021	**52.7**	**35.6**	**26.8**	**115.1**	**14.4**	**12.7**	**27.1**	**142.2**
At 30 June 2021	42.1	31.1	22.1	95.3	14.2	13.5	27.7	123.0

10. INTERESTS IN JOINT VENTURES AND ASSOCIATES

The Group's share of profit after tax in its equity accounted investees for the six months ended 31 December 2021 was £3.2m (2020: £5.8m).

The carrying value of the investment is reconciled as follows:

	31 December 2021 £m	31 December 2020 £m
Balance at 1 July	**34.1**	22.7
Share of post-tax retained profits of joint ventures and associates	**3.2**	5.8
Additions	**1.1**	0.4
Disposal	**(0.1)**	–
Effect of other movements including exchange rates	**(2.2)**	(0.5)
Balance at 31 December	**36.1**	28.4

Summary unaudited financial information for equity accounted investees, adjusted for the Group's percentage ownership, is shown below:

Income Statement	Revenue £m	Net IAS 41 valuation movement on biological assets £m	Expenses £m	Taxation £m	Profit after tax £m
Six months ended 31 December 2021	**19.6**	**(0.4)**	**(14.7)**	**(1.3)**	**3.2**
Six months ended 31 December 2020	20.6	2.1	(14.7)	(2.2)	5.8
Year ended 30 June 2021	38.9	3.1	(25.9)	(3.0)	13.1

11. TRADE AND OTHER RECEIVABLES

	31 December 2021 £m	31 December 2020 £m	30 June 2021 £m
Trade receivables	**90.9**	86.0	87.2
Less expected credit loss allowance	**(3.6)**	(4.8)	(5.0)
Trade receivables net of impairment	**87.3**	81.2	82.2
Other debtors	**7.8**	6.5	6.4
Prepayments	**9.3**	6.6	6.6
Contract assets	**9.8**	4.8	7.7
Other taxes and social security	**3.9**	2.4	3.3
Current trade and other receivables	**118.1**	101.5	106.2
Non-current other receivables	**1.8**	2.0	1.8
	119.9	103.5	108.0

Trade receivables

The average credit period our customers take on the sales of goods is 53 days (30 June 2021: 53 days). We do not charge interest on receivables for the first 30 days from the date of the invoice.

The Group always measures the loss allowance for trade receivables at an amount equal to lifetime expected credit losses ('ECLs'). The ECLs on trade receivables are estimated using a provision matrix by reference to past default experience of the debtor and an analysis of the debtor's current financial position, adjusted for factors that are specific to the general economic conditions of the industry and country in which the debtor operates and an assessment of both the current and the forecast direction of conditions at the reporting date. The Group writes off a trade receivable when there is information indicating that the debtor is in severe financial difficulty and there is no realistic prospect of recovery, such as when the debtor has been placed under liquidation or has entered into bankruptcy proceedings.

No customer represents more than 5% of the total balance of trade receivables (30 June 2021: no more than 5%).

12. EARNINGS PER SHARE

Weighted average number of ordinary shares (diluted)

	Six months ended 31 December 2021 000s	Six months ended 31 December 2020 000s	Year ended 30 June 2021 000s
Weighted average number of ordinary shares (basic)	**65,390**	65,056	65,108
Dilutive effect of share options and awards	**430**	554	554
Weighted average number of ordinary shares for the purpose of diluted earnings per share	**65,820**	65,610	65,662

	Six months ended 31 December 2021 (pence)	(restated)[1] Six months ended 31 December 2020 (pence)	Year ended 30 June 2021 (pence)
Earnings per share			
Basic earnings per share	**30.4**	46.4	72.6
Diluted earnings per share	**30.2**	46.0	72.0
Adjusted earnings per share			
Adjusted earnings per share	**42.4**	55.3	100.9
Diluted adjusted earnings per share	**42.1**	54.9	100.1

1 See note 1 for details of the prior period restatement.

Earnings per share measures are calculated on the weighted average number of ordinary shares in issue during the period. As in previous periods, adjusted earnings per share have been shown, since the Directors consider that this alternative measure gives a more comparable indication of the Group's trading performance.

Basic earnings per share is based on the net profit attributable to owners of the Company for the period of £19.9m (six months ended 31 December 2020: £30.2m; year ended 30 June 2021: £47.3m) divided by weighted average number of ordinary shares (basic and diluted) as calculated above.

Adjusted earnings per share is calculated on profit for the period before net IAS 41 valuation movement on biological assets, amortisation of acquired intangible assets, share-based payment expense and exceptional items, after charging taxation associated with those profits, of £27.7m (six months ended 31 December 2020: £36.0m; year ended 30 June 2021: £65.7m), which is calculated as follows:

Adjusted earnings

	Six months ended 31 December 2021 £m	(restated)[1] Six months ended 31 December 2020 £m	Year ended 30 June 2021 £m
Profit before tax	**24.4**	37.4	55.8
Add/(deduct):			
Net IAS 41 valuation movement on biological assets	**6.8**	(3.5)	10.8
Amortisation of acquired intangible assets	**3.8**	3.7	7.4
Share-based payment expense	**2.2**	4.3	7.7
Exceptional items (see note 3)	**(1.7)**	5.1	3.3
Net IAS 41 valuation movement on biological assets in joint ventures	**0.4**	(2.1)	(3.1)
Tax on joint ventures and associates	**1.3**	2.2	3.0
Attributable to non-controlling interest	**(0.2)**	–	(0.1)
Adjusted profit before tax	**37.0**	47.1	84.8
Adjusted tax charge	**(9.3)**	(11.1)	(19.1)
Adjusted profit after tax	**27.7**	36.0	65.7
Effective tax rate on adjusted profit	**25.1%**	23.6%	22.5%

1 See note 1 for details of the prior period restatement.

13. CASH FLOW FROM OPERATING ACTIVITIES

	Six months ended 31 December 2021 £m	(restated)[1] Six months ended 31 December 2020 £m	Year ended 30 June 2021 £m
Profit for the period	**18.9**	29.0	46.8
Adjustment for:			
Net IAS 41 valuation movement on biological assets	**6.8**	(3.5)	10.8
Amortisation of acquired intangible assets	**3.8**	3.7	7.4
Share-based payment expense	**2.2**	4.3	7.7
Share of profit of joint ventures and associates	**(3.2)**	(5.8)	(13.1)
Finance costs (net)	**2.7**	2.6	5.0
Income tax expense	**5.5**	8.4	9.0
Exceptional items	**(1.7)**	5.1	3.3
Adjusted operating profit from continuing operations	**35.0**	43.8	76.9
Depreciation of property, plant and equipment	**12.2**	11.9	24.0
(Profit)/loss on disposal of plant and equipment	**(0.1)**	–	0.4
Loss on disposal of intangible assets	**-**	0.4	0.5
Amortisation and impairment of intangible assets	**2.0**	1.6	3.7
Adjusted earnings before interest, tax, depreciation and amortisation	**49.1**	57.7	105.5
Cash impact of exceptional items	**2.7**	(1.8)	(3.0)
Other movements in biological assets and harvested produce	**(5.8)**	(7.7)	(12.8)
Decrease in provisions and release in deferred consideration	**(0.1)**	(0.4)	(0.4)
Additional pension contributions in excess of pension charge	**(2.3)**	(3.2)	(7.0)
Other	**(0.6)**	(0.6)	(1.3)
Operating cash flows before movement in working capital	**43.0**	44.0	81.0
(Increase)/decrease in inventories	**(8.2)**	0.6	(1.3)
Increase in receivables	**(11.9)**	(5.7)	(11.0)
(Decrease)/Increase in payables	**(0.7)**	3.9	17.9
Cash generated by operations	**22.2**	42.8	86.6
Interest received	**0.1**	0.2	0.4
Interest and other finance costs paid	**(1.7)**	(1.4)	(2.8)
Interest on leased assets	**(0.4)**	(0.4)	(0.8)
Cash flow from derivative financial instruments	**(0.3)**	–	0.2
Income taxes paid	**(8.3)**	(5.3)	(16.1)
Net cash from operating activities	**11.6**	35.9	67.5

1 See note 1 for details of the prior period restatement.

14. RETIREMENT BENEFIT OBLIGATIONS

The Group has a number of defined contribution and defined benefit pension schemes covering many of its employees, further details can be found in the Genus plc Annual Report 2021. The aggregated position of defined benefit schemes are provided below:

	31 December 2021 £m	31 December 2020 £m	30 June 2021 £m
Present value of funded obligations	**1,100.2**	1,166.1	1,097.7
Present value of unfunded obligations	**9.0**	9.0	8.9
Total present value of obligations	**1,109.2**	1,175.1	1,106.6
Fair value of plan assets	**(1,176.1)**	(1,189.0)	(1,147.2)
Restricted recognition of asset (DPF)	**9.6**	8.1	8.8
Restricted recognition of asset (MPF)	**66.1**	20.8	42.9
Recognised liability for defined benefit obligations	**8.8**	15.0	11.1

The principal actuarial assumptions (expressed as weighted averages) are:

	31 December 2021	31 December 2020	30 June 2021
Discount rate	**1.95%**	1.45%	1.90%
Consumer Price Index	**2.30%**	2.10%	2.10%

Retail Price Index	**3.05%**	2.60%	2.85%

The Milk Pension Fund
We have accounted for our section of the scheme and our share of any orphan assets and liabilities, which together represent approximately 86% of the MPF. Although the MPF is managed on a sectionalised basis, it is a "last man standing scheme", which means that all participating employers are joint and severally liable for all of the fund's liabilities.

On 23 September 2021, a formal actuarial valuation with an effective date of 31 March 2021 was completed by the scheme's actuary Aon Solutions UK Limited. The market value of the available assets at 31 March 2021 was £492m. The value of those assets represented approximately 103% of the value of the uninsured liabilities, which were £480m at the 31 March 2021. Reflecting the improvement in the funding position and with effect from 1 September 2021, no deficit repair contributions are payable but funding the scheme's operating expenses of £1.1m per annum was agreed to be paid, rising thereafter by 3.4% per annum until 30 September 2026.

Further details of the Milk Pension Fund can be found in the Genus plc Annual Report 2021.

15. FINANCIAL INSTRUMENTS FAIR VALUE DISCLOSURES

The table below sets out the categorisation of the financial instruments held by the Group at 31 December 2021.

We have categorised financial instruments held at valuation into a three-level fair value hierarchy, based on the priority of the inputs to the valuation technique in accordance with IFRS 13. The hierarchy gives the highest priority to quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). Valuations categorised as Level 2 are obtained from third parties. If the inputs used to measure fair value fall within different levels of the hierarchy, we base the category level on the lowest priority level input that is significant to the fair value measurement of the instrument in its entirety.

	31 December 2021				31 December 2020				30 June 2021			
	Level 1 £m	**Level 2 £m**	**Level 3 £m**	**Total £m**	Level 1 £m	Level 2 £m	Level 3 £m	Total £m	Level 1 £m	Level 2 £m	Level 3 £m	Total £m
Financial assets												
Other investments	**12.4**	**–**	**3.5**	**15.9**	1.8	–	5.0	6.8	2.0	10.4	2.3	14.7
Trade receivables and other debtors, excluding prepayments and contract assets (see note 11)	**–**	**100.8**	**–**	**100.8**	–	90.1	–	90.1	–	91.9	–	91.9
Cash and cash equivalents	**–**	**45.9**	**–**	**45.9**	–	50.2	–	50.2	–	46.0	–	46.0
Derivative instruments in non-designated hedge accounting relationships	**–**	**0.6**	**–**	**0.6**	–	0.9	–	0.9	–	0.1	–	0.1
	12.4	**147.3**	**3.5**	**163.2**	1.8	141.2	5.0	148.0	2.0	148.4	2.3	152.7
Financial liabilities												
Trade and other payables, excluding other taxes and social security	**–**	**(106.9)**	**–**	**(106.9)**	–	(89.7)	–	(89.7)	–	(102.1)	–	(102.1)
Loans and overdrafts	**–**	**(161.6)**	**–**	**(161.6)**	–	(114.8)	–	(114.8)	–	(123.3)	–	(123.3)
Leasing obligations	**–**	**(27.6)**	**–**	**(27.6)**	–	(27.6)	–	(27.6)	–	(28.3)	–	(28.3)
Derivative instruments in non-designated hedge accounting relationships	**–**	**(0.3)**	**–**	**(0.3)**	–	(0.3)	–	(0.3)	–	–	–	–
Derivative instruments in designated hedge accounting relationships	**–**	**–**	**–**	**–**	–	(0.1)	–	(0.1)	–	–	–	–
Put options for purchase of share in an investment	**–**	**(0.9)**	**–**	**(0.9)**	–	–	–	–	–	–	–	–
Put option over non-controlling interest	**–**	**(6.6)**	**–**	**(6.6)**	–	(5.9)	–	(5.9)	–	(6.1)	–	(6.1)
Deferred consideration	**–**	**(0.2)**	**(1.7)**	**(1.9)**	–	(0.4)	(1.0)	(1.4)	–	(0.4)	(1.7)	(2.1)
	–	**(304.1)**	**(1.7)**	**(305.8)**	–	(238.8)	(1.0)	(239.8)	–	(260.2)	(1.7)	(261.9)

The Directors consider that the carrying value amounts of financial assets and financial liabilities recorded at amortised cost in the financial statements are approximately equal to their fair values.

16. RELATED PARTY TRANSACTIONS

Transactions between the Company and its subsidiaries, which are related parties, have been eliminated on consolidation and are not disclosed in this note.

Bomaz, Inc. and Bogz Dairy, LLC, are well recognised breeders in the industry, and are related parties to the Group as these entities are under the control of relatives of Nate Zwald, our ABS Dairy COO.

We transact with Bomaz, Inc. and Bogz Dairy, LLC as part of our bull product development effort, under a variety of contracts and agreements. Payments in the six months ended 31 December 2021 amounted to £0.1m (2020: £0.4m). As at 31 December 2021, the balance owing to these entities was £nil (2020: £nil), all amounts were settled in cash.

These related party transactions were made on terms equivalent to those that prevail in arms' length transactions.

Other related party transactions
Transactions between the Group and its joint ventures and associates are described below:

	Transaction value			Balance outstanding		
	Six months ended 31 December 2021 £m	Six months ended 31 December 2020 £m	Year ended 30 June 2021 £m	**Six months ended 31 December 2021 £m**	Six months ended 31 December 2020 £m	Year ended 30 June 2021 £m
Sale of goods and services to joint ventures and associates	**–**	–	(1.8)	**–**	–	0.4
Purchase of goods and services from joint ventures and associates	**2.8**	3.3	5.0	**(0.3)**	(1.0)	(0.4)

All outstanding balances with joint ventures and associates are priced on an arm's length basis and are to be settled in cash within six months of the reporting date. None of the balances are secured.

17. POST BALANCE SHEET EVENT

On 22 February 2022, PIC has entered into an agreement with Olymel LP, a leader in the Canadian agrifood industry, for provision of genetic products and services in connection with the Olymel's AlphaGene porcine genetic improvement program. Under the transaction, PIC has acquired all intellectual property in Olymel's elite porcine genetics for a total cash consideration of CAD$ 25.0m (£14.5m). The parties have also entered into an exclusive long term genetics collaboration agreement, where PIC will supply elite germplasm and manage the ongoing genetic improvement of Olymel's AlphaGene genetics.

Due to the timing of the acquisition the initial accounting for the business combination is incomplete and the associated disclosures cannot currently be made. Those disclosures will be made in our financial statements for the year ended 30 June 2022.

GENUS PLC
RESPONSIBILITY STATEMENT
For the six months ended 31 December 2021

We confirm that to the best of our knowledge;

a) the Condensed Set of Financial Statements has been prepared in accordance with IAS 34;

b) the interim management report includes a fair review of the information required by DTR 4.2.7R (indication of important events during the first six months and description of the principal risks and uncertainties for the remaining six months of the year); and

c) the interim management report includes a fair review of the information required by DTR 4.2.8R (disclosure of related party transactions and charges therein).

Neither the Company nor the Directors accept any liability to any person in relation to the half-yearly financial report except to the extent that such liability could arise under English Law. Accordingly, any liability to a person who has demonstrated reliance on any untrue or misleading statement or omission shall be determined in accordance with section 90A of the Financial Services and Markets Act 2000.

By order of the Board

Chief Executive
Stephen Wilson

Chief Financial Officer
Alison Henriksen

23 February 2022

ALTERNATIVE PERFORMANCE MEASURES GLOSSARY

The Group tracks a number of APMs in managing its business, which are not defined or specified under the requirements of IFRS because they exclude amounts that are included in, or include amounts that are excluded from, the most directly comparable measure calculated and presented in accordance with IFRS, or are calculated using financial measures that are not calculated in accordance with IFRS.

The Group believes that these APMs, which are not considered to be a substitute for or superior to IFRS measures, provide stakeholders with additional helpful information on the performance of the business. These APMs are consistent with how the business performance is planned and reported within the internal management reporting to the Board and GELT. Some of these APMs are also used for the purpose of setting remuneration targets.

These APMs should be viewed as supplemental to, but not as a substitute for, measures presented in the consolidated financial information relating to the Group, which are prepared in accordance with IFRS. The Group believes that these APMs are useful indicators of its performance. However, they may not be comparable to similarly-titled measures reported by other companies, due to differences in the way they are calculated.

The key APMs that the Group uses include:

Alternative Performance Measures	**Calculation methodology and closest equivalent IFRS measure (where applicable)**	**Reasons why we believe the APMs are useful**
Income statement measures		
Adjusted operating profit exc JVs	Adjusted operating profit is operating profit with the net IAS 41 valuation movement on biological assets, amortisation of acquired intangible assets, share-based payment expense and exceptional items added back and excludes JV and associate results. *Closest equivalent IFRS measure: Operating profit*[1] See reconciliation below.	Allows the comparison of underlying financial performance by excluding the impacts of exceptional items and is a performance indicator against which short-term and long-term incentive outcomes for our senior executives are measured: net IAS 41 valuation movements on biological assets – these movements can be materially volatile and do not directly correlate to the underlying trading performance in the period. Furthermore, the movement is non-cash related and many assumptions used in the valuation model are based on projections rather than current trading; amortisation of acquired intangible assets – excluding this improves the comparability between acquired and organically grown operations, as the latter cannot recognise internally generated intangible assets. Adjusting for amortisation provides a more consistent basis for comparison between the two; share-based payments – this expense is considered to be relatively volatile and not fully reflective of the current period trading, as the performance criteria are based on EPS performance over a three-year period and include estimates of future performance; and exceptional items – these are items which due to either their size or their nature are excluded, to improve the understanding of the Group's underlying performance.
Adjusted operating profit inc JVs	Including adjusted operating profit from JV and associate results. See reconciliation below.	
Adjusted operating profit inc JVs exc gene editing costs	Including adjusted operating profit from JV and associate results but excluding gene editing costs. See reconciliation below.	
Adjusted operating profit inc JVs after tax	Adjusted operating profit including JV less adjusted effective tax. See reconciliation below.	
Adjusted profit inc JVs before tax	Adjusted operating profit including JVs less net finance costs. See reconciliation below.	
Adjusted profit inc JVs after tax	Adjusted profit including JVs before tax less adjusted effective tax. See reconciliation below.	
Adjusted profit inc JVs before tax exc SaaS impact	Adjusted operating profit before tax, excluding the impact of the change in accounting policy related to the accounting for Software as a service ('SaaS') (See note 1) See reconciliation below	This measure is presented only this year to demonstrate the impact of our change in accounting policy, and will not be presented in future periods. We present this measure to allow comparability of financial performance with the expectations of the year, which were based on our pre-existing accounting policy

Adjusted effective tax rate	Total income tax charge for the Group excluding the tax impact of adjusting items, divided by the adjusted profit before tax. *Closest equivalent IFRS measure: Effective tax rate* See reconciliation below.	Provides an underlying tax rate to allow comparability of underlying financial performance, by excluding the impacts of net IAS 41 valuation movement on biological assets, amortisation of acquired intangible assets, share-based payment expense and exceptional items.
Adjusted basic earnings per share	Adjusted profit after tax profit divided by the weighted basic average number of shares. *Closest equivalent IFRS measure: Earnings per share* See calculation below.	On a per share basis, this allows the comparability of underlying financial performance by excluding the impacts of adjusting items.
Adjusted diluted earnings per share	Underlying attributable profit divided by the diluted weighted basic average number of shares. *Closest equivalent IFRS measure: Diluted earnings per share* See calculation below.	
Adjusted earnings cover	Adjusted earnings per share divided by the expected dividend for the preceding 12 months. See calculation below.	The Board dividend policy targets the adjusted earning cover to be between 2.5–3 times.
Adjusted EBITDA – calculated in accordance with the definitions used in our financing facilities	This is adjusted operating profit, adding back cash received from our joint ventures, depreciation of property, plant and equipment, depreciation of the historical cost of biological assets, operational amortisation (i.e. excluding amortisation of acquired intangibles) and deducting the amount attributable to minority interest. *Closest equivalent IFRS measure: Operating profit*[1] See reconciliation below.	This APM is presented because it is used in calculating our ratio of net debt to EBITDA and our interest cover, which we report to our banks to ensure compliance with our bank covenants.
Adjusted operating margin	Adjusted operating profit (including JVs) divided by revenue.	Allows for the comparability of underlying financial performance by excluding the impacts of exceptional items.
Adjusted operating margin (exc JVs)	Adjusted operating profit divided by revenue.	
Constant currency basis	The Group reports certain financial measures, on both a reported and constant currency basis and re-translates the current year's results at the average actual exchange rates used in the previous financial year.	The Group's business operates in multiple countries worldwide and its trading results are translated back into the Group's functional currency of Sterling. This measure eliminates the effects of exchange rate fluctuations when comparing year-on-year reported results.

Balance sheet measures

Net debt	Net debt is gross debt, made up of unsecured bank loans and overdrafts and obligations under finance leases, with a deduction for cash and cash equivalents. See reconciliation below.	This allows the Group to monitor its levels of debt.
Net debt - calculated in accordance with the definitions used in our financing facilities	Net debt excluding the impact of adopting IFRS 16 and adding back guarantees and deferred purchase arrangements. See reconciliation below.	This is a key metric that we report to our banks to ensure compliance with our bank covenants.

Cash flow measures

Cash conversion	Cash generated by operations as a percentage of adjusted operating profit excluding JVs. See calculation below.	This is used to measure how much operating cash flow we are generating and how efficient we are at converting our operating profit into cash.
Free cash flow	Cash generated by the Group before debt repayments, acquisitions and investments, dividends and proceeds from share issues. *Closest IFRS measure: Net cash flow from operating activities* See reconciliation below.	Shows the cash retained by the Group in the year.

Other measures

Ratio of net debt to adjusted EBITDA	The ratio of net debt, calculated in accordance with the definitions used in our financing facilities, is gross debt, made up of unsecured bank loans and overdrafts and obligations under finance leases, with a deduction for cash and cash equivalents and adding back amounts related to guarantees and deferred purchase arrangements, to adjusted EBITDA. *Closest equivalent IFRS components for the ratio: The equivalent IFRS components are gross debt, cash and cash equivalents and operating profit.* See calculation below.	This APM is used as a measurement of our leverage and is also a key metric that we report to our banks to ensure compliance with our bank covenants.

1 Operating profit is not defined per IFRS. It is presented in the Group Income Statement and is shown as profit before tax, finance income/costs and share of post-tax profit of joint ventures and associates retained.

THE TABLES BELOW RECONCILE THE CLOSEST EQUIVALENT IFRS MEASURE TO THE APM OR OUTLINE THE CALCULATION OF THE APM

INCOME STATEMENT MEASURES
Adjusted operating profit exc JVs
Adjusted operating profit inc JVs
Adjusted operating profit inc JVs and exc gene editing costs

	31 December 2021		(restated)[1] 31 December 2020		30 June 2021		
	£m	£m	£m	£m	£m	£m	Reference
Operating profit		**23.9**		**34.2**		**47.7**	Group Income Statement
Add back:							
Net IAS 41 valuation movement on biological assets	6.8		(3.5)		10.8		Group Income Statement
Amortisation of acquired intangible assets	3.8		3.7		7.4		Group Income Statement
Share-based payment expense	2.2		4.3		7.7		Group Income Statement
Exceptional items	(1.7)		5.1		3.3		Group Income Statement
Adjusted operating profit exc JVs		**35.0**		**43.8**		**76.9**	Group Income Statement
Less: amounts attributable to non-controlling interest		(0.2)		–		(0.1)	Group Income Statement
Operating profit from joint ventures and associates	3.2		5.8		13.1		Group Income Statement
Tax on joint ventures and associates	1.3		2.2		3.0		Note 10 – Interests in joint ventures and associates
Net IAS 41 valuation movement	0.4		(2.1)		(3.1)		Note 10 – Interests in joint ventures and associates
Adjusted operating profit from JVs		4.9		5.9		13.0	
Adjusted operating profit inc JVs		**39.7**		**49.7**		**89.8**	
Gene editing costs		3.6		3.7		7.6	Note 2 – Segmental information
Adjusted operating profit inc JVs and exc gene editing costs		**43.3**		**53.4**		**97.4**	

Adjusted profit inc JVs before tax
Adjusted profit inc JVs after tax

	31 December 2021	(restated)[1] 31 December 2020	30 June 2021	
	£m	£m	£m	Reference
Adjusted operating profit inc JVs	**39.7**	**49.7**	**89.8**	See APM
Less net finance costs	(2.7)	(2.6)	(5.0)	Note 4 – Net finance costs
Adjusted profit inc JVs before tax	**37.0**	**47.1**	**84.8**	
Adjusted tax	(9.3)	(11.1)	(19.1)	Note 12 – Earnings per share
Adjusted profit inc JVs after tax	**27.7**	**36.0**	**65.7**	

Adjusted profit inc JVs before tax exc SaaS impact

	31 December 2021	(restated)[1] 31 December 2020	30 June 2021	
	£m	£m	£m	Reference
Adjusted profit inc JVs before tax	**37.0**	**47.1**	**84.8**	See APM
Impact of change in accounting policy	–	1.3	2.7	No direct reference
Adjusted profit inc JVs before tax exc SaaS impact	**37.0**	**48.4**	**87.5**	

1 See note 1 for details of the prior period restatement.

Adjusted effective tax £m/rate

	31 December 2021		(restated)[1] 31 December 2020		30 June 2021		
	£m	%	£m	%	£m	%	Reference
Adjusted effective tax £m/rate	**9.3**	**25.1**	**11.1**	**23.6**	**19.1**	**22.5**	Note 12 – Earnings per share
Exceptional items	0.1	–	(1.0)	(19.6)	(1.1)	(33.3)	No direct reference
Share-based payment expense	(0.5)	(22.7)	(0.8)	(18.9)	(1.6)	(20.8)	No direct reference
Amortisation of acquired intangible assets	(0.7)	(18.4)	(0.8)	(21.6)	(1.5)	(20.3)	No direct reference
Net IAS 41 valuation movement on biological assets	(1.3)	(19.1)	1.3	37.1	(2.9)	(26.9)	No direct reference
Effective tax £m/rate	**6.9**	**21.2**	**9.8**	**19.9**	**12.0**	**20.4**	No direct reference

Adjusted basic earnings per share

	31 December 2021	(restated)[1] 31 December 2020	30 June 2021	Reference
Adjusted profit inc JVs after tax (£m)	**27.7**	**36.0**	**65.7**	See APM
Weighted average number of ordinary shares ('000)	65.390	65.056	65.108	Note 12 – Earnings per share
Adjusted basic earnings per share (pence)	**42.4**	**55.3**	**100.9**	

Adjusted diluted earnings per share

	31 December 2021	(restated)[1] 31 December 2020	30 June 2021	Reference
Adjusted profit inc JVs after tax (£m)	**27.7**	**36.0**	**65.7**	See APM
Weighted average number of diluted ordinary shares ('000)	65.820	65.610	65.662	Note 12 – Earnings per share
Adjusted diluted earnings per share (pence)	**42.1**	**54.9**	**100.1**	

Rolling 12 month Adjusted Earnings cover

	31 December 2021		(restated)[1] 31 December 2020		30 June 2021		
	Pence	Times	Pence	Times	Pence	Times	Reference
Adjusted Earnings per share	**42.4**		**55.3**		**100.9**		See APM
Add: Prior June Adjusted Earnings per share	100.9		77.3		N/a		See APM
Deduct: Prior Interim Adjusted Earnings per share	(55.3)		(43.0)		N/a		See APM
Rolling 12 month adjusted Earnings per share	**88.0**		**89.6**		**100.9**		
Dividend for the period	10.3		10.3		32.0		Note 6 - Dividends
Add: Dividend for prior June	32.0		29.1		N/a		Note 6 - Dividends
Less: prior interim dividend	(10.3)		(9.4)		N/a		Note 6 - Dividends
Rolling 12-month dividend	**32.0**		**30.0**		**32.0**		
Rolling 12 month Adjusted Earnings cover		**2.8**		**3.0**		**3.2**	No direct reference

1 See note 1 for details of the prior period restatement.

Adjusted EBITDA – as calculated under our financing facilities

	31 December 2021		(restated)[1,2] 31 December 2020		30 June 2021		
	£m	£m	£m	£m	£m	£m	Reference
Operating profit		**23.9**		**34.2**		**47.7**	Group Income Statement
Add back:							
Net IAS 41 valuation movement on biological assets	6.8		(3.5)		10.8		Group Income Statement
Amortisation of acquired intangible assets	3.8		3.7		7.4		Group Income Statement
Share-based payment expense	2.2		4.3		7.7		Group Income Statement
Exceptional items	(1.7)		5.1		3.3		Group Income Statement
Adjusted operating profit exc JVs	35.0		43.8		76.9		Group Income Statement
Adjust for:							
Cash received from JVs (dividend and loan repayment)	–		–		4.1		Group Statement of Cash Flows
Depreciation: property, plant and equipment	12.2		11.9		24.0		Note 9 – Property, plant and equipment
Operational lease payments	(5.6)		(5.4)		(12.5)		No direct reference
Depreciation: historical cost of biological assets	5.5		5.2		10.0		No direct reference
Amortisation and impairment (excluding separately identifiable acquired intangible assets)	2.0		1.6		3.7		Note 7 – Intangible assets
Less amounts attributable to non-controlling interest	(0.2)		–		(0.1)		Group Income Statement
Adjusted EBITDA – as calculated under our financing facilities		**48.9**		**57.1**		**106.1**	

Rolling 12 month Adjusted EBITDA – as calculated under our financing facilities

	31 December 2021		(restated)[1,2] 31 December 2020		30 June 2021		
	£m	£m	£m	£m	£m	£m	Reference
Operating profit							
Adjusted EBITDA - as calculated under our financing facilities	48.9		57.1		106.1		See APM
Add: Prior June Adjusted EBITDA	106.1		96.4		N/a		See APM
Deduct: Prior Interim Adjusted EBITDA	(57.1)		(42.8)		N/a		See APM
Rolling 12 month Adjusted EBITDA		**97.9**		**110.7**		**106.1**	

1 See note 1 for details of the prior period restatement.
2 Following Genus entering a new credit facility the definitions of EBITDA, Borrowings and Net Debt were amended. Consequently, the comparative values have been restated to reflect the amended definitions as reported to the banks.

BALANCE SHEET MEASURES
Net Debt
Net debt as calculated under our financing facilities

	31 December 2021		31 December 2020		30 June 2021		
	£m	£m	£m	£m	£m	£m	Reference
Current unsecured bank loans and overdrafts	10.6		9.8		13.9		
Non-current unsecured bank loans and overdrafts	151.0		105.0		109.4		
Unsecured bank loans and overdrafts		161.6		114.8		123.3	Group Balance Sheet
Current obligations under finance leases	8.6		9.0		9.0		
Non-current obligations under finance leases	19.0		18.6		19.3		
Obligations under finance leases		27.6		27.6		28.3	Group Balance Sheet
Total debt financing		189.2		142.4		151.6	
Deduct:							
Cash and cash equivalents		(45.9)		(50.2)		(46.0)	Group Balance Sheet
Net debt		**143.3**		**92.2**		**105.6**	
Deduct:							
Lower of obligations under finance leases or £30m[2]		(27.6)		(27.6)		(28.3)	
Add back:							
Guarantees		19.1		19.6		19.1	No direct reference
Deferred purchase arrangements		1.1		1.2		0.1	No direct reference
Net debt – as calculated under our financing facilities		**135.9**		**85.4**		**96.5**	

CASH FLOW MEASURES
Cash conversion

	31 December 2021		(restated)[1,2] 31 December 2020		30 June 2021		
	£m	£m	£m	£m	£m	£m	Reference
Cash generated by operations		**22.2**		**42.8**		**86.6**	Note 13 – Notes to the cash flow statement
Operating profit	23.9		34.2		47.7		Group Income Statement
Add back:							
Net IAS 41 valuation movement on biological assets	6.8		(3.5)		10.8		Group Income Statement
Amortisation of acquired intangible assets	3.8		3.7		7.4		Group Income Statement
Share-based payment expense	2.2		4.3		7.7		Group Income Statement
Exceptional items	(1.7)		5.1		3.3		Group Income Statement
Adjusted operating profit exc JVs		**35.0**		**43.8**		**76.9**	Group Income Statement
Cash conversion (%)		**63%**		**98%**		**113%**	

Free cash flow

	31 December 2021	(restated)[1,2] 31 December 2020	30 June 2021	
	£m	£m	£m	Reference
Cash generated by operations	**22.2**	**42.8**	**86.6**	Note 13 – Notes to cash flow statement
Interest and tax paid	(10.6)	(6.9)	(19.1)	Note 13 – Notes to cash flow statement
Capital expenditure	(27.8)	(9.7)	(33.8)	Group Statement of Cash flows
Dividend received from joint venture and associate	–	–	4.1	Group Statement of Cash flows
Joint venture and associate loan repayment	–	–	(0.4)	Group Statement of Cash flows
Proceeds from sale of property, plant and equipment	0.1	0.6	0.3	Group Statement of Cash flows
Dividend to non-controlling interest	–	(0.2)	(0.2)	Group Statement of Cash flows
Free cash flow	**(16.1)**	**26.6**	**37.5**	

1 See note 1 for details of the prior period restatement.
2 Following Genus entering a new credit facility the definitions of EBITDA, Borrowings and Net Debt were amended. Consequently, the comparative values have been restated to reflect the amended definitions as reported to the banks.

OTHER MEASURES

Ratio of net debt to adjusted EBITDA

	31 December 2021		(restated)[1,2] 31 December 2020		30 June 2021		
			£m	**Times**	£m	Times	Reference
Net debt – as calculated under our financing facilities	**135.9**		**85.4**		**96.5**		See APM
Rolling 12 month Adjusted EBITDA – as calculated under our financing facilities	**97.9**		**110.7**		**106.1**		See APM
Ratio of net debt to Adjusted EBITDA		**1.4**		**0.8**		**0.9**	

1 See note 1 for details of the prior period restatement.
2 Following Genus entering a new credit facility the definitions of EBITDA, Borrowings and Net Debt were amended. Consequently, the comparative values have been restated to reflect the amended definitions as reported to the banks.