



Are grower entities responsible for policing claims about country of origin, potency and health benefits?

AUTHENTICATING EXTRACTS

Consumers around the world are increasingly recognising the added value of New Zealand blackcurrants as a natural health supplement. However, where there is value, there is the risk of fraud.

John Gauldie

About half of blackcurrants grown in New Zealand end up in supplement form, thanks to a growing global market for the unique and proven properties that differentiate New Zealand blackcurrants from blackcurrants grown elsewhere.

Research has well-established the high levels and unique combination of antioxidant anthocyanins in New Zealand blackcurrants – the result of a targeted breeding programme and favourable growing conditions such as high UV, climate and soil conditions in the primary growing areas of Canterbury.

Around the world nutraceutical manufacturers purchase bulk anthocyanin extract in powder form. These companies produce supplements that are frequently marketed with 'New Zealand blackcurrants' as the key ingredient.

"As fruit, our blackcurrants are rather easily distinguished," says Mike Callagher, general manager at the NZ Blackcurrant Co-operative Ltd. "The problems occur up the value chain when the fruit is transformed into products with much higher value, both financially and in terms of health benefits. This is where we have come across examples of adulteration, substitution, misleading claims around potency and misleading claims around the health benefits. This is very much of concern right now."

A serious food safety issue or loss of trust in efficacy involving blackcurrant extract would be massively costly to blackcurrant growers, Mike says. The industry relies on consumer trust which can be easily knocked.

A recent example out of Japan involving an extremely serious food safety issue from a well-known supplement producer has impacted the entire supplement industry in

that country. Despite this being an extreme case, examples like this keep the New Zealand blackcurrant industry focused on maintaining a clean supply chain.

Compromising safety is a key concern, however the authenticity of country-of-origin marketing is obviously also critical to protecting industry revenue.

At the recent Vitafoods Trade Show in Barcelona, Mike met with Kenn Israel, one of the pre-eminent commentators on the subject in the industry. Kenn says, "Adulteration is the biggest existential threat to the future of the dietary supplement industry. If we want to scale with integrity, we need to confront it head-on."

Earlier this year Meike Rombach and Hiraina Tangiora from Lincoln University published an article titled "The food fight - Overcoming the challenges of food fraud" in *The Journal by the NZ Institute of Primary Industry Management*.

Of the various types of food fraud, the paper outlines the risks including:

-  **Adulteration:** Adding unauthorised substances to food products to enhance weight, volume or perceived quality, often compromising safety and authenticity
-  **Substitution:** Replacing a valuable ingredient with a cheaper alternative while misrepresenting it as the original
-  **Mislabelling:** Providing false or misleading information on product labels, such as incorrectly claiming a product's origin or quality
-  **Dilution:** Like substitution, this involves mixing a food product with a cheaper substance to increase volume and profit while reducing quality.

Meike goes on to contemplate the ethical nature of the problem.

"From an ethical perspective we should consider our role as stewards of land, our duties to consumers and justice. Horticultural growers are stewards towards land and products, and this includes our unique New Zealand story of provenance. Safeguarding authenticity is part of that stewardship."

Food fraud strips growers of the value they have worked to create, transferring benefits to dishonest parties. From an ethical lens, this is an issue of fairness. Growers should be recognised and rewarded for their product, Meike says.

"Within our New Zealand products, consumers are seeking real health benefits. Supplying anything adulterated or misleading not only violates their trust but can also harm their health. The grower's responsibility to that consumer extends beyond the orchard. The fight against food fraud considers economic aspects but is also about honouring the integrity of our New Zealand products."

New Zealand blackcurrant traceability is excellent - not just to the grower, but down to the bin number.

To guarantee New Zealand provenance, the NZ Blackcurrant Co-operative Ltd developed its own Adaptive™ New Zealand Blackcurrants trustmark together with the Bioeconomy Science Institute (previously Plant & Food Research). The uptake of Adaptive™ has been slower than ideal, Mike says. This in itself is potentially concerning, considering its use requires full and absolute traceability. Once the blackcurrants are shipped offshore for processing into extract, it becomes difficult to trace.



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Mike says that he is currently in active discussions with offshore suppliers of branded supplements claiming to be using high anthocyanin New Zealand extracts. "The price point is generally the first sign in identifying questionable product being offered at prices which simply are not viable were the product genuine."

Often this comes down to insufficient due diligence by brands buying bulk product from a trader several steps away from actual processors.

New Zealand-based tech company Oritain is a global leader in applying forensic science and data to verify the origin of products. It is used by New Zealand's meat industry, for example. However, such solutions are cost prohibitive for small sectors like blackcurrants.

"There are some great genuine blackcurrant products out in the market which the consumer can rely on to deliver what they claim," Mike says. "We are doing what we can with the resources we have to police functionality, authenticity and claims as we come across products, but where do we start and where do we stop? We are grappling with these questions at an industry level but are determined to safeguard the value of authenticity that we hold so highly."

One solution being actively explored to ensure New Zealand blackcurrant provenance, would be to restart onshore processing, which would be an opportunity to control traceability through to the extract form - as well as adding value to the New Zealand economy. ●

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