



# Food Quality and Design Group – PhD study trip to Italy

9<sup>th</sup> of October – 21<sup>st</sup> of October 2016



## FQD 2016 PhD trip to Italy report

Food Quality and Design Group (FQD) is part of the Wageningen University and Research (WUR), The Netherlands. The mission of the group is to study and teach in an integrative way how technological factors as such, or in relation to socio-economic and managerial factors, can be used to optimize food quality throughout the food chain. Within FQD, three research themes are formed: Dairy Science and Technology; Process and Product Design; and Food Quality Management Perception and Use.

FQD traditionally organizes biennial study trips. The main objective of these trips is to exchange knowledge and experiences with the companies, research institutes and universities in the area food science of the visiting country, to gain insight into their research and food science applications.

This year's study trip was to Italy, between the 9<sup>th</sup> and the 21<sup>st</sup> of October 2016. Fifteen PhD students, the chair of the group, prof. Vincenzo Fogliano, and two staff members, Teresa Oliviero and Ruud Verkerk, visited universities, research institutes, and companies in Italy (14 in total). We are delighted to share the outcome of this very successful PhD Trip in the form of this report, which contains the notes of each of the visit during the trip.

The 2016 FQD PhD trip to Italy would not be possible without our wonderful sponsors. We would like to express our sincere gratitude to: VLAG Graduate School, LEB Foundation, Elsevier and Cargill. We would also like to thank our hosts for their willingness to receive us and share their knowledge and experience with us.

We would especially like to acknowledge the amazing co-organizers of each visit, with whom we exchanged countless e-mails. Thank you for your patience, without you this trip would not be such a great experience: Gloria Veneziani (Ferrero), Giulia Sirio (Lavazza), Joanna Lynch (JRC Ispra), Giacomo Pirlo (CREA-FLC), Emanuele Eccel (FEM), Floriana Marin (FEM), Marco Trezzi (Parmalat), Silvia and Carlo Lanfranchi (La Perla), Stefano Sforza (University of Parma), Koulouris Stylianos (EFSA), Gloria Attolini (SSICA), and Federica Zanetti (Zini).

Yours,  
the organising committee:  
Ana Rovalino Cordova  
Andrijana Horvat  
Ayusta Fitriyono  
Isabelle Silvis  
Jonna Koper  
Valentina Acierno



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Participants of the 2016 FQD PhD trip to Italy (standing from left to right: Ayusta Fitriyono, Vincenzo Fogliano, Ruud Verkerk, Isabelle Silvis, Jonna Koper, Andrijana Horvat, Shingai Nyarugwe, Ruben de Vries, Chunyue Zhang, Faith Manditsera, Ana Rovalino Cordova, Sydney Phiri, Mostafa Zahir; sitting from left to right: Arianne van Eck, Femke Brouwer-Damen, Valentina Acierno, Jing Yan)

## Monday Oct 10: Ferrero SpA, Alba

*By Ruben de Vries and Jing Yan*

### FQD and Chocolate Factory

The first visit of the PhD trip was at Ferrero, the third biggest chocolate producer in the world. Ferrero is a family company that has their head office in Alba, the location that we visited. The company was founded more than 60 years ago, and still a member of the Ferrero family is CEO. Over the years, the company has expanded to 18 factories around the world, with a total of approximately 21,500 employees. The main Ferrero brands are Nutella, Kinder and Tic Tac. Besides food production, Ferrero is involved in social projects, such as organising sports events for children by the Ferrero Foundation, and supporting developing countries.

We started the day with a plenary session together with Ferrero team. The company was introduced by Mélanie Charron and Gloria Veneziana, followed by a video on the history and mission of Ferrero. Professor Vincenzo Fogliano introduced Food Quality and Design Group, pointing out the broadness of the term quality.

After the coffee and chocolate break, four of our PhDs presented their work in small parallel sessions, resulting in lively discussions with colleagues and our hosts. Shingai Nyarugwe presented her work on food safety culture, Arianne van Eck on food structures in relation to sensory properties, and Andrijana Horvat on system dynamics in product development. Femke Brouwer-Damen, who is collaborating with Ferrero in her PhD project, showed her project set up about food choice. After the parallel sessions, together with our hosts, we had a complimentary Italian style lunch: a starter, pasta and a glass of wine.



Lunch offered by Ferrero

In the afternoon, we visited the Ferrero factory. We learned that their ingredients come from different places in the world to ensure the availability of high quality materials throughout the whole year. Hazelnuts, for example, are imported from Turkey and South America, as it happened in the past that the harvest in one of the countries was damaged due to bad weather conditions. Furthermore, a technologist explained the different steps in the production of the Kinder chocolate bars and told us the output can reach 5 million Kinder chocolates per day. Afterwards we saw the production line of Ferrero Rocher, where 12 million of individual Ferrero Rocher balls are produced per day. We had the opportunity to taste different products, which we did with great pleasure. After ending the visit, we drove back to our hotel near Torino, where we ended the day with an Italian dinner in a small restaurant.



(left) Ferrero received traditional Dutch sweets as a thank you gift; (right) a bit of networking before leaving Ferrero



**Tuesday Oct 11:**

**Lavazza SpA, Turin**

**Joint Research Centre (JRC), Ispra**

*By Chunyue Zhang and Sydney Phiri*

### **EU scientists met the best Italian coffee**

On the October 11<sup>th</sup>, we visited the coffee company Lavazza and the European Commission Joint Research Centre (JRC) in Ispra.

*Lavazza*, established in Turin, Italy, in 1895, has been owned by the same family for four generations. As the world's seventh ranking coffee roaster, today Lavazza is the retail market leader in Italy with a market share by value of over 47%, 2700 employees and sales of 1,340 million euros. The company has six production sites, four in Italy and two abroad, and operates through associated companies and distributors in more than 90 countries.



Group photo at Lavazza

Upon reaching the Lavazza Research Centre in Turin, we were served with a really nice espresso and macchiato, and we were introduced to the company's unique processing and innovation activities by Giulia Sirio and Andrea Giomi. We all had a special lesson on how to become a master in art and science of coffee. Afterwards, Vincenzo introduced the process and products of Maillard reaction during the coffee

roasting. We continued our visit with a tour of the production line and the stunning warehouse. We learnt a lot about coffee, from harvesting to processing, about coffee beans choice, blending, roasting, grinding, packaging and storage. Every year Lavazza selects the best beans from plantations all over the world in order to create their specialized blends. The sublime balance of each blend is obtained by mixing several types of coffee, which differ in terms of quality (Arabica or Robusta) and type of processing (washed or natural). To keep the same high quality of Lavazza coffee all over the world, Lavazza also has special training systems.

In the afternoon, we proceeded to the *Joint Research Centre (JRC)* in Ispra, which is the third biggest European Commission site after Brussels and Luxembourg. It covers an area of 167 hectares with ca 138 buildings hosting ca 1 850 staff. After more than 50 years of development, Ispra is firmly established as one of Europe's leading research campuses. Nested in the beautiful setting of the Italian lakes, Ispra provides a fascinating, multicultural working environment for people from all over Europe and beyond.

Director Elke Anklam introduced the institution's different activities followed by insights on the projects on Energy and transport, Nuclear energy, Solar innovations, Food and health. Then we visited the laboratories on Nano Biotechnology, Food Contact Materials and Genetically Modified Food and Feed. We were surprised by the advanced design, equipment and professions in an EU institution. The detection of food contact materials and the ethical discussion on the acceptance of GMO food draw the most of our attention. We also talked about our multidisciplinary studies on food in FQD, and exchanged ideas on the balance between energy cost and the supply of human nutrition. We ended the visit with a nice 'aperitivo'!



Group picture at JRC

**Wednesday Oct 12:**

**Centro di ricerca per le produzioni fromaggere e lattiero-casearie (CREA-FLC), Lodi**

*By Arianne van Eck*

### **The Fodder and Dairy Production Research Centre (CREA-FLC)**

PhD trip participants visited CREA (The Fodder and Dairy Production Research Centre) during the morning of Wednesday October 12<sup>th</sup>. This research centre was established after the aggregation into one single institution of three experimental institutes belonging to the Italian Ministry of Agriculture: The Experimental Institute for Fodder Crops (located in Lodi), The Experimental Institute for Dairy Products (located in Lodi), and The Experimental Institute for Dairy Livestock (located in Cremona).

The activities of CREA-FLC are directed towards the dairy sector, in which they concentrate on the livestock and forage systems for the sustainable improvement of crops for animal feeding, breeding techniques and their effects on physiology and animal wellness. Their activities are also related to the improvement of the quality and safety of milk and dairy products, the study of industrial processing, by-products and microorganisms related to the dairy industry.

Our visit began with a welcome note by Giacomo Pirlo and a presentation by Aldo Tava in which they explained the different research topics they are working on. In short, they explained us that they are investigating primary and secondary metabolites involved in quality aspects of forage plants, as well as natural compounds possessing anti-nutritional, toxic, nutraceutical, and pharmacological properties. Research is also targeted at: identifying and characterizing genes of interest in forage and feed grain legumes through the use of model species (e.g. *Medicago truncatula*); applying molecular and genetic engineering techniques; increasing the efficiency of breeding methods and genetic resources utilization; selecting forage and feed grain legume varieties with improved stress tolerance, quality and adaptation to Italian environments; improving the agronomic, economic, and environmental sustainability of cereal-forage cropping systems.

Later on we had a tour of the labs and we had the opportunity to see all the equipment they use for the research currently done. Here they explained us that this centre is also in charge of doing research on dairy products. They are in charge of studying the content of milk



constituents, with particular attention on the bio-functional molecules; evaluation of the physical characteristics of milk fat as a function of genetic and nutrition; development and application of chemometric models for data analysis; development of analytical methods to assess genuineness and authenticity of dairy products such as goat and buffalo; microbiological characterization of cheeses; detection, collection, and characterization of lactic acid bacteria bacteriophages; evaluation of hygienic quality of dairy products; investigation on the origin and the causes of safety concerns; development of new dairy products with improved nutraceutical and functional characteristics.

After the tour, four participants of the trip (Ruben de Vries, Faith Manditsera, Jing Yan and Mostafa Zahir) had the opportunity to share with the audience their research projects. The visit concluded with a tour of the pilot plant and experimental farm. In the pilot plant we observed several equipment used for cheese production and they explained us that the objective of this place is to follow research on cheese yield joined to product quality. They produce and ripen different cheese varieties such as mozzarella, Crescenza, Gorgonzola, etc. and they are working on determining the influence of milk protein level or fat to protein ratio on mozzarella yield and quality; different exo-polysaccharides strains to produce low-fat soft cheese; use of different starter sources to improve the taste of ripened cheese and utilization of novel sources of rennet such as camel chymosin.



Visiting the pilot plant, where we observed the equipment used for cheese production

Finally we visited the experimental farm in which we had the opportunity to see calves and cows at different lactation stages. Here they explained us the different feeding systems they use for the cows and the ways they use to control and monitor the animals' health conditions.



Visiting the experimental farm, where we had the opportunity to see cows at different lactation stages

After our visit we drove to Trento. Despite of the huge traffic jam, we enjoyed a nice dinner in Salerno, with a beautiful view of grape cultivars and mountains that surround the area.

**Thursday Oct 13:**

**Fondazione Edmund Mach (FEM), San Michele all'Adige**

*By Shingai Nyarugwe*

**Wageningen meets San Michelle (FEM)**

The Edmund Mach Foundation Research and Innovation Centre (FEM), established in 1874, is the first One Health research centre in Italy which carries out interdisciplinary research in the fields of modern and sustainable agriculture, food and nutrition, environment and health. Their aim is to share knowledge and to contribute to economic growth, social development and the overall improvement of quality of life. The institute also collaborates with major domestic and foreign universities in the realization of university undergraduate and master studies. The education and training centre also offers courses of training and higher education, including advanced training courses.

The institute stretches over 70 hectares of land with a 14 hectare campus that includes greenhouses, classrooms and offices. The institute also averages 1000 students, 120 researchers, 50 doctorate students, over 100 teachers, over 150 technologists, and supports more than 8000 farms.

The Edmund Mach foundation is a neuronal type of organisation as all sectors are independent but are closely related to each other. This neuronal structure makes the organisation to be flexible with external relations and to be responsive to market and research communities' questions. Owing to the strong ties with the local community, technical,

operational and professional sectors, the institute is able to realise its overall vision of production, transformation and environmental sustainability.



The impressive hall in FEM

The visit started with the cell cultures and microbiology labs. Later on, three PhD researchers from each institution gave presentation on their current work with Ana Rovalino Cordova, Jonna Koper and Isabelle Silvis being presenters from Wageningen. FEM presenters were Andrea Mancini and Michele Pedrotti. Afterwards, the speed dating of science was introduced where 6 students (Sydney Phiri, Jing Yan, Faith Manditsera, Valentina Acierno, Mostafa Zahir and Arianne van Eck) from Wageningen each had to explain their research to a selected group of people for 6 rounds of 6 minutes each. We then had a tour of the sensory analysis, metabolomics and traceability labs. Lastly the visit ended with a tour of the historic wine cellar built in the 12<sup>th</sup> century, and the distillery, situated within the institute's farm. The farm, which is one of the sectors of the institute, is on approximately 120 hectares of cultivated land with grapevines and apple trees. Approximately 250 000 bottles of wine, 10 000 bottles of sparkling wine and 5000 bottles of brandy are produced on a yearly basis.

The visit to the institute gave us an insight into how interdisciplinary research can be beneficial to an institute and substantiates the usefulness of interdisciplinary research as is within FQD.

*Did you know? The historic wine cellar was formerly a monastery established in 1145. The institute has 5 patents and has published 1000 scientific papers and 2500 informative papers in the last 10 years.*



Ana Maria Rovalino Cordova presenting her project



**Friday Oct 14:**

**Sant'Orsola, Pergine Valsugana  
Melinda, Segno di Predaia**

*By Femke Brouwer-Damen and Faith Manditsera*

**A fruitful day at Sant'Orsola and Melinda**

Friday the 14<sup>th</sup> of October was a rainy, but fruitful day at Sant'Orsola and Melinda. We started our day at *Sant'Orsola*, which is a farmers' association specialized in the production and sales of berries, strawberries and late cherries. The head office is based in Pergine Valsugana, close to Trento. The company has more than 1,000 member farms growing the fruits for the company. These farms range from very small part-time farms to big, professional farms. The company also started an intense research and development project to make it easier to select the best varieties of all kinds of berries.

We had a visit to the big packaging and storage department of the company, which was very interesting to see. We also visited a strawberry field. Because the strawberry harvest just ended, we were able to go in the field and pick and taste the last ripe strawberries ourselves.

The next visit of the day was all about apples. We went to *Melinda*, which is a producers' organization whose vital structure is composed of farmers shareholders. The company works with about 4,000 fruit farmers families who live and cultivate apple trees in the Noce Valley (Val di Non and Val di Sole). Every year, these members deliver their harvest to their Cooperative, to which they delegate organisation and management of all harvest downstream procedures, like storage, selection, packaging, dispatch, promotion, sales and administration. At Melinda we had visited big storage rooms, which were located in the mountain! It was very impressive to see the big chambers under the ground, full of apples! One chamber can store up to 5 million of apples.

With the Melinda brand, the company wants their consumers to easily identify apples that are of objectively superior quality. The unique combination of latitude, orographic and pedoclimatic characteristics (fairly shallow terrain, low summer rainfall and low relative air humidity, big differences between day- and night-time temperatures) make them one of the naturally most suitable areas on Earth for apple production.

At the end of the day we went back to our hotel and enjoyed a nice diner. It was a very nice day where we learnt a lot about fruits, its growing, storage and distribution.



Visiting Sant'Orsola and Melinda

## Saturday Oct 15: MUSE Science Museum, Trento

*By Mostafa Zahir*

On Saturday, the 15<sup>th</sup> October, we visited MUSE, the science museum in the new city district Le Albere. The MUSE is a public institution operating in the field of natural sciences, within the specific context of the local Alpine environment. The museum promotes science culture and aims at spreading scientific knowledge to the general public, with particular attention on learning and education. In this museum, science and technology show the interaction of humans and the environment.

We learnt that the MUSE was planned by Renzo Piano and in 2013, it replaced the old science museum of Trento. The museum is divided into 7 levels, including a panoramic roof garden which gives a great view across the whole Albere district, and the Adige river valley. Here we will list some of the highlights of the day.



Animals that can be found in Trento region

On the fourth floor, we learnt all about the mountains that have shaped the city of Trento. The visitors can also enter the Glacial Experience – a 10-metre long multi-vision space inside which the visitor experiences the impression of flying above the Alps! On the third floor there is the Bio-Diversity Labyrinth, which takes visitors through a quick succession of different Alpine panoramic views, showcasing various different habitats and their flora/fauna. The second floor has various exhibits showing the beauty and power of the geological forces that shape our planet. The first floor has a Time Machine, a multimedia cave. Inside this immersive space, scenes of prehistoric life are projected on the walls and centrally located screens.

Finally, one highlight of the Museum that is unmissable is the Big Void – the central space that runs down this magnificent building, allowing visitors to look down and up through the different floors, and into which various stuffed animals and skeletons are suspended.

After the visit, we drove to the Garda lake where we integrated several international dishes into a lovely meal. We spent the rest of the weekend enjoying the beautiful sunny weather at Padenghe sul Garda.



MUSE Science Museum



**Monday Oct 17:**

**Parmalat SpA, Collecchio**

**Salumificio La Perla Di Lanfranchi Carlo & Fabrizio S.N.C.,**

**Langhirano**

*By Ruben de Vries and Arianne van Eck*

### **The Parma experience**

Our first host of the day was *Parmalat*, which is an Italian dairy and food corporation with global presence. They are specialized in UHT milk and milk derivatives, *e.g.* yogurt, cheese, butter and desserts. Next to that, fruit juices are of their interest as well. Parmalat is the largest dairy company in Italy, but they operate in other countries of Europe, America, Australia, China and South Africa as well. Lactose-free products are their top-selling products on the Italian market, since about 40% of the Italian consumers have experienced problems with the digestion of milk (products).

The day started with a warm welcome by Marco Trezzi (R&D Director) and his Research and Development team. They introduced us to the Parmalat group, the activities of the R&D department, their recent innovations and launches. After a short coffee break, the program continued with presentations by three WUR PhDs: Chunyue Zhang talked about the effect of raw milk quality on UHT milk instability, Andrijana Horvat about food design system dynamics and Femke Brouwer-Damen about consumers food choice determinants for snacks and confectionery. The visit ended with a factory tour and a lunch at the factory canteen.

In the afternoon we had free time, which some of us used to visit the city of Parma. Prof. Vincenzo Fogliano introduced the history of Italy and Parma to his group of PhD students.

Our second host of the day was *Salumificio La Perla*, which is a Parma ham producer owned by the family Lanfranchi. The family has been dedicated to the production of Parma ham for over 20 years. We visited their factory, that mainly consists of drying chambers. It takes 24 months to produce a Parma ham, including salting, resting and drying phases. The total capacity of the factory is approximately 50.000 hams, having a total value of €9,000,000! In order to produce Parma ham one has to comply with very precise rules imposed by the Parma Ham Consortium and the production process is well documented, checked and marked by this consortium. The pigs that are selected for the Prosciutto di Parma have to be born and bred in 10 regions of central and northern Italy, fed with specific feed and to be more than 9 months

of age. Despite development of novel technologies, the quality of Parma hams is examined by ‘sniffing’ experts that use a horse bone needle, which is a material that absorbs the aromas of the hams for a short time. The Parma ham production process is a typical example of the traditional and local food culture in Italy. Hence, securing the authenticity of Parma ham on a global level seems to be the main scientific challenge in this field.

After the guided tour, we tasted Parma ham during our dinner at Salumificio La Perla, accompanied by food scientists from the University of Parma.



(left) Group picture during our visit to Parmalat; (right) Drying hams at Salumificio La Perla

**Tuesday Oct 18:**

**University of Parma (UNIPR), Parma  
European Food Safety Authority (EFSA), Parma**

*By Jing Yan*

### **Visiting Italy Food valley - UNIPR and European Food Safety Authority (EFSA) in Northern part of Italy, Parma**

In the morning, we visited the department of Food Science of *University of Parma (UNIPR)*, which is one of the oldest universities in the world. It currently has about 25,000 students and 1,800 faculty and staff workers, and it has 18 departments. In the heart of the city you can find 9 departments. The other 9 scientific departments are located in the University Campus, a scientific centre covering an area of over 77 hectares in the southern area of Parma, including the Food Science Department that we visited.



Chunyue Zhang presenting at the University of Parma

During the meeting, the chairman of the department presented us their research area and collaboration with external organisation (food companies and research centres like EFSA). Four of our projects were presented

in the meeting (Ruben de Vries, Jonna Koper, Valentina Acierno, Chunyue Zhang) and four students from UNIPR also presented their own research (Alessia Levante, Matteo Cordioli, Laura Mele, Laura Brighenti).

In the afternoon, we were guests of the *European Food Safety Authority (EFSA)*. After a short lunch break offered by EFSA, we had a nice overview of this institute, of risk assessment, novel food and biohazards. EFSA is a European agency, funded by the European Union, that operates independently of the European legislative and executive institutions (Commission, Council, Parliament) and EU Member States. It was set up in 2002, following a series of food crises in the late 1990s, to be a source of scientific advice and communication on risks

associated with the food chain. The General Food Law created a European food safety system, in which responsibility for risk assessment (science) and for risk management (policy) are kept separate. EFSA is responsible for the former area, and also has a duty to communicate its scientific findings to the public. Most of EFSA's work is undertaken in response to requests for scientific advice from the European Commission, the European Parliament and EU Member States. The process of EFSA's scientific advice is: 1) receipt of request for scientific advice from the European Commission/other National food safety bodies/the European Parliament; 2) assessment by working group experts for detailed scientific work, and 3) adoption by sending the opinions to the original requesters. They also talked about one of their tasks, which is maybe the most important part, the communication on risk associated with the food chain. Scientific results cannot always be easily converted into simple guidelines and advice that non-scientists can understand. Therefore, EFSA communicate them clearly, not only to its principal partners and stakeholders, but also to the public at large, to help bridge the gap between science and consumers.



Listening to the presentation at EFSA



**Wednesday Oct 19:**

**Stazione Sperimentale Per L'Industria Conserve Alimentari (SSICA),  
Parma**

*By Shingai Nyarugwe and Sydney Phiri*

**Experimental station for the food preserving industry (SSICA)**

The experimental station for the food preserving industry (SSICA) was founded as a public body in 1922 with the purpose of improving quality and safety standards of food products along the entire chain. The institute comprises of departments specific to different products with skilled staff and advanced equipment to be able to carry out experiments on new research products, processing technologies, preservation procedures and assessing their economic and social impact. Thanks to its specialized staff and cutting-edge laboratories, SSICA is one of the most important applied research bodies in the preserved food sector in Europe and in the world and takes part in national and international research projects.

SSICA has been promoting the scientific and technical progress of the Italian food preserving industry in meat, fish, fruits and vegetables sectors through research activities, consultancy, training and dissemination of information.

*1. Meat*

The department focuses on the industrial preservation of cooked meat, with emphasis on industrial preservation by heat treatment, drying or fermentation. The main traditional activities aim at imparting the technology and quality of food in Italy by promoting food safety, nutrition, product development, packaging and environmental sustainability.

*2. Fish*

The department addresses the fish and aquaculture product chain from raw material handling to storage and sales.

*3. Vegetable products*

The department is committed to studying fruits and vegetable products. Research activities cover the whole production chain that aims at promoting and improving food quality, safety and service standards of products to be able to optimize and transform the process while

studying the different applications of innovative processing technologies through companies, universities and research institutions.

SSICA also offers services that guarantee microbiological stability and food product safety through activities that require implementation of specific research projects with direct support to companies via testing and consultancy services. In addition, the institute offers technical training courses for food industries. Moreover, the institute cooperates with technological departments such as consumer science, which deals with the design and development of new food products and focuses on existing product formulation by assessing chemical, physical and sensory food markers. The institute further looks at packaging from a technological, hygiene and safety point of view. Its activities are performed in collaboration with manufacturers of raw materials, packaging and end users with the aim of improving scientific technics and regulatory tools to produce safe packs that ensure quality and hygiene characteristics of food products throughout their shelf life.

Apart from specific services that SSICA offers, it has a food processing plant for industrial food testing that enables the organization to give technical advice concerning food processing innovations and raw materials. The institute hinges its operations on food companies in Italy, thus all companies are mandated to subscribe to SSICA and be able to pay compulsory fees that support their operations.

The visit to SSICA showed the relevance of food laboratory testing and industrial food processing. This is in turn beneficial to food quality and design to be able to tailor experimental designs to what can be simulated in a food processing plant.



Ayusta Fitriyono presenting his project at SSICA

**Thursday Oct 20:**

**Zini Prodotti Alimentari SpA, Cesano Boscone**

*By Faith Manditsera*

**FQD experience 60 years of passion for fresh (frozen) pasta at Zini**

The last day of our study trip was to Zini Prodotti Alimentari SpA, a producer of frozen pasta. The day started with a glitch with traffic but we managed to arrive at the company in time for our appointment. Despite being the last day of an eventful two weeks, and that Vincenzo had to leave us, the group was still energetic and looked forward to knowing how pasta is made and to tasting of the pasta. The first surprise at Zini was the size of the company. The group was expecting to see a small company, from the description we had that they are still producing pasta in a traditional way.



Group picture at Zini

The tour started with the presentation about the company, how it started and how they had grown over the 60 years. What started as a family business has grown to be a big company that is boasting 8 production lines, one of them dedicated to gluten free products. The company mainly produces fresh pasta, which they freeze for long term preservation of flavour and its naturalness. Their range of products include filled pasta, Zini sauces and individually quick frozen products. The company has also been making some advances in innovation by introducing non pasta products. They partnered with the University of Naples to develop stick mais - an innovative and modern way of eating polenta, by reducing the preparation time still maintaining the taste and flavour. The product is easy to cook without compromising quality.

The group had the opportunity to tour different production lines where we were taken through the processing steps of freezing fresh pasta. The major highlight of the day was when we had the opportunity to have the taste of the well prepared pasta (of course, everyone liked it). Tasting such good pasta was a great way of ending our study trip.



Tasting delicious Zini pasta

## Friday Oct 21:

*By Femke Brouwer-Damen and Mostafa Zahir*

### **Back home: looking back at the fantastic trip!**

Today was the last day of our food journey in Italy. In the morning we had some free time to take a walk around the hotel. At noon we went to Milano Linate airport to return our vans, our only means of transport in the past two weeks. We did some last shopping at the airport and enjoyed the great Italian food for the last time during this trip. At 19.00 we took the flight back to Amsterdam.

Now we look back at this great trip where we learned a lot, visited many different companies and institutes, and met many great people! The trip was also valuable for getting to know our FQD colleagues better. We learned about the strong points of all of us and about the (very different!) topics we work on. This will be of great value for the coming years working together as PhD students.

Many thanks to the sponsors of our trip: VLAG Graduate School, LEB Foundation, Elsevier and Cargill. And of course, thanks to our great PhD trip committee: Ana Rovalino Cordova, Andrijana Horvat, Ayusta Fitriyono, Isabelle Silvis, Jonna Koper and Valentina Acierno for organizing this fantastic trip.



Waiting for our flight at the airport Milano Linate



We would like to express our deepest gratitude to our sponsors and hosts of the 2016 FQD PhD trip to Italy

## SPONSORS



## HOSTS

