

# Bioactive innovation

From the highest-quality  
natural marine resource.



SANFORD  
**BIOACTIVES**



# Science-based marine nutrients harvested from the purest source

By controlling the end-to-end supply chain, Sanford Bioactives products deliver the highest-quality science-based marine nutrients from New Zealand's pristine oceans and beautiful seafood.

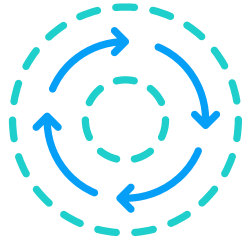


## What sets Sanford Bioactives apart



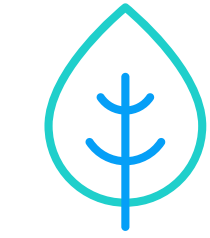
### Efficacy

Carefully selected natural marine resources which are processed with a focus on quality and bioactivity.



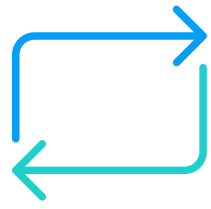
### Traceability

Our end-to-end supply chain ensures each product produced can be traced back to source.



### Sustainability

100% natural. Non-GMO. Certified sustainably managed marine inputs.



### Consistency

Secure and consistent supply meeting demanding specifications.



# Sanford: A rich history

We started as a family business in Auckland, New Zealand in 1881 and have grown into a company with over 1,400 people.

With more than 130 years of sustained growth, we are proud of our history and excited about our future.

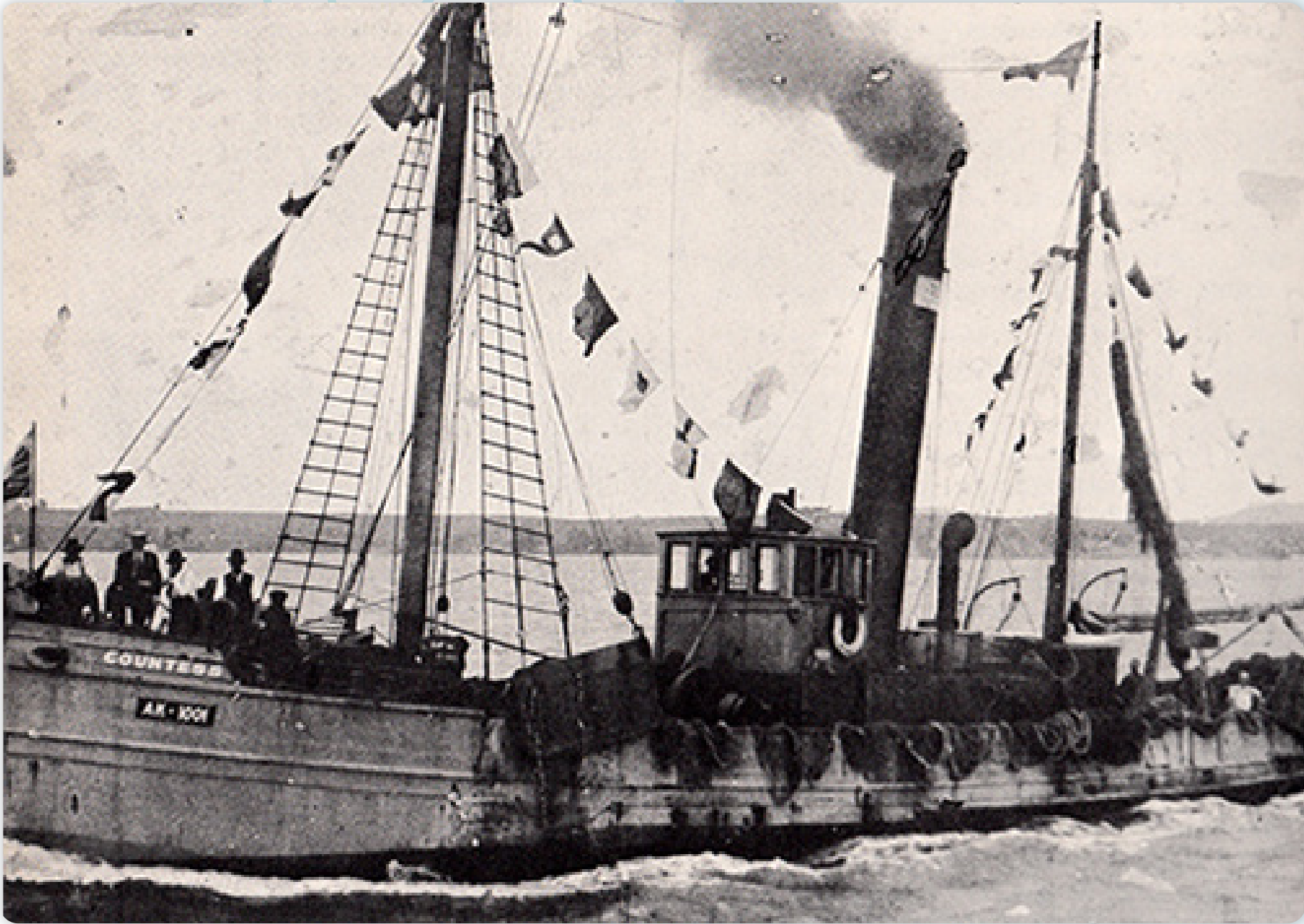
Holding 19% of New Zealand's quota and with 41 vessels and 225 aquaculture farms, Sanford is New Zealand's largest integrated fishing and aquaculture business.



Sanford's first fish market on the corner of Albert & Custom St West, early 1890s



Albert Sanford, father of Auckland's fishing industry



Steam trawler Countess in Auckland Harbour, 1917



# Our Greenshell™ Mussels

Greenshell Mussels are New Zealand’s most iconic seafood, rated by the Monterey Bay Seafood Watch Programme as one of the most sustainable seafood products in the world.

Sanford makes up over 40% of the national harvest volume and employs more than 400 staff who are committed to growing mussels in a way that has a positive impact on our waters.

## Harnessing nature for health

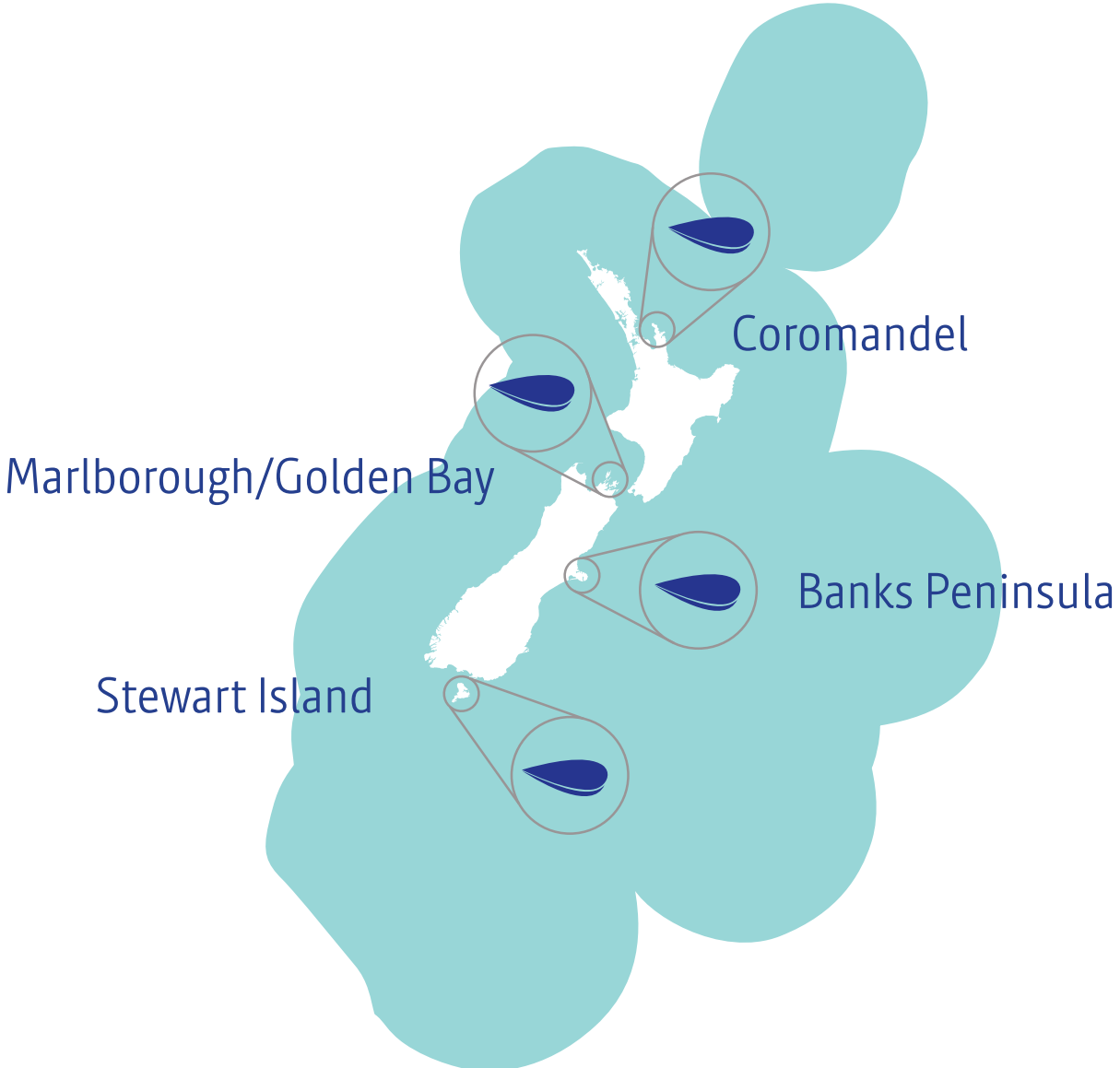
New Zealand Greenshell Mussels have proven effectiveness in relieving the symptoms of joint pain and flexibility and other inflammatory conditions.

### Contains:

- > Protein, contains all essential amino acids.
- > Fat, including marine Omega-3 fatty acids, and other bioactive lipids.
- > Carbohydrates, including natural glycosaminoglycans (GAGs), e.g., Chondroitin Sulfate.
- > Naturally occurring micronutrients, e.g., vitamins and minerals.



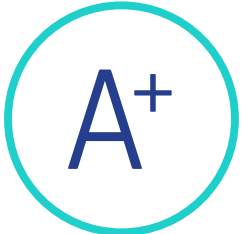
## We grow our mussels in four areas:





# Sustainability sits at the heart of our business

We don't just say Sanford's New Zealand Greenshell™ Mussels are 'sustainably farmed', we mean it and have the credentials to prove it.



Our Greenshell Mussel aquaculture practices are rigorously and regularly checked in accordance with the **A+ New Zealand Sustainable Aquaculture Programme**, a comprehensive sustainable management framework covering ecology, water quality, waste management, resource use, food safety, indigenous communities, and local community involvement.



New Zealand half-shell mussels have among the **lowest carbon footprints of all animal protein**. This has been confirmed by a full lifecycle assessment of New Zealand farmed Greenshell Mussels completed using standardised lifecycle assessment methodologies (ISO 14044 and ISO 14067).



All Sanford's New Zealand Greenshell Mussels are rated '**BEST CHOICE, Buy First**' by the **Monterey Bay Aquarium Seafood Watch system** due to being farmed 'off bottom culture'. Products rated as 'BEST CHOICE' are deemed to be 'well managed and caught or farmed in environmentally friendly ways'.





# Sanford Bioactives – Marine Extracts and Innovation centre

In late 2022 Sanford Bioactives opens its brand-new, purpose-built Marine Extracts Centre located in Blenheim, New Zealand.

The site includes some of the most technically advanced equipment for extraction and drying of marine products as well as a team of dedicated research scientists working on the development of the next generation of marine extract ingredients.

- > Unique flash-drying process
- > Large-scale powder blending
- > Supercritical Fluid Extraction (SFE)
- > Specialty fish oil extraction
- > Collagen extraction for high-value and unique collagenic products
- > Innovation Hub
- > Research, testing and scale-up facilities





# PERNAULTRA™

## Greenshell™ Mussel Powder

Our proprietary 'flash-dried' process using only fresh mussels, yields a superior powder, which is more bioactive than any other on the market.

For centuries, native New Zealand Greenshell Mussels have helped maintain mobility and joint health by supporting the body's natural ability to manage inflammation.

Providing a unique synergy of marine fatty acids associated with anti-inflammatory responses, our powder also contains Glycosaminoglycans (GAGs), a special form of mucopolysaccharide complex carbohydrates. Studies suggest that these combined with the omega-3 fatty acids can be beneficial to joint health.

## Our process

At Sanford Bioactives we sustainably harvest Greenshell Mussels in their pristine New Zealand ocean environment before capturing their nutritional benefits in a 100% natural flash-dried powder. Our Greenshell Mussel powders contain **no** additives, preservatives or fillers.

We control the process from start to finish; from the selection of the raw material to the production of the powder to consistently deliver a premium and high-quality product.

Our unique flash-dry process produces a fine powder within minutes, ensuring product freshness and avoiding the opportunity for lipids to oxidise.

The product is immediately packaged under vacuum for stability and shelf life.



**PERNAULTRA™**  
Internationally  
trademarked for  
100% consistency

## Nutritional powerhouse

- > High-quality protein: contains 19 essential amino-acids
- > Omega-3 fatty acids (ALA, EPA, DHA, and ETA)
- > Glycosaminoglycans (including chondroitin sulphates)
- > Vitamins: vitamin A, vitamin B, vitamin D and E
- > Minerals and trace elements from the sea: iron, iodine, selenium, magnesium, potassium, phosphorus, and zinc
- > 100% natural

## To support

- > Joint mobility and flexibility
- > Bone, cartilage and connective tissue
- > Inflammation management
- > Respiratory health
- > Digestive health



# PERNAGOLD™

## Greenshell™ Mussel Oil

Our proprietary technology delivers a supercritical CO<sub>2</sub> extracted non-polar lipid fraction rich in marine omega-3. PERNAGOLD has a concentrated delivery mechanism for the Greenshell Mussel anti-inflammatory properties.

Greenshell Mussels have been the subject of decades of research exploring their health supporting properties, many of which have been directly related to their support of joint health, which all started with lipid extracts.

Our PERNAGOLD Greenshell Mussel oil provides naturally occurring non-polar lipids with a wide range of health benefits. It's a good source of omega-3 fatty acids, including EPA and DHA.

## Our process

At Sanford Bioactives we sustainably harvest Greenshell Mussels in their pristine New Zealand ocean environment before capturing their nutritional benefits in a 100% natural supercritical CO<sub>2</sub> extracted oil. Our premium Greenshell Mussel oil contains **no additives, preservatives or fillers.**

Our supercritical CO<sub>2</sub> extraction method concentrates the natural bioactivity and key nutrients:

- > Low processing temperature for a superior-quality product.
- > Solvent-free oil.
- > Non-polar lipid fraction.



PERNAGOLD™

Internationally  
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100% consistency

## Bioactives concentrates

- > Omega-3 fatty acids (ALA, EPA, DHA, and ETA)
- > Natural vitamins
- > 100% natural

## To support

- > Inflammation management
- > Joint mobility and flexibility
- > Respiratory health
- > Digestive health



# RENEWCOL™

## Marine Collagen Powder

Our hydrolysed, highly water-soluble, marine collagen consists of predominantly Type I collagen extracted from hoki skins, sourced solely from the deep and pristine waters of New Zealand. Sustainably managed, and traceable back to source.

After years of scientific research supporting its ability to provide a wide range of health and beauty benefits, collagen has quickly become one of the world's most popular ingredients. Although several collagen sources have been studied to date including bovine, porcine and poultry, it is marine collagen that stands out as the safest and most sustainable source in the market today.

RENEWCOL Marine Collagen Powder consists of hydrolysed Type I collagen. This naturally sustainable product serves as a convenient and effective source of collagen, packed with restorative amino acids and peptides.

## Our process

Through our fully integrated operations from catch to final product we can tailor processing solutions to suit the highest specifications required.

Shortly after the hoki are brought on-board our deep-water fishing vessels, the skins are separated at sea.

The skins then go through a low temperature extraction and drying process. The resulting product is a 100% natural, white and odourless free-flowing powder.



**RENEWCOL™**

Internationally  
trademarked for  
100% consistency

## Premium quality & service

- Excellent source of protein
- Bioavailable amino acids and peptides
- Small batch production runs
- Gentle processing technique
- From MSC certified sustainable hoki

## To support

- Skin hydration and elasticity
- Skin rejuvenation
- Hair and nail quality
- Joint and musculoskeletal health







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