



| Feature |

## The Secret to Aging Well

Words **Stephanie Yeap**

**Fermentation, a cornerstone of food cultures across Asia, is enjoying a revival in contemporary cuisine thanks to chefs who have taken it upon themselves to carry on the tradition.**

While the likes of kombucha and kimchi have become popular all over the world in the past few years, many of us have grown up with fermented foods in one form or another—from the fiery tang of *achar* and *belachan* to the buttery umami of *miso* and *nattō*. And that's no surprise, considering large civilisations and indigenous communities across Asia have cultivated the process of fermentation over the centuries.

Consuming and preparing fermented foods comes with a whole slew of benefits too: the process creates strong, tangy flavours while ensuring a long shelf life, and, best of all, contains probiotics that vastly improves gut health.

### Fermentation in the Asian context

Fermenting has long been a cornerstone of culinary traditions across Asia. Communities rely on the process to preserve and increase the longevity of fresh produce prior to the creation of modern technology. This ensures a steady supply of food throughout the year, no matter how harsh the climate or season. While Asia spans numerous regions, countries, and cultures, there are a couple of key traits shared by fermentation practices across the continent.

One of most defining features is the use of natural, spontaneous fermentation in preserving fruit and vegetables. A paper in the *Comprehensive Reviews of Food Science and Food Safety* published in early 2020 defines this as a lack of starter culture, instead the fermentation process revolves around the food commodity slowly maturing to create alcohol and organic acids. These products are behind the unmistakable tang and pungent aroma of fermented fare, with lactic acid being the most prominent natural preservative. Key dishes made with this method include the essential Korean fermented cabbage dish *kimchi* and *gundruk*, a fermented leafy green staple from Nepal.

On the flip side, there's the use of starter culture, where the intentional introduction of microorganisms—think yeast and bacteria—kickstarts the fermentation process. Countries across East and Southeast Asia boast their own variations of starters to create national or regional foods including alcohol and bread. While starter cultures are commonly associated with dairy products such as yoghurt and cheese, these products tend to be less popular in East Asian countries due to the reduced access to animal-based agriculture, especially when compared to the likes of India and the Middle East.

Each East Asian country has a long track records of integrating its own distinct starter culture in their drinks and condiments. In China, *qū* is the cornerstone of many a Chinese alcoholic beverage like beer and *baijiu*, which has can be traced all the way back to the Shang dynasty. Korea has equally historic roots in fermenting starters, having produced *nuruk* since the 3<sup>rd</sup> century C.E. The grain-based starter forms the basis of drinks such as *soju* and the refined rice wine, *cheongju*, as well as *ganjang* (soy sauce) and *gochujang* (chilli paste). In a similar vein, *kōji* mould very much defines Japanese cuisine. It primes grains for *sake*, *soju*, rice vinegars and ferments soybeans for miso and soy sauce. Perhaps unsurprisingly, biochemistry researcher Eiji Ichishima of Tohoku University deemed it a “national treasure” in the *Journal of the Brewing Society of Japan* in 2006.

The equivalent starter culture in Southeast Asia is known as *tapai*, the sweet-sour result of traditionally fermenting rice or starchy foods in large, wide-mouthed *tapayan* jars. It can produce a number of distinct dishes, depending on how long it's been fermented for, and is so versatile that it's an essential building block for cuisines across the region.

You'll find *tapai* at traditional ceremonies in Indonesia, such as marriages or the birth of a child, or consumed casually as a snack, while fermented rice remains a popular staple in the Filipino dishes, such as in *puto* (steamed rice cakes) and *burong isda* (cooked rice and raw fish fermented with salt and red yeast rice). It's worth noting that each ethnic group tends to have their own takes on these dishes, only testifying to how diverse cultures across the region are.



Nattō

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– Cynthia Chua

#### **Pack a punch with probiotics**

Probiotics exist in large quantities in foods left to foment, as the process allows the pre-existing bacteria to multiply and flourish. They are frequently touted as bacteria and enzymes that are good for your gut; they support the creation and absorption of vitamins, particularly vitamins B and K, while fortifying the mucosa, or gut lining. The result is a strong gut lining that’s more resistant to inflammation and disease, and in turn, an enhanced microbiome and wider immune system.

In Southeast Asia, *tempeh* (fermented soybeans) from Java is commonly found in the region’s cuisine. A nourishing food containing copious amounts of iron, protein, and dietary fibre, the aged soybeans supplies all nine amino acids that are necessary to support bodily growth, healing, and digestion. Other foods that will do your gut a world of good include pickled fruits and vegetables known as *achar*, Indian fresh cheese named *paneer*, and *nattō*, the Japanese counterpart of *tempeh* but treated with the strain *Bacillus Subtilis*.

The holistic benefits of fermented fare have not gone unnoticed by veterans in the restaurant industry, with Cynthia Chua, founder & chairman of Singapore-based lifestyle conglomerate Spa Esprit Group, incorporating it into her restaurants The Butcher’s Wife and Le Vin Levain. “As diners, we’re more exposed and accepting of fermented foods like a good cheese, yoghurt, a juicy natural wine, kimchi, especially a properly made sourdough bread. They have all helped to open up a whole new understanding of fermentation and the wonders of natural yeast, which has achieved cult-like status in some circles,” she explains.

### A test of patience and precision

Many contemporary chefs in Asia have continued to incorporate this process of aging food into their menus today, using it as a gateway to the past. Chiang Mai-based chef, Phanuphol “Black” Bulsuwan, runs Blackitch Artisan Kitchen, where he is celebrated as a master of fermentation. He blends Thai and Japanese culinary traditions for “unique flavours that cannot be found [on] the general market” while optimising the kitchen’s leftovers. Considering fermentation a mainstay of Thai culture, he believes that “understanding the process of fermentation enhances the understanding of local wisdom”.

Over in Bangkok, chef Garima Arora of Michelin-starred Gaa similarly attests to fermentation’s perennial role in India’s culinary traditions. “It is such an integral part of our culinary history. It is simply a way of life,” she elaborates. Her restaurant is known for its progressive menu showcasing traditional Indian techniques and continues to keep historic culinary practices alive such as culturing butter by allowing the cream to ferment before it’s churned. Arora does the same for Gaa’s butter and lychee sake that is fermented for two nights.

Another outspoken advocate is Brazil-born chef, Mariana Campos D’Almeida. Now offering a menu almost entirely dedicated to fermentation at The Butcher’s Wife, she first fell in love while making bread from scratch at The Slow Bakery in Rio de Janeiro. Her time at Institut Paul Bocuse in Lyon learning how cheese is left to age with minimal human intervention instilled an appreciation for the time- and labour-intensive aging methods as well as the quality of the raw ingredients.

One of her dishes, Our Own Goat Cheese, is made from raw goat milk from Hay Farm in Singapore that she ferments with kefir grain, giving it a thick consistency and tartness. The milk is strained over several days and becomes a rich and creamy goat cheese by the end of two-weeks. Another highlights her South American heritage—the ceviche-based dish, *tucupi tiradito*. Instead of marinating the fish in juice from a citrus fruit, it is accented with *tucupi*, a starchy juice derived from peeling, boiling and fermenting cassava root, which is a Brazilian culinary staple.



Fresh noodles wrapped with grouper in E-sarn clear soup from Blackitch Artisan Kitchen, in collaboration with chef “Van” Chalermpon Rohitratana from DAG

But it certainly isn’t the easiest process to tame. Arora struggles to achieve consistent results but has taken it in stride. She adds, “Part of the joy of fermentation is that it is always spontaneous [and] no two batches are ever the same”. For D’Almeida, it’s been a long journey of trial-and-error to determine when food is aging the way she wants them to or, well, spoiling. Singapore’s hot and humid climate also heavily affects the volatile process; fermenting can take three days when the weather is warmer but up to five during rainy season. “Preparing and organising ingredients for our menu every time is really challenging, but it’s worth it... Once you dominate the technique, you can make your own vinegars or cheese from scratch and it will be a lot cheaper,” she quips.

As chefs and restaurateurs continue to re-educate diners on the benefits of fermentation our forefathers once enjoyed, D’Almeida is hopeful that it will, in turn, foster a deeper appreciation for what we eat as it has done for her. She gives an example of how an informed consumer would more likely purchase fermented coffee at a higher price because they “know the work behind it, want to give value to it, and want the technique to keep on existing”. **WD**