



Carbon Farming in Europe From pilot to scale

Indigo Agriculture

September, 2020





Founded
2014 by Flagship Pioneering



>1000
Employees

World's largest:
Digital Grain Platform
Plant microbiome database
Endophyte library
Agricultural lab

5 crops
in production



19
Commercial Products

Commercial Acreage:
2016: 0K
2017: 55K
2018: 1M
2019F: 4M+

Our mission

Harnessing Nature to Help Farmers Sustainably Feed the Planet

... by focusing on
improving farmer
profitability



... by improving the
sustainability of
agriculture



... and by better aligning
agricultural practices with
consumer health



Agriculture is typically viewed as part of the problem...

Land Degradation

Agriculture degrades 25M+ acres / year

Water Usage

70% fresh water used by agricultures

GHG Emissions

Agriculture creates 28% of emissions

Pesticide Use

50%+ of vegetables have pesticide residue

... but it can be a big piece of the solution by driving innovation across the value chain



Inputs



Growers



Storage



Processors



CPG & Retail



Consumers

Our solutions



Pays farmers for drawing down carbon into their soil

Enables carbon drawdown
Helps prove carbon drawdown



Enabled by
**MICROBIAL TECHNOLOGY &
DIGITAL INNOVATION**



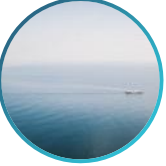


Connects farmers with buyers who want to buy high quality sustainably grown crops

Enables sustainably grown high quality crops
Ensures quality certification & identity preservation

To achieve climate targets, we need to remove atmospheric CO₂

Sequestering carbon into agricultural soil via photosynthesis is scalable, affordable, and immediate

		SCALABLE	AFFORDABLE	IMMEDIATE
	Agriculture	✓ Potential for 1+ trillion tons of CO ₂	✓ \$15-20 / ton CO ₂ stored, with increased farmer profitability	✓ Farmer control of land Means to make change System to harness collective efforts
	Trees	✓ Potential for ~700 billion tons of CO ₂	— \$15-20 / ton CO ₂ stored, unknown opportunity cost	— 76% of forest land not controlled by individuals No system to harness collective effort today
	Oceans	✓ Potential for 1+ trillion tons of CO ₂	— Largely untested; still high cost today	✗ No scalable and affordable solution yet developed

Legend ✓ High — Medium ✗ Low

The way to sequester carbon is via regenerative farming practices

These 5 practices are proven to develop carbon enriched soils ...



**Cover crops,
esp. legumes**



**Reduced
tillage**



**Longer crop
rotations**



**Reduced
synthetic
inputs**

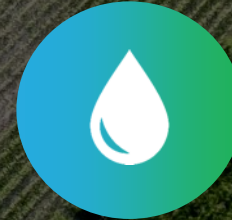


**Incorporate
livestock /
grazing**

**There are also
other important
benefits to soil
that contains
more carbon**



**Improved Drought
Tolerance**



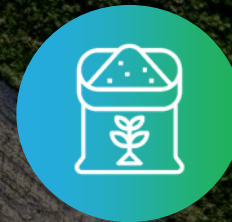
Better Flood Resistance



More Nutritious Crops



Enhanced Yields

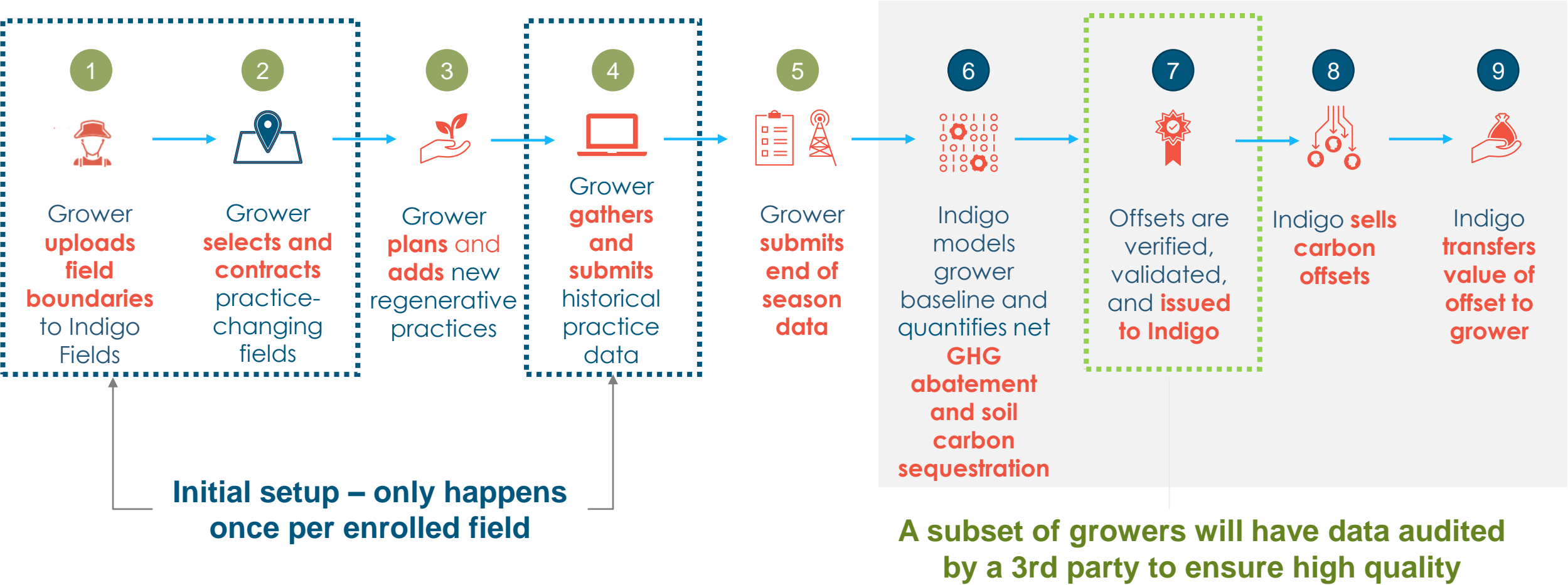


**Decreased Inputs
Required**

How Indigo Carbon works

Grower step

Indigo step



We plan to generate demand for carbon credits from four key stakeholders



Businesses

- Certification
- Direct offset of products or corporate footprint
- Option to offset carbon footprint at purchase



Non-profits

- Donations to the most effective near-term climate change solutions



Consumers

- Direct purchase of carbon credits
- Certification
- Issuing a credit card
- App that tracks carbon footprint



Governments

- Regulations to support carbon markets
- Cap and trade program
- Carbon tax

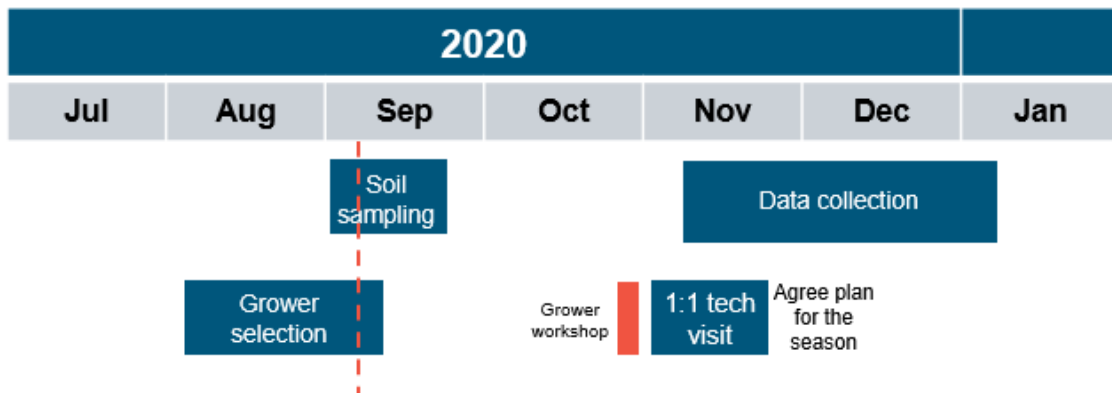
Partnering with Wasa (Barilla) to test the approach

Winter cereal crop season 2020

Grower commitments

- Mutually agreed 3 year regen ag practice change plan; flat rate €/ha payment
- Allocate one specific field (~10-20ha)
- Provision of 3-5 years of data and all in season, detailed, field level activity data
- Allow soil sampling and periodic field inspections
- Wasa only growers must have rye in rotation

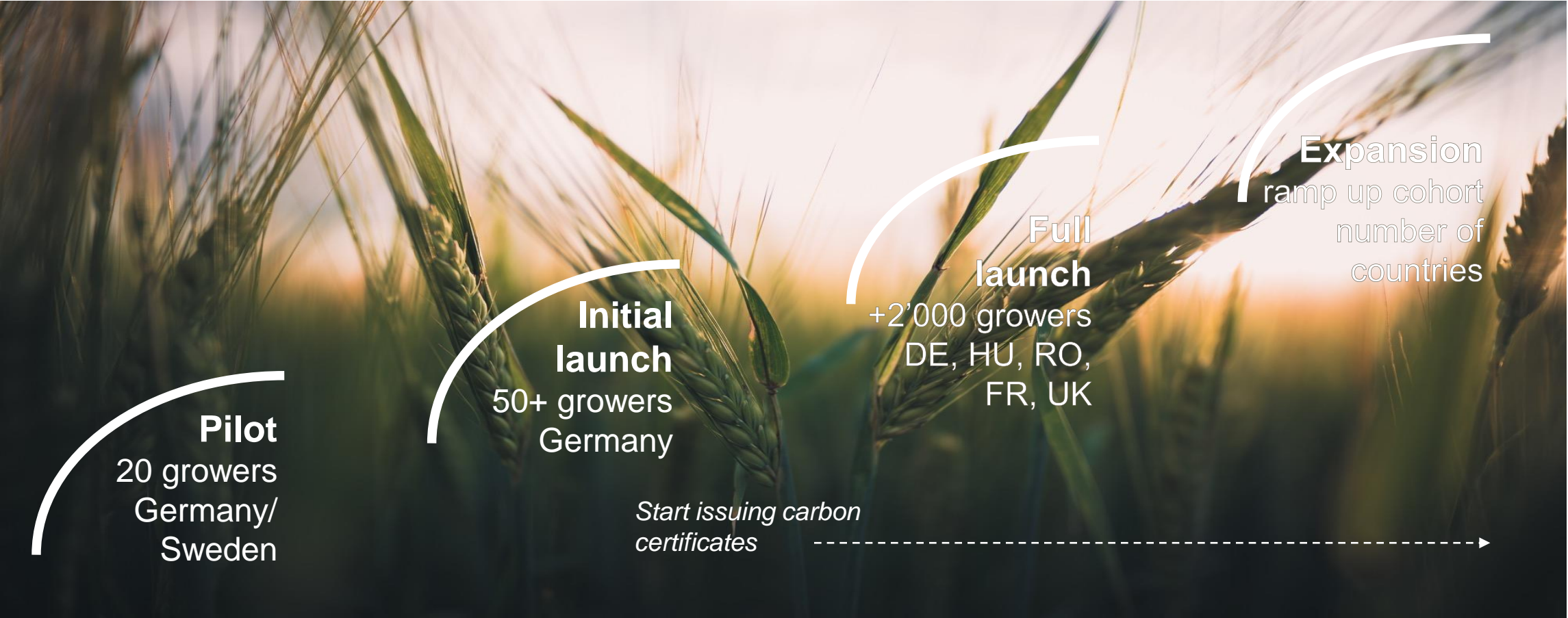
Identification & contracting with ~ 20 growers



Growers mainly located in Germany;
additional locations in Sweden*



Proposed scale up plan



Key enablers for private as well as public investment in carbon farming



Build on **Farm to Fork** and **Biodiversity Strategies** to develop an EU wide approach to carbon farming which stimulates public and private initiatives and investment which can deliver on our environmental goals, create new revenue streams for growers and make agriculture part of the solution to climate change



Linked to the above, a **Common Agriculture Policy** that incentivizes growers to adopt regenerative farm practices and go beyond the minimum requirements; **avoid mandatory** approaches which reduce the scope for additionality in carbon farming initiatives that **would crowd out private engagement**



A rigorous and robust EU regulatory approach to **certifying carbon removals is critical** to the development of carbon markets and the creation of a **new generation of tradeable carbon certificates** whose security and environmental integrity is reflected in their price.



Inclusion of this **new generation of carbon certificates in the EU Emissions Trading Scheme** – the world's biggest carbon compliance market – would stimulate demand and enable growers to achieve a higher price point for their carbon certificates



Any questions?