



NATURE BIO FOODS

*Growing
the
Future*

ORGANIC SOY MEAL FEED

The Indian Organic Soya sector has not seen better days than the present. Backed by good support from the Government and the advantage of Nature Bio Foods; cultivation practices backed by a unique business model, infrastructure and the resultant products, have made Indian Soya products among the best in the world. NBF follows globally aligned quality processes right from extrusion to meal feed to manpower & traceability and earning it a rightful place in the Global Organic Soybean arena.

INDIAN ORIGIN SOYA

THE EDGE

GOVERNMENT POLICY

Since India has a shortage of cooking oil, government policies are oilseed friendly. Year on year the Minimum Support Price (MSP) has been increased for major Oilseeds, including Soybean, ensuring long term Soybean availability from India.

Pro-agro industry and export promotion policies of the Indian Government make it easy to conduct business with Indian partners.

**Its 100%
GMO free**

QUALITY

Oil and Protein content:
Indian origin seeds are consistent in achieving globally accepted parameters with 18% oil and around 40% protein.

Seeds: Indian origin seeds are bolder in size ranging between 5-7 mm, with uniform texture and a yellow shine, with bulk density above 70 (0.7 kg per litre).

**Nature
Bio Foods
Organic Soybean
differentiator:**

01

**CULTIVATION
PRACTICES**

02

**BUSINESS
MODEL**

03

INFRASTRUCTURE

04

PRODUCTS

05

PROCESS

06

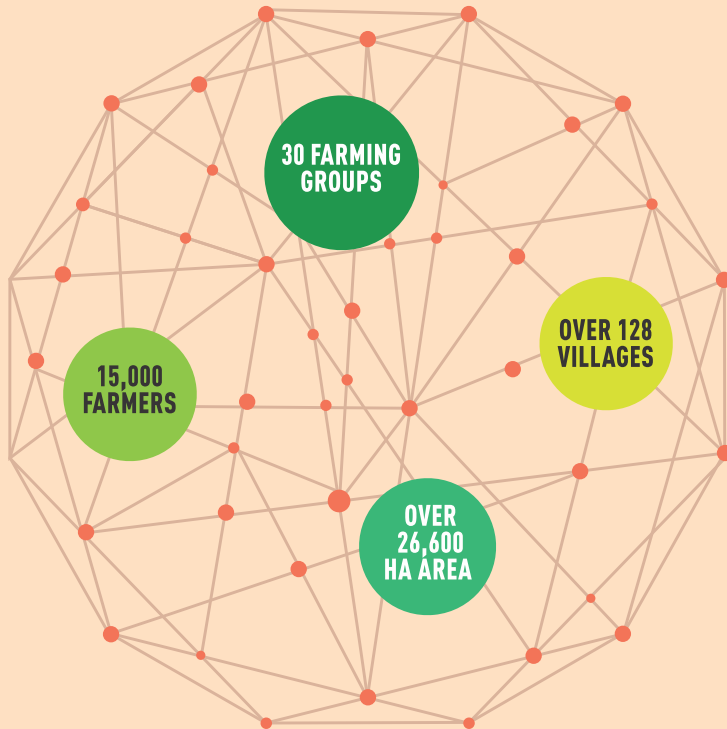
QUALITY

01

CULTIVATION PRACTICES

Strong backend with an Integrated Supply Chain network

NBF is a pioneer in the Organic Business with a proven 25-year legacy. The practice of contract farming along with processing and trading of Organic Soybean and Organic Soybean products, facilitates full control over the supply chain. Over 30 farming groups with about 15,000 farmers, spread over 128 villages and covering over 26,600 Ha area across Madhya Pradesh, Maharashtra and Rajasthan, ensure good consistent quality and a sustainable supply of Organic Soybean – the main kharif crop of the region.



Madhya Pradesh



Maharashtra



Rajasthan



02

BUSINESS MODEL

Organic Friends

A network of village level workers



Agriculture Extension Officers

Officers with strong technical knowledge of the subject who follow the principle of 'Prevention is better than cure'

QUALITY

Low risk of chemical contamination: Since our project locations are in remote areas and the farmers are small and marginal, the risk of chemical contamination is very low. This coupled with minimum mechanization helps in keeping the original quality of the product intact.

Triple advantage: As a result of working directly and closely with farmers, NBF enjoys the triple advantage of - **Quantity** plus **Quality** along with **Supply Chain Traceability**.

SUSTAINABLE AND INCLUSIVE

Fair Price: Fair price market support for all the crops, round the year, for sustainable development of the farming community.

Sustainability: Ecopure Producer Company Ltd. has empowered 990 farmer members to be successful Agriprenuers and carry forward the model. A model where; women farmers take active part; continued agricultural extension support via regular training is provided; need based supply of bio-inputs and strong monitoring at each stage of crop is ensured.

VARIETY OF PRODUCTS

Our integrated supply chain enables us to support market links for other crops like Sesame, Pulses, Cereals, Flaxseeds and other spices which are grown along with Organic Soybean.

CERTIFICATIONS

Various organic certifications like NPOP, NOP, EU, COS, JAS, Bio -Suisse, Naturland and Social certifications like Fairtrade for our farming operations and processing installations.

From seed to final harvest, we work closely with our farmers to ensure social, economic and environmental benefits to the community.



Plant: Located strategically near our Organic Soybean Farms in the New Industrial Area of Mandideep, Madhya Pradesh with the added benefit of shipping containers from the factory to the dry port of MP.

The factory plot is built up over an area of **20,000 sq. mtrs** which includes the main processing facility of around **2800 sq. mtrs.**

Major areas / divisions

- Organic Soybean storage areas
- Organic Soybean cleaning area
- Organic Soybean extrusion & oil expelling area
- Organic Soymeal storage areas
- Utility area

With a commitment to end-product quality, low maintenance, and high durability, the plant is also equipped with metal detectors at various stages of processing for food safety. CCPs (Critical Control Points) are monitored through highly sensitive online detection systems.

04 PRODUCTS

**ORGANIC
SOYBEAN
MEAL – FEED**

**ORGANIC
SOYBEAN
SEED – FEED**

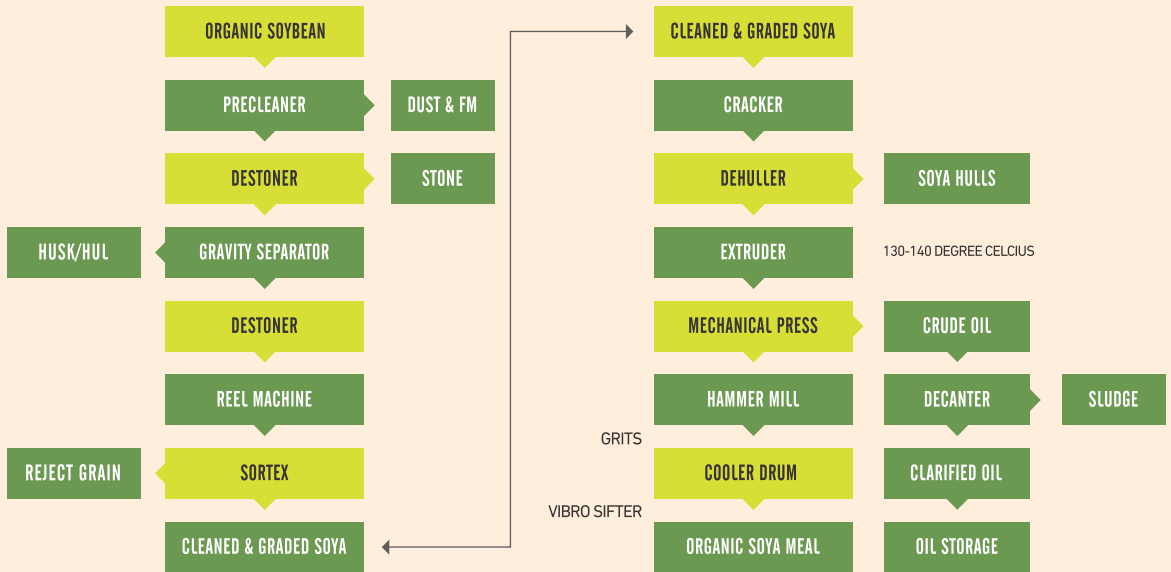


Per 100 gm	ORGANIC SOYBEAN SEED FEED GRADE
OIL	18%
PROTEIN	38 gm

Per 100 gm	ORGANIC SOYBEAN MEAL FEED GRADE
KOH	78-85%
TRYPSIN	Max 15000 TIU/ gm
PROTEIN	48%
UREASE	(0.01-0.1) pH

05 PROCESS

It all begins with a dedicated, high standard procurement & quality team, working on sourcing Organic Soya from our farming projects. Organic Soybean stocks are maintained at designated areas following Good Warehousing Practices (GWP). Through a series of cleaning machines and a gravity selector, all foreign matter and impurities are eliminated; passing through a series of destoning machines. Finally, all discolored and damaged grains are taken out through the latest technology color sorter machine thus ensuring impurity free seeds of the highest quality. Our Organic Soya meal process line can generate standard Organic Soya meal as well as high protein (>50%) variants of Organic Soya meal.



The Extrusion Process

The heart of the Organic Soya meal production is in the extrusion process characterized by five major functions:

- A** Denaturation of protein and increasing digestibility
- B** Conversion of complex carbohydrates to a relatively simpler form
- C** Destruction of anti-nutritional factor - trypsin inhibitor
- D** Deactivating fat enzymes which increases shelf life
- E** Frees the oil by rupturing the cell wall

Nature Bio Foods products are neither overcooked nor undercooked but delivered at an optimum level, ensuring that anti-nutritional factors are eliminated, optimum KOH level is maintained and a safe product is delivered.

Our process is monitored through an automatic yield measurement system which depicts the correct utilization of raw material and product generation. Temperature sensors are deployed at various stages to map the cooling process.

The extruded Organic Soya (full fat Soya) is expelled through a mechanical expeller and the oil generated passes through a decanter machine which separates the sludge through a centrifugal action.

The hammer mill at the post expeller stage grinds the Organic Soya meal to smaller granulation and then it is passed through a cooler drum to bring down the temperature of the meal.

We have the provision to provide different granulation of Organic Soya meal based on customer requirements. This is achieved through a high capacity on-line vibro-sifter.



MACHINE CAPABILITIES • Temperature control • Constant output • Pressure and high sheer

06

QUALITY



Quality Assurance

- The whole QA programme is designed based on GMP and HACCP guidelines
- In-house laboratory equipped with all modern facilities needed for physiochemical testing with the finest group of trained Feed Technologists
- In Process Quality Controls
- Quality checks as per Inspection Matrix Detailing
- Pre dispatch final material quality checks with Organic regulations of USFDA & EU
- Testing by reputed European laboratories



Manpower:

- A dedicated Team with SME (Subject Matter Experts) controlling the entire operations with technical expertise
- Carefully chosen Feed Handlers
- Continual upgradation of manpower through on job and external training programs

Traceability

ERP based module traceability system where each final produce can be traced back to the exact farm, enables a close and direct association with these farmers that enhances the trace back.

- Dehuller
- Cracker
- Extruder: 5 numbers
- Decanter
- Vibroshifter
- Tilter for bulk loading
- Designed to meet GMP and HACCP guidelines, the machines are systematically placed for smooth flow of products with minimum human intervention and hindrance free processing
- Fully equipped in-house lab for quality check of raw materials, in-process and finished goods with skilled manpower
- High precision instruments to detect KOH, TIU (Anti-nutritional factors), Urease Activity and other Physicochemical parameters for delivering acceptable quality
- Epoxy floor to facilitate robust cleaning for maintaining dust and dirt-free floors with zero moisture and oil retention helping achieve acceptable microbial contents in final produce
- Insulated interiors to maintain optimum temperature and humidity level
- Principally semi-automated, allowing minimal human intervention
- Energy efficient with solar energy synchronization in the grid



EXTRUDER FROM INSTA PRO



HAMMER MILL



CLEANING MACHINE



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