

**Minutes of the dissemination workshop
on
Decentralised food grain management
Conference room, SERP, Hill Ford Road, Hyderabad
1 April 2003**

Introduction to the workshop (chairperson: K S Gopal)

- K.S.Gopal welcomed the participants to the dissemination workshop on decentralised grain management. He also explained the purpose of the workshop. The workshop is organised to share and discuss findings of the project with larger audience; and also consolidate findings.

Session 1: Sharing experiences in decentralised food security (chairperson: Sashikumar / Thinksoft)

Presentation 1.1: Decentralised food security (Achyut Das / Agramee)

Presentation

Part one: Experiences so far

- MSSRF published some of Agramee's experience as part of a volume of case studies on grain storage
- Case study of Agramee experience done by Thimma Reddy and Barbara Adolph in 2002 (looks at key issues determining success of grain banks)
- Tribal areas: Dominance of money lenders, who control all aspects of tribal life (including government programs)
- 1980 A and V Das came to the area and asked tribal communities how best they could be assisted to overcome lean season food shortages (symptom: Eating of mango kernels)
- Natural resource base is there – so why are there starvation deaths?
- Aim of Agramee: Fight money lenders by addressing food security issues
- System before Agramee: Farmers have to buy grain from money lenders at high interest rate during lean season
- Introduction of grain bank to constitute a community fund of grain
- Initially: Matching contribution from organisation to village contribution
- Grain bank formation: Initially through Agramee, later on some spontaneous formation of grain banks by villagers
- Problems and successes: see chapter in MSSRF book and case study by Thimma Reddy and Barbara
- Key issues:
 - (1) Grain bank should provide security in times of food stress
 - (2) Is the grain bank enough for the development in the village, or are other development initiatives needed? If so, what initiatives?
 - (3) Storage issue: Houses are small – where to store? Need for specific structure.
 - (4) Is community grain bank enough? This leads to the next part on block / panchayat level grain banks

Part two: Decentralised food security: Concept of Panchayat Food Bank

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- Food security as integral part of the decentralised governance system in India
- Village/community level grain banks need back up in order to cope with distress situations.

- Community grain banks need to be linked up at a higher level and backed up through a panchayat level grain bank.
- Grain bank is only about grain, but at panchayat level the focus can be on food and nutrition in the wider sense (from grain bank to food bank)
- Other food items like pulses, vegetables, milk should also be part of the basket for food security.
- Grain banks cannot be stand alone. Lot of other interventions are needed to sustain it. In this livelihood linkages are very important.

Discussion

- How can Panchayat level food banks address nutrition? – Not quite clear how this will work in practice, e.g. how a food bank could include all types of food beyond grain.
- What backup support is required? – Grain banks need other interventions to be sustainable (increases in production) – other inputs required for this.

Presentation 1.2: Designing and promoting a community food security movement – a summary report (Bhavani / MSSRF)

Presentation

- MSSRF is working in two states: Tamil Nadu and Orissa. It is also looking at nutritional support.
- The intervention has four components: Gene Banks, Seed Banks, Water Banks and Food Banks.
- Differences in infrastructure and socio-economic conditions between Orissa and Tamil Nadu. In Tamil Nadu intervention is in big villages and issue is nutritional security. In Orissa intervention is in small villages, which are predominantly tribal and issue is food security.
- Orissa: Entry point activities: Usually water supply / water harvesting structures (communities provide labour, MSSFM provides community lunch and gives technical backup and materials)
- Grain storage structures (mini-warehouse): smaller compartment for seed, larger part for grain storage; storage in bags and metal bins; Safe-Grain Campaign workshops were held in various villages
- Tamil Nadu: Entry point activities = e.g. Zero Energy Cool Chamber (for vegetables), cleaning up village well
- System: MSSFM provides a contribution (double of villagers' contribution?) in grain to the grain bank
- Repayment systems vary between communities (different interest rates and repayment periods)
- Attempts are also made to revive traditional grain storage structures.

Discussion

- How does the system work? – Villagers store grain, take it out in times of need, and pay back in grain. What happens if grain bank runs dry? – MSSFM policy is to support other livelihood activities as well to enable people to pay back.
- Differences between Orissa and Tamil Nadu: More food stress in Orissa compared to Tamil Nadu.

Presentation 1.3: Rice credit line (Krishna Gopal / DPIP Srikakulam)

Presentation

- Rice credit line programme is taken up in the back ground of huge surplus of rice available with Food Corporation of India.

- The RCL was designed by CEC and also helped to ground and oversee it.
- The Civil Supplies Corporation of India agreed to lend grain to SHGs in the villages where the World Bank supported poverty alleviation programme is being implemented.
- The Society for Elimination of Rural Poverty stood guarantee for the rice borrowed by the SHGs.
- The rice borrowers have to repay in money in three instalments.
- While Civil Supplies Corporation lends rice at the rate of Rs. 5.65 per KG members receive at the rate of Rs. 7 per KG. The difference is meet the expenditure of transportation and administration of the scheme and also build up a corpus.
- First phase: 10,000 metric tons of rice, on credit over one year
- Second phase: 50,000 metric tons
- Network of CBOs: Mandal Mahila Samakhya, Village Organisation, SHGs
- The repayment levels are at more than 90 percent.

Discussion

- Repayment percentage appears to drop over time. – This is because even though repayment is meant to happen during three months, some people repay later. Sanctions are being taken against defaulters.
- Any data on what is happening to PDS allocations for the households participating in RCL? – Reach of PDS is low in these groups. Shop owners use PDS allocation of these households as security. In some cases households receive PDS allocations and use them, but they are not enough.
- Are there any problems in implementing this programme? – It required 1 ½ years to stabilise the accounting system. Transportation is working fine (completely decentralised) and government orders are issued to ensure quality.
- Why do you suggest that grain banks should eventually be part of the system? – Grain banks are not needed as long as FCI provides grain stocks (up to 2005 December). But once this system ends, communities would need grain banks to store grain to make the system is sustainable.
- Food security through basket – need to look at overall impact of the different components (PDS, RCL etc.) – Not yet done, because this is a new programme. But no grain has been taken out and sold at the open market.
- Not all SHG members are making use of the RCL – it is often for those households who do not have access to the PDS

Session 2: Institutional issues in decentralised grain management (chairperson: Bhavani / MSSRF)

Introduction by Gopal

- Three partners: APMMS (500 groups in four districts), SAPAP / SERP (100 groups in Mahboobnagar districts), CEC (60 groups)
- Frequent droughts / some areas are chronically drought prone (leads to food deficit)
- No evidence that the areas can produce enough food for their populations, but some NR potential is there
- Food grain management is highly distorted (subsidised etc.) – need to consider this as a background
- Components of the UNDP project: (1) centred around women's groups / empowerment of women, (2) micro-credit support for each group, (3) infra-structural support (physical: storage, land improvement and social: training / capacity building). Focus on production and access of food.
- Land access is a major issue and was addressed through fallow land cultivation programme and lease land cultivation programme (through SHGs)
- Structures: physical storage structures (types of grain, seasonality etc.) and social infrastructure (groups formation and management, institutional aspects etc.)

- UNDP programme: seed provision / seed multiplication, FYM provision etc (production enhancing components)
- Sharecropping and harvest sharing – how to have adequate stocks in grain bank and marketing issues
- Gap between available grain and grain dispersed to members
- Risk: Has not received any attention: (1) production risk, (2) price risk.

Presentation 2.1: Institutional arrangements (Barbara Adolph / NRI)

Presentation:

- **Village-level institutions for food security and food distribution**

- Activities under output 1
- Literature review
- Monitoring of a decentralised food security model in three villages in Andhra Pradesh (Mirzapur, Thogapur, Kollur)
- Case studies of grain banks

- Challenges for a decentralised food security system
- Provides food in adequate quantities and qualities throughout the year
- Is reliable and not dependent on outside projects and initiatives
- Reaches the poorest of the poor
- Is locally controlled and managed
- Has in-built monitoring mechanisms to ensure bottlenecks are identified and addressed

Different arrangements, depending on source of grain:

- Locally produced and locally consumed grain (Aragamee, Darfal, Mirzapur)
- Grain purchased or acquired from elsewhere (RCL)
- Combination of both – village level grain bank, linked to block/ region level “mother grain bank” that stores local and external grain (newly emerging model)

Village level grain banks storing locally produced grain

- In food shortage areas, works only in combination with production increasing interventions (fallow and lease land cultivation – CEC, watershed management – Aragamee)
- Principle (AP experiences): Communally produced grain is stored communally and distributed during lean season, according to the norms set by the sangha
- Limited or no government support => tends to be linked to NGO interventions in limited numbers of communities – sustainability?
- Relatively high storage and management costs require external support (technical and financial)
- Issue of inclusion of the poorest, who cannot afford to pay for grain purchases in cash, but villagers sometimes do not allow payments in instalments
- Need for the system to be rigorous, but sangha can alter the rules according to needs in times of crisis
- Local shocks (drought etc.) can result in grain banks “drying up” without external support / inflow of grain

Rice credit line

Common features with village grain banks:

- Provides secure food to the poorest
- Is locally managed and controlled (SHGs decide on eligibility, payment procedures, rice quality, transport arrangements, etc.)

Differences

- Relies on surplus production elsewhere (FCI), but institutional arrangements could be used to bulk-purchase rice from local mills
- Accelerates changes in food consumption pattern (coarse grain to rice) – long term effects on nutrition quality?
- Does not address production issues (competition with locally produced grain?)

Main lessons related to institutional arrangements at the village level

- Food security needs to be tackled through CBOs (community based organisations) – all successful schemes work through groups
- Villagers appear to generally prefer individual storage => give people choices!
- Sustainable arrangements require institutionalisation of the process, so that communities can eventually manage the system without external support
- Importance of training / capacity building element for groups (in group management, accounting, dealing with external agents such as government officials, traders, transport agents, etc).
- Specific mechanisms required to reach the poorest of the poor (ideally already at group formation stage)

Factors influencing grain bank establishment and functioning

- Role of moneylenders and level of interest rates
- Size and composition of community
- Presence or absence of other development activities
- Transparency and accountability
- Simplicity of transactions
- Role of women in GB management
- Level of agricultural productivity / surplus production
- Appropriate storage technology
- Facilitation / support from outside

Discussion:

- How can NGOs communities address all the different issues in addition to grain banks? Is the capacity there? – Need to pursue panchayat level grain banks and link to other community development initiatives
- Grain banks cannot be stand alones

Presentation 2.2: Samatha Dharani – Sustainable Dryland Agriculture by Mahila Sangham in AP (Leelavathy/ APMS)

Presentation:

- Empowering women
- Supporting women farmers in developing marginal lands owned by them
- Leasing of lands by the women groups in the villages

- Physical infrastructure: Grain storage = major component
- One bin for 2-5 villages (= 1 cluster)
- Major problem: Land acquisition for bin. In most villages the land comes from the panchayat (= community land)
- Construction of bin: Done by SHG women, helped by masons (8 metric tons capacity)
- Women develop negotiating skills when acquiring building materials, and develop skills in building
- Micro-capital assistance under UNDP project: Used to form collective capital, e.g. collective farming (land lease programme). Problem: Low productivity during the last three years => low production
- Some proportion of the collective produced grain will go into bin

Contributions from sangha women

- Sangha promotes girl education – almost all girls are now going to school
- Yield from fallow land cultivation was very low this year
- During the first year, they stored the grain from collective production in bags and it got spoilt (pest attack). This is why they decided to construct a storage structure.
- When asked, they said they would only store surplus production in the bin – the amount for their own consumption they store in their own houses
- The grain storage structure protects the grain from moisture during the rainy season

Discussion

- Is there a rule of thumb on how much grain should be stored in a grain bank to make it economically viable and to ensure food security? – It can be calculated in terms of grain requirements per household and duration of lean period. E.g. Tribal Corporation has calculated 150 kg per household.
- One of the women used the wording: “How much I will HIDE”. Apparently the women’s perception of storage needs is different from ours – it is about emergency rations, not total storage needs.
- Fallow land cultivation: What are the implications for grazing etc., if grazing land is brought back into cultivation? – Bunds will be left for grazing. Crop by products can be used for fodder.
- Land lease: Is it not a very difficult, labour-intensive process to get land on lease? – These are informal leases that are negotiated at the village level.
- Gender dimension: What is the role of men in this process? – Men help with ploughing. Men can also get credit more easily from moneylenders, but now women have alternative access to capital.

Session 3: Technical issues in decentralised grain management (chairperson: Mr Mastan Rao / IGMRI)

Presentation 3.1: Technical issues in decentralised grain management (K Jayaraj, IGMRI and Rick Hodges, NRI)

Presentation:

Main features of bin

- Construction costs - US\$720
- Annual management costs US\$220 (includes IGSM-RI and CEC costs)
- Womens' Group happy with size and location
- Not happy with

–lack of partition

–heavy concrete lid

–moisture seepage through outlet pipe

Initial management strategy

- Grain sun dried for up to 15 days and then placed in gunny bags. Then bags emptied into silo.
- Periodic inspection for pests by farmers, IGSM-RI & CEC (monthly)
- Fumigation with phosphine if pest found (supervised by IGSM-RI)

Stored grain is affected during rainy and winter seasons stretching from July to December.

Moving forward

- Replaced lid with one of fibre glass construction,
- Sealed outlet port, but
- Unable to insert partition

Devising a sustainable grain management strategy

- To prevent insect infestation without recourse to fumigation or admixture of synthetic insecticide.
- To introduce a procedure that farmers can implement without assistance of IGSM-RI or CEC

Suggested procedure: Solarisation

- Place grain in an envelop in the sun
- Hold grain at 50C for about 6 hours from 10 am to 4 pm
- Grain depth should not exceed 1.5 cm
- Use gunny bags or sorghum panicles as insulation
- Enough sun shine is available in the months of November and December to solarise kharif crop

Solarization in Mirzapur (N)

- Grain at 12% moisture content
- Maximum recorded temperature 52° C
- Immediately after treatment, grain placed in polypropylene bags
- Stored in Panhayat offices until all solarization completed, then placed in bin
- Bin painted with gas-tight paint and inlet and outlet ports sealed

Discussion

- Will sangha members be able to pay for the materials need for grain solarisation? – For bottom layer, any materials can be used (sorghum panicles etc.). Clear plastic sheet is available locally at low cost. The labour requirements come from the sangha.
- Government spends 5000 Rs per ton of grain stored. We should not assume that the sangha women have to buy their own plastic sheet – it might come from the government.
- Do we now have a firm technology for grain treatment? – Yes. Under “Total Grain management for Kharif Sorghum” project, 2m x 2m plastic sheets were given to farmers for solarisation. Initial results suggest that it works (no insect infestation). No further trials seem to be needed.
- The technology is well tested, but it has not been widely used, and so we don’t know what can potentially go wrong. More practical experience could lead to a deeper understanding, and to the development of extension materials.
- One thing that can go wrong is the grain depth – once it is too deep, it won’t work. Farmers need to be trained in measuring at different points in the grain layer to make sure it is not too thick.
- Farmers already use solar drying already and know how to combat pests. There are some local methods, e.g. lining the bins with certain leaves – we should experiment and improvise with these methods. – Neem only acts as a repellent, but is not an insecticide. It can be used to protect small amounts of stored grain.
- We need to take the labour requirements into account.
- Storage structure: There are many types of structures – did women chose this type of structure? – Yes, they did. They were shown different types of structures (concrete and metal).
- In another village people asked for a smaller structure with two compartments. In the third village they also asked for compartments.
- Use of neem leaves etc. is not cost effective for large quantities of grain.
- The technologies developed were for dryland crops for 8 months in silos. For different types of storage (different duration, different grain), different technologies might be needed. In this case, the bin was sealed with gas-proof paint and the outlets and lid were sealed. This way, the solarisation was a one-off process. But if insects or moisture can enter into the storage structure, the process might need to be repeated.
- In the Agragamee case, the grain is taken out from June to September during the rainy season. Therefore, the risk of moisture entering the structure is higher at this stage. Are there suitable methods / recommendations for this? – Need to develop situation-specific methods in collaboration between the people and institutes such as IGMRI.
- Can the method be used for all kinds of grains, including maize? – New trials need to be done, because each type of grain has different characteristics. Need for de-centralised trials for specific situations.
- Issue of high moisture contents: Once moisture content is brought down to less than 8 %, and when stored in sealed container, it should be alright even during monsoon period.

- Reason for different compartments: Different seasons, different types of grain even within the same season.
- Three structures have been constructed. The fibreglass lids could not be purchased in Hyderabad, but had to be brought from Delhi. This is not sustainable. Hyderabad-based companies could produce such lid en masse, if the demand is there, but not just one piece.
- IGMRI has carried out mason / artisan training courses in different states on how to produce grain bins. These people can be hired by sangha to provide expertise in bin construction.
- Under UNDP programme, 375 bins are to be constructed (so far only 10 bins have been built). It is important that UNDP can benefit from IGMRI experiences and receive guidelines and information about the different options.

Session 4: Policy guidelines for decentralised grain management

and

Session 5: Recommendations and steps forward (chairperson: Achyut Das, Agramee)

(combined)

Achyut Das: 10 points related to policies

1. Objectives – how to relate policies to objectives of the grain management system?
2. Location (Should every village have a structure, or only certain high-risk villages?)
3. Types of grain (locally produced or from outside, only grains or other foods as well?)
4. Size of grain bank
5. Modalities (how to implement and plan – participatory, matching contribution, totally subsidised? – GoI is planning to implement fully subsidised grain banks in tribal areas by just “dumping” grain in villages without a participatory process.
6. Facilitation and role of NGOs and SHGs
7. Management (transparency)
8. Gender perspective / role of women
9. Food security and linkages to livelihood security (food security in isolation or through linkages with other livelihood activities and needs)
10. Sustainability of grain banks

Andy Hall:

- Main issue is sustainability. Viju James’ study raised issues about viability of grain banks. Need to look at economic viability. Are we confident that the system can work?
- What are we trying to do for poor people? Is it only about food security, or are there other livelihood issues such as access to livelihood opportunities etc. – the issue is broader
- If RCL is a successful model, what does this mean for PDS and similar interventions?

Discussion:

- Can the panchayat level system combine the best parts of both system (local grain banks and rice credit line)? Need for clarity.
- Need to think beyond grain banks. (1) Panchayat level: Production takes place, but markets are not there (low bargaining power of farmers) (2) Consumption – commodities are being imported from outside. FFWPs etc are importing grains and other issues. There are no processing facilities, so people are selling grain and buy dhal.
- We cannot fix all problems. Let’s start discussing whether grain banks are viable, economically and in other ways. Debate on food should be dealt with now, because people need food now. There are discussions going on at different levels, which is good, but a pragmatic solution needs to be found now for those people who are hungry now.

- Need for paradigm changes:
 - (1) No need for international money and programs – use grain from India.
 - (2) Sharing of resources: technical, capital and labour
- Larger issues are important, but we need to see what lessons can be learned from this study and what we can pragmatically do to take them forward.
- We should look at the panchayat level as a means to addressing the wider livelihood issues and to provide linkages between the village level grain banks.
- There are problems related to construction of storage bins and we have to think how to overcome them. In APMMS the sangha design the rules and therefore the system is very flexible.
- Currently there is a high-cost system of procurement and centralised system of distribution. We have to design a decentralised system where people have easy access to grain. Putting aside grain for the lean season is a traditional thing that people have done for a long time. If it is done on a very small scale, the system is very vulnerable. So what is the optimum size? What are the linkages between the macro and the micro level? This is where the proposed Panchayat level storage comes in. But how will it work? Who is going to manage it how? What will be the linkages between the hamlet level grain bank and the panchayat.

Discussion continued after tea:

- Suggestion from Achyut Das: Use list of criteria from table (made by Thimma Reddy and Barbara Adolph) on “Factors in favour of successful grain bank establishment and functioning”
- Andy: There is probably not enough evidence to make policy recommendations to the central government. But there is enough material to develop guidelines based on the experience of this project.
- Example from Mahboobnagar: Pigeon pea is locally procured, processed, and given to sangha members as dhal. Such a system overcomes marketing constraints at village level. There have been recent experiments on “rural supermarkets” supported by APRLP, whereby local produce is sold.
- Need to focus on what we have learned from the experiences and develop guidelines based on the lesson
- We cannot influence policies, but we can influence the thinking of research institutes and other actors. Is a bank the best model for food security? Perhaps an assurance company is a better model. Try to be open-minded and see what brings us further. Research institutions: Need for support systems – what is needed to support micro-level initiatives (e.g. mother banks). Another issue are financial issues – what is the financial package? This is meant to be a safety net, not a stand alone system. If there is a loss due to storage, or due to unavailability of credit, how can the system deal with it?
- Another issue is integration with other government processes, e.g. PDS, so that the entire package can be influenced.
- Project-level: Are largely donor-funded / donor-driven. What is worth trying, but needs further work? What is working? We know that community institutions are formal bodies, with formal structures. They involve external inputs, but external influences could probably be minimised. No problem as long as external support is “good value for money” and the trickle-down / wider livelihood impacts.
- Validation of storage methods: There is something to build on.
- Suggestion: Consolidate findings by compiling lessons learnt systematically – one person to compile findings on one theme and share with others.
- Different systems: Fair-price shop / PDS (but more flexible, buy when you have money), RCL, grain banks (e.g. for cases where there is no access to PDS). There are positive examples of grain banks, e.g. Darfal.
- We can put together a set of best practices / guidelines from different organisations. But there is also a need to look forward to e.g. Panchayat level initiatives still to be researched.

e.g. Matrix (split up between different “experts” by rows):

Aspect	Best practices	Problems / constraints	How these could be addressed	Remaining researchable issues
1. Storage technology				
2. Organisational issues and community participation (CBOs), including training / capacity building				
3. Management and financial issues				
4. Fall-back mechanisms / micro-macro linkages (including mother banks, linkages to PDS etc.)				

- Can we produce training materials based on validated case studies? This would be useful to the government also.
- Important lesson to get across: Grain banks require a process (not just dump grain on villagers)
- Focus should not only be on rice. In tribal areas, the staple food is not rice, so ragi and other millets need to be included.
- Our contribution is more about policy process and not about policies as such. There is a lot of grassroots experience. How can this knowledge feed into the policy making process? We should not get bugged down about what scheme is best. Each situation is different and might require different systems. There is a need to influence in the policy process.