



**U.S. SOYBEANS: THE CASE STUDY OF SUSTAINABILITY
IN THE PRODUCTION OF FOOD BEANS**

INTRODUCTION

- Dan Schwartz
 - Married for 36 years
 - 6 children, 6 grandchildren
 - 2nd generation farmer
- Schwartz Farms
 - Cortland, OH, USA
 - Established in 1956
 - 3rd generation family farm
 - 5 families involved
 - 17 employees
 - Transitioned to grain only farm in 1978
 - Added the seed and IP soybean business in 1998
 - Produced 17,805MT of NON-GMO soybeans in 2020
 - Proud to be a sustainable, farm-to-table family farm operation



OUR TEAM

Dan,
partner

Tom Jr.,
partner

Leah, Tom's
wife

Larry
Morse

Bruce
Brainard

Dave,
Steph's
husband

Pam, Dan's
wife and
market
analyst

Steph,
Dan's
daughter
#1

Sam,
Tom's son
#2

Bill
Helmuth,
seed plant
manager

Tyler, Tom's
son #1

Elizabeth,
Dan's
daughter
#4

Sarah,
Tyler's wife

Koichiro
Ahaira

John, Jess'
husband and
office
manager

Jessica, Dan's
daughter #2

Gracie, Dan's
daughter #6

Denis, Tom's
son #3

Aaron, Dan's
son #5

Kristen, Dan's
daughter #3

*Not pictured:
Tom T, Jake, Pat & Ryan



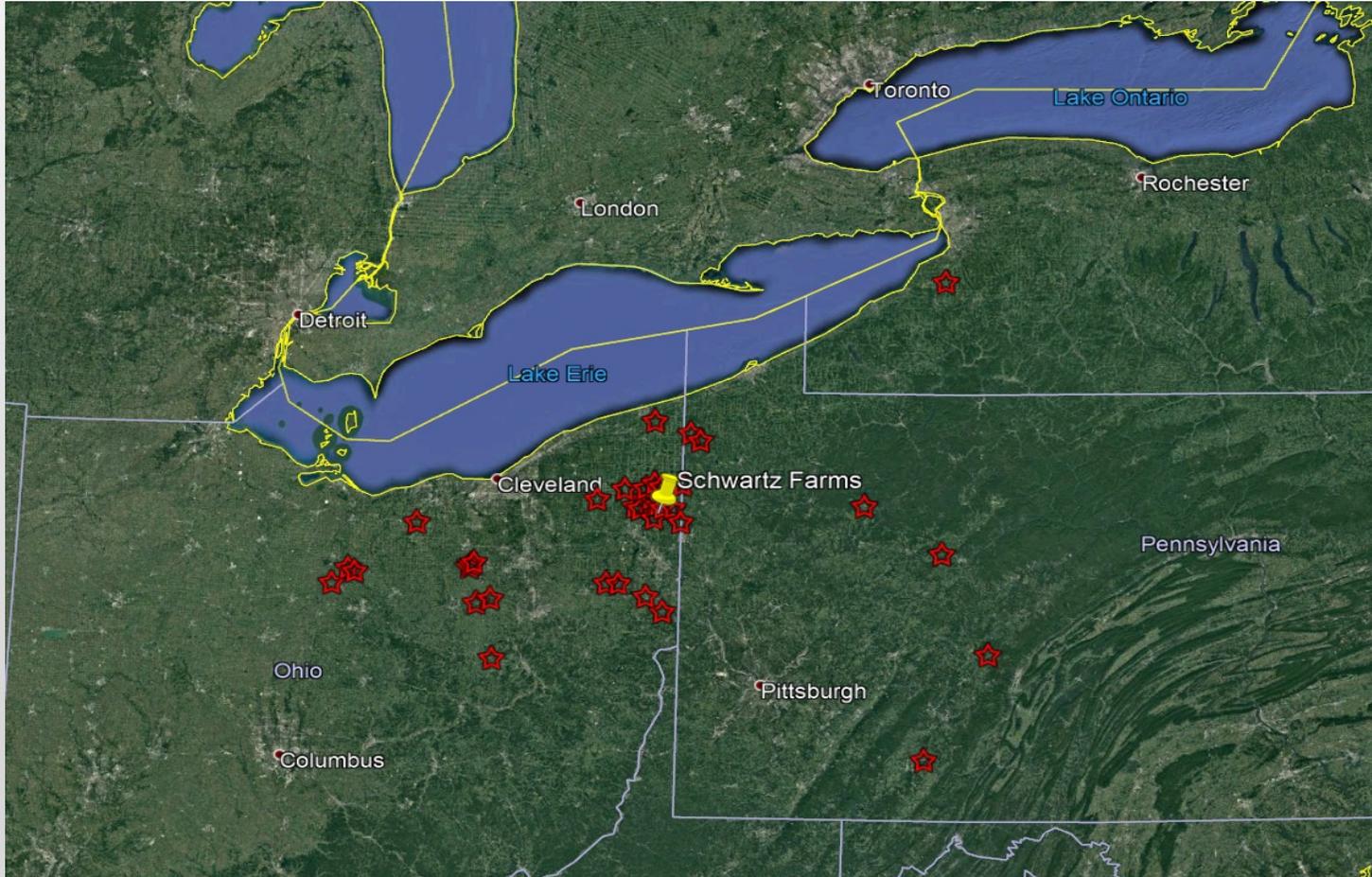
CONTENT FOR TODAY

What does Sustainability mean to us at Schwartz Farms?

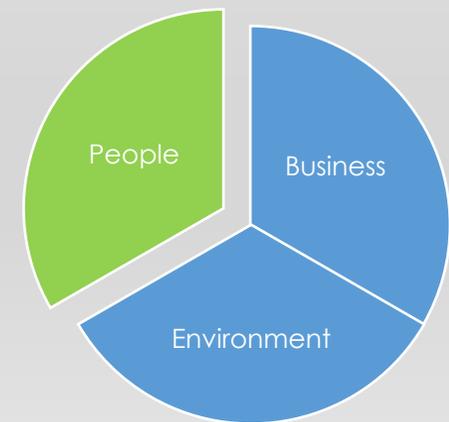
- People
 - Team, Community & Partnerships
- Business
 - Growth, Diversity, Technology, Markets, IP Handling & Certifications (USSEC SSAP)
- Environment
 - Soil Health (such as Nutrient Management & Erosion), Water Management (such as Drainage & Water Quality), Carbon Sequestration, etc.



COMMUNITY ENGAGEMENT

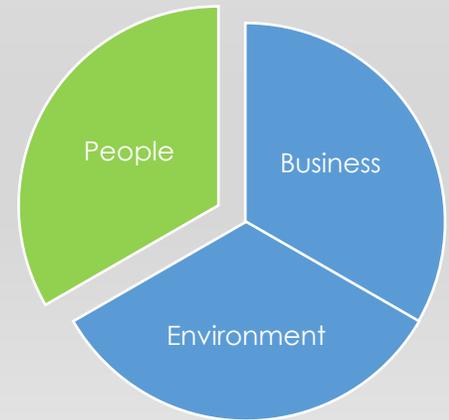
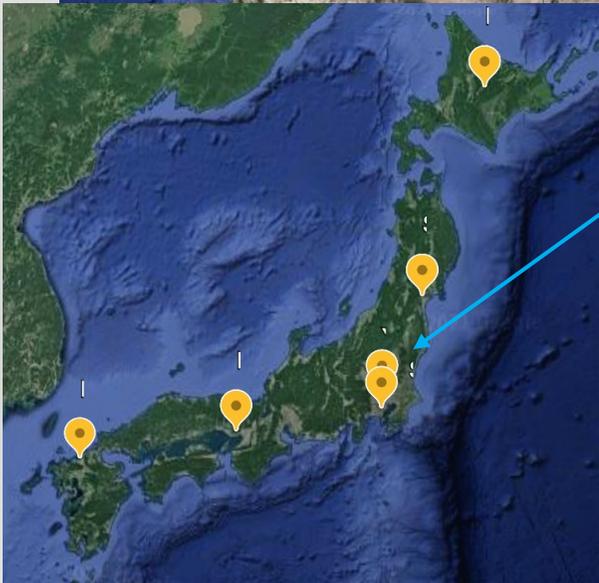
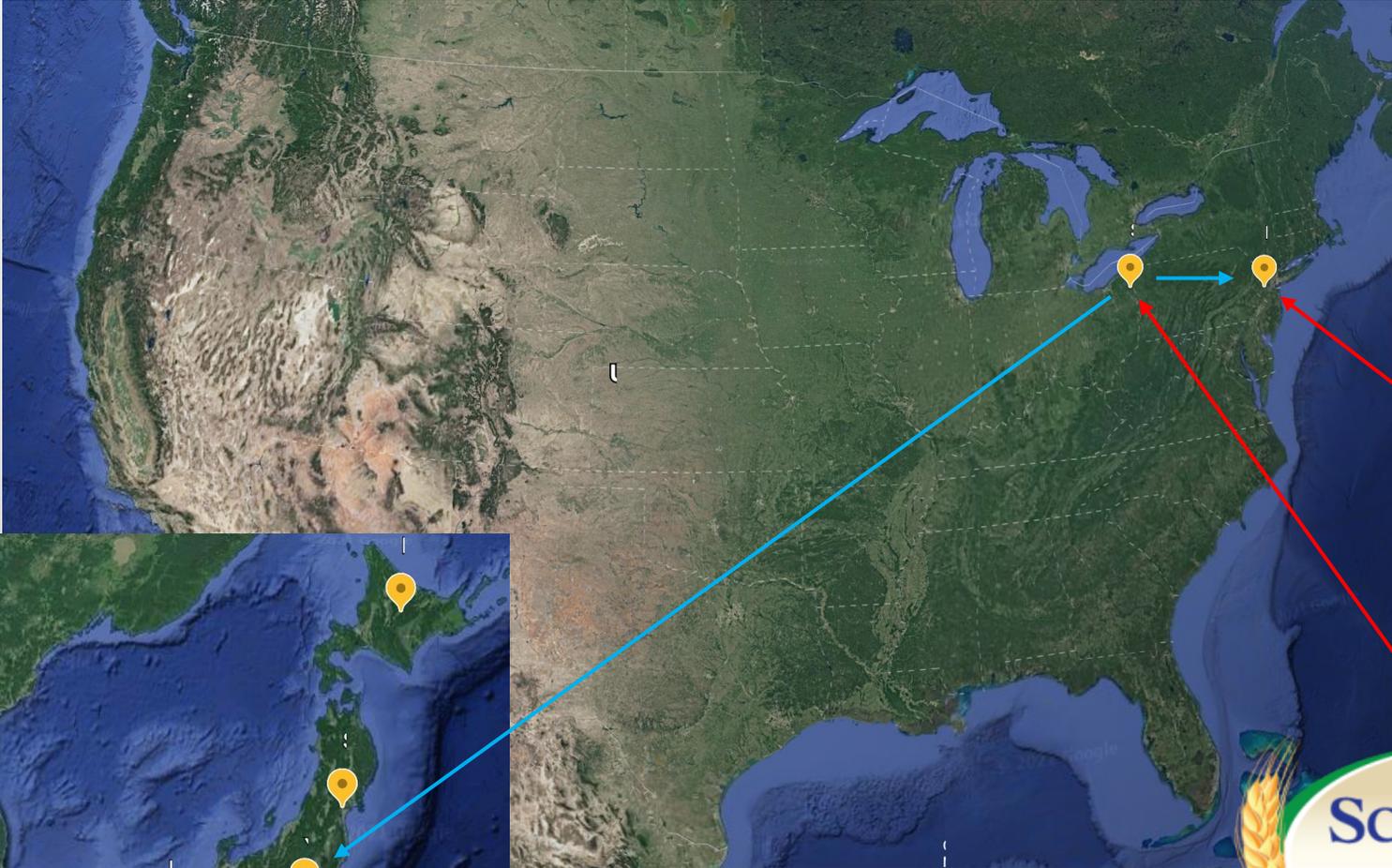


- 64 total Contract Growers – Ohio 43, Pennsylvania 18 and New York 3 in 2020 crop
- Opportunity to grow, diversify & be profitable
- Helps the greater community

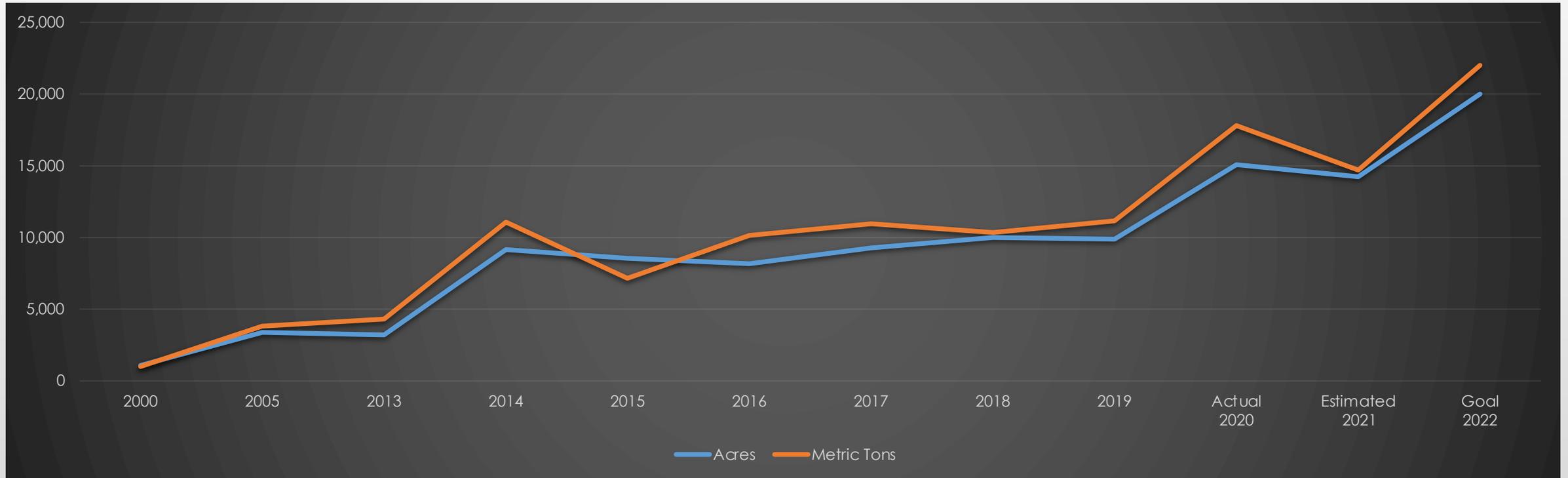


STRONG, TRUSTED PARTNERSHIPS

- Shipping to Japan since 1998 and House Foods America since 2006



GROWING OUR FOOTPRINT



- Our growth continues (20x since year 2000)
- Our goal for 2022 crop is to secure 20,000 acres to produce our goal of 22,000 MT

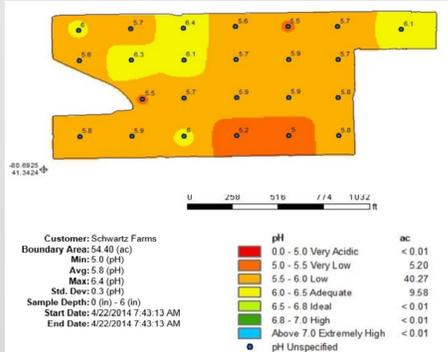


INVESTING IN TECHNOLOGY

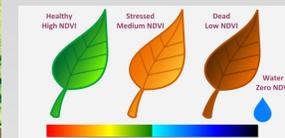
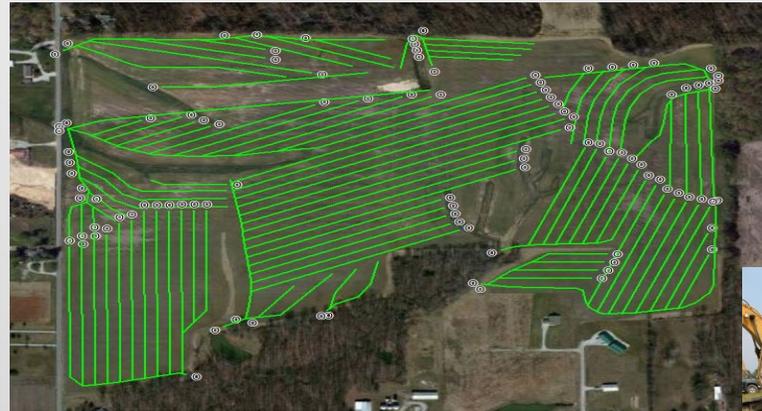
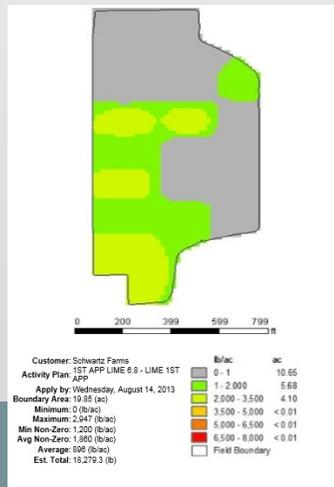
- GPS systems used for:
 - Field Work
 - Tile Installation & Maps
 - Soil Testing
 - Fertilizer Applications
- Precision agriculture uses satellite & drone technology that result in energy savings



Soil test



Fertilizer test



ADVANCING OUR FACILITIES



Cleaner & Sorting by size



Color Sorter



Gravity table ①



Gravity table ②



Magnet ①
10000 gauss



De-stoner



Magnet ②
10000 gauss



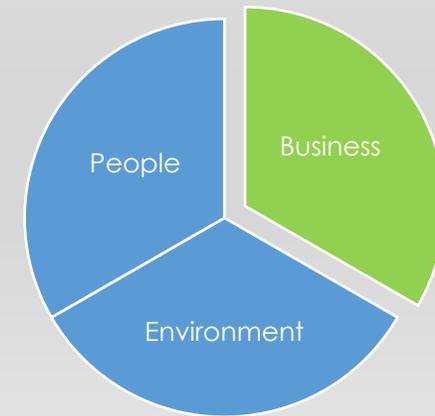
30kg, Tote bag & Bulk

- Processing facility:
 - Able to sort 9.50MT per one hour
- Storage facilities:
 - Able to store 13,610 MT per year at home farm
 - Allows us to maintain IP and quality



2015 upgrades to cleaner, color sorter & robot

← New 2020 investments in IP bins added 5,000 MT of storage



Increasing Industry Demand for Sustainability SSAP Shipment to Japan 2020/21

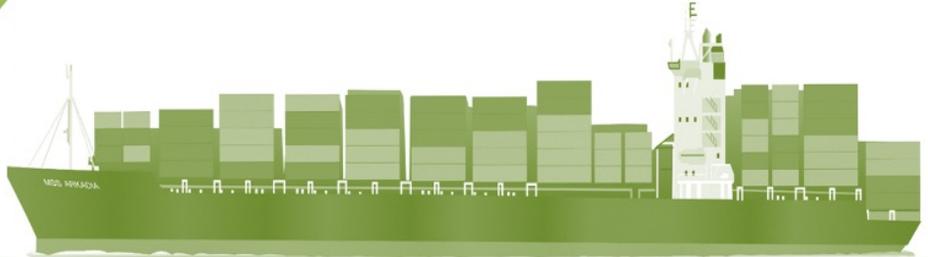
More than
96%
of U.S Soy shipped
to Japan are SSAP
certified



SUSTAINABLE
U.S. SOY

~~**SUSTAINABLE**
U.S. SOY~~

Soy Sustainability Assurance Protocol (SSAP)



LEADING IN SUSTAINABILITY CERTIFICATION



SOY EXPORT SUSTAINABILITY LLC
16305 Swingley Ridge Rd.
Suite 200
Chesterfield, MO 63017
USA

CERTIFICATE of SUSTAINABILITY

According to **U.S. SOYBEAN SUSTAINABILITY ASSURANCE PROTOCOL**

This is to certify that soybeans or soy products described herein were produced in compliance with U.S. laws, regulations, production practices, and audit process as listed in the U.S. Soybean Sustainability Assurance Protocol.

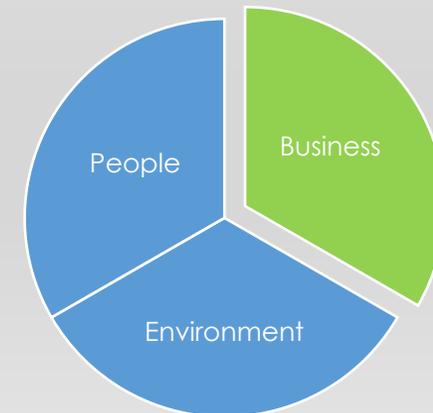
SOY EXPORT SUSTAINABILITY, LLC
16305 Swingley Ridge Rd.
Suite 200
Chesterfield, MO 63017
USA

CERTIFICATE VALIDATION
Use the Certificate Number & the Certificate Code below to validate this certificate on the secure SES Certification Portal (usses.org):
Certificate Code:
096be0cbb97bf46ee1fd

NAME OF EXPORTING COMPANY Schwartz Farms	VESSEL/CARRIER NAME/SHIPMENT IDENTIFIER COSCO JAPAN V.063S Export Location: Prince Rupert, Canada
DATE OF SHIPMENT February 2, 2018	PRODUCT Soybean
METRIC TONS 42.000	
CERTIFICATE NUMBER SES-SSAP-US18-075417904	Company Representative Dan Schwartz <i>[Signature]</i>
DATE OF CERTIFICATION February 6, 2018	SES <i>[Signature]</i>

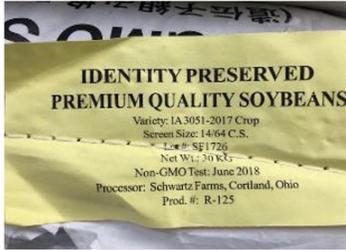
ALL SOY SOURCED & SHIPPED FROM THE U.S.A.

- 100% of Schwartz Farms soybeans are SSAP certified
- Transparency, traceability & competitive advantage in the supply chain

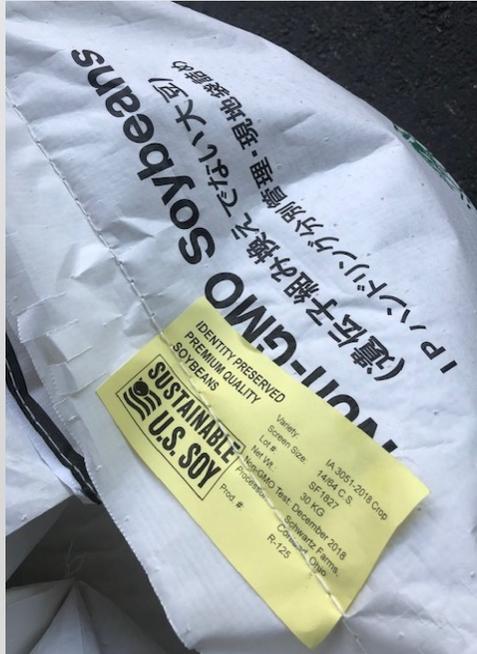


MEETING JAPANESE DEMAND

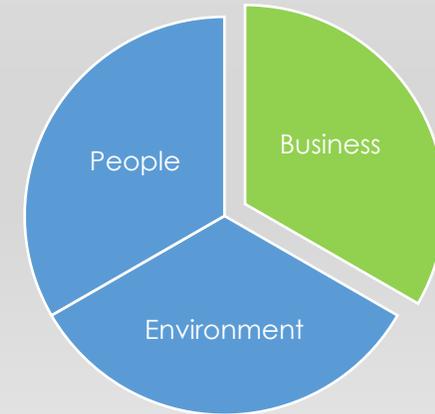
Old Tag on 30kg bag



New Tag on 30kg bag

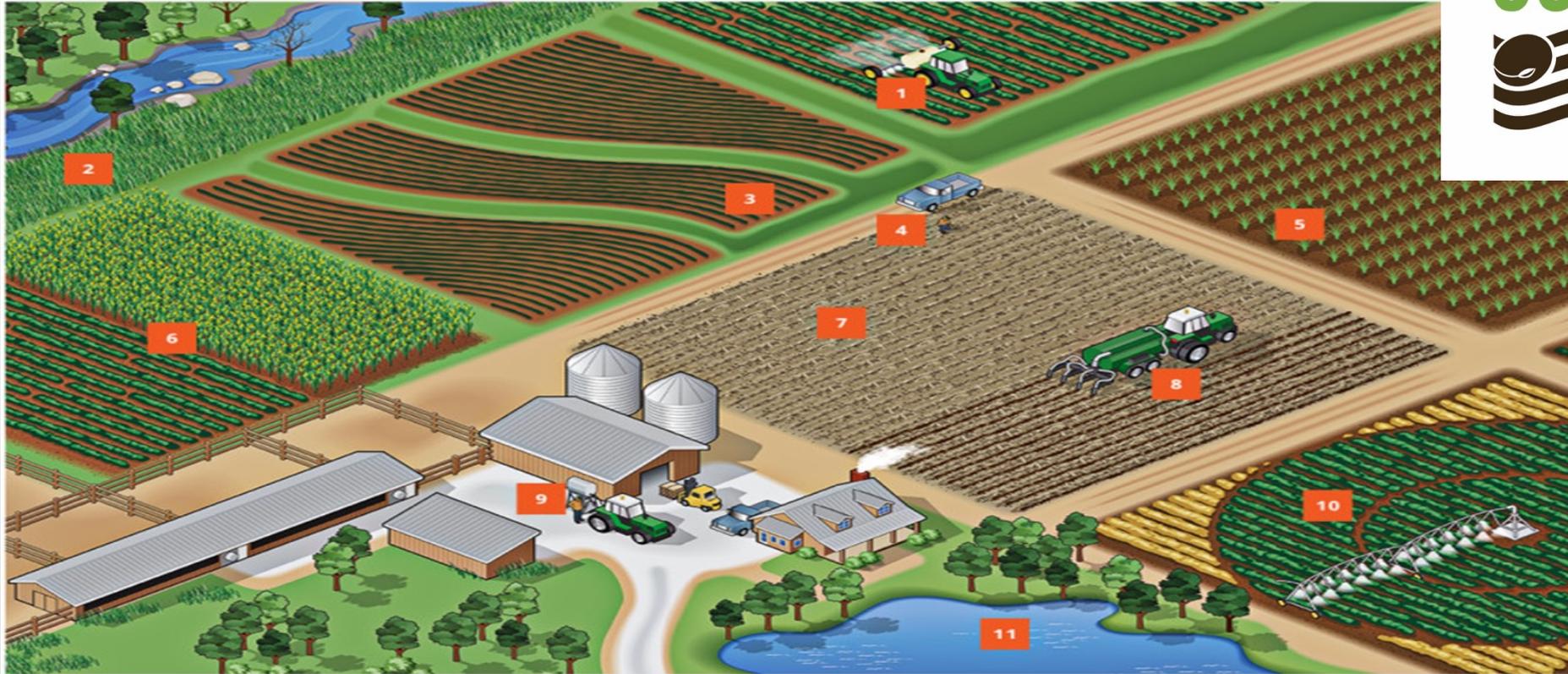


- Specialist in IP Handling
- 99% Non-GMO guarantee
- Developing new seed with The Ohio State University and others
- We will continue to grow and supply food beans under thorough IP handling system even if Japanese "non-GMO labeling" regulation will be changed in 2023



PRIORITIZING SUSTAINABLE FARMING

A FRAMEWORK FOR SUSTAINABLE FARMING



1 PRECISION CHEMICAL APPLICATION
2 CONSERVATION RESERVE PROGRAM
3 TERRACES
4 SCOUTING

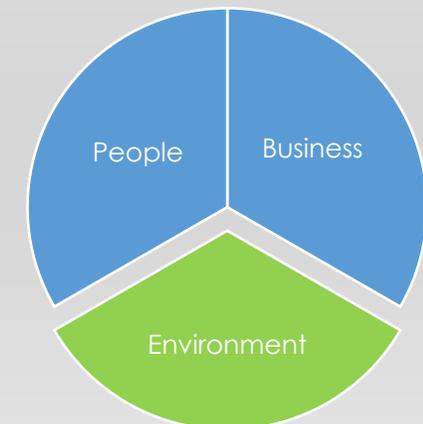
5 COVER CROPS
6 CROP ROTATION / DIVERSITY
7 NO-TILL / CONSERVATION TILLAGE
8 PRECISION NUTRIENT MANAGEMENT

9 REDUCING FUEL USE
10 IRRIGATION
11 WATER-STORAGE PONDS

SUSTAINABLE
**U.S. SOY™**

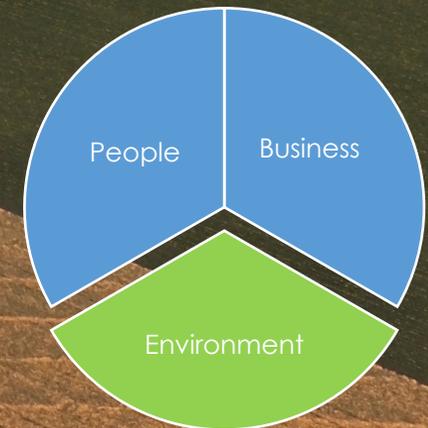
We implement every pillar except for:

- #3 because our land is flat
- #10 & #11 because we get lot of rain and have heavy soils



STRENGTHENING BEST PRACTICES

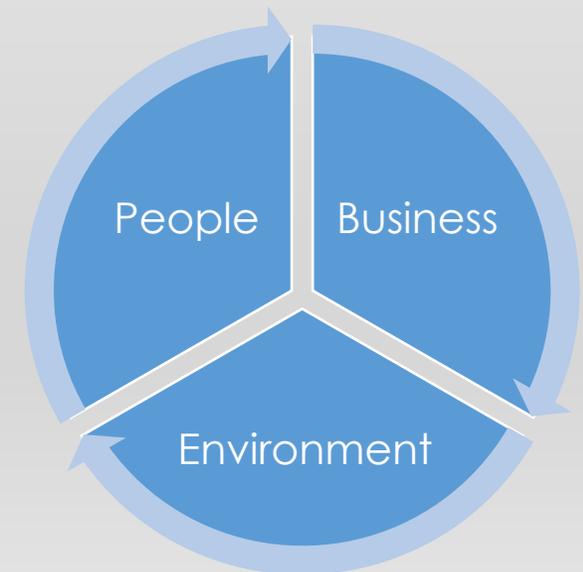
- **CROP ROTATION**
- **EROSION CONTROL**
- **CONSERVATION TILLAGE**
- **PEST MANAGEMENT**
 - Integrated Pest Management (IPM)
 - Developing New Seed
 - Cover Crop
- **NUTRIENT MANAGEMENT**



LOOKING AHEAD

At Schwartz Farms, we plan to advance our commitment to sustainable farming through the following efforts*:

- People
 - Increase outreach, education and communication with new and existing growers
 - Continue being transparent with customers w/ advances in technologies
- Business
 - Advocate for USSEC SSAP Certification
 - Optimize technology usage, data collection & analysis
- Environment
 - Continue to add new crops to our rotation plan
 - Continue to develop water runoff plans for all fields
 - Improve water quality by adding additional waterways



*This is a sample of our short and long-term Sustainability Goals



Thank you!
ありがとうございました

Please email Masako Tateishi with any questions:

MTateishi@ct.ussec.org

Visit our website for more information:

www.schwartzfarmsohio.com