Contents

ORGANICS & MILLETS 2018

INTERNATIONAL TRADE FAIR

The “Organics & Millets 2018 International Trade Fair”, organised by the Department of Agriculture, Government of Karnataka in association with ICCOA – International Competence Centre for Organic Agriculture, is an international conference and exposition that aims to build further on the immense success of the Organics & Millets Trade fair 2017. The fair will be a platform for domestic and international companies, farmer groups from different state and Central/ State bodies in organic and millet sectors to explore opportunities in global and domestic markets. This fair has scaled up to offer the participants a wider reach and opportunity to interact and share experiences with organic and millet stakeholders – both domestic and international.

ICCOA, as the knowledge partner, is the lead organiser of the International Conference 2018, which will have organic and millet experts and practitioners from India and other countries as speakers. The National conference on ‘Organics & Millets – Improving access to Markets’ during 2017 was attended by around 1200 delegates, comprising students, organic farmers, traders, practitioners, retailers, officials and representations of various governments bodies, organisations and agencies in the organic and millet sector. The Conference, spread over 3 days had over 22 eminent speakers – experts in their respective fields.

Organic & Millets National Trade Fair 2017 – a glance

- 194 exhibitors
- 260 stalls
- 75000 visitors
- 11000 farmers
- 14 Organic farmer federations/ 4 FPOs

Publications

- Organic Policy 2017
- Millet Recipe book
- Organic Directory
- Exhibitors Catalogue
- Bengaluru Organic/ Millets outlets & Restaurants map

Outcomes

Business potential worth Rs.100 crore

Short term business worth Rs.45 crore

45 buyers with a long term business potential

16 MOUs signed.

A GLOBAL REVOLUTION

The global quest for nutritious food, security of farmers, sustainable agriculture and conservation of environment is fuelling a revolution in organics and millets. Globally, over 43.7 million hectares are organic, with over 2 million producers from 172 countries. The total area under organic cultivation and the global food market are increasing at 10 & 12% respectively. Global organic trade is estimated to reach 100 billion by 2020.

What is Organic farming?

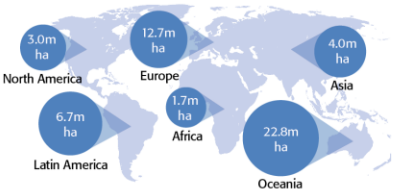
Organic farming primarily aims at cultivating the land and raising crops in such a way, as to keep the soil alive and in good health.

FAO defines Organic agriculture as *'a holistic production management system which promotes and enhances agro-ecosystem health, including biodiversity, biological cycles, and soil biological activity'.*

According to International Federation for Organic Agriculture Movement (IFOAM)*"Organic Agriculture is a production system that sustains the health of* ***soils, ecosystems*** *and* ***people****" and is based on the* principles of health, ecology, fairness and care.

The World of Organic Agriculture 2015

Organic Land 2015

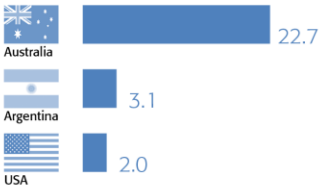


50.9m ha Organic farmland

179 Countries with organic farming

+14.7% From 2014

Top 3 countries (land in millions of hectares)



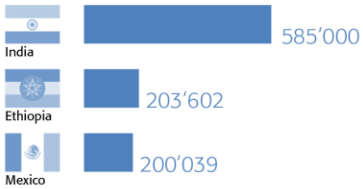
Organic Producers 2015

Number of organic producers is increasing

2.4 million Organic farmers

+7.2% From 2014

Top 3 countries (number of producers)

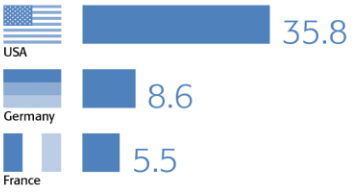


Organic Market 2015

The global market is growing and consumer demand is increasing

Approx. 75 Global organic food market in billion euros

Top 3 countries (market in billion euros)



Source: FiBL survey based on national sources

More information: www.organic-world.net

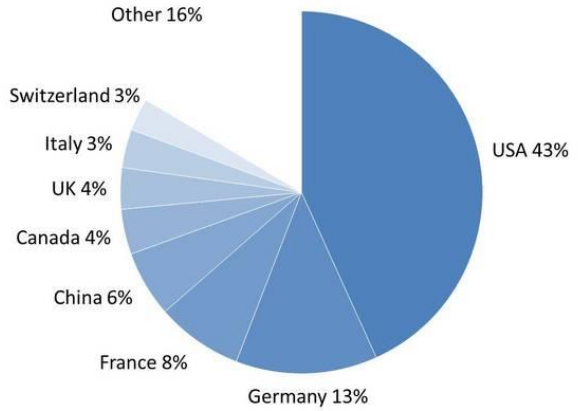
FiBL

www.organic-world.net/yearbook/yearbook-2017.html

Global market: Distribution of retail sales value by country 2014

Source: FiBL-AMI survey 2016, based on retail sales with organic food

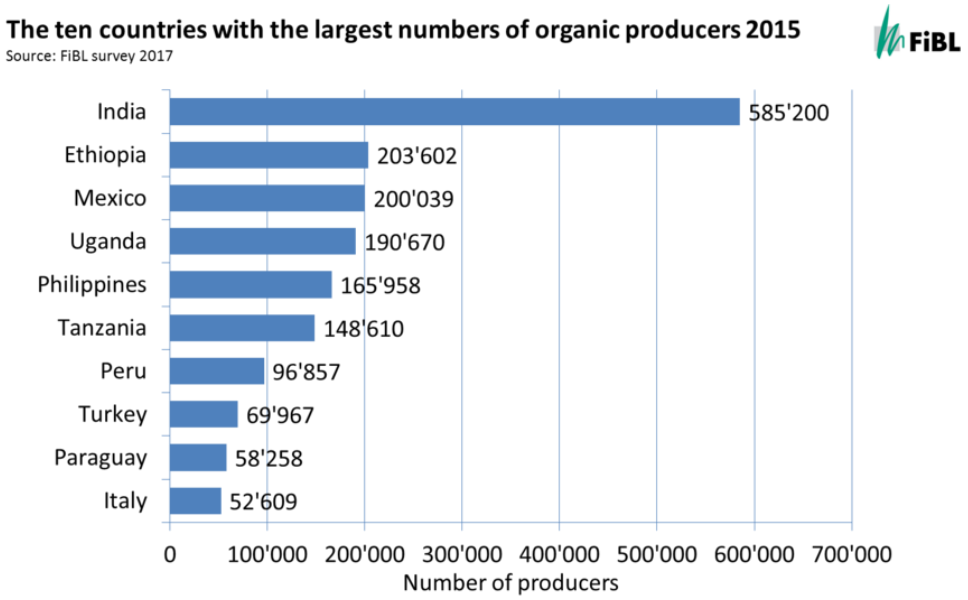
FiBL

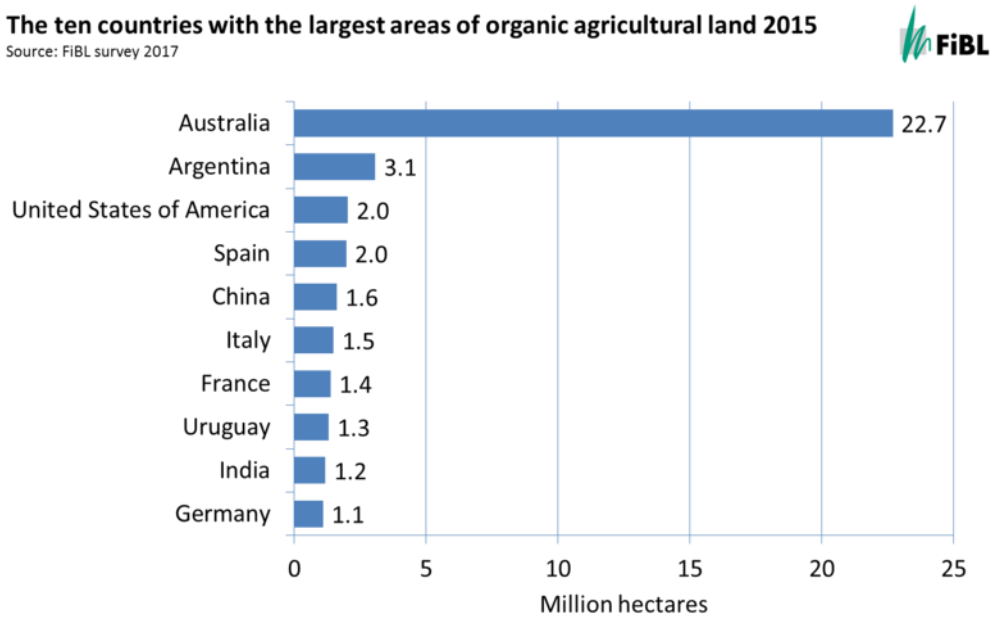


THE GLOBAL ORGANIC FOOD MARKET

The global organic food market which is estimated at USD 90 billion in 2015 has been growing at an average CAGR of around 12% for last 14 years. Europe and North America together generate about 90% of the global organic food sales. United States leads the market with a market size of over USD 39 billion followed by Germany USD 11.2 billion and France USD 6.7 billion.

The largest organic market in EU is Germany with growth rate of over 7%; and together with France they represent over 50% of the EU organic market.





ORGANIC POTENTIAL - INDIA

Organic agriculture has seen a significant growth in India, especially in the last 8-10 years. The area under organic farming with certification has grown from 42,000 ha during 2003-04 to11,00,000 ha in 2016.

The markets for organic products are growing faster with the global demand increasing at 20-25 % p.a (and India's markets growing at even 40-50%). The worldwide sales crossed US $ 80 billion and are expected to reach US $ 100 billion by 2017. The trade estimate in India shows that the market for organic products has crossed Rs.4500 crores (exports at Rs. 3500 crores and domestic markets at Rs. 1000 crores). The market in India will touch Rs. 10000 crores (USD 1.50 billion) by 2020.

India produced around **1.35 million MT** (2015-16) of certified organic products which includes all varieties of food products namely Sugarcane, Oil Seeds, Cereals & Millets, Cotton, Pulses, Medicinal Plants, Tea, Fruits, Spices, Dry Fruits, Vegetables, Coffee etc. The production is not limited to the edible sector but also produces organic cotton fibre, functional food products etc

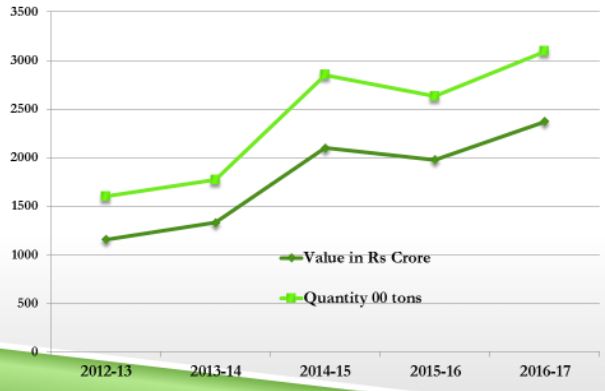
Among all the states, **Madhya Pradesh** has covered largest area under organic certification followed by Himachal Pradesh and Rajasthan.

Status of Organic Agriculture in India (graph)

Certified organic – an overview (2017)

Total area under organic	44.52 lakh ha
Farm Area registered	14.438 lakh ha
In-conversion	7.94 lakh ha
Organic	6.486 lakh ha
Total operators	6674
Individuals	1512
Grower groups	3315
Total farmers	10.92 lakh
Total Processors/Traders	885/889
Total Production (Farm)	11.80 lakh ton
Total production (Wild harvest)	0.21 lakh ton

ORGANIC EXPORTS



CATEGORY WISE EXPORT (2015-16)

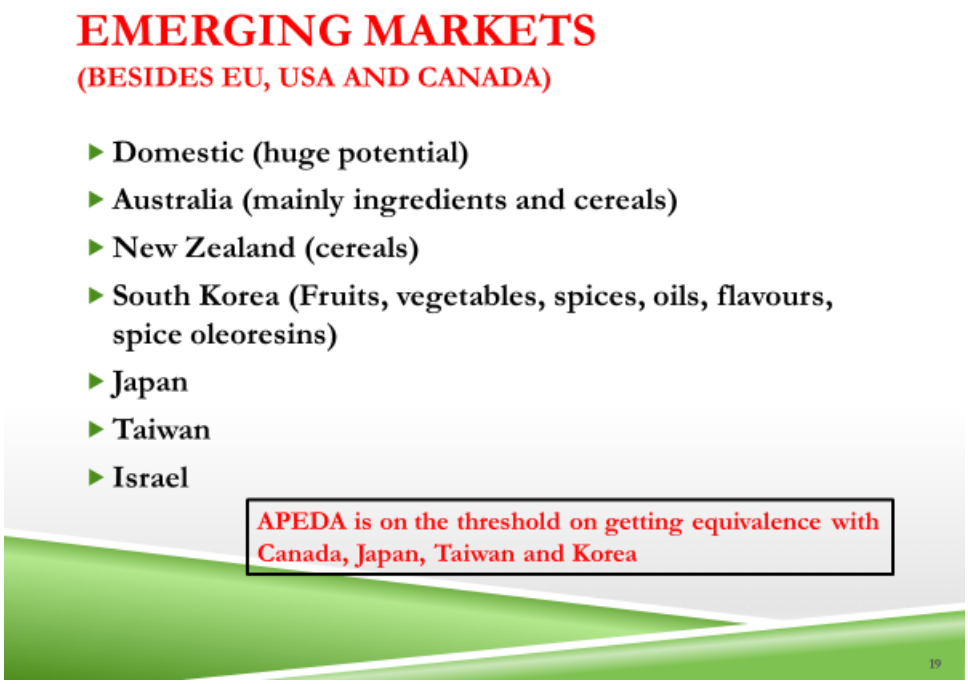
Rank	Crop commodity	Quantity in lakh MT
1.	Oil seeds	1.32
2.	Cereals and millets	0.44
3.	Processed foods	0.67
4.	Tea	0.054
5.	Pulses	0.048
7.	Dry fruits	0.024
8.	Spices and condiments	0.030
9.	Medicinal	0.022
10.	Coffee	0.022

Total Exported quantity	2.64 lakh tons
Export value realization	1900 crores (Rs)

TRENDS OF EXPORT IN 2016-17

- Total Exports (quantity) 3.039 lakh tons
- Total Export value in Rs 2478 crore (370 mi $)
- Important destinations

European Union	1114 crore
USA	974 crore
Canada	193 crore
Switzerland	56 crore
Australia	42 crore
Japan	20 crore
S. Korea	09 crore
New Zealand	08 crore



Source: APEDA

KARNATAKA -#GO ORGANIC #LET'S MILLET

The Government of Karnataka, realising the importance of organic agriculture as early as in 2004 has brought out a State Policy on Organic Farming and has implemented several schemes and programmes to promote organic farming. In accordance with this, the State has witnessed a steady growth with an increase in certified area from a mere 2,500 ha during 2004-05 to 93,963 ha as on March 2016. **Presently, Karnataka ranks fifth in the country in terms of certified area and third in terms of total certified annual production.**

SavayavaBhagyaYojane(SBY):

SavayavaBhagyaYojane is implemented in 566 hoblis of the state benefitting 53829 farmers and bringing an area of 63677 hectare under organic cultivation. In each project areas (100 ha) assistance is being given for the establishment of organic manure production units viz., Vermi-compost, Compost, Bio-digester, Azolla, cattle urine collection pits, cement structures for production of liquid-manures/ panchhagavya/ jeevamruta/ beejamruta. Assistance is also being given for flooring of cattle sheds for collection of urine & dung. In addition to these, organic manures viz., green manure seeds, concentrated manures, oilcakes, bio- fertilizers are being distributed to the farmers at subsidized rates. Also, assistance is being provided for cluster level collection, grading, packing, branding and sales of organic produce.

The entire area under SavayavaBhagya Yojana has been brought under group certification programme through Karnataka State Organic Certification Agency (KSOCA).

"**Market Based Specific Organic Crop Cluster Development Programme**" is implemented from 2017-18 under SavayavaBhagyaYojane with the focussed attention to provide proper linkages between producers and consumers by strengthening the supply chain mechanism by supporting activities related to production, collection, grading, value addition, processing, packing, brand development, whole sale and retail marketing of organic produce.

Paramparagat Krishi Vikas Yojana (PKVY):

The state has initiated the implementation of the Centrally Sponsored Scheme "Paramparagata Krishi Vikasa Yojana" from the year 2015-16. The programme is being implemented in all the districts & Taluks of Karnataka in project areas of 50 acres (clusters) each. A total of 545 crop-specific organic clusters @ 3 clusters/taluk have been selected throughout the state covering an area of 27,250 acres benefiting 25,968 farmers in the state. Participatory Guarantee System (PGS) certification is adopted in PKVY implementation area.

Publicity and Creation of Awareness in Organic Farming:

The state has brought out a directory having details of all stake holders of organic farming. Separate Package of Practices for organic farming has been brought out for several crops and also model farms have been established by the State Agriculture Universities. Further, to create awareness in organic farming separate pavilions are being established in "Krishimelas" of State Agriculture Universities. Karnataka also participated in International Organic Trade Fairs with separate pavilion providing opportunity to organic farmers' groups to establish marketing linkages for their produce. Organic and Millets Melas are being organised in district head quarters throughout the state.

Karnataka Organic Farming Policy 2017

Karnataka State policy on organic farming 2017 was released during the National Trade fair in 2017. The policy is a revision of the 2004 version, incorporating new objectives and strategies to create more opportunities for the farmers of the state to meet the growing demand for organic food in the market. The new policy focuses on providing proper linkages between producers and consumers, strengthening the supply chain mechanism and supporting activities related to collection, grading, value addition, processing, packing, brand development, whole sale and retail marketing of organic produce.

Karnataka: Millet capital of India

Karnataka is promoting millets as nutri-cereals that are good to eat and grow and kind on the planet. The perception of ragi (finger millets) and jowar (sorghum), the

principal millets of the state, as food of the poor is changing mainly among those with lifestyle diseases. Karnataka has developed a brand called “Siri,” which means “rich” in Kannada, and is calling millets ‘siridhanya’ or rich grains. Karnataka started implementing distribution of millets through PDS -where the grains are sourced and distributed locally.Today, Karnataka is one of the leading producers and consumers of millets in the country. It also stands at the top of the market with a huge demand for millets. The state government is trying to make millets 'The Food of the Future' through various initiatives and ensuring farmers get their due remuneration. It is procuring Ragi& Jowar by giving a bonus of 20-25 percent above the MSP from farmers.

Regional Federations

To facilitate systematic marketing of organic produce, Govt. of Karnataka has facilitated setting up of 14 regional federations of organic farmers’ associations throughout the state. The village level farmers’ associations and clusterswere formed into 14 district level regional federations and registered during 2015-16.

Table: Federations’ progress

SMART FOODS – MILLETS

India is the largest producer of millets in the world, and accounts for more than 40 percent of the global consumption. Millet cultivation is the mainstay of rainfed farming which provide livelihood to nearly 50% of the total rural workforce and sustain 60% of cattle population in India.

Millets are most unique amongst cereals. Millets grow under dry conditions, can performs well with relatively poor soils and require low inputs. They are a staple food with superior nutritional qualities compared to other cereals. In India, for the poor, for instance among tribal people residing the highland areas of North East, and for farmers in dry areas including the Deccan, central India, western Indian states such as Gujarat and Rajasthan, and the western ghats, millets have long acted as a source of nutritional supplement. Used as dual-purpose crops (food and fodder), they make strong economic sense in mixed farming systems. In addition, millets sequestrate carbon, thereby adding to CO2 abatement opportunities, contribute to improved agro-biodiversity by their rich varietal diversity, allow for mutually beneficial intercropping with other vital crops, and have significant cultural value due to their long history.

Millet grains contain higher protein, fibre, calcium and minerals than the widely consumed fine cereals, and can ensure nutritional security to the poor people who cannot afford a variety of food items in their diet. A combination of factors like low remuneration as compared to other food crops, lack of input subsidies and price incentives, subsidised supply of fine cereals through Public Distribution System

(PDS), and change in consumer preference (difficulty in processing, low shelf life of flour and low social status attached to millets), have led to shift from production of millets to other competing crops.

Millets are termed as the last standing crop in times of drought and as wonder grain that has a capability to enhance nutritional security in the country. Despite this, the consumption and cultivation of millets have been on the decline, greatly due to a lack of awareness around them.

Bringing millets into mainstream of agriculture and diet is the challenge ahead. Need of an hour is to focus on awareness, creation of consumption demand, enhancing cultivation, conservation and commercialization of small millets in a integrated approach is very much crucial.

Background

A total of about 18 m tonnes of millets food grains are produced from nearly 16 m ha area, which constitutes 7% of national food grain basket . Bajra is grown in about 8.2 million hectares yielding 9.6 million tons, followed by jowar (6.4 m ha, yielding 5.9 m ton) and ragi (1.2 m ha, yielding 1.9 m ton) and other millets (0.7 m ha yielding 0.4 m ton). These crops are grown for both grain and fodder purpose. Much of the grains are consumed at house hold levels and the rest goes for industrial uses including for poultry feed, food processing and breweries. Some quantities are also get exported as seed, bird feed and processed food items. At global level, India is the leading producer of millets producing 41% of bajra from 28% of global area under the crop and 7% of jowar from 13% of global area under the crop. Ragi, little millet and kodo millet are mostly grown in India, whereas maximum area under foxtail millet (4-5m ha) is in China and proso millet is grown in Eurasian countries.

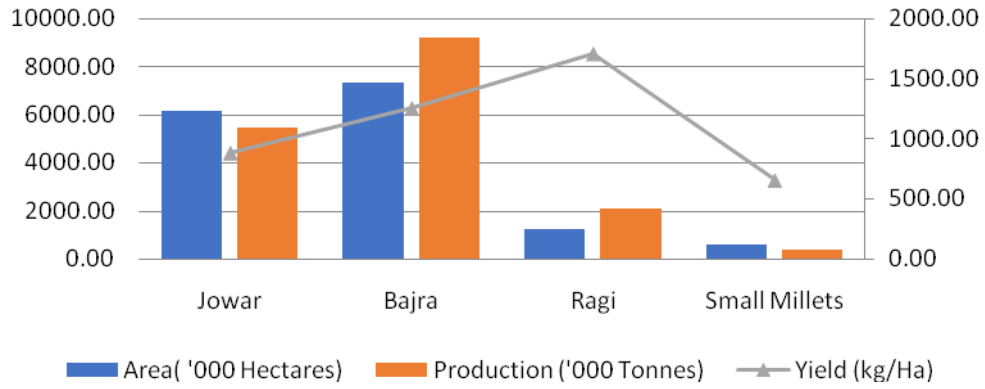
Millet crops are grown in low rainfall (200-600 mm) areas. These crops, being drought tolerant and highly adaptable, are highly suitable for dryland agricultural ecosystems and some of them are important in hill and tribal agriculture. Since centuries, the millets have provided food and nutritional security to the populations in the disadvantaged geographical regions. These food crops are unique as they require less water to grow, mature early and are cultivated in low input conditions. Agronomic advantages are that they are highly adapted to low rainfall conditions, able to withstand fairly long dry spells, recover fast after delayed rain, make them good contingent crops. Millets are highly resilient in adapting to different ecological conditions; ideal crops for climate change and contingency plantings. Being C4 plants these are more environment friendly with high water use efficiency and low input requirement, but equally responsive to high input management. Besides being farmer-friendly, the unique nutritional properties of millets, i.e., high fiber, quality protein & mineral composition, being called as “nutri-cereals”.

Estimates (Mean of 2010-11 to 2014-15) of Area, Production and Yield of Millet Crops in India

Crop	Season	Area (million ha)	Production (million ton)	Yield (kg/ha)
Jowar	Kharif	2.53	2.85	1126
	Rabi	3.83	3	783
	Total	**6.36**	**5.85**	**913**
Bajra	Kharif	8.16	9.56	1172
Ragi	Kharif	1.2	1.95	1621
Small millets	Kharif	0.72	0.43	596
Total Millets	**Total**	**16.45**	**17.79**	**1076**

Source: Directorate of Economics and Statistics, GOI

The below figure depicts the area, production and yield of millets in India during 2014-15.



[Source: Directorate of Economics and Statistics, GOI]

Though millets are one of the earliest grains that are being cultivated and consumed by the people, in the last few decades India and the world have witnessed significant decrease in the area under the millets crops. The total area, production productivity of jowar declined with CAGR of 4.4%, 5.8% and 1.4% respectively from 2010-11 to 2014-15. The loss in jowar area has remained more conspicuous since middle of 1980s at a rate of over 360 thousand ha per annum (Rakshit et al. 2014). The bajra area (7.3Mha) and production (9.2MT) also observed declined trend with CAGR 6% and 3.5% but productivity shown positive trend with CAGR of 3.1%. Ragi and other small millets also have shown similar declining trend in area and production with CAGR -1.1%, -1% and -7.7%, 3.2% but productivity observed slight positive growth of 0.1% and 1.2%. In India total area under the millets crops declined with CAGR of

5.4% annually from 2010-11 to 2014-15 and the production of total millets also declined at 4 % annually. Since the annual decline in the production was less than the loss of area under crops, the productivity of the millets witnessed slight increase in the last five years with CAGR value of 1.2 %.

Among the states, maximum area under millets is in Rajasthan (5 m ha; 87% under bajra) followed by Maharashtra (4 m ha, 75% under jowar) and Karnataka (2 m ha, 54% under jowar, 32% under ragi) .

Though India is the largest producer of millets in the world, between 1961 and 2012,there has been drastic reduction in the area under cultivation of millets but due to productivity gains in some varieties, total production of millets showed some increase despite shrinkage of area.

The main reasons for decline of the millets crops in India are low remuneration as compared to other competing crops, lack of input subsidies and price incentives, subsidized supply of fine cereals through PDS, and change in the consumer preferences (NAAS, 2013). These factors had led to shift from production of millets (jowar in particular) to other competing crops such as soybean, maize, cotton, sugarcane and sunflower in the country as a whole.

Millets are smart foods

a. **Good for the consumer:** they can help overcome some of the biggest nutritional and health problems (iron, zinc, folic acid, calcium, diabetes and more);
b. **Good for the planet**: they have a low water footprint, are able to survive in the hottest driest climates and will be important in coping with climate change, and more;
c. **Good for the farmer**: can increase yields up to 3 fold, have multiple uses (food, fodder, fuel), and are typically the last crop standing in times of drought being a good risk management strategy for farmers.

Millets for the management of lifestyle disorders

Recent Research findings pointed that millets show anti-diabetic properties which is due to the presence of slow digestible starch (SDS) in good amounts, prolongs digestion and absorption of carbohydrates in intestine. Another study also points to the fact that blood glucose level showed considerable reduction of non-obese patients with non-insulin-dependent diabetes mellitus (NIDDM), who consumed sorghum bran papadi (Shinde, 2004).

Pearl millet is also proven to effectively help in maintaining the blood sugar level constant in diabetes patients for a long period of time. Finger millet based diets have shown lower glycemic response due to high fiber content and also alpha amylase inhibition properties which are known to reduce starch digestibility and absorption (Kumari and Sumathi, 2002). All small millets have been proven excellent anti-

hyperglycemic activity (Sireesha*et al*., 2011; Park et al., 2008). Millet based foods also help to obtain better nutrition and as well as considered as preventive medicine for diabetes as they are also rich source of protein and other nutrients. Thus, millet consumption helps in the prevention and control of diabetes.

Consumption pattern of nutri-cereals

Sorghum and other millets are the staple food of western and central regions of Maharashtra and the northern region of Karnataka and Andhra Pradesh. The annual per capita consumption of sorghum is declined by 75% in urban areas, and 87% in rural areas during 1972-73 to 2011-12.

In the last two to three decades sorghum grain, especially sourced from kharif season are diverted to industrial uses such as livestock and poultry feed, starch, potable alcohol and ethanol production due to poor quality and mould affected grains.

The declining trend in sorghum consumption and other nutritious cereals in general is attributed to the shift in dietary patterns of consumption towards a balanced diet that includes livestock products, fruits and vegetables (Chand, 2007) which is mainly driven by an increase in income and urbanization wherein people are too busy to spend much time in preparation of their daily diet. Secondly, the shift is due to the consumption of fine cereals which are supplied through PDS at subsidized prices.

Bringing millets into Mainstream of Agriculture and Diet

Researchers, public policy advocates, government agencies and NGOs along with the millet farmers from across the country through their collective campaign and continuous dialogues with central government made it possible for millets and has given the focus they deserve; the coarse cereals of the dry land population of India to enter Public Distribution System(PDS) through a provision made for them in the Food Security Act, 2013. Several years of efforts made by the millet farmers and their demands to make space for their indigenous crops were thought to be fulfilled when the Act was made three years ago. However the act was unable to provide such status to millets as expected; except in the State of Karnataka.

While attention for millets is increasing, it is important to revitalize the nutri-cereals cultivation in the country. The only way is to have a focused and integrated approach to aim, strategize and implement the programme for doubling millet farmers' incomes. Various intervening points discussed in the previous sections are summarized below for policy formulation to attain the underlying goal of doubling the millets farmers' income by 2022.

- **Firstly,** Given the inelastic supply nature of lands, significant income generation of millets farmers can be done by productivity enhancement of millets through reducing yield gaps, including fallow and wastelands under millets cultivation, improvement in TFP through technological breakthrough and development of

HYVs and hybrids, development of bio-fortified millets varieties and establishment of seeds village/seed hubs.

- **Secondly**, millets farmers' income in dryland conditions can also be effectively increased by reducing the cost of production.
  - ✓ The cost of cultivation of millets can be reduced by adoption of recommended package of practices and increased resource use efficiency, technological upgradation and adoption of water saving technologies.
  - ✓ Resource use efficiency on the other hand can be increased by adopting conservation agriculture and blending indigenous and modern technologies of millets cultivation. Adoption of integrated farming system models with inclusion of millets for cultivation in post-kharif rice fallows will increase cropping intensity in dryland agriculture.

- **Thirdly**, generation of demand for millets is most important point to absorb the additional output generated with above mentioned ways. Generation of demand though value addition and millets sub-sector development will generate remunerative prices to the farmers and double millets farmers' income.
  - ✓ Value addition for demand creation can contribute up to 30% of additional income required for doubling millets farmers' income by 2022. Demand for millets and value-added products can be done through various policy advocacies.
  - ✓ Development of product specific varieties, creation of farm level grading and standards, fabrication of primary processing machinery and conducting bioavailability and shelf-life studies will create demand for millets in the country. Setting up of nutrition-cum-referral labs on nutrition in IIMR will significantly contribute towards "branding of millets value chain" in the country.
  - ✓ Addition of nutri-rich fodder in the millets value chain and other millets subsector development will significantly help in doubling the farmers' income.

- **Fourthly**, by formulation of steady price policies, expanding the coverage of small millets under MSP, more procurement of millets through MSP and providing insurance coverage to all the nutri-cereal crop enterprises.

- **Fifthly**, creation of marketing infrastructure with innovative supply chain models, online marketing platforms and others will significantly increase the millets farmers' share in consumer rupee.
  - ✓ Federating the millets farmers to form into FPOs will sufficiently increase the bargaining capacity of millets farmers. These FPOs need to be supplemented with provision for farm gate level processing of millets with technological backstopping from IIMR. The start-up entrepreneurs can be

linked with FPOs for creation of innovative supply chain model and bringing remunerative prices to the millets farmers.

- ✓ Thus the policies should aim at creation of FPOs with regard to millets with provision of small warehousing facilities for incentivising them to attain the goal of doubling the farmers' income.
- ✓ The horizon of contract farming can be explored under millets sector in the dryland parts of the country to provide price security to the farmers. This will also bring out timely and systematic supply of quality millets grains in the market.

❖ **Lastly**, improvement in the terms of trade (ToT) of agriculture, extending credit and insurance support to the farmers and providing tax exemption to the millets farmers and entrepreneurs will boost the millet farmers' income and production in the coming years.

Karnataka: Reviving the Smart Grain

Department of Agriculture, Government of Karnataka making an effort in reinventing the past as millets had gone out of fashion and trying to make millets the food of the future through various initiatives and ensure farmers get their due remuneration as the crop can be grown with less water.

ORGANIC CERTIFICATION

Certification of Organic Products:

Certification is a process of auditing the organic agricultural methods followed by the organic farm by an independent agency with reference to some established standards.

In our country, the National Programme for Organic Production (NPOP) has set standards for organic production. The 'standards' are the minimum required practices to be followed for the resulting product to be called as 'organic'.

Is it necessary to undergo certification process for all organic production?

It is a voluntary step taken by an organic farmer or project. If the interest of the farmer is only for improving fertility of the soil or saving the environment from pollution of soil and water with chemical contamination or for growing organic food for own consumption, there is no need for certification.

If a farmer wants to export his product to overseas markets, then the organic certificate is a must. Without such certificate, he cannot export organic products from India. Even in the domestic market, with the advent of retail chains, the opportunity to market certified organic food is quite promising. Apart from the certificate from the Accredited certificate agency, the Government of India has introduced **Participatory Guarantee System (PGS) Certificates** for small farmer groups who would like to market their organic products direct to consumers or retail chains. This is a decentralized organic certification system to help small organic farmers to market their products authentically. The details regarding this scheme are

available with all agricultural extension offices in the country. Details can also be obtained from the Website: www.pgsindia-ncof.gov.in

In the U.S. and Europe markets, the sales of organic products are regulated in the domestic market by strictly observing the labelling requirements. Such a regulation is expected in our country also in the near future for domestic marketing.

What are Organic Standards?

Organic Standards are some minimum required organic practices to be followed by the organic farmers so that the farm can be called as Organic. Some of the practices are given below in brief;

- The conventional farms should undergo conversion to organic farm. The conversion period is 24 months from the date of inspection for annual crops like cereals, pulses, vegetables, oilseeds etc. It is 36 months in case of perennial crops like orchards and plantation crops.
- Soil fertility and nutrient management should be only with organic inputs. Organic inputs can be sourced from on-farm resources or off-farm materials as long as they are natural products and not chemicals. Generally, all organic products are based on plant, animal or microbial sources.
- Seeds and planting materials shall be sourced from organic crops.
- Crop protection from pests and diseases are carried out with materials originating from plant, animal and microbial sources. Chemicals are prohibited.
- All branded nutrients and plant protection products should be approved by accredited Certification Bodies (CBs) for use in organic agriculture.
- Genetically Modified (GM) products are not allowed in Organic agriculture.
- Steps should be taken to avoid contamination of land, water, air and the organic products with chemicals and non-organic substances.
- The organic farm should have an organic system plan containing all the production practices followed in the organic farm.
- All farm activities should be properly documented and should be made available for inspection by the CBs.
- More details can be obtained from the National Programme for Organic Production (NPOP) guidelines available in APEDA website www.apeda.gov.in under publication section.

THE WAY FORWARD

The vision of the state government is to transform agriculture in Karnataka into a sustainable, remunerative and respectable occupation and to enable the farmers f the state to reap the benefits of dynamic market opportunities and bring organic farming into mainstream agricultural production, which would help transform at least 10% of the cultivable area of the state into organic by 2022.

Thrust areas

- Expansion of area under organic farming and millet cultivation
- Market oriented crop cluster development
- Creation of mega infrastructure facilities at production points for value addition and processing

- Encouragement and facilitation of public- private partnership among farmers organisations/ federations and marketers for production, processing and marketing
- Encouragement for opening of retail outlets in Bangalore and other cities and towns of the State
- Promotion of the State brand of organic products and millets at national and international level.
- Encouragement for eco and agri-tourism