



WHY ORGANIC FOOD?

COMPILED BY

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WHY ORGANIC FOOD?

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MAHARASHTRA ORGANIC FARMING FEDERATION, PUNE

State level federation of:-

- Farmers
- Stakeholders
- Environmentalists
- NGOs
- Consumers
- Contact Vikram Bokey IPS (R)

Chairman, MOFF

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OUR AIM

- Transfer of technology for Sustainable Agriculture to farmers at grass root level
- Promotion of low-cost, no-debt, sustainable production of agricultural crops & prevent farmers' suicides.
- Training for value addition, grading, packing, labeling & marketing
- Certification of Organic farms
- Women participation & empowerment in Sustainable Agriculture
- Awareness of poison free organic food consumption in the urban society
- Facilitate marketing of organic food from farmers directly to the consumers.
- Documentation –Success stories, Innovative Practices, package of Practices, Data on Economics, Research Papers etc.
- Publications.

COORDINATION WITH

- Food & Agriculture Organization United Nations (FAO UN)
- International Institute For Sustainable Agriculture, Pune (IISA)
- International Competence Center for Organic Agriculture, Bangalore (ICCOA)
- Gene Campaign, New Delhi
- Center for Environment Education, New Delhi (CEE)
- Research Foundation for Science, Technology & Ecology, New Delhi
- The Covenant Center for Development (CCD), New Delhi
- Department of Biotechnology, New Delhi (DBT)
- Organic Farming Association of India, Goa (OFAI)

- National Center of Organic farming, Ghaziabad (UP)
- Commissioner of Agriculture, M.S, Pune
- MITCON, Pune
- AFARM, Pune
- Department of Agriculture Animal Husbandry and Dairy Science, M.S.
- Mahatma Phule Krishi Vidyapeeth, Rahuri, Dist. Ahmednagar, M.S.
- NGOs Panipanchayat, Gramparivartan, NOCA, VOFA, KVK etc

NETWORK OF MOFF, PUNE

•	Jurisdiction -	Maharashtra State	
		* 34 Districts	
		* 140 Taluka	
		* 15,000 Villages	
•	Head Office -	Pune	
	Trustoes	10	

Trustees 10 **Apex Council** 127 members (3 - 4 Senior Organic Farmers /

- **District**) **Advisory Board** 12 members (Hon. Dr. Vijay Bhatkar, P.B.Shitole, Subhash Sharma, Mohan Shankar Deshpande, Raosaheb Dagadkar & others)
- **District Heads** 34 Organic farmers.
- **District Coordinators** -68 organic farmers
 - Member NGOs 120 **Farmers in Contact** 1,42,000

PRINCIPAL ACTIVITIES

- Organic Farm schools (Every Thursday, 2 hrs Theory & 2 hrs Practical on organic farms)
- Organic Model Farms
- Organic Crop demonstrations
- Trainers' Training on Organic farming
- Self help groups of male & female farmers
- Organic farm certification with Participatory guarantee scheme (PGS)
- Farmers' Producer Companies
- Farmer rallies, seminars, workshops, exhibitions, organic Mandi / Bazar

Contd

- Study tours for farmers in & out of Maharashtra State
- Organic food consumers club
- Seed Banks of traditional, improved, straight & composite varieties of major crops (Hybrids & Genetically modified crops Prohibited)
- Active participation in OFAI sponsored Anti. GM. Campaign, Chennai
- Documentation of organic farmers', experiences, Innovative experiments, Success Stories, Technical & research findings, Marketing data etc
- Self Sustainable Biovillage Projects
- "Farmers Suicide Prevention Mission" in Vidarbha
- Leading role in state Government's organic policy
- Leading role in establishment of An International Institute, for Sustainable Agriculture, Pune





ACHIEVEMENTS OF THE MISSION













ACTION STEPS FOR PROMOTION OF ORGANIC FARMING

I. Awareness:-

- Farmers :-
- a. Rainfed or irrigated farmers
- b. Male & female farmers (youths)
- c. Self help groups
- NGOs
- Consumers
- Educational Institute

contd...

II. Technology Transfer:

- Transfer of precise organic farming technology to individual farmer / NGO.
- Ensure Switching over farmer gets same net Profit from 1st year itself.
- Study Tours.
- Farmers' rallies, Workshops, Trainings, Seminars, Capacity building workshop, Beej Mahotsav, Organic Bazar/ Mandis, Publications.

III. Value addition in organic Produce Cleaning, grading, processing, packing, labeling

IV. Marketing.

- Certification with PGS
- Market Survey Overall Survey of demand & availability of Produce in 12 Months.
- Farmers Producer Company
- Farmers to Consumer direct selling (Takai System Japan)



ORGANIC MANURE

Jeevamrut – Cow Dung, Urine, Jaggery, Gram flour



JEEVAMRUT - FERMENTATION TANK



JEEVAMRUT - APPLICATION METHOD



ORGANIC SUGARCANE





TRANSPORTATION TO ORGANIC PROCESSING UNIT



ORGANIC JAGGERY & CONCENTRATED JUICE



ORGANIC WHEAT



ORGANIC BANANA WITH MIX CROP



BANANA BUNCH



ORGANIC TURMERIC WITH MIXED CROPS



ORGANIC TURMERIC WITH MIXED CROPS



ORGANIC TURMERIC WITH MIXED CROPS



ORGANIC SUGARCANE WITH MIXED CROP OF TURMERIC



DEFINITION OF ORGANIC FARMING

"Organic Agriculture is a holistic production management system which promotes & enhances agro-eco-system health including biodiversity, biological cycles & soil biological activity. It emphasizes the use of management practices in preference to the use of on farm inputs. This is accomplished by using, where possible, agronomic, biological & mechanical methods, as opposed to using synthetic materials to fulfil any specific function within the system".

Definition proposed for adoption by FAO / WHO Codex Alimentarius Commission.

ORGANIC STATISTICS AT A GLANCE

•	Total	organic	area

Total projects

No of Grower groups

Total organic farmers

Total certified production

Number of processors

Total export

• Value of export in Rs.

> 1,207,000 ha

1812

886

7,54,618

19,58,621 t

276

51,370 t

5711 million INR

119 million US\$

Number of exporters

299

ORGANIC STATISTICS

Important States, Area and farmers

States	Organic	In-conversion	Total area in ha	Total No of farmers
Madhya Pradesh	322863	140689	463553	167141
Maharashtra	129077	148703	277780	213456
Orissa	60006	21554	81560	43852
Gujarat	23559	27367	50927	17057
Andhra Pradesh	7377	25072	32450	34185
Mizoram	12097	22808	34906	41841
Uttarakhand	11093	19408	30501	46135
Rajasthan	9959	19307	29267	15214
Nagaland	1212	22830	24042	28365
Uttar Pradesh	9613	12633	22246	15417

IMPORTANT STATES & COMMODITIES

Madhya Pradesh
 Cotton

Maharashtra
 Cotton, rice, wheat, soybean

• Gujarat Cotton

Orissa
 Cotton

West Bengal
 Tea

Kerala
 Spices

• Rajasthan Cluster bean & herbs

• Tamil Nadu Coffee & herbs

• Punjab/Haryana/HP Basmati rice, Honey

Madhya Pradesh & Rajasthan Wild collection

SOME OUTSTANDING FEATURES OF INDIA ORGANIC GROWTH

- India is the largest Organic Cotton grower with more than 50% share
- With 1.2 million ha cultivated land India is the country with largest cultivated area under organic
- With 8.0 million ha wild harvest collection area India is single largest country.
- India produces wide range of commodities

FOOD GRAINS

Crop	Quantity in MT			
	Organic	In-Conversion	Total	
Paddy (Total)	44,335	32,354	76,690	
Paddy (Basmati)	14638	7,520	22,159	
Wheat	6892	15364	22256	
Other cereals and millets	67,333	63,985	1,31,318	

MOST CULTIVATED

Crop	Quantity in MT			
	Organic	In-Conversion	Total	
Cotton	2,84,835	86,906	3,71,740	





PULSES AND OILSEEDS

Crop				
	Organic	In- Conversion	Total	
Pulses	17560	16785	34345	
Oilseeds	1,63,506	59,647	2,22,832	
				Transition for the second seco



FRUITS AND VEGETABLES

Organic

1,94,505 MT

In Conversion

5,38,073 MT

Total

7,32,579 MT







HERBAL, MEDICINAL, DYE & AROMATIC PLANTS & OTHERS

Crop			
	Organic	In-Conversion	Total
Herbal and medicinal plants	129543	58767	188310
Other crops/ plants	8001	25232	33236



MARKETING OF GROWN COMMODITIES

• Total Production 1.878 Million Tons

• Exported quantity 39,000 MT

• % of quantity exported 2.07%

• Domestic sales 15.00%

as organic

More than 80% of food commodities are sold locally with or without premium. No assessments available

PROCESSING OF ORGANIC FOOD ITEMS

- 75% of Tea, coffee and spices are being processed
- More than 75% of organic cotton is processed
- 50% of fruits and vegetable are processed
- Remaining items are not processed as organic products. At the most they are dried and powdered

MARKET GROWTH GROWING DEMANDS AND CONSTRAINTS

PRODUCTION-DEMAND MISMATCH

- Practically all crops are being grown
- Farmers complain that there are no buyers
- Buyers and processors complain of low supply & poor quality
- Farmers/ groups are dispersed over long areas
- Lack of proper agreements between producers and buyers

CONCERNS OF PRODUCERS

- No assured purchase
- No assured market
- Fluctuating prices and absence of Govt. support. No level playing field.
- Loss of productivity on being organic
- Production technology still immature
- Lack of dedicated processing units
- Problems in storage

CONCERNS OF PRODUCERS

- Poor and inconsistent quality
- Low volumes and inconsistent supply
- Lack of awareness among consumers
- Consumers not willing to pay premium prices
- Non-existence of supply chain for continued supply of consistent quality material
- Lack of value addition and processing facilities
- Low demand in domestic market for value added/ processed food items

OPPORTUNITIES

The area is likely to grow by 25-35%

It is likely to capture 5% of total cultivable area & total food market in next 10 years

Comparison of Mineral contents in dung & milk of

	i	ndigenou	is & cross-bre	ed cows		
Sr. No	Sr. No Mineral Mineral content in Micrograms / Kg					
		Cow dung			Milk	
		Sahiwal	Cross-bred (HF)	Sahiwal	Cross-bred (H	

64.06

10.67

2.41

2142.46

833.23

1663.61

Ref. Bhabha Atomic Research Centre, Mumbai)

33.3

5.68

0.033

263.04

283.14

1800

1014

3.66

0.032

220.65

753.64

131,6.44

102.63

10.66

2.66

2764.83

1276.67

1503.75

3

5

6

Iron

Zinc

Copper

Magnesiu

m

Calcium

Potassium

Note:-

- 1. NBAGR Kernal (Haryana) report in indigenous cow milk A-2-Allili gene content is more (good for health) than (HF & Jersey) cows.
- 2. A-1-Allili content in HF & Jersey Cow Milk is more is harmful to human health-causing obesity, diabetes & heart problems.

(Ref. Dr. Nitin Markandeya – Agrowon 28.07.2011)

Impact of chemical contaminated in food material on human health

Sr.No.	Food material	Chemical	Impact
1	Milk	Oxytocin (hormone to let milk)	Abortion, sterility
2	Coffee, tea	Coal tar dye	Carcinogenic Stimulants
3	Dal	Coal tar dye	Carcinogenic Stimulants
4	Turmeric	Lead chromate	Anemia, paralysis, mental retardation, brain damage, miscarriage,

Metanil yellow

(Rhodamin B)

Copper salt

Sweets

Pickles

6

abortion.

Carcinogenic Stimulant

Damage to kidneys 56

Sr.No.	Food material	Chemical	Impact
7	Saumf	Malachite green dye	Carcinogenic Stimulant
8	Vanaspati	Rancid animal fat	Nausea, Vomiting
9	Lady's finger	Copper sulphate	Anemia
10	Brinjal	Carbofuran	Growth development delays, carcinogenic
11	Cauliflower	Phosphamidon II Methyl parathion II	Growth development delays, carcinogenic
12	Salt	Rangoli	Irritation to gastro intestinal tract
13	BT Cotton cloth, oil & cake	 Cry I Ac gene (transgenic) CaMv 35 (cauliflower mosaic virus promoter gene) 	 Human – Skin allergic (cloth) Sterility, Digestion, problems, Children & elders are more prone Livestock – reduces

Sr.No.	Food material	Chemical	Impact
14	BT Brinjal	Antibiotic resistant marker gene NPTLL, AAD	Cancer, Abortion, retarded growth Miscarriage, Sterility, Allergy, Reduces immunity (Ref. India Medical Parliamentarian Forum, New Delhi)
15	Dhania powder	Horse Shit	God knows (No studies)
16	Raw jowar (Hurda)	Green dye	God knows (No studies)
17	Vegetables	Lead, Mercury, E-choli, Selmonil	God knows (No studies)
18	Brinjal	Poor quality oil coating	God knows (No studies)
19	Apple	Wax coating (for shining)	God knows (No studies) 58

Sr.No.	Food material	Chemical	Impact
20	Carrot & watermelon	 Injection of red colour water Dipping in acetocene solution (for size & colour) 	God knows (No studies)
21	Mango, Banana	Cultar, Ripening agents – ethrel, calcium carbide (for artifical ripening)	God knows (No studies)
22	Fish	Gilebi & gulal colour coating (for luster & colour)	God knows (No studies)
23	Chilli Powder	Brick powder	God knows (No studies)
24	Pista	Low quality sponge	God knows (No studies)
25	Almost all vegetables & fruits	Calcium carbide, ethrel, cycosil, livosin, sulphate of potash, potassium diertho phosphate (for weight increase & luster)	God knows (No studies)
Ref :- 1. Green watch, UK & Greenpeace (GM contamination register) 2. Centre for Cellular & Molecular biology, Hyderabad (AP) 3. Times of India 24.02.2005			

Difference between Organic & Inorganic Food

Sr. No.	Particulars	Organic Food	Inorganic Food
1	Shelf Life	No conclusive	No conclusive
		report	Report
2	Water Content	Less	More
3	Vitamin & mineral content	More	Less
4	Pesticide content	Nil	Above harmful limits
5	Free nitrate radicals	Less	More (Due to use of urea & therefore pest attack is more)
6	Fiber contents	More	Less
			60

ORGANIC FOOD

Why you should care

- We do a lot to keep our loved ones healthy
- Much of the produce we consume rice, vegetables, fruits-contains alarming amounts of dangerous chemical residues from fertilizer & pesticide use.
- Young children are especially at risk.
- The really harmful stuff actually permeates well into the skin and flesh & cannot even be completely removed by cooking, let alone washing the skin.

ORGANIC FOOD IS THE ANSWER

- Organic food is food that is grown the way it was meant to be without the use of chemical fertilizers & pesticides.
- Switching to organic food is a safe, easy & economical way to enhance your family's well beings.

THE CHEMISTRY OF POISON

- In a cluster of villages in kerala
- In a short span of time, an alarmingly high precentage of newborns showed deformations & birth defects.
- The mystery was finally solved when investigations revealed the casueheavy spraying of the pesticide ENDOSULPHAN on the cashew crop being grown in plantations in the area.
- You are at risk even if you live in a city, miles away from any farm or plantation.
- It is also not true that only high concentrations of pesticide are harmful to human health-long term exposure to low levels of pesticide are known to cause severe ill- effects, which become evident only after years after exposure.

IN WHICH WAYS PESTICIDES HARM YOUR HEALTH

- Acute poisoning can lead to: Headaches, blurred vision, nausea & vomiting, changes in heart rate, muscle weakness, respiratory paralysis, convulsions, coma or even death.
- Constant low-level exposure over the years can lead to :- Respiratory problems, liver & kidney damage, nervous system disorders, reproductive problems & even cancer.
- **Pesticide poisoning can cause** :- Damage to foetuses, causing miscarriage, stillbirth, birth defects & mutations.

Exploding the Myths

Common questions & misconceptions about organic food

1. Organic fruits & vegetables doesn't look as bright & fresh as nonorganic ones:-

- It is common practice to add chemicals to crops like bananas, brinjals to give them a brighter colour.
- The simple act of polishing rice removes certain vital nutrients present in The huste people prefer unpolished rice that 'Whiter' hybrids.
- 'Good' appearance is not necessarily an indicator of nutritive quality.

2. This whole 'organic food' thing is just another fad that will disappear in a few years :-

- Fads usually disappear in 2 to 3 years at most.
- The global market for organic food has been growing at a tremendous 20 25 % rate for the past 8 years.
- It is projected that the world organic market size will grow to US \$ 125 billion by the year 2015.

- 3. I have heard that organic farming is low yielding. If the whole world goes organic, how will farms produce enough food?
 - The yield from organic agriculture is equivalent to non organic agriculture, if precise & science based organic package of practices are adopted.
 - In traditional rainfed agriculture, organic methods can actually increase the yield
 - 'International Conference on Organic Agriculture & Food Security' held at Rome on May 3-5, 2007 assured that organic farming policy if adopted effectively can feed whole world.
 - Additionally, the chief cause for shortage of food has not been insufficient production but bad management practices. Tremendous amounts of food produce is wasted due to improper storage & inefficient distribution.
- On the contrary if in-organic farming continues, repeated chemical treatments has been known to decrease the soil fertility in the long run, leading greatly diminished yields over time.

- With organic methods, the soil quality is sustained & the yields are far more consistent over the years.
- Organic Farming recommends mixed cropping & not monocropping as prevalent today. In provides cereals, pulses & oilseeds along with main crop, therefore ensures food security more.
- In long run, organic agriculture is far more sustainable & is the only way to ensure global food security.

I'd like to eat only organic food, but the range of products is very limited.

What's the point if I can't get organic food for all my family's need?

- While it is true that the range is rather limited, these are new products being launched regularly, & soon you will be able to get a far wider variety of organic produce.
- As the organic movement gathers further momentum, organic produce will be available much more easily.
- MOFF can provide organic produce if collective order is placed.

Isn't organic food far more expensive than regular food?

- It is true, but please understand following factors :-
- 1. With chemical farming in India being heavily subsidised, certain costs are actually borne by the Govt., so the consumer is spared. With the support of Govt. organic farmers will no longer be at a disadvantage, & will be able to offer much more competitive prices.
- 2. Chemical agriculture also involves a number of hidden costs that are not immediately obvious. If factors like damage to the environment & human health are factored in to the mix, the picture would appear very different.

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- 3. Think of the additional cost you pay for an organic product as a payment made towards preservation of the environment & towards minimsing your family's exposure to harmful chemicals.
- 4. In organic farming, initial period of 3 to 4 years may witness a drop in yield- until the soil recovers its fertility. However, after this, the yield will increase substantially, reducing the retail cost of the produce.
- 5. As demand for organic food & products is increasing, technological innovations & economies of scale should reduce costs of production, processing, distribution & marketing for organic produce.

Eventually, organic food may cost as much as or even less then chemically grown food.

How do I know if food is organic?

- While buying check organic label or logos on the packaging that indicate that the product is certified as organic.
- If you are confident that your supplier is honest & giving you genuine organic produce, you don't have to look for a label.
- Organic certification is costly & complicated with tedious documentation, therefore small farmers cannot afford the cost, but their produce is genuine.
- Organic certification under "Participatory Guaranty System" is affordation & easy and is being popularised

Does 'Organic' mean 'Chemical free'?

- When a product is termed 'organic' it mean that it has been produced by a process that adheres to certain guidelines, laid down by certifying bodies.
- Organic food is grown without the use of synthetic pesticides & fertilizers. It therefore doest not contain residues of theses chemicals.
- In general, plants grown organically tend to be more resistant to pests & diseases.
- Farmers are using biofertilizers & herbal pesticides for the control of pests & diseases.

What kind of food can be organic?

- Any kind of food can be organic.
- Organic rice, vegetables, fruits, milk, meat, honey, oils, nuts, pulses, spices, medicinal herbal products.
- Processed foods like butter, cheese, chocolate, wine.

We have been eating non- organic food all along, it hasn't harmed us.

Why switch to organic now?

- It is indisputable that the chemicals used in pesticides & fertilizers are not meant for human consumption.
- An alarmingly large percentage of India food products have been tested & found to be highly contaminated.
- Across a range of vegetables, fruits & milk products, between 10 % to 70 % of the samples were found to contain pesticide residues well over permitted levels making them unfit for human consumption.
- Studies have proved that the chemical residues present in produce from chemical farms greatly increase the risk of several health disorders like.

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- Respiratory illness, nervous disorders & cancer being the most notable.
- Other side effects that are not immediately noticeable like reduced sperm counts in men & weakned immune systems. These become apparent only over time.
- Eating organic eliminates a large number of risks simply by virtue of not containing chemical residues.
- Additionally, organic food is usually found to have higher nutritional value.
- Organically grown potatoes, oranges & leafy vegetables have higher levels of vitamin C then conventionally grown ones.
- Phenolic compounds are also found in significantly higher concentrations in organically grown foods, which act as antitoxidants, protecting against heart disease & cancer.

INTERESTING CONTACT ADDRESSES

1. 'Organic food & traditional remedies for women's health

Lalitha B.R. & Navanish Prasad Bangalore, Mb. 09886738176,

Email: drlalithabr@yahoo.com, navanish@yahoo.com

- 2. 'Centre for Indian knowledge systems':
 - www.ciks.org, Email :- ciks@vsnl.com
- 3. 'Organic Products' Greenpeople: www.greenpeopel.com, www.wisearth.org
- 4. 'Curative powers Organic Food':
 Dr. K. Natrajan TamilNadu
 Mb. 09443358379

EAT ORGANIC & STAY HEALTHY

THANKS!!