

NEW FEED SOLUTION TO ALLOW A FISH MEAL REDUCTION IN AQUAFEEDS - EXAMPLE WITH SEABREAM *Sparus aurata*

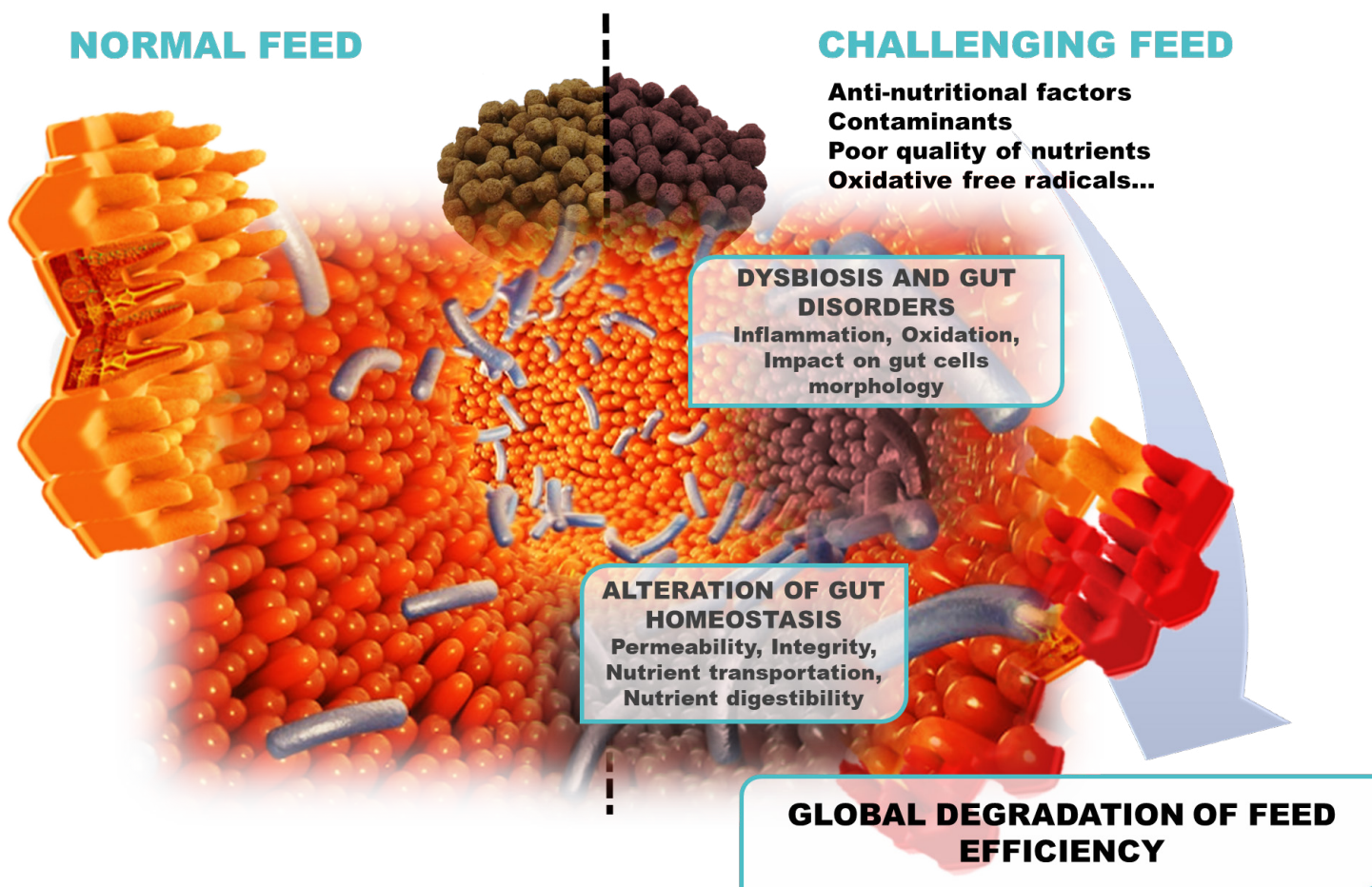
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For economic, environmental and societal reasons, a lower usage of finite marine-harvested resources has been a major trend in the aquafeed industry. Grain and oilseed by-products are promising sources of protein and energy for aquaculture feeds. However, high dietary inclusion levels of plant proteins can be challenging since they are often been associated to detrimental effects on growth, feed efficiency, intestinal dysbiosis and immune response, threatening the profitability of major aquaculture species

In the scope of this sustainable approach, miXscience explores a specific solution, that helps to reduce the negative impact of challenging feeds.

PROBLEMATIC



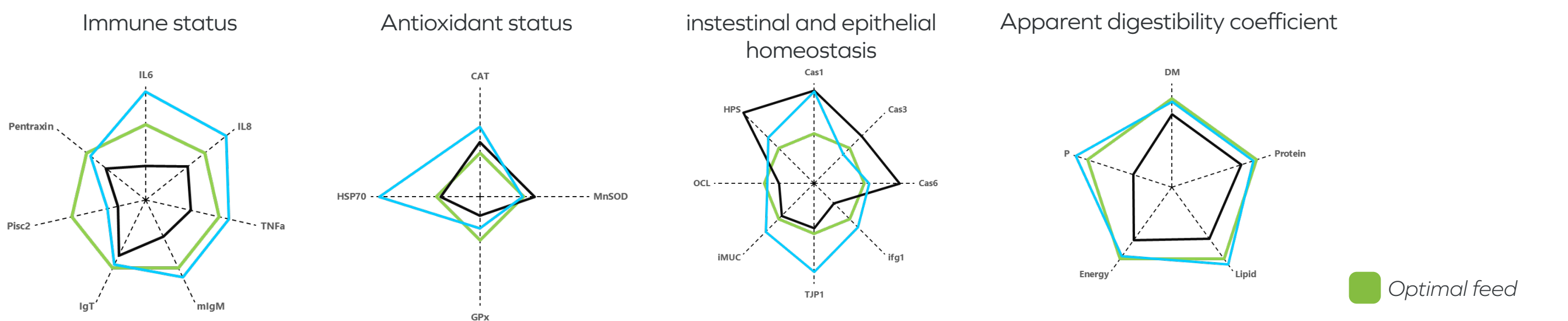
SOLUTION & ASSOCIATED EFFECTS



- ▶ Internal Mixscience trial (2022) – Seabream *Sparus aurata*
- ▶ Initial weight: 40 g / Extruded Feed
- ▶ 62 days under nutritional stress = partial replacement of Fish meal SP (10 %) by vegetal ingredients (soybean and sunflower meals)
- ▶ Followed by 12 days of stress challenges (high density + low oxygenation)
- ▶ Dose Experimental product [EXP] : 200 g/T

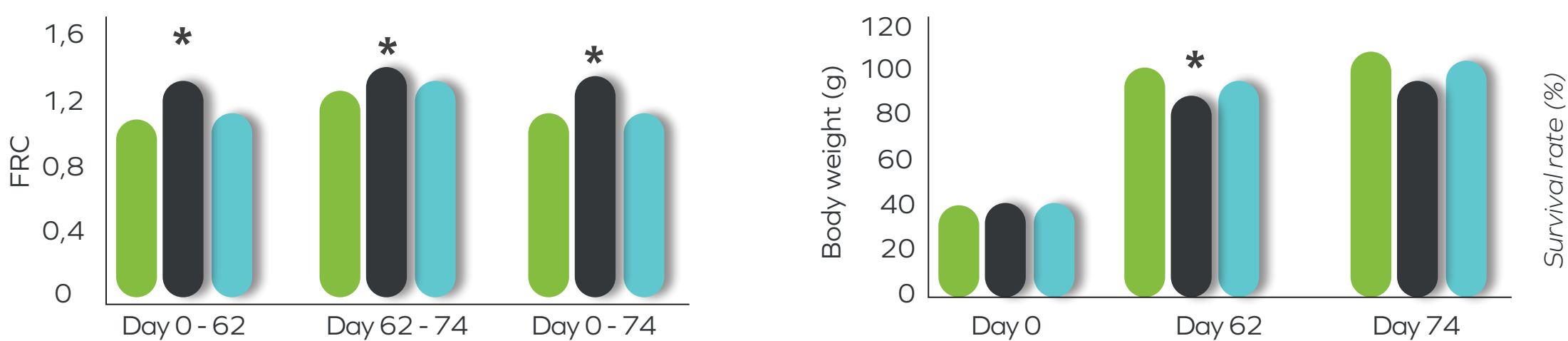
KEY RESULTS

1 - RELATIVE STRESS RESPONSE OF SEABREAM UNDER NUTRITIONAL CHALLENGE



2 - OVERALL EVOLUTION OF FEED CONVERSION RATIO (FCR) AND FINAL BODY WEIGHT [DAYS 0-74]

[0-62 days] = Nutritional Stress ; [62-74 days] = 12 days of Nutritional stress and Environmental stress



IN CHALLENGING CONDITIONS, THE PRODUCT :

1 - Activates key metabolic activities to save energy and maintain an overall resistance that limits dysbiosis and gut disorders under stressful conditions

2 - Helps to maintain an optimal feed efficiency and global host's fitness

The present study confirms that dietary supplementation with this new feed solution is an effective strategy to maintain the zootechnical performance of gilthead sea bream under conditions of dietary and environmental stress.