

# Embrace Sustainability With Natural Materials

**Pharma companies are taking environmental considerations more seriously and investing in different packaging types that meet their stringent criteria**

*Josie Morris at Woolcool*

**'Greenwashing' is an ugly term. It is often levelled at corporations that take only cosmetic steps towards a sustainable future – making superficial changes to branding or adopting practices that give the impression of a greener outlook, which, on closer inspection, may be designed only to steal a march on their competitors.**

It is a form of virtue signalling that is less about adopting real 'eco' values and more about climbing aboard a bandwagon. Sometimes, the only significant change can be seen in their marketing.

However, the pharma industry is not one often accused of greenwashing. As a science-based sector, it

considers change through the prism of stringent performance criteria. Pharma packaging, for example, naturally sets higher standards than that needed in other sectors, given that contents often include life-saving medicines or items that need to be kept in a sterile state. Questions of robustness, security, contamination and temperature control should always come above 'green' considerations in these circumstances.

The corporate world's shift towards sustainability is being driven by a combination of changing public attitudes, plus pressures from government, clients and investors.

Pharma is now joining that shift. In the UK, for example, the NHS has worked with the government to set ambitious

net zero targets. Public healthcare expenditure in the UK represents more than 10% of GDP, employing 1.2 million full-time-equivalent staff. Not surprisingly, the NHS accounts for a significant part of the UK's carbon footprint, at around 5%.

A quarter of the service's total carbon footprint is believed to be generated by the manufacture and use of pharmaceuticals. Therefore it follows that, for the NHS to achieve its net zero ambitions, it will require private sector partners to make a significant contribution by reducing the carbon footprint of the services and products that they provide.

This situation is being played out across the globe as governments, regulators, pharma and the world of





medicine work together to deliver sustainable outcomes.

A more sustainable approach to packaging can play a significant role in helping pharma companies to reduce emissions and the broader ecological impact of their operations.

Research and development into ecological temperature-controlled packaging has been happening for over a decade. Back at the start, it was considered a niche issue, but that work was the foundation of the current global push for more sustainable solutions.

The challenge is to be truly sustainable while still delivering the performance required. Millions

have been spent on research into the properties and ecological impact of sheep's wool as insulation for sustainable packaging, in comparison to man-made materials, such as polystyrene.

As a 100% natural material, wool is biodegradable, compostable, recyclable, reusable and abundantly available. It also lowers the carbon footprint of delivery chains, as it takes up less room in transit than man-made alternatives.

In the early days, it was difficult to persuade the industry that using natural materials was not only a viable option, but that it was also preferable. The research that can be provided now proves that any long-held

concerns that choosing an ecologically sound packaging method meant sacrificing performance or costs are no longer correct.

However, a pragmatic approach, that considers the bigger picture, is also important when it comes to ecological and social impact. That means looking at the question of sustainability in a holistic fashion, beyond knee-jerk decision-making and marketing gimmicks. This is one way to avoid the tag of 'greenwashing'.

The shift to sustainability is not about cutting out a material, nor about using substantial amounts of other materials just to make something fit a rhetoric. This is not sustainable in the true definition of the word.



While members of organisations like the Natural Materials Association advocate finding better ways to use the materials created by Mother Nature, the integrity of the contents must remain paramount. A balance must be struck in terms of the green credentials of a packaging solution and the efficiency of the product. Striking that balance means avoiding a binary decision. For example, with the world pushing for a greener future, there have been moves to jettison plastics entirely, without taking a balanced or long-term view of their properties.

Similarly, some may choose to use only cardboard in their packaging,

without taking into account the significant waste attached to it as a strategy.

Glass always carries a high carbon cost, but some of it can be reused, and there are applications where nothing else will do the job. Similarly, plastics are vital in some situations.

## Research

Rightly, the pharma industry looks to research to ensure the packaging it employs provides the reliability required. Research has provided tried-and-tested data to meet its exacting requirements. Those data show that there really is a science to temperature-controlled packaging; it is not just about putting ice packs in a box. Every product has different packaging requirements, whether for vaccines or medical supplies. There are multiple factors involved.

This means that not only the product, its dimensions and the temperature range at which it is needed to be kept must be considered, but also the likely length of delivery time and the mode of transport. Staying within the correct temperature range is key to the success of any delivery.

It is also vital to consider potential damage and the robustness of the packaging. Another factor is the bespoke mix of cooling agent and insulation for the product.

'Going sustainable' should not mean a loss of performance, or adding in amounts of a material that are not inherently suitable for this purpose.

Then there is the question of temperature. Temperature-sensitive deliveries typically, although not exclusively, fall within two ranges: 2-8°C and 15-25°C.

Traditionally, pharma companies looked to man-made solutions to insulate their deliveries. However, the push to sustainability means more are looking at the properties of natural materials.

Wool, as a temperature regulator developed by Nature through millions of years of evolution, consistently performs to maintain the challenging demands of both temperature ranges.

Crucially, in respect of more recent pharma guidelines changes, wool performs exceptionally for products requiring regulation at controlled room temperature (CRT), meaning it is leading the sector at protecting a vast range of temperature-sensitive contents in all passive situations.

When refrigeration is not available to help keep a delivery cool, such as a vaccine delivery into a rural area or difficult terrain, insulated packaging for pharmaceuticals using wool provides both the protective and insulative answer.

Until relatively recently, ecological packaging solutions faced a credibility challenge in the pharma sector. Those pushing a green agenda have often faced questions over costs, reliability and the veracity of data.

However, those attitudes are changing, partly because investors are waking up to the importance of sustainability.

According to a recent global survey of 500 institutional asset owners by Morningstar, called 'Voice of the Asset Owner', investors are increasingly interested in companies that reflect their own social sensibilities, with 85% of institutional investors that responded to the survey saying environmental, social and governance (ESG) factors were material to investment policy.

Now, the biggest players in pharma are moving to prove their green ambitions. For example, AstraZeneca launched a \$1 billion 'Ambition Zero Carbon' programme that engages its entire value chain. It also recently announced plans to build sustainable offices at Dubai Science Park, where the design and construction of the project, and the materials it uses,

will meet the platinum standards in Leadership in Energy and Environmental Design set out by the US Green Building Council.

## Conclusion

Clearly, pharma is embracing the green agenda and looking for ways to develop a sustainable trajectory, while ensuring the high standards it has always required.

The world of packaging will play an important part in this journey, but the sector will need not only investment and research, but also a practical, long-term vision that will help pharma make decisions that support its growth, product quality and the planet, too.

Natural materials like wool can play an important part in packaging pharma products in a more sustainable way.

By trusting in research to disprove long-held concerns over sustainable options, pharma can plot a path to a more ecologically sound future, while avoiding any accusations of 'greenwashing'.



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A passionate advocate for diversity and the development of strong cultures within innovative businesses, Josie is closely involved with organisations, such as the Bio-Based Industries Association, which lobby the UK government on the environmental problems of global packaging waste.

She holds a BA and an MA from the University of Birmingham in the UK.