

Plant Growth Promoting and, Nitrifying Properties of *Bacillus* strains isolated from Tilapia (*Oreochromis niloticus*) Farm Environment in Ivory Coast for Aquapony Application

Wahauwouélé Hermann Coulibaly et al.

Nangui Abrogoua University, 02 PO Box 801 Abidjan 02, Côte d'Ivoire

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Highlights

- 12 *Bacillus* strains from tilapia farm environments (Ivory Coast) produced **indole-3-acetic acid (IAA)**, **siderophores**, **ammonia**, and **solubilize phosphate** and **potassium**, supporting nutrient availability for plants.
- **Nitrification potential** was confirmed through **ammonia**, **nitrite**, and **nitrate production** assays.
- Identified as *Bacillus licheniformis* by MALDI-TOF MS (score 2.03, NCBI ID 1402),
- Strain Bc12 exhibited **PGPR**, and **nitrifying traits**, making it a **strong candidate for sustainable aquaponic applications**.

