BUILDING STRONGER PRODUCER-CONSUMER RELATIONSHIPS TO ESCAPE THE MONO-CROP FARMING MODEL

DYNAVERSITY

"Within a couple of millenia, humans in many parts of the world were doing little from dawn to dusk other than taking care of wheat plants. It wasn't easy. Wheat demanded a lot of them. Wheat didn't like rocks and pebbles, so Sapiens broke their backs clearing fields. Wheat didn't like sharing its space, water and nutrients with other plants, so men and women laboured long days weeding under the scorching sun. Wheat got sick so Sapiens had to keep a watch out for worms and blight. Wheat was attacked by rabbits and locust swarms, so the farmers built fences and stood guard over the fields. Wheat was thirsty, so humans dug irrigation canals or lugged heavy buckets from the well to water it. Sapiens even collected animal faeces to nourish the ground in which wheat grew. (…) Human spines, knees, necks and arches paid the price. (…) Moreover, the new agricultural tasks demanded so much time that people were forced to settle permanently next to their wheat fields. This completely changed their way of life. We did not domesticate wheat. It domesticated us" (Harari 2011).

This quote from Yuval Harari is an eloquent critique of a trend dating back to the agricultural revolution: like any technical invention, the birth and rise of agriculture has been an instrument to both emancipate and oppress throughout the ages. The millenial dynamics towards focusing on just a few highly productive crops seem to be tightly linked to the concentration of power in the hands of a few.

We will not discuss the diverse "enslaving" processes affecting humankind as described by Harari in this article. Nevertheless, allow us to note that the rise of alternative marketing schemes bears the promise of resisting the dominating mono-crop model. In this paper, the use of **alternative marketing schemes** mostly refers to Local and Solidarity-based Partnerships for Agroecology, Community Supported Agriculture and Participatory Guarantee Systems, which those implementing them claim to be creating a framework for the emancipation of food chain actors.

1. The promise of a new alliance between citizens and farmers

Local Solidarity-based Partnerships for Agroecology (LSPA) are based on direct relationships between consumers and producers. They allow consumers access to fresh, healthy, agroecologically grown produce. These partnerships help farmers to preserve the quality of their products, care for the environment, and make a decent livelihood from their work.

Community Supported Agriculture (CSA) is one form of LSPA: it is characterized by direct, contract-based sales. It takes the form of direct partnerships between local producers and consumers. It involves sharing both risks and benefits that are inherent to the activity. CSA is part of the wider family of LSPAs.

PGS, Participatory Guarantee Systems, are quality insurance systems that are locally centred. They certify the producers on the basis of active participation that provides a fertile ground for trust and network building (IFOAM).

All these models have some social and economic values in common: they try to improve the autonomy of the different food chain actors, and to implement food sovereignty, e.g. the right of people to collectively decide on the basics of their own food systems, on how their food is produced, processed and distributed.

These initiatives are very diverse. Even if they are not massive numerically speaking (around 1 million CSA members in Europe, perhaps 2 million globally), they have nevertheless reached some visibility. A reason is that they are pedagogically very suggestive: through the deep commitment of CSA consumers prepaying their share of the harvest, part of society is expressing a demand for a stronger connection between producers and consumers. This strengthened relationship is grounded in a set of common principles. One is the commitment to protect and develop cultivated biodiversity.

2. Diversity at the root of CSA farmers' commitment

Diversity has been at the heart of alternative marketing schemes from their early stages. This is also especially true for the Local and Solidarity-based Partnerships for Agroecology, like Community-Supported Agriculture. The vision of diversity delivered by LSPA pioneers has been manifold, and not only biological. Emily Miyauchi, of Just Food New York City, stressed in an interview conducted by Elizabeth Henderson, that social diversity might be as important as biological diversity: *"Make our Network resilient – build upon existing relationships in community"*.

Red Wiggler believes that *"Just like the worm is an unsung hero of farming, people with developmental disabilities are often unsung heroes of society"*. By employing and equipping its Growers through meaningful work, learning, and growth, Red Wiggler is giving a voice to these heroes and empowering them to transform society, one CSA share at a time.

Many CSA farmers would agree with the way Paul Mueller of Full Belly Farm writes about diversity in broader terms, connecting the social and the biological: *«(…) We must put the many forces of energy to use on the farm - harvesting the biological potential of this land - by optimizing the solar gain that we can achieve through plants and photosynthesis; soil health energy; human creativity and satisfaction; diversity and the greater energy seen when parts stimulate and enhance other parts. We have embraced diversity as a core component of farm health and resiliency. Diversity itself can take many forms, as we think about design. It seems that the more that is added to a complex system, the greater the potential for new insight and for new interrelationships to become clear. We can grow more beneficial insects for example by growing more flowering plants, leaving weedy edges or planting hedgerows for habitat and food. Those insects attract more birds who come to feed and add a dimension of life to farm edges. The edges harbor more spiders and generalist predators who snatch flying insects- both good and bad- from the air. Bats show up and make their home here as a stopping-point in their cycle of migration doing their own harvest of insects- working while we sleep. More pollinating insects also arrive - many who work when it is cold - or visiting preferred plants - expanding the range of workers out here visiting flowers and transferring pollen.»*

Similarly, most of the Community-Supported Agriculture (CSA) movements set the reinforcement of plant and animal diversity in a broad understanding as an objective. This is reflected for example in the AMAP (French version of CSA) charter that was re-written in 2014: principle 2 is about an *"agroecological practice, encouraging vegetal and animal biodiversity (...), contributing to maintaining and developing peasant seeds"* (Miramap, 2014). The European CSA Declaration from 2016 also emphasizes the *"Responsible care for the soil, water, seeds and the other commons through the agroecological principles and practices as found in this declaration and the Nyeleni Declaration of 2015 as one of the key leading principles for the European CSA movement"* (URGENCI, 2016). Another example comes from Belgium, where the Gasap charter (written in 2011) states that one of the Gasap's founding principles is *"reinforcing the diversity of (preferably Indigenous) animal and vegetal varieties"* (Gasap Bruxelles, 2011).

In the Moroccan *Swani Tiqa* groups that were established in 2009 following the French Amap model, the 3rd paragraph of the charter calls for the preservation of the *"Environmental heritage - water, soil, biodiversity - in a sustainable development-focused approach, to promote local seeds, resources and know-how"*. In the same country, the Participatory Guarantee System *"SPG Maroc"* has a whole point about *"Seeds and seeds use"*, as point 4 of its charter.

3. Practice: how can CSA offer stability for farmers to work with farmers' seeds

How to translate these principles into practice? For some, the change has been surprisingly fast and with long-reaching consequences.

"Ten years ago, after 15 years of selling at the outdoor market, we took the decision to sell all our production through an AMAP group. The change was radical, much deeper than what we could have imagined", says Pierre Besse, an experienced AMAP farmer from the Toulouse area in Midi-Pyrénées, France. *"Nowadays, we produce most of the seeds we need ourselves", he continues. "Some peace of mind and availability is necessary for this, as well as some care"*. According to Pierre and many other farmers, the CSA model and its siblings offer several key assets for the farmer to develop cultivated biodiversity in their fields: the stability for production, more time to work with other kinds of seeds, and reduced pressure on the quality of seeds to be commercialized.

1/ The direct, long term partnership with consumers can provide the **stability and the economic security** farmers are desperately looking for.

It forces them to adopt a renewed discipline: the farmer needs to produce precisely the quantities of each vegetable necessary to provide balanced shares, no more, no less, and produce the right overall quantity necessary for all the pre-paid shares, no more, no less. In this way, once the necessary income of the farmer and the production potential have been correctly estimated, one can escape from the temptation to use too much land for cultivation, in the hopes of producing more to earn more, with the risk of being overwhelmed by difficulties, and disappointing results at the cost of excessive and exhausting work. The goal is solely to produce enough for the members.

2/ Thanks to the partnership, the work thus becomes more efficient, and the producer can dedicate **more time to taking care of the seeds and to experiment with new working methods.**

One has to learn some basic elements of biology to obtain a quality seed. "Nothing much complicated", says Pierre, *"just getting a bit further into the knowledge of the plants we are cultivating. For example, we actually use the very same sieves we used to build our house, 20 years ago"*.

3/ In a CSA partnership, there is no need for perfectly clean seeds, as would be the case on the commercial market. In the same spirit, even if the best should be done to avoid undesired crossing breeding, there is no need for an absolute varietal purity. A handful of "mongrels" can be accepted. They often prove as tasty as the original varieties.

Among the CSA organic vegetable growers, self-producing the seeds is not the rule, but more and more often, informal groups pop up with the common objective of training one another in self-production and also to exchange seeds. It is a slow working process, but the groups are very lively.

Over and above the incentive to produce one's own seeds, the different kinds of local solidarity-based partnerships like the AMAP are also an opportunity to develop faster and

more radical production techniques. This is done not by enlarging the plots, but, on the contrary, by reducing the size of the gardens, by improving the unitary yields of crops and the soil use rate, by associating crops and by accelerating rotations.

Agro-biodiversity may also encompass winter crops. Pierre, for example, has been using the pink Chinese radish, which crossed with a wild variety has generated a new type, with smaller, purple and more robust roots, that are more difficult to pull. This variety cannot be harvested for the AMAP shares. Yet, it is perfect as a winter crop: it resists mild cold much better than its Japanese cousin, the *daikon*. Once the winter is over, the space used for the radish can be used in different ways: if carrots are on the menu for the next season, the radish can simply be pulled out, the soil raked over, and the carrots subsequently sown. If it is rather the turn for potatoes, the radish may be grown in a regular row, and one can plant on either side. If the plan is to grow beans, it should be enough to crush or cut the radish and to sow through the mulch with a sowing stick.

"Farm beans" can also be used as winter crops. Generally, for some reason, the beans have started producing shorter pods after 3 or 4 generations, containing still edible but much smaller seeds. This leads to selecting only the biggest harvested seeds for reproduction. The others can be used as a cover crop, in association with radish. As for radish, it is enough to trample the plants before sowing the next crop, at least when it comes to cultivating such crops as tomatoes or cucurbitacae.

Pierre says that with time, the pressure of spontaneous weeds has been reduced in his garden. Perennials have almost entirely disappeared. Annuals mostly produce tiny seeds that have difficulties to germinate through the mulch. Some weeds have proven more beneficial than initially thought, like *Medicago arabica*, for example, or, even more, the cleavers. These common annual plants reach the end of their life cycle at the end of Spring, beginning of Summer, when it is time to place the solanaceas and the cucurbitacae. Under certain conditions, these plants are able to spontaneously produce a cover with sufficient density and homogeneity to allow crops to be planted together with them, without weeding and without destroying the cover crop, just by gently pressing the cover, with bare hands, where the seedlings will be placed. Under the growing crop, the cover dries and leaves a light mulch, including its own seeds, which will allow it to grow back stronger during the following winter. The cleavers can even stop the quackgrass, the bindweed and the thistle within a couple of years, without sacrificing any summer crop, and without much additional work other than minimal hand weeding.

This experience-based account of the use of *"farm seeds"* on CSA farms shows both how community-based models can offer an interesting framework for the farmers to focus on cultivated biodiversity, and how this action can in return facilitate producers actions, by developing efficient winter crops and mulch. This is one more demonstration that seed sovereignty is a key element of food sovereignty, the right of producers, and the population they feed, to choose the food production and distribution system to which they wish to belong. The right to choose the seeds for their food.

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