

## Technical Seminar 21:

# On the landscape of regenerative cotton

24 July 2024

Climate goals require the fashion industry to greatly reduce carbon emissions when producing raw materials, especially cotton – one of the most popular materials in the clothing industry. Regenerative cotton is a promising practice that helps stakeholders meet due diligence and environmental requirements. This online seminar invited industry professionals to share their practices and perspectives on:

- What are the benefits that regenerative cotton could provide compared with conventional practice and why it's relevant to fashion brands and producers?
- What needs to be done to support the local farming community to transition into regenerative cotton practice and what role fashion brands and manufacturers could play together?
- How can region-specific primary data help existing standards and certifications incorporate regenerative cotton practices?

The three invited professionals shared their insights and practices on how to understand the regenerative cotton practice from a fashion industry perspective and what needs to be done to incorporate it into the supply chain.



### Mian Saqib Sohail

Responsible Business Projects- Lead, Artistic Milliners

A lifelong learner with diverse experiences in the textile and education industry. Winner of Ryan Young Climate + Award. Currently, Saqib Sohail works at Artistic Milliners in Pakistan focusing on ESG and sustainable cotton projects.



## **Amol Mishra**

Co-founder & CEO, Beetle Regen Solutions

Amol comes with an end-to-end supply chain experience ranging from cotton production to end product manufacturing and garment retail, forming a decade of experience in leading the strategy and execution of some path-breaking initiatives within the cotton textile sustainability sector.



## **Ruchita Chhabra**

Sourcery's Grower Engagement Director

Ruchita leads Sourcery global sourcing solution Direct-to-Grower in India. With a strong passion for sustainability, she draws on her experience in apparel sourcing and managing sustainable cotton programs towards creating a more robust, transparent, and sustainable cotton sector.

The online seminar comprised a lengthy panel discussion, followed by a Q&A.

Saqib from Artistic Milliners helps us to gain an overview of the landscape of regenerative cotton practice that it's beneficial to nature, the local farming community and the fashion producers and brands, yet the financial challenges can only be answered if brands join manufacturers to invest in the practice and the transitioning calls to have a completely different mindset:

- After starting a pilot regenerative cotton project in 2023 with 92 farmers and later expanding to 600 farmers on 6000 acres of land, the outcome of the project clearly shows the usage of pesticide, diesel and fertilizer decreased greatly while seed cotton yield and afforestation are increased, which directly benefit the environment and the farming community, and help Artistic Milliners and the clients make progress on their climate commitment and actions.
- The fashion industry is in great need for cleaner cotton which brings an opportunity to incorporate regenerative cotton practice into the fashion supply

chain but also brings an industry-wide challenge. The challenges are resource-intensive and require collaboration across an entire industry.

- Those challenges include the elimination of middlemen in the supply chain, the over-complicated requirement of traceability, the high cost of certification and verification for both cotton growers and fashion producers and the wide investment gap. Those challenges require a collective effort from all stakeholders and demand pooled resources and expertise.
- It is important to consult fashion suppliers and cotton growers when creating climate goals initiatives. It's also important for stakeholders to prioritize sustainability and ethical practices over short-term financial gains when investing in regenerative cotton practices.

Amol from Beetle Regen Solutions provides very helpful insights by showcasing their one-stop solution to sustainable textile sourcing not just focusing on sustainability goals but also taking into account a wider range of benefits to the environment and human wellbeing.

- By providing training to 70,000 farmers in India and measuring the outcome afterwards, Beetle Regen shows the great potential to fashion brands and producers how they can reduce carbon emissions within their supply chain.
- Beetle Regen illustrates how to build end-to-end traceability without creating overwhelming data work on the farm level by applying advanced information technology such as AI, blockchain, DNA tracers & markers,
- Though traditional mindsets of practising agriculture are difficult to uproot, it's very promising for the farming community to transition into regenerative practice with cooperation across the industry on resources and expertise.:

Ruchita from Sourcery demonstrates how important it is to build data equity into the infrastructure construction for sustainable cotton sourcing by sharing the practices on:

- Providing a transformative sourcing solution that enables comprehensive traceability from grower to retailer which can facilitate the adoption of regenerative cotton practices and help to direct financial reward to the farmers.

- Equipping a suite of modular services to engage, train, collect, verify, and measure the commercial, social, and environmental performance of growers and manufacturers.
- Building a platform allows for real-time data collection, verification, and reporting, which helps to incorporate the regenerative cotton practice into the current supply chain.

In conclusion, the panellists agreed on the importance of having industry-wide support on resources and expertise in transforming the current cotton production to a regenerative practice and emphasising full supply chain involvement from growers to brands. It is important to engage farmers and manufacturers when creating climate initiatives especially in implementing regenerative agricultural practices and measuring environmental and social impacts.

To learn more, watch the [recording of the Seminar](#). The slides presented in this seminar are attached below. For more online seminars on similar topics, check out the [Asian Dialogues Series](#).



**Artistic  
Milliners**  
DENTIM COMPANY OF THE FUTURE



# SUSTAINABILITY GOALS

Empowering today for a sustainable tomorrow

## CLIMATE ACTION

42%

Absolute reduction in GHGs by 2030

42%

Net Zero target for scope 1 & 2 by 2030

50%

Net Zero target for 2030 for scope 3

50%

Reduce fresh water consumption by 2035

Commitment towards implementing Bio diversity and afforestation projects



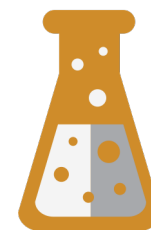
## RESPONSIBLE PRODUCTION

100%

Single use plastic reduction by 2030

100%

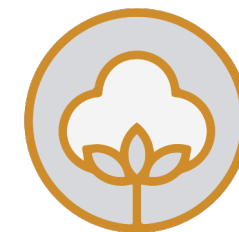
Waste diversion from landfill by 2025



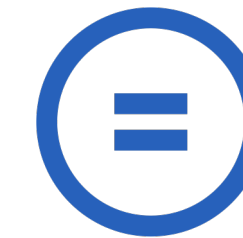
100%

Certified screened chemistry by 2030

Sustainable farming and regenerative agriculture by MO and MCI



## COMMUNITY & WORKER WELL-BEING



- Equal opportunity
- Gender Equality
- Anti GBV Program
- Digital grievance Mechanism
- Daycare facility

### Training & development programs

P.A.C.E | FLDP | STU | BetterWork | Her Essential | HSE



Massive community based interventions on Water stewardship platform by 2026

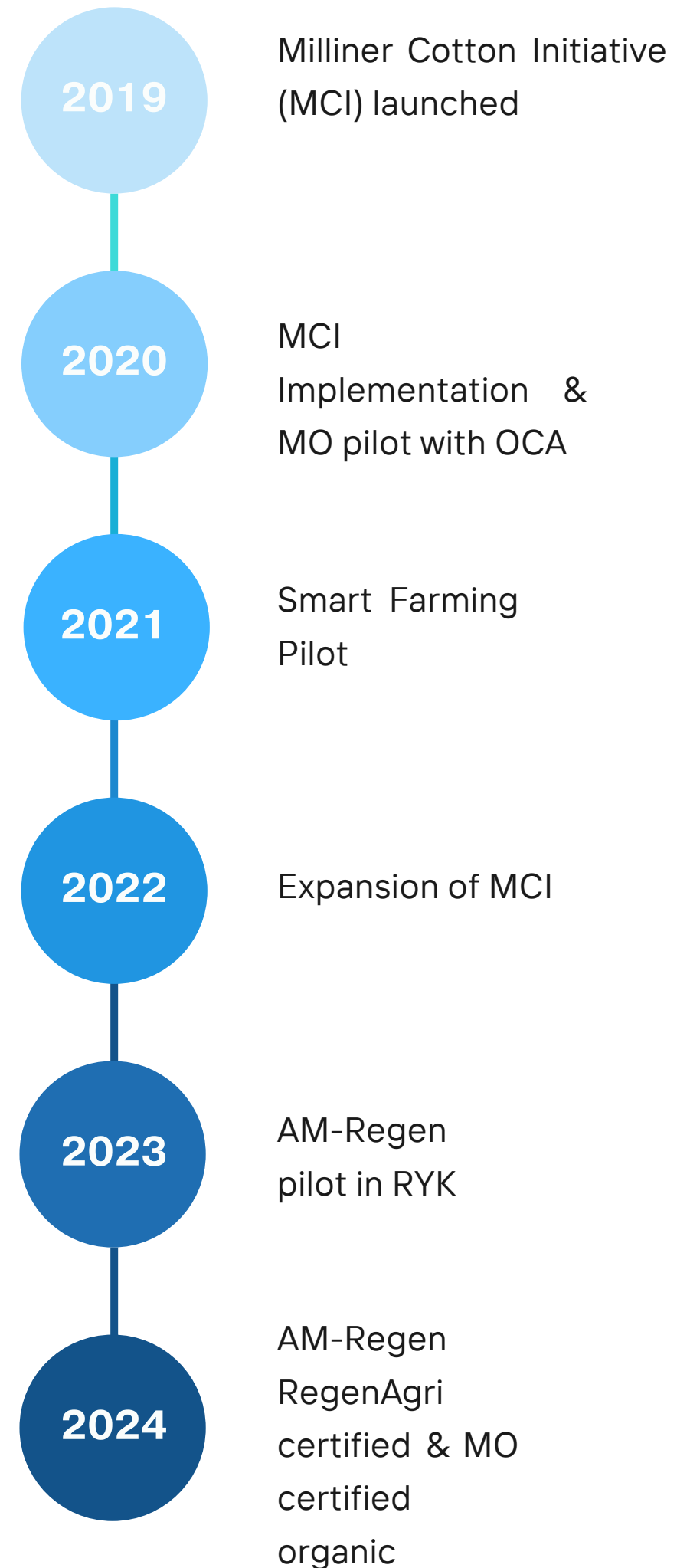
Continuous improvement & engagement in worker health and satisfaction



# PRIVATE SECTOR & COTTON FARMING

---

- **Need for Cleaner Cotton**
- **CSR efforts result in the launch of Milliner Cotton Initiative in 2019**
- **On-ground Issues: Traditional Agricultural methods, lack of awareness in best practices, farm management, lack of agri-tech for efficiency**
- **Importance of engagement of all stakeholder in the supply chain**
- **Elimination of middle-men**
- **Requirement of traceability**
- **Cost of Certification and verifications**
- **Need for investments by retail brands**



# MILLINER ORGANIC

- **Location:** Balochistan, Pakistan
- **10000** acres
- **1800** farmers
- **15,500** bales per season
- **Control Union Certified** Scope Certificate
- All project farms are certified organic
- **Lint production: 2,600 MT/year**



# MILLINER COTTON INITIATIVE

- **Project Expansion Underway:**
- **15,000** acres.
- **1000** farmers.
- **Up to 50,000 MCI bales/season.**
- **2 Ginning Mills**
- **Capacity of 9-10 million meters of fabric**



By Textile Exchange

# AM-REGEN



- **Pilot launched 2023 with 92 farmers on 1000 acres land**
- **Expanding to 6000 acres with 600 farmers**
- **RegenAgri Certified**
- **Lint production: 1,800 MT/year**





# AM-REGEN

---

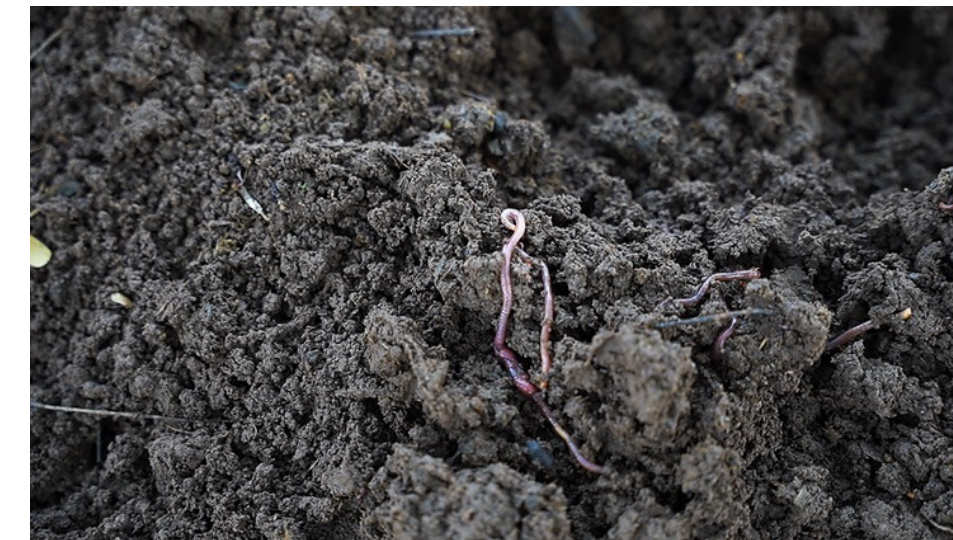
In 2023, we launched a **pilot run** of AM-Regen-regenerative cotton farming with 92 **farmers on 1000 acres** in **Rahim Yar Khan**, Pakistan.

Interventions included:

1. Minimizing Chemical Inputs for Environmental Conservation
  - a. Composting
  - b. Vermicompost
  - c. Distribution of NIAB Eco Spray
    - Pest and Disease Management
    - Environmentally Friendly Solutions
    - Enhanced Crop Yield
2. Integrated pest management and pest control methods
  - a. Pheromone traps
  - b. Yellow sticky traps
3. Cover Crop
4. Integrating Livestock to Enhance Soil Fertility Training



- **Pilot launched in 2023 with 92 farmers and 1000 acres land**
- **Expanding to 600 farmers on 6000 acres of land**
- **RegenAgri Certified**



## **Outcomes of AM-Regen Pilot**

**Seed Cotton Yield: 18% increase**

**Afforestation: 2000 trees planted**

**Land Preparation Cost: 13% reduced**

**Pesticide Cost: 28% reduced**

**Irrigation Hours: 13% reduced**

**Diesel Usage: 29% reduced**

**Fertilizer Rate (KG): 32% reduced**

# OTHER SUSTAINABILITY & CSR INITIATIVES

---

Our ties with the farming and ancillary communities in Rahim Yar Khan go beyond commercial interests. We support several outreach and CSR initiatives including:

- Seed Distribution
- Health Training
- Livestock Training
- Pulses distribution
- Tree Plantation

**14,925 trees planted** with MCI farmers and WWF-Pakistan to help improve biodiversity and environment.



# FARMING COMMUNITY PERSPECTIVE

---

- **Regen practices- how do they compare to old indigenous practices?**
- **Farming Community successes & challenges**
- **Perception of Artistic Milliners in the community**
- **Progressive farmers in AM-Regen**

*“What’s different now is that this company (Artistic Milliners) advised us to cut down the use of chemical fertilisers, and moderate our inputs on the land, regardless of how we thought it would impact yields. They helped us install an organic fermentor. Working with Artistic Milliners has been a boon, they’ve been helpful... The result has been great, quite beneficial. especially compared to other farmers around us. 2600 KGs from just 3 acres! No one here saw yields like these. We have been blessed.”*

***Abdul Karim, AM-Regen farmer, Rahim Yar Khan***



## SUPPLIER PERSPECTIVE

- Significance of creating climate goals initiatives in consultation with suppliers in regenerative projects
- Incorporating the regenerative approach in existing verification systems
- Data collection requirements at the farm level





**Artistic  
Milliners**  
DENTIM COMPANY OF THE FUTURE





SOURCERY

# Impact and Assurance

## Direct-to-Grower™ Solution

Global | July 2024 | Version 1.0



**giz** Deutsche Gesellschaft  
für Internationale  
Zusammenarbeit (GIZ) GmbH

**FABRIC Asia**

thesourcery.io

## Setting the Tone

**“It is a mistake to theorize before  
one has [verified] data.”**

**- Sherlock Holmes**



1

# Introduction to Sourcing



# Transforming Trade for Good

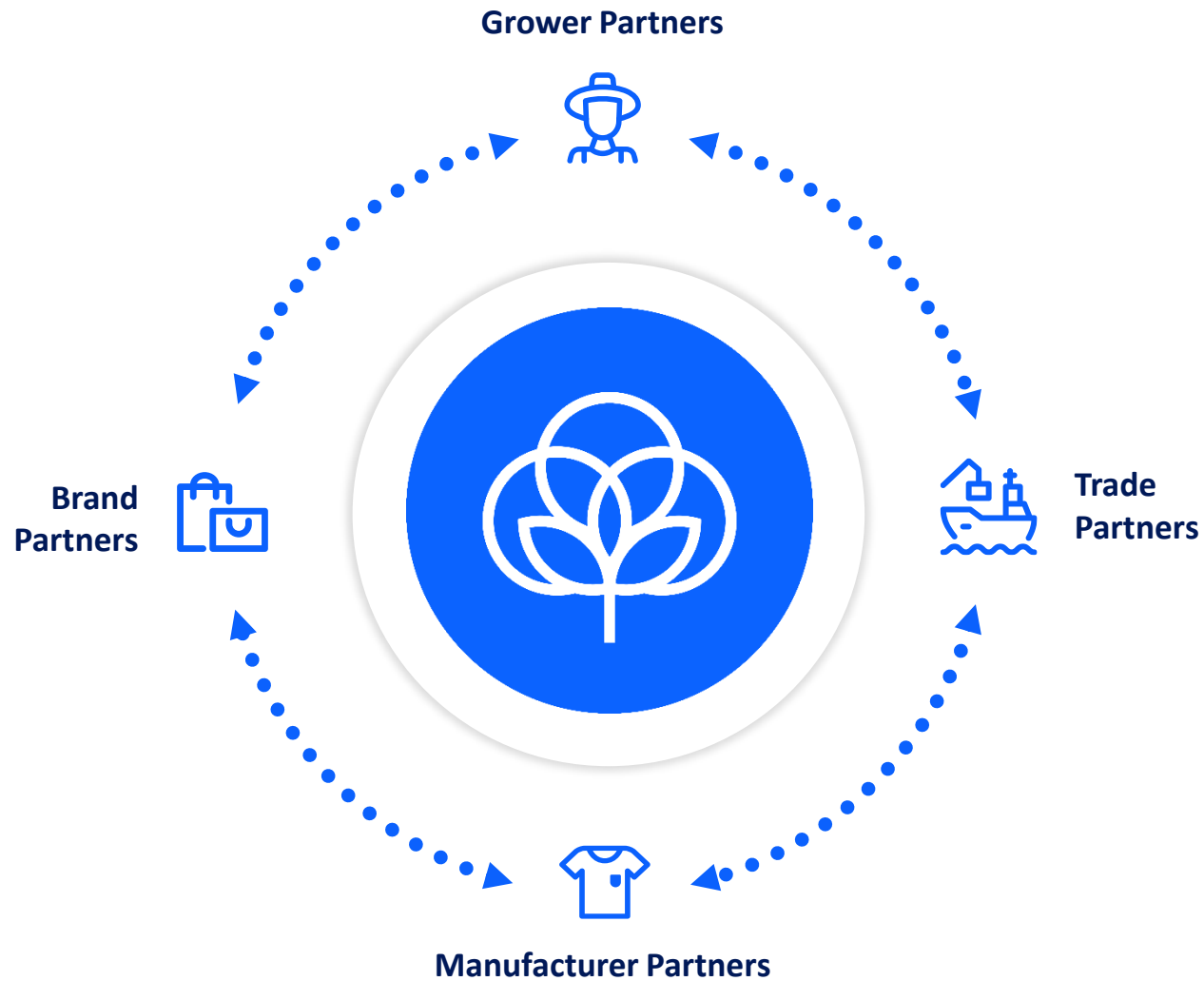
## A transformative new approach to sourcing.

Sourcery is a **member-owned global sourcing solution and digital trade platform that connects brands, manufacturers, traders and growers** who are committed to transforming trade for good.

Through the Direct-to-Grower™ Solution to trade, Sourcery Partners can secure and **transact fibre, yarn and fabric with full transparency, traceability and verified impact.**



# Transforming Trade, Together (Partners)



## Our Core Principles

1

**INCLUSIVE** - We're inclusive of **all growers, everywhere** (manufacturers and brands too!)

2

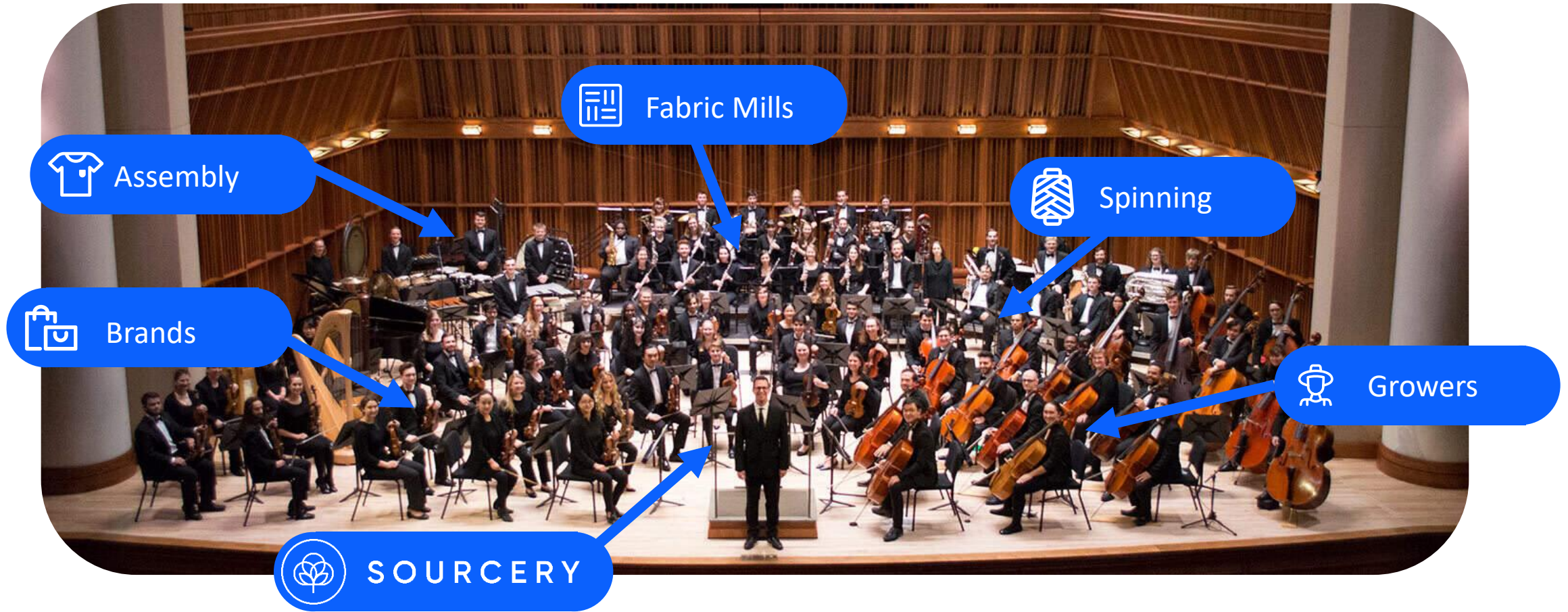
**IMPARTIAL** - As a neutral trade intermediary and facilitator, we are impartial to commercial interests—this **builds mutual trust from grower to consumer**.

3

**IMPACT** - We focus on verified primary data collection that is **more meaningful, measurable and equitable**.

# How We Transform Trade

What makes an orchestra work so well?



**Trust** is a prerequisite for transparency, traceability and impact.

# Direct-to-Grower™ Solution

**Direct-to-Grower™** includes **three integrated programme solutions** for Partners to enable transparent, fair, efficient trade and verified impact from fibre to finished goods.

1

## Trade Facilitation

Sourcery's **transformative sourcing solution and trade methodology** that enables transparent, fair and efficient transactions on fibre, yarn and fabric that are fully traceable<sup>1</sup> from grower<sup>2</sup> to retailer.

2

## Impact and Assurance

**Verified commercial and environmental primary data** that is meaningful, measurable, equitable and secure.



3

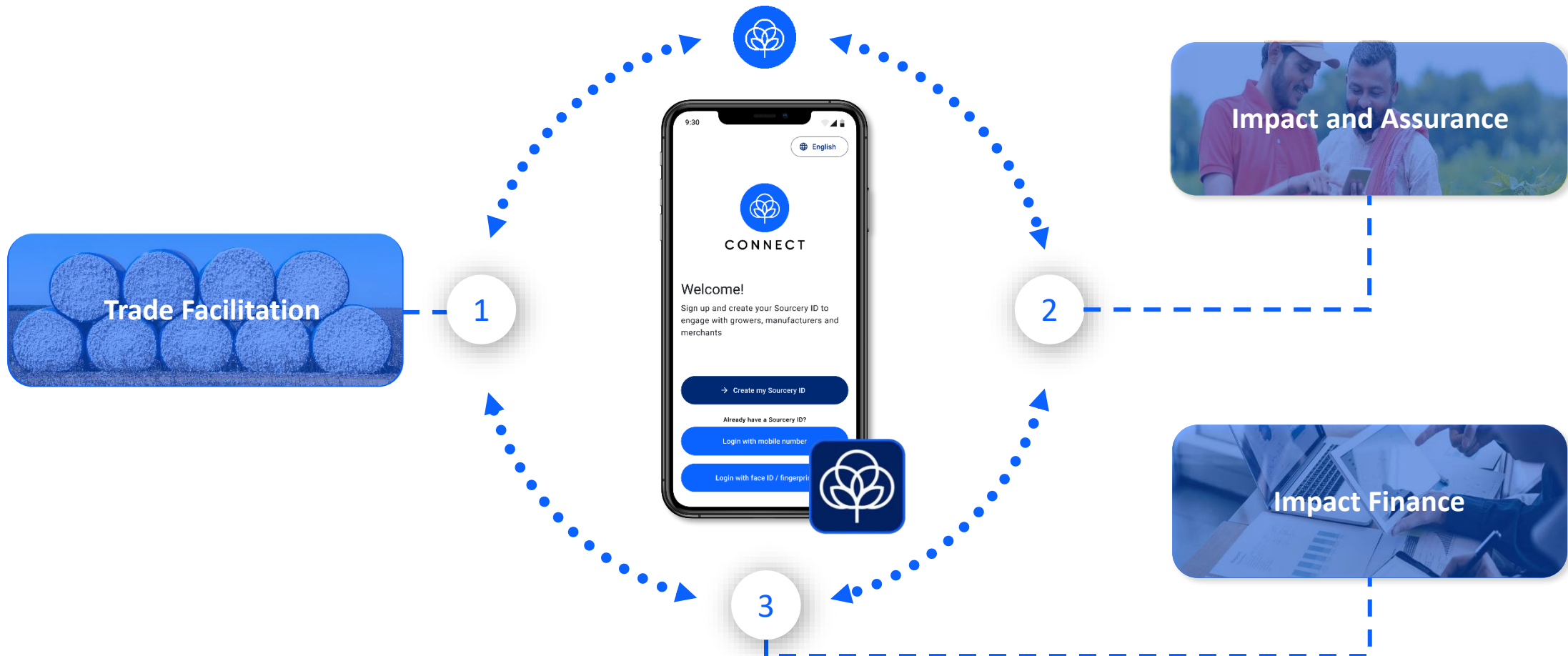
## Impact Finance

**More efficient and scalable impact and structured finance** solutions to leverage the full commercial and environmental benefits of Direct-to-Grower™

- Extension service and training
- Fibre and product procurement

# Direct-to-Grower™ Solution – Connect App: Tech + Service

The **Sourcery Connect App™** serves as the **digital nexus of the Direct-to-Grower™ Solution**, putting the power of collaboration, transparent trade and verified impact in the hands of our Partners.





2



## Impact and Assurance



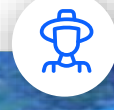
# Impact and Assurance – Three Components



## Protocol

Regional-specific **scope, data criteria, collection methodology and verification processes** to capture harmonized to capture primary data that supports all growers, everywhere.

- Harmonised Grower, Facility, Assurance and Traceability data collection methodology
- Open-source (and licensed) data criteria and Management & Evaluation<sup>1</sup>



## Services

Suite of modular services to **engage, train, collect, verify, and measure** the commercial, social and environmental performance of growers and manufacturers.

- Grower Essentials (Required)
- Grower Services
- Facility Services
- Assurance Services
- Traceability Services



## Connect App

Digital nexus of the Direct-to-Grower™ Solution, putting the **power of collaboration, transparent trade and verified impact** in the hands of our Partners.

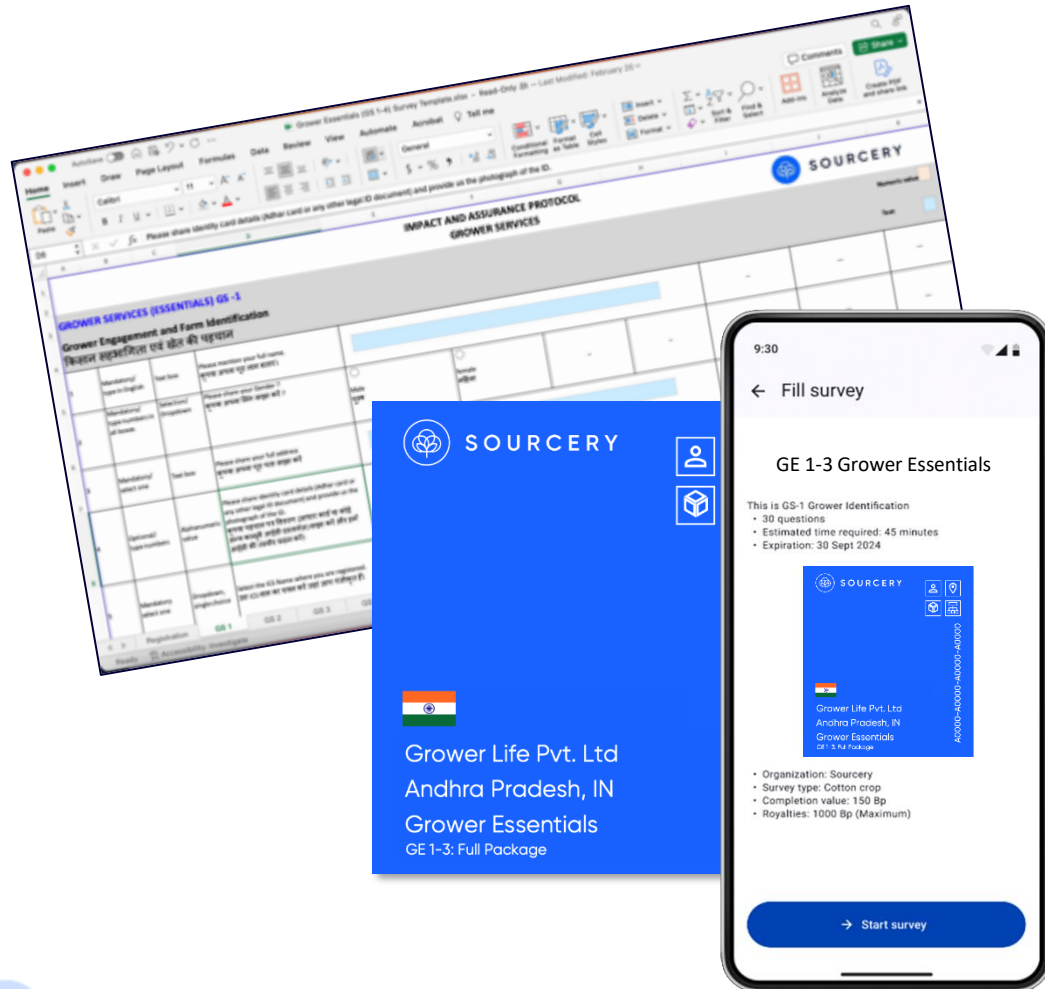


[www.bluenumber.org](http://www.bluenumber.org)



# Impact and Assurance – Protocol

Regional-specific, open-source<sup>1</sup> library of commercial, social and environmental performance metrics.



- **Harmonised Data** - Universal fixed boundaries and collection methodologies that allow for consistent and standardised data collection practices.
- **Sourcery Protocol<sup>1</sup>** – Sourcery Partners can access and use the Sourcery Open-Source Protocol scope, SOPs and data criteria across all Grower, Facility, Assurance and Traceability Solutions.
- **Impact Partner Protocol<sup>2</sup>** – Sourcery invites Impact Partners to develop their own Licensed Protocol scope, SOPs and data criteria across all Grower and Facility Solutions.
- **Cost-Effective** - Collect, verify and report data with ease matching impact criteria for mapping and informing any, preferred or identity cotton programs or ‘at-large’ measurement and evaluation framework, reducing audit costs and administration.
- **Mix and Match** - Sourcery Connect App enables easy and customized reporting with ‘drag and drop’ survey creation, enabling real-time data collection and reporting with growers, field staff, verifiers, aggregators, gins, manufactures and brands.

1. All Sourcery Partners can use Sourcery Protocol for data collection, verification and reporting purchases. Sourcery does not early royal revenue from its Protocols. 2. Impact Partners can create their own Protocol (Bluechips) and can earn royalty revenue and control who among Sourcery Partners have access to the Protocol and can use their Protocol for collection, verification and reporting purposes.

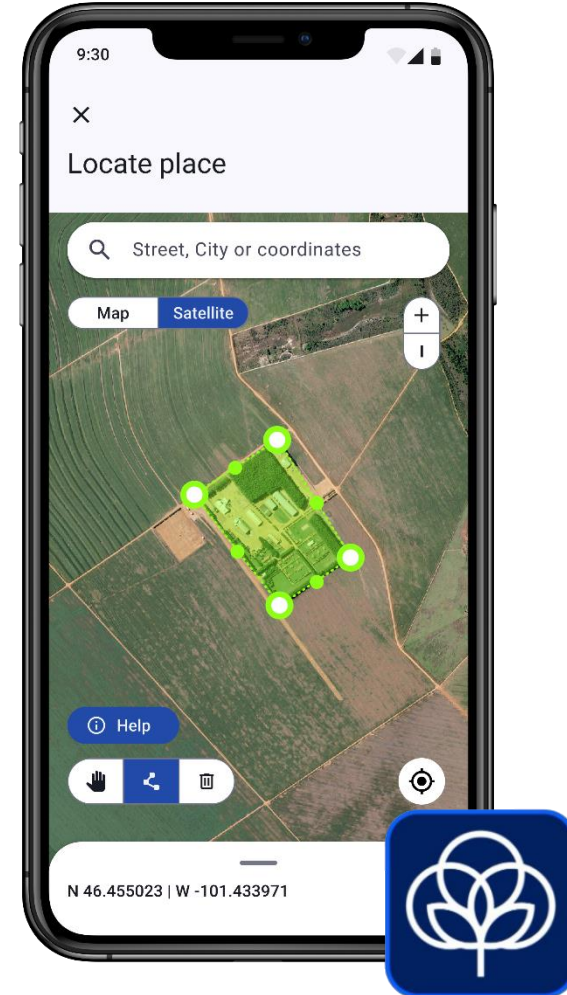
# Impact and Assurance – Grower Essentials



## Grower Essentials (GE 1-3)

Grower Essentials is required<sup>1</sup> for all growers enrolled in Direct-to-Grower™

- **GE 1** - Grower registration and field/plot identification
- **GE 2** - Household demographics
- **GE 3** - Basic agronomic practices assessment



# Impact and Assurance – Grower Solutions



## Labour and Livelihoods (LL 1-3)

Rural community and “worker voice” insights into labour, social and livelihood health.

- **LL 1** - Community Social and Labor Assessment
- **LL 2** - Community Income and Livelihoods Benchmark
- **LL 3** – Grower Income and Livelihoods Benchmark



## Crop and Environment (CE 1- 4)

Farm level data that captures crop and environmental performance data of individual growers.

- **CE 1** - Soil Nutrient and Management (Quantified)
- **CE 2** – Crop Protection (Quantified)
- **CE 3** - Water Use and Intensity (Quantified)
- **CE 4** - Nutrient and Soil Health Benchmark (5%)



## Land and Climate (LC 1- 3)

Farm level data that captures land and climate performance needed to report greenhouse gas emission and removals.

- **LC 1** - Land Use Change and Biodiversity Assessment
- **LC 2** - Energy Use and Emissions (Scope 1 and 2)
- **LC 3** - Soil Health and Climate (ISO 14064 - 25%)

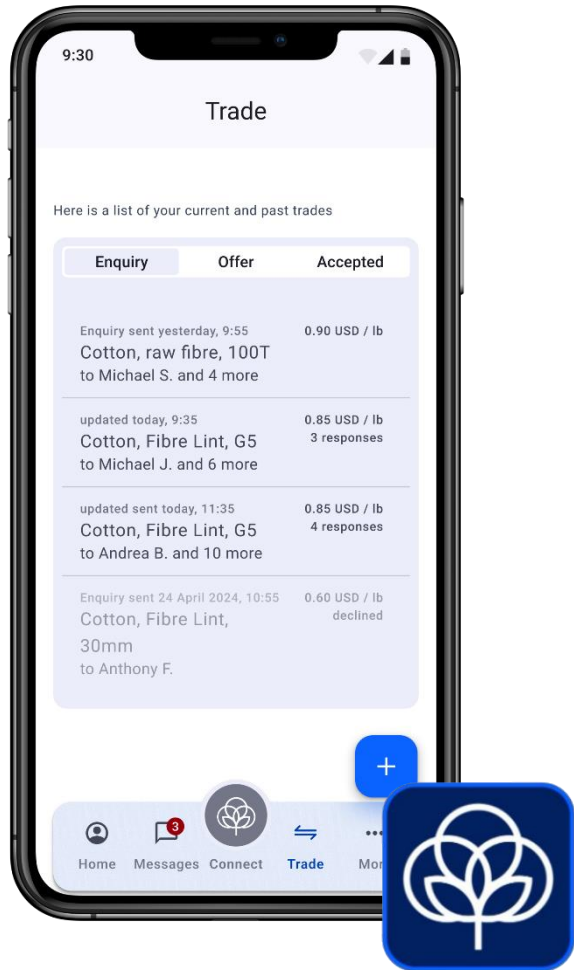
# Impact and Assurance – Services

Suite of modular field services to **engage, train, collect, verify, and measure** the commercial, social and environmental performance of growers and manufacturers.



- **Grower Services** – Grower identification and demographics, commercial, social, environmental impact reporting.
  - Grower Essentials (GE 1-3)
  - Labour and Livelihoods (LL 1-3)
  - Crop and Environment (CE 1-4)
  - Land and Climate (LC 1-3)
- **Facility Services** – Social, labour and energy intensity, waste and emissions assessments for ginners and spinners.
  - Labour and Livelihoods (LL 4-6)
  - Facility and Environment (FE 1-2)
- **Assurance Services** – Third-party quality and integrity sampling and testing on seed, crop, fibre, yarn and fabric.
  - Product Assurance – Quality (PA 1-3)
  - Product Assurance - Integrity (PA 4-7)
- **Traceability Services** – Chain-of-custody and transactional document, image and data collection and verification from farm to brand.
  - Transactional Traceability (TT 1-3)

# Impact and Assurance – Connect App Features



- **Site Verification** - Grower and site verification via geolocation to create cadastral boundary of farm and fields.
- **Data Ownership** - All growers, field staff, verifiers, aggregators, gins, manufacturers and brands issued a unique Bluenumber B#SSID for data ownership, sovereignty and equity.
- **Connect in Real-Time** - Secure engagement, training and real-time communication (text, voice, video) between growers, field staff, verifiers, aggregators, gins, traders, manufacturers and brands.
- **Survey** - Customized survey creation and templates for real-time primary data capture and verification.
- **Trade** – Remit enquires, offers, forwards on all fibre, yarn and fabric with real-time chain-of-custody and transaction verification.
- **Direct Payments** - Mobile wallet to receive direct digital payments (BluePoints) for primary data collection, fibre and premium payments for growers, field staff, verifiers and others.

# Impact and Assurance – Creating Bluechip Credential (Survey)

9:30

← Fill survey

Step 6 of 6

GS-1 GE 1-3 Grower Essentials

What is the main crop you grow?

Select your main crop

Is your cotton certified organic?

Yes

No

I'm not sure

Which integrated pest management (IPM) strategies do you implement?

Write all that apply

← Previous → Finish



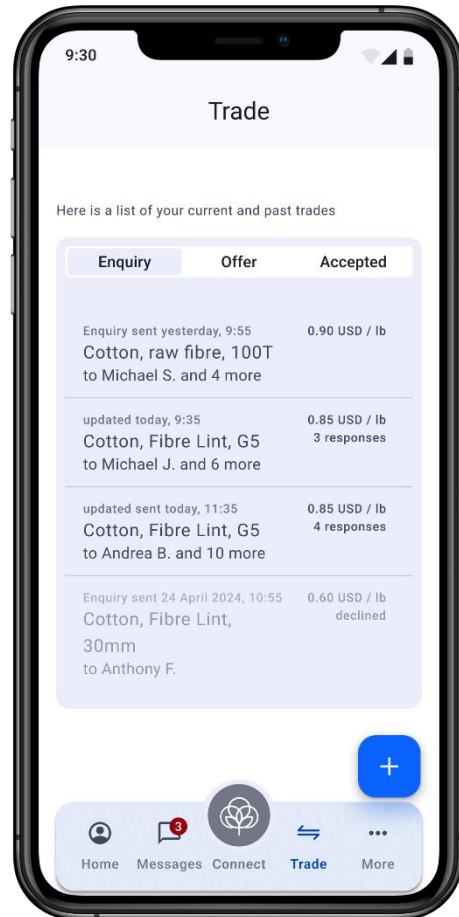
## Bluechip Credential

SOURCERY

Grower Life Pvt. Ltd  
Andhra Pradesh, IN  
Grower Essentials  
GE 1-3: Full Package

A0000-A0000-A0000-A0000

# Impact and Assurance – Creating Bluechip Credential (Trade)




## Bluechip Credential



# Impact and Assurance – Bluechip “Impact Stack”

## Bluechip Credential(s)/Licensed



Grower Life Pvt. Ltd  
Andhra Pradesh, IN  
Grower Essentials  
GS 1-3: Full Package

A0000-A0000-A0000-A0000



Grower Life Pvt. Ltd  
Andhra Pradesh, IN  
Crop and Environment  
CE 1 - Soil Nutrient and Management

A0000-A0000-A0000-A0000



OMAX Cotspin Pvt. Ltd.  
Gujarat, IN  
Labour and Livelihoods  
LL 3 - Facility Social and Labour

A0000-A0000-A0000-A0000

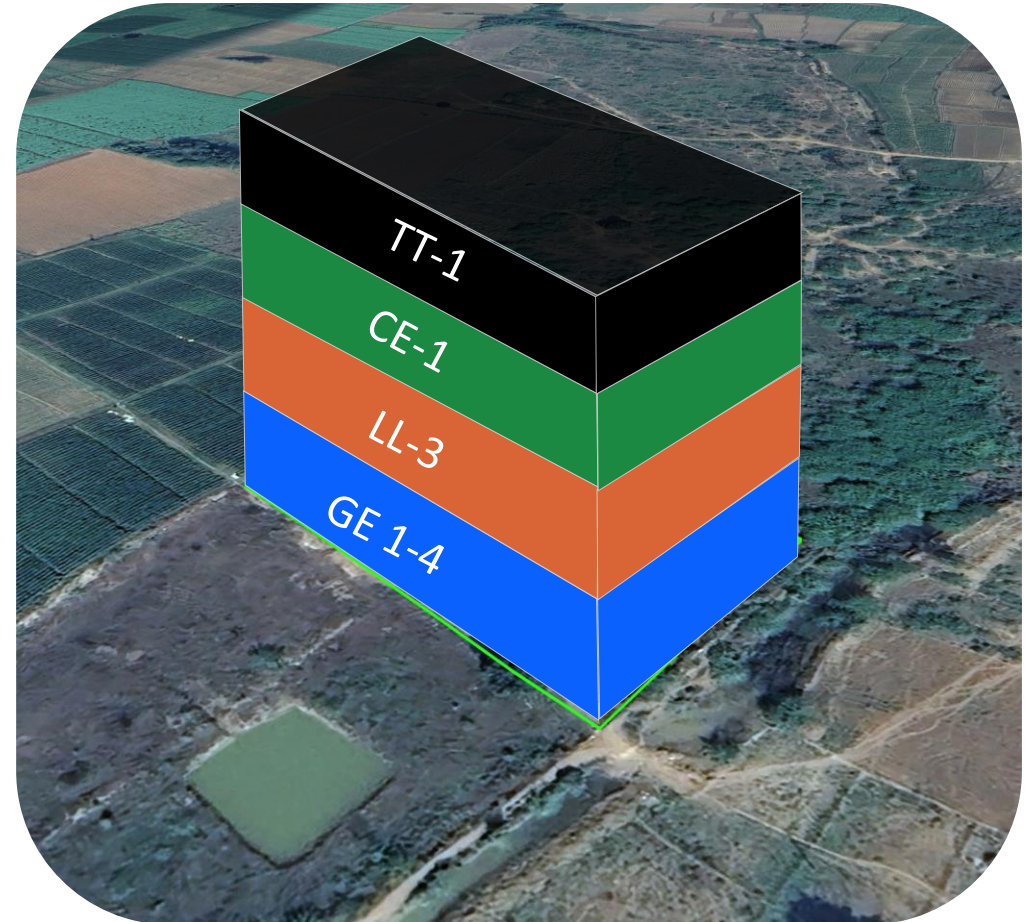


Grower Life Pvt. Ltd  
Andhra Pradesh, IN  
Transactional Traceability  
TT 1 - Farm to Processor (Raw Materials)

A0000-A0000-A0000-A0000



## Bluechip ‘Impact Stack’<sup>1</sup>





# Impact and Assurance – Assurance Partners (Data Verification)



## Assurance Partners

Independent **third-party verifiers to collect or verify data**, fibre and product samples and conduct testing.

- Grower Essentials
- Grower Services
- Facility Services
- Assurance Services
- Traceability Services

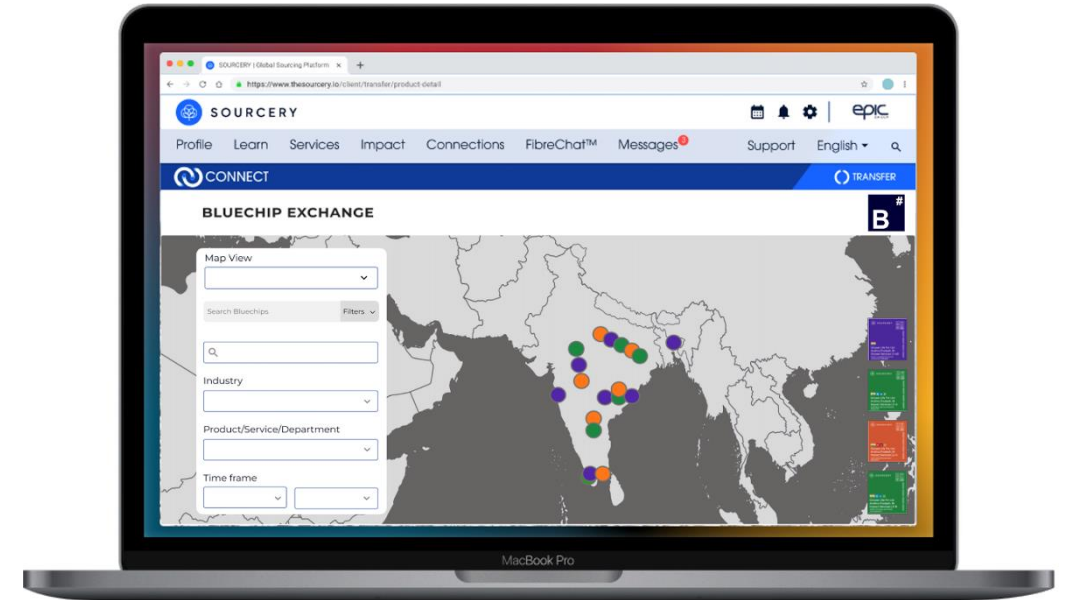


# Impact and Assurance – Bluechip Exchange

## Bluechip Credential(s)<sup>1</sup>



## Sourcery Bluechip Exchange<sup>1,2</sup> (data marketplace)



Prospective Impact Partner logos are protected under copyright. Used for demonstration purposes only and does not imply existing partnership with Sourcery.

1. Graphical representation of forthcoming Sourcery Bluechip Exchange marketplace integrated into Sourcery Connect and Transfer products.
2. Each Bluechip can be reserved or purchased under license from the Bluechip Exchange following qualified Direct-to-Grower™ transaction on fibre, yarn, fabric and finished goods.

# Transforming Trade, Together – Impact Collaborators (Prospective)



## Impact Collaborator

Independent organizations that **develop measurement and evaluation (M&E) frameworks**, reporting systems and certifications.

- Multi-stakeholder organizations
- Standards and Certifications
- Trade organizations



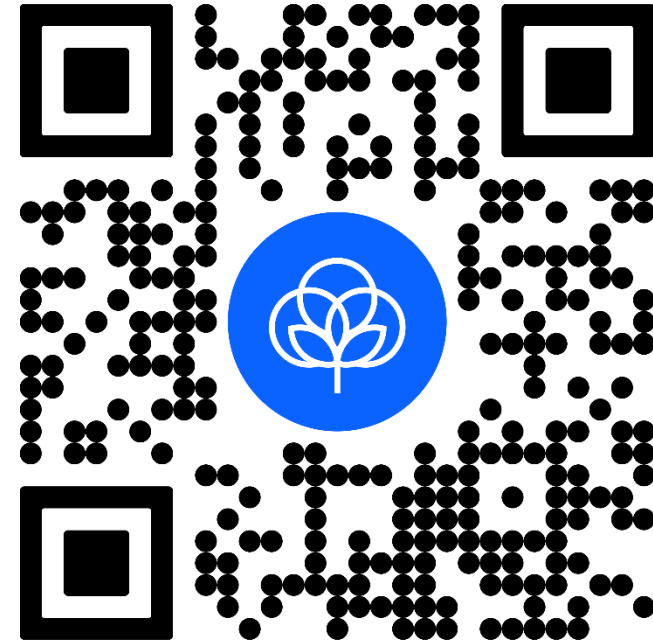
FIBERSHED



Let's Transform Trade, Together – Thank you

# Thank you!

Want to learn more about becoming a Manufacturing Partner in Sourcing, please Scan the QR code to learn more!





# BEETLE REGEN SOLUTIONS



# About Beetle

A one stop solution to sustainable textile sourcing – a solution which not only measures well against sustainability goals, compliances and government regulations, but also takes into account future needs and the ever-evolving global ecosystems, while offering sustainable textile products, in addition to offering ways to achieve Net Zero targets for corporates and supply chains.



Support in building  
Climate-neutral  
supply chains &  
Net Zero Goals

Sustainable raw  
material policy  
and agenda



# Regenerative Agriculture

Regenerative agriculture is a holistic farming approach that focuses on restoring soil health and enhancing biodiversity through practices like cover cropping, no-till farming, and livestock management, with outcomes that improve soil health, sequester carbon, or both.



Biochar



Conservation Agriculture



Agroforestry



Water Conservation



Natural Inputs Production



Livestock Management



# Current Projects



~75,000 regenerative farmers in India, across a land area of ~100,000 Ha, expected to produce around 45k - 50k MT of regenerative cotton lint and ~7000 MT of low carbon and sustainable rice.

Staple Length (mm)	Mic	Strength (g/tex)	Rd
27 to 30.5	3.5 to 4.5	28 to 32	75/76

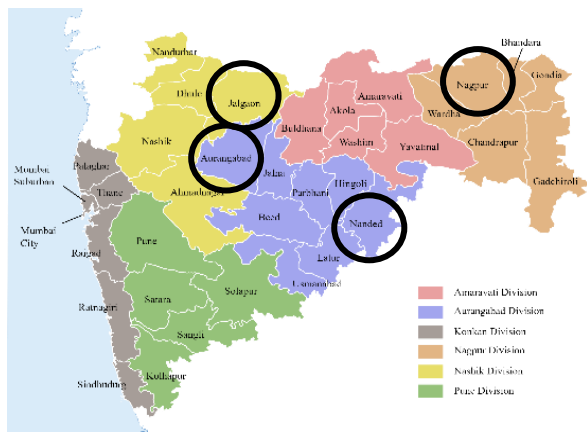
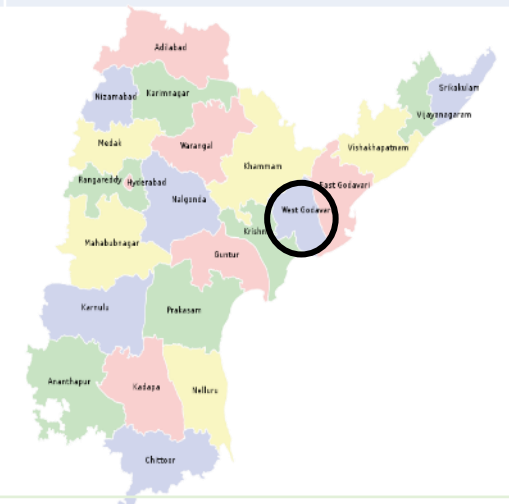
State	Maharashtra
Districts	Nanded, Nagpur, Aurangabad & Jalgaon
Program	~50,000 farmers under Regenerative Cotton program



State	Madhya Pradesh
District	Khargone

Program ~20,000 farmers under Regenerative Program  
 ~1000 farmers under the ROC (Regenerative Organic Certification) Program

State	Andhra Pradesh
District	West Godavari
Program	~5000 farmers under paddy & AWD (alternate wetting & drying) program





# BIOCHAR



Beetle is training its 70,000 farmers on the production, application and benefits of biochar. Using biomass to produce biochar not only prevents uncontrolled decomposition but also has immense potential in sequestering carbon back into the soil.



## What is Biochar?

- Biochar is a form of charcoal produced from organic materials through pyrolysis, a process that involves heating the biomass in the absence of oxygen



## Biochar Benefits

- Improve soil health by enhancing soil structure
- Increases water holding capacity
- Improve Agricultural Productivity
- Increase soil organic carbon levels manifold by sequestering carbon
- Promotes microbial activity



## Cotton & Biochar

- Cotton stalks are often considered waste and either burned, causing CO<sub>2</sub> pollution, or stacked near bunds, spreading insects and pathogens
- Converting all global cotton stalks to biochar could sequester 84.02 Million tons CO<sub>2</sub> in the soil (at 50% efficiency), according to ICAC (June 2023).

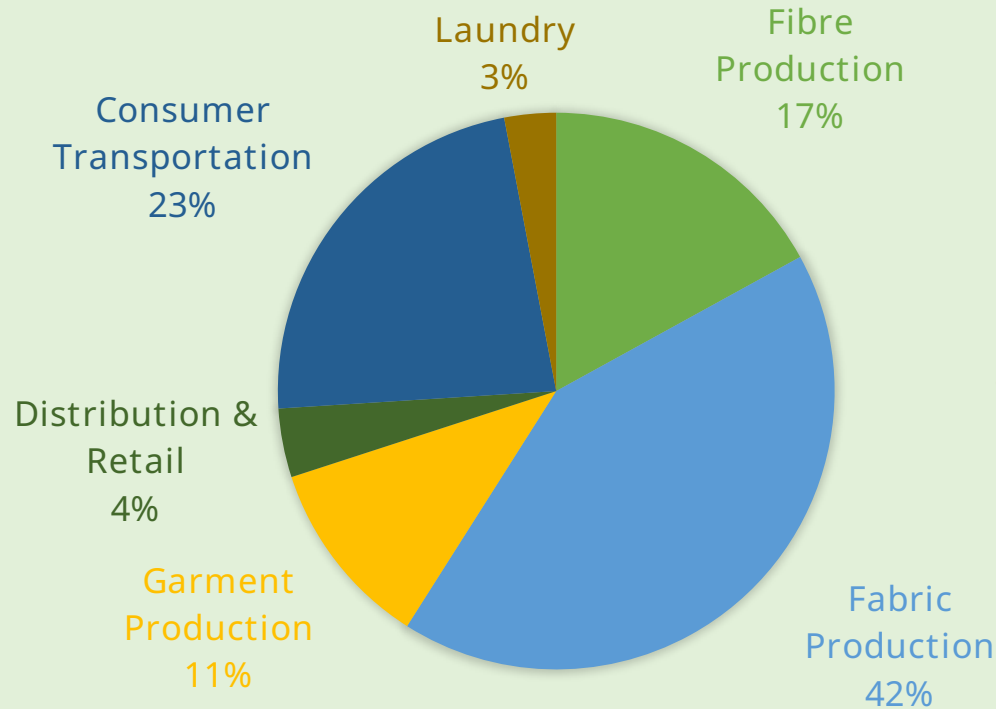
# CARBON SEQUESTRATION : APPAREL & TEXTILE INDUSTRY



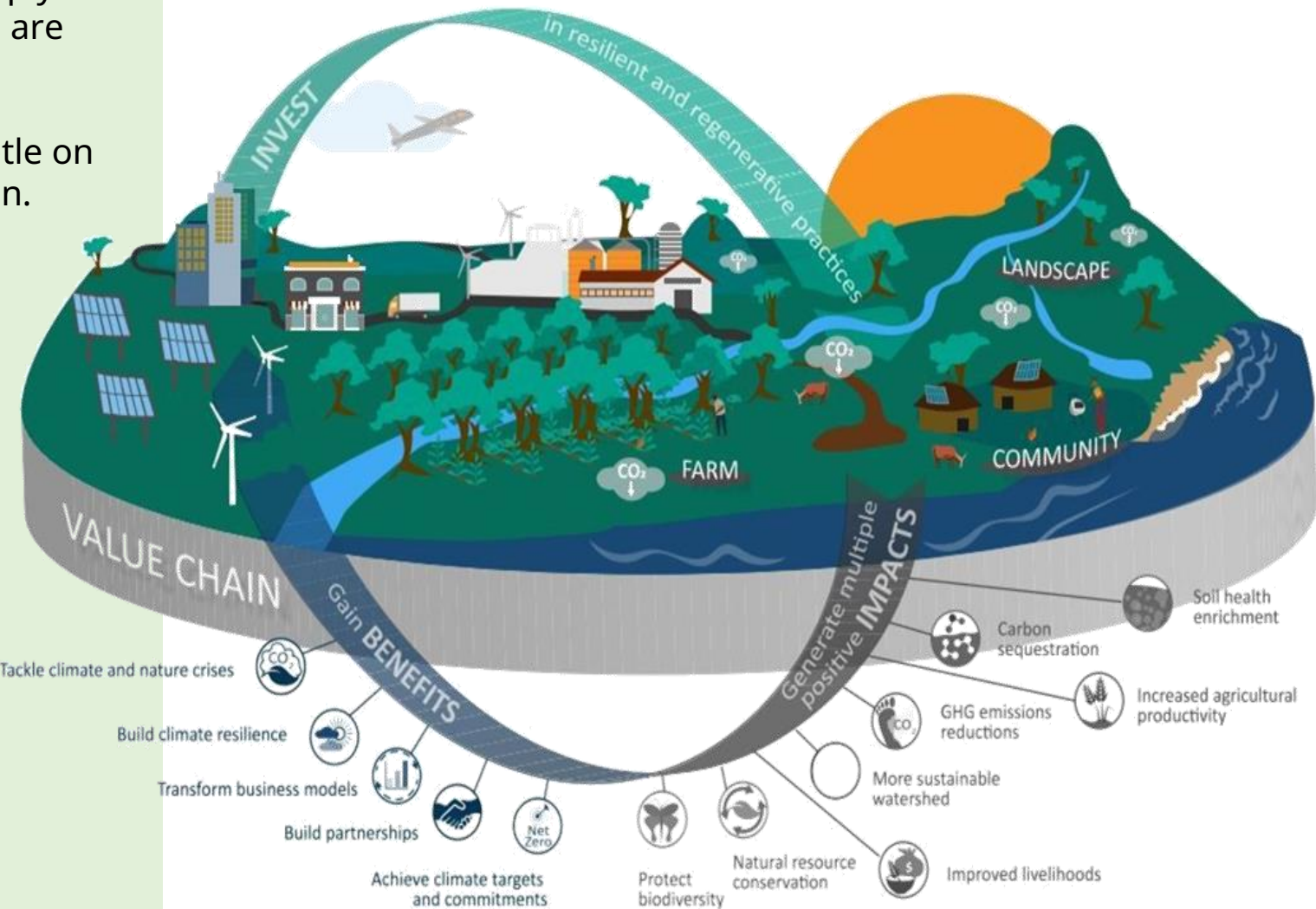
For many Brands, indirect emissions in extended supply chain account for the majority of total emissions and are often the hardest to reduce.

To address this, Companies can collaborate with Beetle on emission reduction solutions within their supply chain.

## CO2 EMISSIONS IN FASHION SUPPLY CHAIN



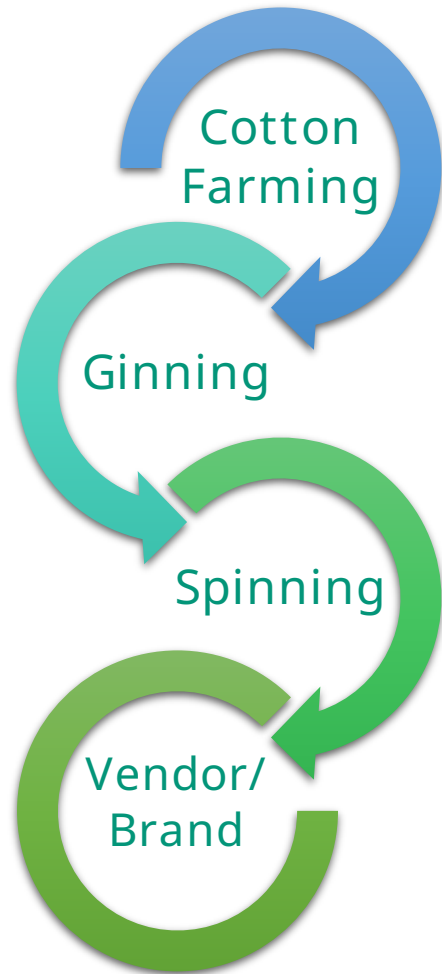
Source: ethicalconsumer.org



Source : World Economic Forum



# Ensuring end-to-end Traceability



- Beetle Farmer's data entered via apps, with unique IDs assigned
- Unique cotton heap and bale IDs to track receipts, segregated processing for regen bales and storage.
- Log all lint transactions in the spinning module, assigning a unique yarn ID to each lot
- QR codes to scan & store the fabric & finished garments separately, and track their entire Chain of Custody

- Ensures chain of custody and traceability

Blockchain & ID System



- At farm, gin, and spinning levels

In-Person Verification



- For end garment/fabric to show the entire chain of custody

QR Codes



- Options include DNA tracers, markers, & isotopic origin testing

Advanced Traceability





# Challenges of Farming Communities

## Knowledge & Training

- Lack of Awareness: Limited understanding of regenerative principal & benefits
- Training & Education : Need for comprehensive training programs & continuous support to help farmers implement and sustain new practices. Changing traditional mindset of some farmers to adopt counter intuitive practices like zero tillage can be a challenge.

## Market Dynamics

- Market Access: Limited access to markets that support and recognise regeneratively grown cotton
- Certification Challenges: Complexity & cost of obtaining certifications as per standards

## Environmental Factors

- Soil Conditions: Soil maybe severely degraded and may require significant time & effort to restore
- Climate Variability: Unpredictable weather patterns & climate change impacts can hinder successful implementation of regenerative practices

## Monitoring & Evaluation

- Impact Measurement: Difficulty in measuring & demonstrating the immediate benefits of regenerative practices

## Access to Resources

- Seed Availability: difficulty in obtaining high-quality seeds for cover crops & diverse plant species



# Data Requirements

Farmer Details	Soil Health Data	Regenerative Practices through field book	Environmental & Social Impact Data	Chain of Custody	Certification Data Requirements
<ul style="list-style-type: none"><li>• Identification Documents</li><li>• Personal Account Details</li><li>• Land Information</li><li>• Baseline Data</li><li>• Need Assessment</li></ul>	<ul style="list-style-type: none"><li>• Soil Composition</li><li>• Soil structure</li><li>• Microbial Activity</li></ul>	<ul style="list-style-type: none"><li>• Crop Types</li><li>• Farmer field book</li><li>• Cover Cropping</li><li>• Livestock Integration</li><li>• Yield data</li><li>• Crop Rotation Patterns</li><li>• Tillage Practices</li><li>• Pest &amp; Weed Management</li></ul>	<ul style="list-style-type: none"><li>• Carbon Sequestration</li><li>• Biodiversity</li><li>• Water Conservation</li><li>• Community Engagement</li></ul>	<ul style="list-style-type: none"><li>• Invoice details at farmer, ginner level</li></ul>	<ul style="list-style-type: none"><li>• Farmer Identification details</li><li>• Land Information</li><li>• Personal Account Details</li><li>• Regenerative Practices</li><li>• Soil Organic Health</li></ul>

# Farming Communities' Perspectives on Implementing Regenerative Solutions



- Traditional mindsets of practicing agriculture are difficult to uproot
- Limited ability to look at long term potential impacts compared to short term temporary gains – environmentally and economically.
- Some farmers are better aware than before on global production and supply chain challenges and hence are positive on regenerative practices.
- Monocropping patterns in most regions are a hinderance to adopting regenerative solutions and moving towards enhanced Biodiversity.





# Thank You!

ANY QUESTIONS?

Contact us: [info@beetlereggen.com](mailto:info@beetlereggen.com)

