AQUA EXCEL 3.0

AQUAculture infrastructures for EXCELlence in European fish research 3.0

Beyond insect flour, use of Wood-Based Yeast SCP (single-cell protein) as an ingredient for Trout diets

Innovation Forum "From Policy to Solutions"

Ricardo Ekmay, Arbiom Inc.

ARBIOM

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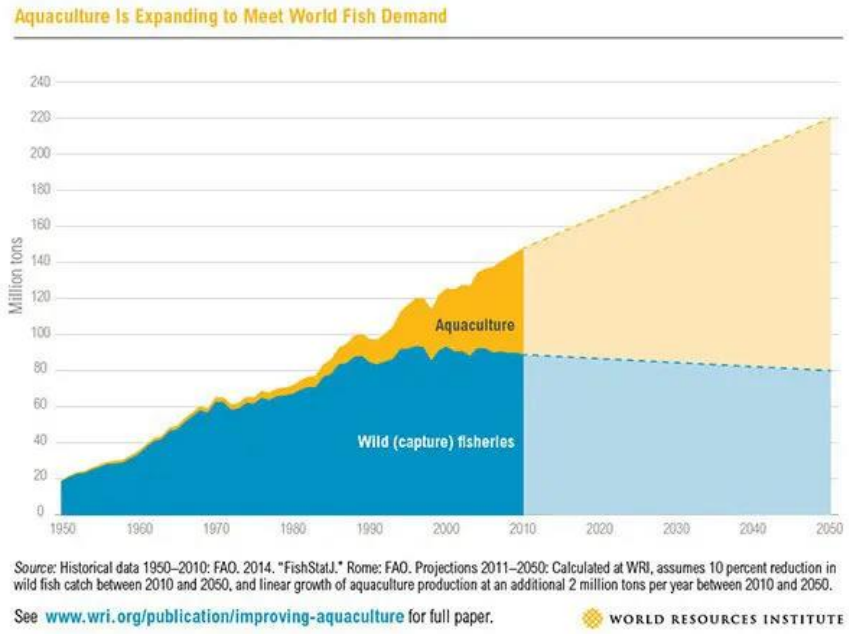
KNOWLEDGE NEED

How do we continue to expand aquaculture without competing with human food?

Least common denominator for many alternatives is often starchy, proteinaceous meals



- Torula yeast first produced in the 1930s (*Cyberlindnera jadinii*, aka *Candida utilis*)
  - Originally grown on spent liquor from paper mills
    - Grows on C5 sugars from wood
  - Lack of clarity on nutritional quality
    - Atlantic salmon (Agboola et al. 2021)
      - ADC: CP, 63%; DM, 40%
    - Hybrid Striped Bass (Chen and Gatlin, 2020)
      - ADC: CP, 97%; DM, 75%

Can SylPro torula yeast replace FM in carnivorous fish?

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SOLUTION/RESULT

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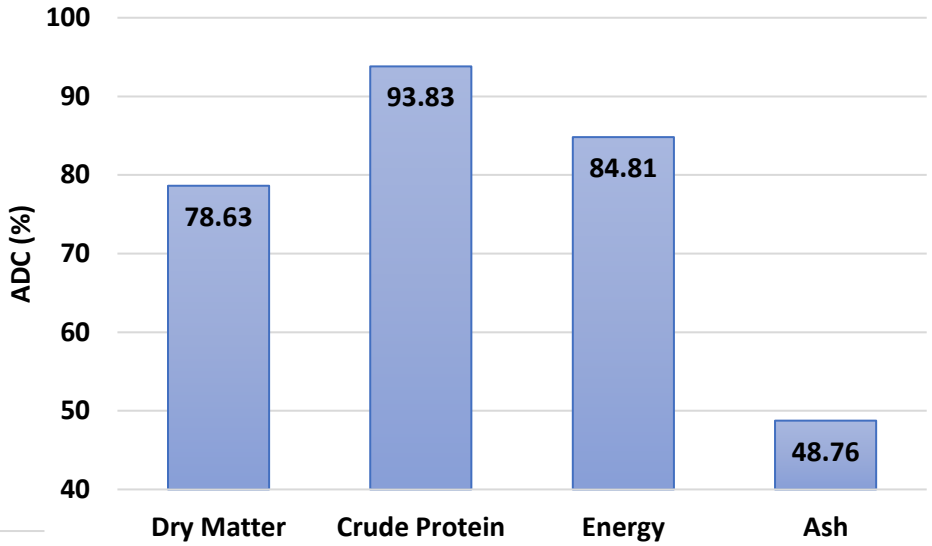
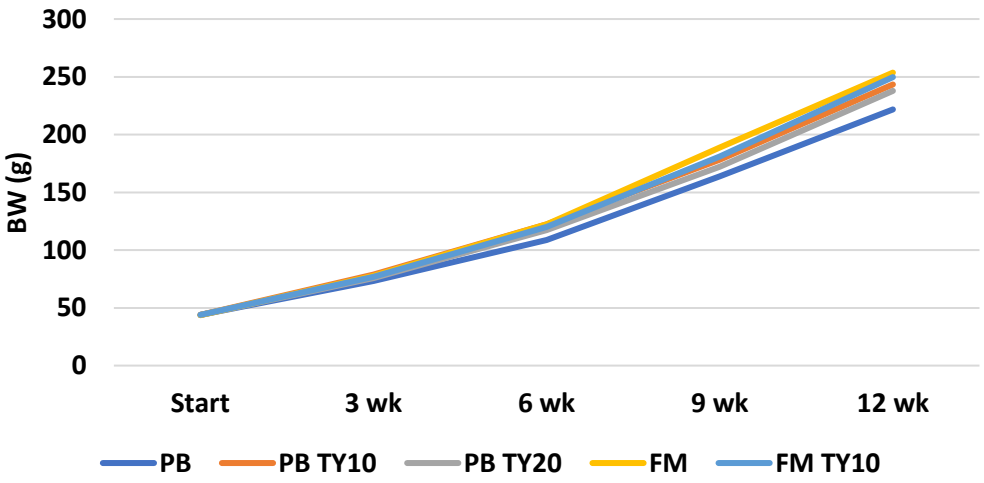
SYLPRO

Commercial plant coming soon!





Excellent digestibility

Torula yeast effectively replaced FM and plant proteins; improved performance over plant protein-only diets

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TARGET MARKET

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Can be leveraged by feed producers and finfish farmers looking to reduce environmental impact of:

Salmon (25% of value)

Trout (14%)

Sea Bream (10%)

5.2B € in value (2017)

Torula yeast is globally approved

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IMPACT

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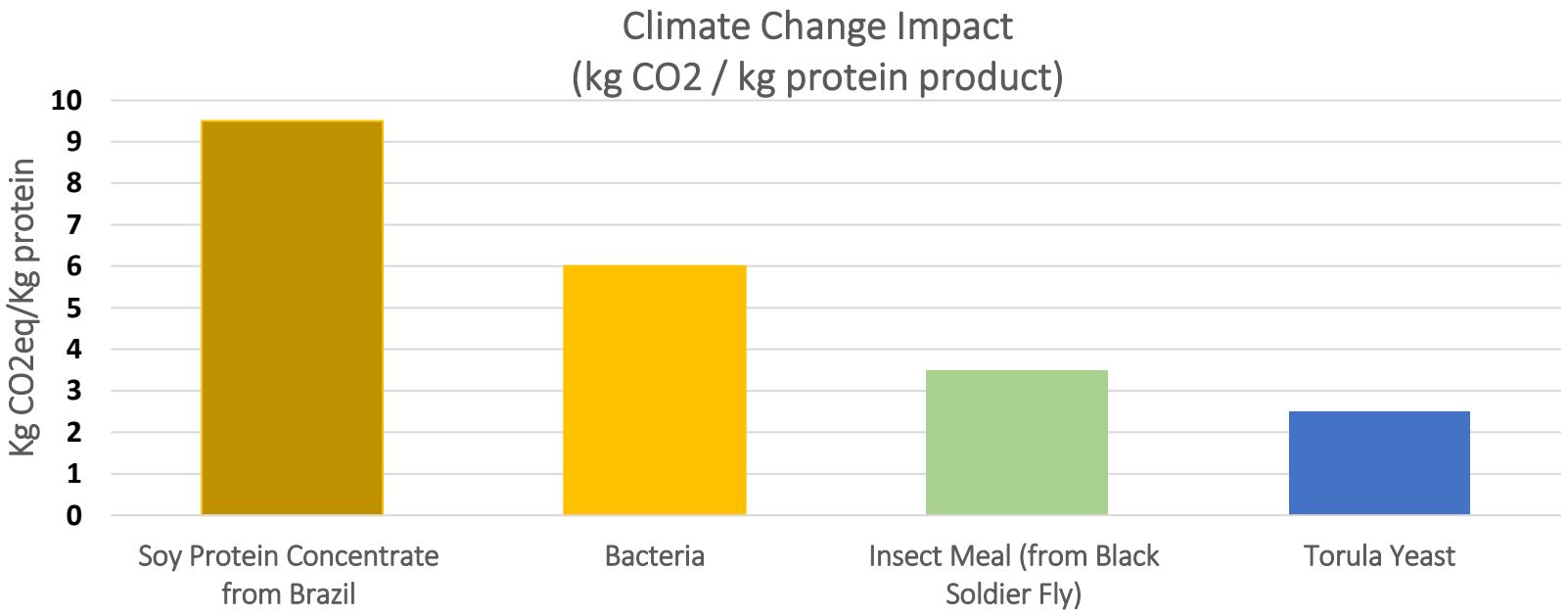
Replacing either soya or fish meal with Torula yeast can help reduce carbon footprint of aqua production

Protein Production✓ Protein Utilization ✓



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