R&D phase | Research **Expected Commercialization** | FY28-

Mehr Licht!
More Photonics for Intelligence

#E08

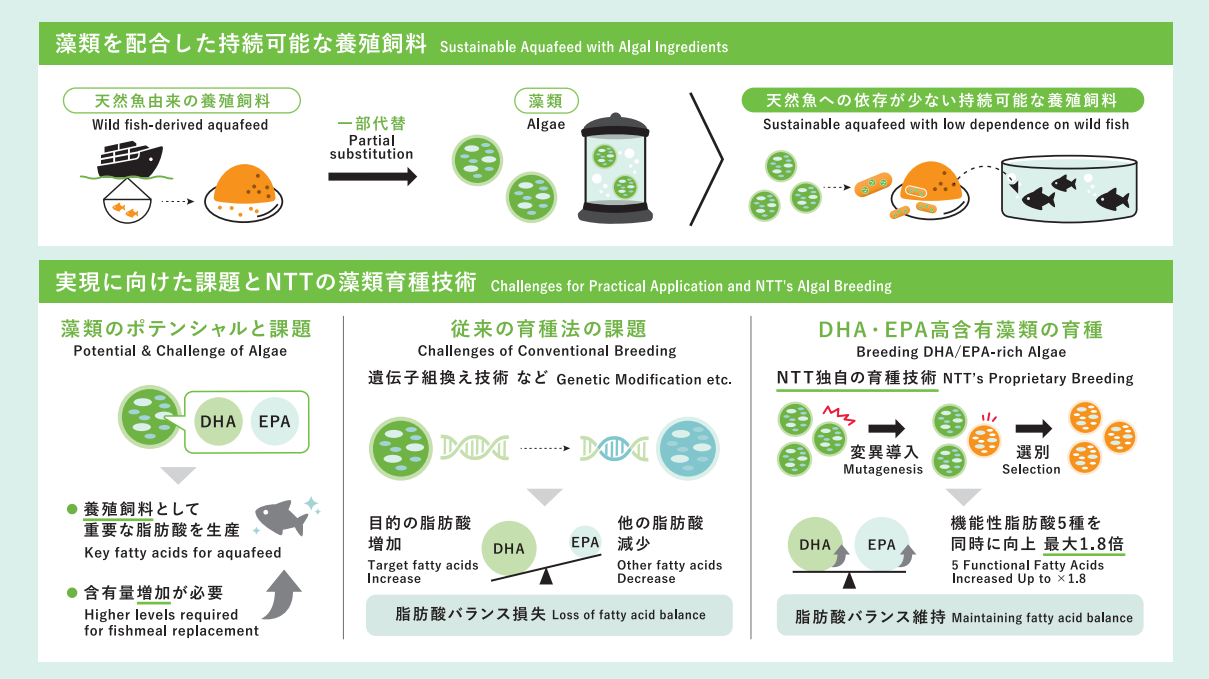
#Climate Adaptation#Nature Positive#Carbon Neutral

Algal Breeding to Enhance DHA and EPA

Advancing sustainable aquaculture with algae-based feed alternatives

Technical Challenges & Goals

Algae offer a sustainable alternative to fishmeal and fish oil, but its practical use requires more DHA, EPA and other functional fatty acids. Conventional approaches struggle to boost multiple fatty acids while preserving their balance. NTT's breeding approach achieves both, improving algae's value as feed ingredients.



Key Technologies

Core Technologies

- NTT's proprietary mutagenesis and selection of algal cells rich in functional fatty acids
- Simultaneous enhancement of five functional fatty acids, including DHA and EPA

Key Differentiators

- Up to 1.8× increase in five functional fatty acids, such as DHA and EPA, without disrupting balance
- Algal strains developed with this approach are exempt from GMO regulations, easing commercialization

Use Cases

Agriculture, Forestry & Fisheries

DHA- and EPA-rich algae could replace some fish-derived feed ingredients, reducing reliance on fishmeal and fish oil. By developing feeds with these algae, we advance sustainable aquaculture.

Exhibitors

NTT Space Environment and Energy Laboratories

Related Links

https://group.ntt/jp/newsrelease/2026/07/07/260707a.html