

AQUAFEED HORIZONS 2019

PRESENTATION ABSTRACTS

OPTIMAL DESIGN AND PROCESSING OF AQUAFEED

Robert Strathman, President, Famsun-USA Design and Engineering

There are numerous technical features, such as buoyancy and water stability, built into every aquafeed product. Ensuring a high level of line performance with minimal quality defects requires a keen understanding of how these design features are affected by formulation, ingredient selection, and the production process. Several critical aquafeed design features, and their interactions will be discussed.

PROCESS OPTIMIZATION IN AQUAFEED, A CHALLENGE WITH FLUCTUATION IN RAW MATERIAL QUALITIES AND FORMULATIONS

Daniel Stoffner, Product Manager, Bühler AG

One of the challenges in aquafeed production is the fluctuation in processing parameters due to fluctuations in raw materials and least cost formulations. The question to be answered is, how can we optimize the process and the production planning to improve the overall performance in daily operations?

SHRIMP FEED MANUFACTURING USING PELLETING OR EXTRUSION

Nils Lastein, Application Manager, ANDRITZ Feed & Biofuel

Pelleting shrimp feed is the traditional processing method for shrimp feed; it requires large amounts of starch to act as pellet binder for water stability. Extrusion technology enables a significant reduction in formulated starch due to the more intense processing. This reduction leaves room in the formulation for nutritional ingredients and consequently higher feed conversion ratio.

PRACTICAL REALITIES ASSOCIATED WITH MICRO PELLET PRODUCTION

Dana Nelson, Aquafeed Specialist, Extru-Tech, Inc.

The focus of this talk will be the practical presentation and discussion of the use of extrusion equipment to produce micro pellet aquatic feeds. Specific details and experiences will be presented with an emphasis on critical issues.

INSECTS AS A SUBSTITUTE FOR FISHMEAL: INFLUENCE ON THE EXTRUSION PROCESS AND THE PRODUCT PROPERTIES OF CARP FEED

Julian M. Foerster, Application Technician, Brabender GmbH & Co. KG

In order to bring black soldier fly larvae meal into greater practical use, knowledge is needed about how it influences the production process and the product. Experiments in a master thesis to achieve an acceptable carp feed addresses this topic.

KEY LEADING INDICATOR BEST PRACTICES IN THE EXTRUSION/DRYING PROCESS

Charles Engrem, Director of Aquafeed Process, Wenger Manufacturing

The Extruder and Dryer are a key part of most aquafeed ventures, and they can easily consume the profits of a company without having a systematic approach to control the profit leaks. This presentation will present key essential best practices.

IOP: LEVERAGING PEOPLE, PROCESS, AND PLATFORMS TO MAXIMIZE AQUAFEED PRODUCTION

Paul D. McKeithan, Head of Digital Services, Bühler Aeroglide

Digital services and the industrial internet of things (IIoT) are transforming processing operations with intuitive and intelligent analytical capabilities. Many aqua feed manufacturers already have the data, sensors and controls. But why do they need the noise of IoT?

MODELLING TOOLS TO EVALUATE AQUAFEEDS

Luís E.C. Conceição¹, Tomé S. Silva¹, Filipe Soares², Ivar Rønnestad²

¹SPAROS Lda, Portugal, ²University of Bergen, Norway

The replacement of fish meal and fish oil often affects protein digestibility, nutrient retention, and has major impact on nitrogen and phosphorus waste. What modelling tools are there to make quantitative assessment of the effects of these changes in feed formulations on fish performance, feed costs, consumer-value, and environmental impact?

THE IMPORTANCE OF PRODUCING HIGH-QUALITY FRY IN ORDER TO OBTAIN WELL PERFORMING JUVENILES UP TO FARMGATE

Tania De Wolf¹, Geert Rombaut² and Alessandro Moretti²

¹ Maricoltura di Rosignano Solvay srl, ²INVE Technologies

Nutrition, microbial management and immuno-stimulation during the early stages results in new concepts, that are applicable in aquaculture production and health management practices of farmed fish in the Mediterranean area, to produce high quality fry, which will further develop into well performing juveniles up to the farm gate.

CONTROLLING PHOSPHORUS DISCHARGE IN AQUACULTURE

John Mollison, Prairie AquaTech

This presentation will describe the challenges of Phosphorus discharge for the feed industry and how developing dietary formulations as well as measurement matrix and challenges/opportunities within production environments work to reduce P discharge.

OPTIMIZATION OF THE USE OF LIPIDS IN AQUACULTURE DIETS

Nicola Tallarico, Regional Director EMENA - Kemin AquaScience

Recent developments in the use of lipid fraction of fish and shrimp diets has drawn the attention of different

Guidelines to prevent lipid oxidation processes, highlighting the attention to the features to look for when selecting antioxidants for different substrates. The author focuses on the importance of synergism between molecules, and how different antioxidants respond differently depending on the composition and origin of fats to stabilize.

A MICROALGAL OIL CONTAINING EPA+DHA AS A SOURCE OF OMEGA 3 IN AQUACULTURE SPECIES

Ester Santigosa, Senior Scientist Aquaculture, DSM Nutritional Products France

Research conducted by Veramaris has demonstrated that an algal oil rich in EPA and DHA can be used in fish oil-free or marine ingredient-free aquafeeds obtaining growth rates, fatty acid digestibility values and fillet fatty acid profiles comparable to those of fish fed with standard commercial diets without compromising animal's health.

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