The Solvent Extractors' Association of India

Feed & Feed Ingredients Conclave - 2017

ANIMAL FEED SECTOR- CHALLENGES & OPPORTUNITIES

FASAR- Food & Agribusiness Strategic Advisory and Research

YES BANK

July, 2017

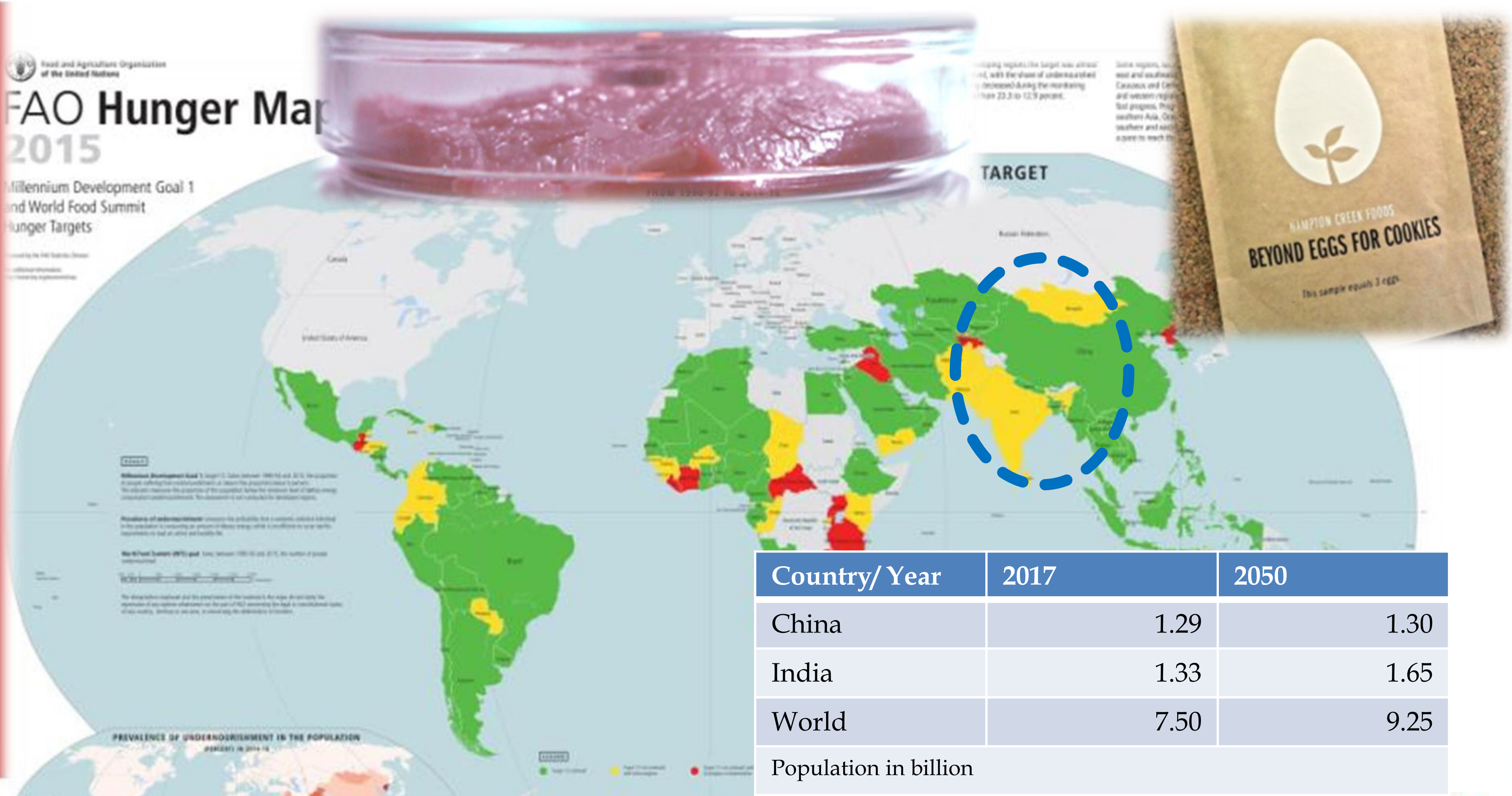
Scope of Presentation

Demand Drivers for Animal Protein in India

Animal Feed Sector in India

Incentive Schemes for Animal protein & feed in India

Protein deficit to be filled

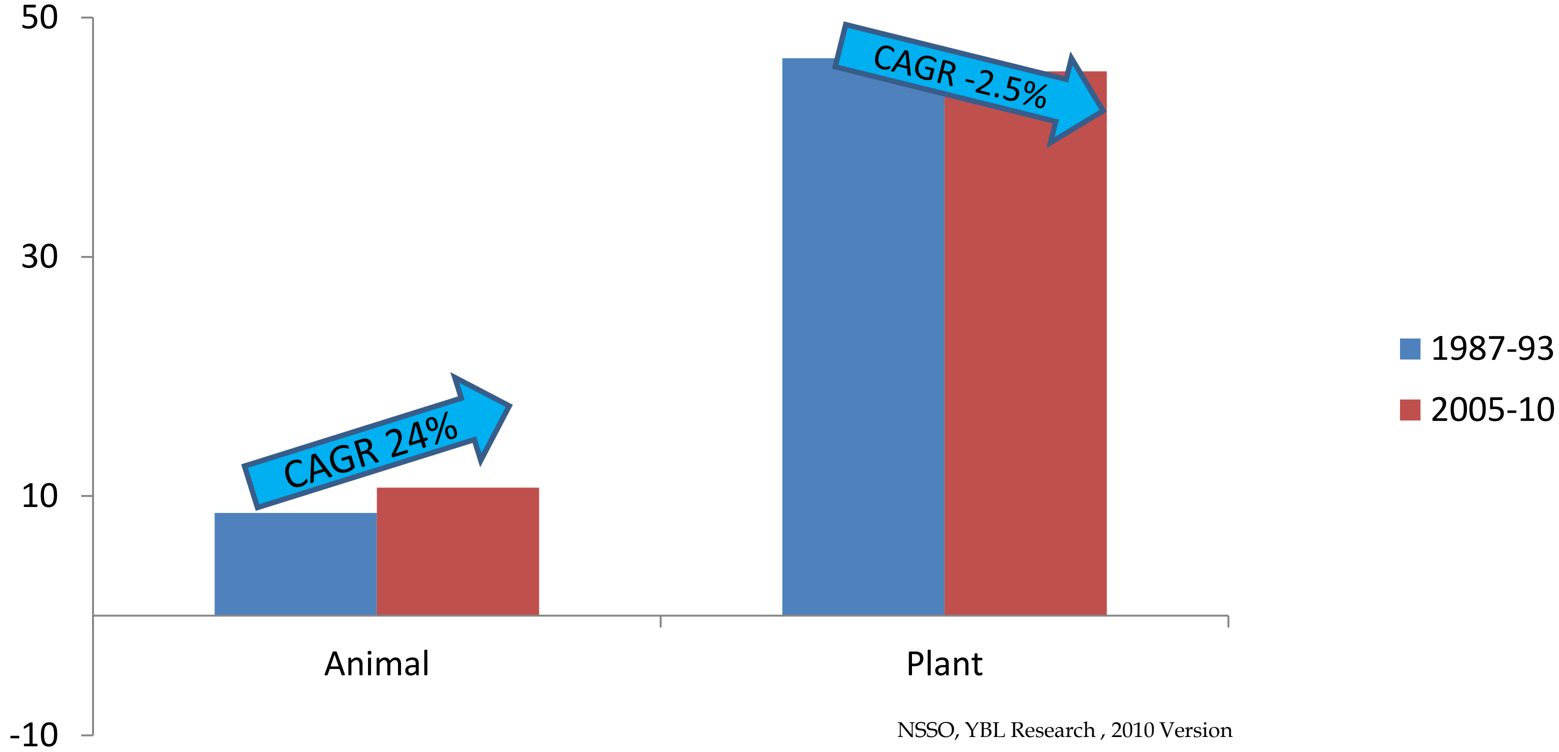


Country/ Year	2017	2050
China	1.29	1.30
India	1.33	1.65
World	7.50	9.25
Population in billion		

- 1/3rd of global population in India and China
- High protein requirement to feed – veg / non-veg
- Approx 200 million in India –hungry

Sources of protein & trends

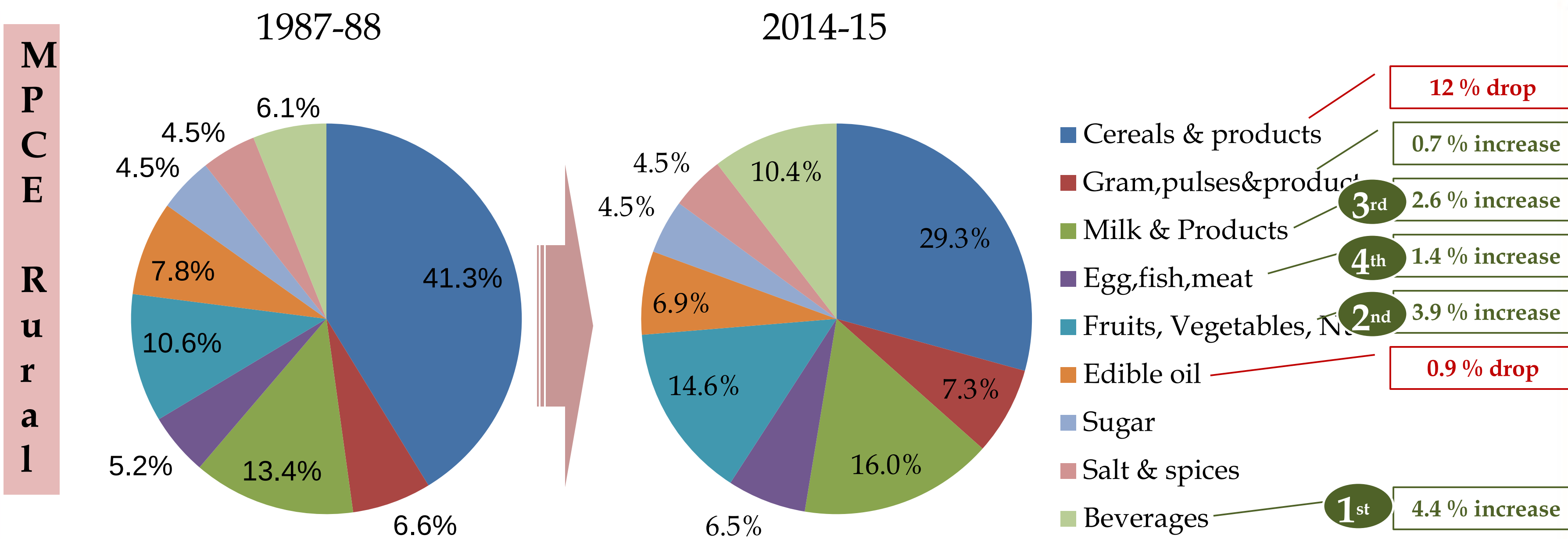
✓ Source of protein (Percapita consumption in Kg/Year)

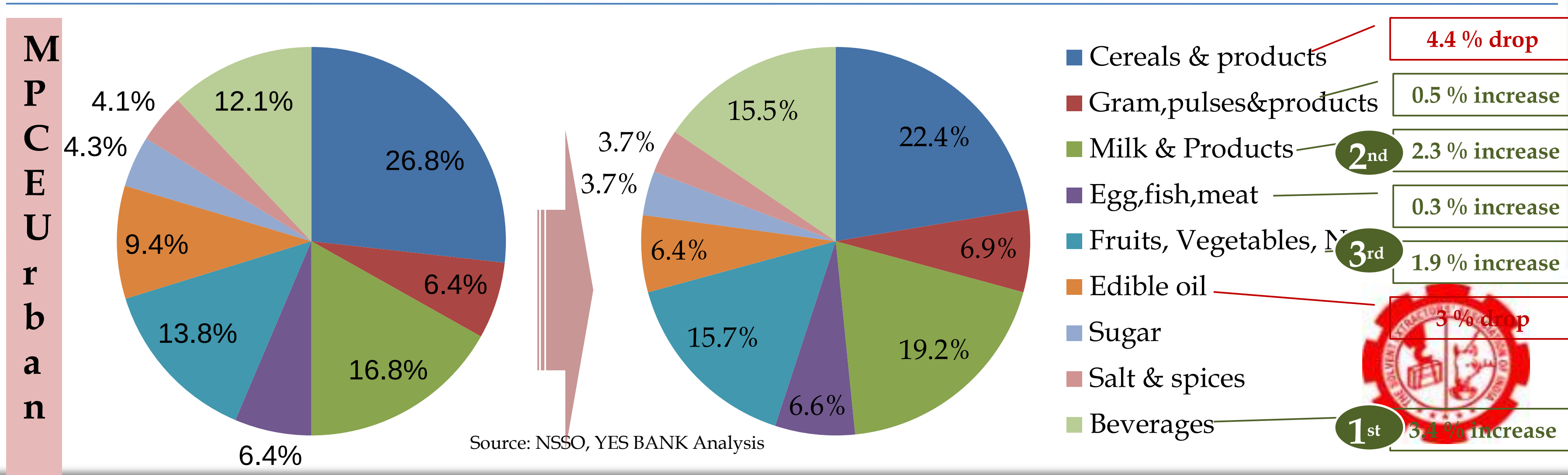


NSSO, YBL Research , 2010 Version

– With per capita income growth increasing, shift from cereals to fruits and veggies, dairy and meat which show 2 digit CAGR of 29%, 25% and 23%)

Food consumption trends in India

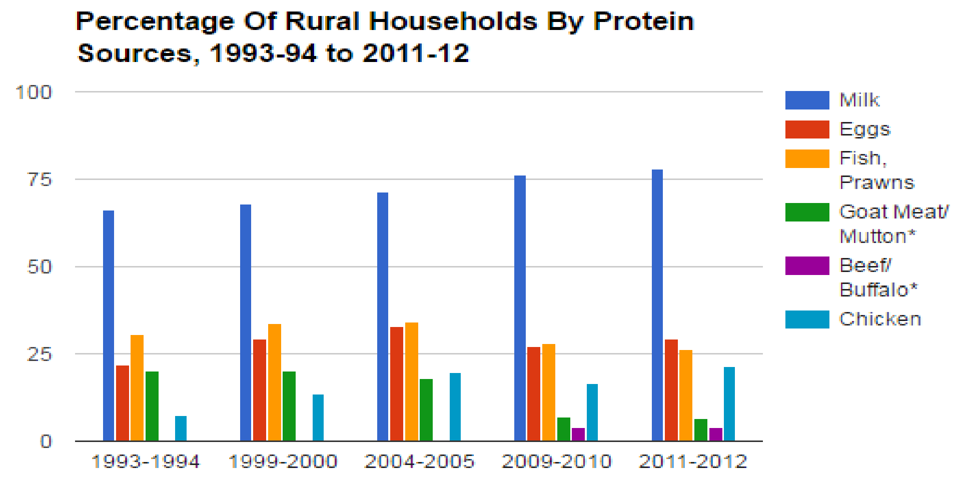


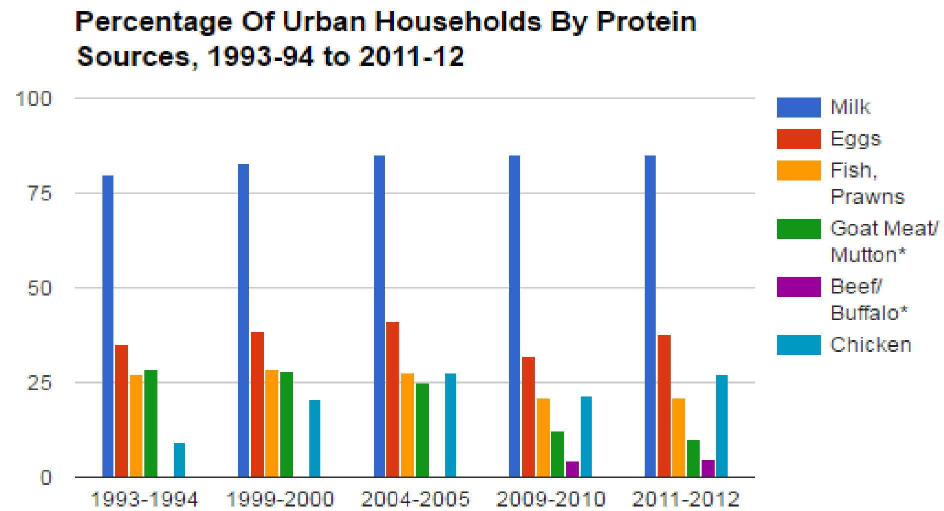


Source: NSSO, YES BANK Analysis

Drivers of growth in animal protein consumption

- ✓ Social trends
  - – DINKs, nuclear families, single families – globalised households, well travelled seeking more varieties with high nutrient quality
  - – Eating out in fine dine ; emodel delivery (Hola Chef, Cyber Chef)
  - – Proliferation of QSR’s – entry of Wendys, Carl’s Jr, Fatburger, Johnny Rockets, Burger King and Barcelos
- ✓ Food consumption trends
  - – Dairy protein, aqua and meat protein growing

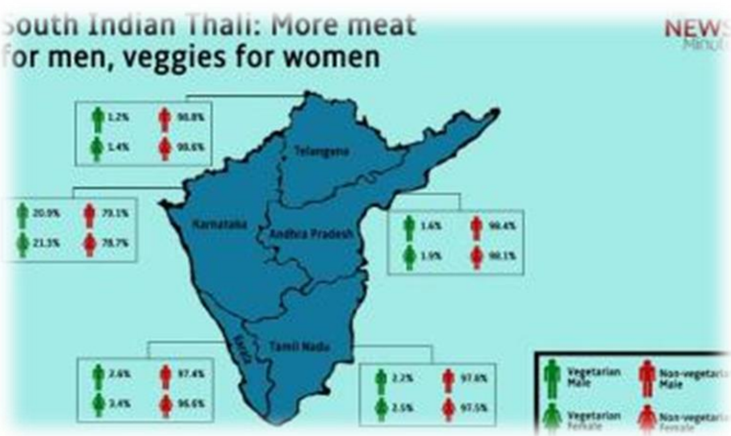




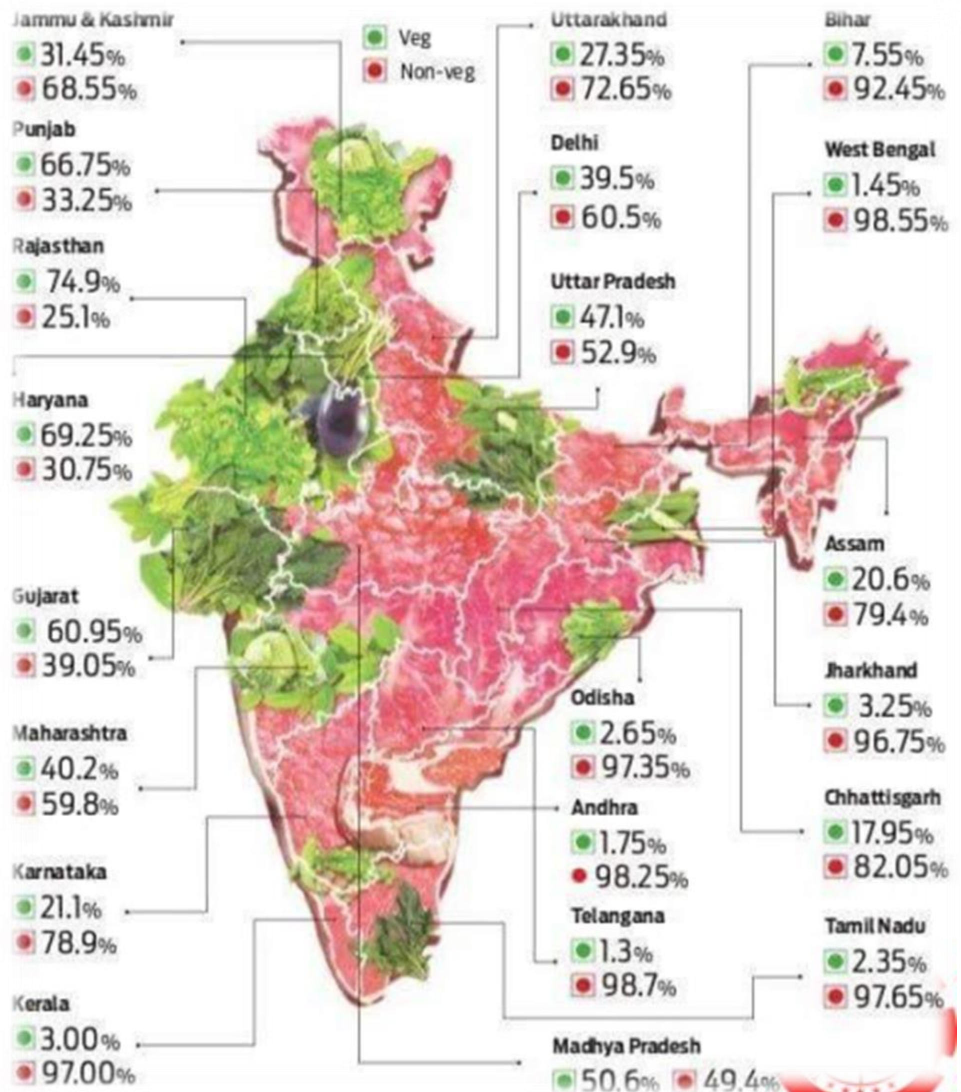
India – Food Habits

Summary of Baseline Findings – Census of India 2014

❖ Telangana has the highest proportion of meat-eaters in the country
❖ People in Telangana consume a lot of lamb and chicken for breakfast
❖West Bengal ranks second after Telangana

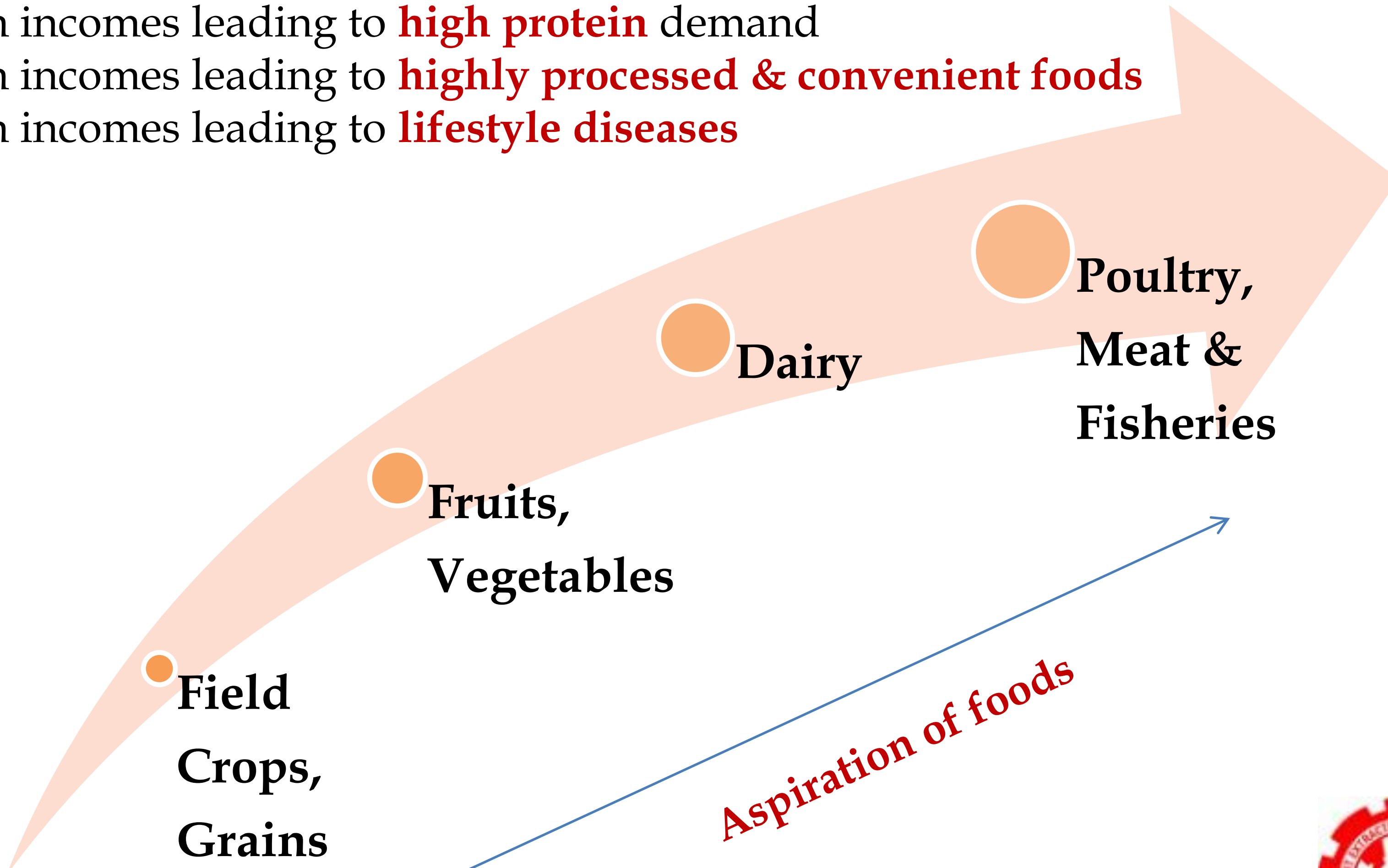


❖63% of Indian households consumed non-vegetarian food in 2013-14 compared to 58.2 per cent in 2004-05.



Food Luxuries and Indian Mindset

High incomes leading to **high protein** demand
High incomes leading to **highly processed & convenient foods**
High incomes leading to **lifestyle diseases**



NIN food map - **India Food Composition Table -**
ninindia.org/Downloads/IFCT%202017%20Book.pdf

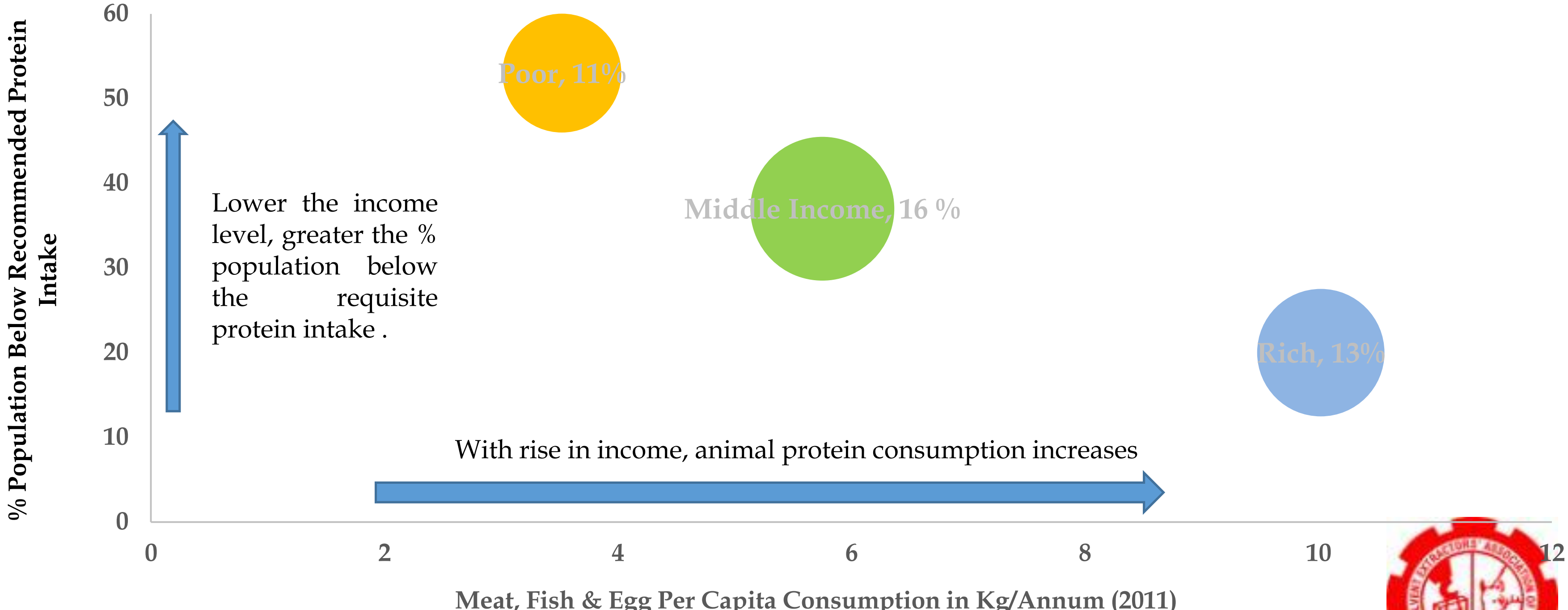
Animal Protein Consumption

Positive Growth Trend

Increase In Consumption Of Animal Derived Protein Across Income Groups

Huge Upside

Nearly 40% Middle Income And 20% High Income Group Are Still Protein Deficit



Bubble size is proportional to % change in MFE consumption b/w 1983 & 2011

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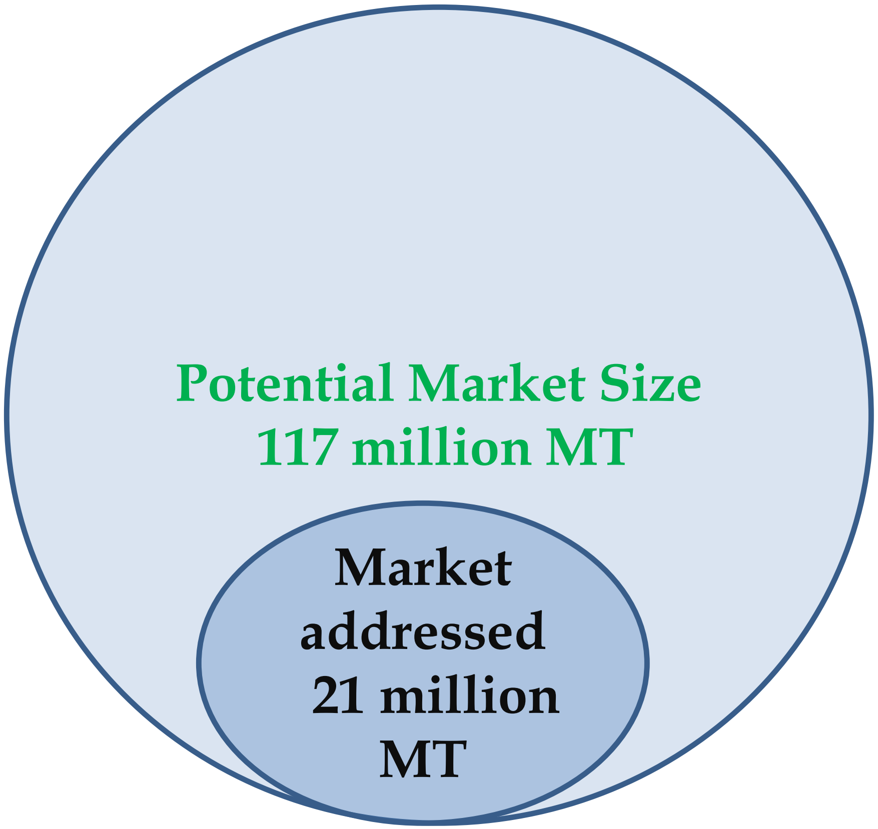
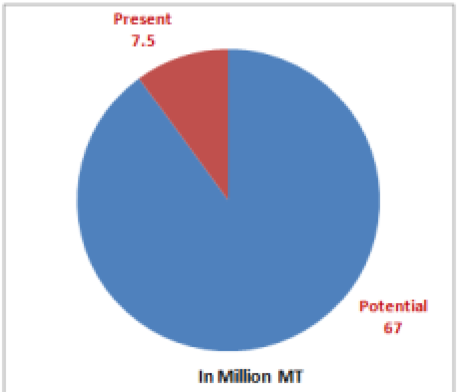
Incentive Schemes for Animal protein & feed in India

Potential vs actual – what does the future hold



Potential vs actual – what does the future hold

Cattle

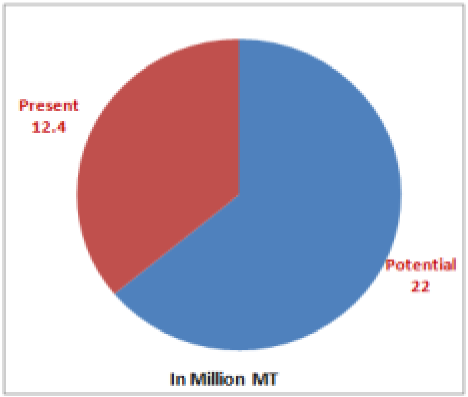


Market Size	Growth Rate
7.5 million tonnes	6 %

- Transition from low herd size to commercial dairy farming
- Shrinkage of land for fodder cultivation and open grazing
- Consumer demand for quality milk and focus on animal health

- Uttar Pradesh
- Rajasthan
- Punjab
- Haryana etc.

Poultry

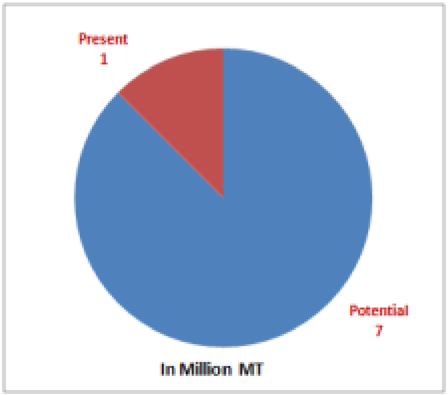


Market Size	Growth Rate
12.4 Million tonnes	6-8%

- Growth in broiler and layer industry are the key drivers for the poultry feed
- Year round availability across the country; and poultry being one of the cheapest source of protein

- Tamil Nadu
- Andhra Pradesh
- Karnataka etc.

Aqua



Market Size	Growth Rate
1 million tonnes	9%

- Shrimp production is growing at 16 percent and has touched 3 lakh MT
- Aquaculture will be the key growth driver for the fisheries production and exports in India

- Andhra Pradesh
- Gujarat
- West Bengal etc.

Where is the growth coming from?

- ✓ Poultry sector
  - Faster growth in poultry sector – however, opportunity for differentiated / innovative products
  - Technological innovations could drive differentiation
  - South and west are key markets
  - 75 % of non-vegetarian food consumed in India is from poultry
- ✓ Aqua sector
  - Booming aqua sector – high scope to grow with esp exports
  - Disease resistance as a differentiated market ?
  - South and east are key markets
- ✓ Dairy sector
  - Long term opportunity – given the unorganised and small size holdings
  - B2C opportunity for large scale farms specially in North
  - North and West are key markets

Livestock industry - SWOT

Strengths

- India is **number one** milk producing country with 138 million tonnes
- **Number two** in freshwater aquaculture
- **Number three** in egg production with 80 billion eggs
- **Number four** in broiler production (3.9 million carcass weight)

Weaknesses

- Low penetration of feed across industry viz. poultry- 55 percent, aqua 14-percent and cattle-11 percent
- Low impact of the compound feed on productivity of native cattle breed
- Compound feed unaffordable to most of small and marginal farmers

Feed Sector

Opportunities

- With the changing demographic pattern and high disposable incomes consumption pattern in India driving animal protein growth
- Feed – a sun rise industry

Threats

- High vulnerability to disease outbreaks in poultry and aqua industry
- Monsoon vagaries
- Price volatility of the feed inputs like, maize and soyabean
- Import substitution of end products

Animal Feed – Challenges and Opportunities

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✓ CHALLENGES

- Affordability
- Disease outbreaks
- Biosecurity issues/ antibiotics misuse
- Volatile livestock product prices (70% of production cost is feed)
- Poor animal genetics/ Indigenous dairy breeds
- Home mixing
- Lack of awareness and low hygiene conditions / Animal hygiene/ upkeep/ rearing
- Clean water availability across value chain
- Veganism / Lab cultured or 'clean' meat

✓ OPPORTUNITIES

- Food safety standards/
- Industrialised food production
- High production needed to address QSR, value added products which can come from high yielders who require compound feed
- Exports surge of aqua
- GHG/ high methane from animals provides animal feed sector to come out with innovative feeds

Protein to make Protein

- Insect-for-feed (IFF) – Higher conversion of protein
  - YNSECT, France
  - Agriprotein, SA
  - Enterra, Canada
  - NextProtein, France
  - Protix, Netherlands (Collaboration with Buhler in China)
  - GoTerra, Australia
  - Beta Hatch, USA

- Investments in FMCG nonveg brands
  - General Mills – EPIC protein bars
  - Tyson Foods- Beyond Meat
  - Danone – White Wave
  - ITC - Masterchef range of frozen nonveg
  - Home delivery DIY kits like Burgundy Box, Let's Chef

Scope of Presentation

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Kisaan SAMPADA Yojana

Sl	Scheme	Grant (Upto INR Cr)	Grant (% of eligible project cost)		Hub & Spoke model / Standalone	Type of Stakeholders
			General Areas	Difficult areas**		
	ONGOING SCHEMES					
1	Integrated Cold Chain & Value Added Infrastructure					
1a	*For storage & transportation infrastructure*	***10 Cr***	35% (37. 5 Cr)	50%	**Hub & Spoke model**	
1b	*For value addition and processing infrastructure*		50%	75%		
1c	*For irradiation facilities*		50%	75%	**Standalone**	
2	Mega Food Parks	50 Cr	50%	75%	**Hub & Spoke model**	Attractive to Realty players with common infra creation
	NEW SCHEMES					
3	Creation/ Expansion of Food Processing and Preservation Capacities	**5 Cr** (14. 2 Cr)	35%	50%	**Standalone**	
4	Infrastructure for Agro-Processing Clusters	10 Cr	35%	50%	**Standalone cluster closer to production areas.**	Attractive to Realty players with common infra creation
5	Backward and Forward Linkages	5 Cr	35%*	50%*	**Standalone**	

** For Farmer Producer Organizations – 50% and 75% respectively in Backward and Forward linkages scheme*

*** Difficult areas include - North East States, Himalayan States, ITDP Areas & Islands*

Kisaan SAMPADA Yojana

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Sl	Scheme	Timeline to set up and commissioning (in months)	Grant milestones
ONGOING SCHEMES			
1	Integrated Cold Chain & Value Added Infrastructure		
1a	*For storage & transportation infrastructure*	20 months from the date of issue of final approval letter (24 months for NE)	1st inst: 8 months ; 2nd inst: in 14 months ; 3rd inst: in 20 months as 25:40:35
1b	*For value addition and processing infrastructure*		
1c	*For irradiation facilities*		
2	Mega Food Parks	30 months from the date of issue of final approval letter	1st inst: 6 months ; 2nd inst: + 8 ; 3rd inst: + 8 and 4th inst: + 8 = 30 months as 30:30:20:20
NEW SCHEMES			
3	Creation/ Expansion of Food Processing and Preservation Capacities	18 months from the date of issue of final approval letter	1st inst: when 50% equity and debt is consumed ; and 2nd inst: is on commencement of commercial production as 50:50
4	Infrastructure for Agro-Processing Clusters	20 months from the date of issue of final approval letter	1st inst: on milestones; 2nd inst: on completion in 40:60
5	Backward and Forward Linkages	12 months from the date of issue of final approval letter	1st inst: 6 months and 2nd inst: +6 = 12 months ; as 50:50

1. Scheme to promote cold chain, value addition and preservation infrastructure

- ✓ Envisages linking groups of producers to the processors and market through well equipped and adequate cold chain infrastructure
- ✓ Both horticultural and non horticultural produce (**such as dairy, poultry, meat, aqua**) are eligible for support under this scheme

➢ **Grant-in aid subject to maximum of INR 10 Crores** as follows

	Type of project	Grant in aid (% of total cost of plant & machinery and technical civil works)	
		General Areas	Difficult areas*
1 a	For storage & transportation infrastructure	35%	50%
1 b	For value addition and processing infrastructure	50%	75%
1 c	For irradiation facilities	50%	75%

*Difficult areas include - North East States, Himalayan States, ITDP Areas & Islands
*Cost norms of Mission for Integrated Development of Horticulture (MIDH) issued by Department of Agriculture, Co-operation and Farmers Welfare will be followed wherever available

To avail assistance, the applicant will have to set up (A) Farm Level Infrastructure AND any one or both components of (B) and (C) / or standalone (D)

A: Farm Level Infrastructure

Includes a processing centre situated in the catchment area of targeted produce*.

Shall have one or more of:

- ✓ Integrated Pack-house
- ✓ Ripening Chamber(s)
- ✓ Cold Storage Unit(s)
- ✓ CA storage
- ✓ Frozen Storage/Deep freezers
- ✓ IQF line, Tunnel Freezer, Spiral Freezer, Blast Freezer, Plate Freezer
- ✓ Vacuum Freeze Drying
- ✓ Milk Chilling / Bulk Milk Cooling/ Milk Processing Unit
- ✓ Poultry/Meat/Marine/Fishery Processing Unit
- ✓ Packaging line for chilled /frozen/temperature controlled products

May have one or more of:

- ✓ Pre-cooling units
- ✓ Mobile pre-coolers
- ✓ Retail refrigerated carts, temperature controlled solar powered retail carts (max 10 / project)
- ✓ Reefer boats (max 10 /project)
- ✓ Refrigerated Containers including multi-modal container units
- ✓ Renewable/ alternate energy technologies (solar, bio-mass, wind etc.) for the project.
- ✓ Accessories/support infrastructure
- ✓ In-house product testing laboratory
- ✓ Any other relevant modern technology (as may be decided by IMAC)

+

B: Distribution Centre

Shall have a modern multi-product, multi-temperature cold storage. May also include one or more facilities mentioned in A

or

C: Transportation

Refrigerated vans/trucks/insulated vans/mobile insulated tanker

or

D: Irradiation Facility

*Special conditions apply for Fruits and Vegetables. Please refer guidelines

3. Scheme for Creation / Expansion of Food Processing and Preservation Capacities

New Scheme

- **Grant-in aid subject to maximum of INR 5 Crores** as follows:
  - ✓ 35% of eligible project cost in General areas
  - ✓ 50% of eligible project cost in North East States, Himalayan States, ITDP Areas & Islands

Eligible projects

- ✓ Fruits & Vegetables
- ✓ **Milk**
- ✓ **Meat / poultry / fish**
- ✓ **Ready to eat / Ready to cook /** Breakfast cereals / Snacks / Other food products
- ✓ **Flour** / pulse / oil mills
- ✓ Other agri-horticulture sectors including spices, coconut, mushrooms
- ✓ Wines & Hops
- ✓ Food flavors, Food additives & colors, oleoresins
- ✓ Rice milling (Only in East and North Eastern states)

In-eligible projects

- ✓ Aerated water ; Packaged drinking water
- ✓ Carbonated soft drinks , tea, sugar
- ✓ Rice milling in geographies other than in East and North Eastern states
- ✓ Meat upto culling

Eligible proposals inside MFP will be preferred

4. Scheme for Development of Infrastructure for Agro-Processing Clusters

New Scheme

- **Grant-in aid subject to maximum of INR 10 Crores** as follows:
  - ✓ 35% of eligible project cost in General areas
  - ✓ 50% of eligible project cost in North East States, Himalayan States, ITDP Areas & Islands

- **Project requirements**
  - ✓ The agro-processing cluster needs to contain 2 components as follows:
    - Basic enabling infrastructure
    - Core infrastructure / common facilities
  - ✓ At least 10 acres of land needs to be brought in by the Implementing Agency. Cost of land will not be considered as eligible project cost
  - ✓ Land may be purchased by IA or be taken on a 50 year lease
  - ✓ Minimum of 5 food processing units with minimum of INR 25 crores investment need to be set up in the agro-processing cluster.
  - ✓ Preference will be given to agro-processing clusters in districts with surplus agri / horticulture production
  - ✓ Units permitted in the cluster include:
    - Units that produce products fit for human and **animal consumption**
    - Packaging units

(4. continued) Project components

- It is expected that each agro-processing cluster will have 5 to 10 agro-processing units.
- To support development of these units, the scheme will have two cost components as follows

Basic Enabling Infrastructure	Core Infrastructure / Common Facilities

• Cost of basic enabling infrastructure not exceeding **40% of eligible project cost** will be eligible for grant
• Includes cost of site development including:
• Development of industrial plots
• Roads, drainage, water supply
• Power supply and back-up
• Parking, Weigh bridges, common office space etc
	• Can be developed based on the need of the units
	• Includes
	    • Testing labs
	    • Cleaning, grading, sorting, packing facilities
	    • Pre-coolers, cold storages, ripening chambers, IQF
	    • Steam generation boilers
	    • Specialized packaging units

✓ Facilities indicated above are illustrative and the exact nature of facilities may vary from project to project based on requirement of units in the cluster

5. Scheme for Creation of Forward and Backward Linkages

New Scheme

- **Grant-in aid subject to maximum of INR 5 Crores** as follows:
  - ✓ 35% of eligible project cost in General areas
  - ✓ 50% of eligible project cost in North East States, Himalayan States, ITDP Areas & Islands
  - ✓ For FPOs – 50% and 75% in general and difficult areas respectively

Eligible Sectors	✓ Fruits & Vegetables processing ✓ **Milk processing** ✓ **Meat / poultry / fish processing including meat / fish/ poultry shops** ✓ Ready to eat / Ready to cook food products ✓ Logistics Sector
Eligible Organizations	✓ Promoters of existing food processing units ✓ Groups of producers (FPOs, Cooperatives SHGs etc) linked to food processing units ✓ Retailers of processed Food ✓ Logistics suppliers

(5. continued) Indicative list of eligible components

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- Applicant needs to set up one or more of the following facilities on a project basis

Backward Linkages	i. Integrated Pack-house(s) (with mechanized sorting & grading line/ packing line/waxing line/ staging cold rooms, etc.) ii. Milk Chilling Centres/ Bulk Milk Coolers iii. Pre Cooling Unit(s) iv. Mobile pre-cooling Vans v. Reefer boats
Forward Linkages	i. Ripening Chamber(s) **ii. Retail chain of outlets for perishables including Meat Shops with facilities such as frozen storage/deep freezers/Refrigerated display cabinets/cold room.** iii. Retail refrigerated carts, temperature controlled solar powered retail carts.
Transportation	i. Refrigerated /insulated transport / Reefer Vans

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