

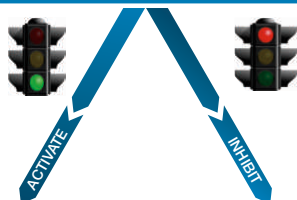


POLYGAIN™

aquaculture

MECHANISM OF ACTION OF POLYGAIN™ AQUA

High antioxidant polyphenols detected in Polygain™



CONSERVED CELLULAR PATHWAYS

NRF2 SIRT1 eNOS AMPK

CONSERVED INFLAMMATORY PATHWAYS

COX2 TNF- α NF- κ B PLA2 PGE2

BIOLOGICAL EFFECTS

- Reduction of oxidative stress
- Improved immune function
- Balanced and healthy microbiome, free of costly antibiotics
- Improved amino acid availability and protein synthesis

PRODUCTION OUTCOMES

- ✓ Increased growth rate
- ✓ Improved feed conversion ratio
- ✓ Improved shelf life and fish meat quality
- ✓ Increased stability due to the anti-oxidants incorporated into the feed



POLYGAIN™ AQUACULTURE

POLYGAIN™

Polygain™ is a registered trademark of The Product Makers (TPM). TPM holds numerous global patents on the production and properties of Polygain™.

Polygain™ is a natural plant extract from *Saccharum officinarum*; it is polyphenol rich, high in anti-oxidants, rich in minerals, nutrients and essential amino acids.

Many countries are legislating to remove antibiotics and hormones from aquafeeds. Natural bioactive additives from plants such as Polygain™ with anti-inflammatory and anti-bacterial properties have the potential to replace some of the functions of these additives in the aquaculture industry.

Polygain™ when used as a feed supplement delivers beneficial results to the intensive farming of a wide range of aquatic species.

BENEFITS

- ✓ Improves overall growth performance
- ✓ Improves resistance in fish against disease
- ✓ Contains anti-inflammatory and anti-bacterial properties
- ✓ Attracts fish to the feed
- ✓ Maintains water quality & environment
- ✓ Improves feed conversion ratio
- ✓ Anti-oxidant effect improves fish meat odour and texture
- ✓ Up-regulates gut microbiome (balance of healthy gut bacteria)
- ✓ Reduces chronic inflammation
- ✓ Low supplement inclusion % (0.2-0.6% w/w)