



MacroBreed

Breeding Kelp for a Warming Ocean

Our mission is to future-proof seaweed ecosystems and the global seaweed industry through genomic breeding, making cultivated seaweed economically competitive, climate-resilient, and deployable at scale.

Dr. Gary Molano · Co-founder & CEO · gary@macrobreed.com

Kelp for the Future.

Kelp Can't Scale!

The Ocean Is Running Out of Time



**Oceans Are
Warming Faster
Than Kelp Can
Adapt**

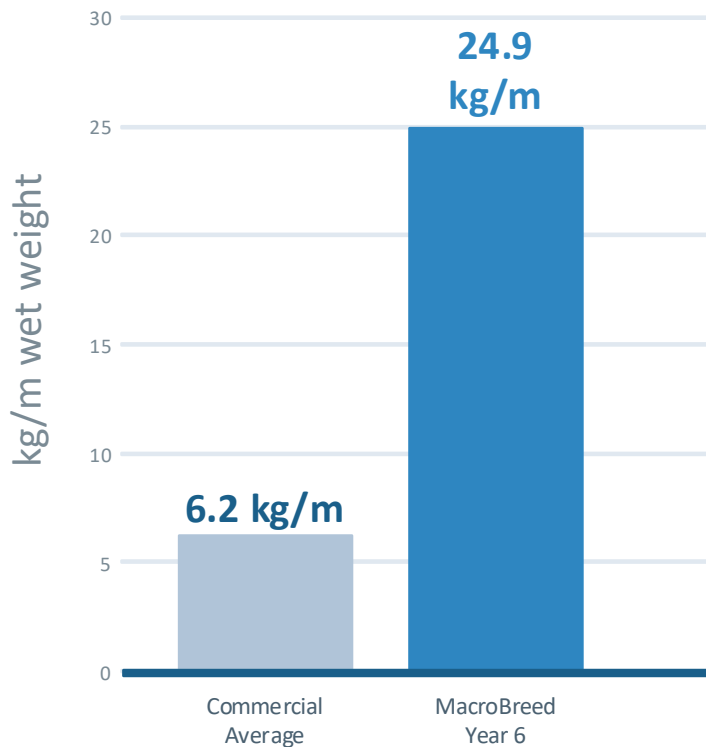


**Breeding
Infrastructure Is
Limited**



**Production Costs
Are Too High to
Scale in US and EU**

8 Years of Science. 4× Yield. Non-GMO Breeding Platform Ready to Scale.



**Whole Genome
Sequencing**



**02 Genomic Selection
Models**



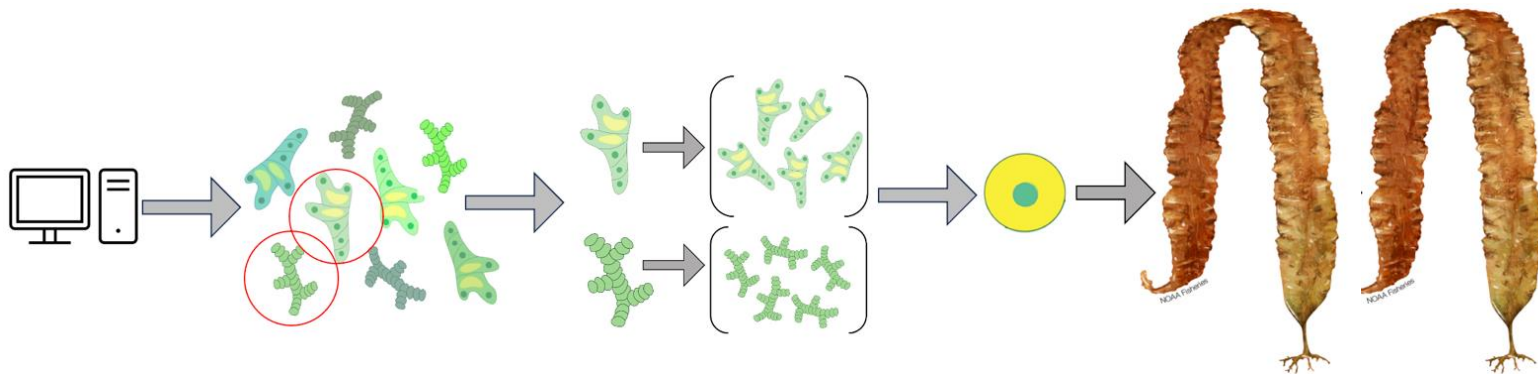
**03 Non-Reproductive
Strains**



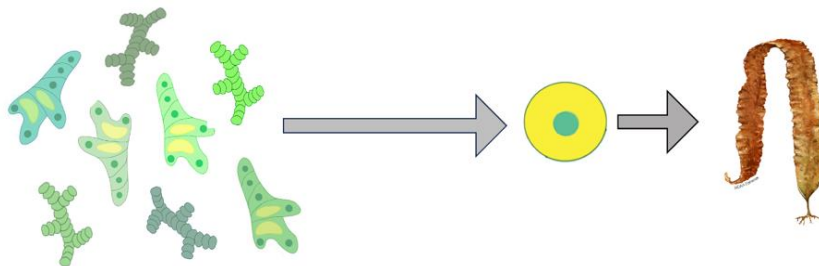
**04 Phenotypic
Consistency**

MacroBreed's Breeding Kelp Platform Uses Genomics to Revolutionize the Seaweed Industry

Our Methods : Cross gametophytes computationally identified with high breeding values.



Traditional Methods: Cross random mixes of gametophytes for outplanting



Better Genetics = Lower Costs = Regenerative Industry

Our platform targets universal traits that benefit all markets and enables precision breeding for specific downstream applications.

4×

yield vs. commercial average
already validated

10×

faster than traditional
breeding methods

6 yrs

to triple sugar kelp
harvestable biomass

\$1M

raised — built on a 7-yr
\$11M research foundation



Universal Breeding Traits

- Yield
- Thermal Resilience
- Disease Resistance



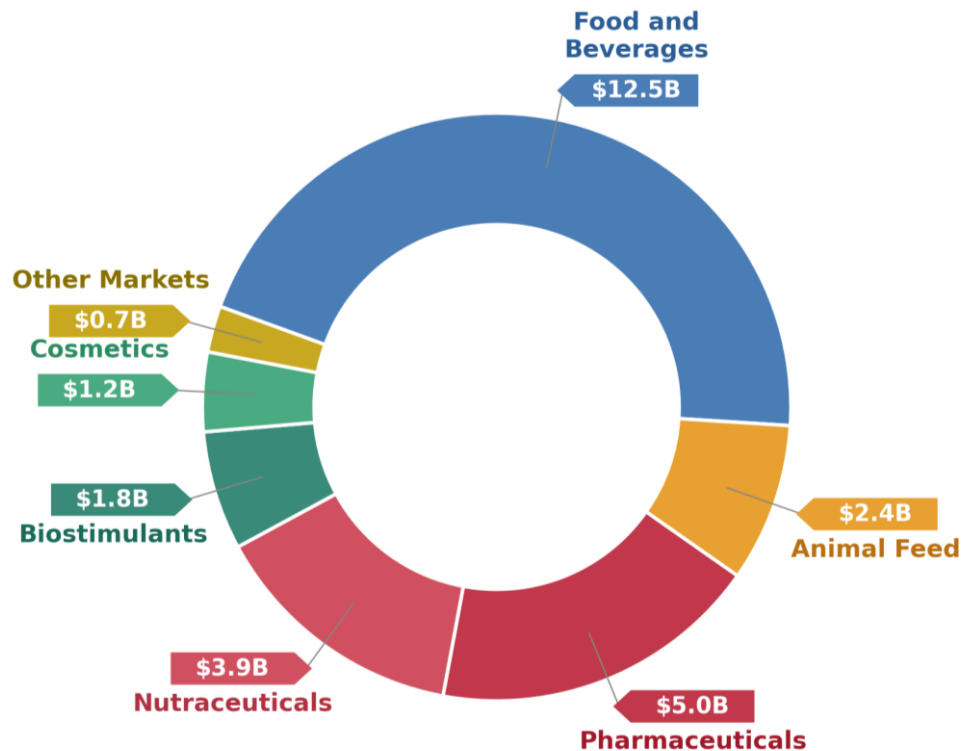
Precision Breeding Traits

- Decrease Iodine / Heavy Metals
- Increase Polysaccharides
- Increased Protein

MacroBreed Paths to Revenue



Seaweed Industry Is Growing Across Many Markets

**TAM****\$27.5B****Global Seaweed Market**

6% CAGR · food, nutraceuticals, pharma, biostimulants, animal feed

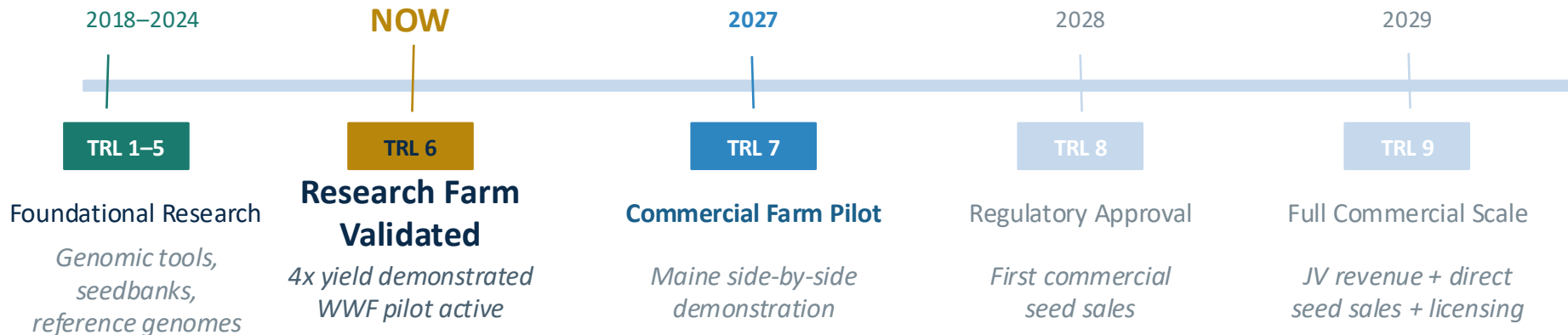
SAM**\$1.2B****Kelp Polysaccharides**

Sugar kelp seed, JVs & licensing · processors most impacted by climate & seed quality

SOM**\$46M****Providing Seed for Polysaccharide Market (20%)**

Near-term beachhead · Maine first · expands with regulatory approval

TRL 6 Today - Commercial Scale by 2029



Commercialization Process:

Active USDA STTR - Automated Seeder

Active USDA SBIR – Sugar Kelp for Food

Non-reproductive Paid Pilot

JV Discussions in US, Europe, and Asia

Support:

10 Letters of Intent

16 Letters of Collaboration

MacroBreed Is the Only Genetics-Based Solution in the Space

MacroBreed Improved Seed Increases Supply Chain Resilience

	Sustainable Regenerative	Scalable	Enhanced Value	Protects Local Ecosystems
OUR SOLUTION MacroBreed				
Seed Suppliers				
Wild Harvest				

World-Class Kelp Scientists & Aquaculture Pioneers

Dr. Gary Molano

Co-founder / CEO



Pioneer in seaweed genomics. Activate Fellow 2025. Co-inventor of non-reproductive kelp (patent pending). PhD, USC.

Scott Lindell, M.S.

Co-founder / CTO



40 years aquaculture experience. Co-founded a commercial RAS fish farm. Co-inventor of non-reproductive kelp. Based at WHOI.

Dr. Charles Yarish

Co-founder / Advisor



University of Connecticut. 300+ peer-reviewed papers. Pioneer in US seaweed cultivation and IMTA research.

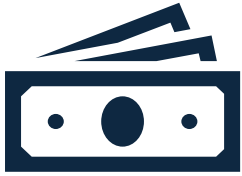
Dr. Filipe Alberto

Co-founder / Advisor



University of Wisconsin-Milwaukee. Expert in seaweed population genetics and local adaptation to climate stress.

MacroBreed Asks



Funding

- \$1M for sugar kelp polysaccharide breeding program (3 years)



Partners

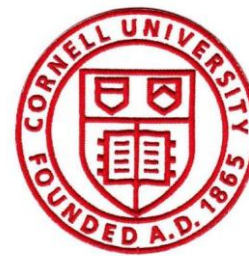
- Large European processor of seaweed for joint venture



Support

- Industry Connections in Europe

Thank You!





The Oceans Need Resilient Kelp.

MacroBreed Has the Science to Deliver It.

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