



Soy, Proteins and ...more

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U.S. Soy

India is growing...

India is the world's fifth-largest and Asia's third largest economy with the second-largest population of 1.3 BN	India's per capita income (PCI) has jumped by 500X - in 1950, it stood at Rs265 and increased to Rs 1,28,829 in 2020-21	Over the last decade, household consumption in India grew 13% year-on-year to reach ` 120 trillion in 2019
The average age of Indians is 29, it has one of the youngest populations globally	Millennials account for 34% of the country's population, while Gen Zers account for 27%	The Indian economy is forecast to expand by 7.4% in 2022-23, making it one of the world's fastest-growing economies.

Scope to improve on nutritional challenges

Nearly every third of young child in India is undernourished, including protein-energy malnutrition, Vitamin A deficiency, iron deficiency (anaemia) and iodine disorders

Number of deaths attributed to poor diet has risen by 15% since 2010 and is now responsible for more than 12 million NCD deaths in adults

Obesity is on the rise among Indian adult male and females - 24% adult women and 23% adult men are overweight or obese

Indian diet is significantly low in fruits, legumes, nuts, fish, and dairy that are crucial for optimum growth, development and prevention of NCDs.

India's protein consumption is much lower than the 48 gms/day recommended by ICMR. India has the lowest average protein consumption

73% of Indians are deficient in protein while above 90% are unaware of the daily requirement of protein.

Proteins and its 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, beef and other animal-origin foods.

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

Relevance of Soy in India

It is all about

.5 million Indian soy farmers

200 Crushers and refiners

5000 Feed Millers

and the whole consumers for protein

soymeal has its contributes to FOREX reserve

employment generation by the entire supply chain of Soy, from farm to feed and supporting industries ...

one and 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.

On India's protein numbers

We produce /placement of 12-13 Million Chicks per day

We produce 300 Million (30 cr) table eggs per day

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

Our per capita chicken consumption is 5.25 kg , the highest is 72 kgs – Israyel

Our per capita egg consumption is 84/annum, highest is Mexico with 400

30 per cent of Indians are vegetarian

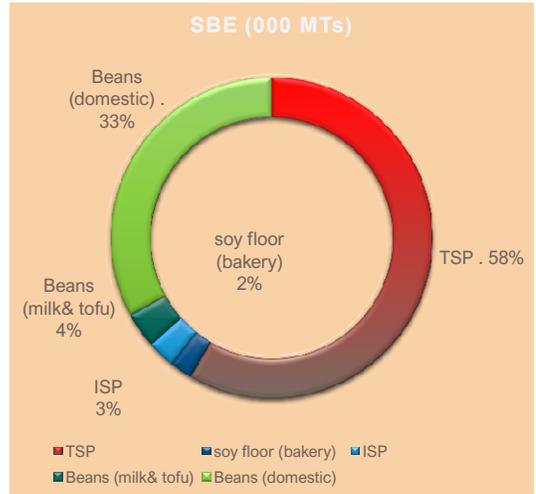
Protein-rich food helps you stay away from diabetes

Do not blame your food (soy or chicken or egg) for your obesity or health . check your lifestyle as well

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

Soy – human Food & Consumption

- Soy food is one of the fastest growing segments (1.5 MMT)
- Mainly driven by health-conscious consumers
- Soy milk, 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
- New and 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.

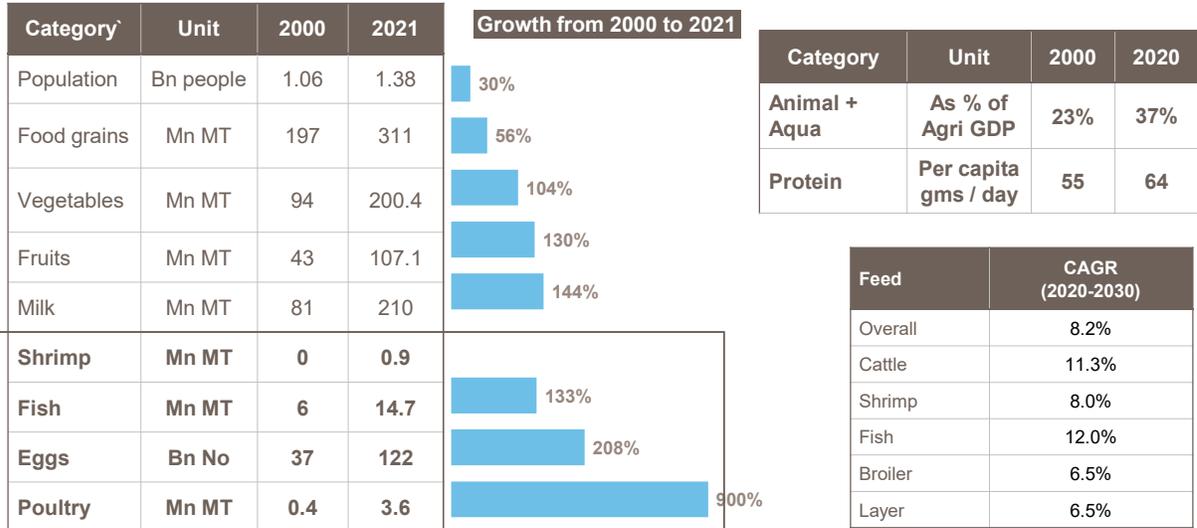


A Snapshot into India's Feed Market



Livestock sector growth vs Other agri

66% OF THE LAST DECADEAL GROWTH IN AGRICULTURE CAME FROM THE LIVESTOCK AND FISHERIES



Source: World Bank Database | Ministry of Agriculture and Farmers Welfare | Basic Animal Husbandry Statistic | Horticulture Board of India | Dept. of Fisheries

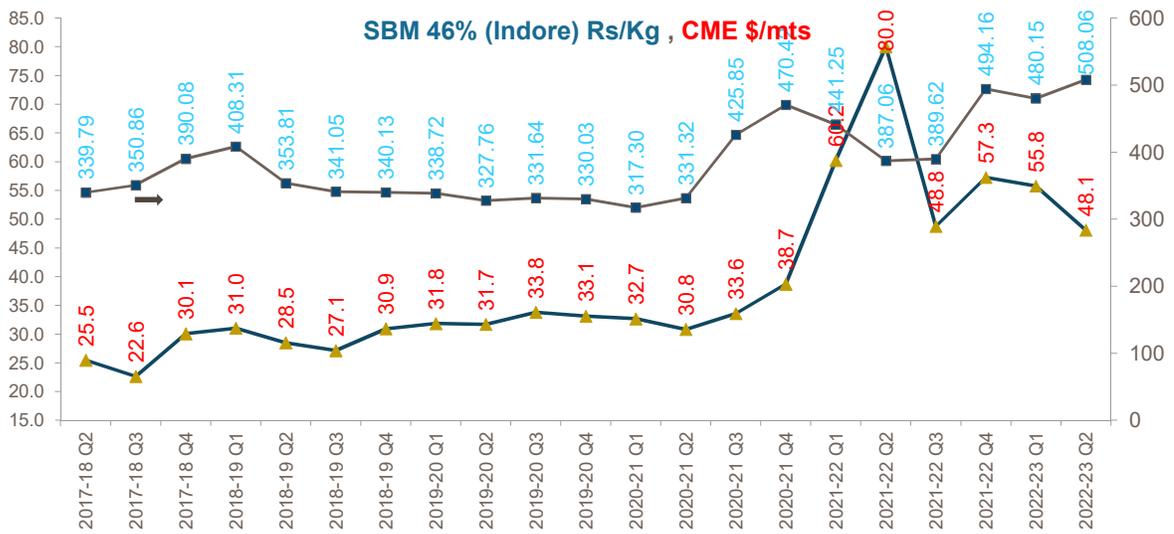
Feed Ingredient Demand (proj.)

	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	(Oct-sept)
C/F Previous year	0.50	0.00	
Production (as per SOPA)	10.45	11.80	
Imports SB	0.50	0.50	
Total Supply	11.45	12.30	
Reserved for Sowing	1.30	1.30	
Direct Human Consumption (SB)	0.50	0.55	
Exports of Seed	0.50	0.50	
Marketable Surplus	9.15	9.95	
Meal Equivalent	7.50	8.16	82% meal
domestic requirement	5.60	5.50	@4.7/month
Exports	1.90	0.65	
Human food (meal/flour)	0.58	0.63	
Demand in total	8.08	6.78	
Gap	-0.58	1.38	1.7 bean
Imports Meal	0.40	0.20	
Imports Protein Isolate 60%	0.01		

Soymeal Price Movements – last 5 years





Facts on industry

- India produces 2.1 MMTS Aqua feed
- Shrimp feed produced in India: 1.3 MMT (2021)
- Fish Feed produced in India: 0.8 MMT (2021)
- Contribution to forex reserve 7760 million \$
- India is the second largest Exporters of shrimp in the world
- No of Feed making industry's 50
- AP contributes 70 percent in Shrimp production and followed by WB and Orrisa
- AP contributes 50 percent in fish production and followed by WB and Gujrat
- Percentage inclusion of SBM in Fish Feed: less than 10%
- Percentage inclusion of SBM in Shrimp Feed: 35%
- Fermented Soy Bean Meal: 1 – 2% in Shrimp feeds
- Soy Lecithin(1 - 2%) : in Shrimp feeds
- Soy Oil (used only in Fish feeds 1 %)

Source: MPEDA

Oil seed or protein?

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 1.2 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 coarse 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

facts

1. According to Food Habits of Indians: Ipsos Study around 77% per cent 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 were consume 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. More than 70% of Indian mothers surveyed believe in myths that 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
11. Indian Consumer Market 2020 report suggests that we spend only one-third of our food budget on protein-rich foods.

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.

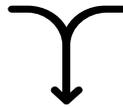
In the long term, fillers, low quality grains and protein reduce efficiency of production and adversely affect animal health.

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

How to handle the growing protein requirements?

- Need to feed the population with homegrown, economical and feasibly priced animal protein (or give way to import this protein)
- Our grain and meal supplies/yield are not keeping pace with the nutritional demand!
- We must supplement its grain and meal demand SUSTAINABLY via trade from the global markets (or import animal protein).
- Need for more protein ...and soy has a significant role to play
- To become Atma nirbhar Grow more, add more yield before its too late

The image shows a screenshot of the 'right to protein' website. The main heading is 'right to protein' with a green leaf icon above the 'o' in 'protein'. Below the heading is a navigation menu with links for 'About Us', 'Protein Tools', 'Initiatives', 'Soy Story', 'News', and 'Blogs'. The 'Soy Story' link is highlighted in green. The main content area features a background image of chickens in a coop. The article title is 'Introducing The First Feed Label For High-quality Protein Food Products'. The text below the title discusses the growing awareness of protein importance and the need for better feed labels. A green button at the bottom of the article says 'Let's Get Familiar!'. In the bottom right corner of the article area, there is a circular logo that says 'SOY FED PRODUCT' around a green leaf icon.

right to protein

About Us Protein Tools Initiatives Soy Story News Blogs

Introducing The First Feed Label For High-quality Protein Food Products

With the growing awareness about the importance of protein and its many sources, there is now a need to further protein knowledge beyond just the source. In other words, superior amino acid profile and amino acid digestibility of soybean meal will have tremendous impact on the growth and development of animals.

To resolve this, Right To Protein introduces, Soy Fed® the first ever feed label for the animal-protein industry to enable consumers to make better protein choices.

Let's Get Familiar!

SOY FED PRODUCT



To know more about
protein
righttoprotein.com

THANK YOU.

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 **US SOY**
Delivers Solutions

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