

## A sweet, sticky fraud

Honey is anything but pure, according to a new scientific study.

A team of researchers from Macquarie University in Australia tested 100 samples of globally sourced honey and discovered that more than a quarter of them were "fake" — adulterated with cheap sugars and syrups.

The paper, published yesterday in the journal *Scientific Reports*, found that 52 per cent of Asian honey samples had been mixed with other substances, but the problem also extended to Europe (28 per cent) and Australia (18 per cent.)



A honey bee visits flowers for nectar in an urban garden in Berlin. In a recent test, 28 per cent of the samples of 'pure' honey sold commercially in Europe were found to contain cheap sugars and syrups. (Sean Gallup/Getty Images)

New Zealand has a particular problem, the study notes, with all the tested samples of manuka honey proving to be adulterated. Not a huge surprise, given that the country produces just 1,700 tons of it annually, yet as much as 10,000 tons of "manuka" is sold each year.

Seven North American samples, including two from Canada, were tested and all passed.

Food fraud is estimated to be a \$40 billion US a year business, and honey is thought to be the third-most adulterated product, behind milk and olive oil.

But the study suggests that the problem might be bigger than previously thought.



A beekeeper pours freshly collected honey into glass jars in Kanchany, Belarus. (Vasily Fedosenko/Reuters)

Tests on more than 2,200 honey samples by the Europe Union recently found that 14 per cent — or one in every seven jars — were fake, adulterated with sweeteners like sugar, molasses and potato syrup. A further 20 per cent made false claims about the origin of the honey, blending together products from various regions and countries.

Honey purity has become an issue Down Under, following an investigation by the Australian Broadcast Company and Fairfax Media that revealed many of the country's largest supermarkets and producers are selling adulterated bee products falsely branded as being 100 per cent pure.

The investigation says Australia's food safety agency is still performing outdated C4 sugar tests on imported honey, which routinely fail to detect added syrups. The Australian Competition & Consumer Commission has launched an inquiry into the claims.

China, which saw its honey production rise 88 per cent between 2000 and 2014 — even as its bee population was under stress from pesticides, loss of habitat and pollution — is thought to be the source of much of the fake stuff.

And popular e-commerce sites like Alibaba are filled with ads for cheap rice syrup and other sweeteners, claiming they can't be detected by official honey tests.

By some estimates, up to 99 per cent of honey sold in China is adulterated, some of it being as much as 50 per cent added fructose.



Palestinian beekeepers, seen here through an overturned hive, collect honey at a farm in Rafah in the southern Gaza Strip. (Abu Mustafa/Reuters)

In Canada, where the value of domestically produced honey dropped by nearly \$53 million between 2015 and 2016, producers have been sounding the alarm about fake imports. They accuse the food industry of exacerbating the problem by buying up the fake honey at cut-rate prices for use in products like granola bars and cereals.

The Canadian Food Inspection Agency says honey has been a "sampling priority" for two decades, and that the isotope ratio technique it uses to test for purity meets international standards.