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ESSAY

Strategies for scaling up agroecological experiences in the European Union

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Abstract

González de Molina, M. 2020. Strategies for scaling up agroecological experiences in the European Union. Int. J. Agric. Nat. Resour. 187-203. There is a growing consensus that the dominant food regime is not viable and that there is a serious risk of food collapse. Building a food system based on sustainability is therefore an urgent task. For years, agroecology has been developing strategies for scaling out agroecological experiences. However, the current institutional framework blocks the growth of these experiences, relegating them to the sidelines. The main challenge facing agroecology is to expand the scale of agroecological experiences, building an alternative food system and challenging the hegemony of the corporate food regime. In this paper, a change in strategy of agroecological practices is proposed, aiming at the formation of local agroecological-based food systems that, by increasing in scale, impose a new institutional framework. This goal will only be possible through social mobilization focused not only on agricultural production or distribution but also on food consumption, weaving social alliances that promote change. This can be done by politicizing food consumption.

Keywords: Local Food Systems, political agroecology, politicization of food consumption, scaling up agroecology.

Introduction

It appears increasingly evident that we are immersed in a structural crisis that reflects the contradiction between economic growth, as a model of economic organization, and the limitations imposed by the depletion of resources and the deterioration of environmental services (Garrido Peña *et al.* 2007; Toledo 2012; González de Molina *et al.*, 2020). The scientific community is warning us that some red lines have been crossed relating to

the capacity to restore ecological dynamics on a planetary scale (Rockström *et al.*, 2009; Steffen *et al.*, 2015). The food system is the major driving force behind biophysical transformations (Tilman 2001; Foley *et al.*, 2005; Weis 2013; Rockström *et al.* 2016; Eyhorn *et al.*, 2019) and is directly responsible for accelerated climate change and loss of biodiversity.

The food crisis shares the same roots as the global crisis: the difficulty of increasing food production in ever more degraded agroecosystems and using increasingly scarce or deteriorated resources and ecosystem services (oil, phosphorus, climate

stability, etc.). Nevertheless, pressures to increase production continue to be fueled by an institutional framework and wealth distribution that threatens to wreck the entire food system. The crisis is being aggravated by specific factors that bring it closer to collapse: (i) the slowdown in agricultural growth; (ii) the low profitability of agricultural activity; (iii) the use of agrochemicals, machinery and water lifting and piping systems that depend on fossil fuels and are in turn increasingly expensive and scarce; and (iv) agriculture's high dependence on environmental conditions and, therefore, on extreme weather events that are becoming more frequent due to climate change.

It is urgent to reverse the crisis to avert collapse. This task fully involves agroecology. To date, preferential agroecological strategies have been based on the development of experiences in production, distribution and consumption that constitute, due to their innovative character, the vanguard of an alternative food system. In recent years, many such experiences have unfolded within a process called *scaling out* according to some transition theories, but their impact on food consumption is still low (López García, 2015). The massification of these experiences, however, is a gradual and perhaps excessively slow process that delays the reversal of the negative impacts produced by the corporate food regime (McMichael, 2013). Moreover, the simple addition of new experiences does not guarantee that their sum will embody a solid alternative to such a regime.

This paper argues that the current institutional framework blocks the growth of agroecological experiences, relegating them to the sidelines. These experiences no longer threaten the continuity of the corporate food regime. The scaling out of this type of experience, although essential, is insufficient to achieve the necessary leap in scale and even to guarantee its own survival. The experiences must increase in size and relevance both in agricultural production and in food consumption. The main challenge facing agroecology is therefore to expand

the scale of agroecological experiences (González de Molina, 2013; Levidow *et al.* 2014; Mendez *et al.* 2016) given the severity of the food crisis and the irreversible impacts that it is causing.

It is therefore necessary to develop specific strategies to scale up the experiences, both in size and scope, to a point where they become an alternative food regime that challenges the corporate hegemony. This approach requires a change in the institutional framework. The most direct way to achieve this change is by participating in the political arena and thus gaining domains of power for developing agroecological public policies. However, this is not an easy task, especially in a political environment, at least in Europe, where food problems hardly make their way to political or trade union organization agendas, or only partially and in a way that accommodates the food regime (Ploeg, 2020). The change is perhaps overly time-consuming and cannot respond to the urgency of the food crisis. In the meantime, the agroecological movement should explore forms of scaling up based on the ability of its own experiences to cooperate with, and involve, other potentially interested social groups. The aim is to strengthen interconnections and improve the organization of experiences, creating a new institutional framework able to resist the attacks of the current institutional framework. The result of this process will also be the strengthening of the experiences themselves and their capacity to influence public policies, favoring the "institutional anchoring" of agroecological innovations (Elzen *et al.* 2012; Bui *et al.* 2016; López García *et al.* 2015). To do so, agroecological practice itself needs to change focus and build local food systems which, by increasing in scale, will impose this sort of favorable institutional framework. It is a matter of overcoming traditional sectorial mobilization and seeking a broader, more food-centered mobilization (Holt-Giménez, 2013) by weaving social alliances that present a capacity for change. This can only be done by *politicizing food consumption*.

In this paper, we first explore the causes stifling the growth of agroecological experiences. Second, we propose a way to overcome this blockage by combining social mobilization, innovation instruments and even public policies setting up *agroecologically-based local food systems*. Finally, we describe the alliances needed to build these systems and to create an environment that is conducive to their development. A necessary change in the agroecological approach is called for: it must shift from mobilizing food supply, i.e., working with producers, to mobilizing consumption as well, placing the necessary dietary change at the heart of demands for sustainable practices throughout the food chain, from production to distribution and consumption.

The systemic rejection of the prevailing food regime

The conviction that input-intensive or industrial agriculture is inviable is spreading among the scientific community, governments and think tanks (Pretty and Bharucha, 2014; IAASTD, 2009; FAO, 2011; IPES-Food, 2016). The negative impacts of this type of agriculture on the environment and health, its inefficacy to provide a decent income to farmers, its great reliance on fossil fuels and its high vulnerability to climate change have convinced these groups that the model needs to change. Furthermore, international organizations such as the FAO (2009) recognize that industrial agriculture will be unable to meet the rise in food demand due to population growth (over 9 billion people by 2050) and due to the increase in meat and dairy consumption, especially in the emerging economies (Tilman *et al.*, 2011). High-level international organizations such as the UN World Committee for Food Security, the IPCC, the EAT-Lancet commission and the UNDP clearly state that business as usual is not an option and that a radical transformation is required (Eyhorn *et al.*, 2019; Brunori *et al.*, 2020). The industrial agriculture model cannot be prolonged over time, and it has become urgent to search for

an alternative based on sustainability (European Commission, 2016). Therefore, why is the shift towards a sustainable model not happening? The former UN Rapporteur on the Right to Food, Olivier de Schütter (2010), has drawn attention to the “lock-ins” that are blocking change. In a recent report, the *International Panel of Experts on Sustainable Food Systems* identified the main blockages and proposed strategies to overcome them following agroecological criteria (IPES-FOOD 2016).

There are indeed many obstacles, but the main factor blocking change and imposing its rules is the prevailing institutional framework. Under this latter model, deregulated markets are the main distributors of food goods and services, including natural resources. It is no accident that deregulated markets have imposed their hegemony over almost all countries and supra-state structures such as the EU and that this hegemony is reinforced by international agreements that govern all global transactions (McMichael 2013; Friedmann, 2016). Large and increasingly concentrated transnational corporations are effectively putting pressure on governments to ensure that this institutional framework, which is favorable to them, is not altered, or that national legislation does not take precedence over trade agreements between them. International treaties such as the CETA between the European Union and Canada, which has been already signed, or the TTIP between the EU and the USA, still to be signed, are paradigmatic of the predominance of lobbies and their legislative action, whose objective is to prevail on a global scale. Business concentration, which is particularly intense in the food system, simply intensifies this pressure. Bayer, Monsanto, DuPont, Dow, Syngenta and BASF already control three-quarters of the global agrochemical market and approximately two-thirds of the commercial seed market (Heinrich Böll Foundation, 2017). Monsanto’s takeover by the giant Bayer only strengthens further the oligopolistic position of these large corporations governing the current food regime.

In recent decades, agroecological food experiences, or simply alternative experiences, have multiplied all over the world, especially in urban environments. These experiences constitute important innovation niches for a new and more sustainable food regime (Díaz *et al.*, 2013; Darnhofer, 2015; Bui *et al.*, 2016). They generate greater social equity in terms of prices at origin and destination (Renting *et al.*, 2003; Bellon & Penvern, 2014). They also establish essential social and territorial links between the rural and urban environments and generally provide better quality food. Moreover, they contribute to reducing the metabolic profile of food systems by pushing down energy consumption through the promotion of short distribution channels, increasing fresh and seasonal food consumption and using less packaging and additives to preserve food (Renting *et al.*, 2003; Seyfang, 2006; Darnhofer, 2014).

Although their numbers are growing, it is difficult for these experiences to increase in size, or they are short-lived. Taken together, they have so far been unable to involve broad segments of the population and meet growing demands for local and organic food (Ilbery & Maye, 2005; Friedmann, 2007; Watts *et al.*, 2005; Marsden & Sonnino, 2008). Most experiences have emerged autonomously and have little to do with each other. The experiences are fragmented, and it is not uncommon that they even compete with each other to attract the same groups of consumers. On the other hand, their scattering and the low volume of food consumed makes it difficult for medium-sized producers and distributors to participate in these networks, generating widespread precariousness regarding logistical infrastructures (López-García *et al.*, 2015; Mundler & Rumpus, 2012). These experiences do not follow a linear or additive growth process, and their massification or scaling out does not guarantee a leap in scale.

The reason is that these experiences operate within the same institutional framework that prevents them from emerging in greater numbers, consolidating those that have already emerged and developing

or gaining in size (Forssell & Lankoski, 2015). Agroecological experiences and alternative experiences to the system in general, inserted within an institutional framework typical of market or capitalist economies, undergo “systemic rejection” (González de Molina *et al.*, 2020). This effect is caused by the system’s defense mechanisms that reject any foreign entity, in this case agroecological experiences. Systemic rejection manifests itself in three different ways: the “expulsion effect”, making experiences disappear after a certain time; the “encapsulation effect”, confining them to a marginal area of agroecological production and consumption; and the “conventionalization effect”, removing the alternative traits and pushing them towards a behavior that is similar to that of the rest of the food system. These three mechanisms are the corporate regime’s immune responses to experiences that threaten its continuity. The most common response in the European case is the conventionalization of organic production, where alternative food experiences and, therefore, agroecological experiences have historically taken refuge.

We can define conventionalization as the process by which organic production (whether certified or not, whether in the hands of family farmers or not) may end up being subordinate to the market, depending on it to reproduce itself. Not all experiences become conventionalized, but it is a risk to which all are exposed. The process, which may be involuntary, involves all food practices. This is because the rules of the game imposed by the food regime push towards market dependency. It therefore covers all agrifood processes: production, distribution and consumption. In the case of production, the phenomenon refers to the proliferation of an agroecosystem management that is in no way different from the conventional approach (Allen & Kovac, 2000; Rigby & Bown, 2003; Reynolds, 2004; Reed, 2009; a revision in Darnhofer *et al.*, 2010; Petersen, 2017). Organic farmers, pressured by the market, end up turning to conventional forms of management. Darnhofer *et al.* (2010) relate this process to the increased

use of external inputs (machinery, fertilizers, feeds, agrochemicals); for example, incorporating commercial seeds due to the lack of genetic material adapted to soil and climate conditions; reducing rotations and accentuating the tendency towards monoculture that makes it necessary to use fertilizers, fuels, etc.; and simplifying the design of the agroecosystem, which also forces farmers to use external inputs, for example, to control pests and diseases, usually permitted by national regulations. These and other similar practices respond to the need to intensify production to compensate for farmers' declining incomes. Usually, the institutional framework prevents intensification from being carried out by managing the agroecosystems themselves, optimizing internal ecological processes.

Indeed, agroecological practices are economically penalized by the market. If organic farmers want to manage their farms sustainably (self-sufficiency in energy and nutrient flows and high levels of biodiversity), they incur comparatively higher costs than conventional producers (European Commission, 2019a). At the farm level, a certain amount of additional land is needed to meet energy and nutrient needs and to increase biodiversity levels, which play a crucial role in pest and disease control and in the crops' very stability (Guzmán Casado *et al.*, 2011; Guzmán Casado & González de Molina, 2009, 2017). The closing of biogeochemical cycles can therefore only be accomplished on the scale of a landscape (Guzmán Casado *et al.*, 2011). Organic farmers therefore incur additional costs that conventional farmers do not have to bear since they replace these land functions (pest control, fertility replacement, fuel for traction, etc.) with external inputs.

For example, Spanish organic farmers have serious difficulties in closing the cycles due to a lack of organic material, while organic livestock farmers experience a lack of organic feed and raw material for their manufacture (Ramos García *et al.*, 2017). The phenomenon of segregating agriculture and livestock has a strong impact on organic agriculture

and diminishes its sustainability. Low imported feed prices make it unprofitable to use their own resources (pasture and dry lands); these prices do not include the social and environmental damage they cause in the countries of origin, mainly Latin America (González de Molina & Guzmán, 2017; González de Molina *et al.*, 2019). Similarly, the lack of machinery adapted to organic management, which increases energy efficiency in the use of fossil fuels, or the lack of incentives for the use of self-produced biofuels at the farm scale, mean that organic agriculture currently contributes less than it could to the decline in the metabolic profile of the Spanish food system, despite Spain's large organic farming surface area (2.24 million ha) (MAPAMA, 2019).

Organic farmers are forced to use external organic inputs, a business in which large corporations play an increasing role. This situation undoubtedly raises intermediate costs and, in a context of generally low perceived prices, stimulates greater externalization of territorial costs (fewer rotations, fewer crops, high response seeds, more phytosanitary treatments, etc.), heightening the dependence on external inputs. A study recently published by the European Commission (2016) shows that organic farmers receive higher prices than conventional farmers, but the producers' share of the total added value created in the entire supply chain remains relatively low; it also shows that there is a limited link in the organic sector between agricultural commodity prices and the price premium paid by consumers. In addition, the yields of organic farms can be significantly lower, varying from 10 to 40% of conventional farming yields. Organic producers therefore have a clear economic motivation to seek economic viability at the expense of sustainability. This tendency is favored by regulations (European Regulation 834/2007, for example) that permit these types of external solutions (for example, in many cases, by penalizing the self-production of seeds, seedlings or phytosanitary treatments). Therefore, organic agriculture tends, in the absence of any change to the institutional framework, to reproduce the

conventional agriculture model, beyond that part of organic production that seeks to be openly framed within agribusiness (Ramos García *et al.*, 2017). Although organic production in the European Union provides a home for most of the experiences and many of the agroecological practices, conventionalization is a common risk to which all of them are exposed.

Distribution follows a similar path. Organic production circulates mostly through the same commercial channels as conventional food. According to the European Commission (2016), European organic supply chains are strongly integrated into the mainstream food system, and only a few cases of high reliance on alternative outlets can be found. Organic producers are often forced to sell their products through large food companies that develop their own organic brands for off-farm work (processing, distribution and sale). In many EU countries, conventional retailers (supermarkets) dominate the organic distribution market, accounting for over 75% in countries such as Austria, Denmark and Sweden. Conversely, in Portugal and Spain, distribution goes primarily through the specialized channel, i.e., stores specialized in organic products (European Commission, 2019b). Regardless, only 23% of total organic production is distributed in Spain through alternative distribution channels (small shops, direct sales, consumer groups). This sector is more globalized than that of conventional food. In fact, the value of exports and imports account for 52% and 29% of domestic consumption, respectively (MAPAMA, 2016). In addition, the imbalance between growing demand and insufficient (EU-DG AGRI, 2010) and poorly organized supply favors the arrival of large distribution operators and reproduces the same conventional model in which farmers retain only a small percentage of the final price.

Some empirical studies show how traditional distribution networks incorporate small local producers and distributors, who are at a disadvantage with regard to global players, pushing

the former towards conventional logics such as competition, economies of scale and quality reduction (Bloom, 2009; Bowen & DeMaster, 2011). Many agroecological experiences combine short distribution channels with longer and more conventional channels to cover the demand as much as possible (Ilbery & Maye, 2005; Friedmann, 2007). This situation has given rise to “hybrid networks” that, based on conventional channels, seek to preserve their character as alternative experiences. The risk is that the conventional logic of large chains will end up coopting the alternative nature of these food networks, pushed by the conventionalization process (Watts *et al.*, 2005; Marsden & Sonnino, 2008).

This issue is also true for consumption since dietary patterns do not change with organic food intake alone. In fact, green markets guarantee the almost complete substitution of conventional foods by organic foods, without the relative prices of each stimulating a diet change. Spanish dietary patterns, for example, have a negative impact on the health of citizens, the environment and agroecosystems in the country as well as third countries (see below). Without a dietary change, it is very difficult for the trend towards conventionalization in both production and distribution to be reversed. However, the high organic food end-prices also clearly reflect conventionalization. As is known, the average price of organic food is higher than the price of conventional food, revealing all the added costs that they bear from production to consumption. Moreover, the organic market’s institutional framework and specific regulations stimulate higher prices by considering them to be products of differentiated quality. This fact largely explains why average consumption in the European Union does not exceed 3% of aggregate food expenses and why the majority of consumers hardly consume this type of product, since the main purchase value is price. The total share of organic food purchases ranges from 9.7% in Denmark to less than 1% in Lithuania (European Commission, 2019b). The consumer profile is that of high purchasing power,

by nature a minority segment of the population. It is difficult for this type of consumer to become the majority. Organic food remains less affordable to consumers since conventional agriculture is heavily subsidized and market prices do not reflect negative externalities (Willett *et al.*, 2019; Eyhorn *et al.*, 2019). These prices generate low aggregate demand for food and therefore make it difficult for medium-sized producers and distributors to participate in the supply; they also lead towards a general lack of security in the development of logistics infrastructure (López-García *et al.*, 2015).

The prevailing institutional framework therefore regulates food markets benefiting conventional production, the input industry, large agroindustrial companies and large-scale distribution at the expense of consumers, producers, the environment and health. Public policies should reverse this situation with measures and regulations that change the monetary and fiscal incentives currently enjoyed by conventional production and consumption, which are so damaging to organic production. However, this reversal requires the institutional framework to radically change. This change, in turn, requires social majorities that place public policies in favor of the scaling up of agroecology on governments' agendas. However, building such majorities cannot be achieved overnight, especially when not even the right to food is a socially accepted and defended right. Meanwhile, it is necessary to propose agroecological transition strategies that are capable of combining social mobilization for healthy food with the development of experiences that build an alternative food regime.

Agroecology-based Local Agrifood Systems

The challenge, therefore, is to expand the scale of agroecological experiences in such a way that institutional rejection is overcome through the creation of alternative institutionality. It is a question of putting cooperation, and not competition, at the heart of the different links in the chain, thus

surmounting the isolation and fragmentation of the experiences. This goal should be achieved by combining the instruments of social mobilization and innovation in the hands of the agroecological movement itself and, if possible, with the support of coproduced public policies. The aim is to build *agroecology-based local agrifood systems (ALAS)* that are capable of occupying an increasingly larger food space, disputing the hegemony of the conventional regime and being sustained both by the strength of social movements and by their socioeconomic viability. It is a question of seeking the synergies produced through cooperation between agroecological experiences and the organized incorporation of other new experiences through the entire food chain.

The main objective of these ALAS is to expand and supply local consumption with healthy food products, grown sustainably within their own territory, applying fair work remuneration and that are accessible to consumers in terms of price and physical location. Therefore, this proposal is far from the most common approaches to local food systems, based on the production of one or more fresh or processed quality foods to compete in national or international markets. This approach is the basis of the differentiated quality labels that we have criticized and is also functional for the corporate regime; this is often a way of homogenizing local products, integrating them into vertical networks and long distribution channels, and does not guarantee greater retention of added value (Bowen & DeMaster 2011; López-Moreno, 2014). From an environmental point of view, this approach does not represent a substantial improvement either, as it does not contribute to reducing the metabolic profile of the food chain or encourage a reorientation of consumption (Edwards-Jones *et al.*, 2008; Darnhofer, 2014). Instead, the ALAS seek to meet local demand in the most comprehensive way possible, generating food autonomy and placing this type of activity at the core of a self-centered local development strategy capturing a greater amount of added value, employment and, ultimately, income.

It is also the ideal arena to exercise food sovereignty, an emblematic demand of the agroecological movement. In this context, the approach takes on a more precise and far-reaching political meaning. It is not enough to affirm the capacity to produce what each territory and its citizens need but also to ensure the capacity of the latter to decide what and how food is produced, distributed and consumed. As we have already mentioned, the local or territorial scale is a particularly suitable scale to coproduce public policies that ensure the continuity of those experiences, shaping an alternative food system. This territorialized way of approaching the food chain meets the same criteria that we use to design agroecosystems to achieve maximum productivity, stability and resilience. As is well known, the more agroecosystems look like ecosystems in their structure and functioning, the more sustainable they are. The organizing principle of biomimicry (Garrido Peña, 1996; Gliessman, 1998; Riechmann, 2006) can be applied not only to agroecosystems but also to social and economic organization, seeking maximum connectivity and linkage with the territory and maximum autonomy from markets, the state or global chains. This connection is essential, not only because the aim is to achieve a maximum linkage between food consumption and production at the local level but also because the territory gives meaning, identity and cultural significance to the very act of feeding oneself (Elzen *et al.*, 2012; Darnhofer, 2015).

The ALAS thus emerge from two converging ideas: on the one hand, from the local agrofood systems approach that links the potential for social and ecological sustainability to its capacity to be articulated within the territory (Marsden *et al.*, 2000; Ventura *et al.*, 2008; Goodman, 2009; Bowen, 2010; Bowen & DeMaster, 2011), and on the other, based on the articulation of the different actors involved in the local food chain within a common project based on cooperation and on the territory itself (Marsden & Sonnino, 2008; Darnhofer, 2015; Bui *et al.*, 2016).

In that sense, the ALAS follow a dual cooperation strategy: *downstream* and *upstream*. From an upstream perspective, ALAS are built by seeking connections between producers to close nutrient cycles and reduce direct energy consumption. It is no coincidence that the greatest energy expenditure in agriculture is related to the import of chemical fertilizers, especially nitrogenous ones, and the import of large amounts of animal feed (Infante-Amate & González de Molina, 2013). The building of networks to produce and exchange organic matter through composting, livestock production, etc., is an initiative that can be led by the farmers themselves. These networks favor the clustering of farmers for other purposes, including integrated pest management, seed exchange and reproduction, etc. In any case, they encourage greater and better integration between agriculture and livestock farming via relatively simple measures that bring food animal producers and livestock farmers into contact. The same applies to investments that go beyond farmers' individual capacity, such as solar energy installations or local biofuel production.

On the other hand, transport, processing, packaging and retailing, i.e., the distribution chain, accounts for 59.2% of the primary energy expenditure in the Spanish food system, with transport alone being responsible for almost 25% (Infante-Amate *et al.*, 2014). Consequently, a downstream strategy of ALAS should focus on the promotion of shorter and more sustainable distribution and marketing channels. The territorial approach of the chain favors the location of agroindustrial activities in areas close to farms, the grouping of producers to sell in common, to plan cultivation, regulate and ensure supply, and, naturally, it can make the establishment of logistical infrastructures viable. This approach also allows production to be effectively articulated with consumption, and it encourages alliances with other local nonfood actors, stimulating agroecological innovation. Finally, ALAS' local orientation facilitates a change in the more characteristic patterns of consumption that support the current diet: the

rooting in tradition facilitates a transition towards a healthier diet with less processed food and less animal protein, a diet that is based more on the consumption of fresh and seasonal products than on highly processed foods of distant origins and of too high an energy cost.

Local food prices are often higher today than they should be, precisely because they do not dispose of the logistical support to reduce distribution costs (Mundler & Rumpus, 2012; European Commission, 2016). The elimination of the long and costly processes, typical of long chains, will surely result in lower final prices. Collective catering, whether in public or private centers, is a very useful instrument to set up this type of circuit. The pulling effect of organic food in public centers including hospitals, schools, high schools, universities, headquarters, etc. is well known (Friedmann, 2007; Izumi *et al.*, 2010). In addition to providing a healthy and waste-free diet to users of these services, it is an ideal tool for food education and dissemination of organic food virtues among patients and their families, schoolchildren, parents of students, etc. However, it is also a precious tool to organize alternative production and distribution channels and to bring together small and medium-sized organic producers located in the proximity of catering centers. The Andalusian experience has demonstrated its potential (González de Molina, 2009).

In short, ALAS consist in configuring rural districts based on cooperation rather than competition in global markets with products geographical indications or other quality schemes. They seek the strategic complement of economies of scale and scope for reducing costs, the horizontal integration and the relative decommodification of the exchange of goods and services through the food chain. They are oriented towards the internal market and not towards exports and seek autonomy or food sovereignty through a biophysical and cultural link with the territory. Furthermore, they become collective action agents and reflect a social self-organization process, that

is, articulations between the actors and the territorial resources sometimes hidden or hijacked by the hegemonic actors (Petersen *et al.*, 2013). The social mobilization involved in building ALAS can also implicate public administrations, especially local administrations that to date have had a small role in food policies such as health, education, the environment or territorial planning.

Politicizing food consumption: weaving alliances between producers and consumers

However, the social mobilization around the building of ALAS does not concern farmers only; the task belongs to citizens, and it must involve all of society. The reasons are obvious: without cooperation between all the operators in the food chain, including consumers, the task becomes impossible, as does the construction of social majorities that make institutional change possible. Traditionally, agroecology has overly focused on mobilizing the food supply, i.e., working with producers. In the middle of the past decade, agroecology moved out of the sphere of agriculture to demand a change in focus in the food system (Francis *et al.*, 2003). However, this change in focus has yet to be completed, also centering on mobilizing demand or consumption, placing citizens' healthy food at the center of demands for sustainable practices throughout the chain.

This change in perspective is also essential: it is not possible to build ALAS only by reconverting to organic agriculture or promoting short channels. Organic production and alternative distribution will not be an effective solution if they are not accompanied by a significant shift in food consumption patterns and in the values that inspire them. If the latter do not change, reducing the intake of meat, eggs and dairy products—even if they are organic—then pressures on food imports from countries with food security and hunger problems will intensify, and progress will be insufficient. Food justice therefore requires a change in the way that we meet our endosomatic

needs. The *politicization of food consumption*, that is, the conversion of food into a responsible and therefore political act of choice, is the most effective way of building consensus around an alternative food regime, which is the main objective of agroecology.

The most obvious way of politicizing consumption revolves around human health. Food insecurity, which has become widespread under the corporate food regime, is associated with cases of undernutrition (insufficient food intake to meet dietary energy needs) and malnutrition (imbalance due to deficiency or excess of energy and nutrients ingested). Malnutrition is already widespread in both the North (over 20 million people in the European Union according to SAPEA, 2020) and the South and is related to the increasing intake of so-called ultraprocessed foods (Monteiro & Cannon, 2012; BMJ, 2019). In high-income countries, the poorest people are the most affected by overweight and obesity, as healthy food is more expensive than processed products that are rich in oils, sugars and fats (Monteiro *et al.*, 2013). The dietary patterns promoted by the corporate food regime are “obesogenic”: they do encourage the adoption of unhealthy diets and they present serious operational and governance problems that are translating into negative health impacts, with very high costs (Winson, 2013; Johnston *et al.*, 2014).

The Spanish case is paradigmatic. Spain consumes a daily per capita average of 3,405 kcal (Schmidhuber, 2006; González de Molina *et al.*, 2017). A diet that has meant abandoning good Mediterranean habits and acquiring others is responsible for 41% of the population being overweight (Schmidhuber, 2006; Di Cesare *et al.*, 2016). Meat, milk and other dairy products are directly responsible for this increase. These changes are related to per capita income increase and to the development of supermarkets, changes in food distribution systems, the fact that working people have less time to cook and the habit of eating more often outside the home, often in fast food establishments, as well as the lower

cost of livestock products due to low labor costs and the low price of raw materials, especially feed imported from third countries (González de Molina *et al.*, 2017).

The Spanish diet requires devoting vast areas in peripheral countries to grain and fodder production to multiply a livestock population that meets high demands for meat and dairy products. Europe subordinates large amounts of land in developing countries to the satisfaction of its western diet. Witzke and Noleppa (2010) estimated the amount of virtual agricultural land imported by Europeans (EU-27). The data are compelling: the EU-27 exports approximately 14.10 million ha, and soybeans alone account for 19.2 million ha of imports. In total, the deficit amounts to 35 million ha. This is approximately the size of Germany. Spain contributes to this reality by importing approximately 11 million ha, mostly cultivated land, while exporting the equivalent of 4.5 million ha, being therefore a net importer of 6.5 million ha of virtual land (Infante-Amate *et al.*, 2018).

Europeans’ eating habits have therefore undergone very significant changes that represent a major cause of unsustainability, in terms of not only human health but also the health of agroecosystems, both domestic and those of third countries (UNEP, 2010). Despite the billions of dollars that major brands spend annually on advertising, consumer concern about environmental and health impacts is growing, and there is increasing collective and individual mobilization around healthy food.

Indeed, food production causes massive dumping of pollutants into the soil, air, waterways and food itself. The composition of foodstuffs varies according to the cultivation and animal husbandry techniques used (variety, breed, fertilization system, irrigation system, etc.) and the changes undergone during the production process. For example, poor fertilization practices—so frequent today—alter the quality of foods by increasing, for example, the nitrate content, decreasing the oligo content,

reducing the dry matter content and thus reducing the shelf life and resistance to parasitism, even decreasing the vitamin C, carotene or zinc content (Raigón, 2007). A detailed description of the case of Spain can be found in González de Molina *et al.* (2019). The massive use of pesticides has considerably increased the chances of finding residues in food, posing notable risks to consumer health. These residues can increase the likelihood of cardiovascular disease, stroke and certain cancer types (Stuckler *et al.*, 2012; Mbow *et al.*, 2019; BMJ, 2019; SAPEA, 2020). A similar reasoning applies to the use of substances such as hormones, antibiotics and meat feed in livestock farming. To all this, we must add the use of over a thousand additives for the manipulation, transformation and conservation of food that usually end up in the human organism. Many of these additives can also produce adverse health effects (Willett *et al.*, 2019).

Nevertheless, there are many other ways to politicize consumption. For example, one way is the fight for the right to food led by many social organizations and even some governmental and parliamentary bodies throughout the world. The right to food is defined as “the right to have regular, permanent and free access, either directly or by means of financial purchases, to quantitatively and qualitatively adequate and sufficient food corresponding to the cultural traditions of the people the consumer belongs to, and which ensures a physical and mental, individual and collective, fulfilling and dignified life free of fear”¹. The right to food is therefore a basic and fundamental human right that is not currently guaranteed in any way. Despite being recognized in some international treaties, including the *International Covenant on Economic, Social and Cultural Rights*, many countries have not yet incorporated it into their legislation. The right to food is not only a question of access to and enjoyment of sufficient food; it is also a question of nutritional quality and sustainability in the way that it is produced.

The protection of this right is above all a political issue, a matter of governance, where the State has a fundamental responsibility but where society’s participation is indispensable. The joint elaboration of public policies by the different actors involved in the food system is crucial. Such participation can be channeled by creating spaces in which to share experiences and generate political proposals that apply to all citizens. Food councils (Feenstra, 2002; Schiff, 2008; Harper *et al.*, 2009) are a good example of this.

An example of the coproducing of public policies following this approach is the *Milan Urban Food Policy Pact* (2015)², involving more than 160 cities around the world. It combines the two avenues of politicization pointed out above: the fight for healthy food and the fight to guarantee the right to food. This pact is the first international protocol at the municipal level aimed at developing sustainable food systems. It includes a strategic action framework with recommendations to promote sustainable and nutritious diets, ensure social and economic equity, promote food production, improve supply and distribution and limit food waste. Similar but more specifically agroecological initiatives have emerged around the world. For example, in Spain, it is worth mentioning the *Red de Ciudades por la Agroecología* [Network of Cities for Agroecology]. Its objective is to “create a process of exchange of knowledge, experiences and resources on food policies between Spanish cities that includes local social organizations”³. Similarly, urban and peri-urban agriculture favors not only the elimination of the barriers between the countryside and the city but also the politicization of food consumption in the urban sphere. These experiences serve as a basis for building ALAS.

In short, food is an issue that affects multiple dimensions of social relations. Satisfying human beings’ endosomatic metabolism is an increasingly

¹ J. Ziegler, The right to food – CHR Special Rapporteur preliminary report under CHR/RES/2001/25, p. 9 (accessed 26 April 2020).

² <http://www.milanurbanfoodpolicypact.org/>

³ *Red de ciudades por la agroecología*: <http://www.ciudadesagroecologicas.eu/>

complex issue that embraces physical and mental health, physical well-being, cultural identity, conservation of tangible and intangible heritage, viability of agricultural production activities, rural development, agroecosystem health, agrofood activities and transformation, sustainability of energy consumption, equity in relations between developed and peripheral countries, etc. Food has become a “thematic meeting point” integrating various social, economic, environmental and political spheres, which poses highly significant and hitherto ignored challenges of governance (Renting & Wiskerke, 2010; Petrini *et al.*, 2016). Their politicization, exposing the political and economic relations that shape them, is the most effective way to generate social alliances that make it possible to expand the scale of agroecological experiences, supporting the construction of local food systems.

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Disclaimer

The opinions expressed and arguments employed in this manuscript are the sole responsibility of the authors and do not necessarily reflect those of the OECD or of the governments of its Member countries.



Resumen

M. González de Molina. 2020. Estrategias para ampliar las experiencias agroecológicas en la Unión Europea. *Int. J. Agric. Nat. Resour.* 187-203. Existe un consenso cada vez mayor en la inviabilidad del régimen alimentario corporativo y en la existencia de un grave riesgo de que colapse. La construcción de un sistema alimentario basado en la sostenibilidad es, pues, una tarea urgente. Durante años, la agroecología ha venido elaborando estrategias para ampliar las experiencias agroecológicas. Sin embargo, el marco institucional bloquea el crecimiento de esas experiencias, relegándolas a un segundo plano. El principal desafío que enfrenta la agroecología es escalar las experiencias agroecológicas, construyendo un sistema alimentario alternativo que desafíe la hegemonía del régimen alimentario corporativo. En este texto se propone un cambio de estrategia de las prácticas agroecológicas para construir sistemas alimentarios locales de base agroecológica que, aumentando de escala, sean capaces de imponer un nuevo marco institucional. Este objetivo sólo será posible mediante la movilización social centrada no sólo en la producción o la distribución sino también en el consumo de alimentos, tejiendo alianzas sociales que promuevan el cambio. Esto puede hacerse mediante la politización del consumo alimentario.

Palabras clave: Agroecología política, escalamiento de la agroecología, politización del consumo alimentario, sistemas alimentarios locales.

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