

## TABLE TO FARM ~ A USE CASE OF SYNECOCULTURE FOR RESTAURANTS

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### 1. Overview

Humans used to consume more than 30,000 different types of edible plant species. Today,  $\frac{3}{4}$  of our diet consists of only 12 kinds of grains and 5 types of livestock. Synecoculture farms have the potential to produce upwards of 500 edible species of herbs, vegetables and fruits. These farms provide the perfect platform for chefs to come up with new and innovative recipes using the large untapped variety of edible produce. We in turn benefit as we are introduced to new edible plant options through the chefs' cuisine.

Taking into account that the traditional model of cooking and serving at restaurants, including the familiar farm to table model, is being challenged during this pandemic, the entire industry is looking for a more resilient model that does not get affected by viruses. Some restaurant owners and chefs have started adapting to the "new normal" by providing alternatives to their usual dine-in business; such as doing more take-outs and deliveries, and cooking for soup kitchens.

Our answer takes a more out-of-the-box approach. We want to bring the experience back to nature. We're calling chefs to start synecoculture farm. This is our rationale behind Table to Farm.

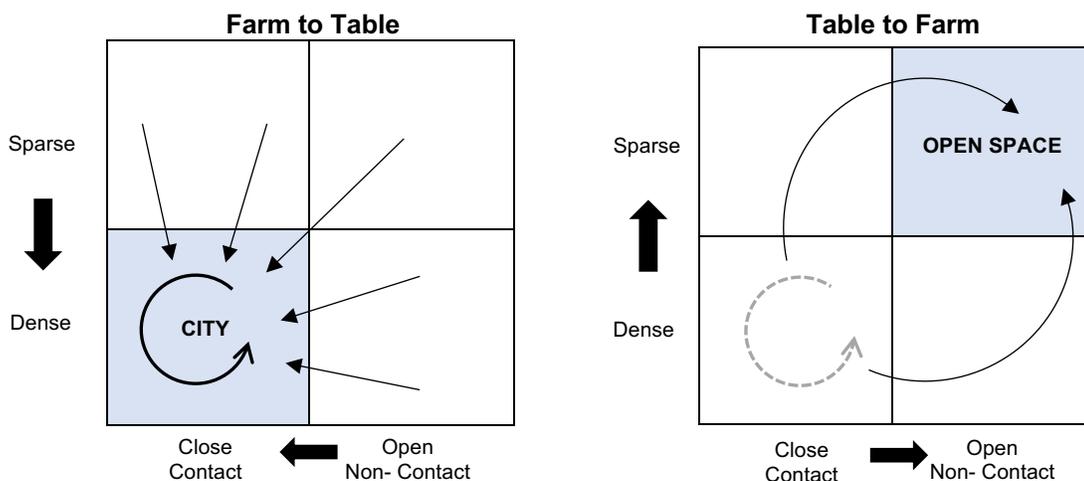
### 2. Table to Farm

Chefs and restaurateurs are challenged, financially and creatively, during COVID-19. Table to Farm gives chefs the safe alternative platform to serve cooked meals, at the same time make a positive impact to the local ecosystem and food system.

These days, the outdoors is the safest place for activities outside of our own homes. Indoor dining at restaurants increases the risk of aerosol spread of viruses due to insufficient proper air ventilation. Close proximity of tables makes social distancing almost impossible. In cases when social distancing in indoor restaurants is achievable, it adversely affects their daily operations and income.

The COVID-19 virus is known to survive on plastic surfaces for 2 to 3 days. Restaurant staff can continue to sanitize every indoor surface more frequently. However, a number of factors render this unrealistic to keep up with this throughout the hours of operation. For one, it adds to the restaurant's operating costs. This is not favorable when restaurants are asked to operate at 50% capacity during this pandemic and are already faced with a loss of income.

In contrast, when we move restaurants outdoors, there is more open space. The sparseness of this new environment ensures natural open-air ventilation necessary to minimize the risk of the spread through the aerosol respiratory droplets. Social distancing becomes much less challenging. Sunlight produces vitamin D which is known to boost immunity in humans.



Dr Masatoshi Funabashi, researcher of Synecoculture at Sony CSL, wrote in the article, *Topsoil and Viruses*, that it is difficult for a single virus to thrive or survive on surfaces of a well-developed biodiverse topsoil due to multiple competition and symbiotic networks of astronomical number of microorganisms.

Dr Funabashi describes viruses on the topsoil as, “They are not that strong when exposed to microscopic soil environments that strongly receive the physicochemical effects from such things beginning with sunlight and water, and interact with other organisms (particularly degradation caused by RNA decomposing enzymes of which a lot are even located on the surface of our hands). A virus in and of itself is a simple structure where nucleic acid is packaged inside a few proteins and a membrane (envelope). If placed on a human-sized scale, it is much like bivouacking in light clothes among the mountains swarming with ferocious wild animals and where fierce rainstorm winds blow violently”.

Therefore, one of the safest places for us to dine is a place under the sun, with lots of fresh air, plenty of healthy soil, on a biodiverse farm.

So instead of building a restaurant the conventional way, with cement and bricks and stainless steel, building a Table to Farm restaurant begins with building this biodiverse synecoculture farm. Vines of tomatoes becomes the wall of the restaurant. Lemon trees over the customers' heads form the ceiling of the restaurant. And a myriad of diverse flora and fauna within the farm provides food and protection simultaneously.

Table to Farm attempts to reconnect humans with nature by creating a new culture that rebuilds a symbiotic relationship between human and nature. More often than not, nature is just a resource that is exploited by us. However, we must not forget that Nature is a larger whole that we all are a part of. When we bring the table to the farm, we are bringing humans back to nature. The customer and the chef are reintegrated into the larger ecosystem. This is the essence of Table to Farm.

### **3. Revenue Generators**

Synecoculture farms yield up to 4 times more produce than farms using conventional farming methods. Coupled with low start-up and operating costs, this large quantity of plant produce supports numerous business opportunities for Table to Farm that go beyond the primary restaurant business.

With Synecoculture farming, neither fertilizers nor pesticides are used. There is no need to spend money on heavy machinery as no tilling is involved. All this helps to bring the maintenance cost to a viable minimum.

Table to Farm owners have the option to diversify and extend their restaurant operations to maximize their revenue sources. Below is a short list of what can be offered -

- Subscription-based sale of farm produce directly to consumers
- Processed food (pickled, fermented, smoked, etc) made from farm produce
- Cooking classes to learn chefs' special recipes using farm produce
- Introduction to Synecoculture farming (online and onsite classes and workshops)
- Eco-tourism

### **4. From Table to Farm to a Local Food System**

COVID-19 exposed the vulnerability of a centralized food system. There is a need to establish a more interconnected and resilient local food system to change the ratio of food dependencies within the community and supplement the existing structure, thus increasing the community's food security. Independent local farmers and food processors who have lost their revenue from direct sales to restaurants could incorporate the Table to Farm model into their own farms and facilities.

Synecoculture has an affinity to other kinds of sustainable and regenerative farming. Today, there is a growing number of environmentally conscious small-scale livestock farmers and fish farmers

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who practice holistic management of their animals and environment. When these farmers and Table to Farm owners join forces, it adds locally sourced ingredients for the restaurant, expanding the menu items available to the customers. At the same time, it becomes a collective regenerative force which would accelerate the restoration of a deserted and infertile plot of land back to a healthy state as we saw in the use case in Burkina Faso.

Table to Farm is a flexible model. It can very easily add a livestock farm to its portfolio. Or, an existing holistically managed livestock farm could add synecoculture to a part of its land as a biodiversity hotspot, and start its own Table to Farm as a new revenue source.

Food processors are another group of invaluable partners in our Table to Farm model. They play a vital role in processing and preserving excess fresh produce from the farm to elongate their shelf life, as well as making the farm produce more delicious and nutritious using a different method. Food processing methods include milling, fermenting, pickling, malting, smoking, milk fermenting for cheese, so on and so forth. Food processors can partner with the farmers and Table to Farm owners and offer their own products like bread and pickled vegetables, to be offered as menu items or for sale to customers. For example, in the face of pandemic, Chef Dan Barber at Blue Hill and Stone Barns converted his Michelin star restaurant into a food processing facility, offering food boxes to his neighbors for pick up and delivery.

With Table to Farm as the cornerstone, each of the above stakeholders has a role to play in the formation of the local food system. This model of a local food system is not as scalable as the industrial food supply chain which require a huge capital investment. A local food system, being on a smaller scale, has its benefits. For one, it is highly replicable across the globe with an easier entry point with a much lower initial capital investment.

## **5. Conclusion**

A restaurant is, in its essence, a communal space where people with different backgrounds gather. Families, friends, chefs, servers and customers interact vibrantly over a shared meal. Faced with the reality and challenges of social distancing measures, this type of communal dining setting is increasingly becoming scarce. Table to Farm attempts to bring that vibrant space back to us, by replacing brick and mortar with a synecoculture farm. Chefs can start building their synecoculture farms today. It is analogous to rebuilding their restaurant business and building a future for their restaurants.

Embarking on Table to Farm is embarking on a journey of discovery as we learn to appreciate a truly symbiotic relationship between human and nature, to ensure the sustainability of our Planet.

Last but not least, I would like to share with you some photos of my good friend, Christopher Cancelliere's backyard synecoculture farm in San Diego. In the short four-year period, this small plot of land has produced more than 50 species of edible vegetables and fruits. I am proud to say our farm is still thriving as we speak.

Chris is my partner in synecoculture farming and we have been working together actively to promote synecoculture in America. To the best of my knowledge, this is the very first synecoculture farm in America.

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October 2016: Planting our first lemon tree.



August, 2017: We have since added more varieties of plants to the farm including tomatoes, onions, zucchinis, oranges, grapes, peppers, and various types of herbs.

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September, 2018: Harvest from the farm.



May, 2020: There are now more than 50 species of edible plants in the farm.