One Health International Symposium

TRANSDISCIPLINARY APPROACHES TO RESEARCH AND EXTENSION IN AGRICULTURE

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Commercial Agriculture







Production Agriculture







Agriculture Technology











Agriculture and...







Agriculture and...



Agriculture and...

Transdisciplinary Agriculture

Production Conservation Responsibility

Transdisciplinary Agriculture

Genetics

Land Management

Natural Sciences

Agricultural Sciences

Engineering

Transdisciplinary Science

Deep integration across disciplines

- Meaningful sharing of knowledge, theories, methods, data
- Integrated and intermingled communities and languages
- New frameworks, paradigms or disciplines can from sustained interaction

Research driven by a specific and compelling problem

- Inspired by a specific challenge or opportunity
- Envision novel framings and solutions at onset
- Collaboration needed for success

Land Management Natural Sciences Social Sciences

Agricultural Sciences

Genetics

Engineering

Transdisciplinary Science

Land Management Natural Sciences Social Sciences

Agricultural Sciences

Genetics

Engineering

Agroecology is...

Transdisciplinary approach

- Dynamic activity science, movement, practice
- Systems awareness thinking, evaluation, management
- Long-term responsibility environmental, social

Foundational principles

- Sustainability
- Systems
- Production
- Diversity
- Resilience

Agroecology is...

Agroecological Awareness + Agroecosystem Navigation

Sustainability

Population Community Ecosystem

Space and Time

ZF ORMATION

An example...

Peanut Agroecosystem

Peanut Food System

Peanut Food System

Peanut Aflatoxin Risk Assessment

How can we better **manage** for aflatoxin in peanut?

How can we better **monitor** for aflatoxin in peanut?

Where are the points of **vulnerability** and **risk** in the peanut aflatoxin food system?

Peanut Aflatoxin Management

PeanutFARM

Peanut Field Agronomic Resource Manager

Home Overview PeanutPROFILE

Peanut Aflatoxin Monitoring

CENTER FOR STRESS RESILIENT AGRICULTURE

Peanut Food System Development

Proposed Changes

Transdisciplinary Extension

Speak from experience and evidence

• Continuous and open dialogue, expert learners

Direct and interactive communication

• Field days and workshops

Farmer to Farmer Innovation

Farm schools lead to adaptive farming

Goal-oriented impacts

• Knowledge < Action < Condition

Transdisciplinary Research & Extension

Proposed Changes

Thanks!

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How do you develop a strategy to engage diverse stakeholders?

- Farmers
- Industry members
- Policy makers

How does your communication strategy change as you engage different audiences?

How can research and policy outcomes from one place inform the decision for similar situation across the world?

What happens when the decision options are controversial or potentially damaging to public perceptions?