

# CHIPS + SNACKS

Raw materials to formed products

17—19 APRIL 2023  
LISBON, PORTUGAL



# COURSE OBJECTIVES

CHIPS + SNACKS  
RAW MATERIALS TO FORMED PRODUCTS

SAVOURY SNACKS PRODUCTION COURSE 1  
17-19 APRIL 2023  
LISBON, PORTUGAL

This three day intensive course organised by the European Snacks Association will provide an understanding of:

- The market for savoury snack products across Europe
- The key drivers for successful new snack product development
- How potato chips, extruded, pelleted, and sheeted snacks are manufactured
- Key techniques in popcorn and pretzel production
- The food safety aspects you need to be aware of including an update on acrylamide
- How to make the right raw material and process choices
- How to exploit the versatility of different process solutions
- How to maximise product quality and consistency

Attendees will have the opportunity to interact with experts with years of practical experience of working within the savoury snack food industry. They will empower you to trouble-shoot and evaluate your own processes and equipment, to find hidden areas of opportunity that could result in novel process solutions and new product ideas.

You will learn in detail about industry best practice and the latest practical applications of new technology both to improve your product quality and consistency and to achieve potentially significant cost savings.

The course combines classroom lectures from leading experts in the savoury snacks industry with practical interactive sessions as appropriate.





## WHO SHOULD ATTEND?

The agenda is presented as an intensive course for new plant personnel or as a refresher for more experienced operators whilst marketers will also benefit from the course content.

It offers an excellent opportunity for those people involved in savoury snack manufacture to meet experts in the field, to discuss their current problems, and to find creative solutions which will enhance their plant operations.

The course is designed for:

**Snack manufacturing personnel, including:**

- Plant managers, operations personnel, project managers
- Research & Development personnel
- Plant engineers and quality control technicians

**Personnel wishing to better understand their production processes**

- Line production personnel and supervisors
- Quality assurance personnel
- Production management

**Suppliers researching the needs and production methods of their customers**

In addition, the course content is appropriate for business development managers, sales and marketing specialists, equipment manufacturers and product designers who are interested in understanding the wide range of possibilities for turning creative ideas into real products.

The course material will serve as a useful reference for snack processors, product formulators, scientific staff and technicians, as well as for business managers in the areas of nutrition, snack food processing, baked snacks, extruded snacks and tortilla chips.



# MONDAY APRIL

# 17

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## Potato Chips – Raw Materials

- Most common chipping varieties used across Europe.
- Key attributes to look for and variety selection.
- Key agronomic factors affecting potato quality / consistency.
- How to optimise potato storage.
- The procedures and controls necessary to deliver chip quality throughout the year.

## Potato Chips – Key Back-End Process Elements

- Best practice potato handling and back-end processing.
- Washing / de-stoning and peeling and further preparation before slicing.
- Building quality and consistency into the process and the available systems.
- Factors influencing product quality and the food safety aspects which need to be considered.
- The impact of slicing and blanching on product attributes and upstream processing.

## Potato Chips – Frying

- Fryer systems for standard, batch, and lower fat products.
- Factors which influence choice of frying systems and deciding which best fit your needs.
- The impact of fryer throughput, oil turnover rates, and process conditions impacting on product quality and costs.
- How fryer design and set up can affect efficiency, energy recovery, quality and food safety.

## Food Safety – Acrylamide Toolbox

- Legislative developments on acrylamide and the implications for processors.
- Key aspects of the FDE toolbox.
- How the range of acrylamide mitigation options for minimising acrylamide production relate to different product types and processing circumstances.

## Potato Chips – Optical Sorting

- Key elements required for effective inspection and sorting both pre- and post-fryer.
- Options for defects identification and removal.
- Setting machine parameters to eliminate unwanted defects whilst maximising product throughputs and minimising good product giveaway.

## Potato Chips – Oils & Oil Management

- The main types of vegetable oils on the market, their origins and availability.
- The oils commonly used in chip frying operations and how they compare in terms of their nutrition profiles and stability.
- The oil refining process and what finished product quality and performance specifications might look like.
- Best practice with respect to oil storage, frying, filtration, and fryer cleaning.
- Latest developments in high performance oils meeting changing nutritional demands.

Note: To expedite the course subjects may be presented in a different running order or on a different day than shown.

TUESDAY  
APRIL  
18

### Extruded Snacks – Extrusion Theory

- Basic principles of the extrusion process.
- Process evolution from first to third generation snacks and into the future.

### Extruded Snacks – Extrusion Technology Choice and Selection

- The merits and limitations of available technologies (including single and twin screw).
- An in-depth look at the systems available focusing on the range of raw materials they are capable of processing and the type of products, and quality, they are able to produce.
- The practical aspects of set up, controllability, throughputs, flexibility, and relative expectations of the consumables used.

### Extruded Snacks – Raw Material Choices for Processing Snacks

- The choice of raw materials for making snacks is immense, including cereals and grains, maize, wheat, rye, rice, potato granules and flakes, starches, fibre, and a host of smaller ingredients which can significantly affect the finished product.
- How the vast array of options impact on taste, texture, and appearance, whilst recognising the practical limitations of some extrusion technologies.

### Extruded Snacks – Snack Pellets

- The very wide range of products available, the raw materials used, and how they are processed.
- What the future holds for these products at the forefront of savoury snack innovation.

### Extruded Snacks – Die & Cutter Design

- The technology behind die design.
- The impact it has on product definition, quality, and consistency.

### Popcorn

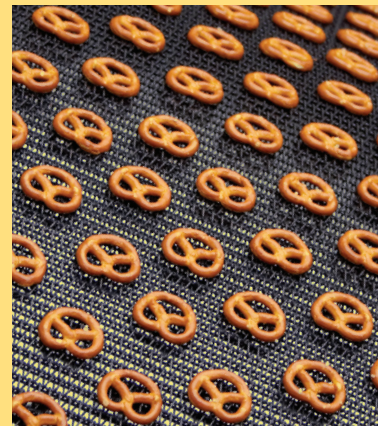
- How popcorn is produced – the essential elements involved in producing a great product.
- Savoury or sweet – coating and flavouring techniques explained.

### Pretzels

- The key ingredients used and their role in product quality and consistency.
- The processing systems available, identifying the key stages of the process and how these can be controlled and optimised.

### Chips production – new opportunities using pulsed electric fields

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# WEDNESDAY APRIL 19

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## Extruded Snacks – Frying

- An in-depth look at the technology for frying extruded snack products.
- The challenges for fryer designers and how they are managed.
- The key factors to be taken into consideration and how they affect product quality and processing efficiency.

## Extruded Snacks – Hot Air Expansion, Drying & Baked Snacks

- With many snacks products on the market now claiming to be lower fat, we look at the alternative processes to frying that are available.
- What the latest generation of hot air expansion and fluidised bed techniques can deliver.
- The direction of emerging technologies for the future.

## Sheeted Snacks – Manufacturing Technology

- Sheeted technology has been fuelled by the emergence of the baked chip category and with stacked chips and tortillas growing in popularity.
- The technology involved and the key ingredients and processing steps which impact on product quality and consistency.
- What the development of improved processes and raw materials holds for the future.

## Course Conclusion & Feedback

Note: To expedite the course subjects may be presented in a different running order or on a different day than shown.



# LOCATION & ACCOMMODATION

The course will be held on 17, 18 and 19 April 2023.

Delegates should arrive on the evening of Sunday 16 April. Hotel accommodation for the nights of 16, 17 and 18 April is included in the fee, as well as the course materials, welcome drinks on Sunday evening, all meals, fun networking evening activities and certificate of attendance.

All lectures will take place in the Ramada Hotel, Lisbon. Located just minutes from some of the UNESCO World Heritage city's main cultural and business highlights, the upscale Ramada is just 5km from Lisbon international airport.

**For additional information, please contact:**

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1 HOW TO BOOK

ESA Membership Status

EMAIL to: veronica@esasnacks.eu

Member  Non-Member

Note: Places are limited. Applications will be accepted on a first-come, first-serve basis. Enrolment forms must be accompanied by payment.



2 YOUR DETAILS (please use a separate form for each participant)

Miss  Ms  Mrs  Mr  Dr Last name..... First name.....  
 Company..... Job title.....  
 VAT number (compulsory for all EU companies).....  
 Address.....  
 City..... State / County / Province.....  
 Post / ZIP Code..... Country.....  
 Telephone..... Email\*.....

\*Note: bookings will be confirmed by email; please ensure that your email address is clearly legible.

3 ENROLMENT FEE (please choose appropriate option)

Price includes three nights' hotel accommodation – 16, 17 and 18 April, welcome drinks on Sunday 16 April, breakfasts, lunches, dinners, evening activities, course materials and certificate of attendance.

Choose rate type	Payment by 20 February 2023	Payment after 20 February 2023	Your cost
<input type="radio"/> ESA Member*	EUR 1,750 + VAT @ 23%	EUR 2,500 + VAT @ 23%	EUR..... inc VAT
<input type="radio"/> Non-Member	EUR 2,200 + VAT @ 23%	EUR 3,150 + VAT @ 23%	EUR..... inc VAT

\*Note: ESA membership must be fully paid at both the date of booking and the date of the event. Otherwise, prices will automatically revert to non-member rates.

Hotel accommodation: Three nights in a double / twin room for single use is included. Additional room nights or room upgrades will be the responsibility of the participant. Room reservations will be made by ESA upon receipt of enrolment form and payment. Breakfasts, lunches and dinners are included; however, hotel extras (e.g. mini bar) must be paid by each participant upon departure.

4 PAYMENT OPTIONS (please choose appropriate option. Payment MUST accompany enrolment)

Bank transfer: I have transferred AMOUNT EUR..... plus all bank transfer charges on DATE..... to: European Snacks Association - ING Belgium, IBAN: BE77 3631 1036 6842, SWIFT: BBRUBEBB

Credit card: Please debit my credit card for AMOUNT EUR.....  
 Visa  MasterCard / Eurocard  AMEX  
 Name on card (Holder)..... Card number.....  
 Expiration date..... Security code..... Cardholder address (if different from registrant).....  
 City.....  
 State / Country / Province..... Post / ZIP Code..... Country.....

I hereby certify that I have read and agree to the TERMS & CANCELLATION CONDITIONS as stated below. I accept that for the purpose of congress organisation only, my personal data will be registered by using electronic data processors. Bookings are not valid without signature.

Date	Signature
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**TERMS & CANCELLATION CONDITIONS.** Confirmation letters and receipted invoices will be sent on receipt of payment – which must be made at the time of enrolment. Full payment must be received before the course commences. No refunds will be made for no-shows or if you cancel whatever the reason. If you are unable to attend, a substitute delegate may be appointed at any time. It may be necessary for reasons beyond the control of the organisers to alter the content, timings or venue. The organisers will not accept liability for any transport disruption or individual transport delays and in such circumstances normal cancellation terms apply. In the event of a terrorist alert or other incident that prevents the running of the course, the organisers reserve the right to retain up to 80% of the fee as a contribution to registration, location, marketing and central administration costs. **LIABILITY DISCLAIMER.** By registering for this course, the participant certifies that they accept any and all associated personal risks and that the organizer (ESA), the venue owner and any suppliers, representatives or agents linked to the organisation of the course shall not be held liable by any person for any injury, damage, theft, loss, medical problem or inconvenience which may be suffered during such person's presence on the course itself or while travelling to or from it. Participants are advised to ensure they are adequately insured against any such occurrences.

**PERSONAL DATA - GDPR.** ESA is GDPR compliant and processes the personal data that you provide to us on this form for the purpose of managing your registration and participation in the course as necessary to perform our obligations based on our general terms and conditions. ESA may also take photographs, video or other recordings during the course proceedings for use on the ESA website and in social or other media in connection with the course and/or ESA's general activities. We will retain your personal data for the duration of the course and for a period of time thereafter as necessary for the following purposes: sharing the participants' list and contact details with all participants and for providing information about the course and other future ESA events. You have the right to request access to the personal data we hold about you and to be informed about the existence and the extent of the processing of your data, to request that we rectify incorrect data, to request that we erase your data or that we restrict its processing, to object to the processing on serious and legitimate grounds, to object to the portability of your data and to lodge a complaint with the supervisory authority in the EU. You also have the right to withdraw your consent at any time.