

AlgaePARC

Algae Production And Research Center

The objective of AlgaePARC is to develop knowledge, technology and process strategies for sustainable production of microalgae as feedstock for fuel, chemicals, food and feed at industrial scale.

AlgaePARC initially comprises four large (24 m²) and three small (2.4 m²) outdoor photobioreactors. These systems will be compared on technical, economic and environmental sustainability criteria and will serve as the basis to build up knowledge required for the development of more competitive systems and strategies for process control and scale up. The small systems will be used to screen for best strains, test different nutrient feedstocks and new reactor and operational concepts.

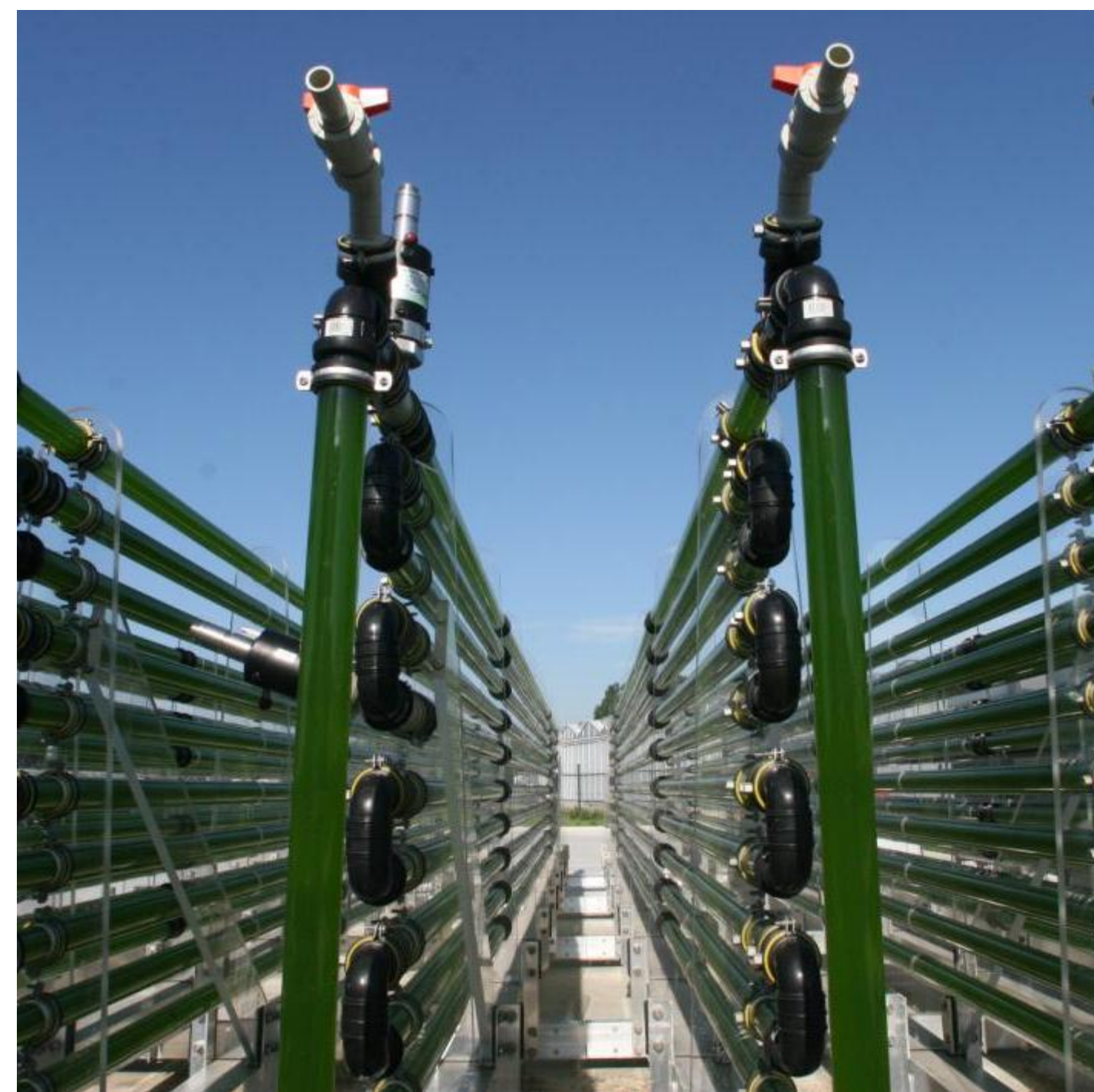
The photobioreactors constructed at AlgaePARC can be seen in the Figures below. They were chosen based on state-of-the-art technology and will allow the study of the most important fundamental aspects for the successful operation and scale-up of photobioreactors, i.e. light regime, mass transfer and photosynthetic efficiency.



Raceway pond



Horizontal tubular reactor



Vertical stacked tubular reactor



Flat panels

Specifications	Raceway pond	Horizontal tubular reactor	Vertical stacked tubular reactor	Flat panels
Length (m)	n.a.	80	80	n.a.
Optical path (cm)	20	4,6	4,6	0.85-1.7
Volume (m ³)	4,80	0,46	1,28	0,27
Illum. A/V ratio (m ² /m ³)	5	23,9	24,1	67,7

Facility financed by

- Ministry of EL&I
- Province of Gelderland
- Wageningen UR



Ministerie van Economische Zaken,
Landbouw en Innovatie

provincie
Gelderland



WAGENINGEN UR
For quality of life

Partners in the research program



GEA Westfalia Separator Group

