

CO2 Supply Issues

Impacts of the closure of fertiliser plants at Billingham and Ince

17 September 2021

On 16 September the owner of fertiliser plants at Billingham and Ince, CF Fertilisers, took a commercial decision to stop production due to rising wholesale prices of natural gas. In effect it became unprofitable to produce fertiliser.

CO2 is a by-product of fertiliser production, and these two plants provide up to 60% of UK production of CO2, so this decision has compromised that supply. The poultry meat industry uses CO2 extensively for stunning, packaging, and refrigeration. Additionally, CO2 is used for on farm culling when this becomes necessary.

Shortage of CO2 will severely impact the production of poultry meat and compromise food supply and ultimately food security in the UK. Additionally, welfare issues are of concern if birds cannot be slaughtered as planned. Current UK production of poultry is around 20 million birds every week. We also expect overall demand for CO2 to increase over the months in the run-up to Christmas.

We are asking the Government to:

- 1. Prioritise supplies of CO2 to poultry meat production on the grounds of maintaining food supply and avoiding bird welfare issues*
- 2. Financially support (to the end of the year) the UK production of CO2 through the continued operation of fertiliser plants*

What is CO2 used for in the poultry meat sector?

- **Stunning:** CO2 is used to stun poultry as part of the slaughter process.
 - Impact: without CO2 birds cannot be slaughtered and therefore food supply will be compromised.
- **Packaging:** CO2 is used in modified atmosphere packaging to maximise shelf-life of products.
 - Impact: shorter shelf-life of products means disruption to supply chains and potentially increased food waste.
- **Refrigeration:** CO2 is used in some cooling systems.
 - Impact: without refrigeration production is interrupted and food supply will be compromised.

What is the current stock status of CO2 in the poultry meat sector?

Any given slaughterhouse or processing plant will hold between one- and five-days stock of CO2. CO2 suppliers are currently not scheduling beyond 24 hours in advance, meaning there is no visibility as to UK stocks and no certainty around deliveries. We simply do not know if and when stocks will be replenished.

How much CO2 is currently in the UK?

We do not know what the current stock of CO2 is in the UK, or indeed how much the two fertiliser plants had in reserve when production ceased. Defra and BEIS are the departments leading on this issue and are trying to assess the overall UK stocks.

Why should Government take this issue seriously?

CO₂ is vital for not just the poultry meat industry and other food production, but also for other important sectors such as nuclear power and healthcare. All these sectors are part of a priority list for CO₂ supply (in the order of nuclear power, healthcare, livestock production) and we need the Government to help facilitate that prioritisation.

If these important sectors face CO₂ shortages that compromise their performance, then it will very quickly become an issue of national security. We hope this can be avoided through swift Government action.

Can we reduce the use of CO₂?

CO₂ can be removed from packaging at the cost of shelf-life, and this would provide some additional gas for stunning and refrigeration. However, this would only provide a very short-term mitigation.

Temporarily moving to electrical stunning would help alleviate the demand for CO₂ but only around half of slaughterhouses have access to this equipment. Even at a site where electrical stunning is possible, we would see a drop in throughput of approximately 30%.

Gas stunning systems are designed for a specific gas (in this case food grade CO₂) and cannot be switched over to use a different gas, such as nitrogen.

Are there welfare issues for the birds?

When birds cannot be slaughtered and must be kept on farm there is the potential for welfare issues to arise. To avoid this flocks can be culled, so they are slaughtered on-farm and do not enter the food chain (food waste). In many cases if this were not done it would cause additional problems further back in the supply chain with the next flock being hatched and having no farm to go to. Unfortunately, CO₂ is also used in on-farm culling so we are facing another supply problem.

Is it possible to import CO₂?

The UK already imports CO₂ in significant quantities from plants in Norway and the Netherlands. However, we know that the Norwegian plant is shortly to close for maintenance for twelve days, and with a generally increasing demand across the EU the plant in the Netherlands is prioritising those markets. Importing CO₂ can help but it will not provide a complete solution in either the short- or long-term.

Is there any sign of wholesale gas prices dropping?

No. We do not expect the financial pressures (on fertiliser production) to ease in the short-term, which is why we believe CO₂ production should be considered as something that is 'in the national interest' and be supported accordingly.

Will this mean empty shelves in supermarkets?

We hope not. If CO₂ supplies become tighter and more unpredictable (which we will see evidence of over the next five to seven days) then supply chains will inevitably slow down. We may see a reduction in product types as poultry meat companies streamline their operations and try to do everything possible to mitigate the effects. We may experience occasional outages, and ultimately, no CO₂ means no throughput.



Will Christmas be affected?

Yes. We know that CO2 demand increases, not just in poultry meat production, as we approach Christmas. This will place additional pressure on existing supplies of CO2, and why we believe Government must financially support CO2 production in the UK up to the end of the year. On poultry specifically CO2 is used in the production of Christmas turkeys and other seasonal birds.

Contact

Richard Griffiths
Chief Executive, British Poultry Council
E: rgriffiths@britishpoultry.org.uk
M: 07545 922117