



AGRICULTURE AND AGRIBUSINESS

Greenhouse and Protected Cultivation Structures

3 day course

Classroom, online or in-house

Course overview

A greenhouse in a hot climate is a heat trap before it is a growing environment, so the design question in this region is almost always how to get heat out rather than how to keep it in. This course starts there. Delegates work through structure types from shade net and tunnels to multispan houses, with the wind and snow free loading conditions that govern structural design here. Covering materials are covered across polyethylene film, polycarbonate and net, with light transmission, diffusion and service life. Ventilation is addressed in detail: natural ventilation, roof and side vent area, and the air exchange needed to hold an acceptable temperature. Evaporative cooling through pad and fan and fogging systems follows, with the humidity consequences. Insect exclusion netting and its ventilation penalty are covered. Irrigation and fertigation infrastructure inside the house are addressed. Climate monitoring and control follow. Structural anchoring and wind damage are covered, since wind loss is the commonest total failure. The course closes on crop hygiene and on costing a structure per square metre.

What you will learn

- Select structure types against local wind and loading conditions
- Choose covering materials for transmission, diffusion and service life
- Size natural ventilation for the air exchange required
- Apply pad and fan or fogging cooling and manage humidity
- Balance insect exclusion netting against its ventilation penalty
- Install irrigation, fertigation and climate monitoring inside the house
- Anchor against wind and cost a structure per square metre

Who should attend

- Greenhouse growers and production managers
- Agricultural engineers designing structures
- Horticulture extension officers
- Investors appraising protected cultivation
- Suppliers installing greenhouse systems

Course outline

- 01 A heat trap before a growing environment
- 02 Shade net, tunnel and multispan structures
- 03 Wind loading and structural design
- 04 Covering materials and light transmission
- 05 Natural ventilation and vent area
- 06 Pad and fan cooling and fogging
- 07 Insect netting and ventilation penalty
- 08 Fertigation, climate control, anchoring and costing

Upcoming dates



Dates	Venue	Format	Fee per delegate
14 to 16 October 2026	Online	Online	R6,500
19 to 21 October 2026	Gaborone, Botswana	Classroom	R14,950
9 to 11 November 2026	Kigali, Rwanda	Classroom	USD 995
2 to 4 December 2026	Dar es Salaam, Tanzania	Classroom	USD 995

Fees and how to register

This 3 day course is **R6,500** per delegate online, **R14,950** in the classroom in South Africa, Botswana, Namibia, Lesotho and Eswatini, and **USD 995** in the classroom elsewhere in Africa. In-house training is quotation on request. Book 2 or more delegates on this course and save 10%.

To register or request an in-house proposal, visit www.afrisciencegroup.com, email info@afriScience.co.za, or WhatsApp us on **+27 63 479 1136**.

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