

CAN WINE GO THE DISTANCE?

A new range of ingredients in the wine mix, with the odd sounding names of food miles and carbon footprint, are in danger of leaving a nasty taste in the industry's mouth if they are not taken seriously, considers James Graham.

There was a time, until quite recently, when food only entered consumer discussions on wine in terms of which wine best accompanied which course. For the on-trade, the cost of providing a scintillating cellar to tempt customers was measured in terms of prestige and margins. While the invoice cost of transporting wine has long been acknowledged, the wider industry now has to make a reckoning of the hidden costs on the environment that pressure groups and some consumers outside the industry are saying must now be paid.

At the simplest, the two main pressures can be identified as the 'food miles' wine travels and 'carbon footprint' of wine production and distribution. The bottom-line concern is whether these issues will lead buyers to turn their backs on products produced far from their consumers.

The issue of food miles is a growing concern among sections of consumers in some of the key wine markets. At its most basic, the theory is that the further food has to travel to market, the worse its impact on the environment will be and that ecologically conscious buyers will always select the option with the lowest miles travelled. However, the industry is beginning to argue that it is not solely the distance that should be assessed, but the total energy used, production to wine glass, recycling and trash, including transport.

The food miles issue is muddled for the wine industry in that much focus and opposition to produce moved hundreds or thousands of kilometres is targeted at items moved by airfreight, especially out of season fruit and vege-

tables. With the exception of the annual Beaujolais run, airfreight is rarely used to any significant extent for wine shipments as its prohibitive costs are not justified. Wine is moved by traditional surface methods of road, rail and water transport modes, both domestically and internationally. At the same time, modern container shipping or road transport providers have not stood still in their attempts to lower carbon emissions. Fuel efficiency is as much a concern for transport providers as it is for outside pressure groups.

New World providers face an obvious hurdle in serving key North American and European markets in overcoming the distance. However efficient the mode of transport, wine shipped long distances to Europe or the American west coast is always open to criticism about its food miles. In fact, a suspicion has grown in some producing areas that the idea, however well-meant when developed a decade ago, has transformed into a subtle form of protectionism.

Recently, it only took a single sentence in The Times advising readers to "buy a bottle of French wine instead of a New Zealand vintage" to cut down on food miles to spark a spirited defence by the New Zealand industry to what it considered a superficial criticism.

"I believe food miles for most people represent a genuine concern about the environment," says Philip Gregan, CEO of New Zealand Winegrowers. However the implication that because a product comes from far away it must use more energy in the transportation is flawed as it completely ignores the energy used in the total life cycle of a product. However there is no doubt some groups or people are using the concept for their own ends, such as protection-

ism," he notes.

"New Zealand wines are exported by sea to the UK, not by air. This mode uses less carbon emissions per kilometre than by air or even road. There is a concern about climate change in many parts of the world, but only in Britain have we really seen concerns about food miles. In fact the term says it all - 'miles', in the rest of Europe it would be 'kilometres'. I raised the question in Belgium recently and they had never heard of the term."

Last year, New Zealand's Agriculture Minister Jim Anderton, commenting on a Wellington government report that questioned the concept of food miles, said: "The concept of food miles is both flawed and too often promoted by those motivated by self-serving objectives rather than genuine environmental concerns. It is being used in Europe by self-interested parties trying to justify protectionism in another guise."

Bulk still behind bottled transport

The growing discussion of food miles in wine shipping often ignores the volumes of wine shipped in bulk to be bottled in the destination market. While using a flexitank bladder or ISO steel tanker can't reduce the actual distance travelled, the ability to load up to 24,000 litres in one container clearly has advantages in terms of economics of scale and works to reduce the environmental impact of wine movements.

A Flexitank is a bladder or inner liner designed to fit inside standard 20' ISO dry shipping containers, converting it into a non-hazardous bulk liquid transportation system. Flexitanks range in size from 10,000 to 24,000 litres, but can be manufactured to accommodate any specific capacity

requirements. The use of bulk importation is well-established to the UK, especially to serve the burgeoning supermarket own-label business. Around one bottle in five is actually brought into the country in such containers for bulk goods. Three advantages are promoted by the bulk transport industry - shipping costs can be reduced by up to 40%, the European Union's lower, common custom tariff is levied on containers exceeding 21, which reduces the total duty per unit, and British bottle prices are often lower than in the producer country.

Despite this, the majority of wine is still transported in bottles. Producers are aware that a perception has arisen that only low-value wine is moved in bulk, as was often the case in the past. A switch to bulk transport also requires either investment in or access to a filling plant domestically and a bottling plant overseas. Industry statistics suggest that most New World wines shipped in flexitanks have a FOB value around US\$1 per litre, which allows the added-value costs of bottling and labelling to be absorbed in the distribution chain. The earlier association of inferior quality wine with bulk transport has been replaced by an understanding of how the distribution chain can help in reducing the impact of wine on the wider environment.

Constellation Europe is to create a warehouse and accompanying bottling

facility at Avonmouth near Bristol, England. The move has been welcome by the government-sponsored Waste & Resources Action Programme (WRAP), who believes the facility could lead to a dramatic increase in the UK's capacity to bulk import wine for domestic bottling. The development, which will have the capacity to fill around 120 million bottles of wine every year, is expected to be operational by 2009. The UK is the largest importer of wine in the world, with over one billion litres imported. Around 80 per cent of this volume arrives bottled. "The Constellation facility has the potential to stimulate more bulk shipments of wine, for bottling in the UK. This can unlock many environmental and business advantages, including reduced transport costs and CO2 emissions," says Andy Dawe, WRAP's Glass Technology Manager.

PET's message in a bottle

It is a contentious issue for producers whether consumers will accept wine in plastic bottles. The introduction of polyethylene terephthalate (PET) bottles is increasing globally as the advantages of using a material that looks like glass but acts like plastic are being promoted by bottle manufacturers. Until a year ago, the use of PET was restricted to half-bottle sizes and smaller for locations such as in-flight catering and occasions where glass is forbidden, such as sporting events.

QUOTE UNQUOTE

» Some people are using the concept of food miles for their own ends. «



*Philip Gregan, Chief Executive Officer
New Zealand Winegrowers*

However, in August 2006, Wolf Blass introduced Bilyara Reserve, a range of premium Australian wines in lightweight, shatterproof and environmentally friendly 750ml PET bottles to its Canadian market. A spokesperson for the producer spelt out the advantages of switching to PET in its bottling. "The 750ml PET wine bottle is completely recyclable and weighs just 54g prior to filling, offering an immediate 85% reduction in packaging weight. PET is often returned to use in food contact packaging, creating a closed recycling loop," he says. Thought was given to ensuring the introduction of the new material presented few problems for the trade and consumer. The bottles were designed to be a little shorter than traditional glass wine bottles to allow them to fit into the refrigerator door more easily while still fitting standard wine racks. "Wolf Blass tested the 750ml PET concept and



Calculated using UK government DEFRA CO2 emissions factor for large bulk carrier ship against the emissions factor for a 75 per cent loaded articulated lorry, assuming an average lorry load of 9.3 tonnes.



Food Miles (FM) considers transport distance, means of transport and transport efficiency. Food Miles are measured as tonnes per kilometres or carbon dioxide emissions from fuel used during the transport.

1 Comparison of CO ² emission of Italian wine exports			
Destination	Mode	Distance in km	EF* per bottle
Domestic	Road	331.6	0.4
France, Germany	Road	1,187.80	1.28
USA, Japan	Sea	12,434.50	0.95

*EF: Ecological footprint
Ecological measures the total CO² carbon footprint and measures it for grammes produced per sq m of vineyard.

"A standard 24,000 litre flexitank container holds the equivalent of 32,000 standard 75cl bottles, avoiding the shipment of 16 tonnes of glass," says Andy Dawe, WRAP's Glass Technology Manager. "If just 10% of current bottled imports to the United Kingdom switched to bulk transport, then 55,000 tonnes of glass would be saved."

SOURCE: GLOBAL FOOTPRINT NETWORK

found that consumers are looking for ways to increase occasions for wine, without always having to worry about the breakage potential or weight of glass. With the popularity of wine on the rise and constant reliance on convenience, consumers want more flexible options," says the spokesperson.

The fact that PET has the practical benefit of being lightweight, shatter-proof and recloseable has not made up for the fact that PET, and plastic in general, is not very good at keeping oxygen from permeating the container. It is only recently that PET bottle manufacturers have developed special oxygen barrier materials that can be incorporated into the plastic. This problem is linked to the question of aging bottled wine. At present, PET is being selected for wines that are intended for immediate consumption. Even Wolf Blass acknowledges this fact in advising its Bilyara Reserve range be drunk "early in their life span".

Journalist and BBC wine broadcaster Andrew Jefford suggests the wide introduction of PET bottles will take time and involve marketing strategies, but is not impossible. "When synthetic corks were introduced, serious wine drinkers swore they would never accept them. Resistance can be overcome in time," he says. "A key route would be their initial use by brands associated with new trends, such as organic wine and eco-consciousness. Brands like Banrock Station already have an edge in the market. It is a changing market and, though much of the wine trade is conservative, PET is coming."

Reducing wine's carbon footprint

It has become a theme in discussing climate change that 'the polluter pays'. The most common attempt to mitigate damage has been to limit the carbon dioxide output in all aspects of production - from manufacture, transport and recycling of packaging. A growing number of producers worldwide are embracing carbon-reducing programmes, even promoting their efforts to secure the 'green' consumer. One

example is the work the Napa Valley Vintners (NVV) trade body has undertaken developing an environmental programme for Napa Valley's winery production facilities. The Napa Green Winery Certification builds on the existing NVV's Napa Green Land Environmental Certification. Napa Green Winery is a Napa-specific set of sustainable and green business practices that demonstrates to consumers that certified wineries are implementing sustainable practices and protecting the environmental quality of the region. The NVV works closely with regulatory partners, such as the United States Department of Environ-

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mental Management, as third party certifiers and uses existing green business models as the basis for this comprehensive programme. Included are topics such as water and materials recycling and energy conservation.

Meanwhile, on the other side of the Pacific, The New Zealand Wine Company, producer of Marlborough's Grove Mill and Sanctuary labels, has become the first winemaker to achieve CarboNZero certification for contributing no net carbon dioxide emissions into the atmosphere. The producer set itself the challenge this year to address the impact of carbon dioxide emissions associated with use of electricity and fossil fuels for the production and distribution of its wines.

Working in partnership with Landcare Research, which administers CarboNZero, the company measured its carbon dioxide emissions, committed to reductions in these and offset unavoidable emissions through the

regeneration of native forests. Rob White, CEO of The New Zealand Wine Company, says: "Over recent years we have strived to improve our environmental performance by implementing energy and water conservation measures and restoring wetland areas. Becoming CarboNZero places us at the cutting edge of global sustainability and gives consumers an opportunity to choose our wine in the knowledge that we have minimised our impacts on climate change."

CarboNZero certification involves three key steps - measuring, managing toward reduced emissions and finally offsetting the remaining unavoidable emissions. The process is independently audited. Dave Pearce, winemaker for Grove Mill and Sanctuary says: "From a strictly business viewpoint, achieving CarboNZero not only focuses us on energy efficiency, but also reduces the risks of non-tariff trade issues such as 'food miles'. As producers of a land-based natural product, it's also a major step towards environmental sustainability."

In California, since launching the Cameron Hughes' Wines brand in 2004, the eponymous importer, who refers to himself as a *négociant*, has sourced 30 wine selections from around the world with no bottle exceeding US\$ 20. "We rely heavily on shipping to receive wines from around the globe and make customer deliveries across the country. If we break out the "true" cost, shouldn't that be factored into the equation?" asks Hughes. "You can get pretty worked up about this kind of stuff, or you can do something about it. We made a commitment to be as innovative as possible - taking advantage of every opportunity to control costs. This is merely an extension of that - and it's an easy choice."

Partnering with the CarbonFund.org Foundation, a non-profit organisation dedicated to the promotion of practical solutions to global warming, all of the company's emissions as a result of office use, travel, freight and shipping activities were tallied and then offset by supporting climate-friendly activities such as renewable energy, energy effi-