We have been providing Extrusion training in Australia for over 20 years, with courses now also in Asia, Europe and South America. Organised by Food Industry Engineering (FiE) in conjunction with the CSIRO Food Innovation Centre.

> Option for participants to attend this course on-site (Melbourne) or remotely via Zoom.

## Food & Feed Extrusion Technology

11 - 13 AUGUST 2021, WERRIBEE (VICTORIA, AUSTRALIA)

Overview

This 3-day course covers the principles of extrusion, the design of extrusion processes, and the formulation of extruded products.

Principles learned will be demonstrated through a practical session using the Clextral extruder at the CSIRO Pilot Plant (will be livestreamed for online participants).

The program is relevant to the production of all types of extruded products - eg expanded snacks and breakfast cereals, pastas and third generation snack pellets, pet foods and aquafeeds. The course is relevant to both single and twin screw extrusion technology.

The course covers topics from the basics of extruders and their configuration, through what is happening chemically and physically inside the extruder barrel, to an understanding of extruder dies and extruder instability, and formulation of extruded products.

### **Course Content**

Topics covered include -

> Principles of extruder configurations (single and twin screw)

SHORT COURSE

- Role of rheology in extrusion
- > Die types and effects Die design
- › Extrusion chemistry Recipe design
- > Product texture development
- › Causes and effects of extruder instability
- Screw, barrel, and die-plate wear

Examples in product formulation and the design of extrusion processes will be included to demonstrate application of the theory. Principles learned will be applied during the practical demonstration on Day 2.





# Food & Feed Extrusion Technology

11 - 13 AUGUST 2021, WERRIBEE (VICTORIA, AUSTRALIA)

## **Course Venue**

**CSIRO Food Innovation Centre** 671 Sneydes Road Werribee Vic 3030

The course will generally run from 8:30 to 5:00 each day, finishing a little earlier on the final day.

#### **Registration Fee**

\$1880 per person + GST

Registration fee is the same for on-site or remote participants (no GST for international participants).

A 10% discount applies for registrations received by 25 June 2021.

An additional 5% discount applies for three or more course registrations received together from the same company.

Registration fee includes handout notes directly related to the presentations, as well as lunches, morning & afternoon refreshments.

**REGISTRATIONS CLOSE WEDNESDAY, 4 AUGUST 2021** 

Register online via course webpage, or send participant details (name, company, address, email, ph) to training@fie.com.au

#### **Further Information**

For course related enquiries, contact:

Gordon Young

Food Industry Engineering (FiE) Associate of FoodStream (Australia)

Ph +61 414 681200

Email gyoung@fie.com.au

FoodStream Pty Ltd is a private R&D company offering a complete range of technical consulting services to the processing industry, including a range of specialist training courses. Due to its unique business structure, FoodStream is able to deliver innovative, flexible solutions to the needs of processors. Details of services offered by FoodStream are available through our website at foodstream.com.au

The CSIRO Food Innovation Centre conducts research to support the health and wellbeing of Australians and the sustainability and viability of the Australian food industry. Information is available at their website - csiro.au/food-innovation

## Sponsorship

Day 2 of this course is Sponsored by **CL RAL** Extrusion Expertise



#### **Course Presenters**

The main presenter is Mr Dennis Forte, a chemical engineer with extensive experience in extrusion processing and die design, including breakfast cereals, extruded snacks, pasta, and confectionery. Dennis has worked with a wide variety of companies using extrusion technology.

Mr Gordon Young is a food process engineer who has worked in extrusion technology in both University research and with private companies. He is also experienced in a wide range of other food processing technologies, including specific expertise in drying technology and thermal processing.



## **Books Published by** the Course Presenters

Available to course participants at 20% discount to list price.

Or order online from fie.com.au/books or major booksellers.



