PADDY
A NEWSLETTER FROM THE SAVE OUR RICE CAMPAIGN
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Editorial

Denatured rice and threatened nutritional security

We knew it - the fact that polished rice is devoid of many essential nutrients and minerals. Now it has been proven by a study done by Dr. Mohan of Dr. Mohan's Diabetes Specialties Centre in Chennai, the paper has been published in the British Journal of Nutrition. The study says that, "rice used to be 2 per cent polished earlier; now it is polished to 8-10 per cent". Polishing removes bran and germ, which contain the fibre, protein, and Vitamin B-complex, whereas polished rice has only starch.

When did we start eating polished rice? Kerala always had parboiled red rice containing bran. Similarly, people living in the coastal Karnataka used to eat parboiled rice which was either pounded by hand or milled in a local huller. In Tamilnadu also people used to eat rice with bran. But in the last 20-30 years rice markets have been flooded with polished rice from the modern mills. This is a result of a policy shift in the seventies when the central government started pumping subsidies into modern rice mills. This resulted in the closure of thousands of local village hullers where farmers and agriculture workers used to get their paddy hulled and thus remained food secure.

Now, after 25 years, statistics show that diabetes has become a major health disorder among rice eaters. Apparently the two changes happened in parallel- use of polished rice and the spread of diabetes!

We in the south of India have been eating rice for at least 5,000 years and have survived through generations of healthy parents. There is no history of diabetes in most of the families. That has changed and now: 1 in 5 Keralites is diabetic, including children. We need to ask our policy makers about this decision to shift to polished rice supply - who gave them this advice and what was the reason?

On one hand we brought in milled and polished rice, thereby denaturing and destroying the nutrition in rice. On the other hand there has been increasing dependence on a handful of HYVs, in the belief that this will address our problem of food security. In the process we have ignored the vast treasure trove of around one lakh paddy varieties in the whole of India. Why did farmers in the past develop this many varieties of paddy? How did they do it? Now, why have farmers in the southern states lost many of their traditional seeds? Why then is there now a renewed effort to revive them? These are questions we need to examine.

There is also an allegation against paddy cultivation internationally and nationally that it contributes to climate change and is a huge water guzzler. This is mainly an issue with irrigated paddy. The case of rain-fed areas, which is the traditional paddy area and which continues to depend on rainfall, is different.

Global warming is no more a myth for farmers and they are experiencing unprecedented drought. It is being reported that paddy production will be at least 40 per cent less because of drought.

Where are the drought and salt and flood tolerant varieties which our farmers had developed? Do we see any potential to develop them so that farmers themselves can manage the production comfortably without adding to their economic loss?

In these circumstances we need to examine what the policy makers and the establishment tell us. They say that IR-8 was the revolution in Indian agriculture and if it had not come, the country would have become a capital of hunger. Revolutions always do one thing: they mask or erase the memories of the past from a society's mind, especially of the political society. IR-8 did exactly that! Hence, in the current times of short collective memory, IR-8 is the beginning of food security. Chemical fertilizers and pesticides are the saviours of agriculture. Without crop loans farmers cannot cultivate!

But now the realisation is dawning on these policy makers and scientists that IR-8 and others of the first Green Revolution cannot assure our food security and hence, according to them, we need a second Green

Revolution to address the increasing nutritional deficiencies and climate related stresses. So they say that the country needs genetically modified (GM) seeds. That we should welcome golden rice, the so called magical remedy to solve the Vitamin A deficiency in the world. They are recommending that the country needs to tie up with private seed companies who are the torch bearers of this second revolution.

But the same policymakers and scientists continue to ignore the second revolution which has already begun in many villages around the country since the 1990s. Farmers sat together in an effort to collectively dredge memories from their past, and they could discover a lot, including many varieties of traditional seeds. They discovered that some of these varieties can cure their problems of nutritional deficiency, some are stress tolerant, while others are spiritual, many are short term quick yielding or fragrant or medicinal. These varieties do not need much input to cultivate and hence are also economically safe.

This tells us something fundamental. Whichever technology we bring in the name of development, unless it is under the control of farmers, unless they can manage without creating economic and ecologic loss, unless it is suitable to their culture, it will not be sustainable. The first revolution lasted this long only through subsidies and now the new trade policies of WTO will not allow our governments to continue with this kind of subsidies. How can we overcome this crisis? Through genetic modification? Through more irrigation? By changing crops? By sustainable practices and proper planning for production and procurement? Through listening to the farmers? Asking them for their ideas, thoughts and challenges? Supporting their endeavours and making them partners in decision making? Through providing direct income support to farmers to do ecologically sustainable farming? Through creating local procurement and distribution networks and providing a stable price?

Questions are many... and we need sensitive, committed decision makers at various levels who are willing to work in partnership with our farming community and feel accountable to the people and the environment.

The Editors

South Indian Rice Forum – The long journey from Kumbalangi!

by Sreedevi Lakshmikutty

This journey began in 2004 with the Indian Workshop on Rice held in a tranquil wetland village – Kumbalangi near Kochi in Kerala. The workshop, which brought together more than 100 people from about 50 organisations across 10 rice growing states of India, was primarily to share the concerns of farmers all over Asia over rice - the food, life and culture of Asia!

That meeting translated into the Save our Rice campaign which gathered momentum in the three southern states – Kerala, Karnataka and Tamilnadu. Over the last four years, the Save our Rice Campaign has made efforts to address some of the issues and concerns that plague rice farming in the southern states. The campaign has come a long way and is at a point where we have to evolve into a broad based movement, involving people from all walks of life and all segments of society. The idea of a *South Indian Rice Forum* (SIRF) emerged out of this understanding. The objective of the forum is to provide a broad based platform to address common concerns and issues that are facing the rice culture and cultivation in the region - increasing paddy production and improving farmers' income, potential of traditional varieties, challenges in paddy farming, and trade and economics issues in paddy farming.

Towards this end a two day workshop was organised at Thiruvananthapuram on September 21-22, 2009.

The workshop was inaugurated by the Honorable Agriculture Minister of Kerala, Shri Mullakara Ratnakaran who said that agri-culture is more than about food security and productivity, it is about community and culture and our future.

The inspiring inaugural speech by the agriculture minister of Kerala, who is very supportive of sustainable agriculture, set the tone further when he suggested that the delegates should evolve strategies and solutions to help the poorest farmers in the land

Dr. Nammalwar in his felicitation address exhorted the delegates to get out of our current mindset and to focus on sustainable development, he pointed out, "we can't forego food, so we need to protect and worship the food producer" and added that "before the 1960s we had agriculture and since then we only have agribusiness".

The deliberations across two days covered the spectrum of rice issues and then some more!

Paddy situation in Kerala, Tamil nadu and Karnataka

Dr. P V Balachandran, Head of Paddy Mission Kerala, elaborated on the paddy scene in Kerala and also briefly explained the Paddy Act[1] , which he said was a good first step, but required stringent implementation .The current paddy situation in Kerala is dire, the area under paddy has come down from 8.5 lakh hectares to 2.2 lakh hectares and the output from 13.5 lakh tonnes to 5.8 lakh tonnes, whereas the requirement of paddy is about 40 lakh tonnes, thereby creating a deficit of 85%. Currently 93.5% of the paddy crop in Kerala comprises of HYVs.

Paddy in Tamilnadu (TN) is cultivated in four zones - river basins, tank fed lands, rain fed lands and irrigated lands. Of this the Cauvery basin covering 11 districts of Tamilnadu is the major rice growing area with almost 12 lakh acres under paddy, explained Dr. Nammalwar. In addition Mr. Ponnambalam, Managing Trustee of CREATE and an expert in agriculture produce marketing, added that conversion of paddy lands to non paddy activities has become a significant problem in TN and the state urgently needs a paddy land protection Act.

Karnataka is not wholly dependant on rice (unlike Kerala and TN), with millet also forming an important food crop in the dry regions. Paddy provides 35% of the average calorie intake in Karnataka and in a state where 43 lakh tonnes of paddy is consumed, about 86 lakh tonnes is produced. Paddy is cultivated in 14.2 lakh hectares of land of which 10 lakh hectares are under HYVs, explained Mr. Reghu, food processing expert and organic baby food manufacturer.

Other issues and challenges

Across the two days of the forum, challenges and problems in rice farming came up from almost all speakers, ranging from lack of availability of seed to neglect of women's role to pesticide use to lack of access to markets.

In all the states the problems sowed by the green revolution culture abound. Women's role in agriculture (previously in all areas except land preparation) is now being marginalized and thereby they have lost their ability to ensure food security, said Ms. Sheilu Francis of the Women's Collective. Use of pesticides in rice is increasing despite the fact that it has been proven time and again that 100% organic paddy cultivation is doable. One of the major areas that the gathering agreed on is the need to grow poison free paddy! Instead of providing subsidies for fertilizers as is the norm today (which benefits the fertilizer companies and farmers who depend on chemical fertilizers), many delegates suggested that farmers should be provided with direct income support, insurance, compensation for losses due to natural calamities and old age support.

The other bottle neck that has become apparent is that even after farmers have grown organic paddy, during the procurement or processing stage, it gets mixed up with non-organic paddy. Lack of an effective marketing network, particularly for organic paddy (traditional varieties) is a continuing problem said Mr. Shetty, President Market Wing of Jaivik Krishik Society, Karnataka. He detailed the efforts they have undertaken through the decades to get organic rice into the mainstream market in urban Karnataka where now there is a new found appreciation for the many traditional varieties.

The use of fully polished rice without bran and the corresponding rampant spread of diabetes among rice eating people is a crisis in the making which all present agreed on. As one of the rice traders from erode jocularly put it, "we have become used to rice which is as white as our dhoti", however he hastened to add that a campaign is needed to make people aware about the health benefits of brown rice.

Dr. K N Harilal, Planning Board Member, explained the conundrum of international trade policies (WTO, ASEAN etc.) and how they impact small farmers. In the current scenario where cartels of big companies are leading to a "destructive competitive downward spiral" the only way to save the rice economies of the world is through cooperation among rice producers –

locally, regionally, nationally and internationally. Dr. Harilal exhorted SIRF to play an active role in working on the issue of trade on one hand and the crisis of rice shortage on the other. He suggested that to begin with SIRF could explore whether the three southern states can work together to become self reliant in rice!

Traditional varieties and their increasing significance

Research and trials with traditional and indigenous seeds has been one of the highlights and focus areas of the Save our Rice campaign in the last couple of years. The CREATE centre in Adirangam cultivated and distributed about 2 tonnes of seeds of 13 different varieties to about 1,000 farmers from across the state (detailed story in PADDY, July 2009). In Karnataka, Sahaja Samruddha has taken the lead to induct many farmers into seed saving and now they collectively save, conserve and grow 140 varieties of indigenous paddy. Krishna Prasad of Sahaja Samruddha said that we should re-examine the present paradigm of releasing a single variety everywhere; instead local varieties should be identified, tested and used in specific geographical regions.

Dr. Devakumar, Senior Scientist, UAS, Bangalore, who is currently conducting research on the various qualities of indigenous varieties of paddy in Karnataka[1] stressed that his research is pointing towards the fact that indigenous varieties have many superior traits; they are better adapted to the local situation, require less inputs, are resistant to pests and provide large amount of fodder, to name a few traits. Dr. Leena Kumari, Senior Scientist from the Mancombu Rice Research Station, Kerala, detailed her work with stress tolerant varieties of indigenous paddy. VOICE in Wayanad began its seed bank to preserve the traditional paddy varieties of Wayanad after they observed starvation deaths among tribal people in 2001.They realized (during interactions) that the tribal people (mainly kurichiars) used to maintain seed banks and had about 200 distinct paddy varieties in that small region. Most are lost and only about 65 varieties survive today. The seed banks initiated by VOICE are maintained in the Kurichiar tharavads[2] in hay/bamboo baskets following the tribal traditions, Mr. Louis Figarado, Director of VOICE, said.

Innovations and experiments

Mr. Abhilash, an Agriculture Officer from Thazhakkara in Kerala, who has pioneered an interesting experiment of homestead paddy cultivation, explained his project with 1,000 households to whom he provided basic kits of paddy seeds and some inputs to grow it in their backyard. Mr. Nandish, a successful young rice farmer from Karnataka, talked about his farming method which he calls "legume logic"; he depends on the abilities of legumes and wild weeds to rejuvenate and replenish his lands and uses no external inputs on his paddy lands. Nandish informed that he earned Rs 4,000 per acre of paddy in 2000, whereas now he earns Rs 45,000 per acre.

Outcome of the two day deliberations

The two days of fruitful deliberations resulted in a few decisions and charted a way ahead for the Forum. The gathering agreed unanimously to support and advance "Poison free paddy farming" and formed four working groups to address the major issues raised by the delegates and they will be coming up with their action plan during October. These groups will be working on the following areas:

(a) The group agreed that agriculture scientists who want to work along with farmers for land to lab research will work with seed savers, farmers and farmers groups to identify stress tolerant and geographically and climatically suitable paddy varieties.

(b) It was decided that more research will be carried out to identify and verify the different qualities of various indigenous paddy varieties.

(c) The millers and traders present agreed to create more awareness among consumers about organic rice and brown/red rice (which is not polished and retains the bran). They promised that they would keep aside capacity to process organic rice with bran.

(d) Policy advocacy, education and awareness among farmers about changing policies in trade are the need of the hour to enable farmers groups to effectively intervene at a political level. SIRF members will work on this aspect in all the three states.

(e) It was agreed that there is an urgent need to provide direct cash income support to paddy farmers rather than indirect subsidies which benefit the companies.

(f) More awareness and advocacy needs to be taken up on the matter of international trade policies and agreements and their impact on food security.

The discussions were led by Dr V S Vijayan, Chairman of the Kerala Biodiversity Board. Dr. P.V.Balachandran, Head of Paddy Mission of Kerala, Dr. Nammalwar, Dr. Devakumar, Senior Scientist from UAS, Bangalore, S Usha, Director of Thanal and Coordinator of the Save our Rice Campaign, Dr Leenakumari, Senior Scientist from the Mancombu Rice Research Station, Dr Gopalakrishnan Nair, Sri Krishna Prasad, Director of Sahaja Samrudha, C Jayakumar, Board Member of Thanal and R Ponnambalam, Director of CREATE and on the second day, Dr K N Harilal, member of the Kerala State Planning Board.

A beautiful display by Sahaja Samruddha, from Karnataka, of 140 indigenous seed varieties including 16 varieties of salt resistant paddy and 12 varieties of deep water paddy was the highlight of the small exhibition organized at the meeting venue. CREATE brought 47 varieties of seeds from Tamilnadu which they are currently cultivating. The agriculture interns at Thanal displayed 7 varieties of paddy seeds and simple manual/semi automatic tools for paddy harvesting and weeding were brought from Mitraniketan. Display of various varieties of brown and red rice, suitable for diabetics and beaten rice attracted people who tasted and bought some!

The two days traditional varieties and address fears about productivity, resilience and ability to deal with climate change related stress.

The full report is available at http://www.save-our-rice.net

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[1] http://www.downtoearth.org.in/full6.asp?foldername=20080930&filename=news&sec_id=4&sid=2

[2] Dr. Devakumar is currently working with 120 varieties of paddy from various parts of Karnataka, mainly from Malnad and coastal Karnataka. Their lab has already collected and conserved 80 paddy varieties. The study is based on analysing features like no of tillers per hill, yield, height, no of grains per panicle, disease and pest scoring and so on.

[3] Kurichiars are one of the original tribal communities in Wayanad and have ancient practices related to seed conservation.

Rice Chain Workshop in Bangkok

Rice Chain – A Way of life and livelihood

by Seema Prasad & Anitha Reddy - Sahaja Samrudha, Karnataka

Rice is a preferred staple food for more than one half of the world's population. Rice is rich in genetic diversity, with thousands of varieties grown throughout the world and the staple food for more than half of our country's population and provides livelihood to millions. But the global changes in trade and technology have profoundly changed the situation today. Therefore, it is crucial to design a set of measures which enable the poor and the marginal rice farmer to get greater access to markets, which is where fairtrade comes in[1]. Fairtrade and certified organic marketing has the advantage of providing access (for farmers) to markets with better prices. It is more than just trading as it highlights the need for change in the rules and practices of conventional trade and shows how a successful business can also put people first.

It is in this context that we (Seema and Anitha from Sahaja Samrudha), attended a workshop on 'Organising the Organic Fairtrade Rice Chain, Building Grassroots Competency', held in Thailand between 1st and 18th July 2009. It was an eighteen day long comprehensive training and exposure to the different components of organic and fairtrade rice chain for non-governmental organisations working largely on rice, in South Asia. It was conducted by Earth Net Foundation, Thailand. The overall goal was to improve the livelihood of the rural producers through organic and fairtrade rice chain activities. The specific objective of the project was to build capacity and increase the competency of grassroots organisations in the Asian region to enable them to run organic and fairtrade rice chain projects[2].

The curriculum included theory sessions, practical trainings and study visits to actual rice chain activities operated by grassroots farmers groups in Thailand as well as other institutions working on different aspects of the rice chain. The training covered overall rice chain management from seed to sale - seed selection, organic rice production methods, farmer extension, guarantee systems, quality management, paddy harvest and storage, rice processing and packing, marketing, sales and promotion. We undertook planning, group work and development of a plan for rice chain activities for our respective locations. We were guided to make an analysis of our own rice chain

project's weaknesses, and to develop intervention measures to improve its operation.

As part of the workshop we visited Khao-Kwan Foundation in Bangkok, a NGO which promotes the concept and practice of sustainable agriculture, and is a resource institute that houses experimentation plots, a seed bank and a training centre for farmers. Here we learnt the best techniques for seed selection, selection of panicles at harvest, and observed practical demonstrations of preparation of growth promoters and liquid manure using locally available materials that increase microorganisms. Seeds of paddy are usually selected without removing the husk, but the new technique followed at this centre is that seeds are selected after removing the husk, either by twisting between two fingers or using a small de-husking machine. While de-husking the rice grains by hand, care has to be taken to start twisting from the tail end of the seed in order not to destroy the seed germ. Only unpolished grains are selected with characters such as bold grain, colour, size, shape, sheen, long grain, not diseased, not chalky and so on. Then the seeds are sown in sand for two weeks and after they germinate, they are transplanted to a seed bed or a bigger pot. Manure or fertilisers are not used during this period. The best germinated seeds are selected and then transferred on to the main field and sown by following a method similar to the SRI method of spacing.

Sand is used for germinating seeds as it does not have any bacteria and does not retain moisture and seeds can breathe well. Even bamboo leaves are sometimes used, as they retain less moisture than any other leaf. Another method followed is the panicle seed selection - during harvest the best panicles are selected and left to dry in the sun for 2 to 3 days. After drying, ears that are large, long and have perfect seeds with no traces of insects or disease damage are selected. Then the ears are threshed and seeds that fall near the threshed area are collected and not the ones that are far off, as the bold seeds usually are heavy and do not fall at a far distance. This procedure of seed selection is considered to be the best for quality seed production.

Another distinctive place we had an opportunity to visit was Capital Rice Co, Thailand's leading rice exporter. We were amazed at the size of the factory that is well equipped with modern machinery and spacious warehouses, and is operated by well trained and skilled staff, supervised by a professional management team. Strict quality control and inspection at every stage is ensured for a high standard product. They won the 'Best Exporter Award for agricultural products' in the year 1987. The leading exporter of Thai Rice became interested in organic rice only during the 1990s. Jasmine rice variety was the first and only organic product produced in Thailand, during that time. And this variety is being exported all over the world by this company.

During our stay at Yasothon, we were able to meet Evam, a farmer, who has adapted some techniques to adapt to climate change. He says that, for farmers, it is always of vital importance to have methods for conserving water and to possess knowledge about rain patterns - time, duration, and quantity in which it falls. He records rain pattern for about a month prior to sowing. He prepares the land for sowing and when it rains the plot gets filled with rain water. He waits till the rain water begins to flow and then starts to sow paddy. With this Evam is able to forecast the amount of rainfall to expect in the season. Depending on the rainfall that is recorded, he chooses the varieties to plant for the season.

Evam has constructed tanks in a sort of cascade, with one tank below the other. The excess water from one tank automatically flows to the tank just below it. At the level just below the tank, land has been prepared where he always grows paddy. Vegetables are also grown on his land. Also another interesting fact there was about community composting, all the 33 members of the community compost together and later share the manure. The participants experienced the unity of the community and the wholehearted welcome and a comfortable stay provided by all the members of the village.

Later a visit to the mill that is operated by a farmers group in Kutchum District, Yasothon Province, helped us to learn about the process and handling of organic rice production. This is the first mill which began

processing organic rice (in 1991) in Thailand and presently is the oldest operating community rice mill. The mill follows stringent quality control measures and the milling process is comprised of cleaning, de-husking, separation of white from the brown rice and finally polishing for white rice. Testing the quality of the milled rice is considered very important to maintain the high quality of rice. We had hands-on experience on grading of rice. Rice is graded according to size - head rice, big broken, medium broken and small broken rice. After milling, if the rice has more head rice and a minimum percentage of broken rice, then the rice is considered of high quality. But if the rice has less of head and an equal quantity of big broken, medium broken and small then it is considered as low quality. This usually causes a problem either during processing or milling. To avoid breakage (of rice) post harvest handling and milling process is checked frequently. We also discovered that quality starts at the farm, because it can only be maintained and not improved upon. So the farmers need to be capacitated with crop management and post harvest handling techniques. Drying of the harvested grain is also critical. If the grain is exposed to high humidity it develops chalkiness and is easily infested by insects. Quality assurance has been very important to build a good market for the product.

One of the most important learnings from the workshop was the concept of product traceability that Earth Net uses to trace the product back to the farmer. The organisation has developed a code of traceability that follows the movement of food through specified stages of production, processing and distribution. Traceability determines the origin of food, safety measures taken during production, quality measures and quality of the product. Another critical factor in the rice chain is the promotion of product, a leaflet and the labeling that describes the uniqueness of the variety. It is to create awareness and to educate the public about the ill-effects of genetically modified and hybrid crops and also to inform them about the benefits of consumption of traditional varieties by describing their nutritional aspects.

[1] Fairtrade is about better prices, decent working conditions, local sustainability, and fair terms of trade for farmers and workers in the developing world. (http://www.fairtrade.org.uk/what_is_fairtrade/faqs.aspx)

[2] Thailand is the leading rice exporting nation of the world and therefore fair-trade and export related issues are very critical and pertinent to the rice industry there.

Of hunger and its eradication

Sadanand Menon

"The Vishnu Mitter Institute of Paleo-Botany in Lucknow, for example, has studies showing that while there were over 127 varieties of rice alone being cultivated in the Indian subcontinent during the first two decades of the 20th century, these were steadily dropping and had reduced to 18 within the first two decades of the Green Revolution period. Along with everything else, the idea of agricultural and food diversity too was receiving a knock. Mono-culture and the idea of single-point control systems, so important for designing market strategies, became the norm."

Business Standard, Sept. 24, 2009
http://www.business-standard.com/india/news/sadanand-menonhungerits-eradication/370436/

Genetically Engineered Rice - Part V: Company Involvement

by Karsten Wolff

Delta & Pine Land (DPL) is the world's largest cotton seed company. DPL bought Syngenta's global cotton seed business in May 2006, and has now, for example, cotton seed germplasm and distribution assets in each of the three primary cotton growing regions of India. Monsanto announced in August 2006 that it was to buy DPL for USD 1.5 billion. Whilst there was opposition, the sale eventually went through.

DPL is not only the largest cotton seed company, but also the inventor and co-patent holder of "*terminator technology*". "Terminator" is a genetic engineering technology that makes plants grow sterile seeds. Farmers can thus no longer save seeds but need to buy their seeds from seed companies every year. There is an international campaign by civil society to ban terminator technology, and the UN Convention on Biological Diversity has declared a moratorium on it. DPL have repeatedly asserted that their aim is to

develop the sterile seed technology for three plants: soya, wheat and rice.

The consequences of rice seeds being marketed with terminator technology is illustrated by the following statistics, supplied by the ETC in 2006: In the Philippines, 59% of the rice crop is planted with farmer-saved seeds. If these rice farmers were forced to buy new seed every time they planted - they would spend an estimated USD 172 million per annum.

Ventria Bioscience, with its headquarters in California, US, is aiming "to become a scientific leader in the biopharmaceutical industry." Their claim is that their science and patented technology "make it possible for Ventria to address unmet and underserved needs in human and animal health by delivering affordable treatments on a global scale." It is ironic that they should choose to use rice as their "production system" for pharmaceuticals, thus threatening to contaminate and undermine the world's most important food crop, upon which more than half the world's population depend for their daily needs.

In fact, there is a lot of money in pharmaceuticals, and plants appear to offer a cheap production system. Rice has been bred and selected by generations of farmers for thousands of years to efficiently produce proteins, starches and other compounds locked into a seed that can be stored easily until required for consumption. It is exactly this quality that is sought by pharmaceutical companies.

Others hold that this dream of rice or other plants being a "cheap production system" does not reflect reality but is ultimately rather expensive, and highly problematic with regard to contamination.

Ventria seems also to have chosen the cheaper option of marketing its GE rice and its GE rice proteins not as pharmaceuticals or infant formula, but as food and drink supplements. Thus it can avoid the costs and the rigour of clinical trials. Nevertheless, it proposes it as an over-the-counter rehydration drink, especially intended for children in Third World countries suffering from diarrhoea. *(To be continued)*

Farmers suing German-based Bayer Cropscience over genetically engineered strain of rice

Nearly 1,500 rice farmers in the U.S. are suing the German multinational corporation Bayer Cropscience and affiliated companies over a genetically engineered (GE) strain of rice.

The lawsuit filed on August 18 in a federal court in the state of Arkansas says the farmers' crops were corrupted by the rice that was produced by Bayer.

The U.S. Department of Agriculture announced in August 2006 that traces of unapproved GE rice had been found in U.S. supplies of long-grain rice. The lawsuit says Bayer and Riceland Foods Inc. confirmed the traces in early 2006 but did not tell farmers, the government or the public until July or August.

Adapted from: Associated Press, August 20, 2009

Bayer clamps down on GM rice protest in AP

Bayer BioScience is pressing charges against protesters following an anti-GM rice demonstration last month in Andhra Pradesh where Greenpeace volunteers cordoned off a field of GM rice in the village of Chinnakanjarla, near Hyderabad, and planted scarecrows and 'biohazard' signs (see report in PADDY No. 4).

The charges include trespassing, causing damage and 'criminal intimidation'. Some of those arrested included members of the public and the press. Greenpeace claims the field trial is a violation of an assurance it received from Bayer in 2004 that GM research in India had been halted.

'[The charges are] clearly a move to silence any opposition to the unrestrained release of risky GM crops into our food chain,' said Jai Krishna, sustainable agriculture campaigner with Greenpeace India. 'Citizens have the right to protest against unhealthy and hazardous GM food trials. If disobeying the law can stop GM rice from contaminating our rich rice biodiversity then so be it, we will do it again. The rights of farmers to save their seeds and the rights of

consumers to have safe food is more important than a company's profits.'

The Indian government has confirmed plans to release 170 GM varieties in 41 different crops, among them more than 25 varieties of GM rice.

Actor and activist Amala Akkineni said it was 'an honour to be part of a just battle'. 'The father of our nation, Mahatma Gandhi, led by example and showed that some citizen rights are not to be negotiated,' she said. 'The right to safe food is one of them. We must demand from our government to be responsible and be on the side of citizens. I don't think anyone in Hyderabad wants GM biriyani.'

Adapted from The Ecologist, July 13
www.theecologist.org/News/news_round_up/285739/bayer_clamps_down_on_gm_rice_protest_in_india.html

Status of GM rice development in India

On August 6, the Indian Ministry of Environment and Forests published a fact sheet on GM rice under development by public and private institutions. It can be accessed at *http://www.pib.nic.in/release/rel_print_page1.asp?relid=51553*

S.No.	Developer	Gene events	Trait	Status
1	M/s Mahyco	cry1Ac gene	Insect resistant	Multi Locational Trials completed in 2007 for generation of biosafety data known as Biosafety Research Trails level-1(BRL-1).
2	Directorate of Rice Research (DDR) Indian Council of Agricultural Research (IARI) and University of Agricultural Science, Dharwad (UAS).	Cry1Ac gene	Insect resistant	Green house stage
3	IARI/ICAR	Cry1Aa3 gene	Insect resistance	Laboratory stage
4	IARI/ICAR	Chitinase gene	Disease resistance	Laboratory stage
5	IARI/ICAR	DREB1a, TPSI	Drought and salinity tolerance	Laboratory stage
6	IARI/ICAR	PDC gene	Submergence tolerance	Laboratory stage
7	IARI/DRR/Tamil Nadu Agricultrual University (TANU) / Delhi University (DU)	GR-1& GR-2	Nutritionally enhanced	Green house stage
8	Bayer Cropscience	EE-1 event	Insect resistance	Multi Location Trials (BRL-1)
9	Pioneer/ Dupont	-	insect resistance	Laboratory stage
10	Avesthagen	Antisense unedited NAD9 gene		Multy Location Trials (BRL-1)
11	Avesthagen	MNSOD	Tolerant to oxidative stress	Green house stage
12	MS Swaminathan Research Foundation	Mangrove	Submergence tolerance	Green house stage
13	Punjab Agricultural University and Cuttack Rice Research Institute	amA-1 gene	Nutritionally enhanced	Green house stage

Soft rice from Assam

A rice variety, *Aghonibora*, from Assam with a low starch content, termed as soft rice or *komal chawl*, was field tested in Orissa by the Cuttack-based Central Rice Research Institute (which is affiliated to ICAR). The rice was found it to be suitable for the state's hot and humid condition. It does not need boiling, and becomes eatable after being soaked in water for less than an hour.

SG Sharma of CRRI said if found suitable for other predominantly rice-eating parts of the country such as Bihar, Jharkhand, eastern Uttar Pradesh, etc., it would result in huge savings in cooking fuel.

They is a number of rice varieties of Assamese origin - *Aghonibora, Bhogalibora, Chakua* and *Misiri* - classified as 'soft' rices

Adapted from: http://www.financialexpress.com/news/Assam-s-soft—low-starch-rice-to-save-fuel-costs/513656/

New drought-tolerant variety in Jharkhand

A new variety of rice is being tested in the fields of Jharkhand that is said to be drought-tolerant. The rice is called *Sahbhagi dhan* - meaning 'rice developed through collaboration' - and is the result of 15 years of work by the International Rice Research Institute (IRRI) and the Central Rainfed Upland Rice Research Station (CRURRS) in Hazaribag town. Agriculturists say the field trials of *Sahbhagi*, which began in 2006, have given positive results. The rice is being tested already in several villages and is proposed for release in the states of Jharkhand and Orissa.

According to Dr VD Shukla of CRURRS, *Sahbhagi Dhan* has "the capacity to take moisture from the deeper levels of soil. It is also tolerant to diseases and pests. Moreover, its stem is much more sturdy and doesn't bend, which means the farmer gets a better yield".

Full article at: http://news.bbc.co.uk/1/hi/world/south_asia/8182840.stm

PADDY comment:

It is ironical that ICAR and IRRI show such alacrity in testing new varieties of rice with properties like low cooking time or drought tolerance while traditional varieties in these very geographies with many unique properties continue to languish due to neglect over years and lack of awareness. We do hope that these institutions take the effort to learn and understand from traditional seed saver farmers about traditional varieties and work on conserving and propagating them.

Iran lab finds basmati contaminated

Dealing a blow to basmati export and loss to Punjab and Haryana farmers, Iran has stopped import of Indian basmati after a government laboratory detected high contents of arsenic, cadmium and lead in the rice exported to it in mid-September.

This development has resulted in steep fall in basmati prices in the export and domestic markets.

The Iranian Standard Institute of Industrial Research reportedly has disclosed that Indian and Pakistan rice is contaminated with chemicals and have no nutritive value. It claims the consumption of this rice is likely to have harmful effects on human health.

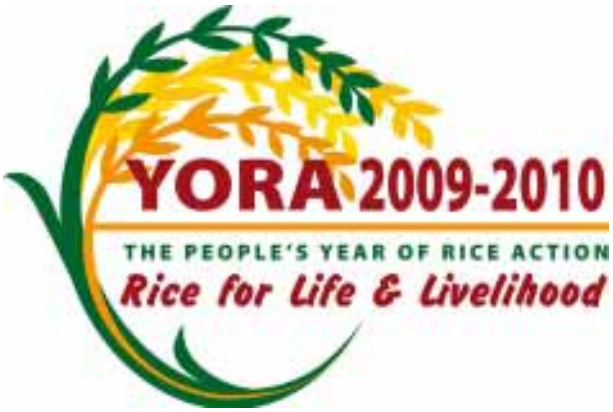
According to exporters Indian basmati, particularly the 1121 variety and the Pakistan copy of the same, which has been named 'kaynaat', had caused steep fall in traditional 'sadri' rice variety of Iran. The exporters claim the tests are politically motivated.

Meanwhile experts said the depleting ground water and the intermixing of water pools due to over-exploitation could be responsible for the present situation. Ground water quality in the Ferozepur belt in Punjab as well as Tohana, Ghanaur and Sonepat areas in Haryana is questionable.

The Indian Agriculture Research Institute (IARI), which developed the 1121 variety, feels the samples tested in Iran need to be brought to India to validate them. IARI senior scientist Dr A K Singh said though arsenic was found in Bengal it was not a problem in Punjab, Haryana and western Uttar Pradesh.

Punjab Young Farmers Association general secretary Bhagwan Dass Gupta said steps should be taken to clear the air as other countries could also stop taking Indian basmati. Farmers in Punjab increased the area under basmati from 3.75 lakh hectares to 6.5 lakh hectares this year. In Haryana the area under basmati is around 3.25 lakh hectares.

Adapted from The Tribune http://www.tribuneindia.com/2009/20090921/punjab.htm#2



YORA in India

Uttarakhand Farmers Formulate Action Plan to Conserve Local Rice

Men and women farmers gathered in Bheerapani, Nainital District (Uttarakhand), on 20th August as part of the People's Year of Rice Action (YORA). Organised by PAN AP's partner organisation Beej Bachao Andolan (Save Seeds Movement) and the Nainital Community Awareness Centre, the meeting generated strategies for conserving local rice and traditional farming practices and provided a venue for the discussion of local, national and international policies affecting rice producers.

The initial discussions centred on the people's work with respect to their traditional knowledge systems and the impacts they have achieved so far. They also reflected on the severe food insecurity being faced by marginalized members of the community, and the replacement of traditional agriculture with chemical-dependent methods, increasing dependence on markets, the introduction of genetically engineered (GE) food, declining food safety, the quality of food, and human and environmental health. Participants emphasized the importance of traditional knowledge systems and their role in food security and access and control over resources (especially for women).

Farmers mentioned that pests and diseases were on the rise, both in plants and humans, as a result of chemical-based agriculture. The participants also spoke of: declining interest among the youth to enter agriculture as a main source of livelihood, the replacement of healthy traditional plant and rice varieties with less-nutritious hybrid varieties, the heavy investment required by modern agriculture and the lack of return, and the declining productivity of the land.

It was strongly felt that happenings at the global level were responsible for the conditions at the local level. The group agreed that remaining aloof was not an option, and committed to join forces both nationally and globally to protect their rights over resource use and traditional farming. One farmer who had switched back to traditional farming methods shared how it had already improved the soil and reduced his overall workload.

In the second phase of the meeting, participants discussed the erosion of traditional rice and food crop varieties and their replacement with mere two or three hybrid varieties. The cultural, geographical and social significance of rice was also brought forth by the participants.

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Save Seeds Movement and ARPAN Hold Strategy Session on YORA

On August 23, the Save Seeds Movement and its local grassroots partner ARPAN organised a YORA strategy session in the village of Bera, Pithoragargh District (Uttarakhand). The one-day meeting aimed to increase awareness of the People's Year of Rice Action (YORA), particularly through the involvement of local people and community-based institutions. The meeting also served as a platform for generating support and solidarity in the campaign against pesticides and genetically engineered (GE) seeds.

YORA is jointly organized by people's organisations in China, Japan, Korea, Cambodia, Vietnam, Thailand, Malaysia, Indonesia, Philippines, Sri Lanka, India, Pakistan, Nepal and Bangladesh in collaboration with the Pesticide Action Network Asia and the Pacific (PAN AP). It runs from 4 April 2009 to 4 April 2010.

More information on YORA at www.panap.net/yora

BOOK POST – PRINTED MATTER

Editors' Note: **please send us poems, stories, rice traditions and other material. If you have a rice related event coming up or if you have an interesting report on rice events already conducted or on policy or new practices. Please do send us the same in word format with pictures, at paddyeditors@gmail.com.**

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