

Current Regulatory Framework for Oils and Fats in India

By

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Presentation Agenda

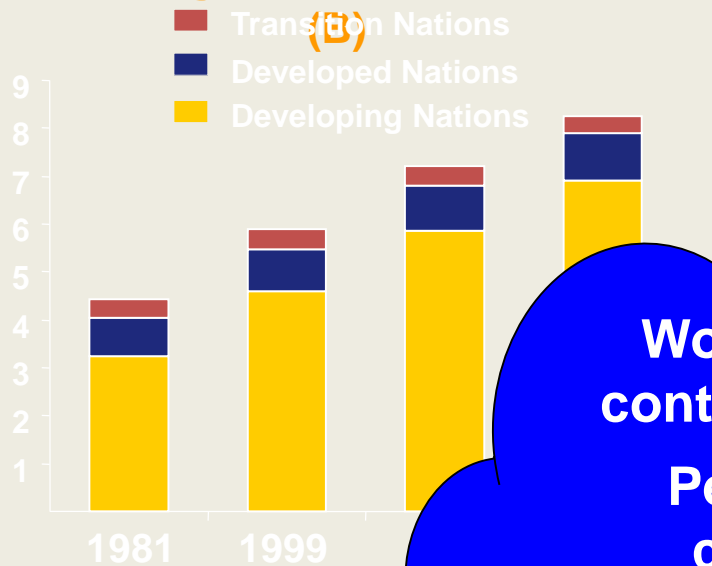
- **History and Evolution of Modern Regulations**
 - Quality and standards
 - Modern Regulations
- **Science behind regulations**
 - Safety & Risk Assessment
- Recent regulatory changes for oils and Fats in India

Historical Evidence

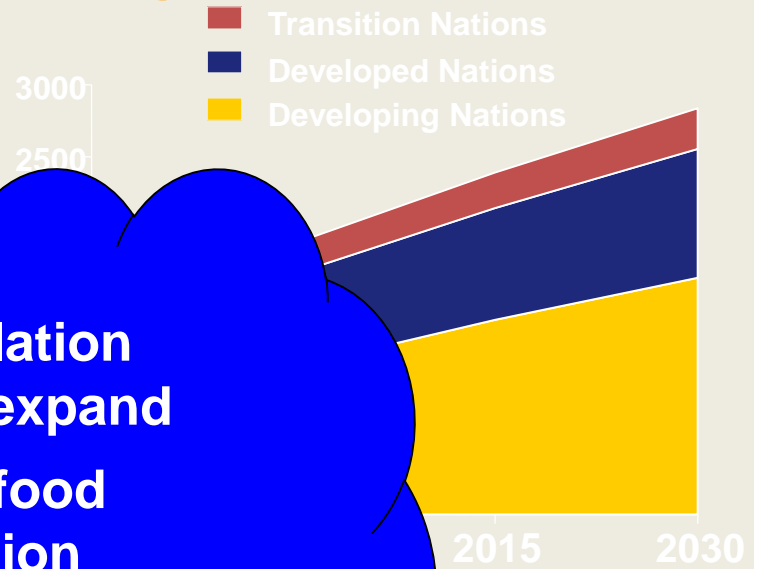
- Arch logical study at Harappa BC-3000 (5000 Yrs Back) shown presence of Mustard as edible grain/spices
- Mention of Mustard in Gautam Buddha – BC 350
- Mention in Bible – By Jesus
 - How Kingdom of God should be? It is like Mustard seed – small in size but having potential to cultivate big plant – Ref Luke-17.6-10

Agriculture must continue to satisfy the demands of a complex global market

Growing World Population



Rising Cereal Demand (MMT)

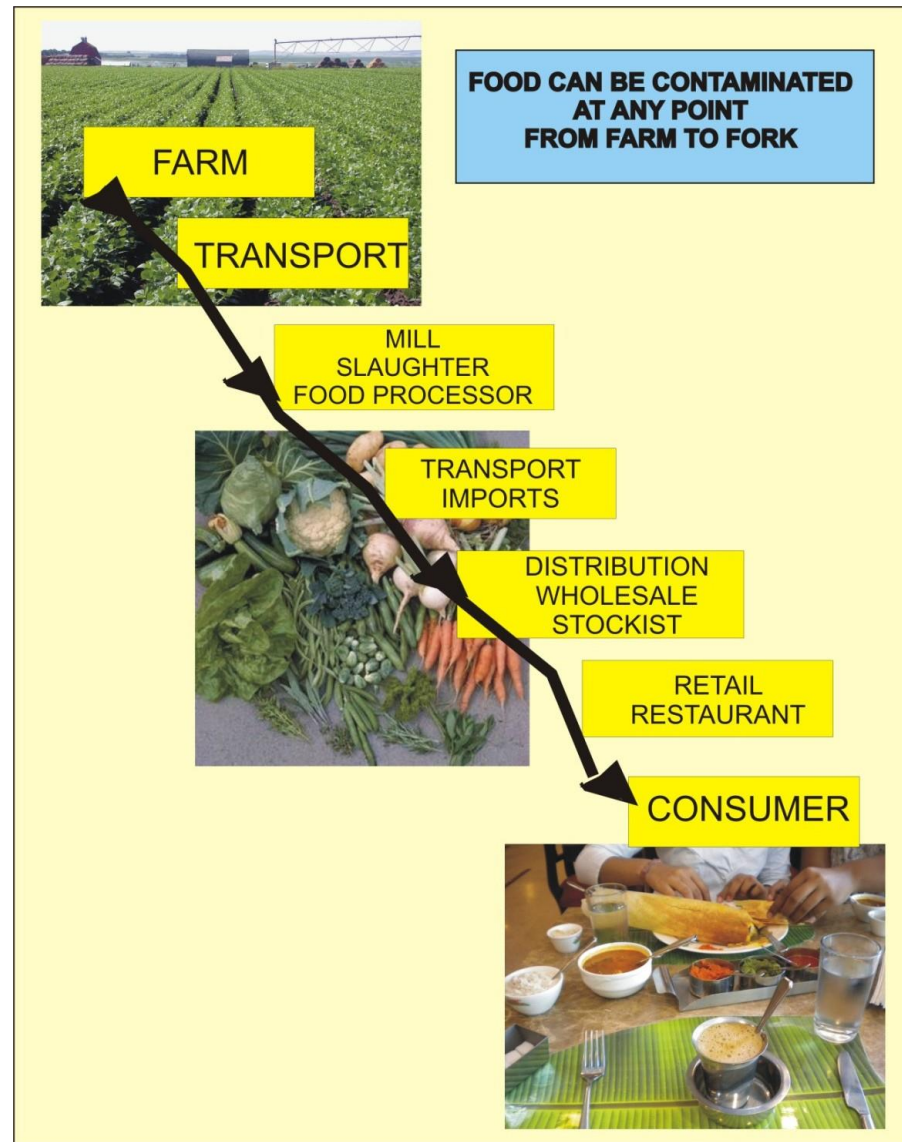


World population continues to expand
Per capita food consumption continues to rise

Consumers continue to demand improved taste, convenience, nutrition and health

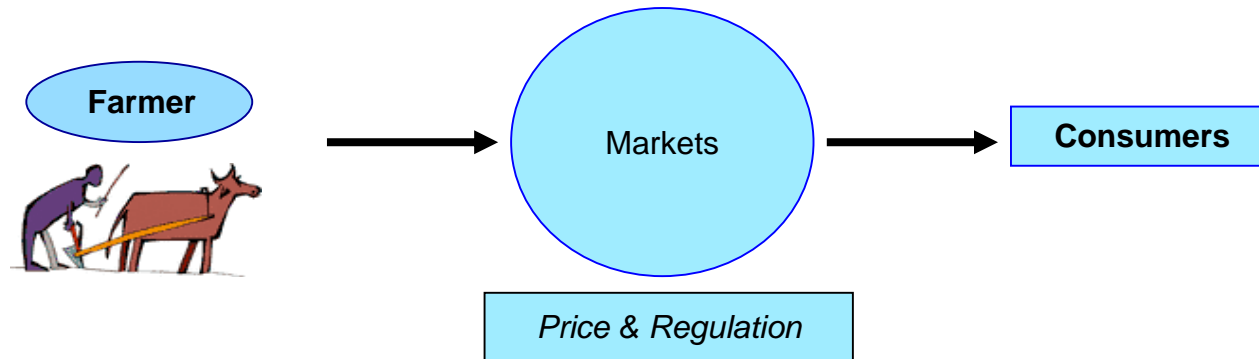
Definition of Food Chain

Sequence of stages and operations involved in production, processing, distribution, storage & handling of a food & food ingredients from primary production to consumption.

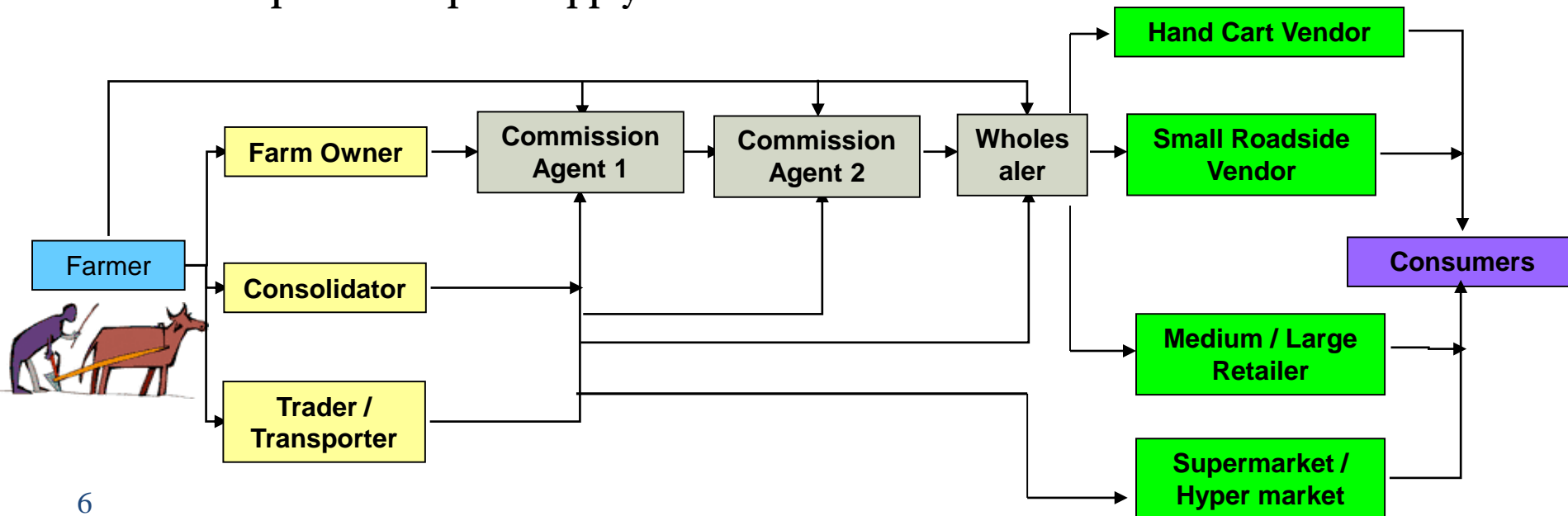


Evolution of Supply Chains

For centuries, traditional market was the only supply chain to handle goods



From simple to complex supply chains have evolved



OILs Vs Food

- Oils and Fats are consumed since time immemorial by human being as source of energy every day
- Oils and fats are part of food products produced and consumed different forms.
- Most of the regulations for food are also applicable in case of edible oils

Birth of Modern Regulations

Food Safety

- **Mother of all Control Orders & Consumer Protection Law**

**Eating food
is a risky
process**

**Innate Immunity and
traditional culinary
practices are major
protective factors**



Food Safety: Why?????

A suitable product which when consumed orally either by a human or an animal does not cause health risk to consumer.

OR

Assurance that food will not cause harm to the consumer when it is prepared and/ or eaten according to its intended use.

Changing food habits
Increased processing and handling
Changing processes, products
Globalization of food trade



SURVEY RESULTS ON FOOD SAFETY- EXAMPLE

☐ Do you fear that branded milk may be adulterated and unsafe to drink?

Yes **60%** No **13%** Can't say **27%**

☐ What is your regular source of milk supply?

DMS **12%** Mother Dairy **38%**

Milkman/Private Dairy **50%** (Pasteurization ?)

Delhiities Say

Food adulteration is rampant & the law against it remains only on paper **93%**

Checking, testing and enforcement machinery must be revamped and strengthened **96%**

Awareness must be built up among public so that they are also vigilant. **98%**

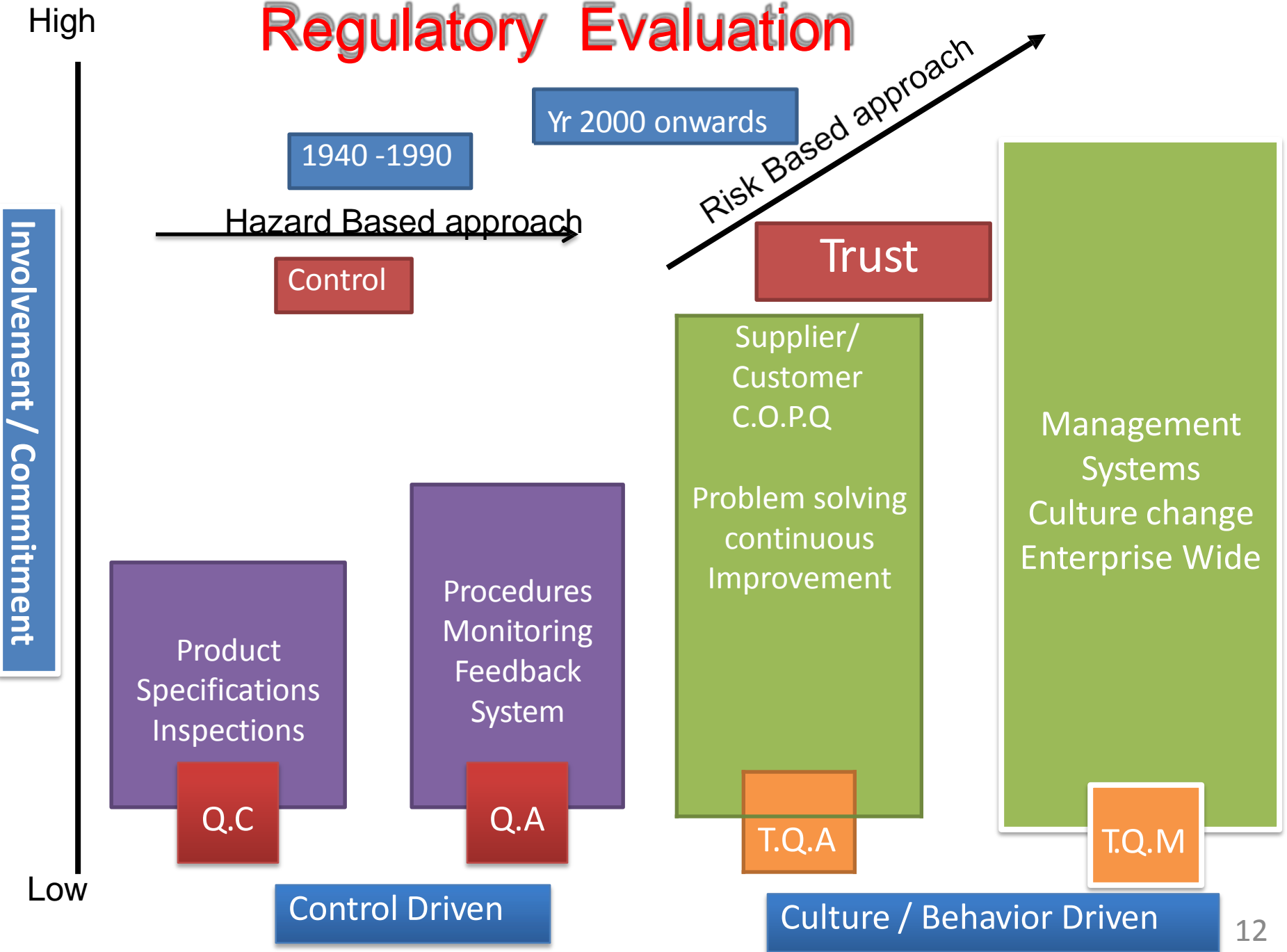
Telephonic poll conducted

by TNS-MODE among 249 Delhiities on May 31 to June 2.

Global food safety issues



Regulatory Evaluation



Food Regulatory Transition



Simple



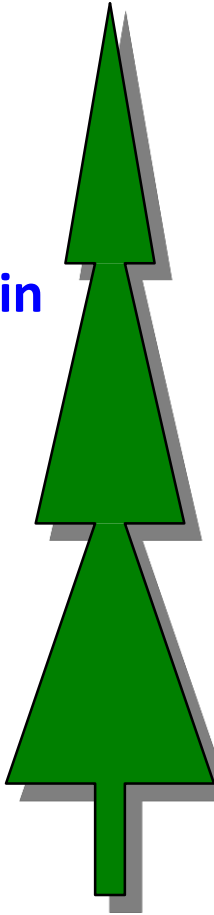
Complex

Products evolved, so have the regulations

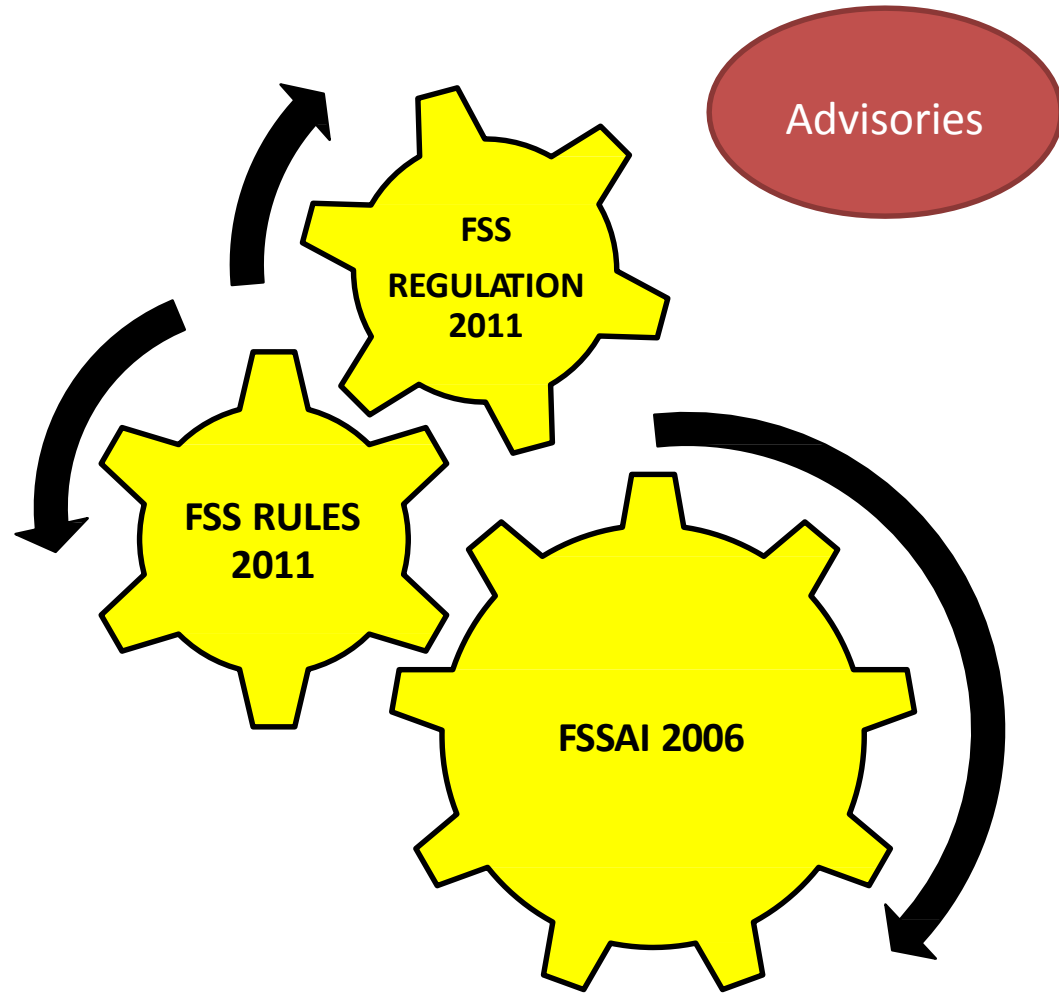
Science behind Regulation

Food Legislation – Milestones in India

- 1899** : States' / Provinces' own food laws with difference in standards for the same commodity -- Conflicts in inter provincial trade.
- 1943** : Central Advisory Board for Central Legislation that brings in uniformity throughout the country.
- 1954** : Central Legislation – Prevention of Food Adulteration Act, 1954. Rules and Standards framed under the Act 1955.
- 2006**: FOOD SAFETY & STANDARDS ACT – 2006.
- 2011** : FSSRR 2011
- 2012** – Import Regulation
- 2016**- Nutraceutical Regulations /Product Recall



FSSAI Legislative Frame



Pre FSSAI Scenario

Nine different laws and eight different ministries governing the food sector

Laws framed by different Ministries/Depts. With different perspective and enforcement approach

Overlapping laws with different quality standards & labelling requirements

India's food regulatory system

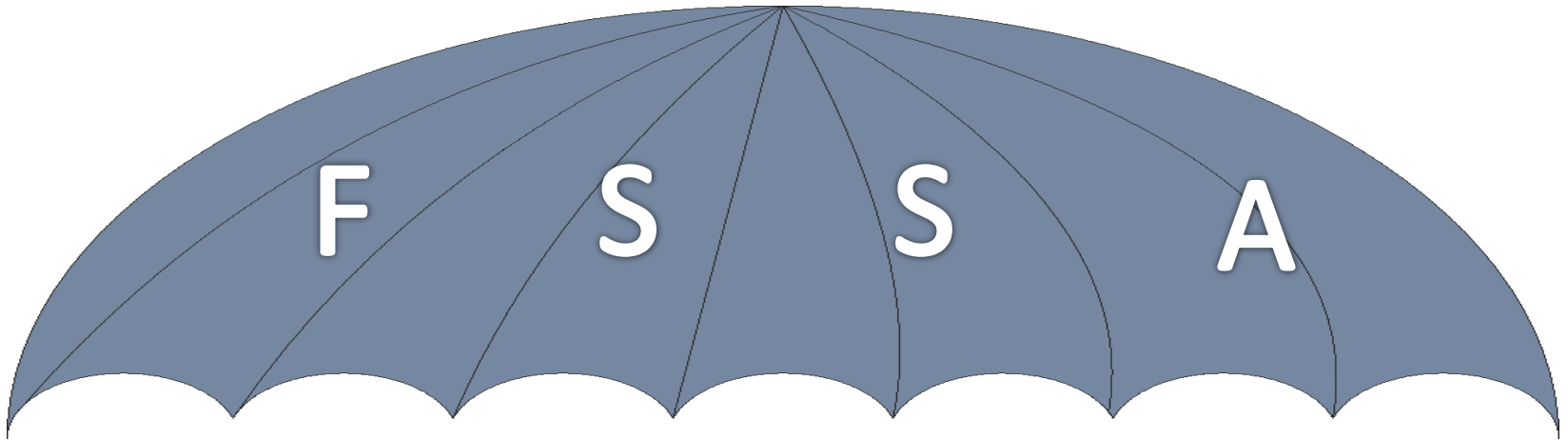


Indian Regulatory System

Regulation for Food:

- Food Safety and Standard Act, 2006
- Legal Metrology Act, 2009 & Packaged Commodities Rules, 2011
- The Essential Commodities Act, 1955
- Bureau of Indian Standards (BIS)
- AGMARK
- Consumer Protection Act

FSSA



The PFA Act, 1954

EOP Order 1988

**Solvent Extracted Oil,
De-oiled Meal and
Edible Flour (Control)
Order, 1967**

FPO 1995

MMPO 1992

MFPO 1973

VOP Order 1947

FOOD SAFETY AND STANDARD ACT 2006

Objectives of FSSAI

1

- To consolidate multiple laws and establish single point reference system

2

- To establish Food Safety and Standards Authority

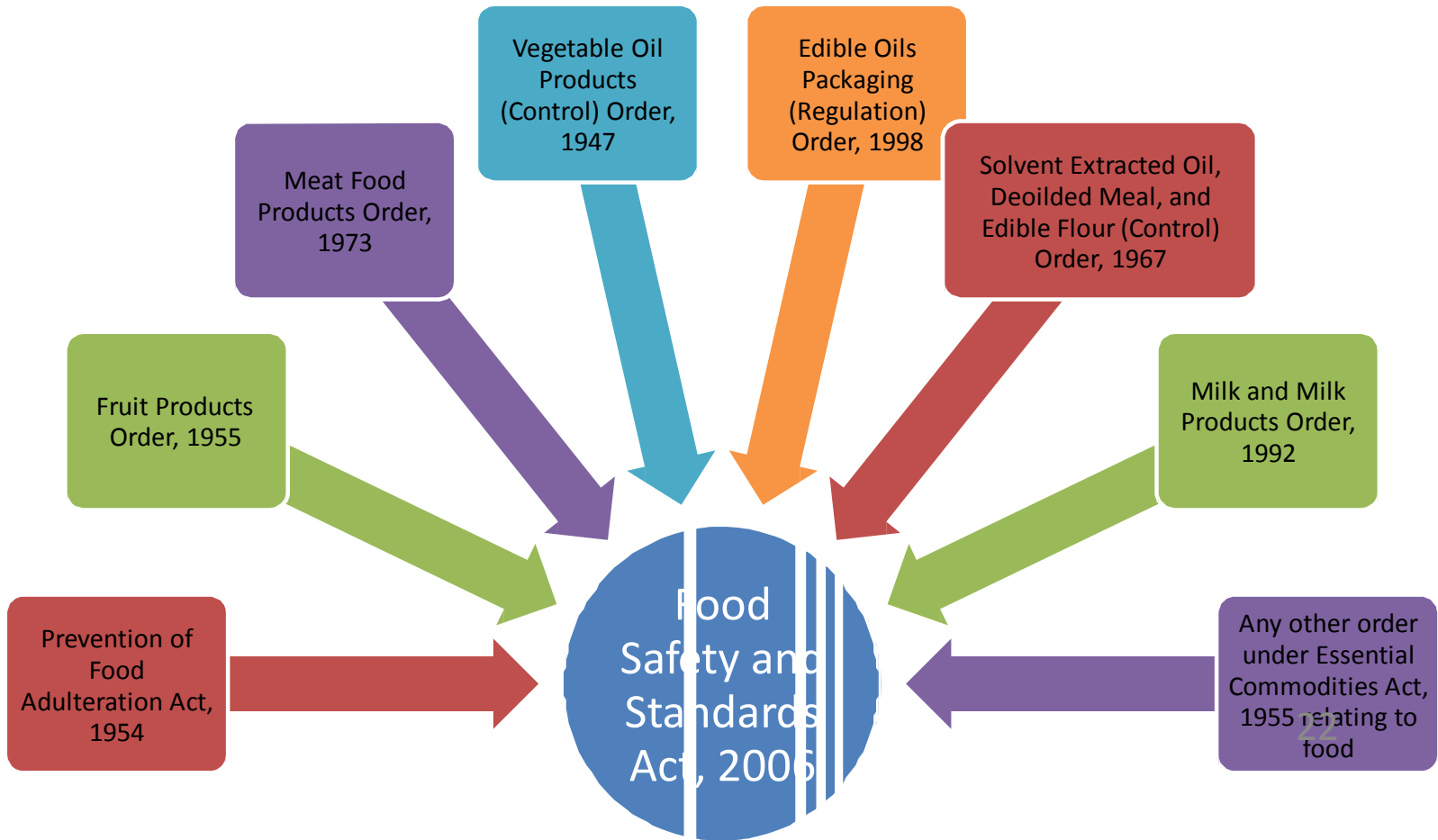
3

- To regulate the manufacture, storage, distribution, sale and import of food products

4

- To ensure availability of safe and wholesome food for human consumption

How FSSAI integrates?



Regulatory Mechanism



Food Authority and the State Food Safety Authority



Central Advisory Committee

Close cooperation and coordination between Centre, States and other Stakeholders in the field of food including consumer org.



Scientific Committee

Consists of heads of scientific panels & 6 scientific experts. They will provide the scientific opinion on multi sectoral, cross-cutting issues



Scientific Panels

Nine panels on Food Additives, Pesticide Residues, GM Food, Biological Hazard, Labeling, Functional Food, Method of Sampling, Contaminants and Fish & Fisheries.

Stake Holders



Building blocks

Science based Food Quality & Safety Standards

Regulations and science based standards for all types of foods

Harmonize Domestic and International Food Standards

Effective Food Safety Regulation & Integrated Food Quality Testing & Risk based Surveillance

Enforcement through States

Networked Laboratories for Food Testing

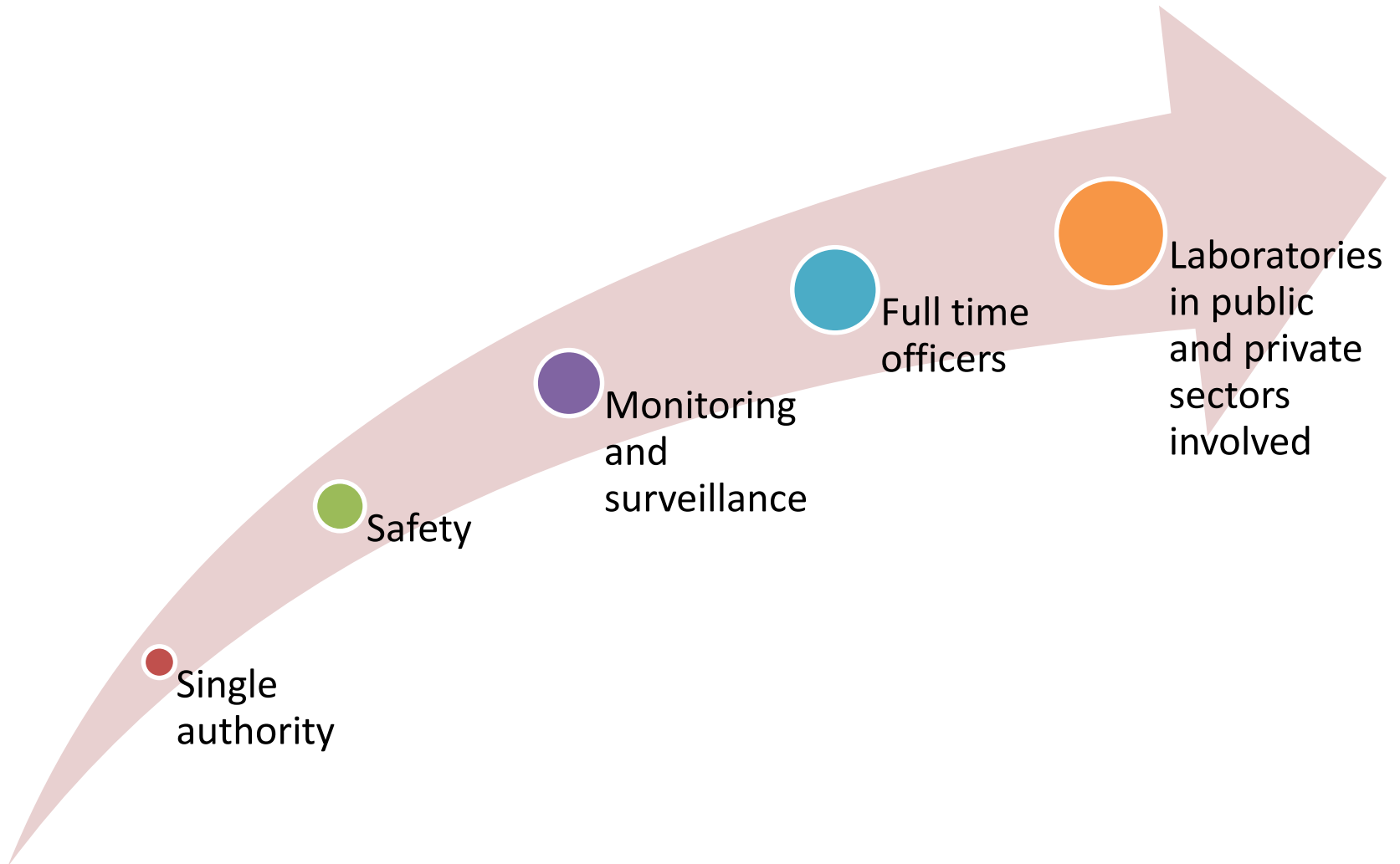
Surveillance through Risk based Approach

Support Services & Communication

Capacity Building, Training & Education for all Stakeholders

Community Outreach promotion Programmes to increase the confidence of the consumer

A leap forward



The Various Regulations

Licensing and Registration

Packaging & Labelling

Food Standards

Food Additives

Contaminants & Toxins

Prohibitions and Restrictions

Laboratory sampling and Analysis

The Repeals

SECOND SCHEDULE (Section 97) - Following Acts /Orders get repealed

Food Adulteration Act, 1954 (37 of 1954).

The Fruit Products Order, 1955.

The Meat Food Products Order, 1973.

The Vegetable Oil Products (Control) Order, 1947.

The Edible Oils Packaging (Regulation) Order, 1998.

The Solvent Extracted Oil, De oiled Meal, and Edible Flour (Control) Order, 1967.

The Milk and Milk Products Order, 1992.

Any other order issued under the Essential Commodities Act, 1955 (10 of 1955) relating to food.

- ▣ All provisions of these will get covered in the new regulations

Basis of FSSA Regulations

- Science Based
- Safety Assessment
- Risk Analysis

Safety

- The condition of being protected from or unlikely to cause danger, risk, or injury
- Food safety” means, assurance that food is acceptable for human consumption according to its intended use

Science Based

- With scientific rationale
- Tested through scientific methods
- Repeatability
- Predictability

Risk Based Approach

Risk analysis

- Risk analysis is powerful tool for carrying out science based analysis and for reaching sound, consistent solution for food /cosmetic safety problems
- Risk is basically combination of two concepts
 - *Probability of occurrence-*
 - *Severity of Hazard*

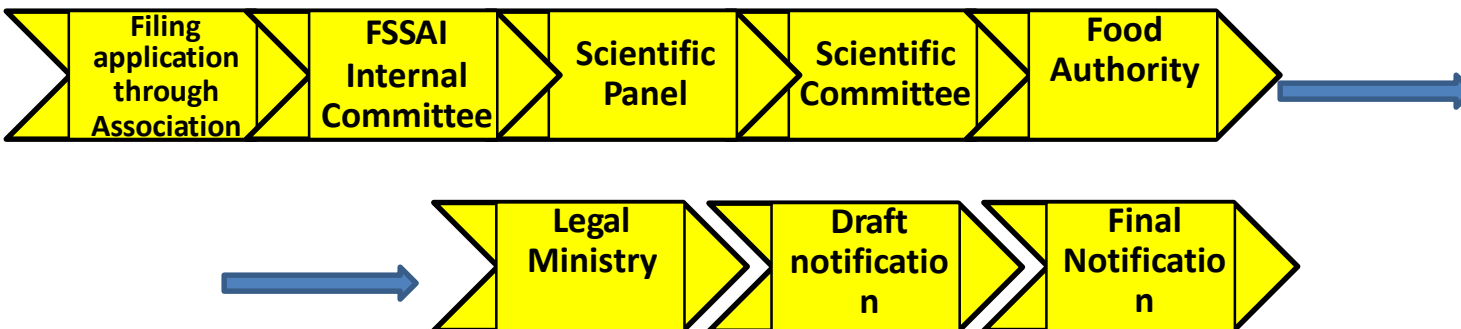
Recent Updates

Regulatory Changes - Flow

Flow of Regulatory Process at FSSAI

8 step process at different levels of Authority once application is filed

Timeline required for any regulatory process : Any thing from 1 year to 4 years



Recent Amendments

- **Inclusion of Alkali Blue indicator for the determination of Acid Value of rice bran oil in place of phenolphthalein**
- Revision of iodine value of cottonseed oil from 98-112 to 98 to 123
- To increase the Unsaponifiable value of Blended edible vegetable oils blended with physical refined rice bran oil up to 4% (Not more than 4.0 percent by weight; provided that oryzanol content be minimum of 0.20% (by weight) with rice bran oil at 20% level and with an increment of 0.05% with every 5% rise in rice bran oil content in the blend.”)
- Maximum pack size permitted for blended edible vegetable oils to be changed from 15 litres to 15 kg

Recent Amendments

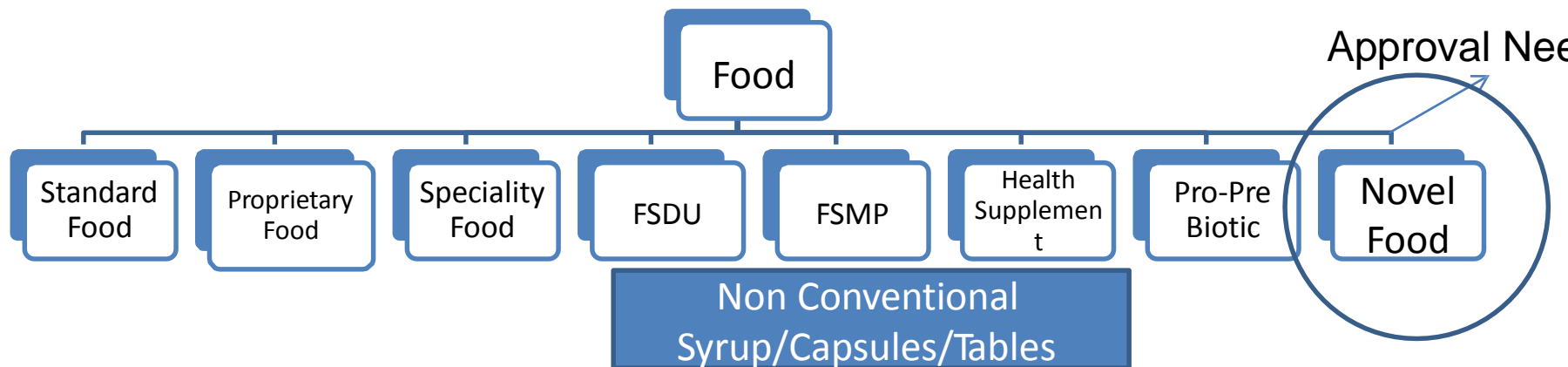
- Palm stearin as edible fat and permitted to use in the manufacture of vanaspati and interesterified fats
- To redefine Interestified Vegetable Fat into Interestified Vegetable Fat/Oil To include Enzymatic degumming process in the refining process
- Declaration of trans fatty acids and saturated fatty acids contents in food may only be placed in the Nutritional Panel to avoid duplicity in declarations
- Removal of BR reading for IE- fat
- Voluntary Fortification of Edible Oil with Vitamin A & D – 4.5 /25IU
- Exemption from refining for Expelled/Pressed coconut oil imported in



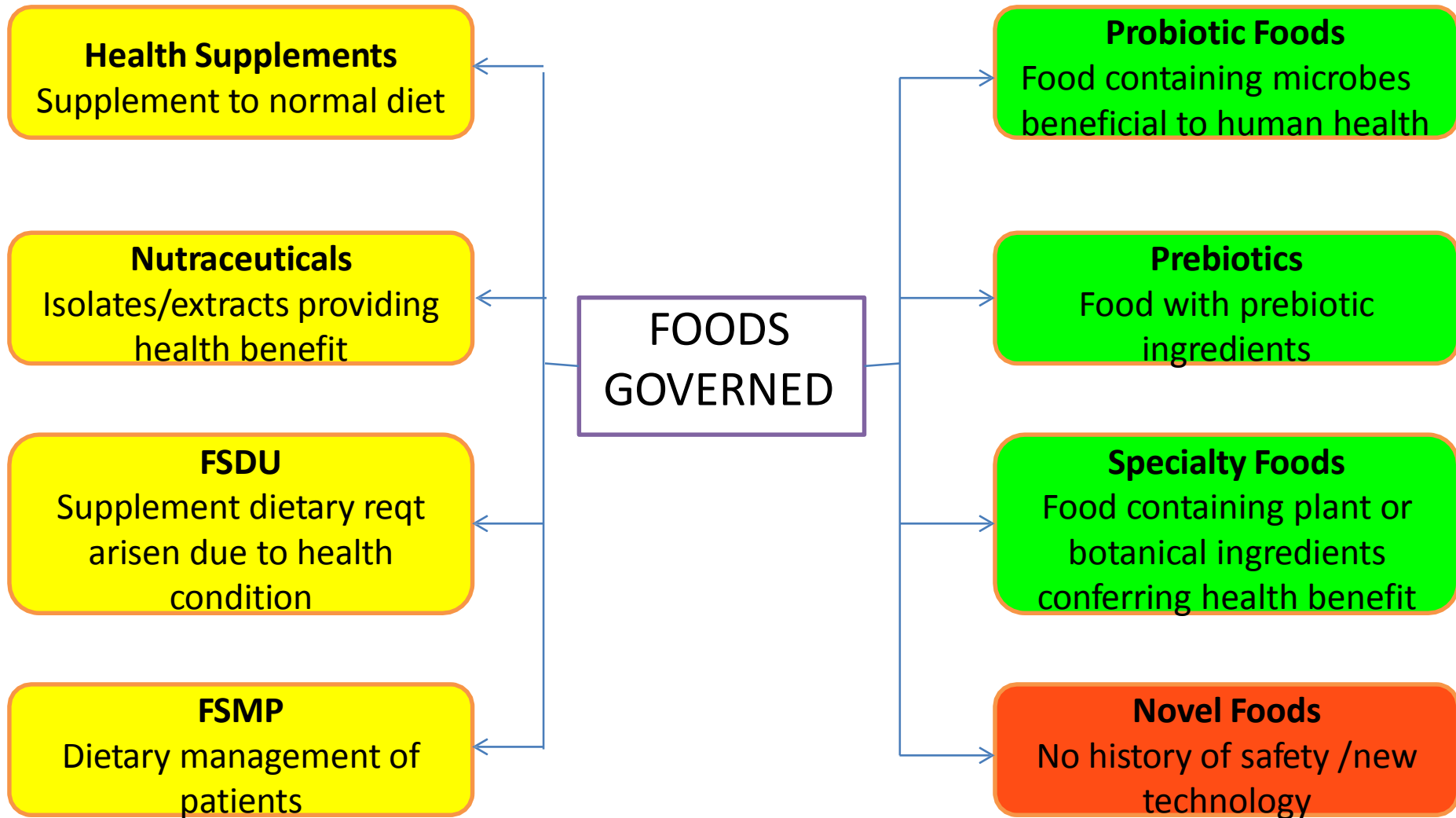
Recent Amendments

- Operationalization of HS, SMP, NF and Nutraceutical draft Regulation
- Operationalisation of new additive regulations
- Operationalisation of import guidelines
- Operationalisation of Proprietary food regulations
- **Guidelines for operations of e-commerce food business operators**
- Palm and Palm kernel Oil Standards: FFA Not more than 10
- Exception of imported raw coconut oil for refining
- **Enforcement notice w.r.t repeated use of edible oil**

Food Categorization as per FSSAI



Food categories



Draft

- **Palm and Palm kernel Oil Standards: FFA Not more than 10.**

Standards for Virgin coconut oils

- **Standard for peanut butter**
- **The oils and fats covered under the regulation 2.2 shall comply with the fatty acid composition of the respective oils and fats given in the tables**

New Agendas to be taken

- Review mandatory usage of Sesame seed oil in the manufacture of Vanaspati
- Unsap value to be revised (max 4.0) for Table margarine, fat spread, vanaspati ,IE when RBO is used. (Not more than 4.0 percent by weight; provided that oryzanol content be minimum of 0.20% (by weight) with rice bran oil at 20% level and with an increment of 0.05% with every 5% rise in rice bran oil content in the blend.)
- Exemption from refining for Expelled/Pressed edible (Ground nut /Mustard /Flax seed and other) oils imported in India
- Framing of Avocado Oil standards under edible oil category in line with Codex (Codex is framing the standards
- Removal of Boudouin Test requirement for Blended edible Vegetable Oil
- Removal of hydrogen gas facilities from 2.2.6.(1).Vanaspati

New Agendas for Mustard

<p>Revision of RI, BR and IV for mustard Oil</p>	<p>2.2.1 (6) Rapeseed/Mustard oil : Refractive Index 1.4646 to 1.4662 Butyro-refractometer reading 58.0 to 60.5 Iodine value 96-112</p>	<p>1.Revise the refractive index @ 40 C from 1.4646 - 1.4662 to 1.461-1.469 (in line with Codex) 2.In conjunction with increase in range of refractive index, the upper limit for B.R should also be increased from 58-60.5 to 58 -65.0 3. Iodine Value is in direct relation with refractive index(RI) so that also needs revision from 96-112 to 98-114 as per oil trend of last 10 yrs.</p>
<p>Revision of Bellier Test from Mustard Oil specification</p>	<p>2.2.1 (6) Rapeseed/Mustard oil : Bellier test (Turbidity temperature Acetic acid Method) 23.0C to 27.5C</p>	<p>2.2.1 (6) Rapeseed/Mustard oil : Bellier test (Turbidity temperature Acetic acid Method) Oil 23.0 to 30C</p>
<p>Standard for KGMO (Kachi Ghani Mustard Oil)</p>	<p>No current standards</p>	<p>1. Introduction of a standard for KGMO: a.Inclusion of Allyl isothiocyanate as a key factor responsible for pungency of KGMO. Proposed limit : 0.1 to 0.6 This has been derived from 1. Agmark standard (0.1 to 0.6 for raw grade II) 2. BIS (0.1 to 0.6 for raw grade II) b. Rest all parameters shall be similar to Mustard Oil.</p>

New Agendas to be taken

Use of exotic fats like Shea, Illipe , dhrambe , Mowrah (Mahua) fats and their fractions may be allowed to be used in chocolate / confectionery products as CBE (Cocoa butter equivalent) ingredients and when added at 5 % level in chocolate

Use of Algal oils as source of EPA, DHA & ARA may be permitted in Infant food formulations & Dietary supplements as a vegetarian source of long chain w 3 rich oils.

Other Important Activities

Standard Review group

1. The group has forwarded the 28 agenda file to FSSAI
2. 2. Other agendas to work on separately:
 - a) More than one oil for blending
 - b) AGMARK issue
- **Voluntary Fortification activity**
 1. The deadline given for the first phase to industries was 31st March 2017
 2. 2. To represent effectively about restricting the scope to refined oils only
- **New FSMS document**
 1. New FSMS being designed for Oil industry
 2. The document will consist of three sections :
 - a) Oilseed crushing
 - b) Oil manufacturing
 - c) Oil Storage and transport
 3. The document is still under process.

Future Regulatory Trends

- Harmonization & Equalization
- Clean Label
- Transparency
- Traceability
- Consumer Engagement
- Structural Enforcement
- Vulnerability Assessments
- Non GMO Claim
- Environment issues : Plastic Ban

Issues in implementation

Volume

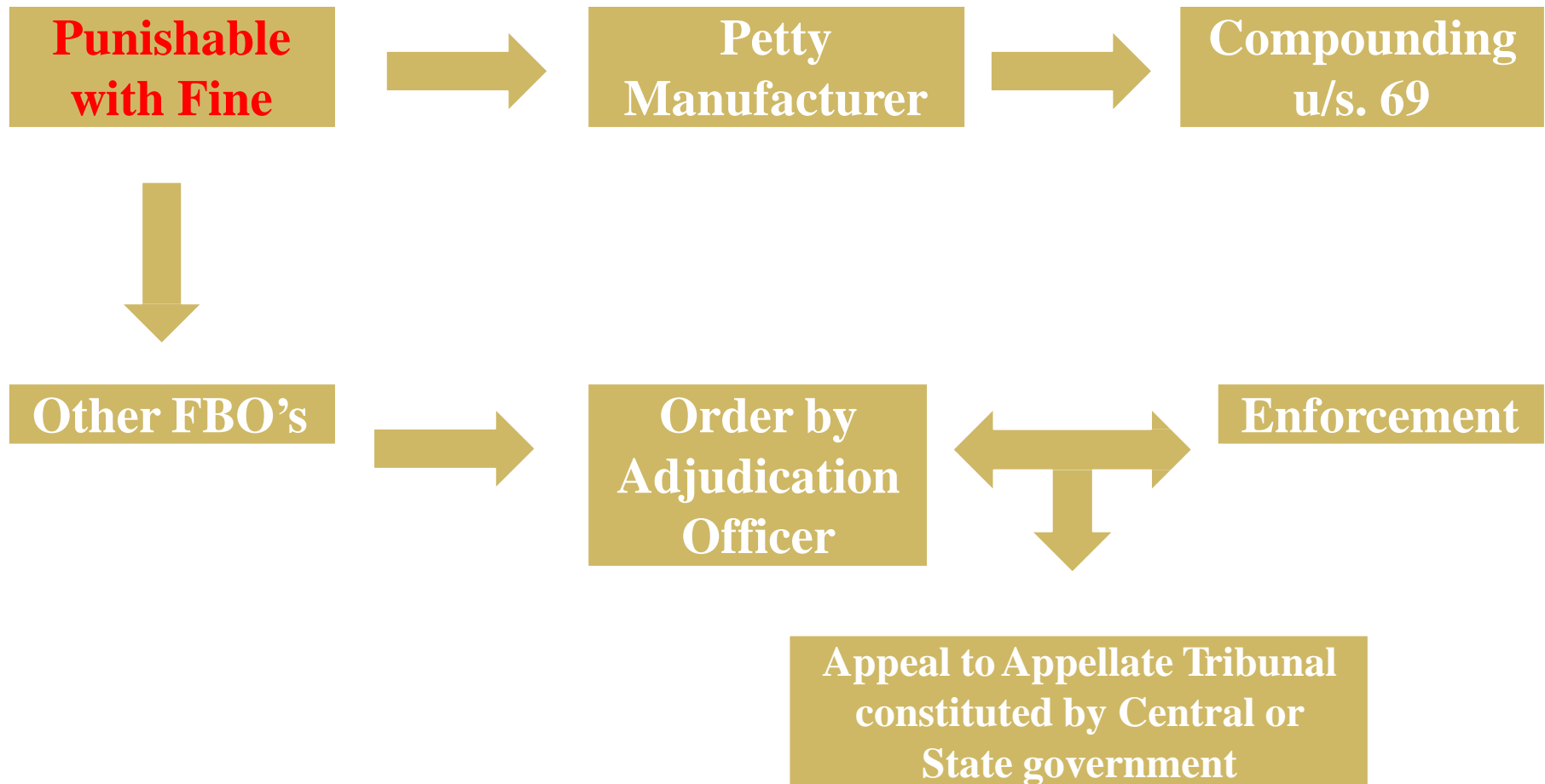


E-Governance Initiatives

Adopting E-Governance initiatives the only way to manage the responsibility entrusted under the Act by ensuring transparency, accountability and reducing human interface

- Y Food licensing and registration system (FLRS)
- Y Food Import Clearance System (FICS)
- Y Food Product Approval System (FPAS)
- Y On-line Payment gateway system-made effective from 1st April 2014
- Y Food risk inspection prioritization system (FRIPS)-on the anvil

Prosecution – Punishable with Fine only



Conclusion

- Regulatory changes are dynamic
- Need to engage with regulators to understand the changes
- Consumers are empowered through social media
- Compliance is hygiene
- Cost of regulatory (non compliance) will be high

Thank You

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