

Cork's sustainable revival



James Bayley explains how cork has recovered from its tainted reputation to prevail as a sustainable contender in the closures world

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A DECADE AGO, the cork industry struggled with contamination by 2,4,6-trichloroanisole (TCA), causing a musty smell. This led to a decline in cork use as aluminium screwcaps, plastic and glass closures gained popularity.

The cork industry has since made a remarkable recovery, courtesy of new technologies to help detect TCA and ever-improving sustainability credentials.

For instance, a recent KPMG study highlights the environmental benefits of cork production, particularly by leading producer MA Silva. The study found that the carbon footprints of MA Silva’s cork stoppers – natural, sparkling and micro-agglomerated – are negative due to the cork forests’ ability to remove CO₂ from the atmosphere, a process known as carbon sequestration.

The research measured energy consumption and atmospheric emissions, comparing them with the amount of carbon sequestration, underlining the environmental value of cork production.

Nuno Silva, MA Silva’s marketing manager, notes that markets previously favouring screwcaps are now increasingly interested in cork products. The company’s commitment to sustainability was evident during a recent press visit to MA Silva in Alentejo, where *Harpers* observed the entire process from forest to bottle.

Cork oak forests, covering about 2.2m ha in the Mediterranean basin, are vital for CO₂ sequestration, biodiversity preservation and combating desertification. These forests also protect endangered species like the Iberian lynx. Portugal plays a significant role, accounting for 34% of the forest area and 50% of cork production.

The process of stripping cork from trees, which causes no harm, enhances CO₂ absorption. This sustainable method, coupled with responsible forestry practices, ensures the quality and longevity of cork production.

Quality is supported by rigorous testing and advanced sterilisation techniques. The production process

involves multiple stages of quality control, including gas chromatography/mass spectrometry (GC/MS) TCA control, electronic and manual sorting, and advanced cleaning systems.

“Investment was paramount across the entire industry,” says Silva. “The cork business was at serious risk of vanishing completely due to TCA, so it’s vital we quality-check at every point in the manufacturing process.”

Last year, members of the Cork Quality Council (CQC) conducted more than 25,000 analyses, showing a steady reduction in measurable TCA levels, now 99% lower than in 2001, according to MA Silva.

However, overcoming past reputations has been challenging. “We’ve had producers return bottles due to detected TCA, but our tests showed the TCA was in the liquid, not the cork. People often forget TCA contamination can occur in the winery and is often found in barrels, drains and wooden pallets,” says Silva.

The cork industry, now focused on sustainability, offers a natural, renewable, and recyclable product. MA Silva, founded in 1972, produces 600 million corks annually and serves more than 8,000 customers worldwide. Its Alentejo neighbour, Amorim Cork, produces more than 5.5 billion cork stoppers per year, the largest manufacturer of cork in the world.

Some of the said cork may even end up in outer space. NASA and other space agencies are incorporating cork into spacecraft design, due to its resistance to extreme temperatures and radiation.

These attributes make it an ideal insulator for space rockets, where maintaining structural integrity and protecting cryogenic fuels are critical. Historically used in Cold War missiles and various space missions, cork’s application is expanding in the era of sustainable space exploration.

For example, the Artemis mission, which uses cork produced by Amorim, aims to return humans to the Moon and utilise cork in NASA’s Space Launch System (SLS) to withstand extreme heat during launch and ascent.



SEAL OF APPROVAL

Other nations, which previously favoured screwcaps, are starting to take note, including the UK.

Norfolk bottler Broadland Drinks reinstalled its corking line after a 15-year absence, marking a significant re-emergence of cork in the UK.

Cork had all but disappeared from major UK bottlers by 2010 due to persistent TCA issues, leaving only Kingsland Drinks with a legacy corking line used to bottle the Australian brand 19 Crimes.

“The complaints of TCA are minute now compared to where they were back in 2009 when we decided to suspend our corking capabilities. At that time, many big decisions were made and Tesco made its major move to screwcap,” says Broadland CEO Mark Lansley.

Broadland is now focusing on cork as a technically sound and environmentally



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friendly option, with the new line aimed at premium bulk wines and brands. Minimum order quantities of 3,000 litres can be handled, either from single containers or as a ‘carve-off’ from larger bulk wine flexis and tanks.

The missing piece in the UK’s sustainability puzzle has been the absence of a means to recycle cork. Earlier this year, The Wine Society teamed up with Wine Logistics UK to offer a service allowing its members to return their corks to be mulched, consolidated into shipping containers, and returned to Portugal for proper recycling.

Similarly, retailer Majestic has its in-store cork-recycling scheme, with the corks being trialled by the Eden Project in Cornwall, which will use them as mulch for its Mediterranean plants.

The cork industry has come a long way from its troubled past. With a strong commitment to environmental responsibility and technological innovation, it is well-equipped to meet future challenges and continue its important role in the wine industry.



↑ MA SILVA’S CORK-MANUFACTURING PLANT IN ALENTEJO, PORTUGAL