



SUSTAINABLE ALTERNATIVE SOURCE



EXCELLENT HIGH-DIGESTIBLE PROTEIN

- HIGH PROTEIN CONTENT (60%)
- LOW ANTI-NUTRITIONAL FACTORS
- BEST PLANT-BASED PROTEIN TO REPLACE FISHMEAL

INDUSTRY-LEADING ORIGATION CAPABILITIES

- RELIABLE SOURCING CAPABILITY
(WIDE BASE OF SOYBEAN SUPPLIERS)

SUSTAINABLE NUTRITION

- SUSTAINABLE SOY SUPPLY CHAIN
(DEFORESTATION-FREE SOY, RTRS-CERTIFIED SOY)
- PRODUCTION FROM SUSTAINABLE MANUFACTURING
(100% RECYCLABLE WATER, ETHANOL)

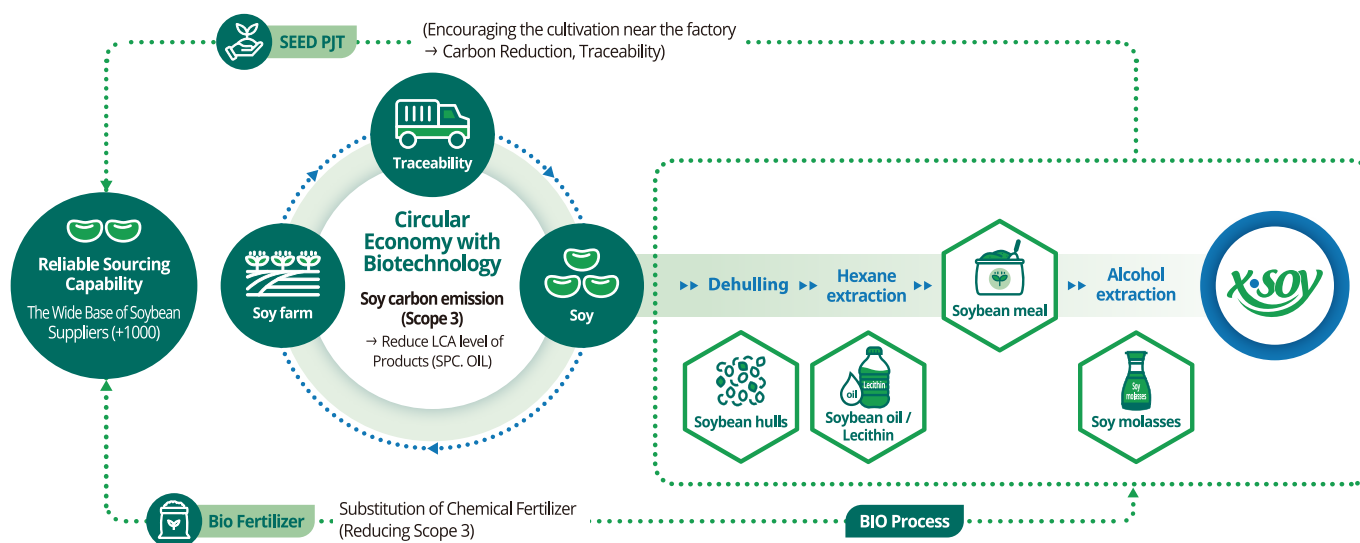
*RTRS : ROUND TABLE ON RESPONSIBLE SOY ASSOCIATION),
A NON-PROFIT ORGANIZATION BASED IN SWITZERLAND



Sustainable alternative source

CJ Selecta X-Soy is from Sustainable Production

CJ Selecta has established a sustainable carbon reduction cycle through the completion of a circular economy based on BIO technology. X-Soy is produced by alcohol extraction to minimize ANFs using Soybean from certified sources (Proterra & RTRS)



Factors for better protein source

- 1 High CP : 60% ↑
- 2 High Digestibility : 90% ↑ (in-vivo)
- 3 Low ANF
- 4 Stable Supply Chain

Type of X-Soy products

All Products have NGMO and GMO type

X-Soy600	95% less than 2000 microns
X-Soy200	Micronized products 95% less than 180 microns

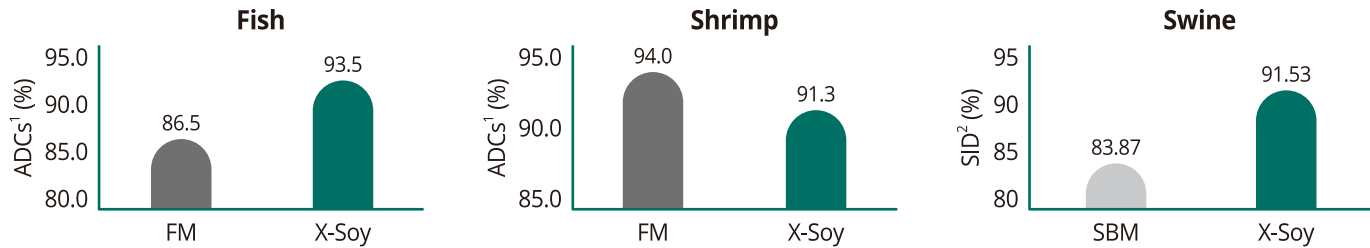
Specification

Typical Composition (%)	
	X-Soy600
Crude Protein	60.0 %
Digestible Protein	54.0-55.8%
Protein dig. (Aqua)	90-93%
Protein dig. (Swine)	91.5%
Crude Fat	≥ 0.4%
Moisture	≤ 10.0%
Crude Ash	≤ 7.0%
Crude Fiber	≤ 5.0%
Trypsin Inhibitor Activity	< 1.0mg/g
Raffinose	0.6%
Stachyose	3.2%
Shelf Life	
24 months (Store in a dry and cool place)	

Amino Acid Profile (%)	
	X-Soy600
Essential amino acid	
Lysine	3.9
Methionine	0.8
Threonine	2.5
Phenylalanine	3.3
Tryptophan	0.2
Valine	2.7
Isoleucine	2.6
Leucine	4.8
Histidine	1.7
Arginine	4.5

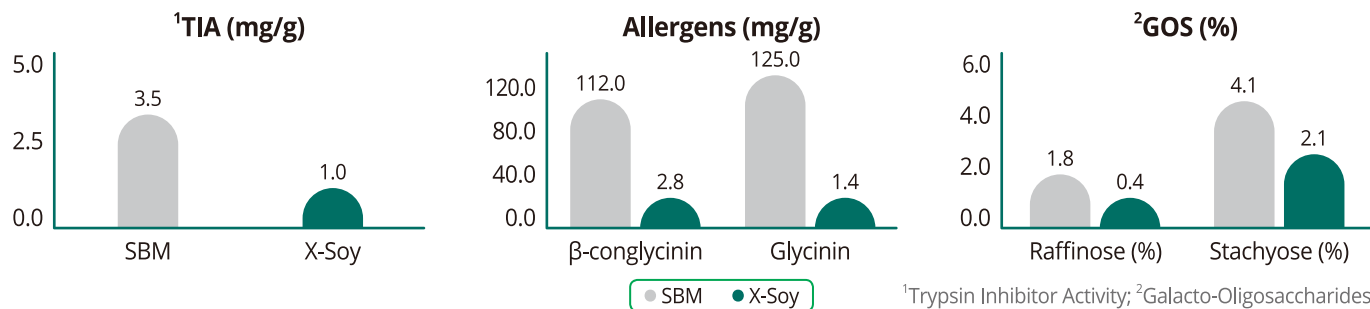
X-Soy Main Benefits

1. High Digestibility



¹Apparent Digestibility Coefficients; ²Standardized Ileal Digestibility

2. Low ANFs



¹Trypsin Inhibitor Activity; ²Galacto-Oligosaccharides

Trial result for Atlantic Salmon

(CAT, Canada, 2018)

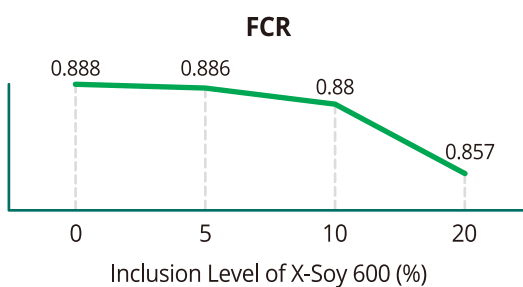
Trial result for Shrimp

(Prince of Songkla Univ., Thailand, 2012)

The Effect of Increasing Levels of X-Soy 600 on Feed Conversion Ratio (FCR) & Growth Performance

• Test Condition

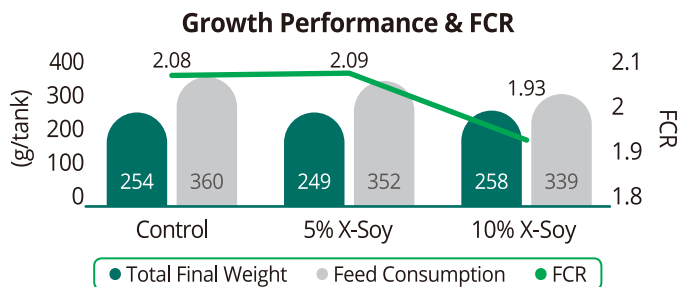
- Initial BW 6.4 ± 1.6 g at 100 fish/tank
- In test diets, 5%, 10% and 20% of the fish meal replaced with X-Soy 600, respectively



• Test Condition

- Initial BW 2.84 g at 30 shrimp/tank
- In test diets, X-soy replaced local fish meal (Thailand) at ratio of 25 and 50%

Treatment Group	Ingredient (%)	
	Local Fish meal	X-Soy
Control	20	-
5% X-Soy	15	25
10% X-Soy	10	50



Trial result for Swine

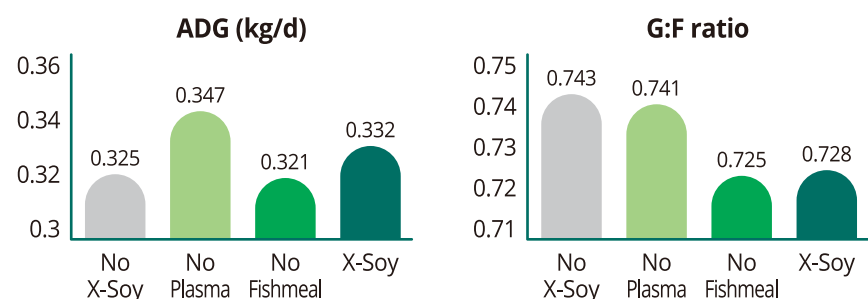
(University of Illinois, Casas et al., 2017)

Evaluation of SPC for replacement of animal protein

Diets based on X-Soy can be used during initial 14 days post-weaning without negative effect on growth performance

Treatment Group	Ingredient (%)		
	Fish meal	Spray dried protein plasma	X-Soy
No X-Soy	5	5	-
No Plasma	5	-	8
No Fishmeal	-	5	5.25
X-Soy	-	-	13.25

* The Inclusion of X-Soy was calculated to replace an equivalent amount of SID Lys as provided by other protein sources





Sustainable alternative source

X-Soy provides sustainable solution

Major projects to strengthen ESG activities



FREE AMAZON
BIOME SOY



NGMO SEED
PROGRAM



ESG IN THE
FIELD

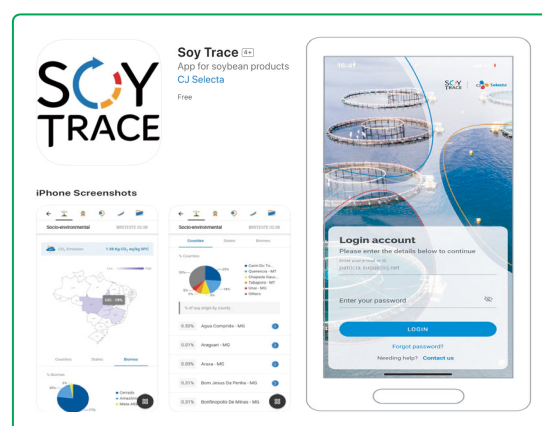


CARBON
FOOTPRINT



SOY TRACE

- Sourcing from **FREE Amazon biome soy** since Apr. 2023
- Operating **NGMO Seed Program** to promote the production of NGMO seed that will improve the biodiversity in the ecosystems in Brazil.
- Running audit system with soy farmers **"ESG in the Field"**.
- Operating **Carbon Footprint Assessment**.
- Implementing a Soy Trace Platform to enhance **transparency** in verifying soybean sourcing and origin.



CJ Selecta ESG Goals for Future



Sustainable
Agriculture



Actions on the
Climate Crisis



Social
Responsibility



Partnership &
Implementation Plan

Certifications

1. Sustainability



2. Quality Standards, Social Parameters

