

# EUROPEAN BEEKEEPING SECTOR

## Proposals to allow nature to ensure our food security



### Position Paper on CAP post 2020

#### European Beekeeping Sector

Beekeeping is an important agricultural sector in Europe. European beekeeping is composed of hobby and commercial beekeeping. Several member states have a beekeeping sector that is an important component of their agriculture and rural areas. For example, the most recent official registration in Italy reveals 44.800 beekeepers, from which 19.100 are commercial producers, managing 800.000 colonies (61% of the total amount of colonies of the country).

Statistics shows the relevance of this diversified and locally rooted sector: at least 600.000 beekeepers produce honey, which means that bees contribute to their household's income as well as to rural dynamism and development.

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#### Common Agricultural Policy

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# Common Agricultural Policy



The EU Common Agricultural Policy (CAP) aims, *inter alia*, at assuring the availability of supplies and at increasing agricultural productivity by ensuring its rational development and the optimum utilisation of the factors of production.

Like all other EU policies or programmes, the CAP is also subject to other provisions of the Treaty to ensure coherence with the overall objectives of the Union. The Common Agricultural Policy (CAP) 2014-2020 aims to be “a more effective policy for a more competitive and sustainable agriculture and vibrant rural areas.” Sustainability is the only responsible policy approach to ensure tomorrow’s agricultural production and competitiveness and it implies the actual respect of the environment.

## Services that pollinators provide us

Pollinators are the most effective *fertilisers* and economic asset for our food production system

Pollinators play an essential and irreplaceable role in preserving fertile, living and diversified food production systems.

The value of the direct contribution of animal pollination to food production is estimated at \$212 bn- \$404bn worldwide, while it is above \$ 14 bn annually in Europe. Most of our food crops are dependant on animal pollination.



Crops that benefit from animal pollination

## Pollinators' role in human health, economy and society



Agriculture and food are the foundation of our health, our economies, society and cultures.

Pollinator-dependent crops include many fruit, vegetable, nut and oil crops and other food that supply both macro- and micronutrients in our diet. A decline of pollinators would have disastrous effects on human health worldwide, as the food with the most nutritional value become more and more scarce.

To maintain healthy and sustainable agricultural production systems, we must at all costs respect pollinators and biodiversity on which such systems rely.

Animal pollination is a regulating ecosystem service vital for ecological resilience. However, depletion of biodiversity proves that the current production model is systematically destroying resources that are essential to the equilibrium of agricultural systems.

## Increasing importance for the development of agricultural capacity

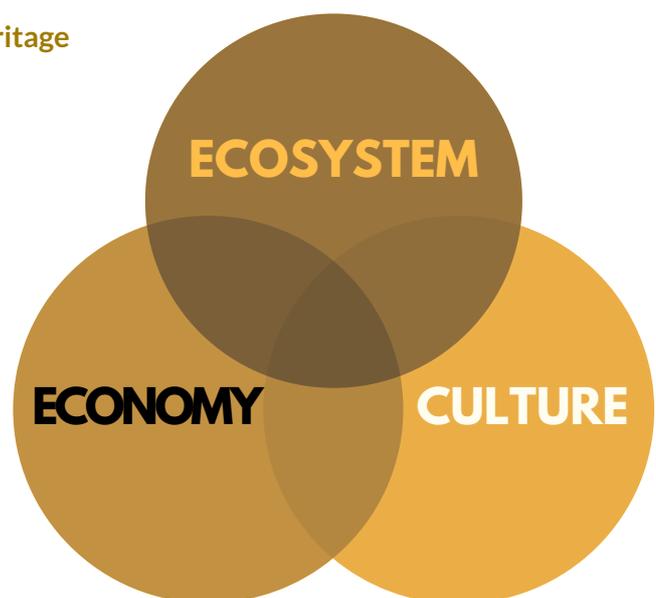
In the 21st century, global agricultural production capacity has ceased to increase while pollinator-dependent crops have triplicated over the last decades.

Livelihoods increasingly depend on pollination. However, studies have shown that yields decline in the absence of pollinators, while their presence increases yields by 24% on average.

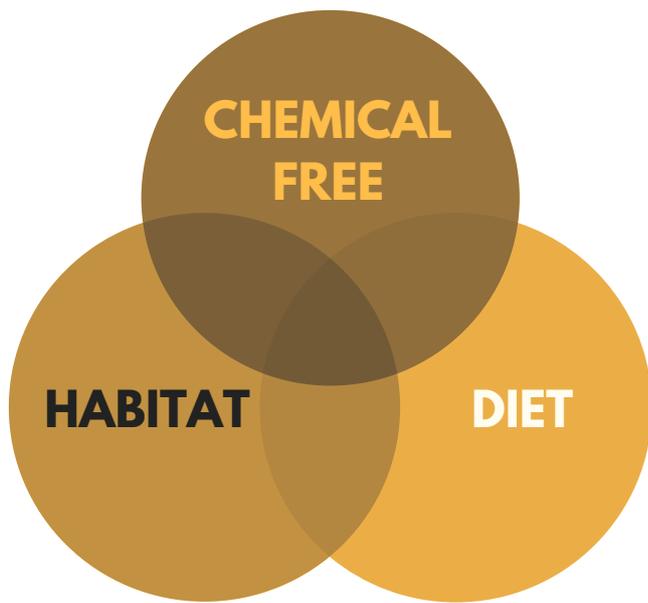
## Engine of rural development and socio-cultural heritage

Pollinators, their products and pollination are key elements for maintaining bio-cultural diversity through multiple practices, languages, and ethics.

Pollination is a fundamental source of inspiration in the fields of art, literature, music, song, cultural heritage, religion, recreational activities, education. It provides goods and services in the fields of food, plants, landscapes, medicine, biofuels, fibre and pharmacology, and inspiration in the fields of technology, construction and industrial design.



# Needs and vulnerabilities of pollinators



**DIET NEEDS:** nectar, pollen, large amount of water, diversification, good-quality sources.

**HABITAT QUALITY** for nesting: soil or wood depending on species.

**EXPOSURE TO CHEMICALS:** bees are extremely sensitive to chemicals, particularly pesticides, for some of them even in extremely low quantities. These can affect the biological cycle of entire colonies in a large variety of forms.

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## A bee-friendly CAP

The decline of pollinators observed in rural areas is an indicator of the imbalance that the current agricultural production model is imposing on ecosystems: how to react?

Since the 1990s', beekeepers and scientists have been warning politicians and civil society about the rising mortality of honeybees and other pollinating insects. Currently the context is as follows.

- **The economic sustainability of our food production increasingly needs pollinator-friendly investments.** Having reached a ceiling in crop yields for many cultures in Europe, the presence of pollinators and diversified agricultural practices able to optimize the use of resources, like agroforestry, have shown the potential to continue increasing yields and farmers' income with limited investments.
- **Increasing threats to pollinators and agricultural yields** - The abundance, diversity and health of pollinators and their services are increasingly affected by threats including: land-use, intensive agricultural management, and pesticide use, environmental pollution, invasive alien species, pathogens and climate change. These threats are translated into risks to pollination deficits in crops (lowering yields and quality), falling honey production, declining yields of wild plants and loss of distinctive ways of life, cultural practices and traditions.
- **Climate change** - Considering the role of pollination as the basis for plant reproduction and bearing in mind the role of plants in mitigating CO2 emission effects, the losses in pollination-linked biodiversity threatens to undermine climate change mitigation policies.

## Principles

1

**BALANCE** There is a need to achieve and maintain balance and harmony between agriculture and nature - in doing so pollinators become a production factor supporting agriculture. This is the essential principle of ecological intensification, which seeks balance and a win-win relationship between agriculture and nature.

2

**LANDSCAPE APPROACH** Considering the range of influence of pollinators (from a few meters to 15 km radius) the entire agricultural territory must be welcoming to pollinators. Policy needs to overcome the categorisation of ecologically friendly areas VS intensive agricultural areas. Agricultural policy needs to be conceived at the landscape level. In this sense, agroforestry practices, meaning the promotion of woody vegetation in agricultural lands should be done at plot, farm and landscape level.

3

**AVAILABILITY OF RESOURCES** There is a wide misunderstanding of the efforts started by the current CAP in order to multiply food resources availability. As a result, these measures are conceived as a burden for production rather than an asset and this is one of the reasons why they are sometimes used incorrectly. A clear example is the application of pesticides to ecological focus areas.

4

**QUALITY OF RESOURCES** The increase of the quantity of food resources needs to go hand in hand with the increase of the quality of these resources. Science has widely proved the high mobility of the pesticides applied in fields. Therefore it is essential to reduce the use of these products to avoid a counterproductive effect: for example flowering plants could become an insect trap instead of a support to the insects food web.

5

**SHARED MANAGEMENT** In order to ensure an agricultural model in balance with pollinators and biodiversity, measures affecting the environment should be discussed and co-managed by agricultural, health and environmental authorities.

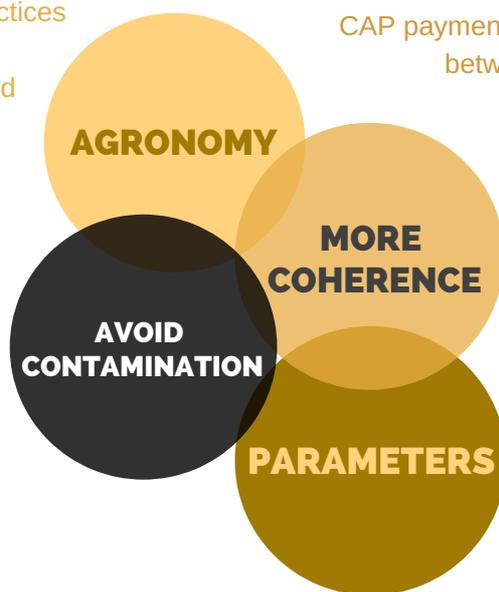
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**INVOLVEMENT** Involve consumers, education and producers: the promotion of balanced and diversified diets, based as far as possible on local products, needs more relevance and support, mainly in early stages of education. Tools should be created and promoted to provide visibility to producers and opportunities for exchange so that producers can meet consumer expectations.

## Priorities

Advantages of agronomic practices compared to chemicals: energy efficiency and balanced effect on ecosystem

Reduce the effects of contamination on living beings, soil, water, air, loss in plant diversity, including polliniferous plants.



CAP payments do not adequately discriminate between irresponsible and good land management: environmental measures make no sense if they paradoxically try to mitigate the effect of another part of the policy.

Identify more adequate parameters in order to measure the efficacy of CAP, with closer control on whether CAP goals are achieved.

## Concrete Actions

### Bee-friendly agriculture

**BEE-FRIENDLY PLANT BREEDING** For some years the beekeepers have observed the reduction in the honey production in certain varieties of traditional melliferous flowers, like sunflower or oilseed rape. It is well known that nectar production, flower morphology, plant flowering period or even plant life span can vary widely among plant varieties and can be selected. However, plant selection nowadays is not prioritising melliferous capacity and other important characteristics on the long run, favouring oil production instead.

A future CAP working for a resilient agriculture should foster quality schemes of plant breeding including melliferous capacity in the selection criteria. In addition, the use of these varieties (not containing pesticides) should be fostered through specific support schemes as an aid to biodiversity.

**SUSTAINABLE USE OF PESTICIDES** It is absolutely necessary that compliance with the directive on the Sustainable Use of Pesticides be a condition for having access to any agricultural public funds. Furthermore, it is essential that official controls be performed and outcomes be publicly accessible in order to ensure a good implementation.

**SUSTAINABLE USE OF FERTILISERS** Avoid the intensive use of fertilizers in biodiverse sensitive areas, because their usage changes the flora and threatens biodiversity. Alternative nutrient fixing means should be favoured like: cover crops, manure, legumes, etc. which go hand in hand with a reduction, if not suppression, of pesticide use.

**AGRO-ENVIRONMENTAL MEASURES** farmers should not be *subsidised* but more coherently *rewarded* for the public goods they deliver, not only in terms of food supply but also of food security and sustainability. From a pollinators' perspective we recommend the following pollination-conditional subsidies to farmers:

1. for the establishment of permanent apiaries;
2. for the location of beekeeping colonies;
3. for the seeding of melliferous varieties that produce either nectar or pollen in abundance.

**RISK-MANAGEMENT TOOLS** There is currently a strong tendency in using pesticide treatments as an insurance of production. This involves an unnecessary use of toxicants into our environment and food chain. Instead, the CAP should help developing approaches to help farmers managing the risks of their production.

Such tools need to be engineered with an integrated perspective, i.e. support should be thought in such way that a farmer has at his/her availability all the tools needed to practice a low impact agriculture. Mutual funds ensuring income are an example of tools that have proved promising in helping farmers in their transition towards a low(er)-impact agriculture, e.g. integrated pest management or organic production.

Furthermore, the CAP should help the development and implementation of risk management tools like monitoring diseases, decision models for pest control, etc. so that they can be more easily used by farmers.

**INFORMATION SHARING AND TRAINING** Encourage multidisciplinary networks, exchanges and transfer of knowledge of field practitioners. The objective would be to ensure a better understanding of the role and needs of pollinators, as well as to provide better opportunities for farmers to help solve the current pollinator crisis.

**RESEARCH AND INNOVATION IN AGRICULTURE** Research should be done in the following fields:

- relevant effects of previous environmental measures on pollinators' livelihood;
- compared efficiency of integrated pest management tools and conditions for their effectiveness;
- quantification of the loss in climate change mitigation potential due to pollinators' losses.
- the fast emerging digital farming technologies such as image recognition and robotics to transition from chemical plant protection to digital plant protection.

Innovation should lead to an improvement in capacity building in the long run, without leading the farming sector to a loss of independence.

## Beekeeping developments

**POLLINATION-FRIENDLY MEASURES** Beekeepers should be given an important role within the payment system framework, by recognising their social and environmental functions, giving them a comprehensive role in the framework of the direct payment system.

**INCENTIVES TO NEW BEEKEEPERS** Considering that 40% of honey consumed in Europe is imported, there is a big potential for the establishment of new beekeepers to fulfil alimentary and market needs: incentives for this establishment should be proposed.

## Measurable and meaningful objectives

Objectives and results need to be well defined and measurable (Regulation 1605/2002 Art. 27). The European Court of Justice has already condemned in several occasions the lack of consistency between the declared objectives of the CAP and its real consequences. It is essential to adopt tools in order to know if we walk in the desired direction and pollinators can be part of those tools.

### REDUCE



toxicity and quantity of all chemicals in all agricultural areas

### MONITOR



the quantity and diversity of pollinators over time and in different landscapes

### MONITOR



the quantity of chemicals in surface waters

### MONITOR



the quantity of chemicals in pollen

### MONITOR



the quantity of honeybee winter losses

## Contact

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