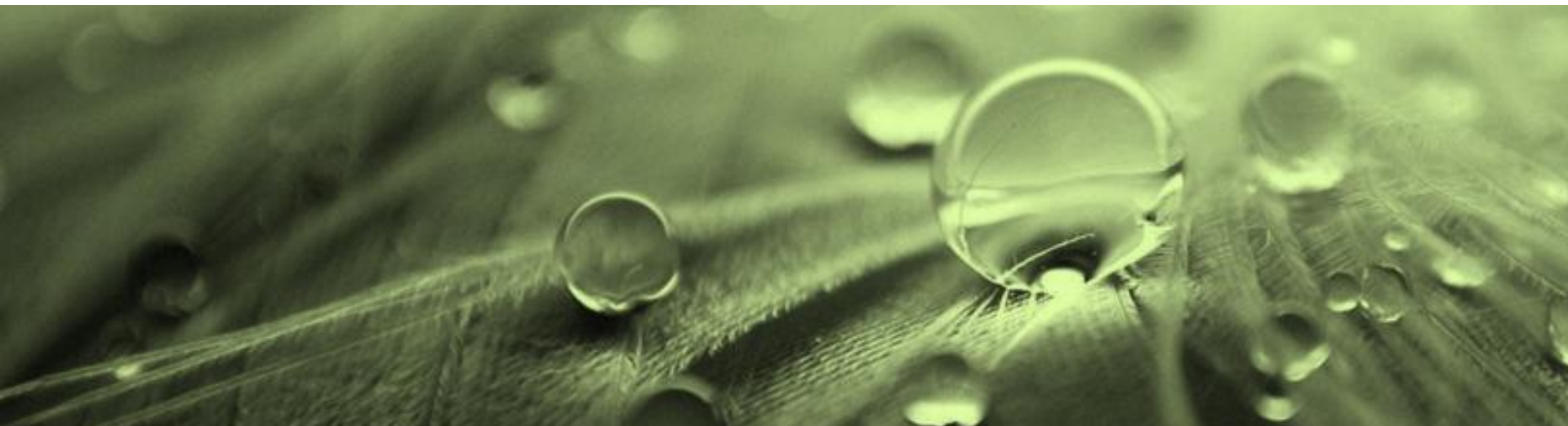


MICROALGAE in AQUACULTURE

September 17th 2020



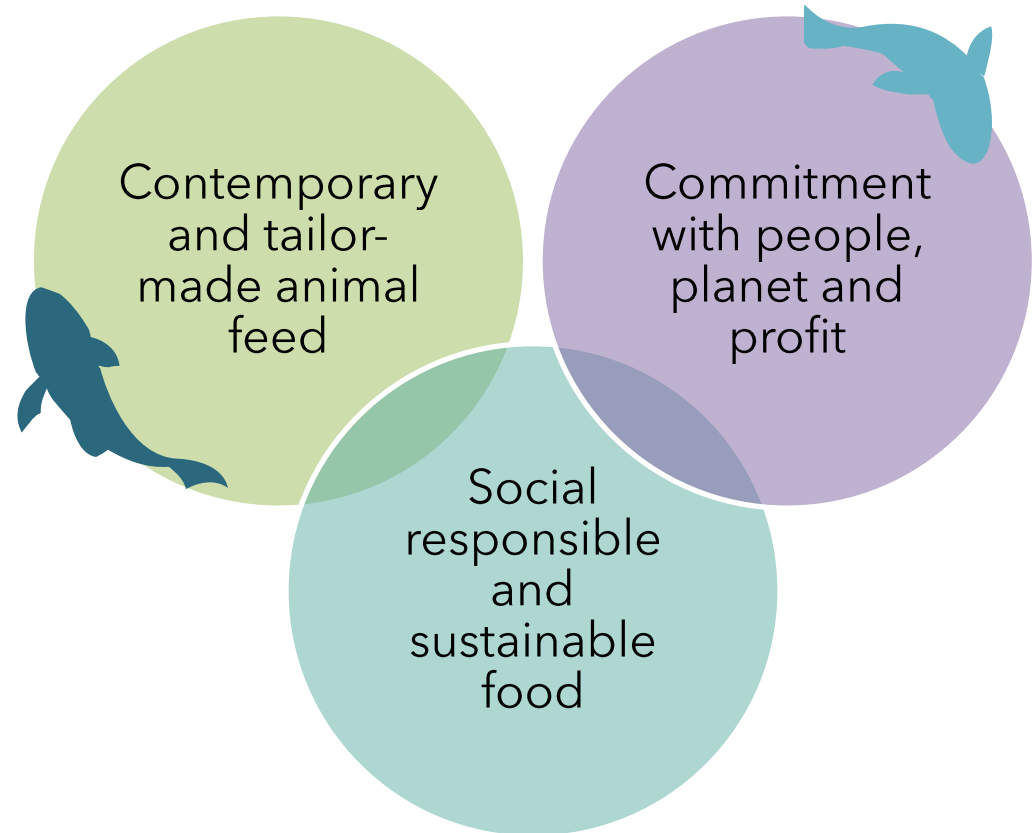
ABOUT US

LSAqua is the section of [Lambers-Seghers NV](#) specialized in Aquaculture feeding products.

OUR SPECIALITY

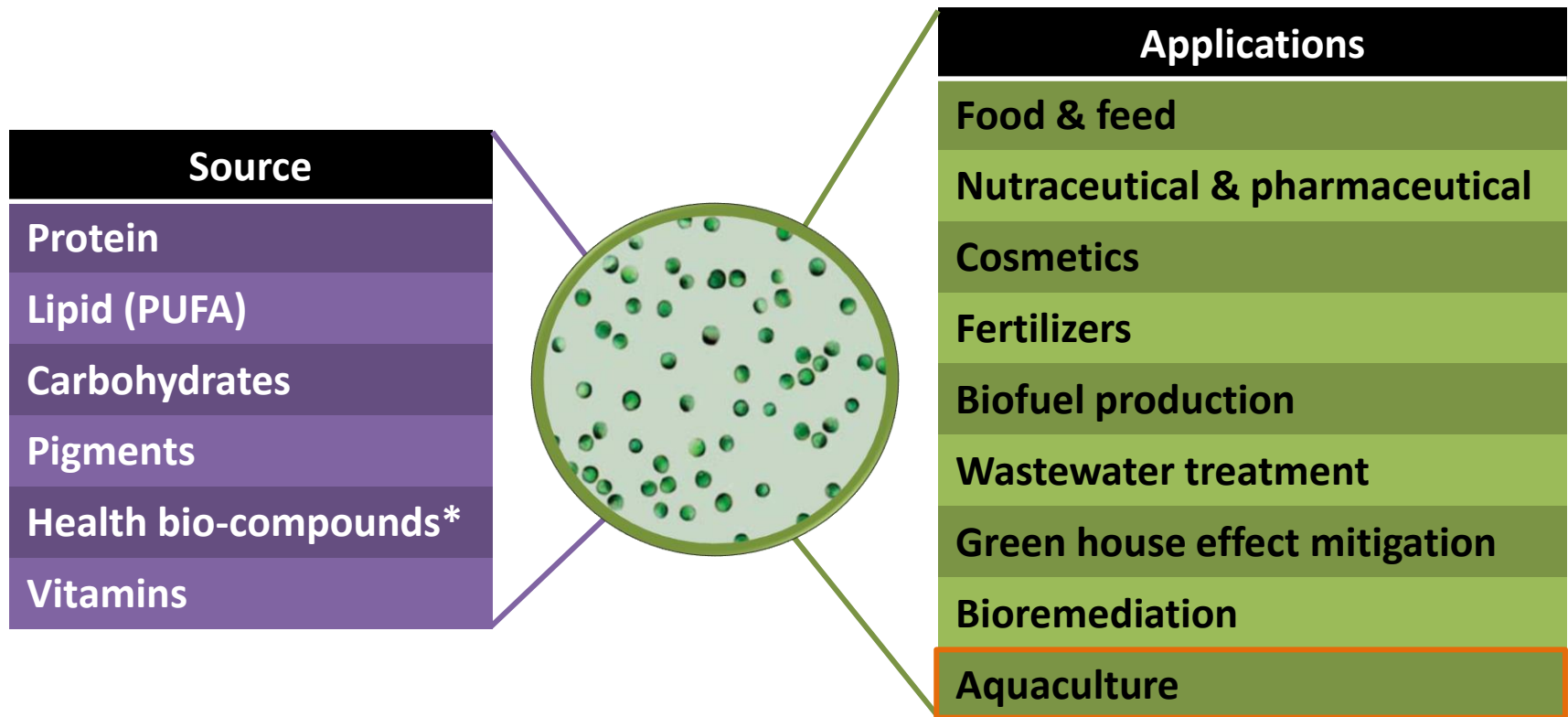
- Fishmeal replacer
- Concentrates
- Tailor-made feed

MISSION AND VISION



MICROALGAE

Microalgae are unicellular photosynthetic microorganisms adapted to live in a wide range of environments



Basis of aquatic food chains

Nutritional value:
dependent on culturing
conditions



APPLICATIONS

- Rearing marine species (larval and early stages)
- Colouring flesh or shell
- Improving water quality

More than **40 species** are used in aquaculture worldwide ranging in size from a few micrometer to more than 100 μm

Main species

Diatoms: Skeletonema costatum, Thalassiosira pseudonana, Chaetoceros gracilis, C. Calcitrans, Phaeodactylum spp

Flagellates: Isochrysis galbana, Tetraselmis suecica, Monochrysis lutheri, Pavlova spp

Chlorococcalean: Chlorella spp

Other: Nannochloropsis spp

Background

1960s Single cell protein (SCP)

1980s Production of pigments

1990s Production of PUFAs

2018 ≈ 87 000 Tn for Aquaculture (FAO)



Turkey, *Dunaliella salina*
Photographer Murat Oner Tas

TRENDS

- Feed alternative: Single Cell Protein (SCP); EPA and DHA source
- Probiotic and immunostimulant
- Wastewater remediation



CONCLUSION

- ❑ Main applications of microalgae in aquaculture are related to nutrition, colour appearance, water quality and immune system
- ❑ Microalgae is a sustainable source for protein and EPA and DHA; a potential source as prebiotic and probiotic and a feasible proposal to wastewater treatment
- ❑ Biotechnology and bioengineering need to keep developing in order to reach industrial scale for some of aquaculture applications

Thanks for your attention !

For more information:
hello@lsaqua.be

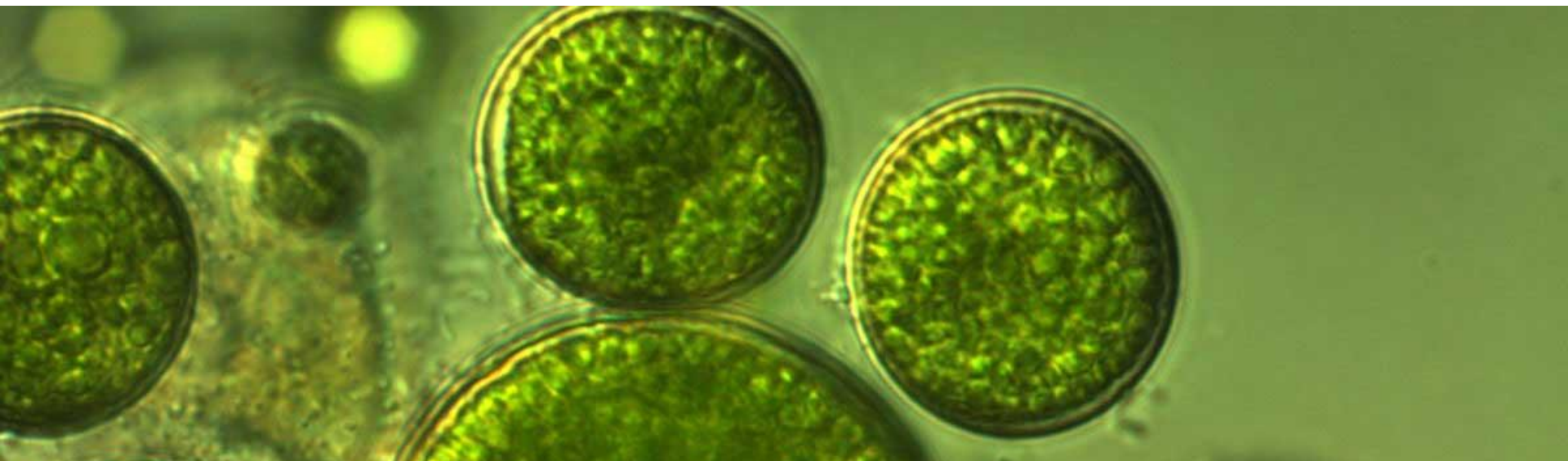


IMAGE SOURCE:

1. <http://www.fao.org/3/y5720e/y5720e08.htm>
2. <https://agrotendencia.tv/agropedia/el-cultivo-de-microalgas/>
3. <https://www.information society.co.uk/turkish-lake-has-turned-blood-red/>

REFERENCES:

References available on request