

DHI SOLUTION

## FISH FEED AND ADDITIVES

Fulfilling the legislative requirements for the EU market

### WHAT'S RIGHT FOR THE FISH AND PERMITTED BY LAW

Fish feed contains nutrients and energy sources essential for fish growth and health. Deficiencies of these substances can reduce growth rates or lead to diseases. The use of probiotics as a feed component has been shown to have significant impact on fish health and thereby the economic performance of fish farming.

Probiotics are live microorganisms which, when administered in adequate amounts, confer a health benefit on the host. The mode of action of probiotics includes modulation of the immune system and competitive exclusion of pathogenic microorganisms based on mechanisms like production of bactericidal substances, competition with pathogenic bacteria for nutrients and intestinal adhesion sites.

### EU LEGISLATION ASKS FOR THOROUGH DOCUMENTATION OF FISH FEED COMPONENTS AS WELL AS THEIR EFFECTS

Placing a fish feed on the market of the European Union (EU) is a very complex process. The feed must be very thoroughly documented, especially concerning its safety not only for the fish but also for the worker handling the feed and for the external environment.

In addition, only specifically approved additives to feed are allowed in the EU. On the other hand, once approved, the market is open for all 27 EU countries, plus the three EFTA countries.



### SUMMARY

#### CLIENT

Aquaculture farms, fishfeed factories for the EU market

#### CHALLENGE

In the European Union providing sufficient documentat for the safety and the efficacy of additives requires extensive knowledge of EU legislation and national specifics, coupled with toxicological and fish-biological expertise.

#### SOLUTION

Early action is required to avoid costly delays and ensure quickest possible approval of fish feed products. Our regulatory experts will help you through the regulatory "maze."

#### VALUE

- Compliance with national and international law
- Smooth approval process
- Maximum safety of your product
- Easy access to the EU market
- Continual updating on future trends in EU market and EU law

To be approved, the feed additive's composition as well as its effects on human health and the environment must be thoroughly documented. Moreover, the documentation requires a justification for its utilization in the feed. For example, certain probiotic bacterial cultures may now be added to fish feed in the EU to ensure a more uniform growth of the fry. That effect has been documented in scientific trials, demonstrating that the adult fish indeed are more uniform in size and shape when such probiotic cultures are fed.

#### EARLY ACTION WITH THE NECESSARY KNOW-HOW ALLOWS YOU A SMOOTH ACCESS TO THE MARKETS

At early stages of feed development by the feed industry, it very important to choose the right path towards the final feed product. This includes having knowledge of which additives are most efficacious, most economical, and are permitted by law.

Therefore, collaboration with regulatory experts is strongly recommended, even by the EU feed authorities. These experts should not only know the EU law but also know the nutritional requirements of the fish. DHI's experts span these knowledge needs.



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#### WE TAKE CARE OF THE LEGISLATION, SO THAT YOU CAN TAKE CARE OF YOUR BUSINESS

By following our expert advice on the regulatory affairs of fish feed in the EU, feed industries and fish farms make sure the operation is on the right side of the law.

As well, they ensure that the effect on the aquatic environment is acceptable.

What's more, these businesses avoid feeds with spurious claims of efficacy for the fish product. DHI's ichthyologists (i.e., fish experts) review the efficacy studies and ascertain whether the test results support the claims. Is the survival of the fry greater with the new additive? Do the adults actually gain weight more quickly with the new additive?

Tests for the absence of negative effects on the external environment can be carried out in DHI's own aquatic laboratories. DHI has laboratories for both tropic and temperate waters.