

PADDY

SAVE OUR RICE CAMPAIGN

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DROUGHT IS HERE TO STAY?

The country is going through unprecedented climate change and all states (not only the traditional drought hit states) are facing drought. This time drought has hit not just farmers and agriculture, but also the town/city dwellers, including people living and working in air conditioned offices and homes. Mercury is rising and deaths due to heat stroke are being reported even from states like Kerala (which has never had this happen before).

In many states this is also the election time. Candidates are busy canvassing for votes and experiencing the heat walking through concrete jungles and un-shaded roads in the scorching sun. Nevertheless, they are not seriously addressing the issue of drought. One cannot understand how much bigger the crisis has to become for them to take it seriously.

In the last 15 years, India has had three drought years — 2002, 2009 and 2015, when annual rainfall was 15-20 per cent below par and all the three years saw sluggish agri output. Official data shows that drought-prone area of the country has increased by 57 percent since 1997! Around 50 million people are affected by drought every year.

In a recent consultation on this issue at the Indian Social Institute, New Delhi, Sunita Narain, Director of CSE said, "Drought in the 1990s was essentially the drought of a poor India. This 2016 drought is of richer and more water-guzzling India. This classless drought makes for a crisis that is more severe and calls for solutions that are more complex. The severity and intensity of drought is not about lack of rainfall; it is about the lack of planning and foresight, and criminal neglect. Drought is human-made."

The country is already facing a drinking-water crisis. Drought and food security are

directly linked. The neglect of this can have far reaching impact on both water and food security. Drought-prone districts account for 42 per cent of the country's cultivable land. We need a long term strategy to combat drought and climate change and an impactful short term action plan.

Many farmers and organizations are showing the direction. In many villages, farmers still follow traditional water management practices and are surviving. The new clan of organic-ecological farmers has also developed many methods of water conservation-mulching, composting, mixed cropping etc.- with good results. Farmers are also realising that traditional varieties of seeds perform better in such situations and they are forming seed networks. However both state and national governments have not started appreciating such innovations and their solution is to pay some financial compensation in the time of crisis and there ends the matter. This is not at all adequate and is of no help in the long run. A lot of current schemes and budgets have to be pulled together for effective planning and implementation so that both water security and food security can be ensured in the years to come.

Citizens need to be educated to shift from the current (so called cheap, but in real terms more expensive) food system so that they can engage with farming and farmers to work on food systems. Governments have to promote local organic food production and marketing systems to reduce wastage and to reduce the consumption of fossil fuels and water. The Save Our Rice campaign is trying to develop capacity among farmers and consumers through training programmes, workshops, seed and food melas since many years to address many of these issues.

PADDY Team

BLACK RICE- OUR DELICIOUS, HEALTHY HERITAGE

Sreedevi Lakshmi Kutty

My first sight of black rice was a few years back during a seed festival organized by the Save Our Rice Campaign. I was fascinated by the purple black grain glistening in my palm. I did not buy it then nor did I attempt to cook it. That happened a few years later. By then I had become involved intensively in the Rice Campaign and passionate about traditional rices. We had taken to using 10-12 varieties of rice a year. Finally we attempted a sweet payasam with Burma black rice, which I purchased from a seed festival organized by Sahaja Samruddha. When cooked the rice became more purple than black, sticky, and tasted heavenly with just the addition of jaggery. We added a bit of ghee just for the fragrance and it was just out of this world!

When we talk to friends about our passion for traditional rices, the stock responses we get from them range from, isn't rice fattening, doesn't it cause diabetes to I have completely gone off rice and so on. All the ills of modern day diets are attributed to rice and we think that by simply eliminating rice from our menu we will be perfectly fine. I think this is an overreaction to the modern day scourge of polished white rice which is now the only thing recognized as "rice". Rice has also become a reviled water guzzler, as the biggest source of climate change causing methane emissions. But the story is not this black and white!

The white polished rice that we eat today is far from the real nutritious grain which feeds half the population of the world. It has been completely de-natured by modern day processing, varieties selected only for yield and

convenience have replaced the 1000s of native cultivars, which have many properties in terms of crop resilience and superior nutritive value. These land races have evolved through farmer selection over hundreds or thousands of years. In the last few decades we have replaced most of them with a small selection of improved varieties chosen mainly for yield and responsiveness to chemical inputs. The traditional red rices and black rices that were grown had almost disappeared from our paddy fields.

However, in the recent past there has been some positive change. With increased uptake of organic farming these rice varieties are experiencing a revival, among farmers and consumers. Many people are re-adopting red rices in their diets and in their farms. However, black rices are still an unknown commodity except a couple of popular ones.

BLACK RICE:

The first stories of black rice emerged out of imperial China where it was forbidden for common people to have it, only royalty were allowed to eat it. Farmers grew it for the emperor and were forbidden from eating it themselves. Many black rices have their origin in South East Asia, where it is still very popular. Recent research has revealed that black rices have many nutritional, medicinal properties and are aromatic.

It is said that all black rices originated from China or Japan (that is contested) around 10,000 years ago. They are found with long grain and short grain, with the distinctive purple-black colour and with amylopectin (that

THE SAVE OUR RICE CAMPAIGN AND SEED CONSERVATION:

It's been a wonderful year for Thanal and the Save our Rice Campaign in Kerala. Since January we have had three Seed Festivals in three districts - Arangottukara in the Thrissur-Palakkad border, Payyannur in Kannur Dst and Kunnamangalam in Kozhikode Dst. The next one was on 12-13th March at Vellangalloor in Thrissur Dst. This was co-organised by the Vellangalloor Panchayath, Salim Ali Foundation (Dr Vijayan is Chairman), Thanal and supported by NABARD. The next one is on 27-28 May in Wayanad.

Four Seed Festivals were supported by NABARD, a welcome step from the agency. Usually the seed festivals have exhibition of seeds, sales and sharing of traditional varieties of paddy, vegetables, tubers, leafy vegetables etc. It will also have a traditional organic food festival, poster exhibition, organic farmers meet, seminars, cooking sessions, showcasing indigenous cattle and cultural programmes.

The initiatives taken under the Save our Rice Campaign to collect and conserve seeds and spread it through seed savers network is expanding and more and more farmers are opting for them with organic farming. After all, it is this spread that will ensure conservation, not the ice-banks.

Sridhar, National Co-coordinator, SOR

makes it sticky when cooked) and high levels of anthocyanin. The fibre rich black rice contains more Vitamins B and E, niacin, calcium, magnesium, iron and zinc than white rice and has anthocyanins that act as detoxifying agents. Black rice contains more anthocyanins than many dark fruits, has anti-inflammatory properties, has antioxidants, and is rich in fibre, iron and other minerals and are mostly aromatic. "The rice arrests proliferation of cancerous cells, by inducing death of cancerous cells (apoptosis). It has anti-inflammatory properties and has anti-angiogenic effects (inhibition of the formation of new blood vessels which encourages tumour growth),"¹ according to research by a Chinese cancer specialist. It is also supposed to have anti-carcinogenic properties and its bran can soothe allergies.

What is interesting about this rice is that almost all of these are also aromatic. If these paddy varieties are grown with chemicals (fertilizers or pesticides), they tend to lose their aroma. The aroma also varies according to the soil where it is grown. Of these black rices very few have a black core, they have black bran with a white core. Some of the Chinese black rices have black core as well.

Sticky rice is popular in South East Asia and not surprisingly many black varieties have their origin there, for example Burma black as the name suggests is from Myanmar and Black jasmine rice is from Thailand. Many varieties have their origin in Mainland China.

BLACK RICE IN INDIA

In India we have numerous black rices growing in different parts of the country. It is most extensively grown in the north east where it is extremely popular and eaten extensively. The sweet made from black rice is called Chak-hao (meaning tasty rice) and is popularly had during feasts.

The North Eastern state of Manipur is particularly famous for black rices. According to Manipuri farmer Devakanta, who is an award winning seed conserver, farmers grow about 20 varieties out of which Chakhao Poireiton is supposed to be the best. Devakanta is motivating about 200 organic rice farmers in Manipur to grow black rice. It is considered to be good for people suffering from viral fever, chikangunea, dengue etc.

BISH MUKT HAAT IN KOLKATA

A Bish Mukta Haat is being organised in Kolkata and the Save Our Rice, West Bengal team participated in the event. The Haat had stalls of organic rices, vegetables, pulses, oil seeds etc. Besides some ornament by organic seed and organic handicrafts were also displayed in this haat. The SOR team carried their seeds and grains. Hundreds of consumers visited and bought organic rice and other items. This is the first time that the SOR team has participated in the event.

The SOR team decided to take part regularly in Bish Mukta Haat. The Save Our Rice will also be partnering in this event. The purpose of the event is both for sales and creating awareness among consumers. The SOR farmers will benefit from the sale of product and indirectly by creating awareness new people/consumers and will meet new one in every times because this haat organized different location in city. So there are vast possibility to spread over our organic message around the kolkata city.

Alaudin Ahmed, SOR West Bengal

Manipur has almost 10% of its paddy area under black rice; however poor yields and consumer ignorance about the rice are a deterrent for increase under area of black rice.

According to Soumik Banerjee associated with the Save Our Rice Campaign, "Black rice is already being grown by a number of farmer groups in West Bengal, Odisha and Karnataka. The most popular varieties are Kala Bhat and Burma Black. The farmers are able to get Rs 100-120 per kg for bulk orders and upto Rs 200 per kg for small quantities. Biswa Banga of Govt of West Bengal is retailing black rice at Rs 300 per kg through its outlets." He added that in Jharkahnd they are growing Kalabhat and Chak-hao since the last two years.

Dr Anupam Paul who manages the Agriculture Training Centre in Fulia and is an enthusiastic rice breeder says, "We grow Burma black, Chak-hao and Kala Bhat in our centre. People are slowly understanding the importance of black rice and demand is increasing. The West Bengal government is coming out with a small publication about black rice". Dr. Paul added that there is tremendous possibility for growing black rice in the Southern rice growing states as this rice is highly adaptable.

In terms of yield it is not too bad and the good prices makes it remunerative for the



Khochor (Santhali) made from Indigenous Paddy Straw used to store grains in Santhal Pargana Division in Jharkhand, can store seeds upto 1 quintal; the seeds are sealed mixed with leaves of Vitex, Neem etc

farmers. But marketing black rice in large quantities is a problem. In Bardhaman District of West Bengal, Kala Bhat under conventional transplant (under organic conditions) has shown yields upto 3.4 MT/ha. Handishala a black rice variety grown in Bargad district of Odisha yields 2.9 MT/ha under conventional transplant (under organic conditions). In 2015 Kala Bhat grown on a small plot of 20 sqm under SRI with organic inputs in Sundarpahari, Godda, Jharkhand showed a mean yield of 472 g per sqm.

In the south of India Karuppu kavuni, a medium grain black rice, possibly having originated in Indonesia or Malaysia is extensively used for making a rice based sweet (along with jaggery) called Chakkarapongal. The glycemic index of the rice is supposed to be so low that even in a sweet dish it does not cause a sugar spike.

Now organic retailers carry black jasmine rice, Burma black rice, Karuppu Kauni and other local black rices. Organic markets/shops are seeing increasing demand for these rices even though in the open market there is low awareness about these rices and only polished white rices reign.

I have always believed that agro-biodiversity can be conserved and promoted only if we eat the agro-diversity. Interest from people to consume these grains is what will motivate farmers to conserve these rare grains, multiply and grow these regularly. So the key

is to eat our way into agro-biodiversity! Enjoy the beauty and taste of black rice.

Try this delicious **black rice payasam**
recipe: Cook one cup of black rice and to the almost cooked rice add $\frac{3}{4}$ or 1 cup of jaggery and let it simmer on the stove while stirring. When the rice is cooked and the rice and jaggery is mixed add powdered cardamom, roasted cashew nuts and raisins for taste and as a final touch add a spoon of ghee. Stir it and let it simmer for a while and enjoy the purple, black, healthy, delicious dessert.

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Black Rice Payasam



Bijapoda (Odiya) made from bamboo structure lined with mud and leaves tied up by wild strings, to store seeds of small quantities in Malkangiri district, Odisha

THE THIRD KISAN SWARAJ SAMMELAN

The third Kisan Swaraj Sammelan took place in Hyderabad from April 1-3, attended by numerous people's movements, farmers' unions, farmers' cooperatives, non-governmental organisations and national/regional/state level alliances working on farming related issues. The three day sammelan discussed issues concerning farmers and farming. The gathering was addressed by many prominent leaders and activists like Medha Patkar of NAPM, Yogendra Yadav of Jai Kisan Andolan, Dr. Sunilam of Bhoomi Sangarsh, Devinder Sharma, Dr. Vijoo Krishnan of All India Kisan Sabha, Dr Rukmini Rao of Mahila Kisan Adhikaar Manch, Dr.Kothandaraman of Telugu Raithu JAC, Ajayvir Jakhar of Bharat Krishak Samaj and others.

The three day Sammelan also included a seed diversity festival from different states of India, where multitude of seed diversity was displayed. The participants engaged in the various sessions covering the different topics in depth, enjoyed the delicious organic food that was provided and met, greeted and shared learning and news. Participants from the various states updated others about the happenings in their state pertaining to agriculture, particularly sustainable agriculture-practices, policies and other developments.



Farmers exchanged seeds and news and everybody took photographs with friends, delegates and others. After three days of sharing people parted resolving to meet again another year.

The three day Sammelan resulted in a declaration, the full text can be accessed here (<http://www.kisanswaraj.in/>). The declaration touched upon issues like farmer income guarantee, tenant farmers' rights, relief and insurance against natural calamities, land rights and land acquisition, seed sovereignty, hazardous technologies like pesticides and GMOs, women farmers rights, ecological agriculture, water conservation, adivasi agriculture, free trade agreements and WTO, relief and rehabilitation of farm suicide affected families and support to farmers organizations.

SOURCE BOOK ON INDIA'S ORGANIC SEEDS

A Source Book on India's Organic Seeds written and compiled by Shamika Mone and published by OFAI has been printed after its official release by Ms. Maneka Gandhi at the OFAI convention in Chandigarh , 2015. The copies are now available for sale at Rs.150 per copy.

This Seed Catalogue is complete along with a separate volume of 200 additional pages of detailed information on varieties and descriptions of the seeds sourced from the different seed keepers whose work is described in this book. The second volume of 200 pages must be separately requested . Such requests will be entertained provided the costs of photo-coping these 200 pages is transmitted to OFAI with the request. To make it simpler we are ready to share the PDF on request.

Please place your request for volume I and II of the Seed Catalogue with myofai@gmail.com or shamikamone@gmail.com .

WHERE THERE IS WILL—THERE IS A WAY

Soumik Banerjee, Sundarpahari, Godda

Dantewada district located in southern part of erstwhile Bastar district of Chhatisgarh state, home to a number of indigenous communities who have for generations developed some of unique crop diversity adapted to the conditions of the region. Most of the paddy grown here is dependent completely on rains. It is simply broadcasted on unbunded uplands as the rains come and harvested as they mature. There has been little interest among the farmers to adapt to the “modern” methods of farming in spite of intermittent efforts by the government in terms of distributing fertilizers, seeds and pesticides. In early 2013, during a short survey in 3 villages in the district, I had come across more than 16 land races; most were short-duration broadcast paddy varieties.

The perceived limitations of the area – low uptake of chemical fertilizers, lack of irrigation, community primarily using bio-manures was converted into an opportunity to promote organic farming with indigenous varieties under the able leadership of District Collector- Sh K C Devasenapathi.

Vegetable cultivation in homestead plots were encouraged with 600 small holder farmers under – *Mocho Badi* program through innovative convergence of existing mainstream programs like MGNREGA, Agricultural Dept programs, IAP-BRGF and CSR support from

National Mineral Development Corporation (NMDC) as shown in figure below-

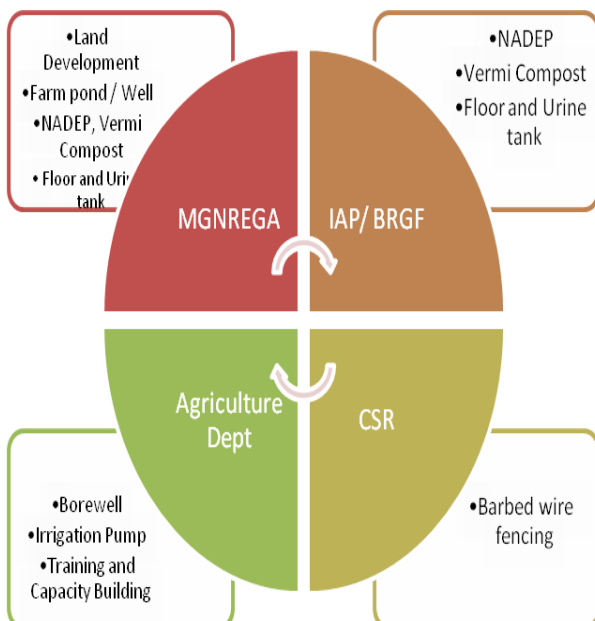
Since paddy was the main crop in the area-System of Rice Intensification (SRI) was taken up with organic inputs with 270 farmers across 177 acres in 2013. The following year 775 farmers across 470 acres had taken to organic SRI. A number of farmer training programs were organized giving practical demonstration of seed treatment using Beejamrit, preparation of Jeevamrit, Panchagavya, Fish tonic, NADEP and vermicompost, biopesticides – 5 leaf extracts



Organic SRI with Sindursingha (Scented Rice)



Urine Collection Tanks in cattle sheds



etc. Apart from this more than 250 NADEP tanks, concrete floor and urine tanks were constructed in cattle sheds, 1340 plastic drums for urine collection and manual implements like 1800 Ambika weeders and 400 Cycle wheel hoes were distributed. A number of cross and external exposure programs were also carried out. Jacob Nellithanam from Richaria Campaign was instrumental in motivating and providing

technical inputs; a number of capacity building programs with farmers on SRI and Organic

inputs were carried out under his guidance.

Under the Organic SRI program a number of unique indigenous varieties were promoted as shown in Table

Paddy Variety	Characteristics
Kalamali	Can be used for making Puffed Rice
Khuti Safri	Tasty, Fine rice
Khursobhog	Tasty, Can be used for making Puffed Rice, Rice Flakes
Chudi	Tasty, Medium grain rice
Lal Chudi	Tasty, fine grain
Javaphul	Scented, Soft, Easy to digest, Good for making sweets, Kheer etc.
Dubraj	Scented, Soft, Good for making sweets, Kheer etc.
Basabhog	Scented, Soft, Easy to digest, Good for making sweets, Kheer etc.
Sindursingha	Scented, Good for making Puffed Rice, Rice Flakes
Lal Dhan	Fine rice
Luchai	Red Rice

In order to give farmers a premium price as compared to the prevalent minimum support price (MSP), about 200 quintals of the paddy was procured by the district administration for creating market linkages to generate demand for these varieties and offer a better price for the farmers. They have also initiated steps towards Participatory Guarantee Systems (PGS) certification of the produce.

In order to encourage nutritionally rich millets which were gradually disappearing and giving way to hybrid maize, SRI practices were successfully tried out in finger millet (ragi) with organic inputs. Due to the absence of MSP and fair markets, the administration mobilized the Self Help Groups (SHGs) to procure the same from the farmers with support from Krishi Vigyan Kendra (KVK) and produce Ragi Malt for distribution in ICDS centres and schools. This not only encouraged ragi cultivation, but also generated additional income for the SHGs and provided nutritionally rich organic food to the children.

This is one of the rare examples of district administration taking up initiatives to promote indigenous varieties and organic farming, in spite of the pressures and targets to promote chemical intensive farming. The strong resolve, belief and commitment of the Collector and his ability to encourage and motivate the agricultural and other allied departments and create innovative linkages and convergence deserves great appreciation and all support from organic network in the country. The best practices adopted here need to be highlighted in interaction with mainstream agencies as a concrete example of what can be achieved Where the District has the WILL to go ORGANIC....

I am greatly thankful to Akash Badave-PMRDF, Dantewada who has been one of the pillars of the organic initiatives who helped organise my short visit and provided the information for compiling this narrative.

Dantewada update : Since the article was written there have been further developments. The farmers have applied for PGS certification and 45 groups with a total of 500 members have been formed. They have created a brand called AADIM for marketing . The farmers are sending their organic products to outlets in Kerala, Chennai, Hyderabad, Pune , Raipur etc. Seeds are also being distributed to farmers and farmer groups. A farmer producer company called Bhoomgadi Organic Farmers Producer Company is being registered.

MYDA- TWO RICE ONE FIELD

Soumik Banerjee

This is the traditional practice followed by the Gadaba communities in Koraput district of eastern Indian state of Odisha. The region falls in one of the most diverse rice ecosystems. The Bonda, Gadaba and Souras-folk communities residing in the area are considered pioneers in domesticating and improving cultivation of wild rice.

In Myda process- 2 crops of rice are grown together in the same field during monsoons (Kharif). The lowlands- Gedda, Bedda and Jholas remain submerged even after the end of monsoon; in March when different levels of lands get partially dried up- the Gadabas plough the land and broadcast 2 types of germinated paddy seeds at the rate of 1 Quintal/ha namely- Chipti (short duration-90 to 100 days maturing by June/July) and Kerandi (long duration- 280-300 days maturing by January) in the same field.

When Chipti matures in June-July, the Kerandi crop is also cut, thus reducing excessive growth and lodging. The water level increases with monsoons and reaches the maximum level in the deep lowlands- Jholas. At places where the crop rots due to excess water- vegetative propagation by splitting tillers from remaining Kerandi crop hills is practiced. As water level rises - Kerandi grows taller and if necessary the standing rice crop is again cut in September/



Maturing Kerandi Crop, -Porojakhuri, Koraput- Odisha (Sep 2014)

October, finally the Kerandi crop is harvested in December/January.

The Chipti yields about 0.5 MT/ha while Kerandi gives 2 MT/ha without addition of any external manures or inputs. The Chipti crop harvested in June-July meets the food needs of the community when no other grain is available.

However currently this practice has almost been forgotten as the seeds are largely not available; only in some of the remote corners of the region Myda still survives.

Thanks to farmers at Porojakhuri and the communities of Koraput who not only gave us rice that is food for billions today but have kept their unique ingenuity -Myda alive.

CENTRE FOR POLLINATION STUDIES, UNIVERSITY OF CALCUTTA

Applications are invited for admission into a 6 months' certificate course in Agroecology to be organized by the Centre for Pollination Studies in collaboration with Norwegian University of Life Science. The prospectus of the course may be downloaded from <http://cpscu.in/wp-content/uploads/2015/06/prospectus%20final.pdf> The course will begin from 1st September, 2016 and interested applicants need to apply with a letter of intent and CV by 15th July, 2016.

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