

ANNUAL REPORT

2018





Contents

01	
Introduction	4
02	
About the company	6
The PHF group.....	6
Mission and values.....	10
Business units.....	11
03	
Main figures 2018	12
Main milestones.....	12
Turnover.....	14
The team.....	14
04	
More than just seeds	18
Positive impact on the industry	19
Foodture Project.....	20
Cocina de ideas (Ideas kitchen).....	24
Positive impact on society	26
Participation in the main	
sector associations.....	27
Commitment to training.....	32
Commitment to the environment.....	36
Support for social organizations	
in our region.....	42



01

Introduction



The aim of the report that follows in these pages is to be the best record of the various activities and main milestones that were carried out by the PHF group during 2018.

First, after a brief depiction of the group's business structure, the document offers a very readable review of the mission, vision and values of the company, as well as its business units.

Second, it provides a summary of the main milestones that were achieved in 2018, with special emphasis on the team of people that makes up the group and that makes it possible to achieve the proposed business mission and vision.

Finally, it describes all those activities that are being carried out in the group that go beyond the main seed business, sharing with you all those activities that have a positive impact on society.

02

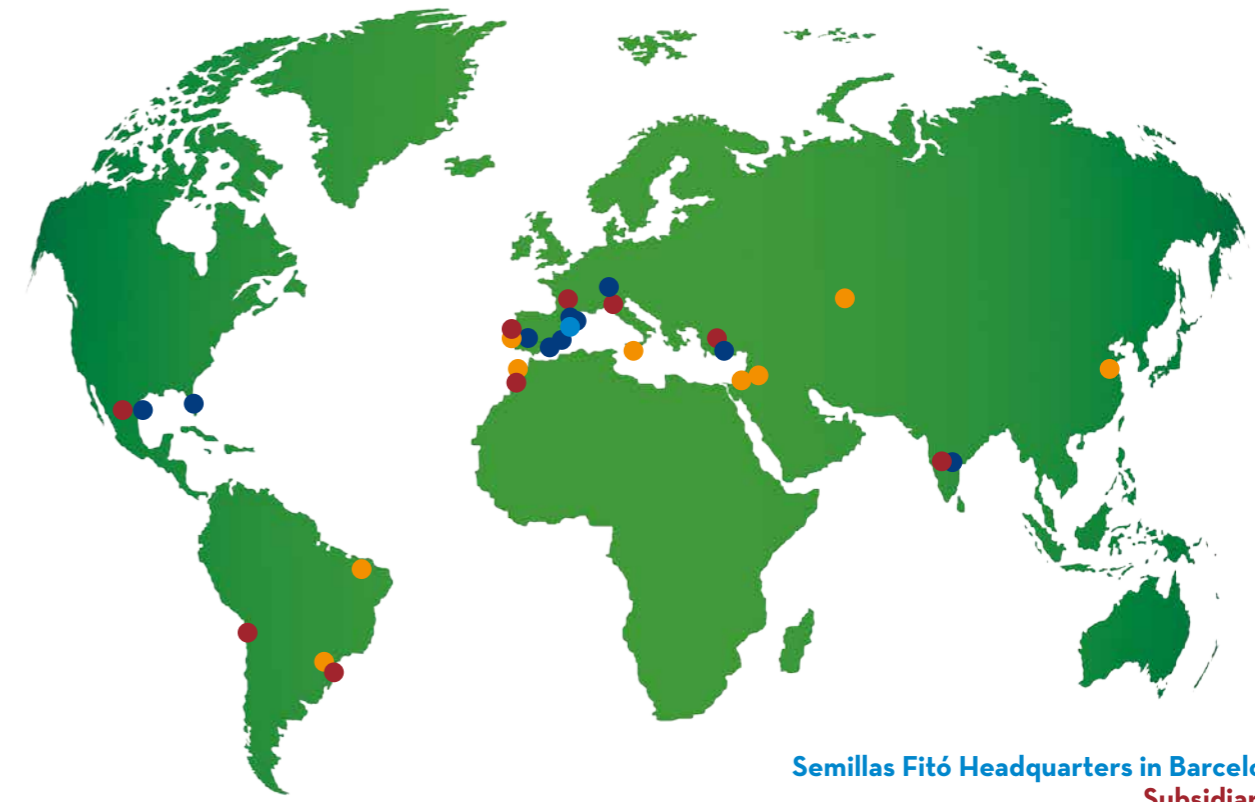
About the company

THE PHF GROUP

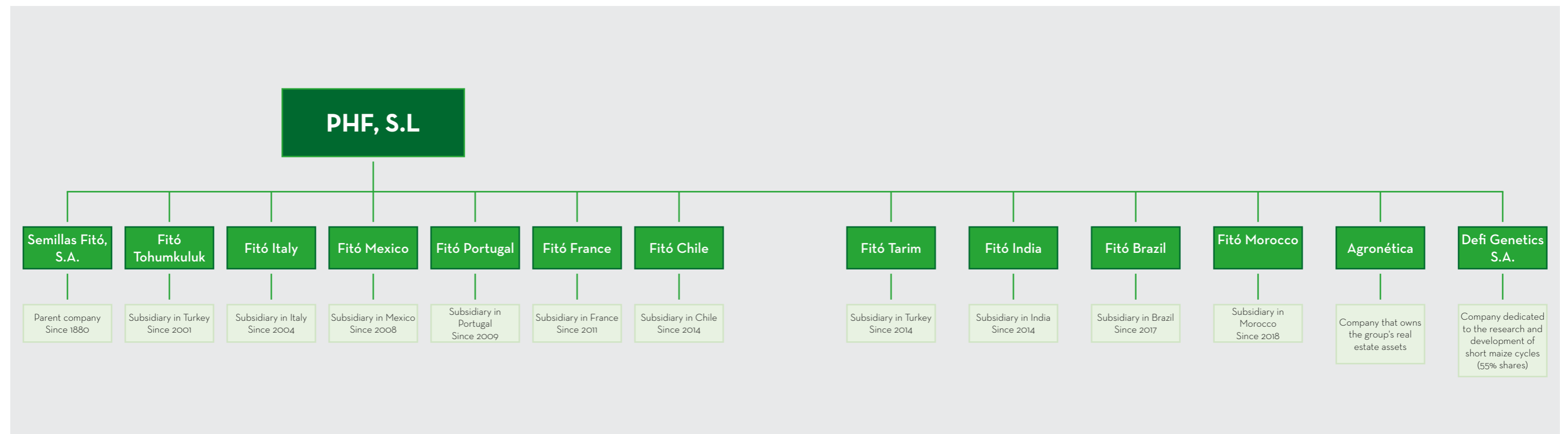
PHF S.L. is the company that owns Semillas Fitó S.A. and of all its subsidiaries around the world.

The group is comprised of a parent company, based in the Poblenou neighbourhood of Barcelona, and ten subsidiaries in other countries whose strategic objective is to provide commercial, production and/or R&D support to the different business units.

The following chart shows the group's business structure as well as the timeline in which each centre was established.



Semillas Fitó Headquarters in Barcelona
 Subsidiaries
 Breeding stations
 Trial stations



This business structure demonstrates the innovative and international nature of the company.

The following are photos of the group's main work centres in full operation during 2018:

IN SPAIN:



Barcelona - PHF Group headquarters
Packaging and shipment of the Professional and Hobby Vegetable Seeds Business Unit.



Cabrera de mar
R&D activities of vegetable crops.



El Ejido
R&D activities of vegetable crops.



Sant Andreu de Llavaneres
Vegetable crop production



Les Cases de Barbens
R&D activities and production of field crops.



Don Benito
R&D activities and production of field crops.

AROUND THE WORLD:



Antalya (Turkey)



Farms in Arica (Chile)



Culiacán (Mexico)



Bangalore (India)

MISSION AND VALUES

Semillas Fitó's **vision** is to optimize agri-food production through new varieties that require lower amounts of inputs: surface area, fertilizers, irrigation and plant protection agents.

Semillas Fitó's **mission** is to fulfil the commitments we have undertaken as a company with our main stakeholders.

CLIENTS

- High-performance solutions that meet the needs of our clients.
- Proximity, cooperation and long-term relationships.

SHAREHOLDERS

- Sustained profitability and value creation.
- A prestigious, forward-looking company.

STAFF

- Professional and personal development.
- Climate of freedom, respect and teamwork.

COMMUNITY

- Be respectful in our initiatives.
- Provide expertise.

At Semillas Fitó, we prioritize the following values that define the management philosophy and underlie our raison d'être.

OUR VALUES



PROFESSIONALISM

We are able to meet deadlines and tasks effectively, proposing solutions to problems and assuming responsibility for the choices we make.



INNOVATION

We are up-to-date and are aware of the trends in each of our business units. We propose ideas and new ways of working, proactively promoting various initiatives.



DISCRETION

We respect hierarchical relationships and highlight the organization's achievements above our individual contributions. We are careful and restrained when it comes to invitations to customers, travel and other expenses, avoiding ostentation.



LONG-TERM VISION

We plan future actions, adapting our behaviour to market campaigns when making decisions. We constantly assess the risks and benefits of short-term and long-term decisions.

BUSINESS UNITS

We are a company that specializes in the **development, production and sale of seeds of a wide variety of species**, which are grouped into four business units.



VEGETABLE SEEDS

Business unit specializing in the development, production and sale of cucurbits (courgette, melon, cucumber, watermelon), Solanaceae (aubergine, tomato, pepper) and large seeds (green beans, broad beans and sweet corn).

Catalogue composed of more than 500 varieties of vegetables adapted to the different terrains of Mediterranean areas, temperate and subtropical climates.



FIELD CROPS

Business unit specializing in the development, production and sale of varieties of maize, sunflower, forage and sorghum.

It works with 15 segments of maize and 6 of sunflower, which comprise a wide range of very specific products for dry, hot and heat and water stress conditions.



TURF GRASSES

Business unit specializing in the development of varietal solutions for the creation and regeneration of green spaces and sports fields in the Mediterranean region.



HOBBY

Business unit specializing in the sale of a wide range of seeds for amateurs.

03

Main figures 2018

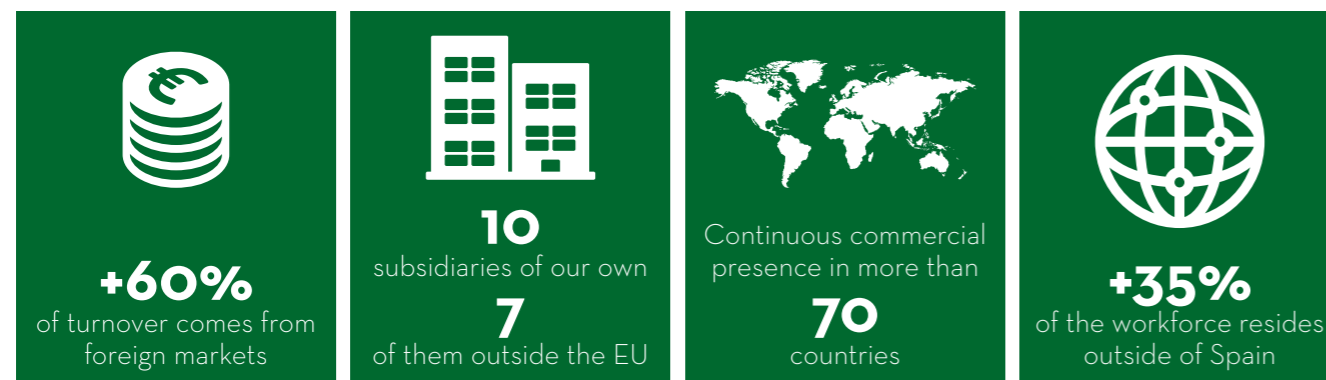
MAIN MILESTONES 2018

The major milestones of 2018 can be summarized in the following four blocks for their relevance to the business group: our capacity for innovation, our international presence, our constant long-term outlook and our unique approach of being close to our customers.

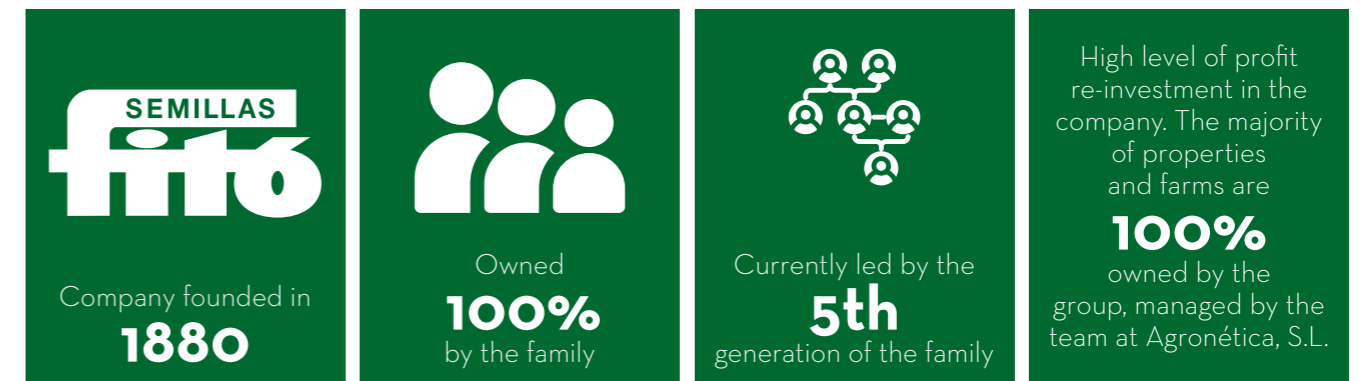
Commitment to INNOVATION



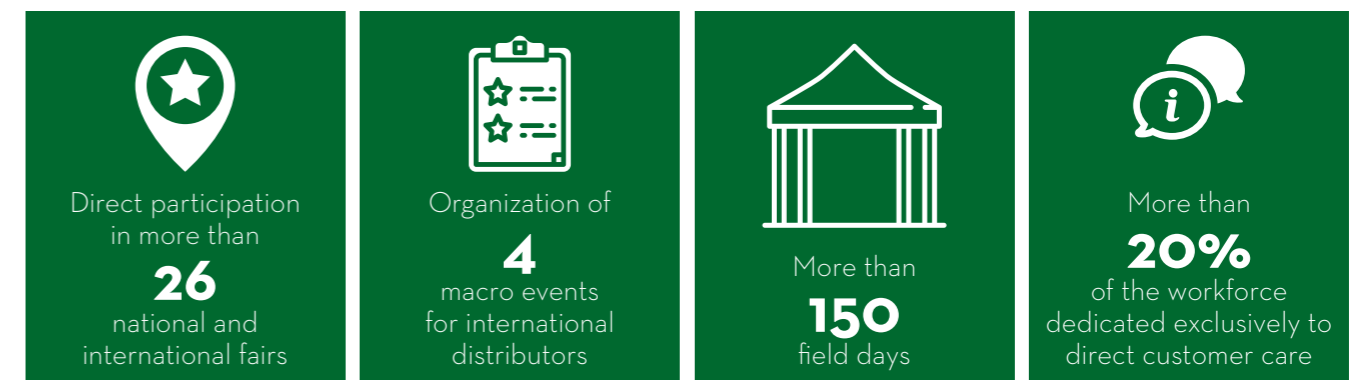
Commitment to an INTERNATIONAL OUTLOOK



Commitment to the LONG-TERM



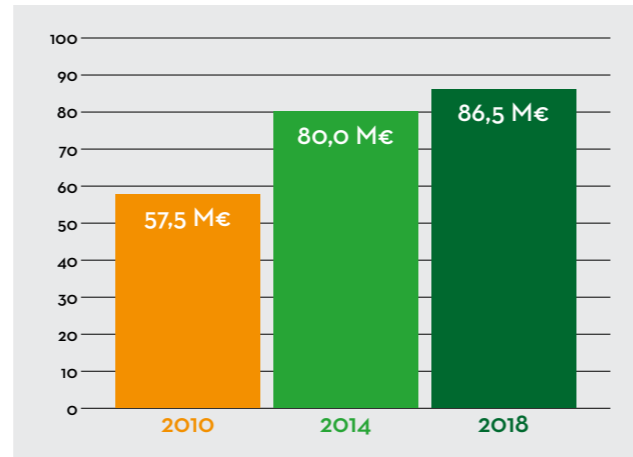
Commitment to PROXIMITY



TURNOVER

Despite the enormous difficulties faced in 2018, the group closed the year with a good consolidated turnover. Specifically, the group's turnover was over 86 million euros, in line with recent years.

The following graph shows the evolution of turnover over the last 8 years.

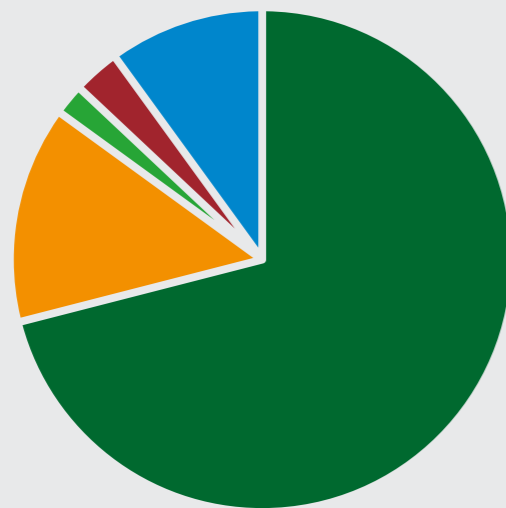


THE TEAM



As we have mentioned in previous sections, a fundamental aspect of the mission of PHF and Semillas Fitó is the professional and personal development of the team of people that comprises the company. The figures below show how this team was structured in 2018.

PHF group ended 2018 with a workforce of **771 people**, distributed as follows.



Personnel dedicated to each business unit in 2018:

- Professional vegetables**
548 people
- Field Crops**
105 people
- Turf Grasses**
18 people
- Hobby**
21 people
- Corporate**
79 people

More than 70% of the group's workforce is part of the professional vegetables business unit

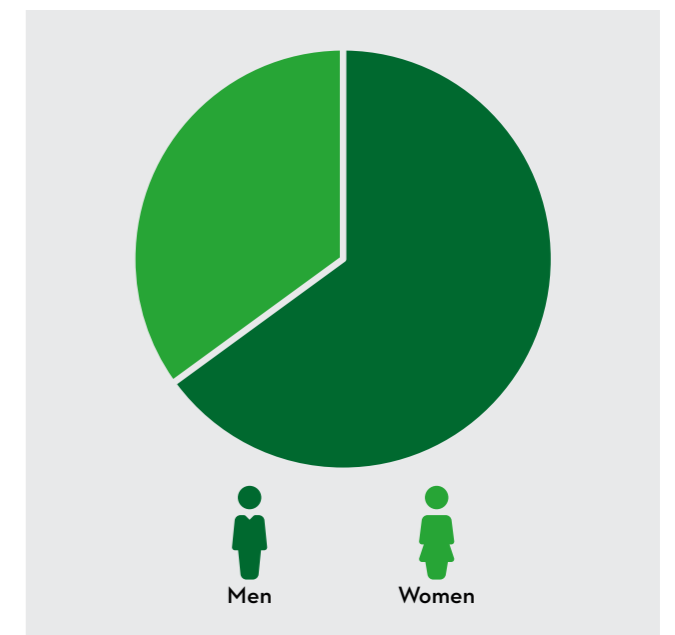
In terms of **geographical diversity** and international expansion, 63% of the workforce is in Spain, while 37% is made up of foreign workers residing in countries where the Group has its own subsidiary.

At the end of 2018, more than 35% of the group's workforce resided outside Spain, working for one of the group's 10 subsidiaries, 7 of which are outside the EU.



As well as geographical diversity, the PHF group ended 2018 with a relatively diverse workforce in terms of sex, age and educational level.

One in three group employees is female



In terms of employee **ages**, the group is very diverse. During the last few years we have gradually taken on more young talent, resulting in a workforce in 2018 in which almost 20% were under 30 years old.

Most workers are aged between 30 and 50.

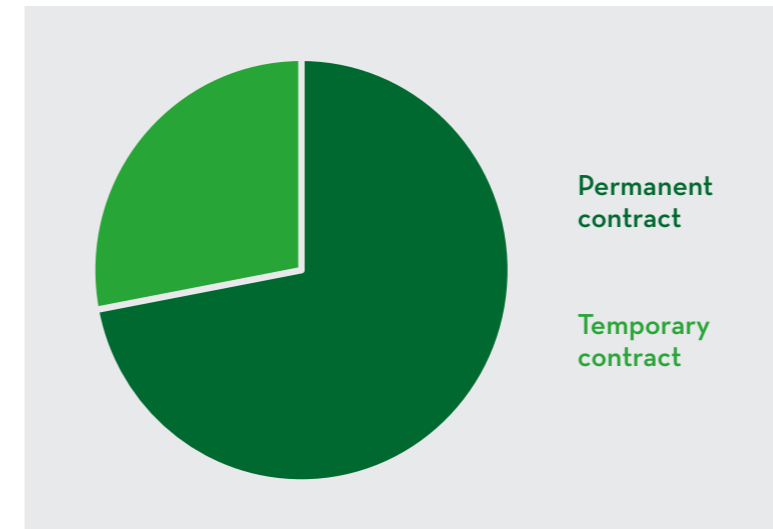
Distribution by age - 2018	
< 30 years old	19%
30 - 39 years old	31%
40 - 49 years old	31%
50 - 59 years old	15%
> 60 years old	4%

More than 60% of the group's workforce is aged between 30 and 50.



As for the **educational level** of the workforce in 2018, as shown in the following graph, 37% of employees have completed university studies, 12% have completed vocational or high school studies and 51% have completed secondary school studies or lower.

Distribution by level of studies - 2018			
University studies	PhD	2%	37%
	Degree	23%	
	Diploma	12%	
Vocational training and/or high school diploma	Higher Vocational Training	6%	12%
	Intermediate Vocational Training	2%	
	High school diploma	4%	
Secondary school studies or lower	Compulsory Secondary Education	40%	51%
	No studies	11%	



As mentioned in previous sections, the company's mission demonstrates a clear commitment to the creation of long-term value and prestige. In line with this philosophy, 72% of the workforce are on permanent contracts, with the remaining 28% are on temporary contracts as a result of seasonal work needs in the field, typical of the agricultural sector.

ORGANIZATION OF WORK

The working hours in all the group's work centres are conducive to a healthy work-life balance so that each worker can fulfil their commitment to work 1,800 hours/year, generally spread over a 40-hour week.

In general, most of the workforce works full-time. During 2018, 10 female workers and 1 male worker have benefited from a reduced working day to take care of a minor.

ACCESSIBILITY

The PHF group's workforce includes six people with a 33% degree or more of disability. These included five men and one woman, occupying various positions appropriate to their abilities.

HEALTH AND SAFETY

During 2018, in the work centres in Spain, 17 minor accidents that did not require medical leave and 11 accidents that did require medical leave were recorded. This represents a total of 323 working days lost due to accidents at work, which represents 0.2% of the total hours worked.



The PHF group's absenteeism and incidence rates derived from accidents at work are well below the sector average for the same employment categories. This has allowed us, during 2019, to request a financial bonus from the Asepeyo mutual insurance company for holding seminars and investing in risk prevention issues. More information on this will be detailed in the annual report for next year.

This information can be obtained thanks to a team of 13 workers from the group who dedicate part of their working day to performing tasks aimed at preventing occupational risks in the company.

04

More than just seeds



Positive impact on the industry

Seed companies and plant breeders are the first link in the food chain. However, in line with our value of long-term vision, Semillas Fitó wants to actively contribute to the improvement and development of the entire chain, from beginning to end.

Therefore, in parallel to our main business, we have carried out projects that aim to raise awareness of the importance of seeds on the industry and the impact they generate.



PROJECT

fito Foodture

THE FUTURE OF FOOD (FUTURE OF FOOD)

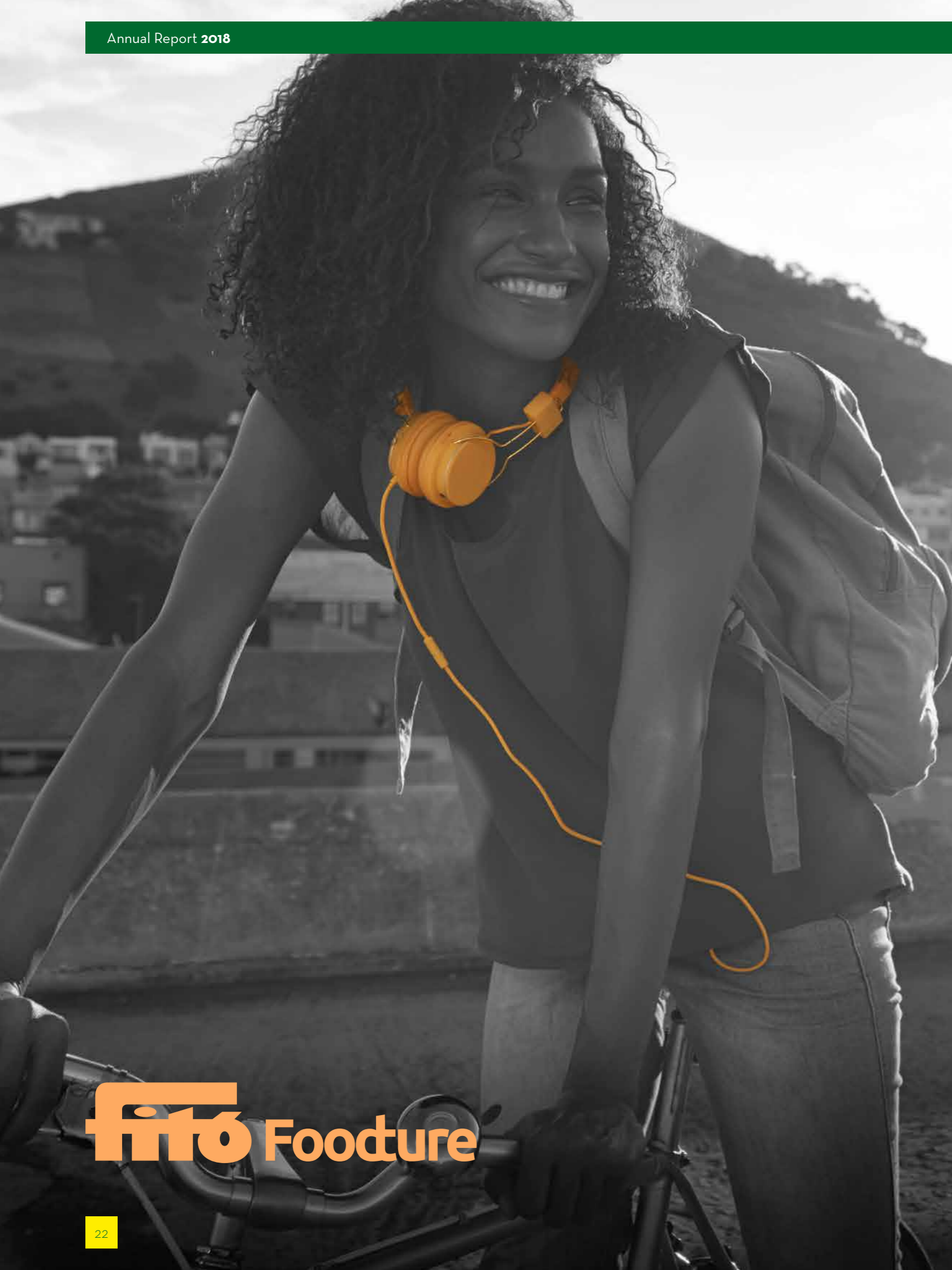
Fitó Foodture includes actions, projects and concepts that aim to anticipate future consumer needs.

At Semillas Fitó we have been innovating for more than 150 years. We understand that our *core business* is to develop new resistance varieties and offer our customers (farmers and distributors) competitive varieties. However, **Foodture goes beyond that** and is not limited to the concerns of our direct customers. The new project **focuses on the end consumer and the consumer of the future**. It offers complete concepts covering one or more varieties grown in a specific way by leading companies (our partners) in specific areas (exclusive), with a customized packaging and consumer recommendations (recipes and combinations with other products).

With Foodture we are not selling seed but rather a concept. We provide a solution, for example, for a meal. We create a new concept from start to finish and offer it in the best conditions, marking a certain way of consuming it. This allows us to offer something unique and distinctive, unlike production innovations that are easier to replicate.

We are convinced that **innovation implemented responsibly will bring value to society and the restaurant industry**.

The Foodture project includes, among other products, the Monterosa tomato and the Waikiki melon.



Monterosa is a large-calibre, furrowed and intense pink tomato at maturity. It does not have a long-life gene so it has a high potential flavour if cultivated properly.

This tomato draws attention and creates expectations. It evokes bygone tomatoes as it is aromatic, juicy and sweet—with a fruity finish.

It is known for being very versatile when it comes to preparation, either alone or in salads of many combinations, even sauces and salmorejo.

Monterosa resulted from crossing a Girona pear tomato and a Costoluto Genovese. From early on we discovered that it would be difficult to develop the variety as a commodity product because achieving the necessary stability in the required qualities with minimal yield was difficult.

We searched for a company that understood the importance of producing Monterosa, bearing in mind its quality standards, and we found in the Gavà Group our ideal partner. This company has a clear idea of the needs and requirements of its customers when it comes to production, and they grow tomatoes based on what they can sell. In fact, part of the production is discarded because it does not meet minimum quality standards. Thus, consumers can be certain that if they buy Monterosa, they are always getting top quality.

Currently the Monterosa tomato is well established, especially in Spain. Markets where it is growing include the United States and the hobby segment.



Waikiki is a Branco melon, but with a smaller calibre—from 2 to 3 kg—and orange flesh.

The Branco melon is a native species of Portugal and usually weighs 4.5 to 5.5 kg, less netting and white flesh. It is a species virtually unknown outside Portugal and is of very good internal quality and good post-harvest, two important and difficult requirements found in European melons.

Waikiki has allowed the Branco melon species to meet the demands of Central European melon consumers. There is currently no other variety like Waikiki on the market because it is an innovation in both size and flesh color. In the eyes of the European market, the new variety is different on the outside and tasty and surprising inside.

Waikiki stemmed from the ambition of making small melons that were different. European consumers look for formats less than 2 kg that taste good. With Waikiki we have achieved a different melon that is amazing outside and inside, with good taste and an appropriate postharvest handling. The challenge now is to further reduce the size of the fruit.

This new variety is in the initial phase. 2018 is the first year it is sold commercially by two partners—one in Portugal and one in Spain—for distribution in Europe. The priority markets are especially Germany and France, Austria and the Netherlands.



AGREEMENT
with
**LA COCINA
DE IDEAS**
innovación integrada

Cocina de Ideas (Ideas Kitchen) is a **centre for food innovation** created in 2015 to meet the research and development needs of Huercasa for 5th range vegetables.

This centre specializes in analysing varieties and trends in the horticultural market. It helps other companies by making providing a comprehensive service for the study, prototyping, development and launch of new food products with the maximum guarantees of transparency, confidentiality and quality.

Taking into account that the development of a new variety involves a process of several years, it is increasingly important to understand the tastes of consumers and anticipate market trends as accurately as possible. **With this in mind, in 2018 Semillas Fitó signed a collaboration agreement with Cocina de Ideas, with the aim of studying the preferences of the final consumer and anticipating market trends.**

The work agreement between Semillas Fitó and Cocina de Ideas focuses on the development of different types of studies:

- Studies on the aptitude of the Semillas Fitó vegetable seed varieties for different industrial processes: evaluation of the industrial yield of the varieties, characterization of quality, etc.
- Studies to know what the consumer thinks, their preferences and demands.
- Studies with producers, customers and consumers (group dynamics) that enable the analysis of consumption preferences and, therefore, help to maximize product acceptance.
- Study of strategies that add value throughout the food chain. With this agreement, Semillas Fitó is clearly committed to its Foodture philosophy, an innovative concept aimed at meeting new consumer needs, addressing their demands for quality, health, new tastes and formats, with varieties such as the Monterosa tomato and Waikiki melon.



Positive impact on society



PARTICIPATION IN THE MAIN SECTOR ASSOCIATIONS

One of the things that makes Semillas Fitó stand out in the agricultural sector in Spain in particular and in the world in general, is the participation of its employees in the different associations that operate in the sector. In terms of figures, it is worth noting that in 2018 we maintained our approach of recent years with the following milestones:

- Participation in more than 30 sector associations
- Contribution of over €150,000 in annual fees to help their growth
- 6 group workers actively participate in one association or another

Our participation in the three most relevant associations is worth a special mention:



Asociación Nacional de Obtentores Vegetales
(National Association of Plant Breeders)
www.anove.es



European Seeds Association
www.euroseeds.eu



International Seeds Federation
www.worldseed.org



The National Association of Plant Breeders (ANOVE) is the Spanish association that brings together companies and public institutions dedicated to the generation of added value in the agri-food sector through research, development and the exploitation of new plant varieties (www.anove.es).

ANOVE's mission is to represent the plant breeding sector in Spain by promoting the defence of its interests and awareness of its activity, supporting innovation and the development of agriculture. ANOVE works for agriculture that is innovative, competitive, and sustainable, which values and has full access to plant improvement, thus contributing to food security and the economic development of society.

Currently, ANOVE is made up of 55 entities and is structured in four areas of activity:

- cereals,
- vegetables and ornamentals,
- fruits and berries,
- maize, oilseeds and industrial crops.

This helps to promote discussion around the specific problems of each type of crop and the definition of strategies.

During 2018, several workers of the group were selflessly involved in the association. We highlight the main roles:

Eduard Fitó

Semillas Fitó Director of Corporate Affairs and Business Development, he is a member of the Board of Directors of ANOVE, which draws up the strategic lines of the association and establishes agreements with other associations.



Israel Roca

Semillas Fitó Director of marketing and sales in Europe for the Professional Vegetable business unit, she has served as chair of the vegetable seed section. Her main functions have been setting the agenda of the annual meetings of this section and aligning the members with the decisions taken both by the Board of Directors of ANOVE and during meetings of the section itself.



Dolors Baget

Responsible for regulatory affairs of the Semillas Fitó vegetable business unit, she has been part of the cross-departmental committee of regulatory affairs at ANOVE. Among other functions, she has actively participated in the annual meetings of the association, in the discussions regarding changes in seed legislation and in the proposals for optimizing processes and communication between all state bodies.



Jaume Bell-lloch

Semillas Fitó Director of Operations of the Field Crops business unit, he has participated in the meetings of the Maize, Oilseeds and Industrial Crops Section (SMOCl in its Spanish initials) to discuss issues related to the market dimension and seed processing.





The European Seed Association (ESA) was founded in 2000 with the aim of being the voice of the European seed industry. It represents the interests of those associations, companies and institutions that are involved in the research, improvement, production and sale of agricultural, vegetable and ornamental plant seeds.

The ESA's mission is to ensure a framework that guarantees the following three points:

- fair and proportionate seed legislation at a European level.
- freedom of choice of seed supplier for the different customers (other seed companies, farmers and consumers).
- effective protection of intellectual property rights related to plants and seeds.

During 2018, several workers of the group were selflessly involved in the association. We highlight the main roles:

Eugenio González

Semillas Fitó Director of the Field Crops Unit, he is also a member of the maize section of the ESA. This involves two meetings a year to analyse the issues faced by the maize sector at the European level in matters of regulation and plant protection agents, among other things.



Germán Anastasio

Semillas Fitó Breeding Station Manager, he has participated as a company representative in the ESA-HRT group. This group is in charge of monitoring the incorporation of new resistances and agreeing on the declaration of said resistances against pathogens within the sector.



The ISF is the most important seed sector association in the world and its annual congress is a key meeting point for the best seed companies around the world.

One of the major milestones in 2018 for the company and for the sector, was the election of Eduard Fitó, Director and CEO of PHF, as chairman of the association for 2019-2021. The election was held during the 69th World Seed Congress in Brisbane (Australia). Eduard Fitó will represent seed breeders—hundreds of family companies, SMEs and several multinationals—based in 72 countries and operating almost all over the planet.



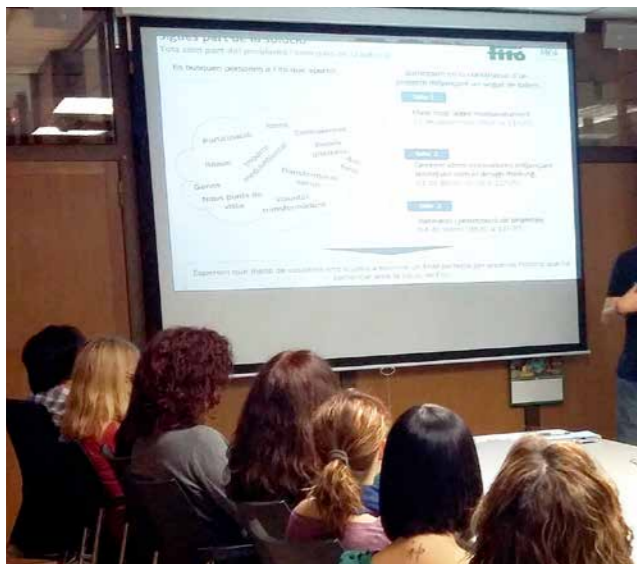
Eduard Fitó, as the new chairman of the ISF, will represent seed breeders—hundreds of family companies, SMEs and several multinationals—based in 72 countries and operating almost all over the planet.

As well as Eduard Fitó's huge dedication to the ISF, there are also other workers involved in the association. First and foremost, Eugenio González, Semillas Fitó Director of the Fields Crops Unit, represents Spain in the field crops section (wheat, maize, sunflower, soybeans, rapeseed, among others). This involves several meetings a year to discuss issues related to the legislation and marketing of seeds worldwide and the transportation of goods.

COMMITMENT TO TRAINING



Worker training



In terms of the internal training of personnel, in 2018 we have continued with activities which have been ongoing in the company for several years, such as language training, combining these with other training options that have emerged as new offerings this year. In general, more than 1,000 hours of training was given,

distributed among language courses (especially English and, to a lesser extent, Italian and Catalan), negotiation courses and courses in people management, project management and waste management, among others.

In 2018, more than 1,000 hours of training was given in the company, especially language training.

In accordance with PHF's commitment to the professional and personal development of its workers, it is worth noting the incorporation of coaching as a methodology to accompany employees or teams in their development, where necessary. At the end of 2018, 36 hours of individual coaching was given to 6 people from different organizational levels and 12 hours of team coaching to a group of 5 people. In both cases, the coaches were experts from outside the organization.

Customer training

At Semillas Fitó we are committed to the dissemination of knowledge to the community and therefore we facilitate or establish discussion forums in the agro-business world. We have been providing training to customers and relevant market players for several years now.

In 2018 the following initiatives were carried out:



Hydroponics course

At Semillas Fitó we are committed to long-term relationships with our customers, so we develop tools that help us grow together. In this regard, in February 2018 we offered a training course on hydroponic agriculture to the technicians of our customers from Eastern Europe and Central Asia. The training course given by Roel Brunyel, agricultural advisor and expert in hydroponic cultivation, took place in the Fitó centre of El Ejido (Almería) and lasted a week.

During the training week, attendees learned about the facilities we have in Almería and the newly opened R&D centre. In addition, they visited the Clisol facilities, where the manager Lola Gómez explained the evolution of agriculture in Almería and showed them the crops that were being grown on the land and using hydroponics. To complete the course, the participants were able to visit a seedbed and a farm and observe in situ the theory learned during the session.

This action, which was highly appreciated by our customers, helps us strengthen our relationship of trust and proximity with them.



Fitó Breakfasts

Along the same lines, at Semillas Fitó we also organize events called "Fitó Breakfasts", which consist of a morning meeting where topics of interest within the sector are discussed and debated.

In 2018, a Fitó Breakfast was held in Murcia (Spain) with the theme "Big Data in the Agro sector: deciding and acting with precision using a great deal more data", which was attended by a dozen farmers. We invited an expert on the subject to share their knowledge and guide the subsequent discussion.

These types of actions bring us closer to farmers and provide them with a global and innovative vision and new tools they can use to make their farms more profitable.

Training for young people



Following the same approach of the last few years, Semillas Fitó receives student interns in several of its work centres for a certain period of time. In 2018, 15 student interns were received distributed as follows. In all cases, the students were paid for the work they did.

Work centre	Number of student interns - 2018	Number of total hours
Almería	1	188 hours
Casas de Barbens (Lleida)	1	150 hours
Barcelona	3	1,080 hours
Bellpuig	1	80 hours
Cabrera	9	3,550 hours

Apart from these internships, we also receive regular visits from groups of schoolchildren and university students who want to learn first-hand about a seed company from the inside. There is no clear record of the total number of visits in 2018. In 2019 a record will be kept and centralized so that it can be published in the non-financial report next year.

The group is also directly linked to several universities. Worth highlighting is the relationship with the Barcelona School of Agricultural Engineering, with whom we have an agreement whereby the student who presents the best final course project is awarded a prize of €1,000.

Industrial Doctorates of the Catalan Government and the Torres Quevedo Programme of the Government of Spain

Semillas Fitó is one of the companies participating in the Catalan Government's Industrial Doctorate Plan. This plan consists of a 3-year research project in a company, in which the selected doctoral student carries out their research training, in collaboration with a university or research centre, which becomes the subject of a doctoral thesis. In this way, doctoral students act as bridges of knowledge transfer between the university and business world, contributing to increase the competitiveness of the country's industry.

At Semillas Fitó we are currently involved in two projects:

- **“Seed treatments for crop protection”**, by the doctoral student Virginia Estévez (2016-2019), at the department of Seed Technology (Barcelona) with Dr Juan Jesús Narváez (Manager of Seed Technology).
- **“Optimization in obtaining double haploids in maize”**, by the doctoral student Ijlal Benslimane (2017-2020), at the Field Crops R&D farm in Les cases de Barbens (Lleida) with Marc Solsona (Director of Field Crops R&D) and the University of Lleida (UdL).



Semillas Fitó is also part of the Torres Quevedo programme of the Government of Spain. The aim of this programme is to award grants (on a competitive basis) for the development of industrial research projects lasting three years, which require the hiring of PhD graduates, in order to stimulate demand in the private sector for sufficiently prepared personnel to undertake R&D plans and projects.

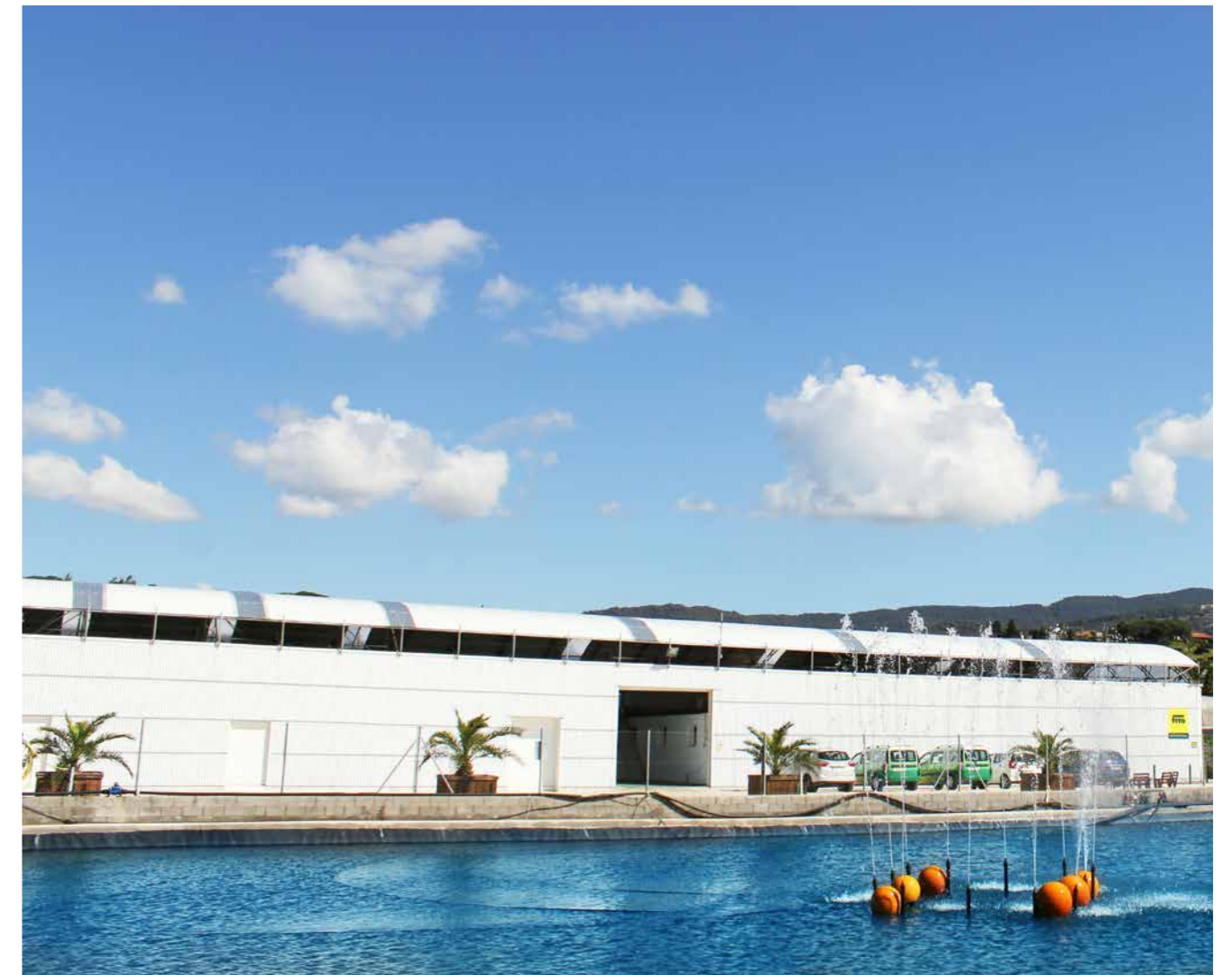
At Semillas Fitó we were awarded this grant. During 2018, our colleague, Dr Juan Jesús Narváez Reinaldo (Seed Technology), continued with the project entitled “Development of microbial inoculants for the comprehensive protection of agricultural crops of maize and tomato” under the framework of said government research programme.

COMMITMENT TO THE ENVIRONMENT



Optimizing the consumption of water resources

Our project in this regard is the construction of a rainwater collection pool with a capacity of 9 million litres in our Sant Andreu de Llavaneres farm. The collected water is used to irrigate our R&D and organic test crops that we develop for our Vegetable Seeds unit. One of the most significant characteristics of the farm is that it was built already taking into account these needs and as result all the rainwater that falls on the hectares of greenhouses at the farm is collected through a system of pipes that feed the pool.



At Semillas Fitó we promote the recycling of water and reduce the consumption of water resources through the construction of rainwater collection pools

At Semillas Fitó we are aware that water scarcity affects more than 40% of the world's population, and that more and more countries are experiencing water stress, increased droughts and desertification. Therefore, it is important to invest in infrastructures that help us alleviate this problem, avoiding, as far as possible, the consumption of water resources from natural sources.

The group is committed to the recycling of water through the construction of rainwater collection pools, with which we reduce the consumption of conventional water resources in the different autonomous communities in which we are present in Spain.

These are some of the pools or tanks built in Spain for this purpose:

Sant Andreu de Llavaneres farm (Barcelona):

- 1 rainwater collection pool - Capacity: 9 million litres
- 1 water recycling tank - Capacity: 1 million litres

Cabrera de Mar farm (Barcelona):

- 1 rainwater collection pool - Capacity: 5 million litres
- 1 rainwater collection pool - Capacity: 3 million litres

El Ejido (Almería):

- 1 rainwater collection pool - Capacity: 500,000 litres

Collaboration in irrigation optimization research



Representatives of the task force comprised of Agrícola Maresme S.XXI, Arrau, the research group of Dr María Cinta Calvet and Semillas Fitó.

The public call for task forces of the Catalan Government subsidizes research projects that bring together partners with complementary skills to enhance synergies. Through Resolution ARP/1868/2017 of the Generalitat, a task force has been created comprising the horticultural sector agricultural producer Maresme S.XXI, agronomic consulting firm Arrau, the research group of Dr. María Cinta Calvet who heads the IRTA-Cabrils Sustainable Plant Protection program and Semillas Fitó, contributing our knowledge of seed technology and seed inoculation.

Semillas Fitó is part of a task force funded to work on a project entitled "Management of irrigation and mycorrhization of agricultural crops".



The aim of the project is to optimize irrigation management in tomato crops by inoculation with mycorrhizal seed pellets. With the implementation of this technology, we will achieve savings in consumption of water resources in tomato cultivation as well as a number of additional improvements such as reduced use of fertilizers, plant protection agents and flavour enhancers, which will directly benefit farms and make them more sustainable. This project will also provide a model for extrapolating technology to other crops in the future.

The project has been funded through EAFRD aid, according to innovation cooperation aid through promoting the establishment of task forces of the European Innovation Partnership on agricultural productivity and sustainability, regulated by order ARP/258/2015 PDR Operation (Measure 16.01.01 of the Rural Development Program of Catalonia 2014-2020).



GSPP (Good Seed and Plant Practices) Quality Certification



The Semillas Fitó head office and Barcelona warehouse have obtained GSPP (Good Seed and Plant Practices) certification. This certification guarantees that the seed has been produced and processed based on the regulatory requirements of the GSPP foundation, which in turn means that the seed has been managed following strict quality standards that minimize the likelihood of contamination by the bacteria *Clavibacter michiganensis subsp. Michiganensis (Cmm)*. This pathogen, harmless to human health but harmful to plant health, is the cause of the main bacterial disease in tomatoes around the world.

During 2018 we worked toward obtaining GSPP certification which was finally approved in March 2019

Semillas Fitó aims to meet the needs of its customers through its varieties whose seeds meet the highest standards in germination and health quality. In line with this purpose, the GSPP standard covers 18 activities as part of the scope of the certification that go from the production of seeds to their sale (including processing and quality analyses). In addition, it requires an exhaustive traceability of the seed lots, an essential requirement for our process control. Therefore, GSPP implies safety and quality assurance in the work centres where these activities are carried out which have demonstrated compliance with said regulations.

To achieve this milestone, in our Barcelona centre a completely isolated working environment has been set up for the tomato seeds that pass through the GSPP activities circuit. In this space, our workers follow strict hygiene measures which include properly disinfecting the work material. In addition, it is equipped with the latest extraction technology to prevent the flow of suspended particles from other environments.

In line with our Quality Policy, at Semillas Fitó we decided to undergo the certification process to offer our customers the highest level of safety in the production and processing of our tomato seeds. In this way, we also internalized the highest standards of preventive culture with the aim of promoting profitable and sustainable agriculture.

We are aware that climate change currently affects every country on every continent. With the GSPP certification our projects are more sustainable since we put seeds on the market that free of pathogens, thus reducing the intensive use of plant protection products, one of the main problems in this industry. We also properly manage waste and avoid wastage through affordable and non-polluting energy.

New seed treatment technology



Since the beginning of the year, at Semillas Fitó we have enjoyed the latest turf grass and forage seed coating technology at our facilities in Les Cases de Barbens. This system is equipped with precision valves for injecting liquid reagents and powder dispensers for encrusting-based coating treatments.

At Semillas Fitó, in 2018 we launched a new coating system.

Encrusting involves homogenizing the shape of the seed to increase its weight. There are several advantages of this treatment for the seed user: the coating protects the seed from the seed drill's mechanical stress, avoiding the dispersion of seeds by the wind, facilitating visibility of the seeds, enhancing a more homogeneous seeding, etc. The coating also facilitates germination by increasing water retention while hindering seed predation by birds and insects. In this way, we contribute to a homogeneous coverage and nutrition for the soil.

On the other hand, it is possible to add various active ingredients to the coating that improve crop seedlings under unfavourable conditions.



In the case of leguminous seeds, such as alfalfa and clover, encrusting technology allows inoculation with rhizobia. Rhizobia are beneficial microorganisms that create an advantageous endosymbiosis relationship with the leguminous plant. Thus, once the seed germinates, the Rhizobium, which was present in the encrusting treatment, colonizes the root system and delivers nitrogen to the leguminous crop, avoiding the need for nitrogen fertilization applications, thus protecting the environment.

Distribution of glass bottles among workers



All our actions directly impact our environment. At Semillas Fitó we are aware of this and, therefore, we want to actively contribute to the preservation of the planet with more sustainable actions. With this in mind, during Christmas 2018 we distributed glass bottles in all the Semillas Fitó centres in Spain. All our centres provide drinking water fountains so that workers can refill their bottles.

As workers, we ended 2018 more aware of the impact of our activity and contributing proactively to the sustainability of the planet

With this gesture, we hope to significantly reduce the consumption of plastic bottles and cups in our centres, thus contributing to the sustainability of the planet.

SUPPORT FOR SOCIAL ORGANIZATIONS IN OUR REGION



Collaboration with local social organizations

During 2018, the company collaborated with the Centre Socioeducatiu Poblenou of the Pere Tarrés Foundation (Barcelona) with financial contributions and by collecting toys and food for Christmas. In addition, we also collaborated financially with the Josep Maria Bernat i Colomina musical scholarship for young cobla (traditional Catalan music ensemble) musicians (Belluig, Lleida)

With associations that promote the sustainable development of organizations

Since 2013, PHF has participated and supported the Corporate Governance Chair of the International University of Catalonia (UIC), thus demonstrating its commitment to the development of a people-centred management model.

PHF
Holding

fito
Your seeds

