Approach of Stellenbosch University in promoting aquaculture education in Africa

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Stellenbosch University Aquaculture
South Africa

VLIR-INCO Workshop, Mombassa, Kenya

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Stellenbosch University
Stellenbosch University

Founded in 1916
11 x Faculties:
  - Science
  - AgriSciences
  - Engineering
  - Business Administration

Ranking:
  - Global (THE) ≥ 300
  - BRICKS ≥ 20
  - Africa 1st

- Undergraduate 18 700
- Post graduate students 9 600
  MSc 4 735
  PhD 1 331
- Academic staff 1 329
  PhD qualified (76%) 1 003
- PG student per Ac/staff 1.36
- Publication per Ac/staff 2.32
Faculty of AgriSciences

- Departments: 11
- Programmes: 8
  - Animal Production
  - Aquaculture
- Academic staff: 125
- Undergraduate: 1350
- Postgraduate: 480
- PhD: 170

Programmes
- Animal Production
- Agriculture Economics
- Conservation Ecology
- Crop Production
- Food Science
- Forestry & Wood Science
- Viticulture & Oenology
# Aquaculture Education in South Africa

<table>
<thead>
<tr>
<th>Number of Universities:</th>
<th>22</th>
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<tbody>
<tr>
<td><strong>Aquaculture:</strong></td>
<td></td>
</tr>
<tr>
<td>- Undergraduate (Major, x1)</td>
<td>Stellenbosch</td>
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</tbody>
</table>
| - Post Graduate (x3)   | Rhodes University  
|                         | University of Limpopo  
|                         | Stellenbosch |
| **Other institutions:** | None |
| **SADEC:**              | None? |
Background to Aquaculture Education in SA

**History**
- Young industry
- 1980's
- University based R&D
- Research led
- Entrepreneurial approach
- Limited government involvement
- Small scale enterprises

**Focus**
- Research
- Postgraduate
- Applied
- Skills
Background to Aquaculture Education in SA

History

- 1990’s
- Established R&D platforms
- Large commercial enterprises
- Market orientated
- Value chain approach
- Lack of human resources
Aquaculture Education at SU

• Multi level:
  - Short courses
  - Certificate (1 year)*
  - BSc Agric (4 year)
  - Post graduate diploma*
  - Masters
  - PhD

• Across Disciplines/Value Chain
  - Major: Physiology
            Ecology
            Nutrition
            Husbandry
            Health management
            Post harvest
  - Minor: Economics
            Management
            Conservation
            Animal science

* Distance learning option
Aquaculture Education at SU

• **Student mobility/access:**
  - Backgrounds
  - Levels (B degrees)
  - Regional (SADEC)
  - International (African/Global)
1. BSc Aquaculture can promote directly into MSc-program
2. Diploma modules/credits can form part of MSc program
3. MSc options
   - Research = 240 credits
   - Taught = 120 – 180 cr

- No prior aquaculture
- Other institutions
- Other levels

BSc Agric

BSc (4 year)
Animal Production: Aquaculture (120 credits x 4yrs)

Post Graduate Diploma (1 year)
Aquaculture Production Management (120 credits)

MSc (2 year)
Aquaculture (240 credits)

PhD (3+ year)
Aquaculture

Exit
Exit
Exit
BSc Agric (4 year)
Animal Production: Aquaculture (120 credits x 4yrs)

BSc Agric (1 year)
Aquaculture Production Management (120 credits)

MSc (2 year)
Aquaculture (240 credits)

PhD (3+ year)
Aquaculture

Other Masters Programs:
Gent Leuven EU initiatives

Exchange of 30-60 credits
Facilities: Welgevallen Recirculation Systems
Facilities: Jonkershoek Trout Research Station
<table>
<thead>
<tr>
<th>Freshwater</th>
<th>Marine</th>
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<tbody>
<tr>
<td>• Trout</td>
<td>• Oyster</td>
</tr>
<tr>
<td>• Catfish</td>
<td>• Mussels</td>
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<tr>
<td>• Tilapia</td>
<td>• Abalone</td>
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<tr>
<td>• Ornamental</td>
<td>• Kob</td>
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<td>• Yellow Tail</td>
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Conclusion

• Focus on disciplines / value chain
• Multiple levels
• Distance learning
• Student mobility / access: African = 9 MSc + 6 PhD
• Outcome based: - Production
  - Management
  - Research
• Networks: - Africa
  - International
• Info: www.sun.ac.za/agric/aqua
PG Students in Aquaculture