



# Aquaponics and Smart Greenhouse Technology Conference 2019

“Hydroponics could be the Future of Farming and Food Security. . .”

10th ~ 11th of April 2019  
Lanzerac Hotel & Spa, Stellenbosch, SA

## Overview

The commercial industry of Aquaponics is growing in Africa, especially since the push towards using more sustainable ways of farming began, and coupled with the drought that much of Africans have been experiencing in the last decade. Some Hydroponic and Aquaculture businesses have converted their existing enterprises into Aquaponics systems, and other business owners have set up Aquaponics systems from scratch.

Technological advancements in the sector has risen, but while some industries have acclimated to the advancements others have lagged their peers. Agriculture ranks first in share of GDP and Employment in Africa. The advent of AgTech (Agricultural Technology) as an industry sector in the past 5 years seeks to leverage that disparity.

Technology allows for new and improved sensors, smart irrigation, automated environment controls, lighting controls and automation of standard automation procedures to grow crops more sustainably. Indoor horticulture is being 'teched up' when it comes to growing food to be both sustainable and profitable. Much of the innovation and technology is being driven by the nascent cannabis market, but is applicable for all indoor agriculture.

Nowadays, greenhouse growers are faced with increased competition and the rising cost of labour, energy and crop inputs. To maximise return on their investment, growers are gradually diversifying their crops to include hydroponic vegetables. Smart growers have realised that sustainably produced fruits and vegetables can be a better investment and a more efficient use of time and resources.

This 2 day Symposium will delve on AgTech, Vermiculture, Aquaponics and Greenhouse Technologies. It will also look into the design and construction of Hydroponic Greenhouses.

## Farm Visits:

### Nembwe Fish Farm - Kolenhof Winery Estate



Nembwe farm was developed in 2007, today the entire farm is run on a closed circuit flow of water originating from the main farm dam. All water is eventually drained back into the main dam via a network of drains, manholes and underground piping, all of which lead to a purpose built slipway.

### Haygrove Training Facility - Grabouw



Haygrove Tunnels South Africa was born in 1996 and after developing the technology in the UK to protect strawberries, then started to export to growers in other countries in 2001.

### Stellenbosch University



Welgevallen was purchased in 1917 with the establishment of the Faculty of Agrisciences, specifically because it was a condition that an experimental farm had to be within walking distance of the campus. Its original size was 278 ha, of which only 120 ha is currently available for research purposes.

## Accommodation in Stellenbosch Contact:

Lanzerac Hotel & Spa [ 021 887 1132 ]

Rusthuiz Guest House [ 021 886 6948/9 ]

Protea Hotel Stellenbosch Technopark [ 021 880 9500 ]

Avenues Guest Lodge [ 021 887 1843 ]

Stellenbosch Lodge [ 021 888 0100 ]

Summerwood Guest House [ 021 887 4112 ]

## Speakers:



**Prof. Gert Venter**  
CEO  
Eco Grow Kweekhuise (PTY)



**Lynn Gunning**  
Director of Operations & Exports  
NFT Hydro



**Jason Kirrane**  
Sales Manager  
Mottech SA



**Henk Stander**  
Principal Technical Manager  
Department of Animal Sciences  
University of Stellenbosch Africa



**Future Farms**



**Byron Ramsey**  
Vermiculturist  
WurmboSch Wormery & Organics



**Aaron Jeffrey Cullis**  
Founder  
Urban Organics



**Wynand Bezuidenhout**  
Pr Eng  
Grow Machines



**Pieter-Ernst Coetzee**  
Agronomist  
Haygrove



**Leandro Hendricks**  
Director  
The Organics Goods Company



**Warrick Du Toit**  
Director  
The Organics Goods Company



**Neil Calver**  
Founder/CEO  
Nembwe Fish Farm

## Speakers from:



organised by



## Who Should Attend:

Growers (Fruit, apples, pears, stone fruit such as plums and peaches, citrus, as well as olives, pomegranates, figs, nuts and berries)

- Horticulturalists
- Cut Flower Industries
- Consultants
- Entrepreneurs
- Aquaculturist
- Vermiculiturst

- Agronomists
- Greenhouse Managers
- Technical Managers
- Production Managers
- Packing Store Managers
- Exporters of fruit and cut flowers
- Quality Controllers
- Agro-Chemical Horticulturists
- Fresh-Cut Line Managers

- Logistical Product Managers
- Agricultural Economic Advisors
- Academics/Lecturers
- Researchers
- Landscapers
- Dept. of Agriculture
- Researchers in Agriculture
- Agricultural Students
- Agricultural Higher Learning Institutes

## DAY 1

07:30-08:00 Registration & Coffee

### 08:00 -09:30 Is Hydroponics the answer to Global Food Challenges?

In the first of a series on alternative crop production methods, international hydroponics consultant, Prof Gert Venter, explores hydroponics as a viable solution to global food security challenges,

- Water and energy constraints and a shortage of available agricultural land.
- Challenges
- Technology
- Latest Trends and case studies

**Presenter: Prof.Gert Venter**

CEO

Eco Grow Kweekhuise (PTY)

### 09:30-10:00 Can a commercial Aquaponics system be economically viable and economically sustainable in South Africa

- Financial Expectations
- Profitability
- Selling variety of products
- Research and Statistics

**Presenter: Henk Stander**

Principal Technical Manager

Department of Animal Sciences

University of Stellenbosch Africa

10:00-10:30 Coffee/Tea Break

### 10:30-11:00 Commercial Urban Farming & Greenhouse Equipment and Technologies

Presentation will be based on research studies conducted with Prof Wayne Prins on the 4 key methods of farming in South Africa

- Introduction of the various farming methods in South Africa
- Profitability & Sustainability analysis of the Indoor Vertical Farming (IVF), Outdoor Vertical Farming (OVF), Horizontal Hydroponics (HH) and Soil-Based Farming (SBF).
- NFT Hydro Horizontal Hydroponic systems designed for high yield & production and ease of growing
- Conclusions and Recommendations

**Presenter: Lynn Gunning**

Director of Operations & Exports

NFT Hydro

### 11:00-11:30 Water Management- Irrigation Systems for Greenhouses

Case Study: The IRRInet Control System

- Monitoring and Control Systems
- Constant control, total reliability and operational efficiencies
- Tailor made solutions

**Presenter: Jason Kirrane**

Sales Manager

Moltech SA

### 11:30-12:00 Case Studies: Roof top Farming Methods

- Ndabeni Indoor Farm
- Joburg Rooftop Farm

**Presenter: Future Farms**

### 12:00-12:30 Organic Hydroponics

**Presenter: Cobus Pienaar**

Founder

Full Circle

### 12:30- 13:00 VERMICULTURE: VERMICAST applications

- Viticulture, berry & fruit production
- Nursery, seeding and tree propagation
- Greenhouse vegetable & flower growers
- Field agriculture & Hops production
- Turf maintenance & Golf Courses
- Commercial & residential Landscaping
- Home gardening & retail outlets

**Presenter: Byron Ramsey**

Vermiculiturst

Wurmbosch Wormery & Organics

13:00-14:00 Networking Lunch Break

### 14:00-14:30 Manufacturing and Implementing of Hydroponic Systems in the South Africa

**Presenter: Aaron Jeffrey Cullis**

Founder

Urban Organics

### 14:30-15:30 Using Value engineering principles to improve the viability and chances for success (Robotics in soilless hydroponics)

- Main reasons for hydroponic project failures (with examples) – I think every speaker can contribute towards this.
- Designing for local climates, which is differ vastly from European conditions.
- Considerations for reducing the energy requirements.
- Solar Greenhouses (hydroponics) and many more
- Aquaponics waste (how to turn that into cash)
- Monitoring Systems
- Management Applications
- The need for innovation

**Presenter: Wynand Bezuidenhout**

Pr Eng

Grow Machines

### 15:30-16:00 Customisation of your requirements-Using Haygrove Tunnel Systems to optimize your returns

**Presenter: Pieter-Ernst Coetzee**

Agronomist

Haygrove

### 16:00-16:30 "The Truth about Aquaponics in an Urban Environment"

- The OG CO (Pty) Ltd Aquaponic journey (our business venture)
- Basics & fundamentals of Aquaponics
- Management/Operations of Aquaponics

**Presenter: Leandro Hendricks**

&

**Presenter: Warrick Du Toit**

Directors

The Organics Goods Company

## Day 2

08:30 Registration

09:00 Depart to Stellenbosch University

09:10 Arrive at Stellenbosch University

10:00 Depart to Kolenhof Winery

10:30 Arrive at Nembwe Fish Farm

### About the Farm

Nembwe farm was developed in 2007, today the entire farm is run on a closed circuit flow of water originating from the main farm dam. All water is eventually drained back into the main dam via a network of drains, manholes and underground piping, all of which lead to a purpose built slipway. The slipway is comprised of two settlement chambers with reed beds to purify the water before its return into the main system.

### Aquaculture in South Africa-A case study of Nembwe Fish Farm

**Presenter: Neil Calver**

Founder/CEO

Nembwe Fish Farm

11:30 Depart to Grabouw

12:30 Arrive at Haygrove Farm

12:40 Lunch

13:30 Practical Demonstration and Hydroponic Farm Visit

### About the Farm

Haygrove Tunnels South Africa was born in 1996 and after developing the technology in the UK to protect strawberries, then started to export to growers in other countries in 2001. Today the business works with a team of design engineers who have developed bespoke systems not only for North European climates, but also for many other climate zones from Kenya to Patagonia. Haygrove South Africa (Pty) Ltd has its offices, warehouse and training facility in Grabouw in the Western Cape. The company is run by the Managing Director, Mark Pritchett. A Mark holds a BSc degree in Horticulture and Agriculture Economics from The University of Stellenbosch. A Mark previously grew 80 hectares of strawberries in the UK, 40 of which were protected with the Haygrove tunnel.

15:30 Leave for Lanzerac Hotel & Spa

16:30 Arrival and End of Conference

organised by





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 Lanzerac Hotel & Spa, Stellenbosch, South Africa

Fill in the form and send to: **Vusi**

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 ✉ 372 Oak Avenue, Randburg 2160, Johannesburg, RSA      🌐 www.empiretraining.co.za

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**SUBSTITUTIONS:**  
 Delegate substitutions. Substitutions is welcome at any time and do not occur any additional charges. Please notify EMPIRE in writing of any such changes at least 3 days before the date of the event.

- Please note that the speakers and topics were confirmed at the time of publishing however circumstances beyond the control of the organizers may necessitate substitutions, alterations or cancellations of the speakers and/or topics.
- As such, EMPIRE reserves the right to alter or modify the advertised speakers and /or topics if necessary. Any substitutions or alterations will be updated and sent to you as soon as possible
- Delegate substitutions must be made in writing 7 days before the event.

**PAYMENT BY MEANS OF BANK TRANSFER**

- Please state your full names clearly on the money transfer.
- Please note, bank charges are of your OWN account and this should be stipulated to your bank. Please advise your bank that the charges should be included in your deposit
- A copy of the bank deposit receipt should accompany your registration form and must be posted or faxed

**DELEGATE ATTENDANCE FORM**  
 NOTE: Please provide information as you wish it to appear on your name badge and on the official participant database

Title	Delegate Name & Surname	Position	Email	Phone

## FEE/ DELEGATE excluding VAT

Yes. [I / We] will attend the event  
 Normal Rate:

# R4,999

Per Delegate

By signing and returning this registration form, the authorizing signatory on behalf of the stated company is subject to the following terms and conditions:

- Charge of 50% of the registration fees, plus R700 (+ VAT) Administrative charge will be made for cancellations received in writing at least 14 working days prior to the event.
- or any cancellations received in less than 7 working days before the start of the event, the full fee will be payable and no refunds or credit notes will be issued.
- If a registered delegate does not cancel and fails to attend the summit, this will be treated as cancellation and no refund or credit will be issued.

By Completing and signing this form, the signatory accepts the terms and conditions as stated on the registration form

**Registration fees above INCLUDES the following elements:** Entrance to session, registration pack, d lunch and refreshment breaks.

**Registration fees above EXCLUDES the following entitlements:** Travel costs and accomodation

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**PLEASE NOTE - EMPIRE HAS A STRICT NO CASH REFUND POLICY**

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