LEGISLATION CONCERNING THE USE OF MICROALGAE IN AGRICULTURE, FOOD, FEED, PHARMA AND COSMETICS

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Introduction

Valuable components can be extracted from microalgae and these are used in food supplements, food additives, in nutraceuticals, feeds and functional feeds and foods as well as cosmetics and pharmaceuticals. It is important that microalgae producers and users are knowledgeable on the legislation governing the use of microalgae relevant to their applications. Figure 1 and Tables 1 & 2 outline relevant legislation concerning microalgal use in food, feed, cosmetic and bio-stimulant/fertiliser products.

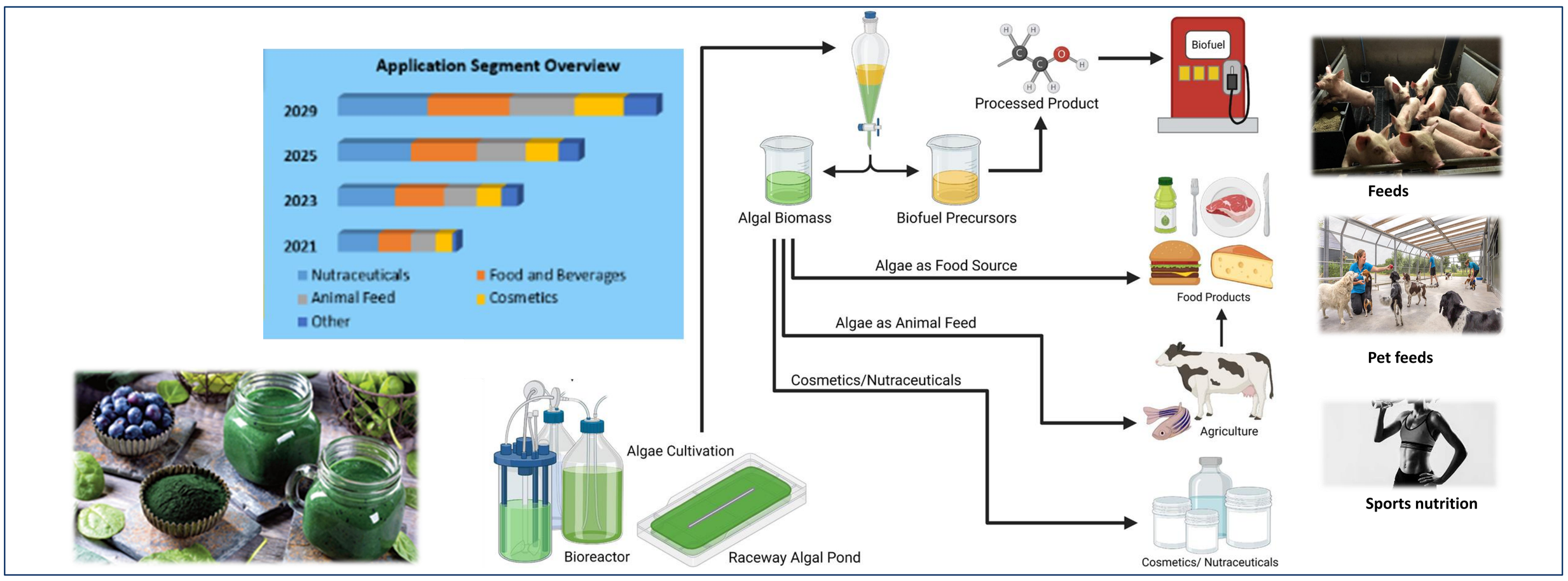

Figure 1: Application of microalgae in different sectors (adapted from Diaz et al., (https://doi.or/10.3389/fnut.2022.102984/).

Application	Relevant legislation	Reference
Food	The consumption history of the alga affects their regulatory status. Novel Food Regulation which states that species having not been used as food to a significant degree in any of the EU member countries before 15th May 1997 need to undergo authorization procedures in order to ensure their safety for human consumption.	Regulation (EC) No 258/97 https://faolex.fao.org/docs/pdf/eur18638.pdf
	New Novel Food Regulation (EC) 2015/2283 an additional notification system is provided for species that have demonstrated history of safe use for at least 25 years.	New Novel Food Regulation (EC) 2015/2283
	The Novel Food Catalogue contains both European and imported algae and till the end of 2020 there were 22 algae listed. (https://ec.europa.eu/food/safety/novel-food/novel-food-catalogue_en)	EU through Regulation (EU) 2017/2470
	Commission Regulation (EC) No 1881/2006 on contaminants sets maximum levels of certain toxic substances that are allowable in food.	Commission Regulation (EC) No 1881/2006
	Regulation (EC) No 396/2005 on maximum residue levels of pesticides in food and feed defines a maximum level for mercury in algae and prokaryotic organisms at 0.01 mg/kg	Regulation (EC) No 396/2005 & (EC) No 1881/2006
Food additives	Food additive use in the EU is governed by EU Regulation (EC) No 1333/2008	(EU) No 231/2012

Table 1: EU Legislation regarding use of microalgae as food and food additives

Application	Relevant legislation	Reference
Organic algae	As of January 2021, a new regulation (EU) 2018/848 on production and labelling of organic products came into being. Subject to the Water Framework Directive 2000/60/EC	EU 2018/848
Labelling	Included in regulation (EU) No 1379/2013 on the common organisation of the markets in fishery and aquaculture. Origin, production and harvesting method needs to be indicated. Microalgae marketed in the member country must be listed in the national register of fishery and aquaculture products.	EU No 1379/2013
Nutritional and health claims	EC/1924/2006 - EFSA evaluated	EC/1924/2006
Nutrition Information regulation	EU 1169/2011	EU/1169/2011
Feed & Feed Additives	EU 68/2013; Toxic contaminants 2002/32/EC	EU 68/2013
Cosmetics	1223/2009/EC	1223/2009/EC
Fertilisers and Biostimulants	EU2019/1009	EU2019/1009
Packaging	EC/1935/2004	EC/1935/2004

Table 2: EU Legislation regarding use of microalgae as functional foods, cosmetics, fertilisers and biostimulants as well as organic ingredients

- The Novel Food Catalogue contains both European and imported algae (https://ec.europa.eu/food/safety/novel-food/novel-food-catalogue_en).
- The EU's cosmetic ingredient database, CosIng (https://ec.Europa.eu/growth/tools-databases/cosing/index.cfm) shows all legal requirements for algal use in cosmetics.

IDEA - Implementation and development of economic viable algae-based value chains (NWE639)

Duration: 9/2017 – 10/2021, capitalisation till 12/2023

Website: www.nweurope.eu/IDEA

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