

# India for Avocado; Avocado for India

## The Size of Indian Avocado Market

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**India for Avocado :** The opportunities available to domestic & international avocado industry from the India at various sectors

- Farms & plantations,
- Post harvest infrastructure,
- Merchandising & consumption by end user of avocados.
- The market size of each sector, the effort needed to improve the present status of the stakeholders of this sectors & present status with case studies,
- **Avocado for India :** the need of avocado industry to
- The Indian farmers,
- Professionals
- Consumers.



# India for Avocado

## History of avocado in India:

- Avocado had entered in India with travelers from Srilanka, to
- Waynad in Kerala, Koorg in Karnataka, Kodaikanal in Tamilnadu in 19<sup>th</sup> century.
- The 3 to 4 avocado plants is grown in homesteads for family consumption.
- The peoples used avocados to make puris & roties, wheat breads, milk shakes.



## Demographics of India



- remarkably diverse.
- India occupies 2.4% of the world's land area, 7<sup>th</sup> largest country, Located fully in northern & eastern hemisphere,
- (8 N & 37 N latitude – 68 E & 97 E longitude),
- The Tropic of Cancer (23 ½ N latitude) passes through the middle of the country & divides India almost two halves. North & South
- Total area is 32,87,263 sq kms which extends over 2,933 km from east to west & 3,214 from north to south.
- India has 28 states & 7 centrally administered territories for effective administration.
- India is called sub-continent for varied relief features, climate, natural vegetation & diversities among people (Unity in diversity).
- India is famous for art, literature, dance, food, agriculture, industries, and enriched culture<sup>2</sup>.

# Population of India

- India is the second most populous country in the world, with over 1.21 billion people (2011 census), more than a sixth of the world's population. Already containing 17.5% of the world's population,
- India is projected to be the world's most populous country by 2025, surpassing China, its population exceeding 1.6 billion people by 2050. Its population growth rate is 1.41%, ranking 93rd in the world.
- India's population growth has raised concerns that it would lead to widespread unemployment and political instability & now **population is the strength of India.**
- India has > 50% population below the age of 25 & > 65% hovers below the age of 35.
- In 2020, the average age of an Indian = 29 years, China = 37, Japan = 48
- 22 languages are official languages. The largest is Hindi 337 mil.; then Bangla 207 mil
- English is the second language in education after Hindi.



Year	Under 15	15-64	65+	Estimate Total	Year	Estimate
2010	370	747	58	1175 m	2020	1,326,093,000
2015	372	819	65	1256 m	2030	1,460,743,000
2020	373	882	76	1331 m	2040	1,571,715,000

Rank	City Name	State/UT	Pop. Mill.	Rank	City Name	State/UT	Pop. Mill.
1	Mumbai	Mahara	13.9	11	Jaipur	Rajasthan	3.2
2	Delhi	Delhi	12.6	12	Lucknow	U.P.	2.8
3	Bengaluru	Karnataka	5.5	13	Nagpur	Maharashtra	2.5
4	Kolkata	W. Bengal	5.2	14	Patna	Bihar	1.9
5	Chennai	Tamilnadu	4.7	15	Indore	Madhya Pra.	1.9
6	Hyderabad	Andhra	4.1	16	Bhopal	Madhya Pra.	1.8
7	Ahmedabad	Gujarat	4.0	17	Thane	Maharashtra	1.9
8	Pune	Mahara	3.5	18	Ludhiana	Punjab	1.8
9	Surat	Gujarat	3.4	19	Agra	Uttar Pradesh	1.7
10	Kanpur	U.P.	3.3	20	Pimpri	Maharashtra	1.7



## The Food of India:

- Important to understand the basics of Indian food culture by an avocado man
- Avocado is a new fruits to the mainstream 90-95 % Indian consumers of modern India
- They will try to adopt avocado in respective food habits explained in following slides

**Indian cuisine** consists of the foods from India and to some extent neighboring countries, characterized by the extensive use of various spices, herbs, and other vegetables, and sometimes fruits grown in India and also for the widespread practice of vegetarianism in Indian society.

- Each family of Indian cuisine **includes a wide assortment of dishes and cooking techniques**. As a consequence, it **varies from region to region**, reflecting the varied demographics of the ethnically-diverse subcontinent.
- **Hindu beliefs and culture** have played an influential role in the evolution of Indian cuisine. However, cuisine across India also evolved as a result of the subcontinent's large-scale cultural interactions with Mongols and Britain making it a unique blend of some various cuisines.
- The spice **trade between India and Europe** is often cited as the main catalyst for Europe's *Age of Discovery*. The colonial period **introduced European cooking styles to India**, (& also **the avocados**) adding to the flexibility and diversity of Indian cuisine.
- A normal Indian diet consisted of fruit, vegetables, meat, grain, dairy products, honey, poultry and other sorts of meats.
- Over time, some segments of the population embraced **vegetarianism**. This was facilitated by the advent of Buddhism and of a **cooperative climate where a variety of fruits, vegetables, and grains could easily be grown throughout the year**.
- A food classification system that categorized any item as **Satvik, Rajsik or Tamsik** developed in Ayurveda. For more details please visit [satvikfoods.com](http://satvikfoods.com)

- In the same period **vegetarianism** also flourished throughout India,
- **Beef eating** was prohibited; this is along-standing feature in Hinduism and India;
- **Live stock is the base of Indian Agriculture due to small & marginal farmers.**
- **The staples** of Indian cuisine are Pearl Millet, rice, whole wheat flour
- **Pulses**, the most important of which are red lentil, Bengal gram, pigeon pea or yellow gram, black gram and green gram. Pulses may be used whole, dehusked or split & used extensively.
- Most Indian curries are cooked in **vegetable oil**.
- **Peanut oil** : Northern and western India is most popular for cooking,
- **Mustard oil** : Eastern India, is more commonly used.
- **Coconut oil** is used widely along the western coast especially in Kerala;
- **Sesame oil** is common in the south as well.
- In recent decades, **sunflower oil** and **soybean oil** have gained popularity all over India. **Hydrogenated vegetable oil**, known as ***Vanaspati ghee ( trans fats)*** is another popular cooking medium. Which is now replaced by health conscious peoples
- Butter-based ghee, or *desi ghee*, is less used than formerly due to cost & availability.



**Here the Avocado has to help the people to reduce, replace the earlier once.**

The most important or frequently used spices in Indian cuisine are chilly, black pepper, black mustard seed, cumin, turmeric, fenugreek, asafoetida, ginger, coriander, and garlic.

**With these flavoring ingredients avocado has to make its place in Indian food system. And is a very challenging job**



- Each regional / State area has its own food specialties, the differences were originated from a local culture and geographical location whether a region is close to the sea, desert or the mountains, and economics.
  - Indian cuisine is also seasonal with priority placed on the use of fresh produce.
  - The main population wise influencing cuisine cultures are, **North Indian cuisines** are from **Kashmir, Haryana, Rajasthan, Punjab, Uttar Pradesh & Bihar**
- Punjabi Cuisine:** Home cooked & restaurant Punjabi cuisine vary significantly,
- This style using **large amounts of oils, ghee, butter and cream**, whole wheat, atta, rice and other ingredients flavored with masalas (powdered spices mix) and dairy products,
  - The food is **good for the Punjabi lifestyle** where most of the rural folk burn up **a lot of calories** while working in the fields. Tandoori (a type of oven) food is a Punjabi specialty especially for non-vegetarian dishes.
  - This food style is **not good for sedentary life style** persons who are unable to **consume the high calories, oily, spicy food which leads to diabetics, hyperacidity & in some cases obesity due to Maida** (refined wheat flour).



- Many of the most popular elements of Anglo-Indian cuisine – such as **Tandoor, Naan, Pakoras and vegetable dishes with paneer** (cottage cheese), **rayatas** (spreads with yogurt) – are from the Punjab. **Avocado can be useful in place of Paneer**, spreads in place of butter & ghee. Punjabi food is available in North & Central India, all metros, road side motels, dhabas, hotels, celebrations & functions, etc.

- Rajasthani cooking was influenced by the availability of ingredients in this arid region.
- Water is at a premium, and hence the food is generally cooked in milk or ghee, making it quite rich in fats.
- On the other hand, Besan or gram flour is a mainstay of Marwari food mainly because of the scarcity of vegetables in this arid land.
- There is distinctness in the Rajasthani cuisine which comes from a tradition that is old and tranquil, and from a culture that has churned the best from its neighboring states of Gujarat, Haryana and Punjab.
- Food that could last for several days and could be eaten without heating was preferred.
- Major dishes of a Rajasthani platter includes Daal-Baati, Raabdi, Kadhi.
- Snacks like Bikaneri Bhujia, these recipes mainly lead the Indian snack industry. The food from Uttarakhand is known to be wholesome to suit the high-energy necessities of the mountainous and wintry region. This people will also adopt avocado easily if properly communicated.



**Central Indian Cuisines:** from the states of Gujrath, Madhya Pradesh, Maharashtra, Goa .



- Gujarati cuisine is primarily **vegetarian**.
- The typical Gujarati *Thali* consists of *Rotali* (a flat bread made from wheat flour, *daal* or *kadhi*, rice, and *sabzi/shaak* (a dish made up of different **combinations of vegetables and spices**, which may be stir fried, spicy or sweet).
- Many Gujarati dishes are distinctively **sweet, salty, and spicy at the same time**. The cuisine changes with the seasonal availability of vegetables. In mango season, for example, fresh **mango pulp** (avocado can be added to get the consistency) is often an integral part of the meal.



- The cuisine in Madhya Pradesh varies from region to region, mainly based around wheat, meat, rice, fish, milk and milk-based preparations.
- In summers, the meals tend to end with fruits such as mangoes, melons and watermelons, custard apples, bananas, papayas and guavas. This is the time to have avocado in salads.



**Maharashtrian cuisine** covers a range from being mild to very spicy dishes.

- Wheat, rice, *jowar*, vegetables, lentils and fruit form important components of Maharashtrian diet.
- The cuisine of Maharashtra has its own distinctive flavors and tastes.
- The interior of Maharashtra—the Khandesh & the Vidarbha area, has its own distinctive cuisine known as the **Khandheshi & Varadi cuisine**.
- As in many states of India, **rice is the staple food grain in Maharashtra**. Like the other coastal states, A part of Maharashtra, which lies on the coast of the Arabian Sea, is loosely called the Konkan and boasts of its own **Konkani cuisine**. there is an enormous variety of vegetables in the regular diet and lots of fish and coconuts are used. Grated coconuts spice many kinds of dishes, but coconut oil is not very widely used as a cooking medium.
- Peanuts and cashew nuts are widely used in vegetables and peanut oil is the main cooking medium. Maharashtrian meal consists of rice and bread both along with cooked lentils and spiced veggies.
- These cuisines are leads to **threatened diseases due to addition of modern lifestyle. So we have to restructure the recopies by adding the avocados.**
- Goan cuisine consists of regional foods from seafood, coconut milk; rice and paste are main ingredients.
- The area is located in a tropical climate, and spices and flavors are intense. Use of Kokum is distinct feature. The cuisine of Goa is influenced by its Hindu origins, four hundred years of Portuguese colonialism, and modern techniques.
- The state is frequented by tourists visiting its beaches and historic sites, so its food has an international aspect.



## South Indian Cuisines Andhra Pradesh, Tamilnadu, Karnataka & Kerala.



- **Rice is the staple food** in the cuisine and is usually consumed with a **variety of curries & lentil soups or broths.**
- A large part of the population is **vegetarian** and has innovated some excellent recipes, while people living in the coastal areas are known for their seafood.
- **Food of Andhra Pradesh** is known for its heavy use of spices and chillies. One of the most important part of the Andhra cuisine are the various pickles. Noteworthy pickles are *Avakaya*, a pickle made from green mango, **one elite research institute had invented the pickle of avocado & standardization is in progress.** **Curd** is also a part of the meal in the Andhra Pradesh as it helps to neutralize the spiciness of the food. **Hyderabadi Biryani** is one of the most famous dishes from Andhra Pradesh.
- The **cuisine of Karnataka** includes many vegetarian and non-vegetarian cuisines.
- The varieties reflect influences from the food habits of many regions and communities from the three neighboring South Indian states, as well as the state of Maharashtra and Goa to its north.
- The famous **Idli, Masala Dosa** traces its origin to Udupi cuisine & are popular in Karnataka.

## Kerala Is 'Gods Own Country'

**Kerala cuisine** is a blend of indigenous dishes and foreign dishes adapted to Kerala tastes.

**Coconuts** grow in abundance in Kerala, and consequently, grated coconut and coconut milk are widely used in dishes and curries as a thickener and flavoring ingredient.

**Rice** is grown in abundance, and could be served, along with tapioca (manioc/cassava), to be the main starch ingredient used in Kerala food. Having been a major production area of spices for thousands of years.

**Tamil** food is characterized by the use of rice, legumes and lentils, its distinct aroma and flavour achieved by the blending of spices.

The word "curry" is derived from the Tamil word 'kari' which means "an additive to the main course or a side dish"

Rice and legumes play an important role in Tamil cuisine. Vegetables and dairy products are essential accompaniments.

Tamil Nadu is famous for its spicy non vegetarian dishes (just like Andhra Pradesh).

**The southern Indian cousins are rice & Coconut based i.e. carbohydrate & fat based (saturated fats are more in coconut than other oils). This may lead to diabetics & CHD, in near future & these people have to adopt avocado in day today life style.**



## Eastern & North Eastern Cousins:

The states of Orissa, West Bengal, & 7 NE States

- **Bengali cuisine** is a style of food preparation originating in the eastern India with an **emphasis on fish and lentils served with rice as a staple diet**,
- Bengali cuisine is known for its subtle flavors, its confectioneries and desserts, and has perhaps the **only multi-course tradition** from India that is analogous with French and Italian cuisine in structure.
- The nature and variety of dishes found in Bengali cooking are unique even in India.
- **NE cuisine is simple, organic and healthy.** Dishes are typically spicy foods that use chili pepper. The staple diet consists of **rice, leafy vegetables, and fish, Bamboo Shoots.** They typically raise vegetables in a kitchen garden and rear fish in small ponds around their house.
- People in India consider a **healthy *nashta* or breakfast important.** They generally prefer to drink tea or coffee with the first meal of the day.
- North Indian people prefer roti, parathas, and a vegetable dish, accompanied by *achar* (pickles) and some curd;
- people of western India, *dhokla* and milk;
- South Indians, idlis and dosas, generally accompanied by various chutneys (Spicy Ground nut or coconut based spreads). **Avocado spreads had to be introduced**





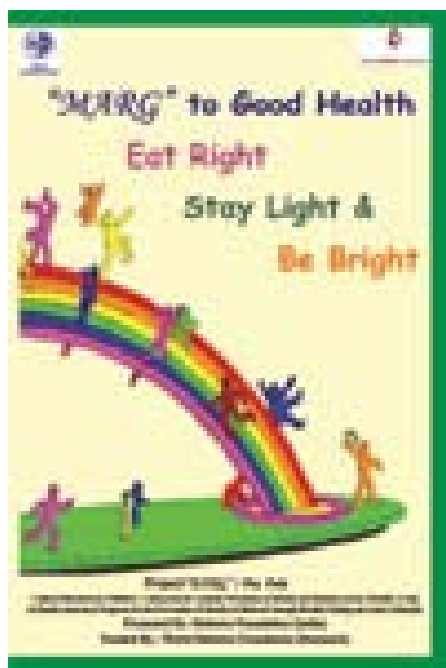
Lunch in India usually consists of a main dish of rice in the south and east and rotis made from whole wheat in the northern and western parts of India.

- It typically includes two or three kinds of vegetables. Lunch may be accompanied by items such as kulcha, nan, or parathas. Curd and two or three sweets are also included in the main course. *Paan* (betel leaves), which aid digestion, are often eaten after lunch in parts of India.
- Indian families will gather for "evening breakfast" to talk, drink tea, and eat snacks. Dinner is considered the main meal of the day, and the whole family gathers for the occasion. Dinner may be followed by dessert, ranging from fruit to traditional desserts like *kheer*, *gulab jamun*, *gajar halva*, *qulfi* or *ras malai*.



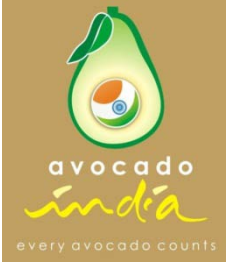
## The Health Of India:

- The International Diabetes Federation estimates that the number of diabetic patients in India more than **doubled from 19 million in 1995 to 40.9 million in 2007**.
- It is projected to **increase to 69.9 million by 2025** making it the '**Diabetes Capital**' of the world.
- Delhi alone has an estimated 29.8 lakh people suffering from this disease (Indo-US collaborative study). Currently, up to **11 per cent of India's urban population** and 3 per cent of rural population **above the age of 15** has diabetes.
- Diabetes affects all people in the society, not just those who live with it.



- The World Health Organization estimates that mortality from diabetes and heart disease **cost India about \$210 billion every year** and is expected to increase to \$335 billion in the next ten years. These estimates are based on lost productivity, resulting primarily from premature death.
- The most prevalent is the **Type 2 diabetes, which constitutes 95 per cent of the diabetic population in the country**. In this, patients are non-insulin dependent and **they can control the glucose in their blood by eating measured diet, taking regular exercise and oral medication**. Type 1 diabetes (insulin dependent), however, is not preventable.
- In India, over 50 per cent cases of diabetes in rural India and about 30 per cent in urban areas go undiagnosed. Each year, over three million deaths worldwide are tied directly to diabetes and even greater number die from cardiovascular disease.

Today, **one in every three Indians has high blood pressure**, which is expected to shoot by 60 per cent in the next 20 years.



- Various studies have shown that the **high incidence of diabetes in India** is due to **sedentary lifestyle, lack of physical activity, obesity, stress and consumption of diets rich in fat (bad), sugar and calories**. Indians are witnessing a rapid shift in their diet and lifestyle with very **rapid rise of obesity, diabetes and heart disease**.
- The **modified dietary guidelines** in view of new India-specific research data **on oils, fats and other nutrients are prepared**. Proper dietary guidelines remain cornerstone of prevention and management of these diseases. **Countrywide adaptation of these guidelines** is likely to have a significant impact on prevalence and management of obesity, diabetes and heart disease in India. **Avocado India is now trying to place avocado in them**.
- The MARG initiative by DFI was able to improve the knowledge and practice levels of children on healthy eating and behavior. There was a significant increase in the intake of health foods, reduced intake of fried and fatty energy dense foods, increased physical activity and time spent on out door games along with improvements in glycemic parameters and lipid profiles.
- Modification in lifestyle and proper medication can delay and prevent diabetes in high-risk groups. Eating whole grain carbohydrates and moderate exercise and avoiding excessive weight gain could eliminate over eighty per cent of Type-2 diabetes. **Here the avocado will help to maintain the energy level without increase in glucose level significantly**.
- All over India the **conventional fat sources are vegetable oils like ground nut, soya, and animal fats like ghee, butter, cheese & animal meats**. These are **not so much good fats**. To avoid the bad effects of conventional fat sources, these peoples are consciously adopting the modern approach of **increasing consumption of fresh fruits & vegetables, using more dietary fibers, consumers are searching for better option like flax, olive, fish & of course avocado**, the new generation fat source, etc. in daily food plate with **doing yoga**.



- **Consumers are curious about** knowing & get the training on latest entrants in **Nutraceuticals, fruits, super fruits** available in there area; may it be a small town or a big metro.
- Most **Indians are vegetarian** they need variety of fruits & vegetables
- They are **ready to pay due to increase in purchase power.**
- peoples in different age categories are **malnourished & underweight** due to various reasons. The avocado is good for both **obesity and hunger.**
- **High enough in calories** to help India's people who are **underweight,**
- yet it is still considered to be a **weight loss tool** The monounsaturated fat speeds up the metabolic rate, as compared with saturated fat. **High fat content gives a quicker feeling of "fullness"**, reducing overeating. So the avocado has its **many benefits in combating malnutrition and obesity.**
- Avocados have highest energy value of any fruit. It also is rich in proteins & fat, and yet low in carbohydrates. with many valuable vitamins & minerals,

## Avocado for India

### The avocado is the fruit of promise in India to maintain her health

- There are **many opportunities in India** when we see the above paragraphs of Indian market which is **associated with main challenges like consumer education, investment, diversified culture; one nation,**
- The solution is **avocado India** which is bringing all the role players on single platform to find the solutions on requirements of other stakeholders.
- Now We will see the status & requirements of this stakeholders & there relation with each other.

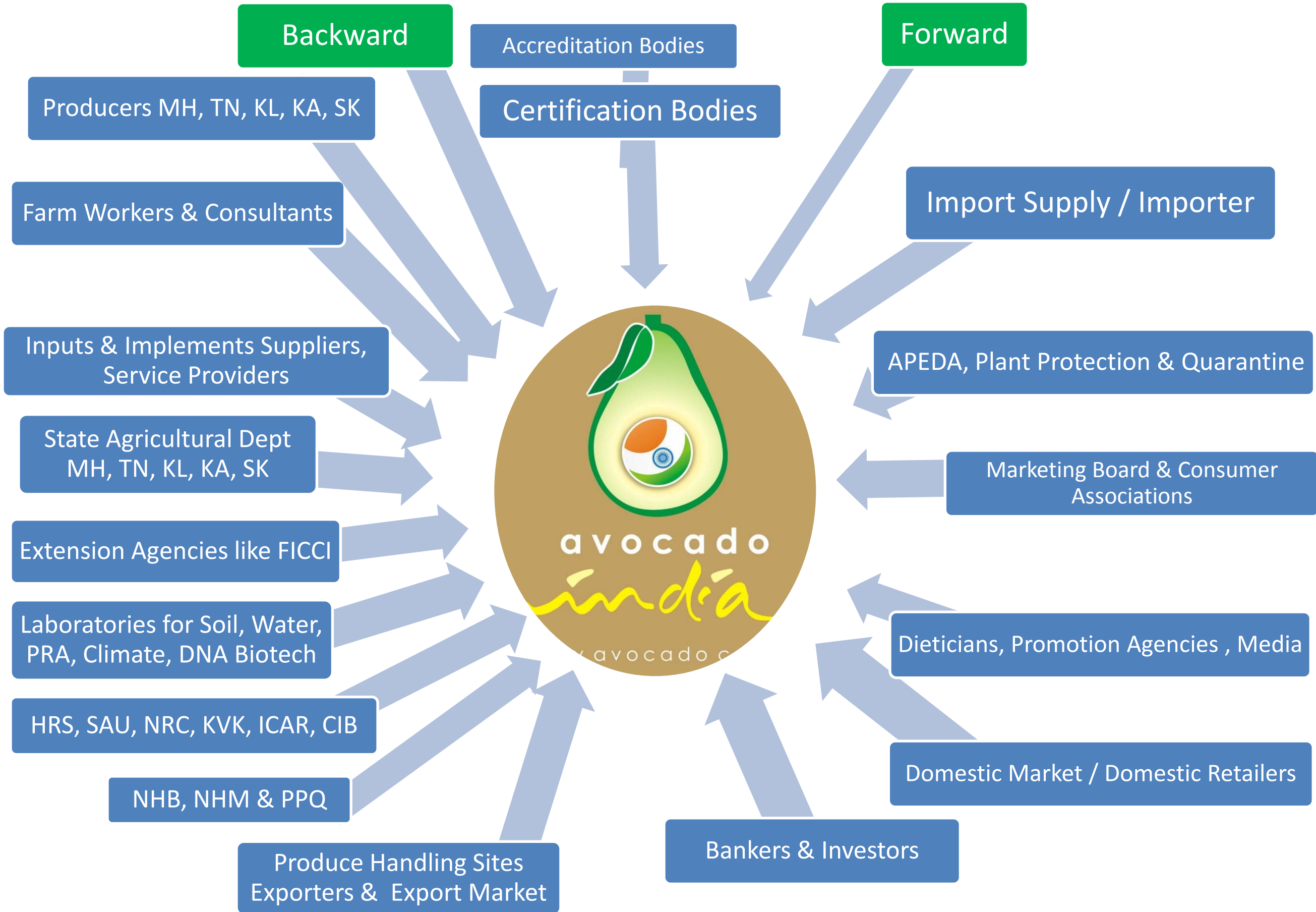






- ✓ **Producers:**
  - Avocados are produced in parts of Maharashtra, Tamilnadu,
  - Kerala, Karnataka, is the main region of Western Ghats of India .
  - This is UNESCO's biodiversity hot spot.
  - Sikkim is part of Himalayan ranges..
  - The presently available varieties in public domain are Fuerte, Purple Hybrid, TKD 1 and Pollock. Farmers are planting avocados in big way on there own coffee plantations instead of jack fruit.
- ✓ **Farm Workers & Consultants:** are getting the training & experience avocado cultivation by farmers based on Good Agriculture Practices.
- ✓ **Inputs & Implements Suppliers, Service Providers:** the **planting material need is huge** as farmers know the opportunities in planting the avocados. The **inquiries are flowing to avocado India** plantation
- ✓ **Laboratories for Soil, Water, PRA, Climate, and Biotech:** the laboratories owned by government & private institution are available at suitable locations & sufficient number. They will need the training associated with the avocado cultivation.
- ✓ **State Agricultural Departments:** in above states have a vital role in making & implementing policies related to plantation & marketing of avocado fruits like EGS
- ✓ **Extension Agencies:** like FICCI, FAO Etc. various chambers of industries & Agriculture are helping to spread the message about importance of avocados in agriculture.
- ✓ **Bankers & Investors:** they are seeing positive investment opportunities to get good returns from avocados. FDI regulation are easy now than the earlier.
- ✓ **Certification & Accreditation Bodies:** the services are available from major certification bodies as per Indian organic standard (NPOP), US NOP, GlobalGAP, BRC, ISO 22000

# The stake holders in Avocado supply chain are



## ✓ **Agriculture Research Institutes:**

- **State agriculture Universities (SAU)** are communicated for the projects related with avocado cultivation & technology development.
- **Krishi Vigyan Kendra (KVK)** under ICAR is working for **multi location multi variety trial with avocadoindia**.
- **Central Insecticide Board (CIB), National Research Center (NRC) & Protection Of Plant Varieties & Farmers Rights Authority (PPV & FRA)** are in communication to standardize the MRL, PHI, registration of new or imported varieties as & when they are developed.
- **Tamilnadu Agriculture University** had started a research center in 1968 & they released the **variety TKD – 1** in 1994 first of its kind in Asia, this is variety with the oil content up to 26 %.
- Other varieties available are **Fuerte; Pollock & Purple Hybrid** will be evaluated in multi location trials where they were not available.
- ✓ **NHB, NHM & PPQ:** the guidance of National Horticulture Board (NHB), National Horticulture Mission (NHM) & Plant Protection & Quarantine (PPQ) is important for importation, infrastructure, technology development, policy design & implementation.
- ✓ **Import Supply / Importer:** are communicated through world avocado congress for the market / demands in various segments of avocado in India.
- ✓ **APEDA:** is the Agriculture Produce Export Development Authority.
- ✓ **Produce Handling Sites & Exporters:** prospectus exporters are enthusiastic to enter in avocado handling as there is surplus infrastructure is available from the grape export.
- ✓ **Domestic Market / Domestic Retailers:** as the consumers are aware the retailers like Spar, Spencer, big bazaar, etc. are selling avocados at premium prices.
- ✓ **Marketing Board & Consumer Associations:** are the promotion partners of avocadoindia with Dieticians, Promotion Agencies and Media.

- This is the first paper as of country representing on world Avocado scenario.
- More researchers & farmers will participate in next world avocado congress
- While we hope to host this event by next 12 to 16 years optimistically.
- Your support , cooperation, guidance is very much solicited

- Various projects started by **avocadoindia** with different stake holders are
- **Multi Level Avocado Sensitization & Awareness Project,**
- **Multi Variety Multi Location Trials Project,**
- **Post Harvest Technology Development Project,**
- **Avocado GlobalGAP & Organic Manual Project,**
- **Avocado Supply Chain Development Project, and**
- **Avocado Domestic & Export Market Development Project**



Please visit [www.avocadoindia.com](http://www.avocadoindia.com) for regular updates.

The aims & objectives to start the avocadoindia in December 2010 are as under:-

1. Development of hi-tech **commercial plantations of avocado** in identified belts act as hubs for supply of fruits growing demand in domestic & international market.
2. **Assistance in securing availability of quality planting material** by promoting setting up of scion and root stock banks / mother plant nurseries and **carrying out accreditation / rating of avocado nurseries** and need based imports of planting material.
3. **Promotion of field trials of newly developed / imported planting materials** and other farm inputs; **production technology; PHM protocols, INM and IPM protocols** and promotion of applied R&D programmes for commercialization of proven technology.

4. **Promotion of applied R & D for standardizing PHM protocols**, prescribing critical storage conditions for fresh avocado produce, **bench marking of technical standards** for cold chain infrastructure necessary for fresh avocado etc.
5. **Development of modern post-harvest management infrastructure** as an integral part of area expansion projects or as common facility for cluster of project avocados.
6. **Transfer of technology to producers / farmers and service providers** such as gardeners, farm level skilled workers, operators in cold storages, work force carrying out post harvest management including **processing of fresh avocado** and to the master trainers.
7. To make the **awareness at domestic & International level** about the presence & Importance of Avocado crop by attending the meetings, seminars, symposiums, Congresses, exhibitions, etc.
8. To take all necessary efforts to **establish the National Research Center for Avocado** at Nasik.
9. Development of integrated, energy efficient **cold chain infrastructures** for fresh avocado produce, & **oil extraction facilities** as an integrated processing complex
10. Popularization of identified new technologies / tools / techniques for commercialization / adoption, after carrying out technology need assessment.
11. Setting up of **Common Facility Centers in Horticulture Parks** and Agri-Export Zones for avocados
12. **Promotion and market development of fresh avocado** produce in **Domestic Market**.
13. **Promotion for consumption and market development** of avocado produce and products in **International Market**.
14. Strengthen market intelligence system by developing, collecting and disseminating avocado database to all stakeholders.
15. **Carrying out studies and surveys** to identify constraints and develop short and long term strategies **for systematic development of avocado production & Market, Supply Chain.**

16. **Providing technical services** including advisory and consultancy services to avocado producers, PH Complex Operators, Exporters, Importers, Research Institutes, Input Suppliers, Consumers, wholesalers, Retailers, etc.

17. To provide a diversion option to the monoculture practices of grapes, to establish a place in between Grapes & Mango economy.

**Conclusion: as on date India is an optimistic market for avocados with lots of opportunities & avocado India is progressing on each one identified inline with aims & objectives.**



**& You Are Invited.**

**Thank you for listening**

**References:**

1. Sarah Knott, Student Participant West Marshall High School, Iowa
2. Ghosh, P. Saurindra. "Avocado Production in India." Food and Agriculture Organization of the United Nations. 1999.
3. Various websites.
4. DIABETES FOUNDATION (INDIA)
5. **Hindustan Times** New Delhi, September 03, 2007.
6. Interviews with farmers, officers of research institutes while collecting the base line data.