Disruptors & Breakthrough Approaches
Wednesday 22 June: 13:00 – 13:55 (55 min)

With Speakers:

Rajan Bhopal
International Project Manager | Pesticide Action Network UK

Sunil Saindane
Project Manager | Lupin Human Welfare & Research Foundation

Julio Cézar Busato
Cotton producer & President | ABRAPA

Oliver Knox
Associate professors of Soil systems biology | University of New England

Facilitator:

Angela Russ
Senior Manager, Implementation | Better Cotton
JIDAGO AND CELESTINE'S STORY

Jidago and Celestine are cotton farmers in Benin. They travelled a long way to share the story of their son’s death because they want you to know about it.
WHY ISN'T THIS PROBLEM MORE WIDELY KNOWN?
A NEW TOOL AIMS TO ADDRESS THE PROBLEM
RESULTS

Percentage Of People Reporting Signs And Symptoms Consistent With Acute Pesticide Poisoning

- Severe: 261 answers
- Moderate: 256 answers
- Mild: 422 answers
- No signs and symptoms: 1289 answers

- Received medical assistance for reported signs and symptoms of acute pesticide poisoning: 357 answers
- No medical assistance received for signs and symptoms of acute pesticide poisoning: 1871 answers
HOW DOES THIS INFORMATION HELP?

- Identifies Highly Hazardous Pesticides (HHPs) linked to acute pesticide poisoning
- Identifies high risk practices
- Identifies high risk groups
- Demonstrate impact
Please do pick up our card or drop us a line for more information:

Rajan Bhopal, Project Manager (Supply Chains)
rajan@pan-uk.org

Sheila Willis, Head of International Programmes
sheila@pan-uk.org

Keith Tyrell, Director
keith@pan-uk.org

WWW.PAN-UK.ORG
Breakthrough Approach: The key to impact at Scale

Shendvan, Akkalkuwa, Nandurbar (MH-India)

Sunil Saindane
Project Manager – BCI
Lupin Human Welfare & Research Foundation
Need of Automatic weather station

- Vulnerable to the impacts of climate change (Ref. study ICAR 2020-21)
- Worst socio-economic situations (Ref. Cotton 2040 study)
- Extreme weather events
How AWS works?

1. Automatic Data collection
2. Data sharing with Agro-Advisory partner
3. Data collates with IMD
4. Data process & generates weather forecast

SMS & voice calls to farmers
Project Stakeholders

NABARD

LUPIN Foundation

IFFCO Kisan

KRISHI VIGYAN KENDRA

Thanks!
1. 92% of cotton area is rainfed

2. 95% is in the Cerrado Biome (It is not in the Amazon Forest!)

3. 60% second crop (after soybeans in the same crop season)

4. Second biggest world cotton export

5. Fourth biggest world cotton producer

6. Professional, Large farm context (3.000 ha avg.)

7. Avg Yield 1.800 kg per hectare (128% above world Yield Average)

8. 84% of total cotton production within ABR sustainability program

Cotton Producing Regions in Brazil

Santos Port (99% of cotton export)
Brazil/Cotton | Biological Control (introduction of natural enemies)

Integrated management of cotton pests and diseases is a basic requirement in **ABR protocol**

- Encouraging the use of biological control within the Integrated Pest Management
- Aerial and terrestrial spraying with safe transport of pesticides, correct dosages and focus on maintaining biodiversity
- Focus on technologies that enable more effective application of chemicals and with the correct dosage
Disruptors Breakthrough Approaches Session

Brazil/Cotton | Biological Control (breeding of natural enemies)

Regional Institutes and Foundations

Laboratório do Ima-MT, 2019

Laboratório da Amipa, 2019
Regional Institutes and Foundations Responsibilities:

1. Efficient evaluation of biological products for the control of insect-pests, diseases and nematodes

   Quality control of biological products made on farm

2. Diagnosis and monitoring of diseases and phytonematoids
**Brazil/Cotton | Biological Control** (introduction of natural enemies)

**Good results in control of nematodes** *(M. incognita)*

- 5 years of research in a region with:
  - 350,000 ha of cotton
  - 600,000 tons of lint by year

**Benefits:**

1. **Lower use of HHPS:**
   - Cyantraniliprole
   - Thiamethoxam
   - Abamectin
   - Fluensulfone

2. **Soil health improvement**

3. **Higher Cotton Yields**

4. **Lower costs for cotton producers**
Brazilian Government launched the National Program for Biobased Agricultural Inputs in 2020.

Biological control adopted in 23 million ha (Soybeans, cotton and Sugarcane) Estimation: 350,000 kg of chemical pesticides substitution

BIOLOGICAL PRODUCTS REGISTERED TO USE IN BRAZIL

Source: MAPA (2022)
BI Platforms for monitoring pest population with Drone intelligence
Our disruptive team: Closing the loop in Goondiwindi

- Divert cotton waste from landfill
- Drought proof a rural community
- *Able and motivated, just need opportunity*
How do we change our world?

• Collect old garments

• Recover the *waste* fabric
  - Local jobs

• Apply to the soil

• Grow the next crop
Concerns

• Other materials

• Other contaminants

• The dyes

• Agricultural impact

• Application

- Polycotton stitching/logos
- Plastic buttons/closers
- Finishes/inserts
- Dyes
A history lesson – post industrial revolution

• Rags were part of the waste

• BUT, education needed books

• Books need paper

RAGS make paper,
PAPER makes money,
MONEY makes banks,
BANKS make loans,
LOANS make beggars,
BEGGARS make RAGS.

Unknown author, 1700s.

Caldercrux paper mill, circa 1920. © Cultural Museums UK
Hierarchy of Cotton textile recovery

- Prevention
- Minimise
- Reuse
- Recycling
- Energy recovery
- Disposal

High $ Respinning Wastes?

Fibre damage Limited use

End of life
Lessons

- We can return natural fibres to soil
  - Application and agronomy
- High rates = good waste removal
- CO$_2$ not CH$_4$

- Garments need to be processed
- Market may change
- Logistics

- Circularity involves all of us!
Thank you