Soy, Proteins & right to protein

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US SOY

facts

1. IPSOS Study says 77% of the urban Indian population would prefer tasty food instead of healthier choices
2. The Indian Market Research Bureau's 2017 report states that protein deficiency among Indians stands at more than 80 per cent, measured against the recommended 60g per day.
3. Nearly 95% of Indian mothers know of protein as a macro-nutrient, but only 3% really understand its important functions and why one should consume it
4. As per the recent national sample survey, India has a declining per capita protein consumption in both urban and rural areas
5. According to the National Sample Survey Office (NSSO 2011-12), rural households consumed 56.5g of protein (reduced from 60.2g in 1993-94), while urban households were taking in 55.7g (57.2g in 1993-94).
6. The British Journal of Nutrition – Protein Intakes in India survey shows that the Indian diet almost derives 60% of protein from cereal sources that are low in quality and digestibility
7. The majority of the Indian population is vegetarian, out of which statistics reveal that 91% of vegetarians were found to have higher protein deficiency compared to 85% of non-vegetarians
8. **Indian mothers believe that** More than 70%, of protein is difficult to digest, leads to weight gain, is only for 'body-builders' and is expensive to procure.
9. 85% of Mothers believe food fortified with multivitamins is more important than protein
10. 84% of Mothers believe carbohydrates are more important for energy than protein

Relevance of Soy in India

It is all about

.5 million Indian soy farmers

200 Crushers and refiners

About 1000 Feed Millers

and the whole consumer for protein

soymeal has contributed to FOREX reserve

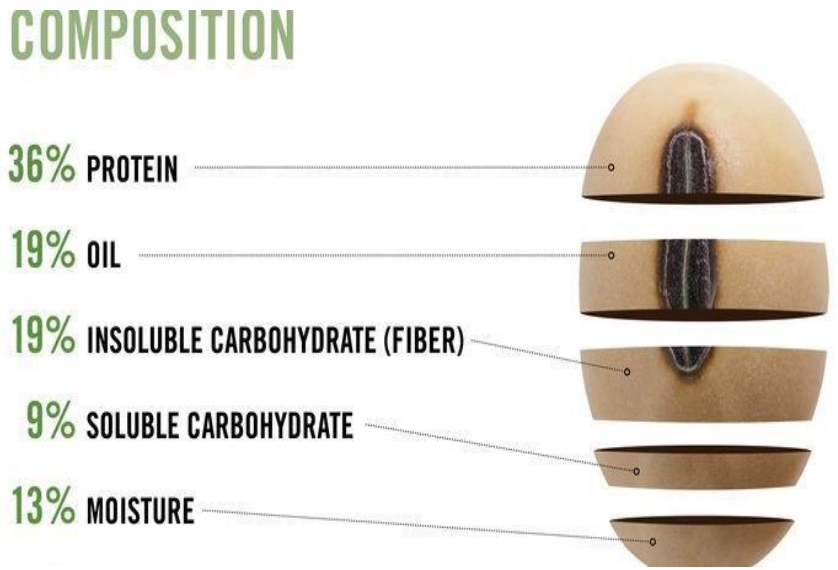
employment generation in every supply chain of Soy, from farm to feed and supporting industries …

The only one commodity which has a significant role in providing:-

- A Plant protein which assures Nutritional security for humans
- Primary protein source for Feed
- Nitrogen to mother earth or soil
- and, it will be a source of sustainable aviation fuel or renewable energy.

Relevance of Soy in feed industry

- Availability
- Affordability
- Consistent quality
- Sustainable source
- High protein (44 –60%)
- High digestibility (88-92%)
- Better Amino-acid profile
- Source of lipids



Feed Ingredient Demand (proj.)

	2019/20	2020/21	2021/22 (P)	2022/23 (F)	2023/24 (F)	2024/25 (F)	2025/26 (F)
Poultry Feed Demand	28.64	27.53	23.22	24.91	26.73	28.71	30.85
Cattle Feed Demand (Org)	13	14	14.98	16.03	17.15	18.35	19.64
Aqua Feed Demand	1.98	2.12	2.27	2.43	2.7	2.9	3.1
	43.62	43.65	40.47	43.37	46.58	49.96	53.59
Milk Production (MMT)	198.4	206.34	214.59	223.17	232.1	241.38	251.04
Cattle Feed Ingredient demand (MMT)	99.2	103.17	107.29	111.59	116.05	120.69	125.52

India's soy SnD

	20-21	21-22	22-23	(Oct-sept)
C/F Previous year	0.50	0.00	1.54	
Production (as per SOPA)	10.45	11.89	12.04	
Imports SB	0.50	0.55	0.10	
Total Supply	11.45	12.44	13.68	
Reserved for Sowing	1.30	1.30	1.30	
Direct Human Consumption (SB)	0.50	0.55	0.60	
Exports of Seed	0.50	0.50	0.50	
Marketable Surplus	9.15	10.09	11.28	
Meal Equivalent	7.50	8.27	9.25	82% meal
domestic requirement	5.60	5.90	6.00	@4.8/month
Exports	1.90	0.65	1.60	
Human food (meal/flour)	0.58	0.75	0.75	
Demand in total	8.08	7.30	8.35	
Gap	-0.58	0.97	0.90	
Imports Meal	0.20	0.55	0.00	
Imports Protein Isolate 60%	0.01	0.015	0.02	
C/F	-0.38	1.54	0.92	

Crux of the Matter: Interconnected Factors

NUTRITION

There is a dearth of nutritional and economical feed ingredients, causing farmers to use “fillers” in their feed.

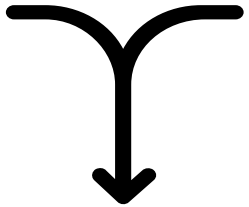
In the long term, fillers, low quality grains and protein reduce efficiency of production and adversely affect animal health.

MARKET DYNAMICS

When demand increases, should produce more.

Unfortunately, instead of benefiting from increased demand, higher prices drive down demand.

Farmers tend to reduce placement and provide less nutritional feed to cut costs .



NET RESULTS

Shortage of animal protein in the market

Rising prices and inflation

The VIETNAM Model

Vietnam needed to import 70% of its commodities primarily for feed

- **Corn: from US, Brazil, Argentina which is milled to make feed**
- **Soybeans: from US, Argentina and Brazil to make SBM for feed use and oil**
- **Non LMO DDGS from US**

Today they are net exporter of value added protein and other food products, India is also importing from them

Oil seed or plant protein source?

Oil is 18%, and protein is 35-40% still, it is an OIL Seed

Soy is the economically feasible plant protein available

India consumes around 1.5 million mts of soybean in food

The primary contributor in the food sector is TVP and which is very much significant in our market

Soybeans grind and blend with wheat and other course grain in households, reaching around .3-.5 million mts.

New products which are getting into the limelight are Vegan alternatives and meat-like foods ()

We might be importing approximately 10K mts soy isolate, which is getting in demand, hence could see some Demand in this sector.

Soy products like .. Tofu, milk, papad, ice cream, soy nuts

Protein fortification is a sector govt is looking for investments in as we do have protein deficiency across the population

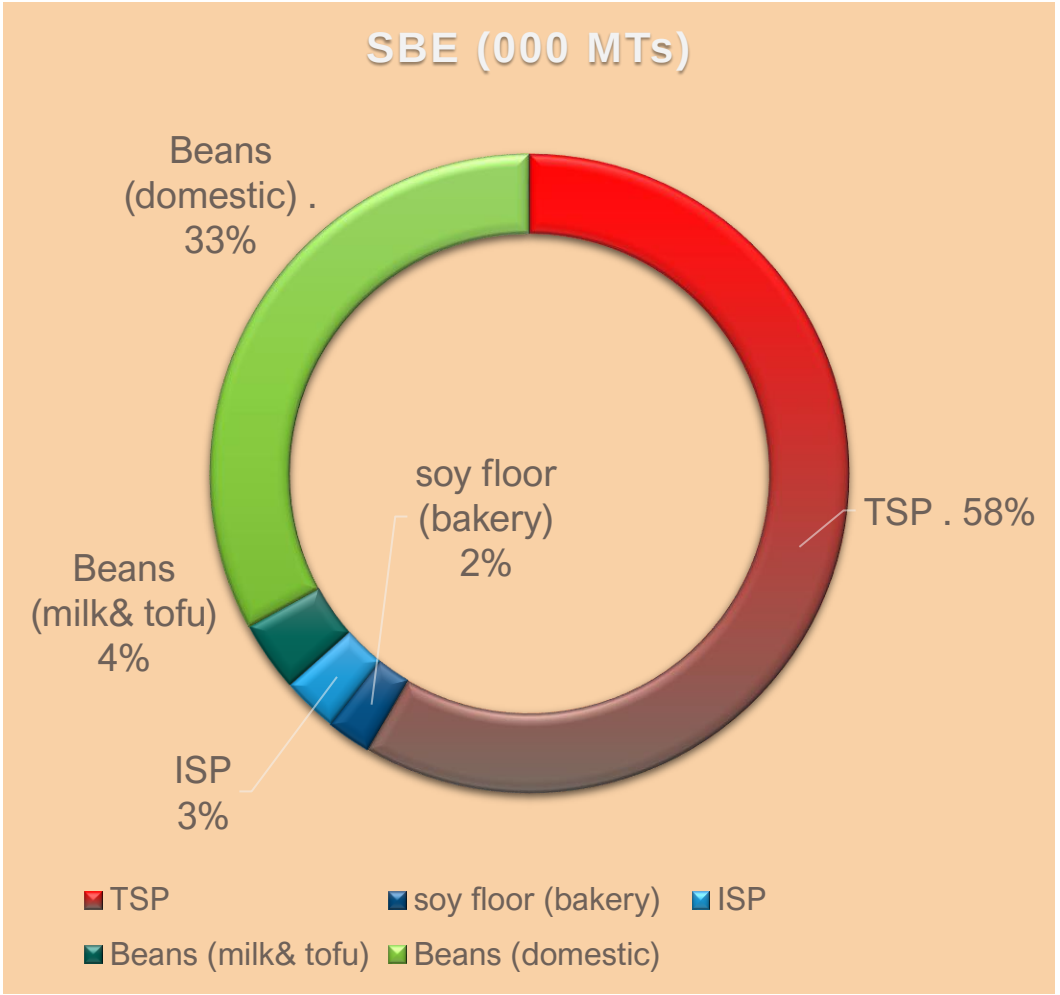
One positive shift or change that has been noticed during this Post covid is a “protein fever” where food products are coming with added PROTEIN

Points to pin on trade

- evolving geo-political issues and headlines will significantly drive daily price movements and trade flows.
- Governments will likely implement policies to control and lower local food prices
- energy prices, it will add to the inflationary pressure, which can impact the overall demand for all products, including Protein
- crude oil and diesel fuel, Natural gas and all energy prices will drive corn ethanol and renewable fuels,
- Recessions, Europe has reported
- Currency, interest rates and inflation The strength of the U.S. Dollar is making U.S.-origin commodities very expensive.
- "N" fertiliser and transportation costs. Higher N,
- Weather
- US is crushing for Oil, Meal will be a cheaper/product for them. (in couple of years)

Soy – human Food & Consumption

- Soy food is one of the fastest-growing segments (1.5 MMT)
- Mainly driven by health-conscious consumers
- Soymilk, tofu, and TSP protein supplements markets continue to have healthy growth.
- Home-level consumption of whole beans
- Increasing interest in plant protein-based foods
- Soy-based meat analogues are growing with innovative products
- High protein, low glycaemic reconstituted rice, Lentil analogue
- US soy protein isolate has about 60% market share (~25 m$)
- Scope of US high-value protein products based on functionality
- Bakery, snack food and processed food industry.`



Proteins and it's relevance

Immunity is our body's capability to fight against foreign organisms/abnormal cells/substances

whenever we are exposed to the above, the immune system releases antibodies to prevent any ill effects caused by the antigen.

an antigen is a toxin or other foreign substance which induces an immune response in the body

antibodies are the ammunition released by the immune system of our body to combat the attack by the antigen.

proteins are essential for the creation of antibodies.

amino acids are the building blocks of proteins.

Amino acids:- essential & non-essential, soy has 20 amino acids which are required `for every animal/human.

there are 9 essential amino acids (the human /animal body can't produce or store them) so should be supplied from the protein we consume.

the rest are non-essential amino acids which are produced by our body.

rich sources of protein are eggs, meat, poultry, fish, and other animal-origin foods.

For vegetarians and vegans, soy, legumes/pulses, nuts and oil seeds are major sources of proteins.

Curd is good protein as well as a good probiotic

On India's protein numbers

Our milk production 2021-22 is **221.06 MMT &** per-capita availability of milk is **444 grams/day**

We have a placement of 12-13 Million Chicks per day

We produce a total of **129.60 billion no's** of Eggs in the year 2021-22

Our per capita chicken consumption is 3.5 to 4 Kg, the highest is 72 kg – Israel

Our per capita egg availability is 95/annum, the highest in Mexico, with 400

A broiler bird consumes 4-4.5 kgs of feed ((2.15 kg body weight average) within 40 days

An egg requires 130 gms of feed

30 per cent of Indians are vegetarian

Protein-rich food helps you stay away from diabetes

Do not blame your food (soy, chicken, fish, or egg) for obesity or health. check your **LIFESTYLE** as well

The human body requires **8gm/Kilo** of bodyweight protein per day

protein Day

SOY MONTH APRIL 2021

protein PARADOX

India Food To Feed Study

SOY FED PRODUCT

maa ke haath ka protein

India Protein Score

2023 SOY SUMMIT Powered by right to protein

right to protein

An awareness campaign to educate people about the importance of adequate protein consumption for better nutrition, health, and wellbeing

The campaign aspires to build public knowledge of different types of protein sources, to meet larger nutritional security goals

Right To Protein is supported by several like-minded organizations, institutions, academicians, professionals, and individuals. The campaign is exclusively driven by the U.S. Soybean Export Council (USSEC)

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BLUE TRIBE

CLFMA OF INDIA

Hello TempaYY THE SUPER BEAN PROTEIN

SNEHA

Pokhara Himalayan Foods

MaaSoy Tastefully Vegetarian

Saffola Mealmaker SOYA CHUNKS

SOYVITA

PFI POULTRY FEDERATION OF INDIA

shalimar Group Since 1968

SUGUNA FOODS Breeding Trust, Growing Together