Sustainable Fruit and vegetables:

a 40 years history

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Co-writters

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1.Introduction:

The European Green Deal, which aims to make Europe the first climate-neutral continent by 2050, represents the major strategic bet of the Van der Leyen Commission. It is available, for the food chain, with the “Farm to Fork” and “Biodiversity” strategies.

Thus, the first of these strategies, among others, stresses that “all actors in the food chain must play their part to ensure the sustainability of the chain. Farmers, fishers and aquaculture producers need to change their production methods faster and make the best use of nature and space-based, technological and digital solutions to achieve better climate and environmental outcomes, building resilience to climate change and reducing and optimizing the use of inputs (such as pesticides and fertilizers). These solutions require human and financial investments, but also promise better profitability, as they will create added value and reduce certain costs. »

The purpose of this report is to explain why and how the European fruit and vegetable sector, and more particularly that which has organized itself into Producer Organizations (POs) and Associations of Producer Organizations (APOs), not only fits perfectly into this approach but has already been involved in this process 25 years ago.

To this end, this report first highlights the importance of the fruit and vegetable sector in the agricultural economy of the Union, then highlights how it has contributed to sustainability objectives and finally presents concrete examples. Organic farming has, of course, its place, but it is accompanied in this approach by other interesting initiatives.

2. Fruit and vegetables, a fundamental sector for UE

Fruit and vegetables are key European Union (EU) agricultural products, with an annual output value of over €57 billion in 2018, of which about 60 % is accounted for by vegetables and nearly 40 % by fruit. The sector's output represents one quarter of the value of the EU's total crop output and 14 % of the overall agricultural output value, with a 30 % increase in ten years. In 2017, vegetable harvested production was almost twice as big as that for fruit, although fruit groves outnumbered fresh vegetable acres by about one million hectares (ha). Even though fruit and vegetable growers are geographically concentrated, products such as cabbages, tomatoes, carrots and apples are cultivated all over the EU.

Fruit and vegetables accounted a fundamental sector for many EU Member States, especially those where it is particularly well developed, such as in the Mediterranean regions and in some northern and eastern European countries. Moreover, all EU Member States produce at least at 14% of the value of the European production.

Horticulture and fruit production represented altogether 9 % of all agricultural full-time equivalent jobs in 2016, albeit only 7 % of all farms and 2 % of all agricultural area, mainly due to the more labour-intensive horticultural sector. Non-family and seasonal workers are more numerous in farms specialised in fruit and citrus or horticulture than in other farming specialisations, representing over one third of all EU non-family labour force working on farm on a non-regular basis 2013 (with higher percentages for the Netherlands, Spain and Poland, among others). One characteristic of the EU trade in fruit and vegetables is the predominance of internal flows over extra-EU trade, due to product perishability, but also to the variety of the EU's products. Another feature is that the EU is traditionally a net importer in international trade.

In 2019, while the value of the EU's exports to non-EU countries of (fresh, chilled and dried) fruit and vegetables totaled €7 billion (15 % of all primary food commodities export value and 5 % of agri-food export value), imports from non-EU countries totaled €26.8 billion (one third of all primary food commodities import value and 23 % of agri-food import value.

Moreover, the fruit and vegetables are a showpiece of a healthy, balanced and durable diet. They are strongly recommended by the medical community because they help to fight against certain cardiovascular diseases and certain cancers. They also effectively prevent the overweight and obesity, which affects a growing number of people in Europe and in particular the young people (obesity crossed the threshold of 20% in many countries).

This highlights the determining role of the fruit and vegetable sector for the whole society and rural employment. The fruit and vegetables are products with high added value and with a very broad range of species and varieties.

They take an active part in the economic activity and the employment of many regions. They allow also the maintenance of ecosystems and a sustainable land use.

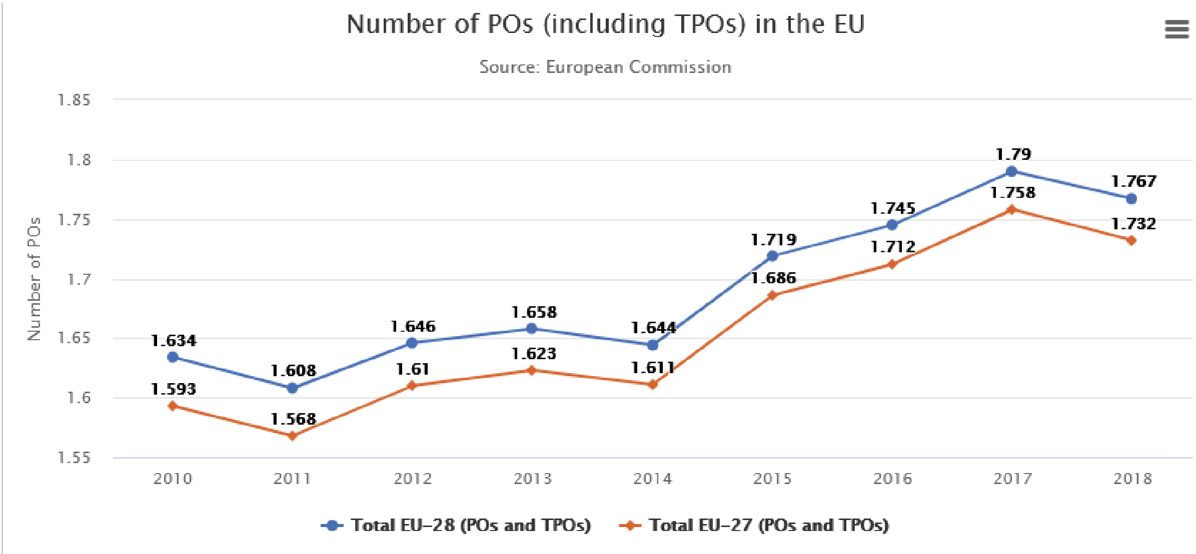
3. The importance of organizing producers

Producer organizations (POs) were from the beginning a central element of European policy for fruit and vegetables. In the first stage of the Common Market Organization (CMO), their main role was, for the Commission, to organize the withdrawal of products which could not find outlets on the markets.

However, in 1997 the regulatory framework changed completely. Emphasis was placed on POs as commercial enterprises of producers; Community support was proportional to the value of the production marketed by the PO and it served to co-finance an operational fund on par with the producers' own financing. The new CMO consolidated the relationship between producers and markets, which is even more important with regard to fresh products, and made them even more sensitive to changes in consumer demands for more quality, traceability and more respectful production methods. of the environment.

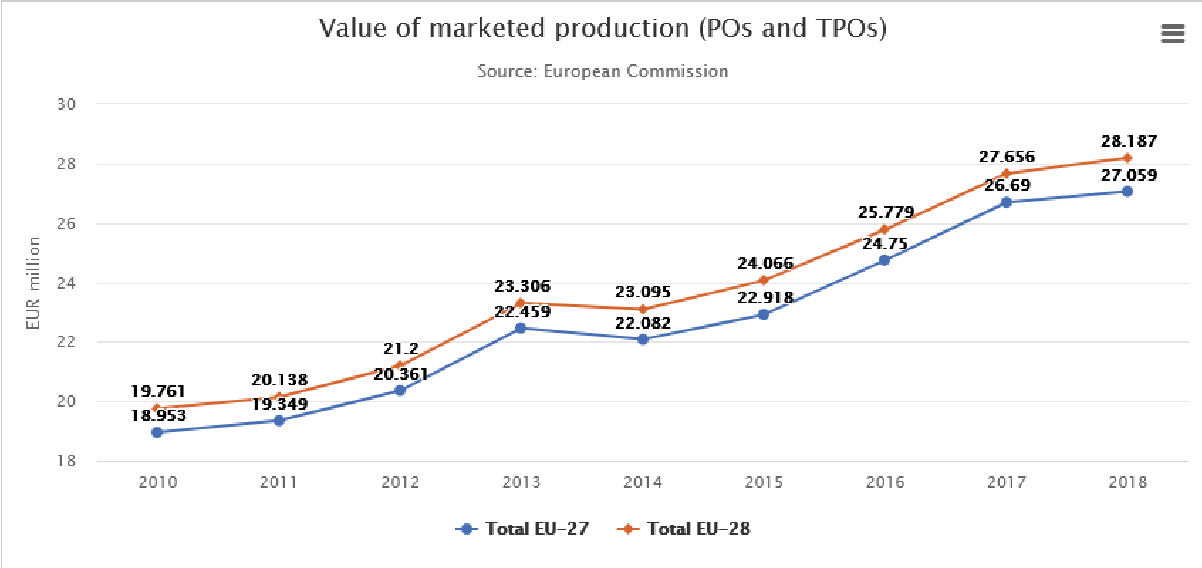
Following the last data available (2017), there were (Graph 1) 3.400 recognised POs and 71 recognised. Associations of Producers' Organisations (AOPs), The value of their marketed production (Graph 2) is increasing year by year.

Graph 1



Source : European Commission https://ec.europa.eu/info/food-farming-fisheries/plants-and-plant-products/fruits-and-vegetables/sector-reports_en

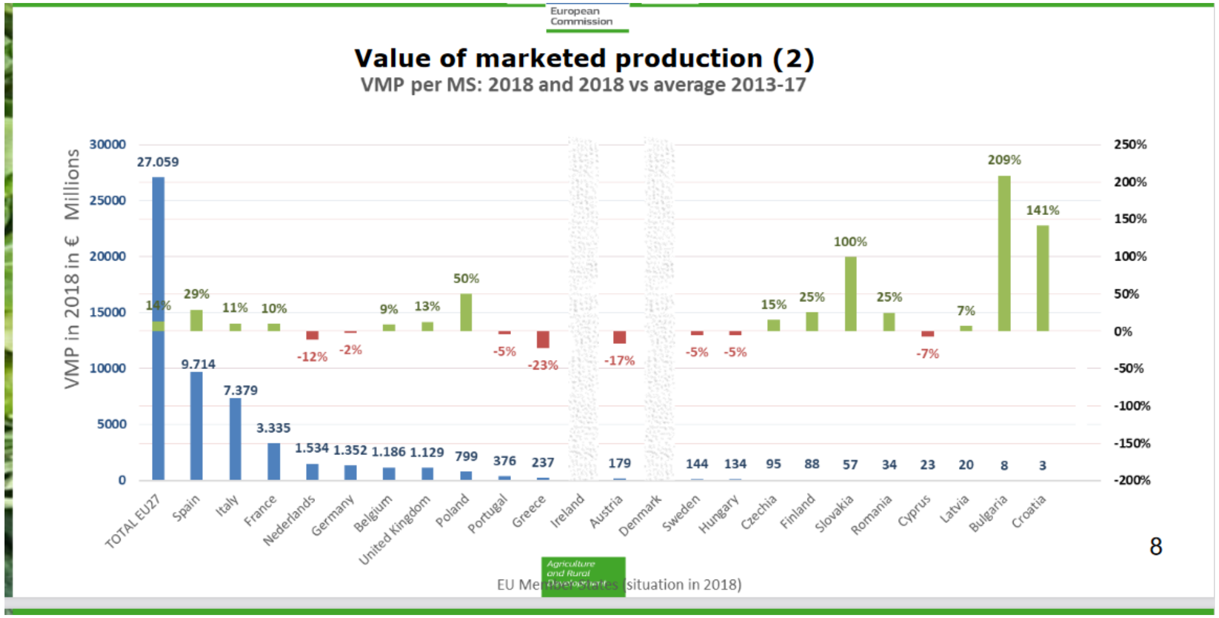
Graph 2



Source : European Commission https://ec.europa.eu/info/food-farming-fisheries/plants-and-plant-products/fruits-and-vegetables/sector-reports_en

It is true that the level of participation of farmers in POs varies greatly from one Member State to another (Graph 3).

Graph 3



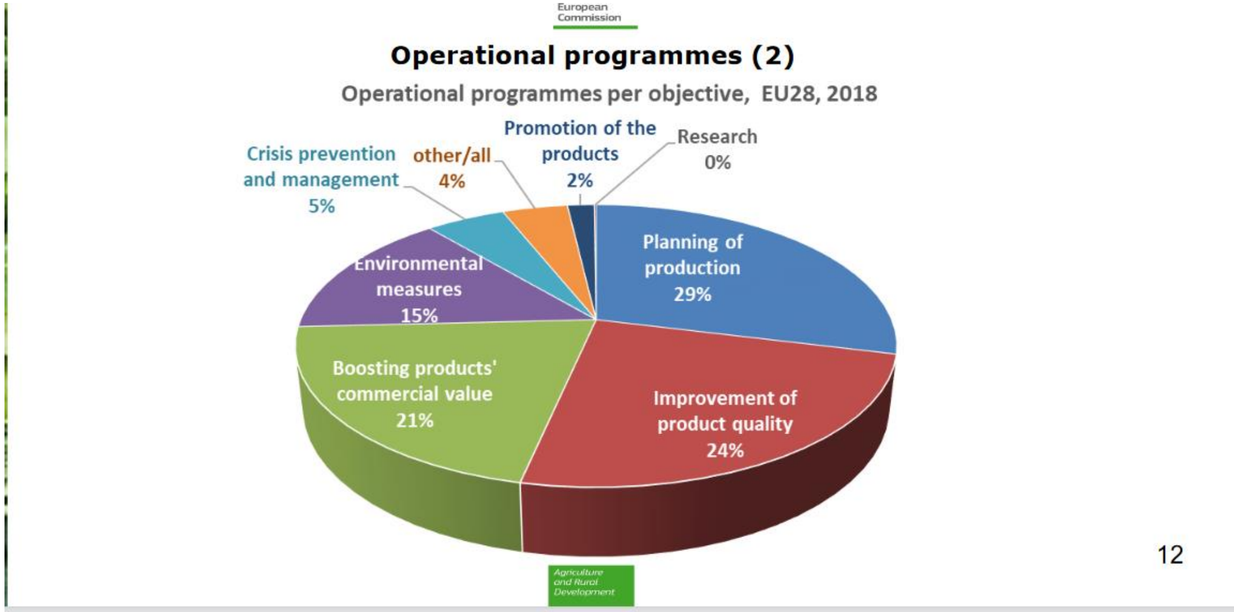
Source : European Commission https://ec.europa.eu/info/food-farming-fisheries/plants-and-plant-products/fruits-and-vegetables/sector-reports_en

There are various reasons for this variation. Among them, we can cite the cultural tradition of each country, the fact that many producers do not feel the need to organize themselves because they are satisfied with the way in which their products are marketed, the importance of local markets and short circuits and, in the case of the new Member States, their more recent entry into the European Union and the historical memory of the forced collectivization suffered under the old regime.

4. Farmers ahead of their time

Among the main priorities of the operational programs (Graph 4), decided by the POs, we note the importance of improving the quality of products, improving their commercial value and environmental measures.

Graph 4



Source : European Commission https://ec.europa.eu/info/food-farming-fisheries/plants-and-plant-products/fruits-and-vegetables/sector-reports_en

With regards to environmental measures, the CMO, as of its origin, was precursory of a much more overall agricultural policy, which was going to be essential several years later; it is the first agricultural policy being conditioned by environment-friendly actions, and this since 1997.

Environmental measures contribute to the implementation of actions and services required by the civil society. More precisely these interventions exert their effects on the environment in terms of:

- Reduction of the impact by the fall of inputs use and/or by the implementation of alternative methods for plant protection, agricultural fertilisers, water, etc.
- Improvement of the quality of the soil and reduction of erosion.
- Improvement of biodiversity and landscapes.
- Reduction of the environmental impact of waste.
- Savings of water and energy.
- Restoration of the quality of the soil.

5. Main Trends for Eco-friendly fruit and vegetables in Europe

As we have seen, to produce Eco-friendly fruit and vegetables is a major target for the European producers, in particular for those who are PO's members. It can be achieved through several approaches, but all of them have enabled significant progress, resulting in consumers being offered some of the safest food in the world. Of course, organic farming plays a central role in this, but it is accompanied by other complementary approaches such as integrated farming or "zero pesticides".

5.1 Organic productions

Following the most recent data made available by Eurostat, organic farming covered almost 13.8 million hectares of agricultural land in the EU-27 in 2019. This corresponds to 8.5 % of the total utilised agricultural area of the EU-27, an increase of 0.5 percentage points from 2018.

Organic food products are widely perceived as being of better quality and safer than other food products. EU legislation on organic farming, dating from 2007, has been updated several times and has just be finally replaced by a new legislative framework in 2021, with the aim of boosting the sector

With the same objective, in the framework of the rural development policy 2014-2020, EU Member States allocated more than €6.3 billion to supporting farmers or groups of farmers who convert to or maintain organic farming practices and methods.

Organic farming has been constantly growing in the EU over the past years. This trend is evident in the evolution of agricultural land being converted to organic fruit and vegetable production, although the overall share of total agricultural land farmed with fruit or vegetables remains marginal.

The existence of a community regulatory framework, renewed on January 1, 2022, has obviously facilitated the consolidation of organic farming. Community support, provided by the second pillar of the CAP, has accompanied producers both in their transition and in their development. The regions, in particular those members of the AREFLH, have also made their contribution, for example and among others in France the Provence-Alpes-Côte d'Azur regions, Brittany, Auvergne-Rhone-Alpes or the Grand Est; Catalonia, the Valencian region and Andalusia in Spain or the Basilicata in Italy.

Temperate fruits were grown in 2020 on more than 150.000 hectares (European Union : more than 120.000 ha) and they covered 5,7% of the total temperate fruit area (10% in the EU). Several countries in the EU had a considerable amount of land dedicated to the temperate fruit

(e.g apples in Poland and berries in Baltic countries). The most important fruit were apples (70.732 Ha), cherries (18.731 Ha), plums (18.002 HA). The largest temperate fruit producers were in Turkey, Italy and France with more than 20.000 Ha each.

In 2020 organic vegetables were grown on more than 190.000 Ha in Europe, and almost 190.000 Ha in the EU, covering 4,7 % and 9,5% of the vegetable area, respectively. The largest areas were in Italy (64.762 Ha), France (36.305 Ha) and Spain (22.023 Ha). High organic shares of all vegetables ate found in Denmark (37;5%) and Luxembourg (35,5%).

Table 61: Europe and the European Union: Key crops/crop group 2020

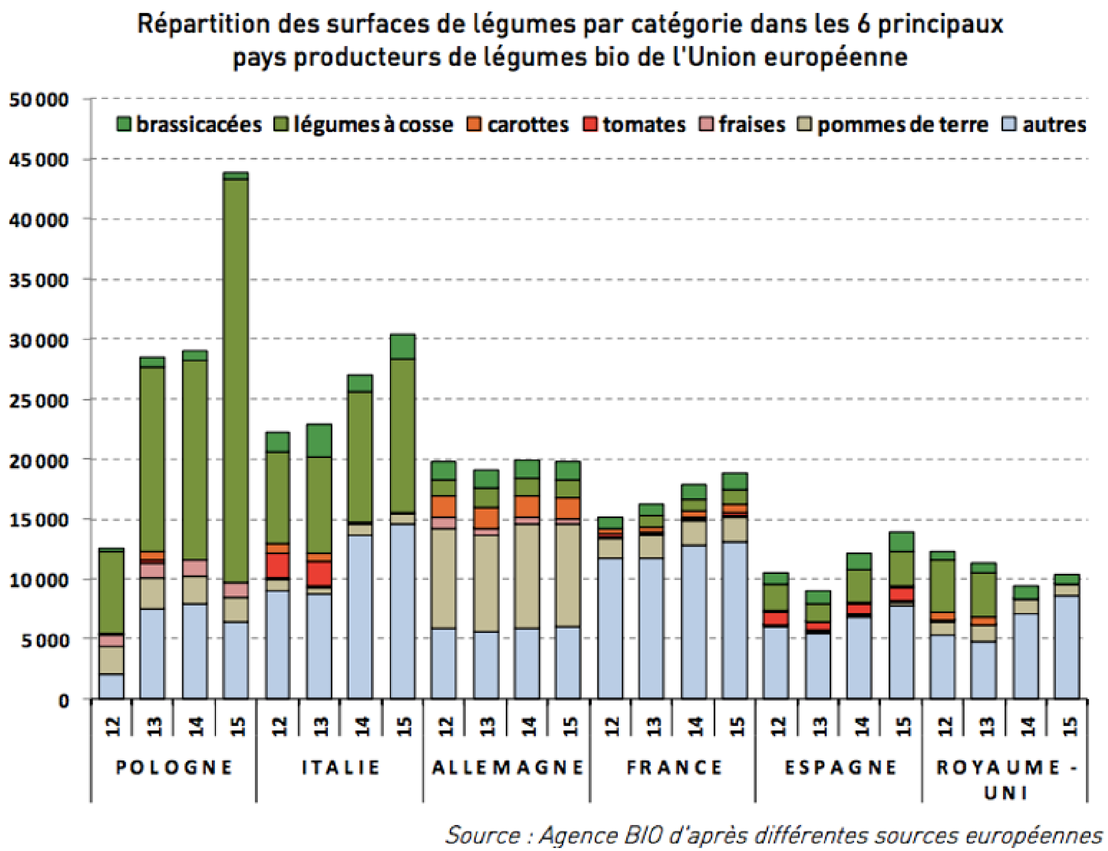
	Crop group	Area (ha)		Organic share (%)		Change 2019-2020 (%)		Change 2011-2020 (%)	
		Europe	EU	Europe	EU	Europe	EU	Europe	EU
Arable crops	Cereals	3'027'517	2'440'184	2.4%	4.7%	2.6%	2.6%	63.2%	71.0%
	Dry pulses	572'233	486'964	10.0%	23.4%	4.6%	4.9%	139.6%	126.0%
	Fresh vegetables	212'563	189'721	4.7%	9.5%	5.7%	4.8%	104.1%	135.1%
	Green fodder	2'669'961	2'507'103	11.7%	12.0%	4.0%	3.8%	53.3%	68.6%
	Oilseeds	821'708	408'600	2.3%	3.7%	30.7%	18.4%	331.6%	174.1%
	Root crops	55'761	51'988	0.7%	1.7%	-4.1%	6.1%	26.9%	77.6%
Permanent crops	Berries	48'419	40'652	15.1%	27.1%	6.9%	0.0%	71.3%	56.4%
	Citrus fruit	60'864	60'021	8.7%	11.5%	5.9%	5.8%	159.9%	162.1%
	Fruit, temperate	154'046	121'889	5.7%	10.1%	4.1%	1.5%	27.7%	17.6%
	Fruit, (Sub)tropical	43'468	21'058	18.1%	12.5%	11.8%	12.0%	130.5%	179.8%
	Grapes	431'225	417'982	11.1%	13.2%	8.2%	9.6%	86.4%	92.6%
	Nuts	374'087	323'567	13.7%	23.5%	11.2%	10.9%	102.2%	96.3%
	Olives	621'470	556'629	10.3%	10.9%	-0.4%	2.7%	48.7%	44.2%

Source: FiBL-AMI survey 2022 based on national data sources and Eurostat. Totals for arable and permanent crops in other tables include further crop groups

Graph 5

The distribution between the different categories of vegetables is quite variable from one country to another (Graph 6). Germany stands out with a substantial share of potatoes.

GRAPH 6



5.2 Integrated farming production

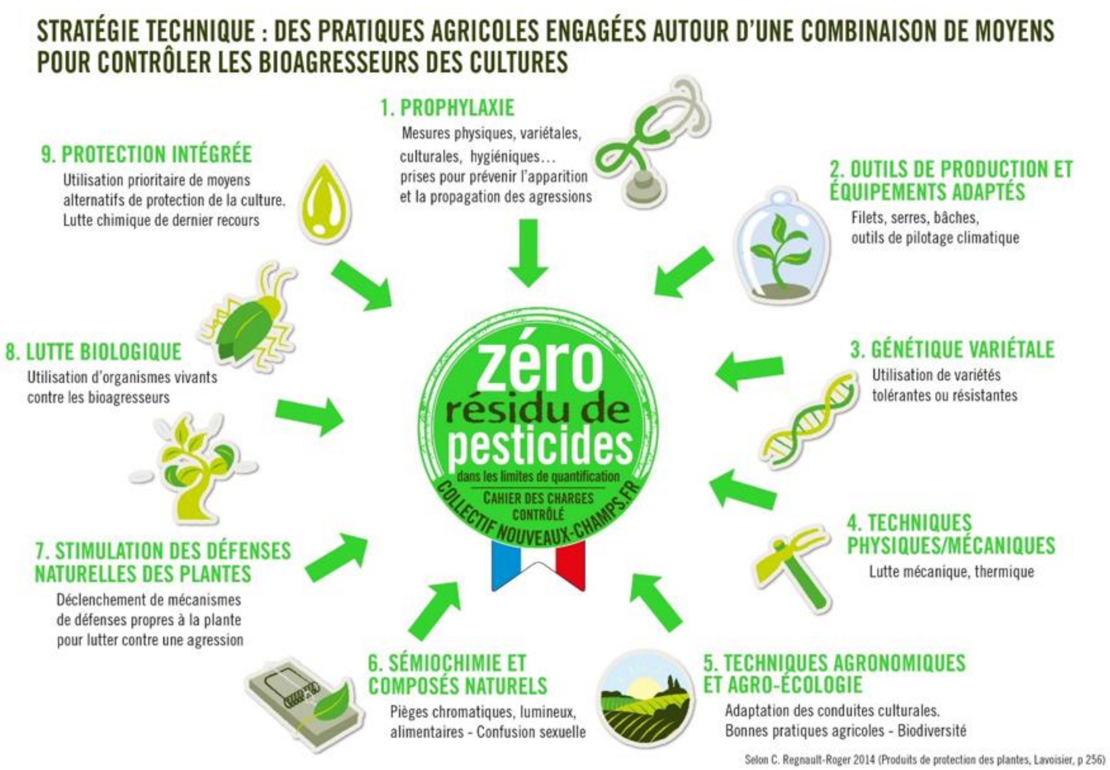
The absence of a community framework that defines it has led to the appearance of various private labels. The efforts of producers have been stimulated on the one hand, but limited on the other, by the reduction in the number of authorized active substances. This is not to call into question the prohibition of products which prove to be dangerous, in particular for human health, but to underline the impasse in which "minor uses" find themselves, the economic importance of which does not justify , for phytosanitary companies, the preparation of an approval dossier.

But this drastic revision has not been a sufficient guarantee for the trade, which has increasingly strict requests. Purchasing groups impose to the suppliers' schemes of supply characterized by a specific environmental value (GlobalGap, BRC, YEWS, Nature Choice, etc). Sometimes, they request a level of residues in the products not exceeding a third of the level of the European Maximum Residue Limit (MRL) or they limit the presence of active substances residues (3 to 5).

Producers have made enormous efforts to adapt to all these requirements, even if they are aware that some are excessive and that they sometimes feel little supported by public research and experimentation, which alone can replace the lack of interest in these minor uses by private companies. It is often the regions, again and in the first place those which are members of the AREFLH, which have had to cover these shortcomings as far as they are able, as demonstrated by the cases, among others, of Andalusia or Catalonia. in Spain and Bolzano, Veneto, Venezia Giulia, Tuscany, Marche, Piemonte, Puglia and Sicilia in Italy.

. In France, the Interprofession has played a predominant role in supporting this approach. The initiative of "eco-responsible orchards", for example for apples, is often taken as an example of good practice.
Finally, the "zero residue" approach is relatively new but has gained momentum in recent years.

Graph 7


STRATÉGIE TECHNIQUE : DES PRATIQUES AGRICOLES ENGAGÉES AUTOUR D'UNE COMBINAISON DE MOYENS POUR CONTRÔLER LES BIOAGRESSEURS DES CULTURES
1. PROPHYLAXIE
Mesures physiques, variétales, culturales, hygiéniques… prises pour prévenir l'apparition et la propagation des agressions
2. OUTILS DE PRODUCTION ET ÉQUIPEMENTS ADAPTÉS
Filets, serres, bâches, outils de pilotage climatique
3. GÉNÉTIQUE VARIÉTALE
Utilisation de variétés tolérantes ou résistantes
4. TECHNIQUES PHYSIQUES/MÉCANIQUES
Lutte mécanique, thermique
5. TECHNIQUES AGRONOMIQUES ET AGRO-ÉCOLOGIE
Adaptation des conduites culturales. Bonnes pratiques agricoles - Biodiversité
6. SÉMIOCHIMIE ET COMPOSÉS NATURELS
Pièges chromatiques, lumineux, alimentaires - Confusion sexuelle
7. STIMULATION DES DÉFENSES NATURELLES DES PLANTES
Déclenchement de mécanismes de défenses propres à la plante pour lutter contre une agression
8. LUTTE BIOLOGIQUE
Utilisation d'organismes vivants contre les bioagresseurs
9. PROTECTION INTÉGRÉE
Utilisation prioritaire de moyens alternatifs de protection de la culture. Lutte chimique de dernier recours
zéro résidu de pesticides
dans les limites de quantification
CAHIER DES CHARGES CONTRÔLÉ
COLLECTIF NOUVEAUX-CHAMPS.FR
Selon C. Regnault-Roger 2014 (Produits de protection des plantes, Lavoisier, p 256)

6. POs at the heart of this evolution: A few concrete examples

As we pointed out earlier when we presented the effective priorities of the operational programs of Producer Organizations, and the Associations of Producer Organizations (AOPs) have been the linchpin of this evolution.

A few examples are worth more than long speeches:

- Rougeline Bio (France): meet the demand of producers and customers (Carrefour) and societal expectations, this is a third way, it allows us to promote the know-how of integrated pest management
- Pomévasion (France): Respond to the customer and consumer requests; the organic offer makes it possible to diversify buyers and create added value; eco-responsible orchards are a necessity for collective industry dynamics and for the pooling of technical and communication resources; development interest from France origin
- Coop Latour (France) started out with the conviction of certain members and management team to satisfy a market waiting for organic stone fruits

- Association Nationale Pommes Poires (France): Our objective: to promote environmentally friendly practices, to ensure the sustainability of production techniques, to enhance the image of French products and producers, to drive a dynamic of permanent progress based on research, experimentation and innovation
- UNICA group (Spain) awareness that sustainability and quality are the future of the sector; provide full service to customers (volume, quality, safety, range and schedule), constant search for new lines; obtain a better valuation for producer by differentiation
- Fruit du Ponent (Spain) contribute to better protection of the health and well-being of producers, better respect for biodiversity, better use of water and soil resources (Agenda 2030)
- Coop Frudeca (Spain): Expansion of markets and customers beyond conventional
- APOT (Italy): willingness to respect Regional, National, European regulations, promote quality and sustainability production techniques, and varietal innovation
- VIVA group (Italy): the integrated and organic production sector which is more and more important in the group strategy (reducing environmental impact, chemical treatments, health guarantee. (65% in PI and 15% in organic) for certain productions Integrated Production represents the whole of production and organic and IGP certifications. Bio via

Almaverde Bio exclusively 100% natural (without pesticides, fertilizers and chemical conservation)

- FINAF: For over 30 years, the PO members of the AOP FINAF have been using agronomic practices in the area capable of reconciling one of the most intensely productive agriculture in Europe with the protection of the environment and the health of consumers
- Conserve Italia POs apply the Integrated Production regulations and develop environmental actions, including: sexual confusion, the application of biological control, the use of biodegradable mulching sheets, as well as investments such as: the purchase of precision machines, the acquisition of purifiers for the reuse of water, of plants for the development of renewable energies or weather stations for water saving
- VBT (Belgium Flanders) meet increasing market demand
- Austria: the country has 25% of its surface area organic and the market continues to grow
- EB fruit (Check Republic) meet the expectations of the domestic market and more economical driving style
- CZ fruits (Check Republic) meet market demand

7. Conclusions: building the future

The future perspective is traced by the European Green Plan and the “farm to fork” strategies and biodiversity and organic farming are a key part of it.

For a long time, the difference in growth rate between the organic market and organic production has been identified as the main obstacle to the development of the consumption of organic products. Between 2007 and 2017, for instance, the global organic market tripled, while areas cultivated organically have doubled. Even if in recent years, the organic production is growing more quickly than before, there are still areas where it grows less quickly than the market.

Experts expect the market to grow further over the next years. Of course, the growth rate will continue to be dependent on the progress of organic surfaces. The Strategic Plan approved in 2021 by the Commission proposes clear ways forward to make possible the ambitious objective of reaching on average 25% of European agricultural areas under organic farming by 2030.

However, the scale of the environmental challenges, the urgency of the necessary mitigation and adaptation of European agriculture to climate change, the ambitious objectives that the Union has set itself with regard to the ODS; the demands of consumers and European citizens also require progress in the sustainability of the other 75% of agricultural land. It is therefore necessary to support the development of organic farming with the contribution of other complementary approaches. Among the latter, and in addition to the approaches mentioned above, direct sales and short circuits have taken on increasing importance in recent years, helped by the COVID crisis.

The challenge is enormous for all European agriculture, also for fruit and vegetable producers. The European political will is clear. At the time of writing this conclusion, the CAP Strategic Plans 2023-2027 are being analyzed by the European Commission and negotiated with the Member States. It will be necessary to ensure that their content really supports producers in their efforts.

However, two pieces of good news should be noted. After being for years a special case in the CAP, after nearly perishing during several CAP reforms under the guise of "simplification", commercial producer organizations in **the fruit and vegetable sector have now become an example to follow and their mode of operation can be extended, if the Member State so wishes, to other sectors.** It is therefore the end of the crossing of the desert for commercial POs and their AOPs.

The second piece of good news is that European civil society**, consumers and taxpayers are increasingly involved in this sustainability approach**. Fruit and vegetable producers, and first and foremost those who join producer organizations, have demonstrated in the past their ability to change and adapt.

Many regions support them in this process. But other public actions are also necessary both at European level and at the level of the Member States. Some already exist and deserve to be continued or even reinforced. Others are announced or announced but should become realities. Among them, without wanting to be exhaustive, we could highlight the following:

A stable regulatory framework at European level which, built on the basis of the "endives" judgment of the European Court of Justice, gives commercial POs and their AOPS the legal certainty they so badly need.

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For years the Commission has, in practice, to avoid the risk of double funding, promoted a drastic separation approach between the rural development programs and the fruit and vegetables operational programs.

This bureaucratic approach has fortunately changed and today we speak much more of synergies and complementarity than of exclusion. Moreover, the Strategic Plans of the new CAP are the extension to all of agriculture of the National Strategies that have existed in the fruit and vegetables sector since the mid-2000s. In the same spirit of consolidating the legal certainty of OPs and AOPs, it should be explained even more clearly.

Constant and reinforced support for research and innovation is extremely relevant, attentive to the needs of the sector, in line with the welcome initiative of the Operational Research Groups launched since 2014.

Therefore, the agricultural advice to farms has to be strengthened, it is essential to support producers in the transformation of their technical itineraries.

Substantial public support is needed to resolve the handicap represented for the sector by the non-authorization of the use of certain substances, not because of their toxicity but because the industries do not submit the necessary approval dossiers for these substances, minor uses, for lack of profitability.

The COVID crisis has highlighted the principle of “one health: human, animal and plant”. the globalization of trade increases the risk of epidemics, epizootics and the spread of plant diseases. Increased surveillance at European borders, and the application of effective health protocols, is an increasingly urgent necessity.

To maintain the fairest possible conditions of competition between Community products and imported products and to protect consumer health, the repeated presence of residues of products whose use is prohibited in Europe in imports from certain third countries must lead to the adoption of rapid measures. The same is true when the maximum residue limits that European producers must respect are exceeded.

The average consumption of fruit and vegetables in Europe is still far from the recommendations of the World Health Organization. The school fruit and vegetable initiative is welcome but should be complemented by clear guidelines and initiatives to promote the presence of organic products, local products and products with a European quality label in collective catering. The European institutions could start by setting an example with European canteens, as a large number of civil servants have requested in the past through a petition.

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