

## **Scaling Organic Farming in Bali - facing the problem and meeting the challenge.**

*A briefing note by Professor Jem Bendell after two years of observation and some consultation with farmers and companies in the food business in Bali, as well as organic farming experts. Prepared for participants in the May 17th 2025 gathering on scaling organic farming at [www.bekandze.net](http://www.bekandze.net) and as background for presentation at the Ubud Food Festival on June 1st 2025.*

### **The conundrum**

In Bali there is a nature-attentive local culture, with many wellness tourists, a booming economy and disposable incomes, in an island with great soils, and yet heavy chemical usage and increasingly high rates of cancer and dementia. So why is organic and regenerative farming not yet a big part of the agricultural sector? Why do most people in the food business still say “I would prefer organic, if only...” What can we do together to change that? In the following pages I share my reflections on what’s needed to scale organic and regenerative farming in Bali (and beyond).

### **In a nutshell**

Despite growing interest, regenerative and organic farming constitutes only a small fraction of the total farming in Bali. Food businesses have expectations of appearance, volume, year-round consistency, just-in-time ordering, and prices, that are based on chemical farming. Therefore, it can be tough for the organic farmer. That won’t change without partnerships. Therefore, we need more restaurants and resorts to work directly with organic farmers. They could invest in farming, guarantee purchases and prices, and adjust their menus to what grows well without chemicals at certain times of year. Then they could tell a true story of collaboration and progress to their customers. Read on to learn more...

### **The need to address toxic chemicals in our food systems**

There is relatively high chemical usage in the very agricultural island of Bali - 0.3% of Indonesian land accounting for over 1% of rice production and near the highest annual yields per hectare in the country, due to intensive production (3 harvests a year). As many of the chemicals are carcinogenic and neurotoxic, this poses hazards for workers and neighbours, and also for all people on the island, longterm, via water supplies. Long term hazards also exist from chemical residues in fruit and vegetables (inside the plants, in surface area flesh, and on skins). Some popular fruits (citrus, apple) and vegetables (celery, spinach) are susceptible to [high residues](#).

There is scientific proof of damage from these chemicals and also some concerning public health data. Research conducted in 2018 revealed a dementia prevalence rate of 32.16% among Bali's elderly population, notably higher than in other regions with similar demographics such as Yogyakarta, which reported a rate of 20.1%. There might be many factors for this, such as diet and lifestyle, but it raises concern because of the known connection between agrochemical exposure and neurological damage [1].

There is high dependence of food production on non-local industrial processes, and thus a fragility of food security in a changing environment and societal systems. This issue is becoming more important as disruptions to international supply chains grow.

### **Education is not enough**

Organic farming for sale of fresh produce at the market is not widespread in Bali. One approach to that situation is more education and training. Bekandze Farm School seeks to combine foreign and local expertise in organic farming to teach small holders and students, for free. Thanks to Sayuri Healing Foods, and crowdfund supporters, and with input from Emas Hitam Indonesia, we taught 60 farmers so far, a 10 week course, with 30 graduated. We convene some of them again on May 17th to discuss their experiences and convey that to restaurant owners.

After 2 years in the sector, and feedback from others working in this sector, we now have some initial ideas about why there is only a small amount of organic farming in Bali.

It is difficult to produce organic fresh produce for market on a consistent basis; unrealistic expectations for absence of pests and blemishes (e.g. mold), or size and shape. Such expectations from food buyers are shaped by widespread chemical usage. Exotic and non-adapted species grow well sometimes, with some weathers and soils, but are more vulnerable and so require more chemical intervention at times (so the demands of the market that are influenced by foreigners and changing diets are driving chemical usage). Organic farming requires more work on the farm, and therefore higher labour costs. The revenues from farm produce are so low that additional farm worker time can make a smaller farm unprofitable.

There appears to be a 'market failure' with fresh organics, where consumer interest in healthy food does not translate into economic reward for organic farmers. First, the commercially easier framing of 'healthy' as "raw, vegan, plant-based" hides the chemical farming issue. Second, the (mostly transient) consumer is poorly informed, as media doesn't reach them about the problems from chemical farming. When people are tourists they want to consume an experience of delight, not of doubt and difficulty. Third, the owners and managers of food businesses do not want to pay much more for organic, nor reduce their expectations for aesthetics (even if the end consumer doesn't see it), nor change their menus to align with what grows more easily or to adjust to seasons or changes in weather, nor take any financial risk to partner with organic producers. Fourth, the demand is not large enough to enable efficiency in sales, and so often organic fresh produce is sold at the cheapest of market prices as there are no premium buyers at the precise moment a fresh product is ready. Fifth, many traders, food retailers and restaurants falsely claim they are selling organic when they are not (for instance many traders top up organic supplies with chemically farmed supplies from the open markets). Sixth, oversight systems for organic farming are far too expensive to be appropriate for the fresh product market in Bali.

Relatively extreme weather compared to the past, e.g. a drought rapidly followed by a perpetually cloudy and moist rainy season ('weather whiplash'), means that plants weaken - but with limited options for organic farmers (e.g. papaya doused in chemicals to save the crop during an extreme rainy season).

These factors mean that if one is relying on farming to feed one's family then if choosing to go organic within the open market, there is greater anxiety and a significant risk of a weather/disease disruption causing an economic crisis for the family. Taken together, all of these factors mean that teaching Balinese smallholders and agricultural students organic methods will not achieve a change in Balinese agriculture.

### **The need for collaboration that shares risks and costs**

Only if the organisations profiting from the current food system in Bali decide to partner with farmers to share the costs and risks to reduce chemical usage will anything significant change. Such partnerships would require a more serious engagement with the issues of chemical pollution and food security (non-local dependency) than I have witnessed thus far.

Food retailers, of any kind, would need to begin to adjust their expectations of volumes, aesthetics, and regularity versus seasonality of ingredients, to be the best partners. They would also need to consider choosing more ingredients from plants that are adapted to the local conditions. Simply, restaurants would need to upgrade their menus with some greater attention to farming realities, not assuming that ingredients arrive exactly as desired due to chemical usage.

Meetings, articles and videos on the barriers to scaling organic farming will help raise awareness so that more partnerships might emerge. Bekandze Farm School is now working on this in a small way. Firms that care to partner with organic farmers could benefit from easy-to-access training materials and advice, such as an online course and database of related advisors. Bekandze Farm School proposes to work on this if funding is secured.

However, the ease of ignoring the toxic reality of farming or just 'greenwashing' food retail, means that a serious partnership approach is unlikely to emerge at scale unless this issue increases in profile to become a commercially significant risk to food retailers and the tourism sector. As a tiny foreign-owned initiative, Bekandze Farm School will not do such advocacy, and instead seeks to help a vanguard of conscious businesses to scale organic farming.

### **To repeat: In a nutshell**

Despite growing interest, regenerative and organic farming constitutes only a small fraction of the total farming in Bali. Food businesses have expectations of appearance, volume, year-round consistency, just-in-time ordering, and prices, that are based on chemical farming. Therefore, it can be tough for the organic farmer. That won't change without partnerships. Therefore, we need more restaurants and resorts to work directly with organic farmers. They could invest in farming, guarantee purchases and prices, and adjust their menus to what grows well without chemicals at certain times of year. Then they could tell a true story of collaboration and progress to their customers.

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1] According to the research organisation Surveymeter, research indicated a dementia prevalence rate of 32.16% among Bali's elderly population, notably higher than in other regions with similar demographics such as Yogyakarta, with a reported rate of 20.1%. The NGO STRiDE summarised the data. Unfortunately, it provided confusing commentary by mentioning the elderly population as a potential cause, despite the studies being of the elderly, not the general public. [06.02.01.-Indonesia | STRiDE](#)