

**Genus plc**  
**(‘Genus’ or the ‘Company’)**  
**Climate Change Policy**

The challenges of producing animal protein for a growing population are heightened in the face of a changing climate. We acknowledge the reality of climate change, and recognise that without significant thought and action it will have a lasting, negative impact on our business, our communities and the world.

We support the outcomes of the Paris Agreement<sup>1</sup> and the long-term goal to limit the global average temperature rise to below 1.5°C by 2100, and we believe we can, and should, be part of the solution.

### **Our Actions**

As we look to the future, Genus will take action in four ways:

1. Monitor and identify goals for the reduction of our GHG emissions from our own operations.
2. Drive porcine and bovine genetic improvements which support productivity gains and improve feed efficiency, enabling a reduction in the production of greenhouse gas (**GHG**) emissions per unit of milk or meat produced.
3. Identify facility and other opportunities for reductions in GHG emissions, consistent with our goals.
4. Partner and advocate for policies that advance positive climate goals and identified United Nations Sustainable Development Goals (**SDGs**).

#### **1. Monitor and Reduce GHG Emissions**

Since 2013, we have reported on our GHG emissions in line with the requirements of The Companies Act 2006. This has enabled us to identify a GHG emission baseline and we will work during 2020 to further refine our methods to develop an annual science-based emission baseline (**Baseline**). The Baseline will then be used to measure future reductions. We are committed to reducing GHG emissions in our operations and will use the “primary intensity ratio” to report emission reductions.<sup>2</sup> We aim to reduce the primary intensity ratio by 25% by 2030.<sup>3</sup> As an organisation, we also aim to have net zero GHG emissions by 2050. This means that even as our business grows, we are seeking to ensure that our GHG emissions shrink.

---

<sup>1</sup> Also known as Paris climate accord or Paris climate agreement, the Paris Agreement is an agreement within the United Nations Framework Convention on Climate Change (UNFCCC), dealing with green-house gas emissions mitigation, adaption and finance, signed in 2016.

<sup>2</sup> The “primary intensity ratio” is identified in the Company’s Annual Report and is a measure of the scope 1 and 2 emissions per tonne of animal weight.

<sup>3</sup> This will equate to a reduction of around 18,500 tonnes of carbon dioxide equivalents (Co<sub>2</sub>e) against the reported scope 1 and 2 emissions in the Company’s 2019 Annual Report.

Our GHG emissions are primarily nitrous oxide, methane (produced by our animals), and carbon dioxide from consuming fuel, energy and other materials, and from transport and distribution of our genetics across the world. We are continuously taking action to improve both productivity and efficiency of our animals' genetics, as well as developing a better understanding of how energy is used within our businesses. We are assessing low-emission technology opportunities, better energy conservation, and exploring opportunities for wider deployment of renewable energy solutions across our facilities, including the use of more solar panels and initiating trials of electric vehicles within our fleet.

We have a clear understanding of the scope 1 and 2 emissions<sup>4</sup> from our current operations. Our primary intensity ratio is based on scope 1 and 2 emissions : animal weight, which is a key driver of our GHG emissions and our secondary intensity ratio is based on scope 1, 2 and 3 emissions : the Company's annual revenue. The reporting of the Company's GHG emissions and the primary and secondary ratios will continue through the Corporate Social Responsibility (**CSR**) section of the Company's Annual Report.

## **2. Continue to Drive Genetic Improvement**

As a world leader in bovine and porcine genetic improvement, Genus has driven productivity gains for farmers which, coupled with continuous improvements in feed efficiency and herd management, enabled a significant reduction in GHG emissions per unit of milk (fat and protein content per litre of milk) or meat (per kilo of beef/pig meat) produced. This is essential if the livestock industry is to make positive contributions to reducing climate change and deliver net zero targets to 2050.<sup>5</sup> For example, in 2014, the United States national dairy herd produced twice as much milk as it did 90 years ago, but with about 60 per cent fewer cows.<sup>6</sup> The United Nations Food and Agriculture Organisation (**FAO**) have also reported that improving fertility, use of genomics and genetic improvement can play a significant role in reducing GHG emissions from the livestock sector.<sup>7</sup>

With each generation of animals that we breed and disseminate, we are selecting animals based on numerous desired traits including greater health, fertility, productivity and feed efficiency. We select for improved robustness (lower mortality and morbidity rates) and for animals to produce more offspring per animal per year, all of which yields more output from the bovine and porcine industry with lower animal numbers and input costs. Our business model aims for continuous genetic improvement, with the improved efficiency generating sustainable production.

We believe our bovine and porcine protein supply chains are resilient and sustainable, and that by working with our customers, we can help the global agricultural system evolve to become a more efficient and carbon neutral system.

---

<sup>4</sup> Scope 1 emissions relate to the combustion of fuels, own transport and livestock and scope 2 emissions relate to the purchase of electricity, steam, heat and cooling. See the Corporate Social Responsibility section of the Company's website at <http://www.genusplc.com/responsibility/overview/>

<sup>5</sup> <https://www.theccc.org.uk/publication/net-zero-technical-report/#outline>

<sup>6</sup> <https://news.psu.edu/story/383607/2015/12/07/campus-life/boosting-milk-production-efficiency-can-reduce-cow-methane>

<sup>7</sup> <http://www.fao.org/3/a-i8098e.pdf>

### 3. Identifying Emission Reduction Opportunities

As noted above, since 2013, we have undertaken a materiality assessment to enable our business to better understand its GHG emissions and impact. We have quantified our emissions and are prioritising how to reduce these levels to contribute towards carbon neutrality. In this respect we have engaged with the Carbon Trust to provide independent third party assurance on the systems and procedures we have implemented. Some of these systems and procedures are considered below.

#### Maximising the efficient use of slurry as fertiliser and increasing carbon capture within soils

Around the globe, in our pig farms and bull studs, we collect and store animal excrement in the form of slurry and composted manures. Following defined protocols, we collect and measure the nitrogen, phosphorus and potassium in the stored slurry along with soil samples from the agricultural fields on which the slurry is applied. Following analysis of the slurry and soil, a plan is implemented to determine how many litres of slurry need to be applied to each parcel of land. This effectively uses slurry and manures produced from our nucleus animals to replace inorganic fertiliser, providing greater crop yields and carbon capture. We recognise that this part of the process sequesters carbon and increases the soil's organic carbon cycling. We also intend to increase our use of alternative crops, zero-tillage practices, and holistic land management methods to significantly increase the carbon stored within our managed land.<sup>8 9</sup>

#### Energy Efficiency and Renewable Alternatives

We are committed to the sustainable development of new facilities, and are evaluating the use of wind and solar power solutions on a number of our farms, as well as the generation of heat and energy from biodigesters. In addition, we consider improved energy efficiency in our current and future facilities.

### 4. Partner Policies that Advance Positive Climate Goals

In addition to our climate change goals, we support the United Nations Sustainable Development Goals 2015, and in particular focus on:

- **SDG 2 – Poverty:** Genus is contributing to providing improved genetic solutions which are able to produce efficient, nutritious, safe, and sustainable protein production across the world.
- **SDG 7 – Energy:** Genus monitors its energy consumption, both in terms of energy and also fossil fuels (vehicles and planes). We believe our energy consumption can be lowered. The switch to alternative energy generation and move into alternative fuel vehicles will make a significant difference to lowering impact.

---

<sup>8</sup> <https://www.nature.com/articles/nclimate2829>

<sup>9</sup> <https://www.farmcarbontoolkit.org.uk/sites/default/files/stories/pdfs/evidence%20for%20fct%20soil%20carbon%20project.pdf>

- **SDG 12 – Sustainable Consumption and Production:** Our genetic improvement solutions provide more efficient, nutritious and sustainable protein which delivers increases in available food without requiring an increase in resources taken from the natural environment.
- **SDG 13 – Climate Change:** Genus' carbon footprint can be improved. Externally, Genus contributes to reduction of GHGs through embracing energy efficiency and sustainable protein production.
- **SDG 14 – Life on Land:** Our farm facilities across the world have an impact on the environment but we aim to have a 'net zero' contribution by 2050 through building soil carbon and other offsetting impacts. Equally we have nutrients in our manure which is used in arable farming.
- **SDG 17 – Partnerships for SDG delivery:** We recognise the vital role we need to play in creating effective collaborations, drawing on our people, our partners, and our stakeholders, in order to execute our plans to achieve the GHG targets set out in this Policy. Partnerships for change, such as the Global Roundtable for Sustainable Beef, will be important in this process.

### **The Next Steps**

We are in the process of identifying and further testing the Company's science-based Baseline against which we will measure our future performance in reducing emissions towards our 2030 target. Each year we will set out the Company's performance against the Baseline and provide updates via the CSR section on our website.

We recognise there is still a lot of 'work to do' but we believe this Policy will help us contribute towards addressing climate change and its impacts.

**Date:** November 2019