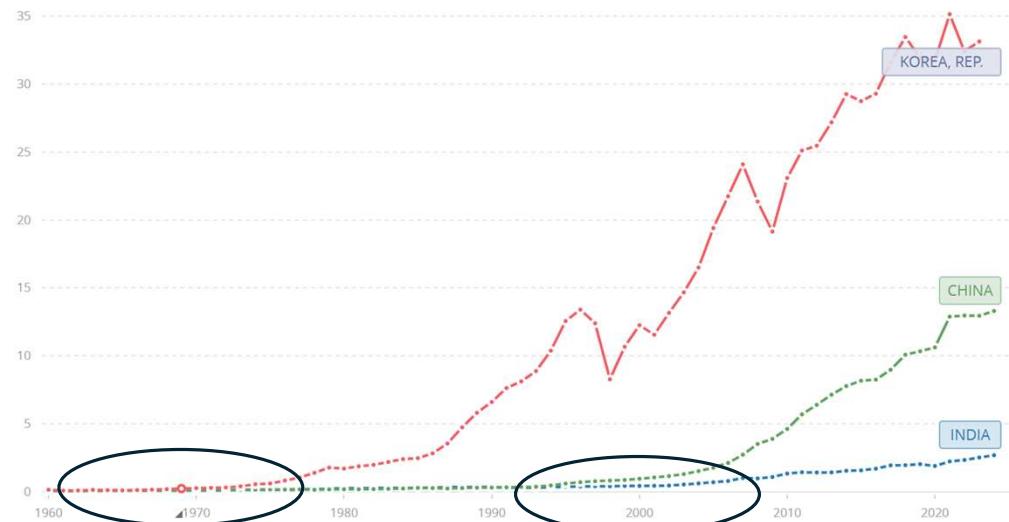


Soybeans- Path to Economic Prosperity and Food Security

The Missed Opportunity



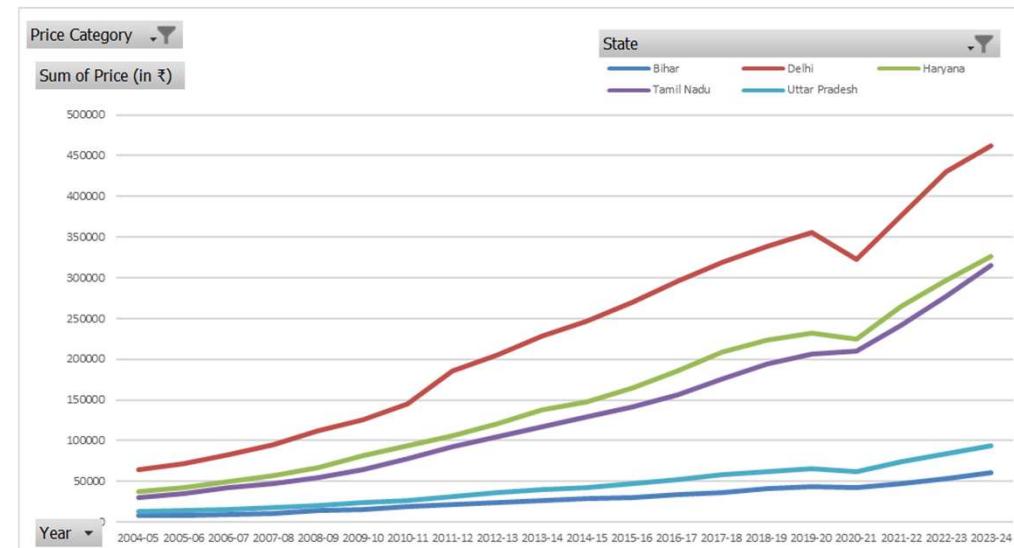
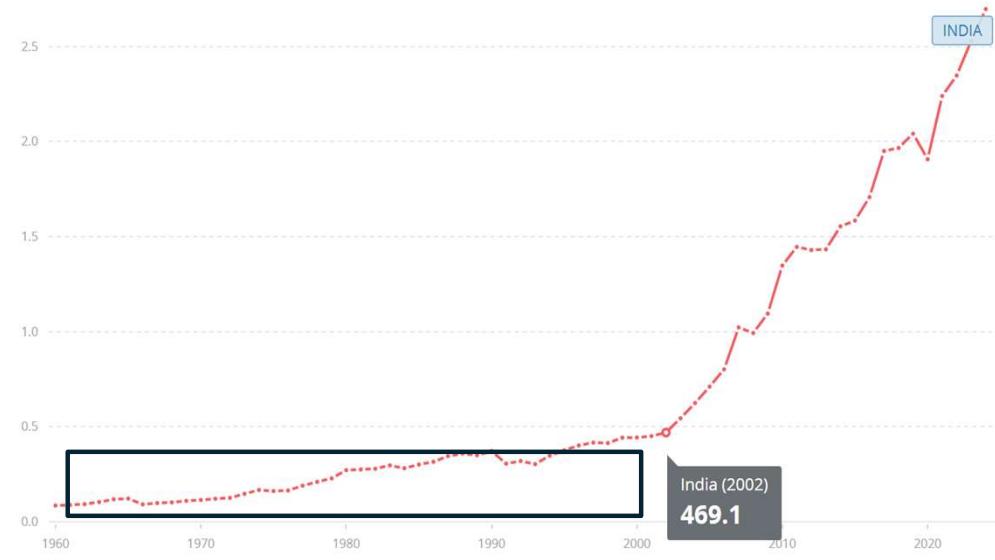
45 years in Economic Divergence had led to drastic Results

Per Capita Income of

USA : India	=	30:1
Korea : India	=	10:1
China: India	=	4:1

Per Capita Income of

Delhi : India	=	3:1
Delhi Bihar	=	10:1



Demographic Engine

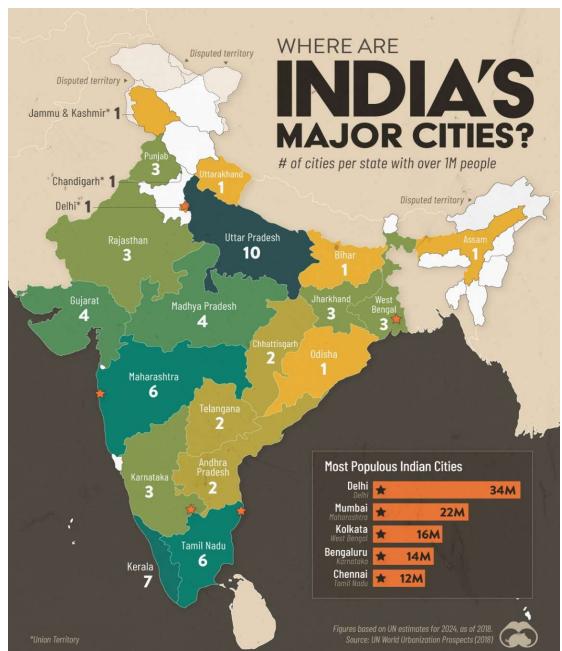
Brazil= UP

Avg District is 2 Million People



60 cities

More than 1 Million Population



India in Numbers

Population	1.45
Population Growth	0.9%
Literacy Rate	77%
Poverty Headcount Ratio	5.3
Life Expectancy	72
Immunization	93%
GDP Growth Rate	6.5%
GDP Per Capita	2700
Poverty Headcount Ratio	5.3
Forest Area	24.4
Access to Electricity	99.5
Firms with Female Top Managers	7%
Prevalence of Stunting	36
Prevalence of Undernourishment	14
Population Living in Slums	5%

The Protein Growth Story

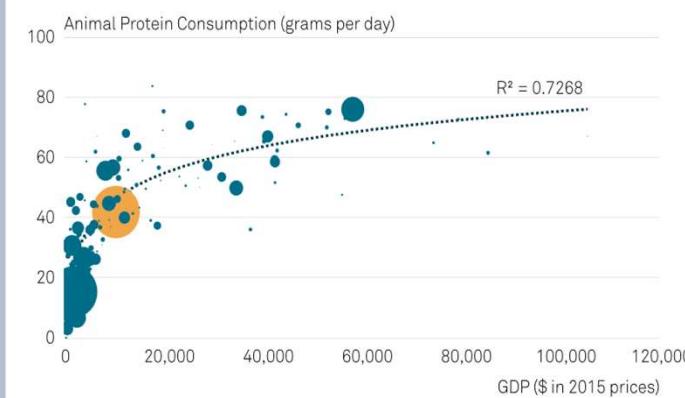
China Protein demand followed per capita Income

- Soybean Imports - demonstrating consumption correlation with Income growth
- India Per Capita Income is same as China in year 2007
- Inflection point of income and bean import growth

China Income and Protein consumption - India to follow

Stagnant production in India , India will be increasingly dependent upon imports

Per Capita: GDP vs Animal Protein Consumption



Source: S&P Global Commodity Insights

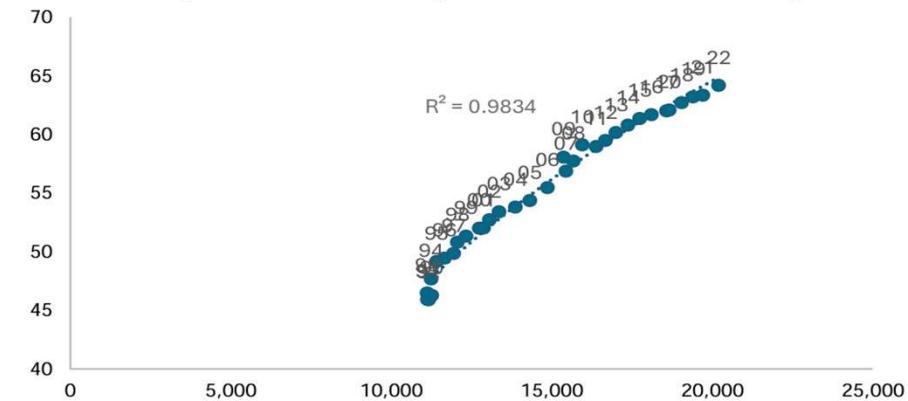
China's soybean imports



- Animal Protein Consumption is Expanding
- Average Indian consumes lags in protein consumption compared to countries at a similar level of development
- India has dietary constraints around Beef and Pork – thus the **Poultry** is main source of Animal protein
- As Income grows and demographics remain supportive- protein consumption will be proxy to GDP growth

GDP Per Capita is a great Indicator of Protein Demand

Global Per Capita Protein Consumption vs Chained GDP Per Capita

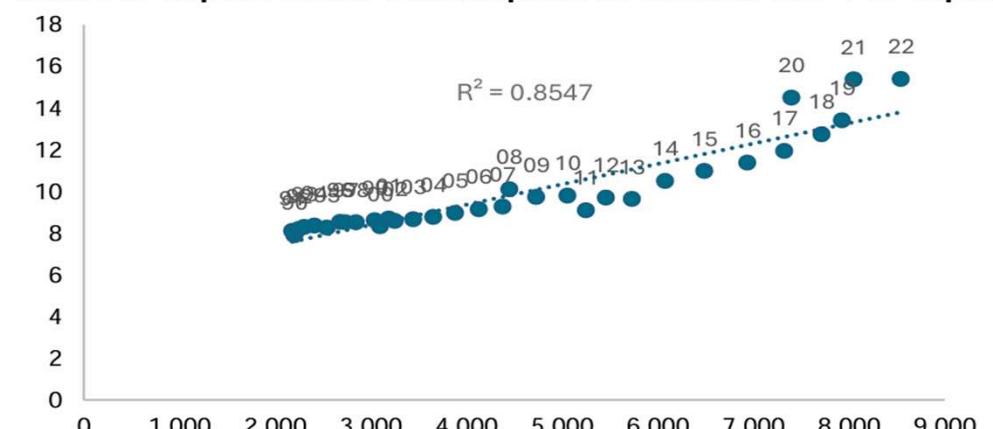


As of Apr. 25, 2025.

Source: S&P Global Commodity Insights, FAO.

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India Per Capita Protein Consumption vs Chained GDP Per Capita

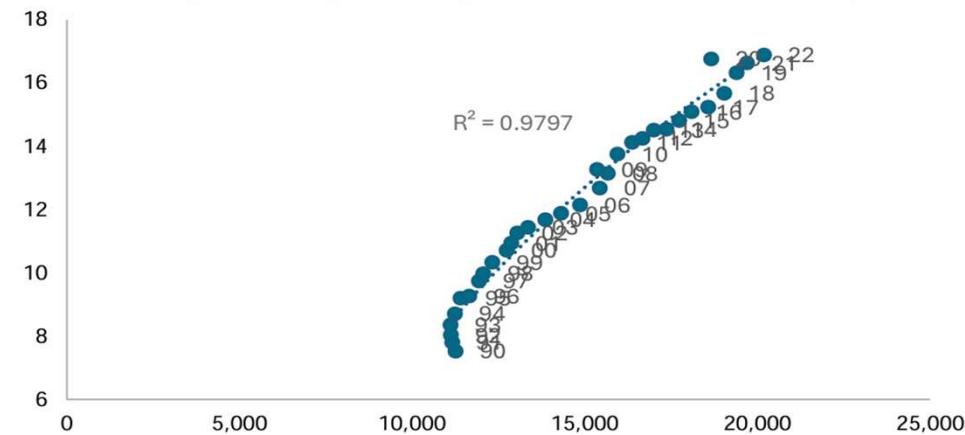


As of Apr. 25, 2025.

Source: S&P Global Commodity Insights, FAO.

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Global Per Capita Poultry Consumption vs Chained GDP Per Capita

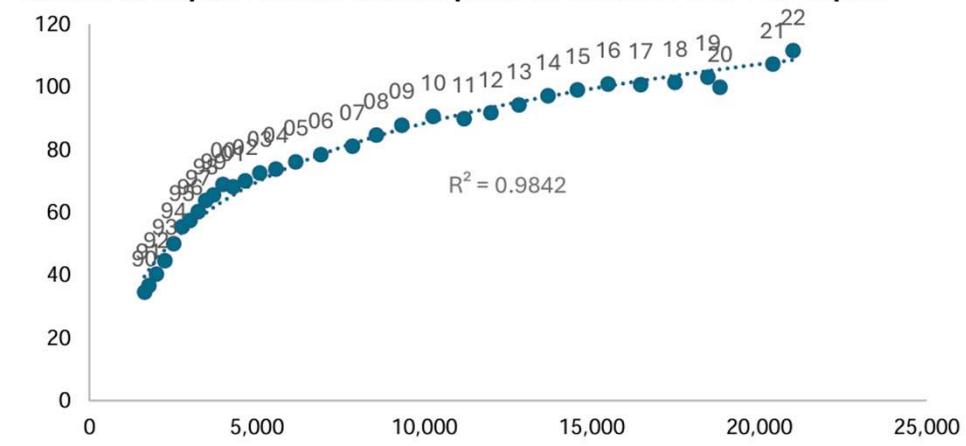


As of Apr. 25, 2025.

Source: S&P Global Commodity Insights.

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China Per Capita Protein Consumption vs Chained GDP Per Capita



As of Apr. 25, 2025.

Source: S&P Global Commodity Insights, FAO.

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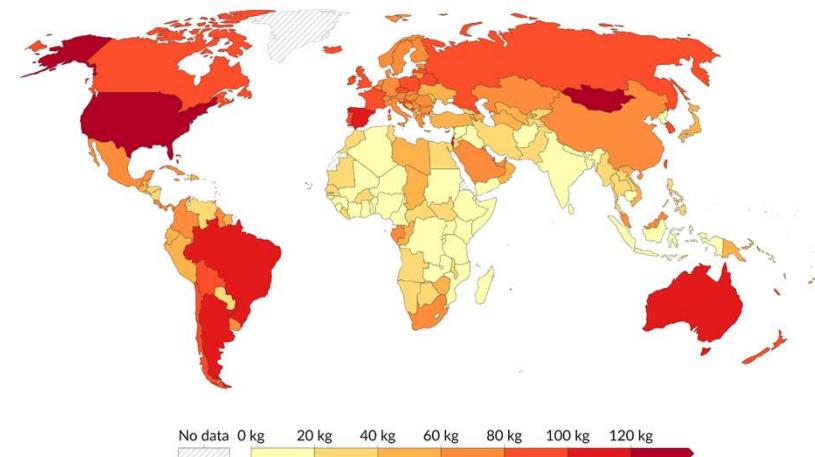
India Per Capita Income and Animal Protein Consumption

Meat supply per person, 2022

Average total meat supply per person measured in kilograms per year.



Our World in Data



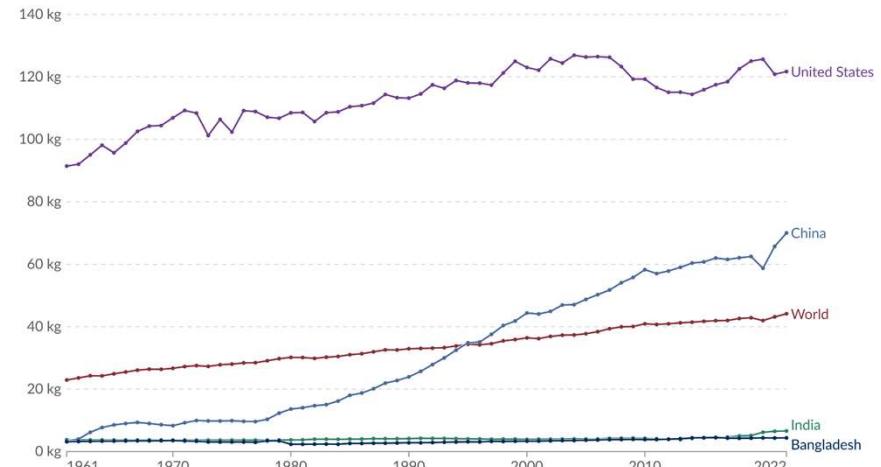
Data source: Food and Agriculture Organization of the United Nations (2024)

OurWorldinData.org/meat-production | CC BY

Note: Data excludes fish and other seafood sources. Figures do not correct for waste at the household/consumption level so may not directly reflect the quantity of food finally consumed by a given individual.

Meat supply per person, 1961 to 2022

Average total meat supply per person measured in kilograms per year.



Our World in Data

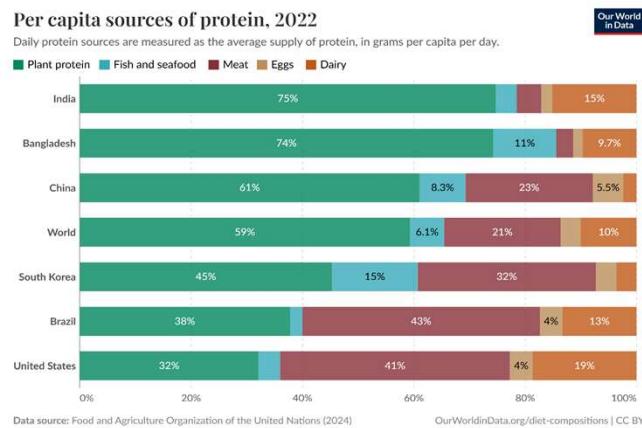
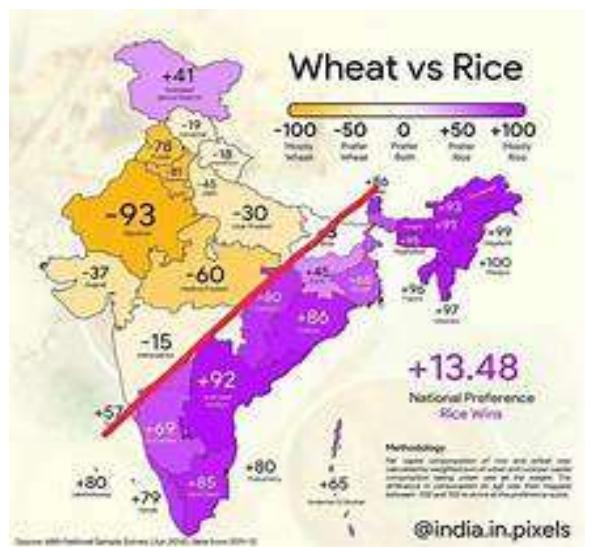
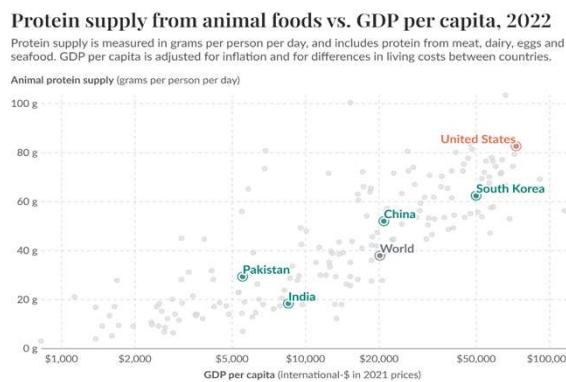
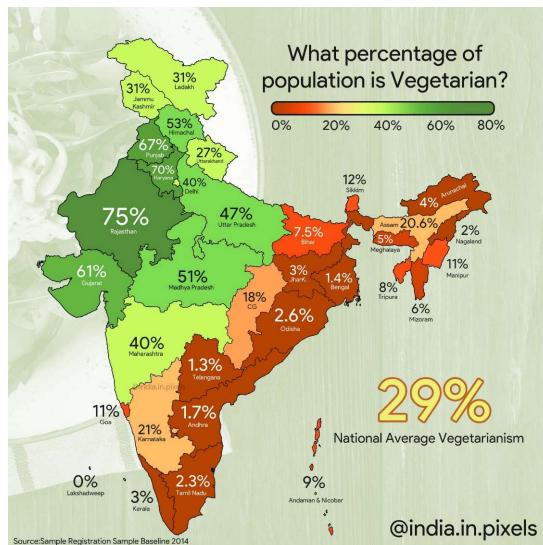
Data source: Food and Agriculture Organization of the United Nations (2024)

OurWorldinData.org/meat-production | CC BY

Note: Data excludes fish and other seafood sources. Figures do not correct for waste at the household/consumption level so may not directly reflect the quantity of food finally consumed by a given individual.

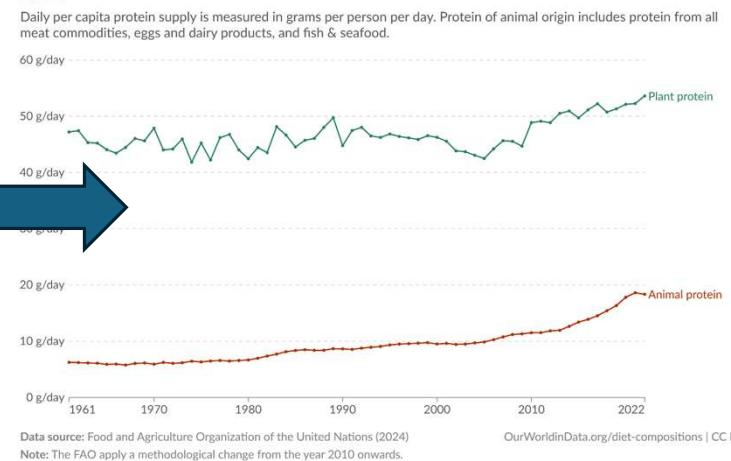
Protein will be the engine of Growth – More intellectual work requires higher compact calories - Proteins

India Per Capita Income and Animal Protein Consumption



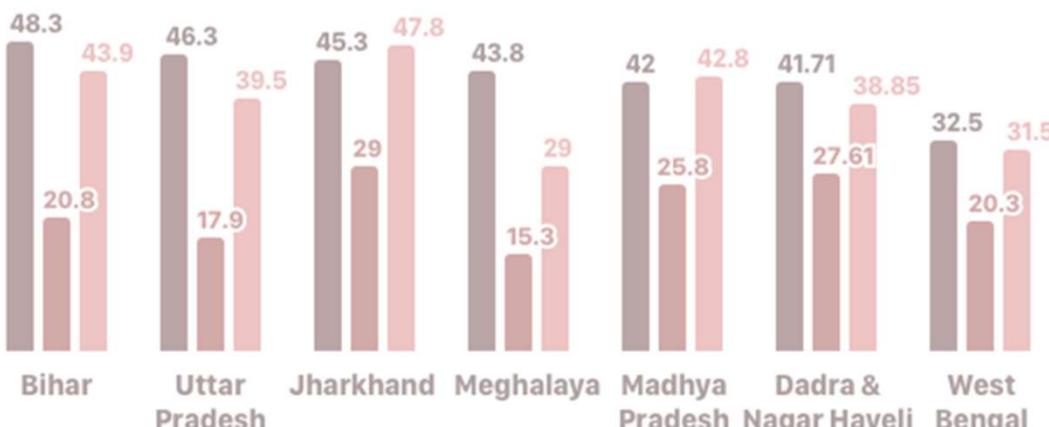
- In South per Capita Income is higher than North India
- South India per capita Protein Consumption is higher than North India
- Watch out for **Protein Rush** – Not the Sugar Rush

Daily protein supply from animal and plant-based foods, India, 1961 to 2022



Can Soybean be the solution to India Malnutrition Problem

THE CRISIS OF MALNUTRITION IN INDIA

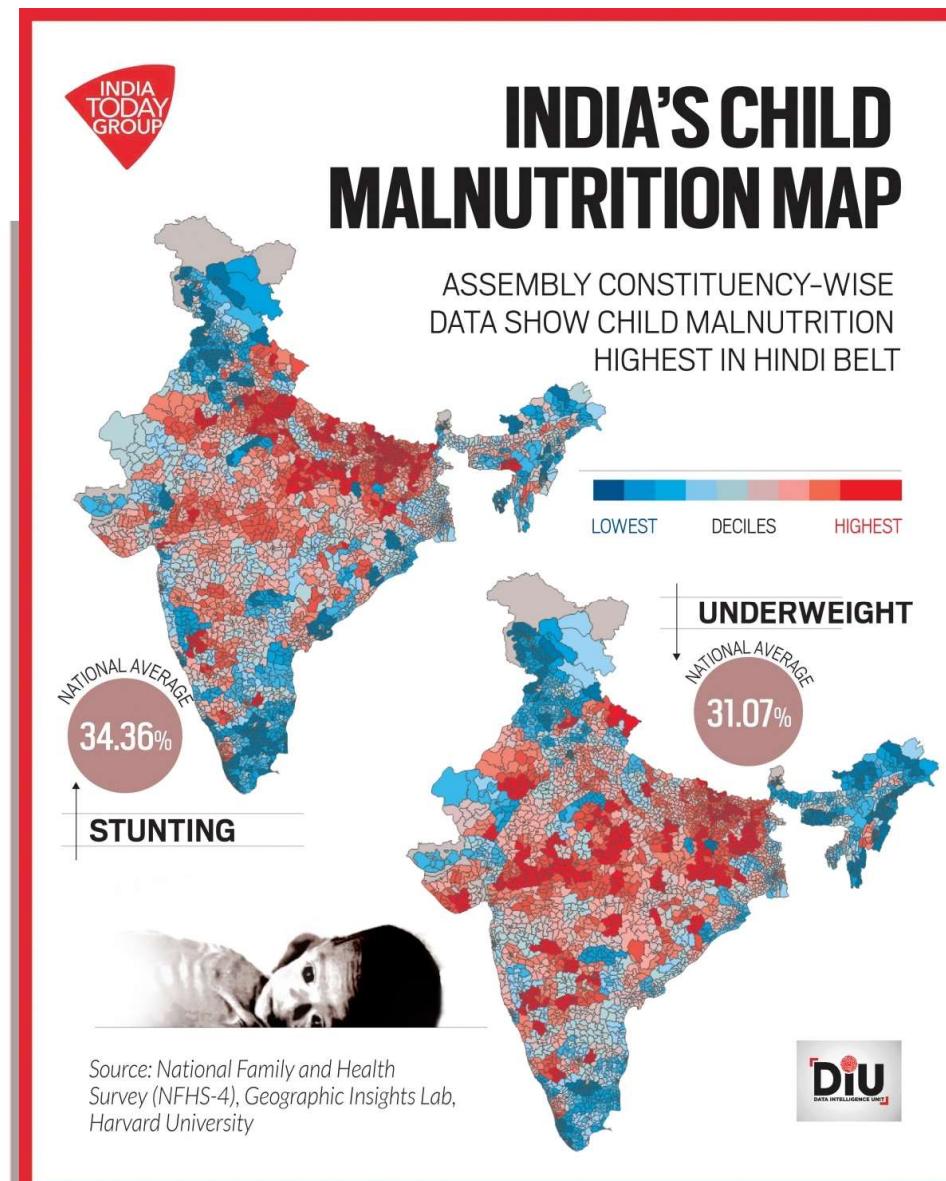


● % of children under 5 years who are stunted

● % of children under 5 years who are wasted

● % of children under 5 years who are underweight

Source: NFHS 4(20015-16)



Propensity of Consumption

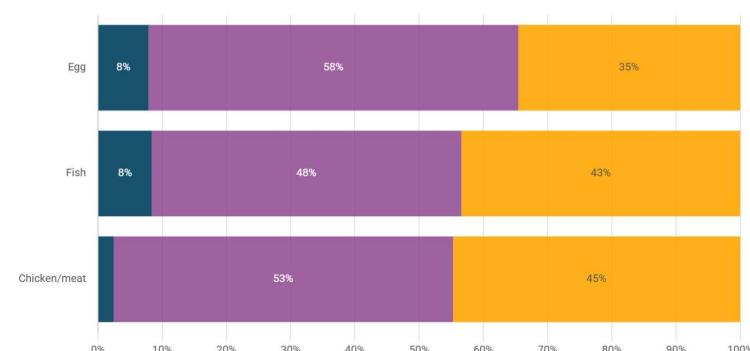
Vs

Frequency of Consumption

Frequency of consumption among those who eat meat (2021)

Six in ten meat-eaters consume it atleast once a week in some form

■ Daily ■ Weekly ■ Occasionally

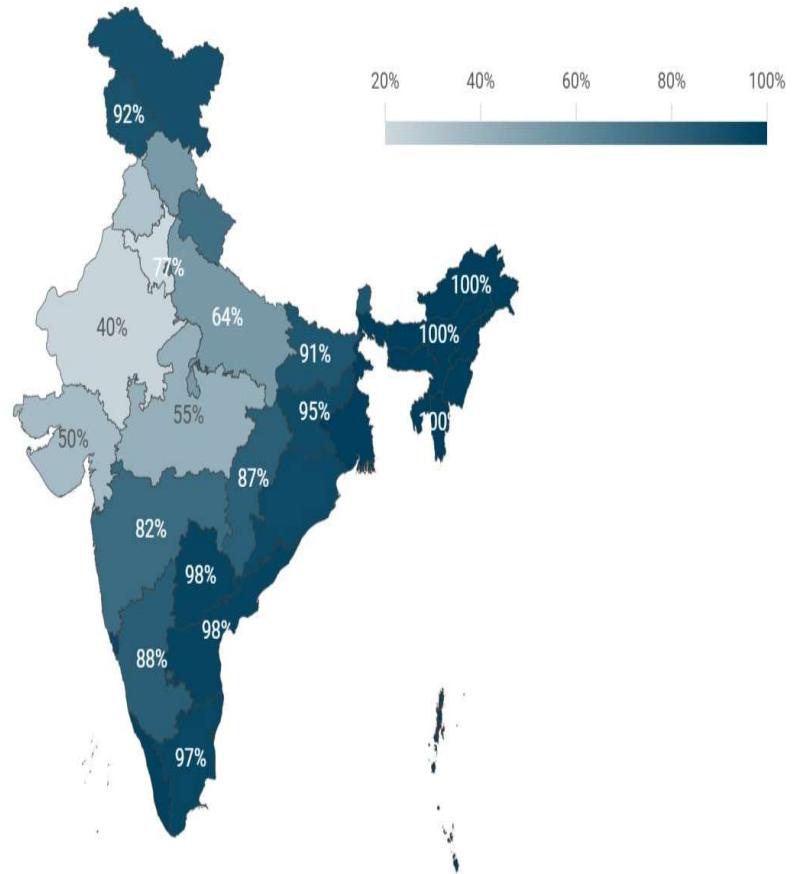


Refers to people aged 15-49.

Source: National Family Health Survey 5 (2019-21), International Institute for Population Sciences

Share of Indian adults who eat egg, fish, chicken or meat across states, 2021

In all states and UTs except Punjab, Haryana and Rajasthan, a majority eats meat

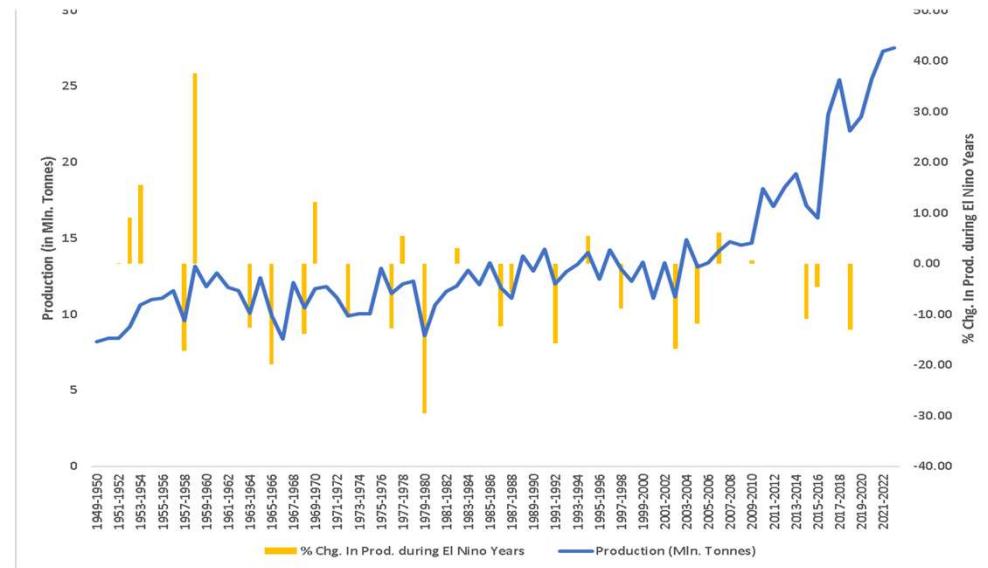
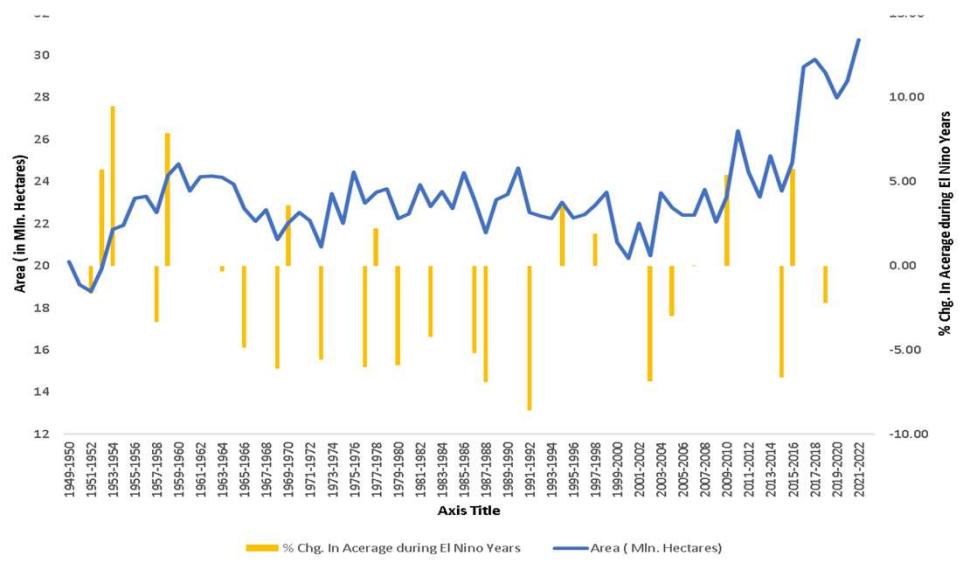


Data is for people aged 15-49. The survey records food consumption separately for men and women. To calculate overall consumption, data from men (15-49) and women in state-module households were merged.

Source: National Family Health Survey 5 (2019-21), International Institute for Population Sciences

The Supply Side

El Nino and Proteins- is it too difficult to guess...



- We studied, last 73 crop years, witnessed 26 El Nino years , out of which 16 years reported lower acreage and 15 years reported lower production.
- The production declined ranging from -4% to -30% year on year basis.
- Acreage in India stagnating. (Normal Area ~ 12 Mln Ha.)
- Production hitting potential of 13-14 Mln tonne (Normal Prod.~ 23-24 Mln Tonne)
- High Fluctuation in yield of 1- 0.8 mt/hectare (Normal Yield ~ 1.1 mt/ha.)

Monsoons 2025



Out of 66 key Soybean-growing districts, rainfall departure from normal between June 1 and September 28 reveals a patchy distribution, raising concerns over yield prospects in key regions.

District-Wise Rainfall Performance

- Large Excess ($\geq 60\%$ above normal): 9 districts
- Excess (20%–59%): 24 districts
- Above Normal (10%–20%): 13 districts
- Near Normal (0%–10%): 9 districts
- Below Normal (-8% to -20%): 4 districts

This indicates that close to 70% of soybean districts received excess to above-normal rainfall. However, excess precipitation in several belts and localized deficiencies in others could weigh on overall productivity and quality.

Overall, rainfall has impacted adversely on soyabean growing regions potentially impacting the soyabean crop of 2026 harvest.

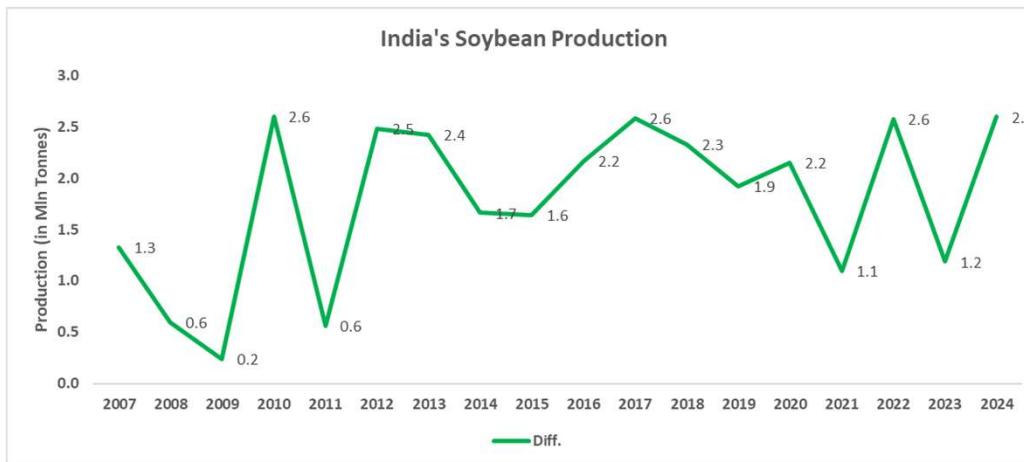
GOI Vs SOPA

Soybean Production No difference between 2 biggest forecasters vary by around 1.5-2 MMT

Who is Right???

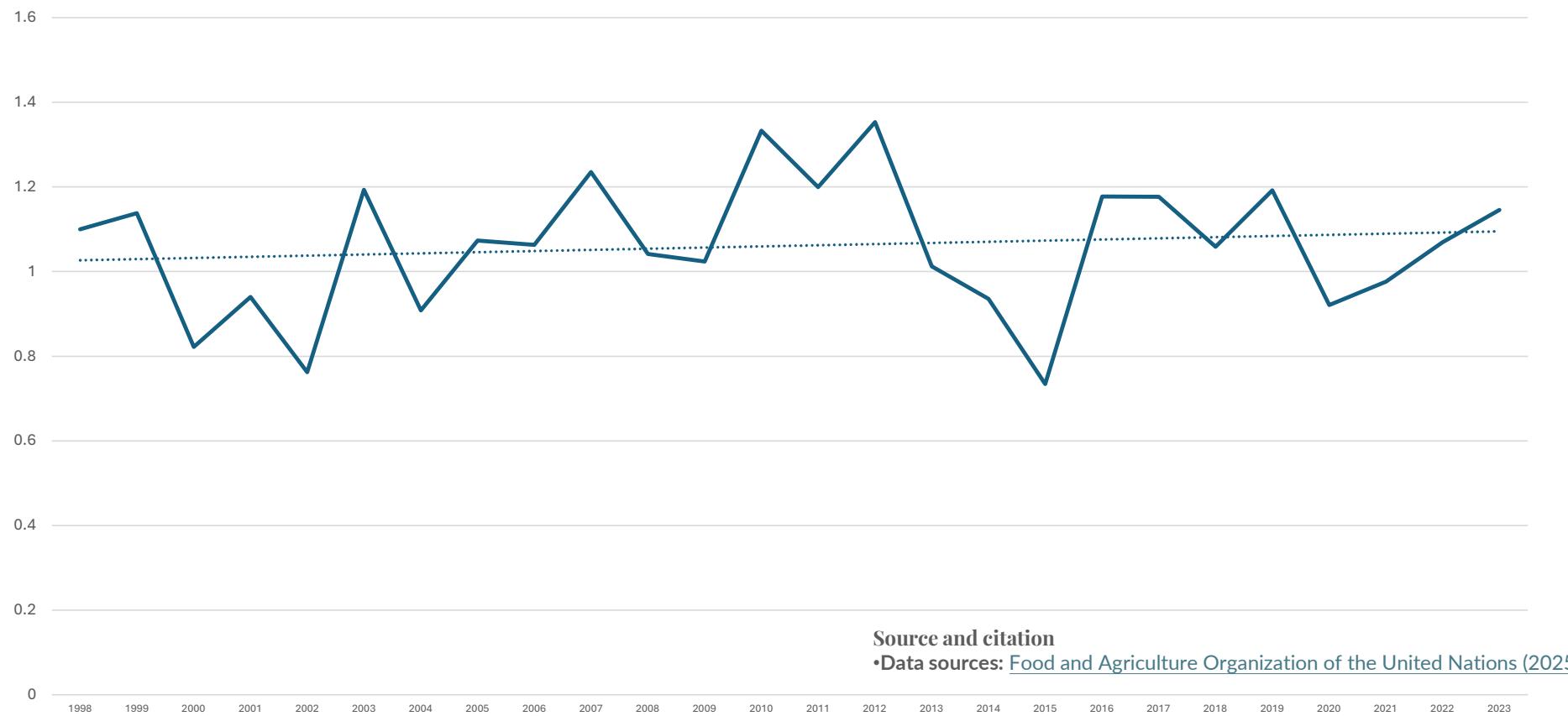
Let us say both are right- but than who needs SnD

Year	Area (in Mln Ha)			Yield (in Tonnes/Hectare)		
	Gol	SOPA	Diff.	Gol	SOPA	Diff.
2007	9	9	0.0	1.2	1.1	0.1
2008	10	10	-0.1	1.0	1.0	0.1
2009	10	10	0.1	1.0	1.0	0.0
2010	10	9	0.3	1.3	1.1	0.2
2011	10	10	-0.2	1.2	1.1	0.1
2012	11	11	0.1	1.4	1.1	0.2
2013	12	12	-0.3	1.0	0.8	0.2
2014	11	11	0.0	1.0	0.8	0.2
2015	12	11	0.5	0.7	0.6	0.1
2016	11	11	0.2	1.2	1.0	0.2
2017	10	10	0.2	1.1	0.8	0.2
2018	11	11	0.3	1.2	1.0	0.2
2019	12	11	1.4	0.9	0.9	0.1
2020	13	12	1.1	1.0	0.9	0.1
2021	12	12	0.1	1.1	1.0	0.1
2022	13	11	1.6	1.1	1.1	0.1
2023	13	12	1.4	1.0	1.0	0.0
2024	13	12	1.1	1.2	1.1	0.1



Soybeans Yield Graph

India

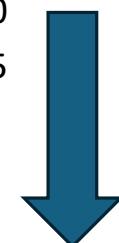


Source and citation

•Data sources: [Food and Agriculture Organization of the United Nations \(2025\)](#)

It has happened in Past and in other Places- Case of Soybeans

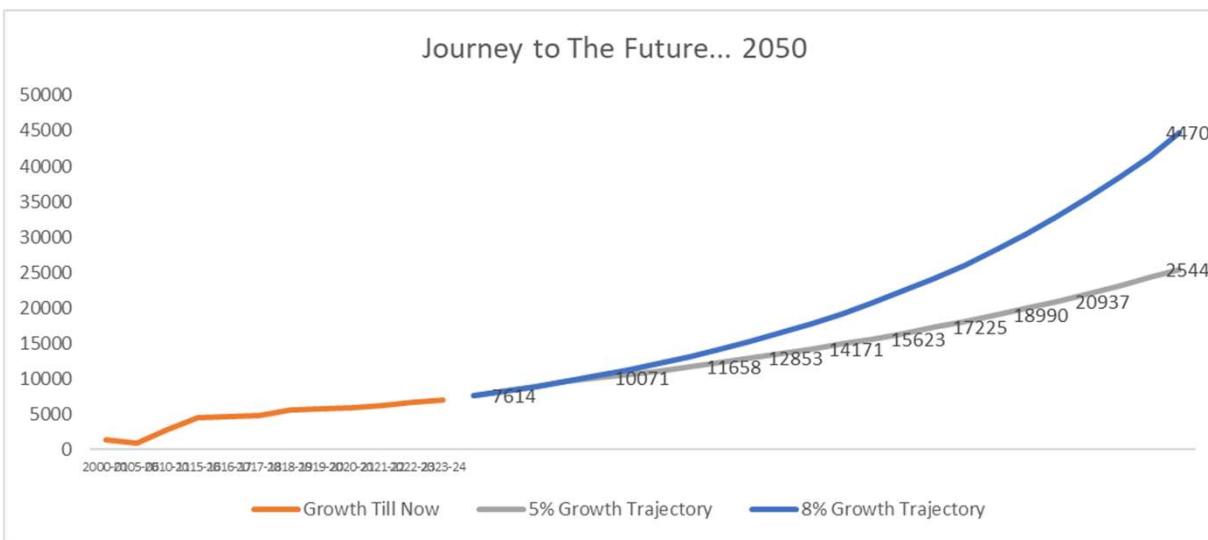
Country	2000-01	2005-06	2010-11	2015-16	2020-21	2021-22	2022-23	2023-24	Growth Rate
Bangladesh	200	279	587	1,072	2,454	2,504	2,404	2,425	12%
China	14,995	27,776	43,300	62,620	72,875	69,630	72,150	75,182	8%
India	1,305	835	2,775	4,460	5,850	6,273	6,725	7,050	8%
Vietnam	432	1,722	3,105	5,565	6,330	6,385	6,285	6,445	13%



Robust Animal Protein Consumption Growth in India

- Soymeal demand consumption rate is directly proportional to GDP Growth
- Protein consumption goes up with Income Growth
- India lags far behind on protein consumption Growth Curve

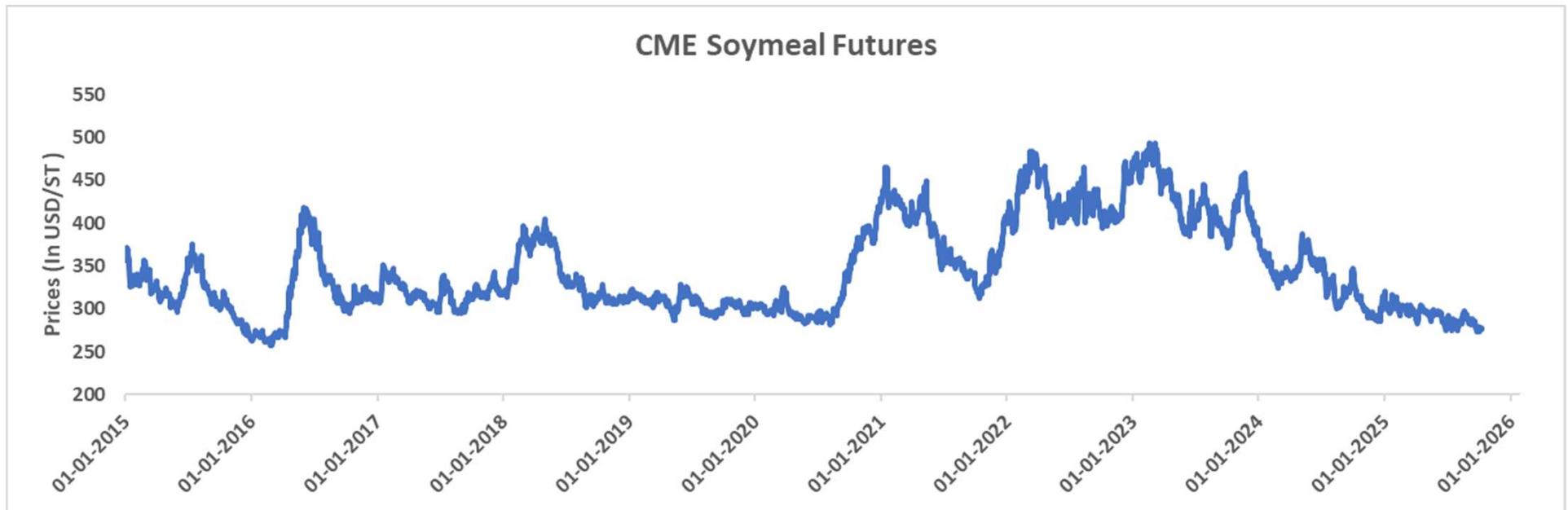
Let us Get our Numbers Correct- Soybeans



Year	Soymeal			Soybeans		
	3%	6%	8%	3%	6%	8%
2001-02	1260	1537				
2005-06	835	1018				
2010-11	2775	3384				
2015-16	4460	5439				
2016-17	4674	5700				
2017-18	4739	5779				
2018-19	5530	6744				
2019-20	5780	7049				
2020-21	5850	7134				
2021-22	6273	7650				
2022-23	6625	8079				
2023-24	7075	8628				
2024-25	7075	8628				
2025-26	7500	9146				
2026-27	8099	9877				
2027-28	8747	10668				
2028-29	9447	11521				
2029-30	10203	12443				
2030-31	10509	10815	11019	12816	13189	13438
2031-32	10824	11464	11901	13200	13981	14513
2032-33	11149	12152	12853	13596	14819	15674
2033-34	11484	12881	13881	14004	15709	16928
2034-35	11828	13654	14992	14424	16651	18282
2035-36	12183	14473	16191	14857	17650	19745
2036-37	12548	15342	17486	15303	18709	21325
2037-38	12925	16262	18885	15762	19832	23031
2038-39	13313	17238	20396	16235	21022	24873
2039-40	13712	18272	22027	16722	22283	26863
2040-41	14123	19368	23790	17224	23620	29012
2041-42	14547	20530	25693	17740	25037	31333
2042-43	14983	21762	27748	18272	26539	33839
2043-44	15433	23068	29968	18821	28132	36547
2044-45	15896	24452	32366	19385	29820	39470
2045-46	16373	25919	34955	19967	31609	42628
2046-47	16864	27474	37751	20566	33505	46038
2047-48	17370	29123	40771	21183	35516	49721

Fasten your seatbelts... we are in for a big Bull Ride...Demand

CME Soybean Meal Prices



10 years		Above	Below		Since 2020		Above	Below		Since 2024		Above	Below
Average	345	1060	1702		Average	367	741	742		Average	315	191	260
Min	257				Min	273				Min	273		
Max	493				Max	493				Max	388		
Median	327				Median	364				Median	304		
Current	278	2665	97		Current	278	1466	17		Current	278	434	17
Std Dev	53				Std Dev	60				Std Dev	28		

Source: Barchart, CME, Public Sources

Farmers:

Protect and Incentivize Indian Farmer

Investment in Seed Research

Sustainability Policy and Farmer Connect

ElNino and Production Modelling

Consumers:

Nutritional Security

Increasing Per Capital Consumption

Supply Security

Market Mechanisms

Dynamic Duty Structure

Farmers, Consumers, Traders, Govt – Part of same ecosystem

Govt should invest in Supply Side Analytics

Market Efficiency

Efficient Dispute Resolution Mechanism- Arbitration Bodies???

Direction for Global Farmer- They are planting for Indian Consumers: Australia, Canada, Myanmar, Africa, BS, Central Asia, Argentina, Brazil



Action Points

- Income Increase and Prosperity will make India a perpetually high food inflation Geography- China has faced similar situation during their growth years.
- India needs more people to move out of agriculture to Industry/Manufacturing
- Interaction of Agri + Manufacturing to lead growth in India
- We need to come out of defensive mindset to aggressive consumption strategies
- India need to build more storage global Buffer Stocks to be to mitigate El-Nino and Ia-Nina cycle
- Protein rich diet to all citizens of the country is the way forward.

"Vasudhaiva Kutumbakam" - "The world is one family" or "One Earth, One Family, One Future,"

Thoughts and Questions



Please feel free to
connect



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Policy and Support



A significant MSP (Minimum Support Price) increase has been announced: from ₹4,892 per quintal (2024-25) to ₹5,328 for 2025-26, + 8.9% increase.



The MSP hike is intended to counterbalance the attractiveness of maize (which is seeing growing acreage) and preserve soybean cultivation.



The government plans crop-wise / state-wise review and support, starting with soybean in Madhya Pradesh, to ensure inputs, extension, and risk mitigation