Insights into blended learning
Case study Germany // South Africa

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Tropical Plant Production and Agricultural Systems Modelling (TROPAGS)
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Content

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1.

TROPAGS – research

Main aim

Understand tropical plant production systems in a changing environment

Tech. innovations – climate risks / adaptation & mitigation
model development

Cereal-legume intercropping – coffee, cacao, macadamia agroforestry;
global-scale crop modelling – crop stress (heat & drought) ..

1.

TROPAGS – research: SALLnet

SALLnet – South African Limpopo Landscapes Network

Interdisciplinary research project: how resilience of multi-functional landscapes in RSA can be enhanced under climate change?

Sustainable intensification of maize production (key system)

Creation of macadamia simulation model

Arable // rangeland interaction

Socio-economic analysis

1.

TROPAGS – teaching

Management of tropical plant production systems

Botany – physiology – crop production & harvesting – systems management

Tropical agro-ecosystem functions & services

Agronomy and agro-ecology -based landuse systems / multi-functionality of rural landscapes

Exercises: linking models & experimentation

Field-based practical exercises

Plus several others ..

Crop modelling for risk management   e-learning version **winter 2020**
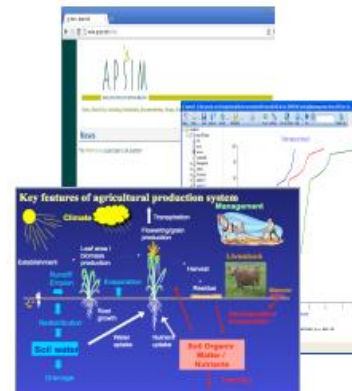**A**gricultural **P**roduction **S**ystem s**IM**ulator (**APSIM**)
Part of the MSc Sustainable International Agriculture (SIA)

Guided simulation set-up; case studies w typical agronomic questions:
yield gaps, SI, rotations, input management

2.

APSIM workshop Niger

3.

TROPAGS & blended learning

Motivation

- International extension of **high demand** crop modelling course

- Taught regular part of SIA MSc

  - Face-to-face lectures; small groups (10-15); independant learning (manual-based); we try to **enrich their experience**

Achievements

- Standard   ➡   e-learning teaching material

- Cooperate w South Africa partners / cultural integration

- First tested w crop modelling course 2018

  - Sceen casts – some 'guest screen casts' (RSA)

  - Joint classroom / webinar: Adobe Connect

3.

TROPAGS & blended learning

Joint classroom casestudy – LOTS of help & tests from Digital Learning group

Structure

- Final presentation & discussion (50% of grade)

  - RSA scenarios as simulation case studies

- Live **joint**-discussion w RSA partners

  - Great exchange & insight (both groups), esp. for SIAs

RSA <-> Gö-students

4.

Next steps

- Polishing of interviews and lecture series w South African scientists

- Complete videos

- Develop examination material

- Test digital learning resources: visiting students from South Africa

      - One-on-one feedback for digital material development

      - Testimonials

- Integration into international MSc programmes at the Universität Göttingen:

- International MSc in soil & global change (IMSOGLO) BOKU, Gö, Ghent, Aarhus

- Launch as a full e-learning course winter semester 2020

4.

Tests RSA exchange students

Queen Mogale, PhD candidate, University of Limpopo RSA

Grain sorghum-cowpea intercrop: a climate-smart approach for enhanced productivity under no-till conditions in Limpopo Province, South Africa

Field trials 2018/19 & 2019/20

Visiting scientist opportunity

Test digital-learning material & take part in face-to-face course

4.

Why blended learning?

Format	Pros	Cons
Face-to-face	Flexibility (lecturer)	Lecturing is a skill (student)
Workshop	Time-efficient Lots of interaction / exchange	Difficult to digest Expensive ($ & CO2)
E-learning	Really precise / no 'bla-bla' Broad audience Diverse input	Difficult to 'problem-solve' A LOT of work to develop Soft-skills difficult to master

4.

Why blended learning?

Joint classrooms are the closest we can get to meeting without actually doing so

For students interested in international topics, the joint classroom enriches the learning experience

The more diversity we offer through out teaching methods and material, the more likely we are to get our messages across

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