



PERDC

PROCESS ENGINEERING RESEARCH
& DEVELOPMENT CENTER

TEXAS A&M ENGINEERING EXPERIMENT STATION

Formerly "Food Protein Research & Development Center"

28th Annual Practical Short Course

Organized by the
Process Engineering Research & Development Center
Extrusion Technologies Program
The Texas A&M University System
College Station, Texas 77843-2476 U.S.A.

Feeds & Pet Food Extrusion January 21 - January 26, 2018

SCHEDULE

Sunday, January 21, 2018

- 6:00 PM Registration, hotel
- 6:30 PM Welcome, Introduction, & Announcements - Mian N. Riaz
- 7:00 PM Dinner with Cash Bar, hotel (optional)

Monday, January 22, 2018

- 7:40 AM Bus leaves hotel for Rudder Tower, Texas A&M University
- 8:00 AM "Introduction to Extrusion" - Mian N. Riaz
- 9:15 AM "Pet Food: Global Market Trends" - Lindsay Beaton
- 9:45 AM Break
- 10:00 AM "Bulk Material Handling in Extrusion Processes"
- Jonathan Thorn
- 11:00 AM **Group Photo**
- 11:15 AM Lunch
- 12:30 PM "Principles of Dry Extrusion and its Applications in Feeds
& Pet Food" - Dave Albin
- 1:15 PM "Plant Dust Collection and Weighing / Feeding"
- Jonathan Thorn
- 2:00 PM Break
- 2:15 PM "Dry Extrusion of Full Fat Soy and Partially Defatted
Soybean Meal" - Dave Albin
- 3:00 PM "Solutions to Common Grinding Problems"
- Joseph S. Andersen
- 3:45 PM "Other Commercial Applications of Dry Extrusion"
- Dave Albin
- 4:15 PM Bus leaves for PERDC for Multiple Demonstrations:
 - **Full Fat Soy from Whole Soybeans using a Dry Extruder**
 - **Full Fat Soy from Dehulled Soybeans using a Dry Extruder**
 - **By-Products Recycling using a Dry Extruder**

Tuesday, January 23, 2018

- 7:40 AM Bus leaves hotel for Rudder Tower, Texas A&M University
- 8:00 AM "Pet Food Treats" - Tom Barber
- 9:00 AM "Optimizing Pet Food Quality: Oxidation Control and
Microbial Growth Control" - Sara Cutler
- 10:00 AM "Formulating Natural Pet Foods" - Lynn Deffenbaugh
- 10:45 AM Break
- 11:00 AM "Continuous Spray and Coating Systems" - Dave Mattice
- 11:45 AM Lunch
- 1:00 PM "Pet Food Palatability" - Lynn Deffenbaugh
- 1:30 PM "Drying and Cooling Systems" - Tom Barber
- 2:30 PM "Extruded Treats" - Galen Rokey
- 3:15 PM Break
- 3:30 PM "Characteristics and Applications of Interrupted Flight
Expanders" & "Processing of Full Fat Soy Products, Pet
Foods, and Aquaculture Feeds" - Amanda Cresanto
- 4:15 PM Bus leaves for PERDC for Multiple Demonstrations:
 - **Full Fat Soy Processing using an Interrupted Flight
Expander**
 - **Dog Food using an Interrupted Flight Expander**
 - **Surface Coating System for Pet Food**

Wednesday, January 24, 2018

- 7:40 AM Bus leaves hotel for Rudder Tower, Texas A&M University
- 8:00 AM "Commercial Vitamin Product Forms, Vitamin Premixes,
and Their Performance in Pet Foods" - Jon Bergstrom
- 9:15 AM "Preconditioning: Effects on Extrusion of Feedstuffs"
- Brian Plattner
- 10:15 AM Break
- 10:30 AM "Raw Materials for Extrusion Processing" - Galen Rokey
- 11:45 AM Lunch
- 1:00 PM "Single and Twin Screw Extruders and Their Applications
in Feeds and Pet Foods" - Galen Rokey
- 2:00 PM "Pulses for Pet Food: Alternative Non-Grain for Extrusion"
- Jolene Hoke
- 2:30 PM Break
- 2:45 PM "Product Analysis & Laboratory Techniques"
- Brian Plattner
- 3:45 PM "NIR Analyzer on Ingredients and Pet Feed"
- Josh Hudson
- 4:15 PM Bus leaves for PERDC for Multiple Demonstrations:
 - **Cat Food using a Single Screw Extruder**
 - **Ultra-Fine Fish Feed Using Twin Screw Extruder**
 - **Pulverizing of Ingredients**
 - **NIR Analyzer on Ingredients and Pet Feed**

Thursday, January 25, 2018

- 7:40 AM Bus leaves hotel for Rudder Tower, Texas A&M University
- 8:00 AM "Automated Control of Extrusion Systems"
- Michael Bachelor
- 9:00 AM "Food Safety and Extrusion Processing" - Brian Plattner
- 10:00 AM Break
- 10:15 AM "Extrusion Dies and Knife Technology" - Gerry Hertzell
- 11:00 AM "High Fat Extrusion and Product Densification"
- Galen Rokey
- 11:45 PM **Graduation Lunch**
- 1:00 PM "Vacuum Infusion Coating Principles for Pet Food"
- Wayne Busilla
- 1:45 PM "Extrusion Processing Technologies" - Brian Plattner
- 2:45 PM Break
- 3:00 PM "Troubleshooting: Ensuring a Smooth Running Extrusion
Operation" - Galen Rokey
- 4:15 PM Bus leaves for PERDC for Multiple Demonstrations:
 - **Dog Treat using a Single Screw Extruder**
 - **Premium Pet Food using a Twin Screw Extruder**
 - **Vacuum Infusion for Pet Food**

Friday, January 26, 2018

- 7:40 AM Bus leaves hotel for Rudder Tower, Texas A&M University
- 8:00 AM "Odor Control in Feed Manufacturing Plants" - Larry Fex
- 8:30 AM "Feed Requirements for Aquaculture Species"
- Delbert Gatlin
- 9:45 AM Break
- 10:00 AM "Least Cost Feed Formulation" - Chris Bailey
- 11:00 AM "Wrap-Up" - Mian N. Riaz and Chris Mack

You can register online at <https://perdc.tamu.edu/extrusion/>

OBJECTIVES OF SHORT COURSE

- Train production personnel in principles and characteristics of extruders and support systems for effective selection and operation.
- Review current practices for preparation of full fat soy meal, processing raw animal products, preparation of pet foods, aquaculture, poultry and swine feeds.
- Demonstrate equipment in operation and familiarize attendees with practical aspects of feeds extrusion.

ACCOMMODATIONS

Reservations for lodging should be made directly by attendee. A block of rooms has been reserved at the College Station Hilton and Conference Center for short course participants at the special rate of **\$125/night** plus tax for single or double occupancy. Ask for the rate specifically and mention the **Group Code "FEED18."** **Hotel reservations must be received before December 29, 2017** in order to get special rate; the special rate DOES NOT APPLY before January 20 or after January 26. You can make your reservation by telephone, fax, or the internet:

College Station Hilton & Conference Center
801 University Drive East
College Station, Texas 77840, USA
Tel: 979.693.7500; FAX: 979.846.7361 & 979.260.1931
www.hiltoncs.com

When faxing or emailing hotel reservations, please include a credit card number to confirm your reservation, and also include your departure and arrival dates.

TRANSPORTATION

Easterwood Airport at College Station is easily reached by about eight flights daily. From Dallas/Ft. Worth International Airport connect via American Airlines. From Houston Intercontinental Airport connect via United Airlines. **The airport code for Easterwood Airport is CLL.** To get to the hotel in College Station, participants can call the **Hilton hotel (979.693.7500)** upon arrival at Easterwood Airport for courtesy van service or schedule a pickup with GroundShuttle.com (855.303.4415) from George Bush Intercontinental airport (IAH) or Houston Hobby airport (HOB).

REGISTRATION

The registration fee for the short course and pilot plant demonstrations include Sunday evening mixer, daily lunch, refreshments at breaks, local transportation, a short course eBook manual, and certificate of completion. **Registration fee is \$1650 if paid in full by December 29, 2017. After this date, registration fee is \$1750.** Continuing Education Units (CEUs) are available upon request. An **OPTIONAL** black & white paper manual/binder is available for an additional \$200 fee. There is a 10% registration discount if three or more individuals from the same organization register for the short course. Academic discounts may be applicable if space is available. **Registration fees are not refundable**, but substitute personnel may be sent by the same firm. Space is limited; therefore, applications will be accepted on a first-come, first-served basis.

You can register online at
<https://perdc.tamu.edu/extrusion/>

You can pay by credit card (American Express, Visa, or Master Card) online or by telephone.

If paying by check, make payable to **TEES (Texas A&M Engineering Experiment Station)** and mail to **TEES Fiscal Office c/o TEES Edge Program 7607 Eastmark Dr., Suite 250 D College Station, TX 77840.** Mail the registration form and a photocopy of your check to Cyndi Casanova, Short Course Coordinator (see address below).

For registration inquiries, contact:

Cyndi Casanova
Short Course Coordinator
Process Engineering R&D Center
2476 TAMU
College Station, Texas 77843-2476 U.S.A.
Tel: 979.845.2741
Fax: 979.845.2744
Email: shortcourse@tamu.edu

LOCATION AND FACILITIES

All lectures will be held at Rudder Tower, Texas A&M University Campus. College Station temperatures are from 61-40 °F (16-4 °C) in January and 66-44 °F (19-7 °C) in February. Participants will be taken by bus to the Process Engineering R&D Center (Texas A&M RELLIS Campus) for afternoon demonstrations. Manuals and lectures will be in English. Translation equipment is available by prior arrangement for organized groups willing to provide their own translators.

SHORT COURSE CONDUCT

All short course sessions will be informal. Insurance policies do not allow non-university personnel, other than original manufacturers, to operate equipment. Questions are encouraged during the lectures, breaks, and social periods. **Laptops are allowed in the classroom to follow the presentations in the short course eBook manual.** If you require WiFi access during the conference, please inform the Short Course Coordinator when you register (the hotel has its own WiFi access and is separate from the conference). Rights to cancel this course with refund, to deny service, to substitute speakers, and to change schedules, as necessary to expedite the course, are reserved. Texas A&M University System policy does not allow inclusion of alcoholic beverages in registration fees.

INSTRUCTORS

Dr. Dave Albin, Director, Nutrition & Extrusion Technologies, Insta-Pro International
Michael Bachelor, Vice President, Bachelor Controls, Inc.
Dr. Christopher Bailey, Professor, Poultry Science Department, Texas A&M University
Tom Barber, Vice President - Process Engineering, Buhler Aeroglide
Lindsay Beaton, Managing Editor of Petfood Industry Magazine, Watt Global Media
Dr. Jon Bergstrom, Senior Technical Support Manager, Swine, DSM Nutritional Products, North America
Wayne Busilla, Purchasing & Logistics Manager, UAS Canada
Amanda Cresanto, Expander Product Line Manager, Anderson International Corporation
Dr. Sara Cutler, Technical Service Manager, Kemin Nutrisurance
Dr. Lynn Deffenbaugh, Technical Services Manager, Kemin Nutrisurance, Inc.
Larry Fex, Technical Sales / Plant Commissioning, UAS Canada
Dr. Delbert Gatlin, Professor, Wildlife and Fisheries Sciences Department, Texas A&M University
Joseph S. Andersen, Applications Engineer, Roskamp Champion
Gerry Hertz, Research Coordinator & Technical Service, Wenger Manufacturing Company
Jolene Hoke, Companion Animal R&D Scientist, ADM Animal Nutrition
Dr. Josh Hudson, Southwest Regional Manager, Perten Instruments
Chris Mack, Senior Research Associate, Extrusion Technology Program, Process Engineering R&D Center, Texas A&M University
Dave Mattice, VP Sales Manager, Automated Process Equipment Corp. (APEC)
Brian Plattner, PE, Process Technology Director, Food and Industrial Products, Wenger Manufacturing Co.
Stephen D. Prince, Research Assistant, Extrusion Technology Program, Process Engineering R&D Center, Texas A&M University
Dr. Mian N. Riaz, Head, Extrusion Technology Program, Process Engineering R&D Center, Texas A&M University
Galen Rokey, Process Technology Director, Companion Animal Division, Wenger Manufacturing Company
Kerry Thomas Sr., Technical Assistant, Extrusion Technology Program, Process Engineering R&D Center, Texas A&M University
Jonathan Thorn, Executive Director of Process Technology, Schenck Process LLC

UPCOMING PRACTICAL SHORT COURSES

For details, visit <https://perdc.tamu.edu/short-courses/>

Extruded Pet Foods and Treats, July 09-12, 2018
Aquaculture Feed Extrusion, Nutrition, & Feed Management, August 26-31, 2018

For additional technical information, contact:

Dr. Mian N. Riaz
Process Engineering R&D Center
Texas A&M University System
Tel: 979.845.2774
Email: mnriaz@tamu.edu

The Extrusion Pilot Plant at Texas A&M University is available for contract research.