

OCEANIUM[®]

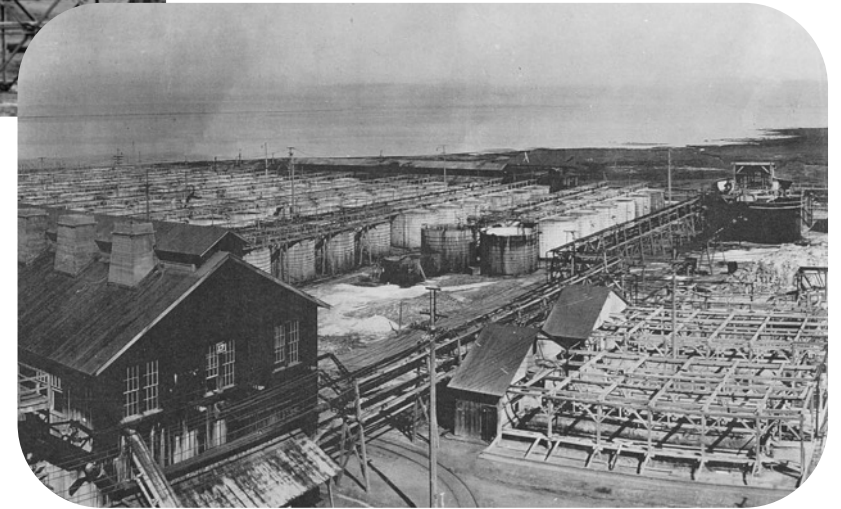
Maximising the Value
and Versatility of
Seaweed

Jessica Thorne



Then... The Early Seaweed Industry

- ❖ 1720s France – soda from kelp
- ❖ In 1820s, Outer Hebrides producing 20,000t of seaweed
- ❖ Potential for alginic acid first recognized in 1880s by E. C. C. Stanford
- ❖ Revisited in 1920s – potential for a 'cellophane-like' material
- ❖ WW1 – major source of potash for explosives
- ❖ WW2 – used in prototype fighter-bomber



Seaweed factory operations – Scotland (top & middle) and California (bottom)

Now... OCEANIUM's Sustainable, Science-Led Biorefinery Approach

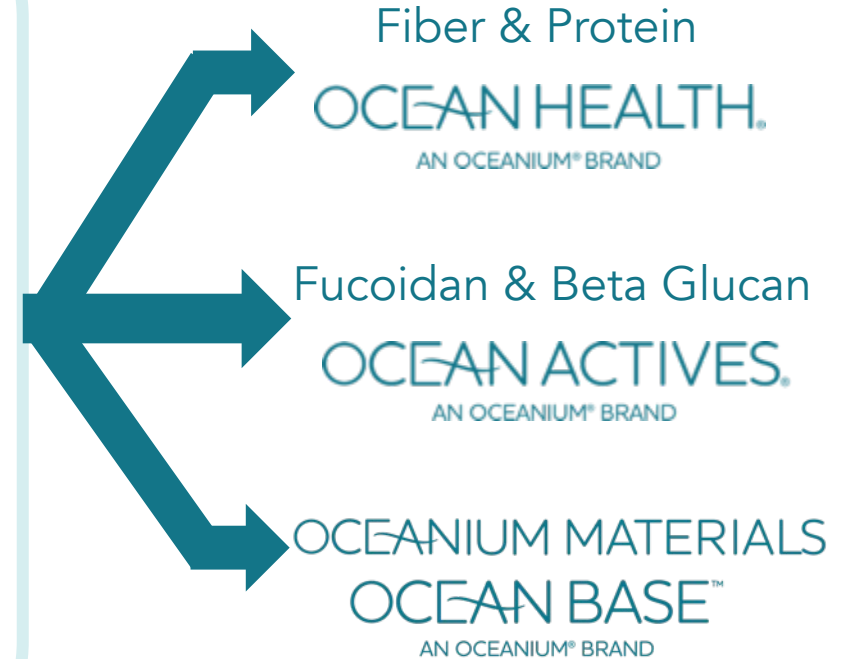


Purchase sustainably sourced seaweed



OCEANIUM®

- ❖ Maximizes value of seaweed
- ❖ Sum of parts > whole
- ❖ Green chemistry principles



Fiber & Protein

OCEAN HEALTH.
AN OCEANIUM® BRAND

Fucoidan & Beta Glucan

OCEAN ACTIVES.
AN OCEANIUM® BRAND

OCEANIUM MATERIALS

OCEAN BASE™
AN OCEANIUM® BRAND



OCEAN HEALTH[®] Fiber



Sustainable
source of
dietary fiber



Digestive
health



Immunity
boosting

OCEAN HEALTH[®] Protein

In development – from
kelp and ulva





OCEAN ACTIVES® Fucoidan

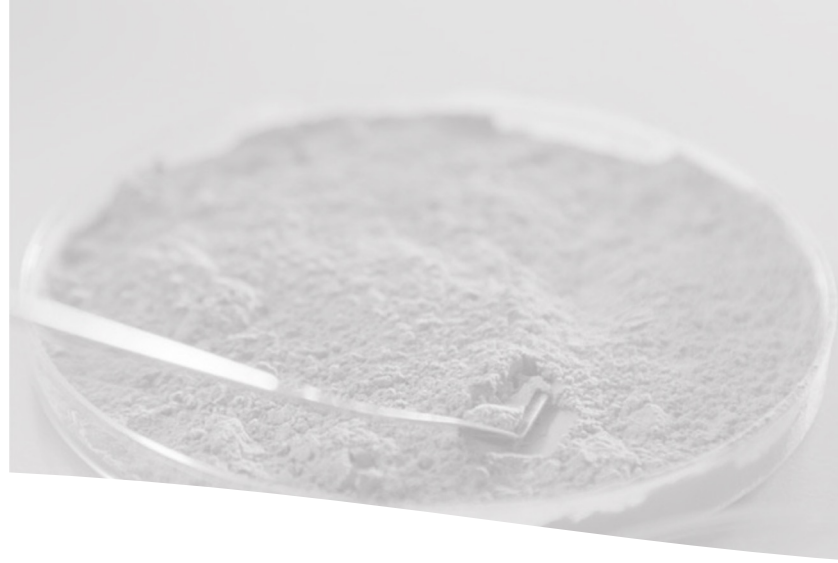
- ❖ Immune boosting and supports gut health/function – increases microbiome mass by 50% (*small in vivo trial*)
- ❖ Restores, calms and protects for skincare use



OCEAN ACTIVES® Beta-Glucan Plus

- ❖ First from seaweed
- ❖ Part of Wageningen University study on countering cognitive decline – gut-brain health

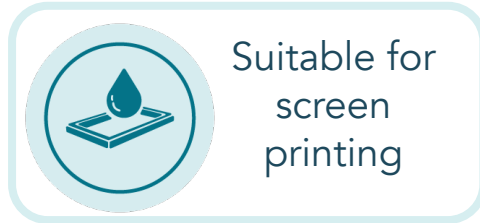




OCEAN BASE™
AN OCEANIUM® BRAND

- ❖ A versatile base ingredient for easy integration and dispersal into materials
- ❖ Offers additional functionality to composites

OCEAN INK®



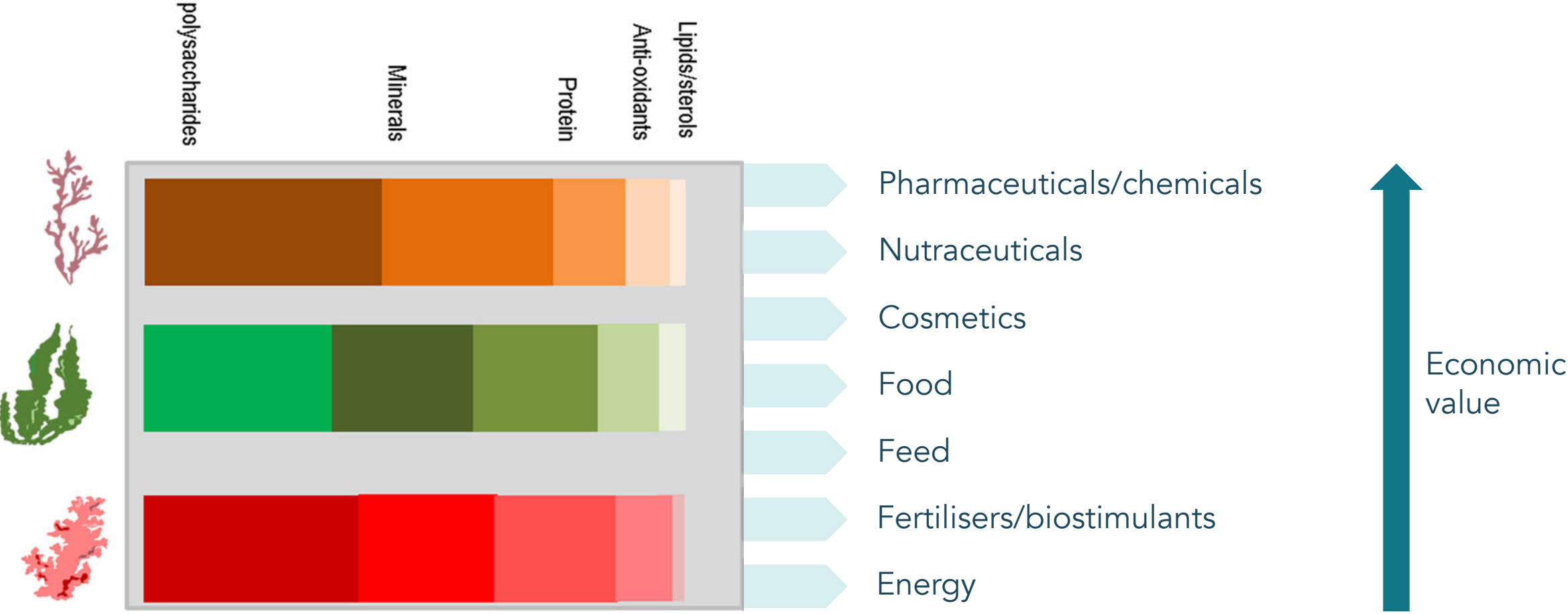
What Do Our Customers Look For?

- ❖ For food applications, TASTE and LOOK are key
- ❖ Verifiable clinical trials and health claims
- ❖ Functionality
- ❖ Traceability and sustainability credentials
- ❖ Consistent supply

And What Does That Mean For Us and Our Suppliers?

- ❖ Massive progress on trials and claims, with more to come
- ❖ Boosting compositional value and research
- ❖ Testing and quality control – similar to other crops
- ❖ Certifications
- ❖ 100% traceability

The Opportunity: Potential to Scale and Diversify Responsibly



Ref: Torres et al. 2019. <https://doi.org/10.1007/s11157-019-09496-y>



*Kelp The
World[®]*

