AGRARIAN CRISIS

Life at stake in rural India

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Foreword

Almost two years ago, we launched the exercise of collecting empirical data and facts to refine our understanding of the agrarian crisis, to test our intuitive insights and to explore if we could come out with some programmatic suggestions. Our resources were and continue to be limited. The task is stupendous. Agrarian scene is vast, complex and differentiated. Voluminous reports have been generated by official agencies well equipped with resources and expertise. At times, we wondered whether they appeared more like dictionaries, rich in meticulous and comprehensive compilation, but lacking in a script.

After two years' travail, we have been able to produce a succinct document, which is not only rich on facts and analysis but also suggests praxis.

Twenty-seven yeas ago, Arvind Das in the preface to his excellent thesis on "Agrarian Unrest and Socio-Economic Change in Bihar 1900-1980" wrote this while acknowledging the debt he owed to all those who in one way or the other contributed to his study:

"At the very end, I remember the poor Mushar peasant, Bhookan Rishi-dev of Banmankhi, Purnea, who said: *"Sab ta baat saith jaitai, kitab nikal jaitai, hamara ki hoyat?"* (All the talk will finish; a book will come out; what will happen to us?) He made me feel uncomfortable. So I can not thank him. Just remember him."

It is a warning as well as a message. Shall we transcend the embarrassment of a research study for its own sake and be able to say that here is the potential of a small step together in exploring collective action to resist and defeat the "final solution" that the ruling elite is harbouring for our peasantry? It is for you to judge and decide.

S.P.SHUKLA
05.12.2010

Content

These are farmers from Jhandiwalan village of Punjab marching together to attend the Kisan Sabha Conference in 1945. The photograph was taken by Sunil Janah who was then closely associated with the Party, PWA and IPTA. His photographs, depicting images of Bengal famine and the canvas of rural India, have been appreciated world over. He is now 92 and lives in California. We got special permission from his son to put this picture here as a message of solidarity from history to present.

Introduction

In January 2009, the Joshi-Adhikari Institute of Social Studies undertook a survey of marginal farmers across eight states in the country. The objective was to study the impact of new technological and economic environment on the production and marketing patterns of marginal farmers.

In each state we selected four districts covering the range of crops cultivated by marginal farmers and, in each district, we made a random selection of four villages. In each village, we listed around 150 households and collected basic information on caste, religion, land holding and cropping pattern. From the listed households we selected 10 households for a detailed survey. We collected information on their resource base, crops cultivated, farm operations, seeds, fertilizers applied, marketing and incomes etc. In this manner, we listed 15,300 households and made a detailed survey of around 1,050 households. We also collected information on village history, physical infrastructure, socio-economic structure and production details of crops cultivated in the village.

The survey was conducted with the help of Kisan Sabha. Our investigators were Kisan Sabha comrades and local activists in respective districts and the information was obtained in local languages. The financial and other support for conducting the survey was provided by Action Aid, PEACE, Focus for Global South and Rajshekhar Reddy

Institute. The data provided by the survey is very rich. In every district, supplementary notes were provided by the investigators to describe the specificities of the households and villages. The survey material provides deep insight into village structure, crop dynamics and livelihood patterns of farmers in different regions.

As described above, the coverage of the survey is sufficiently broad, but the sample size is not sufficient for any statistical inferences at the state or district level. We required a statistical frame in which the findings of the survey could be contextualized. This statistical frame was provided by the 59th round of the NSSO Survey, (National Sample Survey Organization, Govt.of India). This was a special survey on farmers, conducted by the NSSO, covering various aspects from land to consumption and debt.

In this booklet, we present a canvas describing the lopsided integration of marginal farmers in the agrarian frame. We describe their land, their crops, their production, their output and their income. This study was taken up primarily to understand the working of the agrarian crisis and to specifically delineate the trajectories of marginal farmers in the system. But we also intended that the study would provide a material basis for farmers to concretize their demand agenda.

We offer this booklet to our Kisan Sabha activists as an expression of our solidarity in their struggle for justice and equality.

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The Question of Land

Indian economy is described as the emerging (emergent!) economy whose growth rate remained quite unaffected by the world economic crisis. Our ruling elite are ready to join the rich countries' club and discard the third world identity of this nation. But the reality is that we are a poor nation with 80% of our population spending less then Rs. 20 a day. Agriculture, which still provides employment to 50% of our work force, is engulfed in a deep and intractable crisis.

As against a 7% growth of the Indian economy in 2009-10, agriculture and allied sectors registered a growth of only 1.6%. In fact, the agricultural growth in the country has now stagnated for more than 15 years. The threatening magnitude of food insecurity manifests itself in starvation deaths, stunting and wasting of our population, and the rate of farmer-suicides in the country is indeed alarming.

The Government's response to this situation has been to introduce populist measures like debt waivers, food security bill etc. and continue with the neo-liberal thrust of opening up our agriculture to world market forces and the corporate sector. This has exacerbated the crisis and created an impression that the agrarian crisis is the result of the policies of globalization, and a reversal of these policies will correct the situation. Of course, it is necessary to resist the neo-liberal policy frame and also to reverse it. However, the crisis has a much longer history. Its roots are deep and its resolution

demands a far more radical restructuring. Just reversing the policies of past 15 years cannot redress the injustice meted out to the majority of the agricultural population over centuries.

We begin with the central question: the question of availability and distribution of the main resource base - **The Land.**

Arable Land is Shrinking

Dadri, Kalinganagar, POSCO, Raigad, Plachymada, Nandigram, etc. are names synonymous all over the country with farmers protecting their farmland, fiercely resisting industrialization and rapid urbanization. But there are innumerable stories not as well known of arable land being transferred permanently to non-agricultural uses. In some instances, the farmers have resisted, in others they have willingly surrendered their land.

One such story is of Patni Pandapur, a small coastal village of Raigad District in Maharashtra with 250 households of Agari (OBC) community cultivating paddy. These farmers have always lived with the threat of rising sea levels and flooding of their farms. They build small bunds to protect their farms. If seawater enters their farms, it renders the soil useless for 8-9 years.

In 1989, Johnson & Johnson and the Nippon Company began dumping their waste and blocked a seawater outlet. This water washed back into the farms and wells. Farmers agitated against the Nippon Company and forced it to build permanent protection structures and provide drinking water. In 2004, a major flood occurred on the Raigad coast. All constructions in the village to stop seawater were destroyed once again. Most farmers want the barriers to be reconstructed. The Maharashtra government has a special provision to protect coastal villages, but Patni Pandapur is not listed with the government. With proper representation the village could be included in the government list and a

demand for government to facilitate resumption of farming in the ravaged farms could be made. But local leadership is not interested. It hopes that soon companies will buy the land and they will gain by becoming the middlemen. Meanwhile, small farmers have been forced to farm on the nearby hill slopes with poorer soil. Most paddy farmers in this village are now dependent on PDS for food and many survive by selling eatables on a nearby railway line.

Pimpalvihir, another village of Maharashtra has a slightly different story to tell. Situated on Amrawati-Nagpur highway, this village also houses around 250 families. With very poor irrigation, cotton farmers here have never found farming an easy prospect. But in the last decade rising costs, repeated crop failures and fluctuating prices have made cotton farming a definite loss-making proposition. Most cotton farmers have either shifted to soyabean or are ready to leave farming altogether. In 1990s, the Maharastra government allocated the area to the Maharastra Industrial Development Corporation. Over the last decade companies have started setting up units in the area and the price of land has shot up. The farmers are happy with the opportunity and are ready to sell their land at a good price. With the real estate boom, the land market has become very active even in rural India. The Pimpalvihir story is being repeated over and over again in many other villages.

There has been a dramatic drop in total cultivated area in the country. During the period 1992 to 2003, total arable land has decreased from 12.5 crore hectares to 10.7 crore hectares a decline of 1.8 crore hectares. This decline is seen in all the states without any exception. At the same time, the farm holdings have increased from 9.3 crores to 10.1 crores. This implies that the farm size of an average holding has dropped from 1.34 hectares in 1992 to 1.06 hectares in 2003. (NSSO Report 492)

While Special Economic Zones have rightly been opposed by farmers across the country, the entire area proposed to be allocated to these projects is only 2.1 lakh hectares. The total land which has disappeared from farming in the last decade is 90 times this area.

The Skewed Distribution of Land

The farmland, which is available to rural households, has always been distributed in a very unequal manner. While all the states have imposed a land ceiling, they have failed to effectively redistribute the ceiling surplus land to the landless. The only notable exceptions are West Bengal, Kerala and Jammu-Kashmir.

According to the NSSO data in the year 2002-03, 41 percent of households in rural India do not own any land other than homestead. Among those who own farmland, 66 percent households have marginal holdings (less than 1 hectare or 2.5 acres), 18 percent households have small holdings (between 1 hectare to 2 hectares or 2.5 to 5 acres) and 9 percent households have semi medium holdings (2 to 4 hectares or 5 to 10 acres). Only 5 percent households have farm holdings with more than 10 acres of land.

The skewness is reflected in the fact that whereas small and marginal holdings account for 85 percent of total holdings, their share in the land area is only 44 percent. On the other hand, the large holdings which account for only 5 percent of the total holdings possess 34 percent of the total area.

The NSSO data on which many government agencies base their policy decisions only considers land owned by households. This excludes vast tracts of land held by trusts, religious institutions and other such bodies. It also fails to capture the extent to which big landlords have been able to flout land ceiling restrictions by making fictitious transfers. For instance, Bihar, which is still characterized by feudal and caste dominance is not represented as such in NSSO data.

According to this data, in Bihar there are no landowners with more than 50 acres of land. Contrast this with the findings of Land Reform Commission constituted in 2006 under the chairmanship of D. Bandhyopadhyay. The Commission held 15 public hearings in 14 districts and prepared a list of number of big landlords clandestinely holding thousands of acres of land and running shadow Zamindari system. Hathua Raj in Gopalganj, Bettiah Raj and Shikarpur estate in Bettiah, Kursela Raj in Katihar are few such names.

In the neo-liberal era the agenda of land reform has taken a backseat. In fact, the state governments in many places are reversing the clock of land reforms. Along with religious trusts and institutions, the corporate sector is also being allowed to own vast tracts of forest and so called waste land. At the same time the corporate sector indirectly controls huge areas of crop land through the provision of contract farming.

Religion, Caste and Distribution of Land

Caste and religion, it appears, are still strong determinants of land ownership and distribution. The muslims and scheduled caste families own land only where the entire village is inhabited by them. In villages dominated by OBC or general caste hindus, the land ownership of scheduled castes or muslims is marginal. Among the states that we have covered in our study, the landlessness of scheduled caste is most glaring in Punjab, Bihar and Tamilnadu.

The appeal of several socio-religious movements among dalits, such as neo-Buddhism in Maharashtra and Sikhism in Punjab, was the promise of escape from inequality. However, simply changing religion has had no impact on the land ownership patterns of the dalit groups.

In Jalandhar district, we listed the caste and land ownership of 310 households in 3 villages. Out of these, 127 households reported themselves as belonging to other sects (various deras). Those who did not have any farmland were 125.

They are all scheduled castes whose ancestors earlier came to Sikhism to rid themselves of the unequal social strata of Hinduism. As their aspirations remained unfulfilled, they are now moving to other sects within Sikhism. On the other hand, there are 170 jat sikh households of which only 11 are landless.

Similarly, in Amrawati district, we listed 542 households. Out of these 123 households were buddhist but reported themselves as scheduled caste. As many as 72 of these were landless and 23 held land less than 2.5 acres.

Land Leasing

Land ownership in India had the dual inheritance of feudal land relations before the British arrival and distortions introduced by the colonial government. Under the British, landlessness was substantial and continued to increase. Not having access to land and not having employment, poor rural households had no option but to lease land from Zamindars and large farmers. Leas terms were exploitative and gave no security of tenure. Tenancy reforms were, therefore, identified as a key issue in the land reform programme in Independent India. However, land being a state subject, various states took different positions. Some states made tenancy illegal and others provided perfunctory provisions for tenancy protection. In either case, tenancy continued without protection and without fair terms of lease. Once again, West Bengal has been the only exception where Operation Barga ensured that tenants had their tenancy registered with the local administration and were entitled to two-third share of the produce.

Over the years, the incidence of tenancy has declined. NSSO survey reporst that the share of tenant holdings in total operational holdings has reduced from 24 percent in 1970-71 to 10 percent in 2002-03. The share of the tenanted land in the total operated area came down from 10 percent to 6.5 percent during this period. However, these percentages do not reflect

the extent of leasing still prevalent. Even in the year 2002-03, one crore holdings had leased in seventy lakh hectares of land. Mostly, the tenant farmers are landless households or marginal farmers and they lease in land from big landlords at disadvantageous terms.

Hasouli is a village in Madhepura block of Madhubani district, spread over 300 acres. There are 82 families in the village. All of them are Sadays, a scheduled caste community. They don't own any land, not even the land on which their homes stand. The entire village area is owned by a Mahant, who lives far away in Hazaribagh. Most of the households work as agricultural wage labourers, but 20 families reported that they leased in land for cultivation. While some reported that they leased it from the temple (Mahant), others reported leasing land from farmers of the neighboring village. This meant that they were subcontracting the land originally leased in by the farmers of neighboring village. The land leased is around 1 to 2 acres per family. They grow paddy on this land during kharif season and wheat on a smaller portion of the land during Rabi season. Yield rates for both paddy and wheat are low. Half the produce is given to the landlord and rest is used for home consumption. No one markets the produce. The villagers know little about the Mahant, have no security of tenure and have little prospects of changing the lease terms and getting better returns for their labour.

There are also tenancy cases of small farmers leasing in small pieces of land from other small farmers. In these cases the lease terms are more equitable. Often, costs and output both are shared equally by the lessor and lessee households.

Finally, there are small farmers leasing out land to big farmers because they are unable to cultivate their own holdings. This reverse leasing is also reported in the NSSO data. As many as 14% of large holdings in the country reported lease in land. Reverse leasing is particularly noticeable in states like Punjab, where yields and profits are

attractive. Big landlords here lease in land from small farmers and offer a meager amount as rent. In Ujjain and Sagar districts of Madhya Pradesh, small farmers lease out their land for wheat cultivation to well to do farmers. In these cases, the small farmers provide land, labour and half the input cost. The well-off farmers provide water and half the input cost. The output is shared equally.

Any move towards resolving the intractable agrarian crisis demands first and foremost that the transfer of agricultural land to other usage is stopped, and a fair distribution of land to the agricultural workforce is ensured. In particular;

1. The outdated Land Acquisition Act of 1894 must be replaced by a new act in which 'Public Purpose' is well defined, community participation is ensured, and rehabilitation of displaced population is guaranteed.
2. An appropriate mechanism should evolve to enable effective intervention of village community in the operation of market forces. The market may offer attractive terms to an individual and appropriate agricultural land for other usage but the community as a whole would be a loser.
3. The agenda of land reform should be brought back to the centre stage. The vast tracts of land in the control of the big landlords, temples and religious institutions should be appropriated by state and made available for redistribution.
4. State Governments should stop allocating huge areas of land to corporate sector
5. Tenancy reforms should be implemented with rigour providing fair terms of lease and security of tenancy to multitudes of share croppers. The exploitation of small farmers through reverse leasing should be stopped.

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Irrigation and Crop Choices

There are around 10 crore operational holdings in the country and out of them 7 crore holdings are of a land size less than 2.5 acres i.e. marginal holdings (NSSO estimates). (While share of marginal holdings in owned farm holdings is 66%, this share is 70% in the case of operational holdings. This is because operational holdings include leased land and land possessed otherwise). If land reform agenda is implemented, their number will further increase.

One acre of land, however, does not mean the same thing to everyone. Among other things access to water becomes a key differentiator between productive and unproductive land. In the country around 41% of net sown area is irrigated during kharif and 65 % during rabi season, but availability of water varies across the states. In Punjab, 94% of net sown area is irrigated during rabi season while in Chhattisgarh only 8 percent is irrigated. Within a state, the irrigation infrastructure varies from one district to another; within a district it varies from one village to another, and within a village the availability of water varies from one household to another.

In our study we covered 114 villages from eight states. We came across 48 villages where farmers reported that they don't have irrigation source. In Punjab, Bihar and Kerala, none reported lack of irrigation. In contrast, every village of Madhya Pradesh and Maharashtra had farmers who lacked

irrigation facility. Lack of irrigation was reported in 8 out of 16 Andhra Pradesh villages, 5 out of 16 West Bengal villages and 4 out of 12 Tamilnadu villages. However, there were only 4 villages (one in Madhya Pradesh and three in Maharashtra) where none of the farmers had any irrigation facility. In other 44 villages, while most of the marginal farmers depended on rain fed agriculture, this was not the case for medium and big farmers. We found that big and medium farmers in these villages had access to some irrigation facility or the other.

The answer to water availability question, cannot be given in plain yes or no. The inevitable accompanying questions are how much water and at what cost.

How much water

Often when farmer reports that he has access to irrigation facilities, he qualifies his answer by saying it is not perennial. It is a rain fed canal or well. A great number of water bodies provide water only during monsoon. A few months later, rivers, canals, wells, tanks, either dry up or have greatly decreased water availability. They provide irrigation for kharif crops but in rabi season, when irrigation is most required, they become redundant. It is only in states like Punjab and Haryana where water is released in canals in a planned manner to facilitate irrigation.

Even in Punjab, the question 'how much water' differentiates between small and big farmers. In Bhatinda and Mansa districts of Punjab, every farmer reports access to canal water and cultivates both rabi and kharif crops. The marginal farmers, however, have access to only canal water while the medium and big farmers in all the 4 villages have two sources of irrigation - canal water as well as tube wells. Given the rainfall in Punjab, canal water alone is not sufficient for paddy cultivation and is hardly sufficient for cotton cultivation. We found that while all the marginal farmers grew cotton, the big and medium farmers in these two districts opted for paddy

cultivation, which fetches higher returns and has less production and marketing risks.

Cost of Irrigation

Traditionally, irrigation meant using surface storage of water in rivers, ponds and tanks for crop cultivation. The flow of water was not tempered through pump sets and electric motors. Irrigation infrastructure was in this sense, a public good. Although the distribution of water was not always equitable, in principle every farmer had a right to access this public good. In the 1950s and 60s, the government made substantial investment in enhancing surface irrigation facilities. The emphasis was on big dams and long canals. Over the course of time, the development paradigm of big dams was challenged very forcefully. From 1980s, government's drive to lay down surface water irrigation infrastructure slowed down. Many of the big dam projects were withheld. Those who opposed big dams, asked for minor irrigation and watershed projects and revival of traditional water sources. Unfortunately, the transition took quite another direction. Crop cultivation began depending more and more on ground water extraction. In 1981 1.5 crore hectares of land was under canal irrigation and 95 lakh hectares under tube well. In 2005-06, canal irrigated area stayed constant at 1.5 crore hectare, but area under tube well increased to more than double at 2.32 crore hectare, making it the most dominant form of irrigation in India today. (Source: GOI, Ministry of Agriculture).

There are now more than 2 crore irrigation wells in the country equipped with diesel and electric pumps.

The transition from surface water to ground water implies the privatization of irrigation infrastructure. Investment required for ground water extraction is substantial, especially in areas where water tables are low. The ownership of groundwater assets is naturally concentrated

with rich peasants. In some areas of Punjab like Bhatinda, the groundwater table has gone so low that some bore wells have failed even after going as deep as 1000 feet. In successful bore wells the average cost of the bore along with motor and electric facility goes up 2.5 lakh to 3 lakhs. Further, groundwater has no territorial rights. Therefore, rich peasants acquire control over disproportionately large areas of ground water and become water lords. A natural corollary has been the emergence of informal ground water markets and pump rental markets in different parts of the country. Through these markets, although water is available to the small and marginal farmers, the cost is exorbitant. Thus when a marginal or small farmer reports that he has access to tube well water which is motorized, it doesn't mean that he owns the tube well and the motor. The farmer pays heavy amount as rental for this facility.

In Lalgaon village of Katihar district of Bihar, the farmers take only rabi crop. During kharif season their farms are submerged by flood water from the Ganga river. The rabi crop cultivated by them is summer paddy known as *garma dhan*. The crop requires a lot of water. The field is to be irrigated six times and pumping the water requires 80-90 litres of diesel. We found that marginal farmers are spending as much as Rs. 5000.00 per acre just for the irrigation.

Crop Choice

In a given agro climatic region, the possible uses of a farm depend to a great extent upon the land size and water availability. This is reflected in NSSO data as well. According to the NSSO Report no. 492 the cropping pattern changes noticeably with changing land size categories. For instance, in kharif season 76% of area sown by marginal farmers is under cereals. This share goes down to 50% for land size category greater than 10 hectares (25 acres). The big farmers use a substantial proportion of their land for cultivation of oil seeds, pulses, sugarcane and fibre crops.

Lack of sufficient water does not allow marginal farmers to grow sugarcane in the major sugarcane producing states of Haryana and Uttar Pradesh. Marginal farmers in Haryana do not produce sugarcane at all. In Uttar Pradesh they devote around 8% of their land for sugarcane. In both the states, the big farmers are able to allocate around 55 to 60 percent of their land for sugarcane cultivation. Like sugarcane there are other crops, especially horticulture crops which are beyond the reach of resource poor marginal farmers.

We looked into the cropping pattern of 811 marginal farmers in our study. Our main findings are as follows:

1. 393 out of 811 farmers cultivated their farmlands only in one season, mostly kharif. Only in Punjab, we found all farmers taking kharif as well as rabi crops. In Bihar and West Bengal, there is no water scarcity but not everyone is able to take two crops. The farms in villages of Katihar and Khagaria districts of Bihar and a few villages in Murshidabad districts of West Bengal get flooded during kharif season and farmers can only take rabi crop. In water scarce states like Maharashtra and Andhra Pradesh most farmers are able to cultivate only kharif crop. In Maharashtra, 109 out of 126 marginal farmers take only kharif crops. Madhya Pradesh is also a water scarce state but in two tribal districts, Betul and Anoopur, farmers cultivate rabi crops without irrigation. In the other two districts, resource poor marginal farmers lease out their land for rabi cultivation.
2. In general, marginal farmers dedicate nearly their entire crop area to a single subsistence crop, which varies by agro climatic zone. This is most true where paddy is the subsistence crop, such as in West Bengal, parts of Bihar and the southern states excluding Kerala. In Punjab and some parts of Bihar, the subsistence crop is rabi wheat, and it also follows this trend. However, where jowar or coarse grains were the traditional subsistence crops,

farmers in some areas have now shifted to soyabean and other oilseeds. This trend is observed in a few districts of Madhya Pradesh, Maharashtra, Andhra Pradesh and Tamilnadu. In short, we found that marginal farmers in all the states cultivate subsistence crops as their primary choice.

3. In tribal districts of Maharashtra and Madhya Pradesh, farmers with very small and fragmented holdings cultivate a large number of crops in small areas. Their subsistence crops are still lesser known indigenous crops. (See box below).

4. In every village, the big farmers had a much wider and superior spectrum of crop choices available to them. Even in Seetaljhiri, a tribal village, the big farmer with 54 acres of land cultivated traditional crops like kodo, kutki, jowar, maize, wheat, soyabean, etc, but he also cultivated sugarcane, potato, onion, which are crops with high profit margins. In Jalandhar district, the crop choice is directly related to farm size. The smallest land size farmers grow wheat and maize. The slightly better off next category farmers grow wheat and paddy. The large farmers grow wheat, paddy and potato and the largest category farmers grow wheat, paddy and sugarcane.

Cropping pattern of a marginal farmer
Seetaljhiri village, Betul district (Madhya Pradesh)
Total Land 1.4 acres

Crop	Land area sown	Production
Tuar	0.20 acre	12 kg
Batla (Peas)	0.10 acre	10 kg
Kodo	0.15 acre	25 kg
Kutki	0.15 acre	22 kg
Maize	0.30 acre	20 kg
Paddy	0.15 acre	1.8 quintal
Wheat	1.30 acre	1.4 quintal

Note: *All the production is used for home consumption, which is hardly sufficient for this family of five members; four of them work as wage labourers in nearby towns.*

* * * * *

Production and Marketing Patterns

While small land sizes and limited availability of water constrain the land use possibilities for marginal farmers everywhere, these constraints are more formidable in some places than in others. There are marginal farmers situated in relatively more developed areas, and there are marginal farmers situated in regions which are cut off from basic infrastructural facilities. Naturally, the production and marketing patterns in two cases are different.

When water is available, even marginal farmers take both rabi and kharif crops. In West Bengal, almost every farmer grows aman (kharif) paddy as the subsistence crop and then takes either boro (rabi) paddy or potato or jute or wheat as a second crop. There are farmers who grow three crops - aman paddy (July to October), potato (October to December) and then boro paddy (Janauary- March).

Every marginal farmer in Punjab grows two crops - wheat as the subsistence crop and cotton, maize or paddy as the second crop. In some districts of Bihar like Rohtas, farmers grow paddy in kharif and wheat in rabi. In Ujjain and Sagar districts of Madhya Pradesh, marginal farmers grow soyabean in the kharif season and then gram in rabi season. In Maharashtra and Andhra Pradesh, there are not many farmers growing both kharif and rabi crops. However, in Krishna district of Andhra Pradesh, farmers grow paddy in two seasons (known as Sarwa and Dalwa). Likewise in some

villages of Nashik district, farmers grow wheat as their subsistence crop in rabi and maize as the second crop in kharif. In Tamilnadu, the monsoon cycle is different. Many farmers take two crops of paddy and some grow groundnut along with paddy.

Farm Operations

When big farmers mechanize their farm operations, they buy tractors, harvesters, threshers, pump sets with motors etc. When they buy these machines, they also create local rental markets for them. Marginal farmers do not own these big farm implements. In our study, only two out of 811 marginal farmers reported owning a tractor. Nevertheless, when machine use is initiated by big farmers and machines are available on rent, marginal farmers hire these machines and mechanize their farm operations. They use tractors for ploughing, diesel and electric pumps for irrigation, threshers for threshing and trolleys for transportation. We also found marginal farmers using harvesters in many villages of Punjab and in one village of Bihar.

The rentals for use of farm machinery are high. Normally, the rental for a tractor is Rs. 500 to Rs. 600 for ploughing one acre of land. For a tractor owner, the cost for the same is Rs. 200 to Rs. 250. The cost of irrigation varies across states. In Punjab, Andhra Pradesh and Tamilnadu, farmers reported that the electricity was free and electric pumps could be used without incurring any substantial cost. In some villages of Andhra Pradesh, even the pumps were provided by the state. In Madhya Pradesh, electric pumps are used but electricity is not free. Farmers reported taking temporary connections during rabi season and paid high charges for them. Some others reported that they got illegal connections for which they had to pay bribes. In Bihar, the pump sets are all diesel pump sets. We already mentioned the exorbitant cost of Rs. 5000 paid by farmers for irrigating one acre of land for

garma dhan (summer paddy). Threshing and harvesting are activities where the extent of mechanization is relatively less. But even in these activities, if machines are available, the marginal farmers are ready to pay high rentals.

The net result is that farm operation cost per acre is much higher for marginal farmers as compared to medium and big farmers. This trend is seen in every state. The higher cost of farm operations is particularly noticeable in Punjab and Bihar. In West Bengal, the cost differential is small. There are several reasons for this. First, there are very few big farmers in West Bengal and medium level farmers are like small farmers. They do not own tractors. Moreover, ploughing with bullocks is still common there. In addition, the rental markets for machines and wage rates for labour are directly controlled by local panchayat administration.

It is not irrational for marginal farmers to opt for costly mechanized farm operations. The situation is such that they have few options left. For instance, in Punjab, if wheat is harvested with a harvester, the rent is Rs. 1300 per acre. However, if harvesting is done manually, the labour cost for harvesting and threshing comes to Rs. 1300 or more per acre and the time required is also more. Labour is only available there through contractors and is quite expensive. Therefore, the farmer chooses to use harvester.

Application of Improved Seeds, Fertilisers and Pesticides

In developed regions, marginal farmers also use improved variety of seeds, and apply adequate (or excess) quantity of fertilizers and pesticides. The term "improved seeds" however, has different implications in different cases.
With the advent of green revolution in 1960s, National Seed Corporation and State Seed Corporations were set up by the government. Production and distribution of improved varieties of seeds was the responsibility of state. From 1970s onwards, seeds production was opened up to private sector

and in 1980s multinational companies entered Indian seed market and made deep inroads.

It would be incorrect to infer that, the state has absolved itself of all responsibilities. Although production and distribution of seeds has been privatised to a large extent, the development of new varieties of seeds is still the responsibility of agricultural universities and state owned research institutes. Farmers in Punjab largely report using seed varieties developed by Punjab Agricultural University. Only a few farmers use seeds developed by Pepsi. Farmers in Madhya Pradesh report using soyabean seed varieties developed by National Research Centre of Soyabean (NRCS). In some cases the state agencies also undertake the responsibility of production and distribution of improved seed varieties.

The state initiative in Tamilnadu to solve the problems of paddy farmers in Cauvery delta region deserves a mention here. The Cauvery delta region receives medium rains from south-west monsoon (July-October) and heavy rains from north-east monsoon (October-December). Thus, the dry spells are not available between July and December. This makes it difficult to grow and harvest ordinary paddy with a 90 days maturity cycle. A special seed variety, CR-1009 was developed by Cuttack Rice Research Institute which has a maturity cycle of 140 days. Tamilnadu government found CR-1009 variety appropriate for farmers in Cauvery delta region and introduced it there. This variety is sown in mid-August and harvested around mid-December. The average yield is 20 quintals per acre and maximum is 30 quintals per acre. The paddy farmers are supplied CR-1009 seeds directly by the government at a uniform price and the produce is bought by Tamilnadu Cooperative Supply Company. We found this support being extended to every farmer in our sample from Thiruvarur district, in the Cauvery delta area.

The Andhra Pradesh and Tamilnadu governments have also taken a major initiative to promote SRI (System of

Rice intensification) cultivation in dry upland areas. It has the potential to make a big impact on livelihood possibilities of paddy farmers.

The other side of the story related to 'improved seed varieties' can be heard from the cotton fields of Andhra Pradesh, Maharashtra and Punjab. Field trials to assess the efficacy of transgenic seeds in cotton were conducted in different agro-climatic regions between 1998 and 2001. Despite a great deal of controversies over these trials, the government of India gave permission for commercial cultivation of BT cotton hybrid seeds in March 2002. The seeds were developed by Mahyco (Maharashtra Hybrid Seed Company Ltd.) in collaboration with the multinational giant Monsanto.

Since then, BT cotton has spread rapidly in cotton fields. By 2007, Genetic Engineering Approval Committee (GEAC) approved altogether 131 BT cotton hybrids developed by 24 companies. The area under BT cotton increased from 29,000 hectares in 2002, to 62 lakh hectares in 2007. A study in Vidarbha has estimated the production cost of BT cotton to be 30 to 50 percent higher than that of non BT seeds. This is primarily because BT seeds are more expensive. These expensive seeds require expensive inputs. Therefore, the expenditure on all other items like irrigation and fertilizers also goes up. The study observes that the consequent productivity is also higher and so is the risk. BT cotton is water sensitive. If rainfall is delayed there can be a complete failure of crop. Hence, productivity in a particular year may be higher but frequency of crop failure is also high in BT cultivation. The risk of failure also increases because cotton areas have been swamped with different varieties of spurious seeds.

Sale of spurious seeds is not limited to the cotton crop alone. In 2010 kharif season, thousands of farmers in Bundelkhand region of Madhya Pradesh and Uttar Pradesh cultivating urad, til, gram and soyabean have been hit by spurious seeds. No grain formation took place in the standing

crops. Reportedly, these seeds were being distributed under public private partnership (PPP). The seeds were produced by private parties, bought by the government agency, and distributed through government agencies. When media raised hue and cry, the Chief Minister of Madhya Pradesh announced that a committee would look into the matter and offer compensation to affected farmers. There was of course, no mention of punishing the spurious seeds suppliers and taking action against government officials responsible for distributing these seeds. The Seed Bill, 2010, which is currently awaiting introduction in the Rajya Sabha talks about imprisonment extending to one year and a fine of Rs. 5 lakh for spurious seed dealers. In the mayhem that exists in the neo-liberal markets, this provision of a minor punishment will have no impact on dealings in spurious seeds. If the government really means business, rigorous regulatory networks should be established at all levels and the role of private seed producers and dealers should be minimized.

Further, one also needs to look at the impact of so-called genuine and legally approved 'improved seeds.' The high price of BT cotton was justified by Monsanto Company on grounds that it would reduce expenditures on pesticides. BT cotton seeds have failed to keep the promise. The heavy use of pesticide for cotton crop can be seen everywhere. In the cotton belt of Punjab, the pesticide use is so intense that it has started affecting the lives of the villagers. In Bhatinda and Mansa

A report from Punjab

"Locals call Train No. 339 by a chilling name "the cancer train." It routinely carries at least 60 cancer patients who make the overnight journey with their families to the town of Bikaner for treatment at the government's regional cancer center. Research by one of the most respected medical institutes in India recently found that farming villages using large amounts of pesticides have significantly higher rates of cancer than villages that use less of the chemicals."(Source: Editorial of Analytical Monthly Review, April, 2010).

districts, farmers are using pesticides worth Rs. 2500-3000 per acre for cotton crop and Rs. 1200-1500 per acre for wheat.

The government of India, however, actively promotes research advances in transgenic plant and seed varieties and their applications in Indian agriculture. This is one of the main areas of research work under *Indo-U. S. Knowledge Initiative on Agriculture*. The Seed Bill 2010 is being opposed by farmers organisations because it is designed to enable multinational companies acquire greater control on seed markets and seed research. It will facilitate the companies to charge high prices for their seeds and also introduce untested and genetically modified crop and seed varieties through backdoor.

Indiscriminate use of pesticides

The use of pesticides varies region wise and crop wise. Farmers growing cash crops like soya, cotton, potato etc very often apply more than the required dose. Pesticides are also being used in food grains, vegetables and fruits, and posing a serious threat to the very existence of the life.

A significant number of farmers in our survey reported that they applied pesticides but did not even know the name. This doesn't mean that those who know the names also know about the risks involved in using the pesticides. Around one-fourth of the surveyed farmers reported that they use 'Endosulfan' pesticide, which is banned in the U.S., Europe, Australia, New Zealand and several more. In India, the lethal effects of Endosulfan came to light in 1995, when villagers in Kasargod district of Kerala started reporting serious health impairments. This was the result of Plantation Corporation of Kerala recklessly carrying on aerial spraying of Endosulfan on cashew plantation since 1978. The pesticide, which is not easily degradable, contaminated the soil and water and entered the food chain. About 500 deaths since 1995 have been officially acknowledged but the unofficial estimates are as high as 4000 deaths in last two decades. People

are still dying and children are born with congenital disorders and malformations. After a long struggle waged by the people of Kasargod, the Kerala Pollution Control Board announced a blanket ban on Endosulfan use and heavy sentences for violators. On 20th November this year, the Kerala government also announced compensation for affected families.

Endosulfan is still being freely used elsewhere in our country.

We know about Endosulfan because of the Kerala tragedy but there may be many other pesticides, which are equally lethal. Once again, to stop the use of life threatening pesticides, a network of regulatory bodies is required. Private sale and purchase of pesticides should be banned.

Productivity and Total Production

Spending large amounts on farm operations and farm inputs, the marginal and small farmers often manage to obtain produce which can compare with the produce of the big farmers both in respect of the grading and yield rate.

If the weather is favourable, seeds are reliable, and pests do not attack, then these marginal farmers can expect to reach the average productivity of the region or even exceed it. *However, the small size of the land puts the ultimate limit on total production.* Consider the farmers in West Bengal growing aman (kharif) paddy. West Bengal and Bihar have a large proportion of farmers with very small land size. Around 30% farm households have land size less than 0.5 acre. Our survey covered 15 aman paddy growers in West Bengal in the land size category 0 to 0.5 acre. The following figures are the averages of these 15 farmers. The average land holding in this category was 0.34 acres of land. Farmers spent Rs. 1800 on farm operations and seeds, fertilizers and pesticides, and produced 5.3 quintals of paddy. This meant a yield rate of 15 to16 quintals per acre. As aman paddy is primarily a subsistence crop, 4.5 quintals of paddy are kept for home

consumption and 0.8 quintal of paddy was sold in the market. In 2008, the price of aman paddy in West Bengal villages was Rs. 700 per quintal. The farmer, by selling 0.8 quintal earned only Rs. 560 that year. Cultivating aman paddy thus meant getting 4.5 quintals of paddy, or 3 quintals of rice, and a net loss of Rs. 1240. In other words, even under favourable circumstances the farm operation can hardly be called viable.

On the other hand, if the crops fail then marginal farmers have no capacity to absorb the shock. Suppose, because of failed monsoons, aman paddy yield rate dropped from 15 quintals per acre to 5 quintals per acre. A farmer with 20 acres of land would get 100 quintals instead of 300 quintals, but a farmer with 0.34 acres of land would get only 1.7 quintal of paddy which would not be sufficient even for his home consumption. The fragile equilibrium of marginal farmers can break down with slightest of perturbation.

In our survey, many villages reported crop failure in rabi as well as kharif seasons of 2008-09. To name a few, paddy crop failed in Gopinathpur village of Burdwan district, potato crop failed across the entire Hooghlie district (West Bengal); soya, gram and wheat crop failed in Vinayka & Bangela villages of Sagar district and Rudrakheda village of Ujjain dstrict (Madhya Pradesh); paddy crop failed because of Cyclone Nisha in Muvakallur & Marudhavanam villages of Thiruvarur districts (Tamilnadu); cotton crop failed in Amravati (Maharashtra), wheat crop failed partially in Jalandhar district (Punjab).

There are farmers with bigger land size but they may face other constraints like limited availability of water or less fertile soil. It is only in Punjab that farmers have a slightly robust equilibrium and greater capacity to absorb shocks.

Regions with no infrastructural facilities

There are marginal farmers situated in regions where they do not have access to mechanization, water and other

inputs. Farmers in Anooppur and Betul (Madhya Pradesh), Madhubani (Bihar), Raigad and some parts of Nashik (Maharashtra), etc. belong to this group. In Anooppur district, we surveyed 30 marginal farmers growing paddy in kharif season. They ploughed their land with bullocks (only 5 farmers hired tractor for this purpose), they used seeds saved at home (only 4 bought), 6 farmers spent a little on fertilizers and no one used insecticides. It was not the case that those who hired tractors also bought seeds and spent on fertilizers. In fact, there was little overlapping in these three categories. The productivity of these farmers ranged between 1 to 3 quintals of paddy per acre (compare this with average productivity of Punjab and West Bengal which ranges between 15 to 25 quintals per acre). Of course, no one among these 30 farmers produced enough to take his crop to market.
Similarly in Betul district, no marginal farmer had access to irrigation facilities. However, most of the farmers cultivated number of crops, both in rabi and kharif season. The productivity of every crop was very low. For wheat, it was 1 to 2 quintals per acre.

Many of the villages in this category are scheduled tribe villages with undulating planes, poor quality soil and no source of water. Because the topography has been unsuitable for agriculture and the people living here have had no say in country's planning priorities, no infrastructure developed in these villages. We found in our survey that in some of the villages, even big farmers with 20 acres of land did not have any source of irrigation, invested little in their land and obtained no returns. In other villages, the big farmers had obtained control over good quality land and whatever water was available in the area. Their cultivation was viable.

The marginal and small farmers in these areas do not expect to get any worthwhile returns from their land. Naturally, they do not invest anything other than labour on their farms. Labour, they can invest because surplus labour,

they have. In many of such tribal villages, we were told that all family members including women and children migrate to agriculturally prosperous areas or nearby urban areas in search of employment.

On the Margins of the Market

The farmers who produce cash crops or produce enough to market a portion of their subsistence crop are minor entrants in markets and have little bargaining capacity. The volatile markets of agricultural commodities and dramatic responses of farmers make news routinely. Last year we heard of sugarcane farmers in U.P. and Haryana burning their standing crops in the fields. A few years ago, potato farmers in Hooghly and Burdwan districts of West Bengal threw their potatoes on the roads because the potato price had crashed. Opening up the trade in agricultural commodities have subjected our farmers to world market fluctuations. The maximum impact has been on the farmers in Kerala. Most of their production is for export markets. The capitalist solution to market fluctuations is to introduce forward trading and contract farming. The speculation in forward trading can create chaotic situations. The rapid rise of world food prices in the beginning of 2008 was largely due to commodity speculation. Impervious to farmers' demands to give protection to domestic markets, the government has systematically dismantled all controls and has allowed direct access to multinational companies in our agricultural markets.

In the post-Independence era, the government had taken initiatives to provide fair market terms to farmers. Cooperatives were set up at village levels to buy farmers' produce. Institutions like FCI and CCI were created to intervene in commodity markets and ensure minimum support price. During 1970s, every state government enacted Agricultural Produce Marketing Act (APMC Act). According to these acts, agricultural produce could only be sold in

government regulated market yards (Mandis) through a system of open auction. There are 7177 mandis established in the country. Even companies had to make their purchases in these mandis only.

Over the years, village level cooperatives have got discredited and stopped functioning in most places. In 2003, the government of India sent a guideline to all state governments for modifying their APMC acts. The modified acts now allow companies to set up their own purchase hubs outside the Mandi premises. The dynamic initiative taken by ITC to spread a network of e-choupals and make direct purchases from farmers has made big news. The modified APMC acts have also legalized contract farming. This enables companies to hire large tracts of land for their specific requirements.

Both in contract farming and in e-choupal networks, the companies negotiate only with farmers with respectable resource base. The marginal and resource poor farmers are left out of their ambit. Moreover, with corporate entry the government mandis, village traders and small processing units, all will get marginalized in due course of time. Thus, for small farmers the traditional market links are getting weakened and no new alternatives are in sight.

NO ENTRY

The ITC purchase hubs for soyabean in Madhya Pradesh have an efficient weighing system. The lorry full of grain is weighed by electronic weighing machines. Lorries are then emptied and weighed again. The small farmers who do not produce lorry loads of soyabean, nor can afford the rent of a lorry for transport, get automatically excluded from ITC hubs.

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Farm Income, Other Income and Debt

As explained above, the total produce of marginal farmers is ultimately limited by small land size and the unavailability of water. In most cases, the marketable surplus is very small. Even when farmers grow cash crops and produce a respectable surplus for the market, the returns from the market are uncertain. The sale-proceeds of farmers, in many cases, do not even cover their cost of cultivation. Even if the cost of cultivation is covered, the farm income is insufficient to meet the basic consumption needs of the family. Almost every marginal farmer household requires supplementary income. This supplementary income comes from wage labour, income from livestock and other income. The other income includes income from self employment in non farm activities, income received from family members who migrate out, either permanently or seasonally, and so on.

The exact composition of supplementary income depends on many factors and every household can have a different story to tell. However, certain broad trends can be identified.

A major constituent of the supplementary income is the income of family wage labour. In most cases, the wage income component is 2 to 3 times as large as the farm income. In the year 2002-03, at all India level the monthly farm income for the land size category 0 to 1.25 acre was Rs. 296. The monthly wage income was 3 times as large i.e. Rs. 973. (NSSO

report no. 497). In such cases, some academics consider it more appropriate to classify wage income as the primary income and farm income as the supplementary income. So, these *marginal farmer* households are then classified as *landed agricultural labour* households. We think that this classification has incorrect political implications. The marginal farmers' identity as a farmer should not be compromised.

In our survey, we found that although most farmers do not keep bullocks any more, they do keep a cow or a buffalo. However, keeping a cow is not necessarily a source of income for them. Most marginal farmer households do not receive any significant income from livestock they possess. Income from livestock was significant (Rs. 500 to Rs. 1000 per month) only in Punjab.

A major portion of supplementary income in Bihar is contributed by family members migrating seasonally to other states for agricultural wage work. Men and young boys migrate in the sowing and harvesting season to Punjab and other states and get employment through contractors. There are also households where men migrate to urban areas on a more permanent basis. They return home at the sowing and harvesting time to help in farm work. In their absence, the farm and house is looked after by women and elders. We also found many such women kept one or two cows and sold milk to supplement their income.

As expected in Punjab and Kerala, many households reported receiving substantial income from abroad. In these two states, the share of wage income is small.

Unfortunately, in most households the farm and supplementary income together is also insufficient to meet the basic consumption needs. In our survey, 90% of marginal farmer households said that their income was insufficient to meet their basic needs. This is also reported in the NSSO Survey. At an all India level, in the land size category of 0 to 1.25 acre, the monthly household income (farm and

supplementary) is Rs. 1633 and monthly household consumption is Rs. 2427. In the land size category of 1.25 to 2.5 acre, the income is Rs. 1809 and the expenditure is Rs. 2768. This trend is observed in every state including Punjab.

When expenditure exceeds income on a regular basis, the households try to make ends meet by taking loans.

Indebtedness

The NSSO Survey report no. 498 recorded 48.6% of farmer households in the country as indebted in the year 2002-03. Maximum indebtedness was found in Andhra Pradesh - 82%. Next was Tamil Nadu - 74%, and then came Kerala, Punjab, and Karnataka. In these three states 60 to 65% farmers were indebted. The incidence of indebtedness also varied with the land size categories. At an all India level, the indebtedness was 45% for marginal farmers and 66% for large farmers having more than 10 hectares of land. The average outstanding loan was in the range of Rs. 6,000 to Rs. 8,000 for marginal farmers and more than Rs. 76,000 for large ones.

The higher incidence of indebtedness for big farmers does not mean that they are more in need of loans. It only means that they have greater access to credit on reasonable terms. The marginal farmers on the other hand are in far greater need of credit for farm operations and also their consumption needs. Their access to institutional credit is limited and the major part of their loans comes from the informal credit market. This difference is most noticeable in Andhra Pradesh. The NSSO report tells us that 15% of marginal farmers' outstanding loans are from banks and 60% from professional moneylenders. In the case of big farmers 45% of outstanding loans are from commercial banks and only 20% from professional moneylenders. The rate of interest charged by banks is in the range of 7% to 12%, whereas moneylenders charge 24% and 36% interest and sometimes even more.

In Andhra Pradesh, the moneylenders are not necessarily the traditional Sahukars. A number of unregistered financial institutions have cropped up, which call themselves banks. These unauthoriszed banks charge compound interest on the loans which they extend. Compounding is done more than once a year - in some cases monthly or more frequently. In Tippepalli village of Ananthpuram district, we found two cases where Rs. 4,000 and Rs. 5,000 were taken as loans in 1998. In ten years, these amounts have increased to Rs. 25,000 and Rs. 44,000 respectively. Additionally, there are registered micro finance agencies in AP villages. In our survey, all the 16 villages reported the presence of micro finance agencies. The villagers said that the micro finance companies recover their loans on a weekly basis. If a household is unable to pay, the agents behave harshly. Women's groups are demanding that micro finance agencies should not be allowed to operate in the state. In Warangal district, three villages out of four reported farmers' suicides due to financial problems. These villages are Burhanpur - 15 suicides, Krishnajigudam - 6 suicides and Ramteertham village - 4 suicides.

On one hand, the poor farmers in Andhra Pradesh take loans on exploitative terms and when they cannot return it, they give up their assets or their lives. On the other hand, there are farmers in Bihar, West Bengal or Maharashtra who have no access to any sort of credit. In our survey many West Bengal farmers reported that they do not take any loans. On further enquiry they informed us that they buy their food, grocery and other necessities on credit. The interest is recovered by the grocery shop keeper by charging higher prices for the goods they buy. In many cases the farmers also sell their farm produce to the same shopkeepers at a price much lower than the market rates.

In Raigad district of Maharashtra, when farmers did not report having taken any loan, we specifically enquired if

they bought their grocery and other necessities from the local shopkeeper on credit. Some reported that the shopkeeper did not give them any such credit, and others said that they were afraid to buy anything on credit. They know that they would not be able to repay it.

Debt cannot be the solution for everyone and it cannot be a permanent solution for anyone. What, then, is the solution envisaged in a capitalist economy? One solution that is given to "losers" is to "quit the game": the household has the "option" of giving up land and moving into the landless agricultural labour category. The farmer household may also decide to quit agriculture completely and move on to join the burgeoning urban informal sector - howsoever overcrowded, self-exploiting and subhuman it may be. Finally, the farmer also has a choice to quit this world altogether - **as nearly two lakhs have chosen to do since 1997.**

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A Case for Collective Production Base

Amidst all the variations in the resource base and production patterns of 7 crore marginal farmer households spread across the country, two common features emerge without any ambiguity. One, that farm income inclusive of livestock income is insufficient to meet basic cultivation costs and consumption needs. Supplementary income is necessary for all marginal farmers.

Two, marginal farmer households obtain this supplementary income by offering their labour in markets that are unfair and exploitative. In other words, the agrarian question looms large in the face of the Indian economy. The surplus labour in agriculture distributed among numerous small holdings can not be contained in this sector. The neo-liberal capitalist solution is to make agriculture modern and structured and facilitate the entry of corporates. The surplus labour will automatically get flushed out in this manner. The misery and suffering of the agrarian workforce is not a matter of concern in the capitalist development paradigm.

To intervene effectively in this process, the farmers must come together. Transcending caste and religious differences and coming together politically is necessary as a first step. But one can look beyond even that and consider pooling lands together to form production cooperatives. This will enable small and resource poor farmers to participate in the neo-liberal market with a collective production base.

The strength of a Cooperative

Rural society in India has had a long experience of service cooperatives providing credit and other inputs, and facilitating marketing. True, in many places, these cooperatives have malfunctioned and there is rampant corruption in this sector. However, this does not warrant discarding the very concept of cooperatives. What is required is to cleanse the existing system, break local hierarchical structures and ensure participation of the wider village community in a democratic way.

A production co-operative demands a much greater degree of integration than a service co-operative. Poor households are apprehensive because their meager resources are put at stake. It is necessary that they get convinced of the advantages of pooling their resources together.

When 10 or 15 or more farmers pool together their land and form a cooperative holding of 15 or 20 acres, the endeavour would open up many possibilities. Water management would be better. Mechanized farm operations would be more efficient. The spectrum of available crop choice will be widened. The bargaining capacities in input and output market would improve. The risks would be shared in the group.

In addition to all these advantages, the surplus labour in individual small farms will also get collectivized in the cooperative. This collective labour then can be engaged in infrastructure build up and agro processing activities linked to the cooperative. In this manner, the shift of labour from farm to non-farm activities can also be planned in a humane and dignified manner.

Forming a production cooperative does not mean surrendering ownership of land. It only means pooling land together for joint production. The income and production from the cooperative are to be distributed in accordance with the resources and labour offered by each member. The exact

blue print of the cooperative will be decided by members who come together to pool their resources. Nevertheless, two points must be clear in any programme of cooperative formation. First, any joint endeavor succeeds when the partners are equal. Unequal partners entail unequal exchange. Second, the feudal backdrop of Indian villages and predatory character of neo liberal markets will not allow cooperatives to survive on their own. **Therefore, small and marginal farmers' cooperatives must restrict membership based on a criterion of resource base size and a programme of cooperative formation must necessarily demand "state support".**

Cooperatives in the Socialist world

Socialist countries have had a rich experience with cooperative programmes. A detailed study of these programmes would give invaluable insight into the working of cooperatives.

In the Russian revolution, the worker-peasant alliance played a big role. The traditional Russian communes, "Mirs" played a crucial role in the 1905 uprising against the Tzar and continued this pivotal role of providing organizational base for peasant mobilization till the 1917 revolution. Immediately after the revolution, Lenin implemented land reforms. Lenin's vision was to make a transition to socialist base by forming cooperatives of poor peasants. Unfortunately, collectivization of land in Soviet Union used force and laid greater emphasis on state farms.

Mao in China chose a different path. As a first step in the programme of commune formation he initiated producer cooperatives of poor farmers. In these cooperatives ownership of land, draught animals, and farm implements remained with individual members. However, the resources were used jointly by cooperative members. The labour that was released by cooperatives was used for building infrastructure in rural China and promoting rural industries. The transformation in rural China was dramatic. The ultimate shape that these cooperatives acquired were "communes" where a large nuber of families got engaged not just in collective production activities but in building a life together.

The Socialist government in Cuba realized transformation of privately owned land into cooperatives through persuasion. On National Broadcasting Corporation, the government announced, "Whenever a Cooperative is established, a school springs up." The

government formed national association of small farmers to initiate the programmes. The cooperatives took many years to take concrete shape. The government kept persuading the farmers and kept offering various incentives over a long period of 15 years.

Hugo Chavez in Venezuela's 21st century socialist programme has promoted cooperatives in a big way. Over 1.5 million workers in Venezuela are working in cooperatives. The agricultural co-operatives have 7 to 100 members depending on the type of crop. The government supports these cooperatives by setting up special markets to buy their produce, producing organic fertilisers and farm tools for them, supplying tractors and providing seed bank.

The Venezuelan government took a categorical stand that cooperative ownership alone is not sufficient. The operation of cooperatives should not be based on the principle of maximizing profit. Venezuelan co-operatives get special preferential treatment from the government when they promote solidarity, equity and sustainability.

Women farmers show the way

We would like to mention instances of successful joint farming exercises by women in Andhra Pradesh and Kerala.

Since 1989, an NGO, Deccan Development Society (DDS) has been supporting poor dalit women to jointly lease in or purchase land through various government credit schemes. Now there are 144 women who have leased in land collectively. These groups are small in size with 5 to 15 members each. In all, 211 acres of land is leased in across 26 villages. Part of the rent is paid by group members and part by interest free loans from DDS. Similarly, women's groups have jointly purchased land in 21 villages. The government provides subsidized credit for this purchase. Totally there are 436 women, who have made a group purchase of 555 acres of land in Andhra Pradesh.

The experiment in Kerala is far wider and is directly initiated by Kerala government. Under the Kudumbasree programme of Kerala government 46,444 groups are engaged in collective farming. There are a minimum of 4 to 5 members

in a group and a maximum of 10. The land given to one group varies from 50 cents to 1 hectare. Women under this scheme are engaged in cultivating tapioca, paddy, vegetables, pineapple, etc. on 27,270 hectares of land. The land given to these women groups is either fallow land under government ownership or private land taken up by the government on lease. Area incentive is given for bringing fallow land under cultivation and performance incentives are given when production exceeds the stipulated average productivity.

These are still small experiments but they demonstrate that poor women farmers are able to realize the advantages of collective production activities. It is perhaps naïve to generalize at this stage and think of a nation-wide agenda for formation of cooperatives of landless and land-poor farmers. However, if such an agenda is accepted by the farmers and if the state can be pressurized to accede to their demand of state support, then we have an immense possibility for a radical political project.

Marginal and small farmers own 44% of total arable land. If this 44% of the arable land is recruited under cooperatives, the land use pattern can change, the markets can change and a concrete shape can be given to our dream that a just and exploitation free world is possible.

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States and Districts covered in the study

ANDHRA PRADESH
- Ananthpur, Krishna, Srikakulam, Warangal

BIHAR
- Khagaria, Katihar, Madhubani, Mujaffarpur, Rohtas

KERALA
- Idukki, Kozhikode, Thrissur, Waynad

MADHYA PRADESH
- Anooppur, Betul, Sagar, Ujjain

MAHARASHTRA
- Amravati, Beed, Nashik, Raigad

PUNJAB
- Bhatinda, Jalandhar, Ropar

TAMILNADU
- Salem, Thiruvannamalai, Thiruvarur

WEST BENGAL
- Birbhum, Burdwan, Hooghlie, Murshidabad

We present here two poems for our readers. One portrays the ever harsh and miserable life of a poor destitute farmer and the other suggests that this situation can be changed and it must be changed.

Gone with the Rain

- Naresh Saxena

the one who took my land
also took my rain away

just for him now
come the rain clouds
just for him the koel sings
just for him
the scent of rain in the veins of the earth
rise up
just for him

for me no more
no plough, no bullocks
no mud track taking me to the fields
not one drop of green
no parrots, no ponds, no rivers, no streams,
no *ardra nakshatra*
no *Kajri-Malhar* for me

the one with no land
has no sky

the next harvest comes
and all will be set right
loans will be paid off
gone from me now
my pleas, my promises
forever
gone from me

gone now, my rain
even my rain has gone
to the one to whom has gone
my land

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Tailor of Ulm

- Bertolt Brecht

Said the Tailor to the Bishop:
Believe me, I can fly.
Watch me while I try.
And he stood with things
That looked like wings
On the great church roof-
That is quite absurd
A wicked, foolish lie,
For man will never fly,
A man is not a bird,
Said the Bishop to the Tailor.

Said the People to the Bishop:
The Tailor is quite dead,
He was a stupid head.
His wings are rumpled
And he lies all crumpled
On the hard church square.

The bells ring out in praise
That man is not a bird
It was a wicked, foolish lie,
Mankind will never fly,
Said the Bishop to the People.

* * * * *

Ulm is an old town of Germany which is famous for its very high church Steeple. Revolutionary poet Bertold Brecht wrote this poem in mid 20th century based on a saying that a tailor once tried to fly and died. Brecht remembers that tailor of Ulm who once challenged the church and though failed, left a dream for people that they can turn the dreams into reality. Tailor of Ulm died but 4 centuries later mankind did fly, not only in literal meaning but also in the sense of flying free from the cage of exploitation and slavery in the sky of socialism.

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Report 495 - Consumption expenditure of households
Report 496 - Some aspects of farming
Report 497 - Income, Expenditure & Productive assets of Farmer households
Report 498 - Indebtedness of farmer households
Report 499 - Access to modern technology for farming.

We shall not lose heart, no matter which turn history takes. But we shall not allow history to take any turn without our participation, without the active intervention of the advanced class.

- Lenin *(*From *Land Question & Rural Poor)*