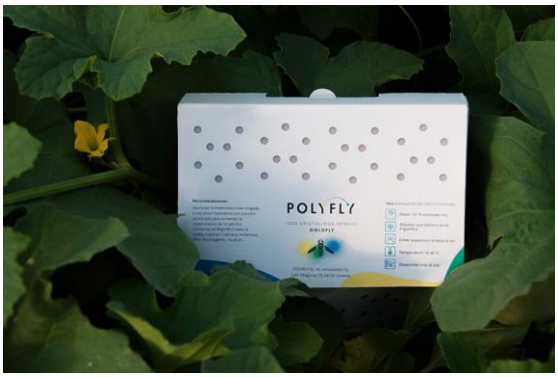
POLYFLY - NATURAL POLLINATION SOLUTIONS FOR ORGANIC FARMING IN SPAIN

In December 2018 the agro-technology startup company Polyfly based in Spain won the International Award for Organic Innovations launched by the TP Organics Technology Platform.

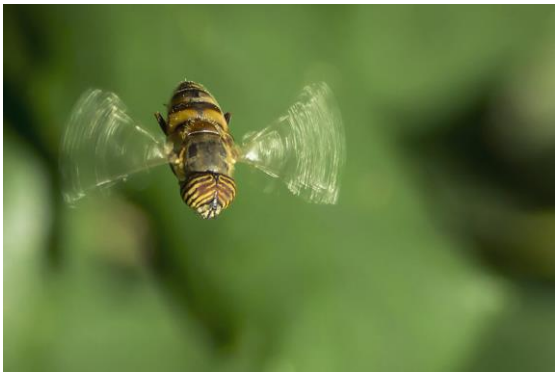
Created in 2017, the Polyfly company commercializes hoverflies as natural pollinators for greenhouse crops. Based in Almería (Andalusia Region), at the heart of the horticulture industry, Polyfly offers an innovative, inspired by nature, economically viable and environmentally sustainable pollination solution.



Today, the importance of natural solutions is enhanced by a pollinators crisis that accentuates several societal challenges including food security and ecosystem degradation. The main causes of wild and managed pollinators decline include the land use changes, the intensive agricultural management and pesticide use, the environmental pollution, the invasive alien species, the pathogens and parasites generating diseases and pests responsible for the decline of key managed pollinators such as honeybees.

The Polyfly's enterprise addresses this problems providing hoverflies for pollination and promoting a sustainable agriculture model.

The process consists of the mass-rearing and commercialization of Glodfly, flies belonging to the Syrphidae family (Eristalinae), also known as hoverflies or flower flies. Goldfly is a native species and one of the most important natural pollinating insects in the Mediterranean basin. The Polyfly website presents all the interesting characteristics of Goldfly and the modalities of use.



These hoverflies can be used as pollinators in protected fruit, vegetable and seed crops, as an alternative to traditional pollinators and other artificial pollination strategies (manual, mechanical). Thanks to its low level of floral discrimination and its high activity in extreme temperatures and in closed environments, pollination with hoverflies can allow for more efficient production under several circumstances where traditional pollinators such as honeybees and bumblebees as well as meat flies do not perform well.

Using insects as pollinating agents requires that farmers manage the crops differently, reducing the inputs of chemical products (e.g. pesticides, herbicides) that could affect the

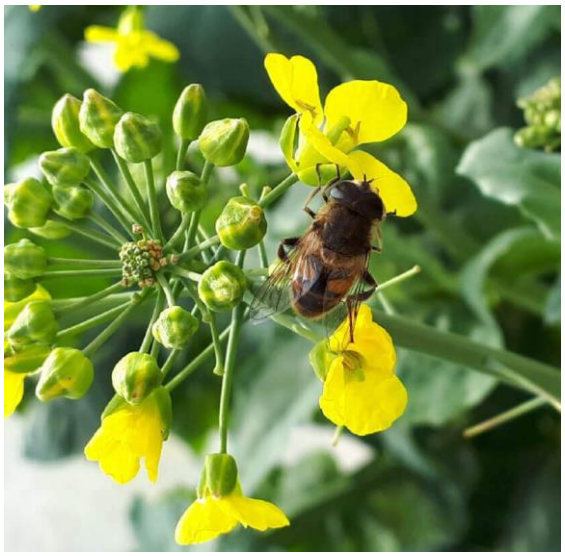
pollinators survival. Polyfly's hoverflies, in this way, are great allies to produce organic vegetables, fruits, and seeds.

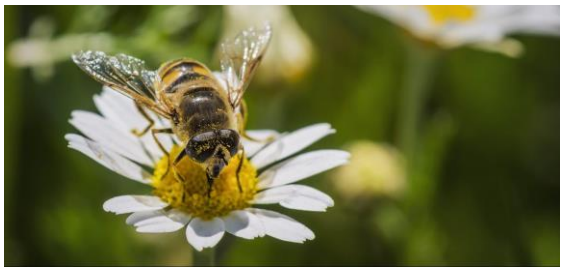
Another advantage is that the production of hoverfly species requires the use of decaying organic matter. During their larval stage, Goldfly are saprophagous, feeding on organic nutrients present in vegetal wastes. They basically act as recycling agents of organic wastes and the mass-production of hoverflies represents a circular economy activity.

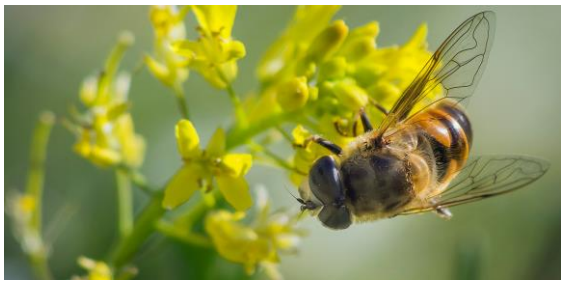
The use of natural pollinators as the hoverflies produced by Polyfly allows and promotes organic farming, bringing the following benefits to producers and the environment:

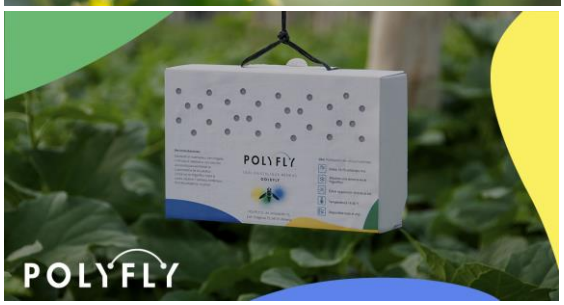
- It allows to reduce the use of pesticides and other chemical products.
- It allows pollination in all types of cabins, tunnels, and greenhouses, thereby enabling small producers to produce seeds in-farm.
- It provides an alternative to mechanical pollination, avoiding the use of machinery and fuel consumption and the corresponding costs.
- The adult flies are not aggressive and do not sting or cause nuisance to humans or animals. The use of Goldfly is harmless for workers and the population in general.
- The adult and larval stages do not need animal proteins, which means they do not represent a threat from a sanitary point of view.
- They increase in-farm biodiversity by adding new species of beneficial insects.
- They are managed in their own native area, without challenging the ecological equilibrium in the local environment.
- Promoting the production of diverse fruits and vegetables, they contribute to healthier and more sustainable diets.
- The production process contributes to the reduction of food waste. It does not involve the use of polluting chemicals and it does not produce hazardous waste.

The Polyfly company has a pilot plant that allows the intensive breeding of 50,000 pupae of Goldfly per week and plans to scale production up to 250,000 per week. Its goals are to automate processes and scale production. The company works to expand the network of potential users and companies by establishing new collaborations in Spain and other European countries. It will also continue working on the investigation of new natural pollinators.









To know more

Polyfly website

Polyfly in TP Organics

Polyfly brochure

Article in pitalmeria.es

Article in emprendedores.es

Article in blogs.grupojoly.com

Polyfly in Linkedin

Presentations for the Organic Innovation Days 2018