PADDY
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Editorial

Traditional Seeds

What is so important about seeds? Why are farmers getting so worried about seeds? Why have some other farmers become so passionate about seeds and planting hundreds of varieties of seeds, even while farming has become economically unviable for them?

We heard and experienced some of the answers to these questions while travelling through the villages of Kerala in the month of February with our seed caravan. Many old farmers came to see the seeds, many of which they used to cultivate in their younger days. Interestingly thousands of children were inspired seeing the different kinds of seeds. During our discussions with the farmers it became clear that they still cherish many of these seeds and some of them are highly productive as well. Not only that, they shared that the new seeds, the so called high yielding varieties (HYVs), are losing their vigour within a short period; whereas, traditional seeds retained their inherent properties over a long period.

The farmers used to cultivate different varieties to cater to their different needs. Seed, they said, is also food and food is related to their culture and the HYVs because of their uniformity and sameness cannot satisfy and address many of their culture specific food needs. One school teacher from Palakkad read out a profound passage from an old book. 'I have a plant in front of my house and it flowered and gave out a beautiful aroma. And it produced a seed. When I cut open the seed I could see myself and my teacher init!'

At another seed festival we heard an organic farmer passionately talk about seeds. He asked the women who gathered there, "Will you kill or die for the sake of seed?" The young women in the gathering were a little perplexed to hear this. Then he answered his own question, "I will". He continued that when he plants a seed in the soil, he also plants a part of himself! However the irony today is that farmers are dying "because of seeds" not "for their seeds", because the HYVs, hybrids and the genetically modified (GM) seeds are letting them down.

In these times when agriculture is perceived and treated merely as a commercial activity it is difficult for non-farmers to understand and accept the emotional relationship to seed. Only a farmer can feel it. It cannot be analysed objectively and the farmers failed during the last few decades to tell the policy makers about their seeds, their properties, their relevance and value. Instead they listened to the scientists and policy makers tell them about seeds made in the labs and test tubes. Now most farmers have lost their traditional seeds and have been seduced by the campaign of 'productivity'.

This malaise has reached even the remote villages of Orissa. Farmers there have started chasing the mirage of productivity and when they hear about new hybrid paddy seeds in the market (public or private sector) they buy them, many fail, yet they continue on the treadmill. As a farmer said *"Life and agriculture have become like a gamble for us farmers, it is a cycle of hope and despair that we are put through by the government and the companies."* [1]

Now, after the HYV treadmill the government has begun propagating hybrid paddy seeds to break the stagnation in productivity. Hybrids need more water and other inputs. On one hand these external inputs are expensive, on the other natural resources are getting depleted at unprecedented rates. Soil fertility has reduced to abysmal levels, water is becoming scarce and supply unreliable. With all these factors at play small farmers have almost no chance of succeeding in this unevenly stacked gamble.

What gets neglected in this process is our existing wealth of highly productive indigenous paddy seeds. Dr. Debal Deb, who has been conserving over 720 rice varieties in his Basudha farm in West Bengal says that he has established beyond doubt that most traditional paddy varieties with low or no inputs can yield as well as or more than most hybrids or HYVs. However the government agriculture institutions and the universities don't seem to care about this valuable legacy and are now running behind the chimera of hybrid rice!

From the campaign desk.

[1] *PADDY current issue article " Vicious cycle of hope and despair"*

Did you say High Yield?

by Dr. Debal Deb -

Folk Rice Varieties versus Modern HYVs and Hybrids

In spite of all the hype and false promises, the yield of hybrid rice in India has seldom exceeded 6.5t/ha under irrigated condition on farmers' fields.[1] On marginal farms (e.g. rainfed drylands, submerged lowlands, and coastal saline farms), the yield of hybrid as well as any modern rice varieties remains abysmally poor. The reason is simple: none of the hybrids can withstand adverse environmental conditions, especially drought and salinity, on marginal farms.

In contrast, there is a plethora of folk varieties (also called 'landraces') that are perfectly adapted to marginal farm conditions and local environmental vagaries. Many of these folk varieties evince amazing yield performance on farm fields. The table on the next page describes some yield characteristics of a few selected indigenous rice varieties grown every year on Basudha farm in West Bengal and Odisha. The data presented here are based on the current year's (2011-12 Kharif) plot-wise harvest from Basudha farm. As the data indicates, the performances of these rainfed folk varieties are yet unachieved by any modern varieties (including hybrids) on two counts: (a) zero inputs of agrochemicals and (b) long term yield stability. Even on coastal saline soil of the Sunderban islands in eastern India, the grain yield of a few salt-tolerant landraces is 4t/ha – considerably higher than some of the best lowland high yielding varieties (e.g. Sabita, Lalat) introduced into the coastal districts. Conversely, no modern variety can practically survive on coastal saline farms receiving tidal waters.

The mean yield of numerous lowland landraces often exceeds the mean yield of the best modern HYVs. A good example is Bahurupi, whose average yield generally exceeds 6 t/ha in southern West Bengal. With adequate rainfall (but no irrigation), its yield can exceed the Chinese average of 6.3 t/ha – after subtracting the loss due to sterile (unfilled) grains. While Bahurupi marks the crown of yield among the high-yield landraces, there exist several lowland folk varieties (Table in next page) which outperform modern high input-responsive varieties in similar environmental conditions. One among this select group of high-yield landraces is that of Baigana Manjia of Odisha – over 5.6 t/ha, which is substantially greater than the so-called HYVs tested in Odisha under identical edapho-

Debt-Free, Poison-Free, Integrated, Self-Reliant, Empowering Agriculture: Farmers' Jury in Bhubaneswar comes up with its verdict

A unique Farmers'/Citizens' Jury, consisting of farmer representatives from seven states of Eastern India gathered in the presence of more than a hundred people in Bhubaneswar, to give their verdict on their vision for the "Future of Agricultural Development and Improvement of Livelihoods in Eastern India". They pronounced their verdict on March 17th 2012 after a 2-day intense process of listening to advocates of various schools of thinking and proposals including from the Government of India, Government of Odisha, private seed corporations, farmers' unions, NGOs etc. This is against the backdrop of the Govt of India assiduously promoting "Bringing Green Revolution in Eastern India" (BGREI) and enhancing the budget allocation for it from 400 crores to 1000 crores.

The jury's verdict

We want and ask for Debt-Free, Poison-Free, Integrated, Self-Reliant, Empowering Agriculture. We dream of building a *Naya Aasmaan (*a New Sky), *Nayee Dharti* (New Earth) and *Nayaa Bhaarat* (New India). The new Revolution should achieve these, keeping Adivasi, Women, Smallholder, Ecological Farmers at the Centre. This new Revolution should focus not just on the current generation but on future generations too. (This means an immediate attention to restoration of life in our soils). *"Surakshit Khaadyann Suraksha"* should be the focus of any intervention. The thrust should be on decentralized, participatory planning process – with any appropriate unit (Panchayat or a cluster of villages) that will be manageable. People should be part of such planning and implementation.

For any intervention that is being proposed and taken up in our Agriculture, these should be the express objectives. We do not want any "Punjab" in our states, where there might be an initial phase of growth but will soon end in health, environmental and economic disaster. We do not seek any such wealth from the government. We reject any Green Revolution that rests on hybrid and other seeds, along with chemicals in our farming. This will only increase our costs, affect our health adversely, contaminate all our resources and push us into indebtedness. We seek Seed Independence, with access to and availability of diverse kinds of seeds. We believe that this focus on Rice and Wheat is inappropriate and adequate attention has to be paid to other crops like millets, pulses, oilseeds, vegetables etc. Only then can there be true food security.

(The detailed verdict is available at http://www.kisanswaraj.in/2012/03/18/debt-free-poison-free-integrated-self-reliant-empowering-agriculture-farmers-jury-in-bhubaneswar-comes-up-with-its-verdict)

climatic conditions. In the table in the following page we have compared the yield of two modern varieities released by CRRI, Cuttack·[2]. All these landraces also prove to be resistant to different insect pests and pathogens.

High grain yields are generally more common among lowland folk varieties, owing to obviously greater water availability to the former than to upland varieties. However, farmers' selection of yield-related traits, bred over generations, has produced a considerable number of upland varieties that yield reasonably high–despite zero chemical inputs. Dhankadi Deepa, an upland-adapted landrace from Tamil Nadu, is a case in point. If the rain is not too late or too scanty, this variety does not require irrigation for a moderate grain output. If the rain is timely and generous – as was the 2011 monsoon – its yield can reach up to 5.10 t/ha.

Yield characteristics of selected rice landraces

Landrace	Origin	Panicle Density	1000 Grain Weight (g)	% Sterile Grains	Yield (t /ha)
Upland					
Basumati	Odisha	313.00	15.95	6.00	4.82
Dhankadi deepa	Tamil nadu	304.33	24.30	8.80	5.10
Jhanjhi aush	West Bengal	215.00	21.25	6.10	5.04
Lal boro	West Bengal	227.33	22.05	5.00	3.70
Pitti Hidsk	Chhattisgarh	172.33	15.20	4.80	3.25
Lowland					
Bahurupi	West Bengal	573.20	20.90	4.30	6.34
Baigana manjia	Odisha	493.08	16.05	4.67	5.61
Bishmoni	West Bengal	341.67	24.60	6.47	5.72
Bourani	West Bengal	412.70	24.20	3.30	5.51
Ghora-sal	West Bengal	312.67	27.75	5.10	5.58
Saline land					
Lal Getu	West Bengal	230.80	24.25	11.20	3.61
Nona Khirish	West Bengal	206.33	33.20	5.60	3.73
Talmugur	West Bengal	200.00	31.25	5.40	4.34
Modern HYV (Lowland)					
Lalat	CRRI	172.20	28.30	10.50	4.80
Sabita	CRRI	139.53	30.20	7.90	5.60

Source: Data from Basudha Farm (2011)

The examples given here are only illustrative. Basudha farm conserves a large number of similar high-yield landraces, which subverts the myth that modern HYVs are 'high yielding' by definition, whereas folk rice varieties are low yielding. The new frenzy with hybrid rice varieties seeks to reiterate this myth by obliterating all local landraces from the country's farm fields. A huge number of incredibly high yielding landraces have already been lost from farmers' fields under the impact of agricultural modernisation. *In situ* conservation of the remaining landraces is the need of the day to ensure the food security of the country's poor. Furthermore, an intensive search for locally-adapted landraces is more urgent than introducing new hybrids with uncertain outputs on marginal farms.

Endnotes

1. B.C. Viraktamath,B.C. 2011. *Hybrid Rice in India - Current Status and Future Prospects,* Directorate of Rice Reseach, DRR, Hyderabad, See page 10, Available at http://14.139.94.99/sites/default/files/ris/research-themes/Hybrid% 20rice% 20in%20 India.pdf
2. CRRI 2005, *Miracle Rice Varieities of India,* Central Rice Research Institute, Cuttack

Dr. Debal Deb did his Ph.D. in ecology, and postdoctoral research in human ecology (Indian Institute of Science, Bangalore) and ecological economics (University of California- Berkeley). He has been conserving and characterising indigenous rice genetic diversity over the past 17 years, and has founded Vrihi, the only non-govt. indigenous rice seed bank for rural farmers in eastern India.

Farmer-breeder Shankar Guru wins NIF award

Farmer breeder M.K.Shankar Guru won the National innovation Foundation (NIF) Consolation Award for developing NMS-2- an improved and high yielding variety of paddy. The President of India, Smt. Pratibha Patil presented the 6th NIF Awards in New Delhi on 9th March, 2012.

Shankar Guru has been associated with Sahaja Samrudha and the Save Our Rice campaign. He developed the variety through the simple selection method. He noticed a different paddy plant in his field of "Salem Sanna", collected the seeds separately and then cultivated it. He continued cultivating it for seven years to stabilize the characters. NMS-2, a fine red coloured rice, yields well, is adapted to the local climate and also provides good fodder. Shankar Guru has distributed the seeds of the variety widely and the reports from the farmers have been very good.

Where is our Oryza?

Shalini Bhutani

India story: Hybrid rice (HR) is one amongst the "modern" agricultural practices such as latest breeding tools, new genetic resources, advanced biotechnology, etc. that India is going after to supposedly increase its food production. The Government of India (GoI) has a target to bring 3 million hectares under HR varieties by 2012; and by 2015 hybrids are expected to cover at least 5 million hectares of the rice in India. To see that through the GoI in July 2010 constituted a central-level 'Task Force on Hybrid Rice'.

The Indian Council of Agricultural Research (ICAR) started a focused HR research programme in 1989 and a HR research network comprising 12 centres across the country was set up with the Directorate of Rice Research (DRR), Hyderabad as the hub. While HR research started in India in the 80s, the first HR variety was released in Andhra Pradesh in the 1993-1994 rabi season. the period of HR R&D in India can be categorised into: first-generation hybrids (1994-98), second-generation hybrids (1999-2003), and third-generation hybrids (2004 until now).

How it began: The possibility of hybridising rice emerged from early work by Indian rice scientists (Sampath and Mohanty, 1954). Japan and USA both attempted hybridisation of rice and dropped it. It is in China that HR was developed and its high-yield performance first demonstrated. Professor Yuan Longping, a Chinese agriculturist is regarded as the father of HR. In China, HR research started in 1964 and it was in 1974 that the first commercial rice hybrid was released there. And the Chinese communist state pushed the widespread adoption of HR by its farmers. In 1979 the HR technology was also transferred to the USA.

HR research at IRRI started when some leading hybrids from China (Shan You 6, Wei You 6, and Shen You 2) were introduced in 1978 and evaluated in 1979.[1] In 1993 the first rice hybrid developed at IRRI was released in the Philippines. In 1995, FAO, IRRI and national agricultural research systems (NARS) established the *International Task-Force for Hybrid Rice* (INTAFOHR).

Rice business: A large number of private companies engaged in R&D and seed production have in the last decade recognised the business potential of HR. The hybridisation technique is a tool for companies to cut-off their biggest competition, which is from farm-saved seed. Farmers who choose to buy and grow hybrids must buy new seed every year if they want the high(er) yields. So the technology in itself works like a biological patent.

In India the private seed companies involved in HR include both domestic and foreign, such as Pioneer Overseas Corp., Hybrid Rice International (Bayer Bio Science), Paras Extra Growth Seeds Ltd., Parry Monsanto Ltd., Mahyco Ltd., JK Agri Genetics Ltd., Ganga Kaveri Seeds Pvt. Ltd., Metahelix Life Sciences Pvt. Ltd., Nath Biogene Ltd., Sri Ram Bioseed India Ltd., Indo-American Hybrid Seeds, Advanta India Ltd. and Syngenta India Ltd.

The private sector benefits from the slew of incentives and subsidies that governments have made available to promote HR. For instance, Syngenta India Ltd. has launched its own 'Green Revolution in Eastern States' (GRES) project for which it will be drawing on funds from the Indian government for the promotion of its hybrid rice seeds and pesticides.[2]

Odisha angle: Most of India's HR is grown in the country's north and east. With rice as the staple crop, the eastern Indian state of Odisha finds itself at the centre of the second 'Green Revolution' (GR II). The use of hybrids is a key component of this so-called 'revolution'. The state is famed for the tribals of its Jeypore Tract who domesticated *aus* varieties of rice ten thousand years ago. The state of Odisha is historically regarded as one of the centres of origin and domestication of rice, from where rice first moved to other parts of India. Even today several farmers are saving numerous traditional rice varieties that are locally adaptive, culturally acceptable and performing adequately.

Odisha is also home to the CRRI, Cuttack which instead of pursuing its public mandate, is now moving to develop marketable hybrid varieties of rice. It has signed five MoUs with private seed companies for production of CRRI hybrid rice seeds and parental lines. CRRI has also been designated as the nodal agency for the Government of India project "Bringing Green Revolution to Eastern India (BGREI)". This was launched in the year 2010-11 in seven States of Eastern India namely Assam, Bihar, Chhattisgarh, Jharkhand, Eastern Uttar Pradesh, West Bengal and Odisha based on strategic action plans developed by these States.[3]

Food 'security'

The justification given for the promotion of HR is that yields need to be increased to feed a growing number of people and that there is going to be less land to do that in future. Addressing this problem head-on should imply that more number of people be allowed to grow their own food and governments ought to stop the diversion of land for non-agricultural purposes. Many central and state government schemes promote hybrid versus conventional rice thereby subsidising the private sector. The Food Corporation of India has already been asked to procure HR.

Small farmers were initially slow to move to HR in India and hesitant to keep cropping it. Surveys have shown that the seed cost for HR in all states is significantly higher than the seed cost of inbred rice. Due to the inferior grain quality HR grain fetched almost the same price as inbred rice grain in some states. It is only in the last 5-6 years, given more incentives by governments and enabling environment for seed companies that HR has picked up.

The technology itself and the fact that it is controlled by someone else outside the farm have serious implications for farmers' rights. HR reduces farmers into merely being growers of someone else's proprietary seeds. Thus, the so-called 'farmers' rights' in domestic laws become meaningless if the government promotes hybrid seeds.

'Alternatives' exist! Farmers themselves are returning to traditional paddy varieties. So the question is: why the original rice of the people of India is not being officially encouraged. ***Why hybrid rice?***

Summarised from the report titled "Where is Our Oryza? Hybrid Rice in India and its impacts on farmers' rights over seeds" authored by Shalini Bhutani and published by Living Farms.

Endnotes

1. *S.S. Virmani and Ish Kumar, June 2004 Development and use of hybrid rice technology to increase rice productivity in the tropics*
2. *Syngenta to enhance rice output in eastern states http://www. thehindubusinessline.com/industry-and-economy/agri-biz/article2388476.ece*
3. *bgrei-rkvy.nic.in/Background/Background.pdf*

Seed Caravan: A Jatha to spread awareness about conservation of Traditional seeds

February 6th to 19th 2012 – Kasaragode to Thrissur

A Jatha to spread the awareness about conservation of traditional seeds was undertaken through the villages in North Kerala, covering 7 districts, to create awareness about the importance of conserving and promoting traditional seeds in the context of climate change and food safety and security. This was held from February 6th 2012 to February 19th 2012.

In the last 10-15 years organic farming has grown in Kerala in spite of many hurdles on the way of farmers. There are a number of successful organic farmers in the state and the state has an organic farming policy since 2010. Many local self governments, NGOs, and schools have initiated organic farming. Two things have been a block in implementing these projects. One is the availability of good quality organic manure and secondly availability of good quality seeds of diverse crops that farmers can multiply and re-use. It is with this background that the jatha was organized through the northern districts of Kerala which have a strong agriculture tradition.

Through the districts the jatha, with exhibition of indigenous seeds, banners, posters on desi seeds, livestock and the value of conservation, documentary films and books for display and distribution, was welcomed in 28 events, which covered farmers' organisations, public institutions, schools, colleges, and village-side events. There were meetings, seminars, training workshops, exhibitions, film shows, slide presentations etc. At least 10,000 people were directly reached through the events. At the end, about 250 farmers registered for sharing and conserving seeds. A highlight of the jatha was the active participation of 10 jatha members who are all young farmers and farm activists including seed savers.

The valedictory function at Thrissur was addressed by Sri Mullakkara Retnakaran, Former Agriculture Minister of Kerala, Dr.V.S.Vijayan, Former Chairperson of the Kerala State Biodiversity Board, Dr.Debal Deb, a prominent seed conservationist, conserving over 700 varieties of paddy seeds and other prominent seed savers and agriculture scientists.

The Jatha was organised by Thanal in association with about 50 other organisations under the banner of Save our Rice campaign.

The Vicious Cycle of Hope and Despair – Part -1

Sayani Hazra

Life and agriculture have become like a gamble for us farmers, it is a cycle of hope and despair that we are put through by the government and the companies- Byomkesh, farmer from Sambalpur

Solutions much discussed, policies thoroughly analysed often fall short of what is expected at the grassroot level. The reality there is miles apart from what we can ever conceive. We might read reports about market dependence of farmers leading to their ever increasing debt burden, further leading to suicides (which nowadays does not even raise a brow and is as common as the death of a highway dog) but seldom do we see reports about multipronged and interlinked problems that the farming community goes through that makes survival sometimes more difficult than death.

This is what I saw and heard when I visited Sambalpur in January 2012 with an intention to collect some information about hybrid rice cultivation. Sambalpur is one of the regions where hybrid rice is being promoted in Orissa through Bringing Green Revolution to Eastern India (BGREI) under the Rashtriya Krishi Vikas Yojana(RKVY). This effort to secure agriculture for the future(according to the government) has a huge outlay of 400 crores. The intention of the government to allot such a huge sum for a new program definitely raises concerns considering the fact that farmers are already enmeshed in many problems, troubled and groping for solutions and relief. On the face of it, introducing hybrid rice seems to be another ray of hope, but it is more likely that it could result in adding to their woes.

Listening to the experiences of some farmers(mostly medium or large) in a village named Talab (Block- Dhankauda, Tehsil-Rengali), I could see the cycle of hope and despair they have been put through all their lives through 'ever renewing' schemes and policies. Some amongst them who failed to fight through the mental agony and financial defeat gave up their lives.

One such story is of Manjit Kumar Bhoi a promising farmer as his friends share-*"Woh padha likha tha par koi acha naukri nahi mili, isliye woh kheti mein aya, ekbar hybrid bhi try kiya. Woh hamesha koshish mein laga rehta tha ki kuch acha badlao layega, unnati ke umeed liye naye naye method asmata tha, par isi koshish ne uska jaan le liya*".[1] His 77 year old father Shyamlal shares how his struggle to make both ends meet began, after his son committed suicide unable to pay back the huge loans he had taken from the money-lender and the cooperative to continue to survive in his profession.

Some of the people from Talab village shared memories dating back to 1950s when they used to cultivate just desi dhan(grain) like Jhili, Chini, Gurmotiya, Kalojeera, Bhojna, Dubraj which used to give good yields without a single penny input, using just cowdung. Then came the trend of high yielding varieties (HYVs) that needed higher input cost –seeds, fertilizers, urea, potash, pesticides and the ever increasing labour cost- giving comparatively much higher yields but prone to failures even in case of a slight change in weather conditions. The state government has a crop insurance scheme, but the benefits are not applicable for them, as their fields are in the irrigated Hirakud dam command area, but they have to pay the insurance premium if they take crop loans.

According to the policy as understood by the farmers, when there is a drought at least 50% of the area[2] has to be affected only then the crop failure coverage will be given.[3] But Talab's problem is of a different kind: 70% of it is irrigated and the rest is non-irrigated, so it will never reach the 50% mark of drought affected area, thus in the end it fails to get any relief. So in effect all the money they pay towards insurance is a complete waste. Another concern about the package is that it just covers crop failures due to drought but in today's times when weather change plays different kinds of havoc, there are no policies to take care of it.

Every dying man appears to be young !

The cost of inputs has increased so much over the years that the returns at the end of the season are just enough for daily survival and for investment towards the next season's crops. But in case a medical emergency arises, for which the only resort is a private hospital for good treatment, or if a marriage is to take place the only alternative left for the farmer is to approach the Sahookar(moneylender) in the village. He charges a cut throat interest of up to 2.4% a month. So, the farmer gets trapped. As soon as the yield is packed, before he can even take it home or sell it at the mandi, he has to send a part to the sahookar. But most of the times even a few years is not sufficient to pay back the principal amount. Every single month the farmer bleeds his hard earned money as interest, only till the day he realizes that he cannot do it anymore, and breathes his last -in 90% of the cases by drinking pesticides. On asking some of the villagers about what was the striking change they have noticed in the village in the past decade, a spontaneous reply

came up- "There are very marginal number of old people in the village, every dying man appears to be young!"

Byomkesh, a large farmer with 15 acres and the Secretary of Paschim Orissa Kisan Sangathan of the Sambalpur area, explains that he normally cultivates HYV Swarna, Puja, Hazar ek(Rs 350/ acre) which requires DAP-50kg, Urea- 75kg, Potash-50 kg/acre. It also requires spraying of herbicides and pesticides like Thimate, Biomycin, Tryzophus. The labour costs for ploughing, sowing, weeding, transplanting, spraying pesticides, harvesting, threshing is also involved. Including the revenue and transport costs the total expenditure comes to about Rs 14000. The yield is about 15 quintals, so the output is much better than traditional varieties, but compared to the input cost the returns are meager.

This drove him towards hybrid rice in 2010 Kharif in expectation of high yield. He used Durga hybrid of Kaveri Seeds. The inputs were the same except the seed cost which was 5 times more than that of the HYV seed. That very year he got a yield of 18.75 quintals after spending around Rs.18000. He made a marginal profit so from the next year on he decided to give up hybrids. But again this year he has fallen for it. On asking about his fickle mindedness he smiled and said, "*Life and agriculture have become like a gamble for us farmers, it is a cycle of hope and despair that we are put through by the government and the companies. This year due to heavy rains my HYV has yielded low returns, so when I heard the government is providing subsidy on hybrid seeds I thought of trying one more time. We all expect to gain something someday out of this trial and error game, which might be an illusion but we have no other way out*", then he narrated a situation that arose in the village last year.

Due to the rising cost of agriculture, people were extremely dissatisfied and migrations to take up daily wage work in Vedanta and other factories was on the rise, debt problems were also disturbing. Considering this situation a resolution was signed in the village that next season they would submit a petition to stop the Rabi water from the canal, and give up agriculture for other alternatives like business or daily labour. When the news reached the sahookar he demanded immediate return of all loans that was paid to the villagers. This was a deadly crisis for people who were fighting for existence. So the entire plan was dissolved. "Aap hybrid beej ke daam ko leke chintit hain, hamara toh apne zameen ke upar bhi haq nahi hai! Ajkal toh sabse badi chinta hai ki koi apni beti ka hath bhi ek chasi ke ghar mein nahi dena chahta, sab sochte hain ki chasi runi hai toh beti ko khilayega kya!"[4]. He then complained the village has many other grave problems as well. With a lot of effort, under the Sarva Siksha Abhiyan, a school was built in the village, at least with the hope that their children will get a good education, but as their cursed fate had in store- it has been few months since the academic year began, but the government has failed to supply books and most of them have to send their children to private schools.

This year for Rabi more than 40 acres of the same village has been planted with hybrid rice in the hope that it may fetch magic returns! Even a marginal farmer who owns just half an acre, and has 2 acres on lease has risked his entire half acre on hybrid rice. But according to the latest media reports the fields where the sowing has already been done have suffered huge losses due to an unknown cause, some guess it might be the result of contaminated water from the factory on Hirakud getting mixed with canal water, whereas others blame it on the sudden weather change. For the time being transplanting has been put on hold by the remaining farmers, but even for them the impending danger seems to be that of crop failure due to late transplantation. Whatever the arguments are, the fate has given its verdict for this season against the already dying farmers.

This piece resulted from Sayani's travels to areas around Sambalpur in Orissa to understand the ground reality faced by paddy farmers, many of who have moved to hybrid rice cultivation. Part II will continue in the next issue of PADDY.

After pursuing journalism from the Asian College Of Journalism,Chennai, Sayani Hazra realised that she did not want to pursue a career in the main stream media, so joined Living Farms and is pursuing developmental/ rural journalism to voice the unheard voices.

Footnotes

[1] Translation: he was an educated unemployed, so he set his heart on agriculture. He always developed innovative ideas of how to improve the prevailing situation of farmers. He even tried cultivating Hybrid once. Hope and aspiration of success entrapped him in the cycle of despair. Unable to face failure he quit and gave up his life.

[2] Previously the unit was a block area, from 2012 onwards the panchayat has been made the unit area

[3] Now the calculation method of relief distribution is a tedious process- this involves calculation of the average yield of the last three years, only if the yield of the current year is less than half of the average, the farmers are entitled to get the relief package. This assessment is conducted by the statistics, agriculture and the revenue department. Then a joint report is prepared by all the three functionaries, and if all of them agree on the package only then it is distributed.

[4] Translation: Byomkesh exclaimed annoyingly that people like us keeps stressing on the ever increasing price of seeds, but never does one try to understand that we no longer have rights even on our own land and have to listen to the dictates of the sahooker! A grave social problem entrenched in this critical scenario comes up gradually; nowadays no one wants to get their daughters married to a farmer because it is taken for granted that he is indebted; the question then arises about how he will support his wife?

From across the world: Ducks replace pesticides in a Japanese paddy farm

A Japanese paddy farmer rediscovered and implemented an ancient rice growing practice of rearing ducks in the paddy fields. The dozens of ducks in his paddy fields fed on the weeds and insects leaving the paddy plants alone. Their moving around oxygenated the water and aerated the soil. The duck rearing resulted in a one third increase in output with reduced input costs. More than 10,000 Japanese farmers have bought the book he published about his experiences.

Adapted from Ducks replace paddy-field pesticides. 24th January 2012 http://www.guardian.co.uk/ science/2012/jan/24/japan-farming-technique-duck-pesticide

SRI paddy will get labour through NREGA

The scope of the National Rural Employment Guarantee Scheme(NREGA) has been enhanced in the new guidelines issued by the Ministry for Rural Development. The changes will come to effect from April 1, 2012. The scheme which initially allowed the use of NREGA labour only for water and soil conservation and afforestation has been now expanded to be used in agriculture and some allied activities. The scheme was facing criticism from farmers and farmers' groups citing that it was adversely affecting agriculture and was contributing to labour shortage.

As per the changes small, marginal and SC/ST paddy farmers growing paddy under SRI conditions can employ NREGA labour for transplanting, weeding etc. The Minister for Rural Development stated that this is in line with the need to make the scheme into a "productivity enhancing instrument" and to allay the concerns regarding the conflict between the scheme and agriculture sector.

Adapted from Hindustan Times February 22, 2012 (http://www.hindustantimes.com/India-news/NewDelhi/NREGA-2-aimed-at-bolstering-UPA-2/Article1-815496.aspx)and Business Standard February 23, 2012 (http://www.business-standard.com/india/news/states-grants-tied-to-wage-payment/ 465547/)

Paddy farmers forced to sell below MSP

On one hand the government is talking about Green Revolution in Eastern India, (to usher in chemicals and company seeds)whereas on the other hand the paddy farmers there are not even able to get the minimum support price for their crop due to poor procurement infrastructure. Paddy farmers of eastern UP, Bihar and West Bengal are selling their paddy 25-30% below MSP. Food Corporation of India and state procurement agencies are hardly present in these areas forcing farmers to sell their crop to middle men and wholesalers at unfavourable prices .

Adapted from Business Standard January 28, 2012 http://business-standard.com/india/news/paddy-farmers-forced-to-sell-below-floor-price/463053/

Virippu and mundakan* cultivation were done simultaneously and not one after the other. When virippu was nearly ready for harvesting the seeds for the next season would be soaked and sprouted. By the time the harvesting was done and the soil readied to receive the next batch of seedlings, the sprouts would be a month old. The furrows for transplanting the sprouts would have been dug earlier. There was a certain ritual involved in soaking the seeds. The Pathaayam was opened on an auspicious day, the man who went in sent up a silent prayer to the family deity and transferred three fistfuls of paddy to a basket. After this, the seeds were shovelled out to a large vessel filled with water. The chaff that rose to the surface was removed and the good seeds were tipped into a sunken bund with a base of wooden planks built in the courtyard. Long turmeric leaves were spread at the bottom and then the bund was filled with soaked paddy. The top was covered with the twigs broken off from the gooseberry tree. This was the season when the gooseberry trees were in flower and small gooseberries were forming in them. Banana leaves covered the top so that sunlight would not penetrate the bundle. Twice a day the banana leaves were removed to wet the seeds with the water brought in potfuls from the pond by women. On the third day, one of the men stepped into the bund and stirred the corn slightly before sprinkling the water mixed with cow dung handed to them by the women workers. The covered paddy sprouted the next day and was ready for transplanting. *Chitteli* seeds were the preferred ones for mundakan cultivation, whereas the seeds used for virippu cultivation, were *kattamodan*, *aryan* and *thavalakannan*.

Even as the sprouted seeds were spread out on the veranda to remove excess water, farm hands prepared the field for the sowing. Sackfuls of these seeds were carried by women to the fields, taking

care not to break the sprouted ends. The base was prepared to suit the requirements of rice cultivation on hillsides. Excess water was drained and the soil readied to hold the seeds firmly in place. The sowing itself had to be done quickly. The seeds had to be slid between the fingers so that they did not fall in a bunch in any one spot. It was a fascinating sight to see workers moving swiftly through the sodden earth holding a basket filled with seeds in one hand and a fistful of seeds in the other. The hands moved rapidly to deposit the seeds in their designated furrows.

PADDY note: *Virippu and Mundakan are equivalent to Kharif and Rabi crops/seasons respectively, in Kerala Virippu relying on the plentiful south west monsoon is the major harvest , whereas Mundakan dependant on the north-east monsoon is the smaller harvest.

From the book "Antharjanam – Memoirs of a Namboodiri woman" by Devaki Nilayamgode (page 130& 131) Published by Oxford University Press. It is a collection of writings by the author translated into English, about life in the 1930s up to the 40s.

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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