

Accepted Manuscript

Modelling and stability analysis of a microalgal pond with nitrification

F. Mairet, H. Ramírez C., A. Rojas-Palma

PII: S0307-904X(17)30446-8
DOI: [10.1016/j.apm.2017.07.008](https://doi.org/10.1016/j.apm.2017.07.008)
Reference: APM 11858

To appear in: *Applied Mathematical Modelling*

Received date: 21 January 2016
Revised date: 3 June 2017
Accepted date: 3 July 2017

Please cite this article as: F. Mairet, H. Ramírez C., A. Rojas-Palma, Modelling and stability analysis of a microalgal pond with nitrification, *Applied Mathematical Modelling* (2017), doi: [10.1016/j.apm.2017.07.008](https://doi.org/10.1016/j.apm.2017.07.008)



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Highlights

- A two species model in competition for nitrogen in a chemostat is proposed.
- Intra-specific competition phenomenon and cross-feeding is considered.
- Parameter conditions for coexistence and stability for equilibriums are given.
- Comparison with a more complex model using real data values is performed.

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