editorial  
agroecology:  
real innovation from and for the people

The crisis in the industrial food system is impossible to ignore. For over a decade, study after study has validated the assertion of the Food Sovereignty movement in 2007 - that the corporate food system destroys life. Now Governments are anxious to find 'innovations' in agriculture that can overcome this. They are hoping to be saved by a new Green Revolution – innovations in science and technology that can increase production without depleting resources or polluting our world. Of course, this type of innovation will keep control of economic, genetic and natural resources firmly in the hands of agribusinesses. It will also keep the discourse firmly in line with the status quo without acknowledging that hunger is not caused by a shortage in food production but rather by poverty, a lack of democracy, the exclusion of vulnerable groups, and unequal or physical obstacles which inhibit (e.g. in situations of conflict or displaced populations) access to food, natural resources, and infrastructure.

On the other hand Agroecology within the framework of Food Sovereignty is also gaining widespread recognition and is increasingly being promoted as an approach to transform agriculture and food systems and address the challenges we face. The Food Sovereignty movement is exposing how the discourse on innovation is actually a way to depoliticise the debate on what a new food system should look like – by not setting any criteria on what innovation must deliver on. In this way Agroecology is put together with GMOs, new gene breeding technologies, ‘climate-smart agriculture’ and ‘sustainable intensification’. These models seize certain agroecological practices and combine them with patented seeds, transgenic plants, and animals, monoculture for international trade and, most importantly, the same vision of private accumulation of the fruits of our planet and of workers. In this edition, we look at the elements of Agroecology as defined by small scale food producers that make it the only real innovation to transform our food and farming.

who we are

In the last years hundreds of organisations and movements have been engaged in struggles, activities, and various kinds of work to defend and promote the right of people to Food Sovereignty around the world. Many of these organisations were present in the International Nyéléni Forum 2007 and feel part of a broader Food Sovereignty Movement, that considers the Nyéléni 2007 declaration as its political platform. The Nyéléni Newsletter wants to be the voice of this international movement.


now is time for food sovereignty!
in the spotlight

What innovation is required

Given how hegemonic discourse on innovation includes from Agroecology to biotechnology among its “focus points for sustainable agriculture”, it is vital to recognize that there are radically divergent perspectives on how to deal with global crises, how to define and implement innovative processes and products, and who should be the central actors and beneficiaries.

The technologies, innovations and practices chosen today will determine the future of agri-food systems’ and the livelihoods of people throughout the world. Therefore, it is crucial that decision-makers, food producers and other stakeholders raise the right questions to guide their decisions.

In this sense, innovation should not consist only of offering a technology or a toolbox from which a few elements are selected, or focus solely on productivity. Innovation should focus specifically on social, economic, cultural, ecological, environmental, institutional, organizational and public policy processes.

For an innovation to reconfigure agri-food systems and contribute to their sustainability, it must be developed on the basis of an integral and multidisciplinary approach for systemic change that positively impacts the lives of people. In addition, innovating to transform these systems is not just about introducing new revolutionary or disruptive innovations, as well as new needs, markets and application spaces: it also involves adaptation or evolution, and the improvement and/or substantial expansion of techniques and practices which already exist.

Evaluating innovations in agrifood systems is a challenge, and requires the development of a framework and a set of indicators, and/or analysis of scenarios to measure the characteristics of an innovation and its impacts on the sustainability of these systems in order to help inform strategic options and actions. To contribute to the development of this framework, here we propose a non-exhaustive set of 13 interconnected criteria. New innovations should be evaluated according to these criteria:

i. Social, economic and institutional dimensions:
- promote popular participation in decision-making, the management of natural assets and in monitoring and evaluation processes, assign a prominent role to the most vulnerable and marginalized.
- build social and economic justice, strengthening economic inclusion and social cohesion to improve livelihoods and actively reduce inequalities, fostering and consolidating relationships and solidarity between rural and urban areas and between generations, and supporting models social and public ownership and management.
- contribute to eradicating hunger, ensuring equitable access and a sufficient food supply that in turn contributes to strengthening food self-sufficiency.
- encourage the consumption of diverse, nutritious and safe foods for healthy, diversified, culturally appropriate and sustainable diets.
- benefit small food producers and workers, creating dignified living conditions, implementing effective participation in decision making and recognizing and preserving their knowledge.
- build gender justice and respect diversity, recognize and value women’s productive and reproductive work, promote equal rights and access to resources, as well as effective participation in decision-making and help to eradicate all forms of violence and oppression against women.

ii. Environmental aspects:
- are effective, minimizing the loss of food, the waste and transport involved in the production and distribution of food, as well as the associated environmental effects through localized or re-localized food systems.
- contribute to energy justice by considering the systems and types of production, distribution and consumption of energy required to create, deploy and operate innovation, minimizing the social and environmental impacts of energy and ensuring fair and sufficient access to it.
- contribute to environmental justice, considering: the short and long term environmental impacts derived from its use, beyond its useful life; its ability to preserve biodiversity and water; and include the labor aspects of innovation in food production and the problems of migrant farm workers.
- contribute to climate justice, addressing the structural causes of climate change due to agri-food systems, to strengthen the resilience of the people facing future crises.

iii. Aspects of the implementation process:
- they will be available and affordable, for all people and institutions at all levels and in all territories.
- they are useful, usable and sustainable over time, being effective in the short and long term in fulfilling the task for which they are intended.
- they have a multiplier effect, to achieve their widespread adoption at all levels and in all territories, with a positive impact.

For an innovation to be considered social, cultural, environmental, political and economically acceptable, it should take into account and meet at least the majority, if not all, of these criteria.

Read more at: https://www.foei.org/resources/publications/Agroecology-innovating-for-sustainable-food-systems-and-agriculture

1 - We refer to the various elements that make up agri-food systems (the environment, people, inputs, processes, infrastructure, institutions, etc.) and the full spectrum from pre-production and production to processing, packaging, transportation, distribution, marketing, preparation, consumption and waste management. This framework also incorporates the inputs and outputs associated with each of these activities, including socio-economic and environmental outcomes. Based on GANESAN (2014).
The innovation we don’t want

The narrative of “innovative” solutions is being imposed in different political, social and economic spheres. In the debate over Agroecology, big farmers’ organizations, some academics, large NGOs, philanthropists and institutions intimately linked to the interests of transnational agribusinesses promote “apolitical” narratives, presented as “triple win” options to achieve economic benefits, food security and adaptation and mitigation of climate change. They seek to incorporate certain agroecological practices into the dominant agro-industrial model while maintaining the structural characteristics and dependencies that have led to the current global crisis.

According to the Organisation for Economic Co-operation and Development (OECD) and the International Agri-Food Network, “agro-ecology is the study of the relation of agricultural crops and the environment”. Indeed, Business at OECD narrowly defines Agroecology as a scientific discipline which emerged in the 1960’s while criticising those who frame it as an agricultural production system based on specific practices, or as a political or social movement. Their argument: “this variety may cause confusion and distract from discussions on how to meet the SDGs (UN’s Sustainable Development Goals)”. Finally, they advocate for “a mix of practices, tools, and technologies tailored to each situation”, including precision agriculture and other “innovative approaches”.

Meeting the SDGs is not our definitive goal as a society. We have to aim for deeper structural changes if we really want to build a fair world for present and future generations. It has also become clear, for example, that by sticking to business as usual the world will fall far short of achieving the SDG target of eradicating hunger by 20301.

We must beware of the multiple reinterpretations of the concept by different actors and interest groups. Agroecology and industrial agriculture are not interchangeable concepts or practices and cannot coexist. They represent two fundamentally different visions of development, well-being and the relationship between human beings and their environment.

FAO process on Agroecology

The FAO process on Agroecology, which began in September 2014 and included two international symposia (2014 and 2018), several regional seminars and meetings (2015 and 2016) and a meeting between FAO and the International Planning Committee for Food Sovereignty (IPC)1 and allies (2017), has allowed the organizations and social movements that promote Food Sovereignty to take our proposals and demands for Agroecology to spaces of dialogue with governments, international institutions, academia and other social organizations.

But the FAO is a monster of a thousand heads and there are attempts to permanently halt the advance of Agroecology. An example of this was the intention to mimic the Agroecology process with Agricultural biotechnologies in 2016 and 2017. The pressure of social movements and organizations, united in the IPC managed to stop this process, but the same actors within the FAO managed to open another front by promoting a discourse on necessary innovations in agriculture as a way out of the global food, environmental and climate crisis.

In this context, the issue was placed on the agenda of the meeting of the FAO Committee on Agriculture (COAG), held from 1 to 5 October 2018 and an international symposium on Agricultural Innovation for Family Farmers was held in Rome in late November 2018.

There has been a very strong emphasis on fostering innovation (mostly understood as technological innovation) to achieve sustainable agriculture and food systems and to adapt to climate change. Innovation will be a very relevant framework in the coming years. In this framework, most governments stressed the central role of private sector investment completely ignoring the fact that small-scale food producers are the first and major investors in agriculture and that they are key actors who have been innovating for centuries. However, under pressure from social movements, the COAG acknowledged in 2018 that “innovation is not a goal per se [and] some forms of innovation may contribute to environmental degradation, be disruptive of livelihoods or exacerbate inequalities. It is important to understand which kinds of innovation need to be encouraged, where and for whom”.

FAO is currently developing an analytical framework for the multi-dimensional assessment of Agroecology and guidelines for its application in order to support evidence-based decision-making on Agroecology, in dialogue with Civil Society Organizations and academia.

For organizations and social movements which are part of the IPC platform, filling major gaps in scientific and evidence-based data on Agroecology, as well as scaling Agroecology outward and upward, should be done through participatory action research, in close dialogue with committed academia. It should foster the capacity of food producers and their communities to experiment, evaluate and disseminate innovations and facilitate the bridging of different knowledge systems, leading to systemic solutions toward truly healthy, sustainable agriculture and food systems.

1 - http://www.foodsovereignty.org/

one does not sell the earth upon which the people walk

Tashunka Witko, 1840 – 1877
Agroecology in practice 1

Peasant to peasant: a model for the effective construction of counterhegemonic alternatives

The most significant examples available for scaling up Agroecology are tied to organizational processes - in particular those in which peasants play the role of the protagonist. For us, scaling up does not mean linearly reproducing preconceived models nor taking something small and making it big, but rather strengthening and multiplying many small processes. In order to integrate more people and territories into the agroecological movement it is essential to consolidate peasant organizations in the development of their own social, territorial, and political processes.

Peasant to peasant is a flexible dispositive or mechanism, a set of concepts/actions/possibilities united to assemble agroecologies, aid in the (re)construction and articulation of territories and facilitate the emergence of the peasant as a political subject. The three dimensions are interrelated and integrated permanently with each other, so much so that it is hard to determine where one ends and the other begins.

It is a process in which the subjects are co-producers of knowledge through the exchange of ideas, experiences and innovations in agroecological production and where successful innovations and experiments are collectively systematized and used as examples to motivate others and strengthen and expand agroecological production. These processes are typically linked to other areas of training or formation such as Peasant Schools, spaces of local, national and international political organization and articulation, "South-South cooperation", and "peasant organization to peasant organization" processes.

The Campesino a Campesino movement for sustainable agriculture started in Central America in the early 1970s and is now widely recognized as one of the best ways to develop and promote Agroecology. Farmers not only share information and techniques, but they also share abstract agroecological concepts, knowledge and wisdom, using models, demonstrations, games, songs, poems, and stories.

One emblematic case is the Campesino a Campesino Agroecology movement (MACAC) adopted by the National Association of Small Farmers, ANAP, in Cuba, which played a key role in helping Cuba survive the crisis caused by the collapse of the socialist bloc in Europe and the tightening of the US trade embargo. Agroecology significantly contributed to boosting peasants’ food production without scarce and expensive imported agricultural chemicals by first substituting more ecological inputs for the no longer available imports, and imported agricultural chemicals by first substituting more ecological inputs for the no longer available imports, and then by making a transition to more agroecologically integrated and diverse farming systems. These practices resulted in additional benefits including resilience to climate change. The MACAC is based on the emulation of peasants by other peasants; it is a “pedagogy of experience” and a “pedagogy of the example”.

Why Agroecology is the path to support

Agroecology is a multidimensional approach, founded on knowledge, know-how and peasants’ and indigenous peoples’ ways of life, grounded in their respective natural, social and cultural environment. It is a living concept that continues to evolve as it is adapted to diverse and unique realities. It provides a coherent framework that conceptualizes these practices and their effects (and their mutual reinforcement), and a holistic understanding of our place in natural cycles and how food systems must adapt to and restore the biocultural systems on which they depend.

It includes a long-term vision and goes beyond agricultural production to encompass and transform the whole food system. It is a tool of struggle and resistance to build peoples’ Food Sovereignty (MST). It calls for paradigm shifts on multiple fronts, including in research, consumption, and policy-making in order to achieve Food Sovereignty for rural and urban communities. Across the world, Agroecology guarantees the diversity of food and food cultures adapted to their social and natural environments.

Additionally, there is convincing data that Agroecology can raise yields significantly among those that need it most, i.e. marginalised and subsistence food producers in rainfed areas, without needing expensive and resource intensive infrastructures like irrigation and corporate seeds.

Small-scale food providers, especially peasants and family farmers, are the primary innovators in agriculture and have been for thousands of years. They are the main designers of agroecological farming systems, including agroforestry and integration of livestock with crops and trees, as well as the main plant breeders in the world. What research institutions and the private sector contribute is minuscule in comparison. This is especially true when we consider agroecological systems and locally-adapted crop varieties and livestock breeds. It is these farmer-led and farmer-conducted innovation processes that need to be supported, as well as Campesino a Campesino (farmer-to-farmer) processes to stimulate farmer innovation and sharing of results.

There are a myriad of ecologically based farming methods developed by at least 75% of the 2 billion small scale producers, mostly women on 500 million small farms that feed 70 – 80% of the world. Most of the food consumed today is derived from 2.1 million peasant-bred plant varieties.

In conclusion, Agroecology is the innovative approach to be supported; an Agroecology practiced by and according to the principles of those who maintained it for millennia: small-scale food producers.

Read more:


Agroecology at a crossroads, Nyéléni newsletter num. 28 http://www.nyeleni.org/ccount@click.php?id=106

1 - For more on Agroecology read the Nyéléni newsletter num.20 http://www.nyeleni.org/ccount@click.php?id=62
2 - http://www.mst.org.br/2019/03/27/agroecologia-comoinstrumento-da-luta-de-classe.html (only in Portuguese)
**Agroecology in practice 2**

**Women and Earth in Tajikistan**

Zan va Zamin (Women and Earth) is a grassroots organization founded in 1999 by a small group of women activists in Tajikistan, whose goal is to secure tenure and access to land, the conservation of biodiversity and the preservation of traditional knowledge, and the creation of farmer associations and cooperatives.

To date, it has helped more than 1,200 women obtain title to their land. It has community nurseries and encourages women and the elderly in their role as custodians and transmitters of agricultural heritage. It has helped to create more than 30 seed banks to give access to seed varieties to farmers. Its twelve field schools produce at least 1,000 tons of vegetables a year, while their gardens and community nurseries provide trees and maintain more than 10,000 fruit trees.

It has also provided local communities with solar dryers, greenhouses that work with solar energy and low-energy kilns. Through the great work it does, it contributes to creating more resilient ecosystems, less food shortages, greater Food Sovereignty and better local incomes.


**Agroecology in practice 3**

**Mobilization for institutional innovation**

“This product of many years work for Agroecology and Food Sovereignty now has a legal framework in Uruguay that will allow us to continue advancing.”

Silvana Machado, National Network of Criollo Seeds

In December 2018, the Uruguayan parliament transformed the National Agroecology Plan - an initiative of agroecological family producers and producers and social organizations that promote Food Sovereignty in Uruguay - into an Act of law.

This triumph is the result of an extensive process of discussion, which began in the 5th National Festival of the Creole Seed in April 2014 and included the organisation of various seminars and workshops within the framework of successive national and regional festivals and meetings of the National Network of Native and Criollo Seeds and the Agroecology Network.

In the parliamentary debate it was stressed that the subjects to whom this new norm points are family farmers and producers of food and their role in the defense of biodiversity, territories and watersheds. Also, the historical accumulation of more than three decades of action bringing together collectives which promote Agroecology from the land was highlighted. Obtaining approval of this norm also grants formality to a critical view of the agri-food system in Uruguay and the region, starting with the defense of the Right to Food and Food Sovereignty.

Read more at: https://planagroecologia.uy/ (only in Spanish)

**Agroecology in practice 4**

**From Atelier Paysan to Farm Hack**

“At my place, it’s very hard to get something between a tractor and a trowel. There just isn’t much in between. It’s nice to come to places like this [Farm Hack event] and get energised and inspired. Cross-pollinate, swap-ideas, whinge about the weather. Lots of things. It’s very fruitful.”

Kate Collins. Market Gardner, UK

Atelier Paysan, in France, and Farm Hack, in the UK, are part of a community-led approach to the development, modification, and sharing of designs for farm tools, machinery, and other innovations. These initiatives emphasize a peasant to peasant / farmer-to-farmer approach to learning and create platforms for them to come together to ‘hack’ and apply their collective ingenuity in the development of technologies adapted to their agroecological practices.

These initiatives strive to develop technical and technological sovereignty for peasants thanks to open source resource platforms, promoting farmers’ autonomy and re-appropriation of knowledge and skills.

At Atelier Paysan, the peasant to peasant, farmer to farmer, and engineer-trainer to farmer is one horizontally but also through a referent person: an engineer from the cooperative. At the end of the training, each participant can go back to its farm with a tool he knows how to build, repair and potentially adapt to his own needs. More than 60 training dates are available each year. The auto building trainings last from 2 to 5 days. The participative processes for technology building can last for several months. Read more http://www.latelierpaysan.org/

Farm Hack typically involves two main complementary components: web platform and events. A web platform is used to where designs can be shared using an open source or creative commons approach. Farmer-derived innovations are made available and editable by other members of the community. Farm hack events bring together farmers, growers, fabricators, engineers and IT programmers to demonstrate and share tools, skills, and ideas through field demonstrations, practical workshops, seminars, entertainment, and cultural exchanges. These two components come together when tools that are demonstrated at events are posted on-line. Read more: https://www.eurovia.org/farm-hack-farm-to-farmer-innovation-open-source-and-creative-commons/

These initiatives while allowing peasants to acquire several skills (e.g. adequate technologies for peasant Agroecology, technological sovereignty, user innovation, socio-technical network animation, open source documents) play an important role in building networks between people and thus in strengthening social movements.

*From https://www.eurovia.org/eaken/
Digitalization of agriculture: Next edition of this newsletter is dedicated to this worrisome agribusiness strategy. Make sure you read it!

Climate-Smart Agriculture: reinforce business-as-usual: The FAO began talking about ‘climate-smart agriculture’ (CSA) in 2009 as a way to bring agriculture – and its role in mitigation, adaptation and food security – into the climate negotiations. The Global Alliance for Climate-Smart Agriculture (GACSA), launched in 2014, includes national governments, agribusiness lobby groups (the majority representing the fertilizer industry), the world’s largest network of public agricultural scientists – the Consultative Group on International Agricultural Research (CGIAR) – universities and NGOs. The 2017 report Too big to feed by the International Panel of Experts on Sustainable Food Systems (IPES-FOOD) shows that agrochemical corporations and their lobby groups are strongly represented in the major alliances and initiatives promoting CSA today. CSA is a classic technological fix that seeks to address a problem created by biotech’s failed technology (herbicide tolerant crops), and a new way of commodifying and appropriating nature. Furthermore, while claiming to use agroecological approaches (e.g. agroforestry), CSA does not exclude practices and technologies that can undermine, or be incompatible with them.

Sustainable intensification: While the term ‘sustainable intensification’ has been in existence for two decades, its use has only recently become mainstream and has also been incorporated into Climate-Smart Agriculture. It was originally conceived as an approach based on three fundamental assumptions about food security and agricultural production in the 21st century: 1) the world needs to produce significantly more food in the coming decades to feed a growing population; 2) the arable land base cannot be expanded significantly; and 3) agricultural production must become more sustainable and resource efficient in order to preserve the natural capital on which agriculture relies. Considered together, these three assumptions imply that agricultural production on existing arable land must intensify in order to meet higher demand, but in a manner which does not damage the environment. Nevertheless, the first assumption ignores the evidence, already stressed by the FAO and many others, of the importance of measures to redistribute food and reduce waste rather than increase production, and the latter is linked to the strongly criticized ‘Green Economy’ approach.

Gene drives: Gene drives are new tools that force genetically engineered traits through entire populations of insects, plants, animals and other organisms. This invasive technology represents a deliberate attempt to create a new form of genetic pollution. Gene Drives may drive species to extinction and undermine sustainable and equitable food and agriculture.

CropLife International: This global network, “the voice and leading advocates for the plant science industry”, with BASF, Bayer and Syngenta among its members, identifies the six main elements of Agroecology based on a vision that mention farmers only as mere receptors of technical support and users of technology, such as biotech products, both offered by these companies.

Mega-mergers: The sudden increase of mega-mergers in the agri-food sectors and consolidation of corporate concentration throughout the entire industrial food chain (seeds, agrochemicals, fertilizers, livestock genetics, animal pharmaceuticals and farm machinery) is celebrated by some actors for creating a dynamic innovation climate. Nevertheless, while R&D spending in the sector is high ($7 billion in 2013), the scope remains narrow. Industry focuses on crops and technologies with the highest commercial returns; for instance, 40% of private breeding research goes to one crop, maize. Furthermore, a common trend is for large firms to buy emerging ‘healthy’ or ‘sustainable’ brands to fill their innovation gaps in this sector, while at the same time stifling innovation and compromising the commitment to sustainability of these smaller firms.

The Peasant School Multimedia

In November 2015, the National Association of Small Farmers of Cuba (ANAP), La Via Campesina International (LVC) and the Komanilel Collective, launched a video course called “Multimedia Peasant School; an audiovisual tool to scale up Agroecology”. The objective of the course is to help the diffusion of Agroecology around the world. It was developed together with the network of peasant agroecological schools that La Via Campesina has created in almost every country where it has members. The training is technical, political and methodological. The virtual material explains the concepts and practices of the “Campesino a Campesino” (peasant-to-peasant, or farmer-to-farmer) methodology for spreading Agroecology. It is based on the successful Cuban experience in disseminating Agroecology. Each of the short videos in this collection pictures an aspect of the processes, actors, and experiences that together configure the Peasant to Peasant Methodology, as well some specific features of the methodology in Cuba. The video series is also complemented with a bibliographical collection on Agroecology, peasant to peasant methodology, technical manuals, and political documents from La Via Campesina. The Peasant School Multimedia is available online in English, Spanish, French and Portuguese at: http://agroecologia.esporea.org