CHAPTER-4

LOOKING FOR THE POSSIBLE SOLUTIONS TO THE AGRARIAN CRISIS IN PUNJAB

There has been a near unanimity among the economists and the farm scientists on the possible solutions to rejuvenate the agriculture sector in Punjab. Various options have also been suggested for achieving sustainable agriculture. These include, among others, policy changes, diversification, protection of the environment and ecology, marketing strategies, input and output pricing, scientific storage to ward off post-harvest loss and wastage, processing, transportation and distribution.

It is not that the challenges lying ahead of the agricultural sector in maintaining the momentum of growth could not be foreseen earlier. As some one who has been an insider, RS Mann, a former chief secretary of Punjab, underlines the fact that the future problems and prospects of Punjab agriculture have for long been well-enunciated and documented in the recent past to “educate” the policy-makers in New Delhi and Chandigarh regarding the grim situation evolving. He further points out that over the years there has not been any difference of opinion on diagnosis and approach to the problems or policies that are required to be pursued, which have been of repetitive nature. Therefore, without pointing what was wrong with the solutions or why there was not much effort to apply the remedial measures? Mann concludes, “all players are equally responsible. The blame should start from the top. Politicians, administrators, universities, research workers and technocrats must be apportioned the blame. If there is lack of political will, there is also lack of bureaucratic commitment and lack of vision in planning”.1 As Punjab has remained at the receiving end

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1 This is an excerpt of the presidential remarks by R S Mann in a two-day seminar cum workshop on the issue of ‘Future of Agriculture in Punjab’ organized at Centre for Research in Rural and Industrial Development, Chandigarh. The other participants also spoke on the same issue and repeatedly referred to Dr Johl’s report on diversification submitted to the government in the mid-eighties that it held was still relevant. The report had observed that the surplus food grain phenomenon was showing signs of “back pressure” because while production kept going up
When it comes to input and output pricing, export of farm produce and products, even when the state government commanded respect in Delhi, it was time Punjab should have learnt to stand on its feet. He regrets that political and administrative support to the poor is dwindling due to the lack of commitment. Therefore, the administration has to concentrate more on rural development to revive the commitment to the people.

The politics and economy of Punjab have become the twin topics of discussion among the common people and the policy-makers. There is not much on either front in terms of development in the recent past. Understandably, Punjab scene cannot be viewed in isolation. It has to be seen in the context of Indian economy and politics. There have been attempts to look into the possible ways to pull Punjab out of the quagmire it is stuck in. The economists and the policy-makers (both administrative and political-executive) have talked about and expressed concern over the way Punjab is positioned. Lamenting the fact that “the dynamism of Punjab economy is lost”, the experts observe that the solution to its problems has to be both short-term and long-term. It is not the time to recount the ‘success’ story of Punjab that was in the seventies and eighties. The problems of the nineties have dominated the state and “failures” or every front stare in the face. Both challenges and opportunities have to be dovetailed and Punjab developed, politically, administratively and economically in the context of the emerging systems of World Trade Organization, liberalization, privatisation and globalisation.²

The economy of Punjab has been slowly but steadily hurtling towards a major crisis thanks in part to the populist policies of the Punjab government and also due to the lack of will on the part of agriculture economists and other policy makers to take a stand against the short sighted policies of the state. The free

power supply to the agriculture sector, announced by the Akali government in 1997, was a major constraint in the diversification of Punjab agriculture. Agriculture, despite the recent reverses, is still the backbone of the state economy due to the dependence of a large section of the population of the state. A number of suggestions have been poured in from the different quarters. In fact there is unanimity among the farm scientists and economic experts on the diversification of state agriculture. Hence, a very lively debate on diversification of Punjab agriculture is on. It is also confirmed through development experience across the globe that agriculture alone cannot sustain the tempo of development in the long run. As the economy moves towards development, the relative share of agriculture declines in national and regional income, employment whereas income from non-agriculture sectors increases. Unfortunately, this aspect of the development saga is not fully validated by the Punjab experience. Historically, upward mobility of the economy was mainly based on agriculture. With the deceleration in the growth of agriculture, a deceleration in the overall growth of the economy has been set in motion. Thus the expected progressive role of the non-agricultural sectors in boosting the economy during an agricultural crisis is almost non-existent in Punjab.

**Reading the Development Reports**

Government of Punjab has long recognized the problems of depending overwhelmingly on a rice-wheat monoculture system. In 1985 it had set up a Committee under the chairmanship of S.S. Johl, a distinguished agricultural economist, to deliberate upon ‘Diversification of Punjab Agriculture’. The Committee called for a reduction in at least 20 per cent of the area under rice and wheat. After analysing the profitability of alternatives, the Committee placed heavy emphasis on diversifying to dairy, with a target of bringing some 17 per cent of total cropped area under fodder crops by 2000. Over the next 17 years, the area under rice and wheat continued to expand, and the associated problems of low growth, environmental degradation and burgeoning food...
stocks further intensified. Accordingly, Government of Punjab in 2002 set up a second Committee on “Agricultural Production Pattern Adjustment Program in Punjab for Productivity and Growth”, again under the chairmanship of Johl.\(^3\) This report recommended a set of adjustment measures aimed to shift one million hectares out of rice and wheat. Given the experience of the first Committee, this report provided a number of specific recommendations that recognize the difficulties of adjustments, given current price incentives.

One of the central recommendations of the committee for the Government of India has been to provide income support payments of Rs 12,500 per hectare to those Punjab farmers who agree to reallocate land from rice and wheat to other crops. This payment (a total of Rs. 12.8 billion, including administrative costs) would be made out of the estimated savings of some Rs.50 billion that GOI would realize by not having to procure rice and wheat from the one million hectares diverted from these crops. The report also provided an incentive measure, based on the existing state marketing costs, to encourage the private sector to enter rice and wheat procurement for exports. This is the second time Johl has made these recommendations. Sixteen years ago, too, he had submitted a compact report on ‘Diversification of Punjab Agriculture.’ Circumstances so evolved over the next couple of years that the Punjab Government developed an indifference towards those recommendations. Johl, along with his 10-member team, once again mirrored dismal state of Punjab agriculture, recapitulating the situation as comprehended by him and his associates in 1986. He forewarned what the future held for Punjab and its agriculture, if 95 recommendations made in the report are ignored yet again and not implemented. The committee was “mindful of the imperative need to ensure that recommendations … (were) economically viable/revenue neutral, socially acceptable and politically sustainable.”\(^4\)

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\(^4\) Ibid, p. 6.
Let us read the text of the comprehensive report by Johl committee that comprises of 11 chapters. The report observes that if agriculture is the anchor of Punjab economy, wheat and paddy have turned out to be the two villains.\(^5\) The report admits difficulties in suggesting diversification in agriculture that has been a means of livelihood. It says that the problems of the farm sector cannot be all solved within the sector alone. ‘We cannot keep the ever-increasing rural population battled up in the stagnating or slow growing farm sector for all time to come. For this, alternative employment opportunities must be created to reduce the pressure on the agriculture’ says the report. Diversification, therefore, is not simply switching of furrows or sowing of an alternative crop. Attached to each requisite input and decision-making are human ethos and economies, and much more. The report, therefore, makes suggestions that do have a ‘human face’. The report assures that the recommendations mentioned in the report should be immediately and easily actionable with no foreseen adverse consequences.

With such an assurance coming from the well-intentioned and experienced minds, let us explore the Johl committee report. It promises to suggest the means to integrate the economy of Punjab into the world economy in such a manner that Punjab gains economically. It has dissected agriculture sector-wise and crop wise, encompassing all factors before formulating any recommendation. These factors can be in respect of managing production and marketing of wheat/paddy or choice of alternative crops and reasons thereof, or soil and water conservation practices, or selection of vegetables/ fruits/ floriculture, medicinal, aromatic, spice crops, agro-forestry, sericulture or dairy farming. The report justifies the choice of the listed alternatives and suggests agronomic practices to explore the market potential.

\(^5\) Ibid, p. 4.
The report advocates the expansion of the dairy farming on a large scale by devoting a whole chapter to it. The chapter lists main problems and recommends future strategies. It says that the present day dairy farming is a victim of low productivity, poor quality animals, poor feeding and management practices, inadequate health cover, higher cost of per unit production, problems of unproductive, useless animals, etc. It also refers to poor quality of milk, defective milk procurement system, lack of integration of government functions, less value addition, product development, and hassles of marketing. The report has been drafted while keeping an eye on the WTO requirements. Therefore, very clearly and even at the cost of repetition, the report suggests a paradigm shift from ‘quantity’ production to ‘quality’ production, enabling farm products to compete in the world markets. For this there has to be a big leap forward to promote agro-processing, corporate or contract farming, change in certain revenue laws, etc. Punjab must involve the Centre for exporting farm produce and invite private sector and it goes on to unfold details on this proposal.

The report analyses the deleterious effect of paddy on ground water and presented a fact sheet on over-exploitation of water resources due to excessive sowing of paddy, particularly early sowing. Punjab Agricultural University scientists have highlighted the following factors related to the deceleration of the Punjab agriculture: 35 per cent of the total electricity is consumed by 7.5 lakh tube wells; Every year, the water table goes down by 30 cm; Water is declining in 77 per cent of the area, where groundwater quality is good and canal water limited; A critical water table depth below 10 meters has been reached in 28 per cent area; Districts where the water table is below the critical depth are: Ludhiana (40 per cent), Sangrur (56.5 per cent), Jalandhar (58 per cent), and Patiala (67 per cent); Area of central Punjab, where the water table has gone down below the critical level of 10 metres, was 3 per cent in 1973, 25...
per cent in 1990 and 46 per cent in 1994. The warning given by M. S. Swaminathan, a noted agricultural scientist, in his address to the Federation of Indian Chambers of Commerce and Industry in New Delhi is unfortunately proving to be true. He had said that four major states, including Punjab, would face a gruelling search for water in the very near future. The other states have been Rajasthan, Orissa and Maharashtra.

Johl and his associates go on to give more facts and figures in respect of escalating costs of production due to the rising costs of input, which eventually makes Punjab’s agriculture produce uncompetitive in both national as well as in the global market. An interesting aspect of the report is at the end of chapter 8. It refers to ‘some new crops and concepts in agriculture’. It points to the need for thinking and looking beyond normal production patterns to the unknown and untried areas of land use. In the introductory chapter ‘Perspective’ itself, the report elaborates up on pricing mechanism, the concept of the minimum support price and goes on to caution that this system may not last for very long because the Food Corporation of India is already dragging its feet on the issue. Its operations are becoming costly, corrupt and unwieldy something, which goes against the idea of fiscal governance, part of ongoing economic reforms. Then one also has the huge stockpile of food grains that assembles as the government narrows the public distribution system base. The report offers solution in a cogent manner, which it argues will eventually be beneficial to the Centre, the state and the farmers in terms of financial savings on post-harvest handling of produce till the time it is disposed of.

The data in the report should be of as much interest to research workers, policy-makers as to political executives, bureaucrats and even ordinary people of Punjab, who are rooted to the soil. One cannot agree more with the opening
sentence of Johl committee report: ‘Change is difficult! Yet, change we must!’

In this backdrop, the same question props up like an obstinate weed: Will Punjab do what it should, now that yet another set of recommendations are available? The report has given 95 suggestions to be followed by the policy makers. Some important measures are: Replace at least 1 million hectares in Punjab from under rice-wheat rotation; Compensate farmers for that—total cost: Rs 1280 crore; Distribution of compensation through panchayats proposed (Details have been worked out); Alternative crops must yield higher income than wheat-rice. Unfortunately, not many options are available, hence income support programmes are required. Research emphasis must shift away from wheat and rice to oilseeds and pulses; Minimum support price worked to increase wheat-rice production. Now use it for alternative crops; Encourage contract farming; Enforce obligations; Promote fruit growing in central Punjab also; Modernise production technology; Go for high-density plantation with 3-year-old plants.

Functioning of the Diversification Programme

The major concern of Punjab farmers is sustainability of Agriculture, which is un-remunerative due to the high input costs, low returns and progressively declining profitability from the wheat paddy system that has adversely affected economy, ecology, small and marginal farmers and the farm labour. The Government of Punjab launched the diversification programme in 2003 to persuade the farmers to divert their cropping pattern from the existing cropping pattern. The main intention behind this move was to sustain the agriculture of the state in the long run by introducing environment friendly more remunerative crops than the wheat and paddy. The crop adjustment programme, under which farmers agreeing to divert area away from wheat and paddy were to be given subsidy of Rs. 5000 per acre (Rs. 12,500 per hectare) with estimated total subsidy of Rs. 1250 crore per year. Apart from this, an additional cost of Rs. 30 crores were to be paid as implementation charges to
the Department of Agriculture and to the village Panchayats. Thus, a total of Rs 1280 crore was recommended by the committee, which would be contributed by the Government of India. This would reduce the burden of Government of India of procurement costs if farmers, did not grow wheat and paddy to the tune of Rs. 7000 crore. The proposal was submitted to the Government of India, which accepted it initially for consideration.

Seeing the repercussions of these hazards on the farming economy, the state governments have been emphasizing the diversification of agriculture by promoting alternative to wheat-rice system through contract farming, encouraging agro-based industries, developing infrastructure for easy marketing and exploring the possibilities of boosting agro-exports. On its part, Government of Punjab decided to launch the Crop Adjustment Programme in February 2003 and named it contract farming. It accepted two most important recommendations of Johl Committee (2002). One, it planned to divert 1 million hectare away from what paddy up to 2007 under the crops recommended by the Committee without paying any subsidy. Two, this was to be done through contract farming by making provisions of mutual obligations of both the farmers to supply the produce of specified quality and grade, and on the processing firms to lift the produce at specified contracted prices. National and Multinational food companies, as recommended in the committee as the right entities to assess the demand in the global market and work backward, were invited to invest in the food processing industry in the state. The agreed companies were to be provided tax concessions/subsidies and services of the staff from the department of agriculture and even from the university. By accepting the central part of the diversification scheme, Government of Punjab has started the implementation drive by involving a number of private/national and MNCs with necessary concessions to them. Punjab Agro Food grains Corporation Limited (PAFC) was established and made the nodal agency through its offices located at district headquarters.
The working of the programme so far has shown that it has not succeeded. The area under wheat paddy has increased in case of both the main crops, which have been earmarked under the Crop Adjustment Programme (see table).

**Table 4.1: Area under Different Crops**

<table>
<thead>
<tr>
<th>Crops</th>
<th>2001-02</th>
<th>2002-03</th>
<th>2003-04</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paddy</td>
<td>2487.0</td>
<td>2530.0</td>
<td>2614.0</td>
</tr>
<tr>
<td>Basmati</td>
<td>102.0</td>
<td>157.0</td>
<td>212.0</td>
</tr>
<tr>
<td>Kharif Pulses</td>
<td>36.7</td>
<td>27.4</td>
<td>34.0</td>
</tr>
<tr>
<td>Kharif Oil Seeds</td>
<td>34.0</td>
<td>24.6</td>
<td>34.0</td>
</tr>
<tr>
<td>Cotton</td>
<td>607.0</td>
<td>449.0</td>
<td>452.0</td>
</tr>
<tr>
<td>Sugarcane</td>
<td>143.0</td>
<td>154.0</td>
<td>128.0</td>
</tr>
<tr>
<td>Wheat</td>
<td>3420.0</td>
<td>3375.0</td>
<td>3440.0</td>
</tr>
<tr>
<td>Rabi Pulses</td>
<td>16.7</td>
<td>15.6</td>
<td>17.1</td>
</tr>
<tr>
<td>Rabi oil seeds</td>
<td>57.4</td>
<td>80.1</td>
<td>86.4</td>
</tr>
</tbody>
</table>

*Source: Department of Agriculture, Government of Punjab, 2003.*

And contract farming has not yet worked on desired lines. A study of the experience of contract farming has worked to the disadvantage of the majority of farmers. A number of issues need to be debated in the wake of adverse experiences. The foremost among them is the original design suggested by the Johl Committee, which was not accepted by the Government of India. The main reason remain to be a big element of direct subsidy, which is non acceptable in the new policy regime initiated in the country since 1991 and its possible effects on other states, demanding similar subsidies from Government of India. Moreover, shifting a huge area from food grains would jeopardise the

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country’s food security, which is fragile when looked from the long-term perspective.\(^9\)

Implementation of modified recommendations of the Johl Committee especially contract farming with the involvement of private agro-processing/trading national and multinational companies have disadvantaged the farmers on expected lines, given the past experience and the present administrative and political environment in the state. The experience of contract farming of vegetable growers in the state with Pepsi Company in 1990s did not work properly because of lack of contract enforcement mechanism/agency in the state. In absence of the creation of such mechanisms/agency, his was supposed to produce the same results. A cursory evaluation of the working of contract enforcement shows that such contracts are broken both by big private as well as public enterprises in the state involved in purchase of sugarcane (sugar mills both private as well as cooperative) and vegetables making farmers to wait for months and years to get payments for sale of their products. In spite of such negative experience in the state and numerous such experiences of farmers with MNCs in a number of developing countries, if a group of intellectuals and a committee makes such suggestions is most unfortunate. It seems that the consideration was given as contract farming has been recommended in the National Agriculture Policy 2000.\(^{10}\)

In the last few years Punjab’s diversification agenda has become closely associated with the concept of contract farming, whereby farmers enter into an


\(^{10}\) The first ever-National Agriculture Policy was announced on 28th July 2000. The National Policy on Agriculture seeks to actualise the vast untapped growth potential of Indian agriculture, strengthen rural infrastructure to support faster agricultural development, promote value addition, accelerate the growth of agro business, create employment in rural areas, secure a fair standard of living for the farmers and agricultural workers and their families, discourage migration to urban areas and face the challenges arising out of economic liberalization and globalisation. The policy seeks to promote technically sound, economically viable, environmentally non-degrading, and socially acceptable use of country’s natural resources - land, water and genetic endowment to promote sustainable development of agriculture.
agreement with processing and/or marketing firms for the production and supply of agricultural products under forward agreements, frequently at predetermined prices. Given the political difficulties with changing price policies, contract farming is increasingly being seen by GOP as an instrument to wean farmers away from the rice-wheat system. A public sector corporation, Punjab Agro- Food grains Corporation (PAFC), has been assigned the task of promoting contract farming in the state, for which it has developed a five-year plan that aims to shift one million hectares out of rice-wheat cultivation to a variety of other crops. PAFC sees its approach to be that of a facilitator, tying up farmers with agribusiness, which will supply quality seeds and technical assistance, and buy back the crop. There is little doubt, though, that contract farming has a place in the development of Punjab’s agriculture. The physical and social environment is suitable – highly productive with assured irrigation, widespread mechanization, all villages connected by roads, good telecommunications, and average farm size more than twice the India average. Moreover, PAFC’s venture into this field embodies a more market-oriented approach to agricultural development and a significant shift away from the state’s traditional focus on production as an end in itself.\textsuperscript{11} To be successful, however, attention will have to be paid to a number of aspects;

- Without significant reforms in other areas (e.g., price support, marketing, research and extension) to correct the presently distorted incentive structure that favours rice and wheat, there is little to suggest that the target of one million hectares will be attained by 2007.

- International experience suggests that contract farming tends to succeed only in certain types of crops/activities such as perishable products, or those where exacting market specifications have to be met. Basic field crops like standard rice, wheat, maize, oilseeds, pulses do not normally figure highly in contract farming programs and there is also a high risk

\textsuperscript{11} The World Bank has also found merits in the CF initiative of the state government. It, however, has cautioned the state to pay attention to a number of aspects to make this program successful.
of ‘side selling’ i.e., farmer will sell output to another buyer. In the PAFC plans, maize and oilseeds figure prominently.

- The absence of a quick and effective contract enforcement and dispute resolution system in Punjab (and India) magnifies the risk of farmers ‘side selling’ if market prices at time of harvest significantly exceed the contracted price, or conversely the risk of buyer default if market prices are well below the contract price. To address this, Government of Punjab needs to facilitate initiatives by agribusiness and farmers organizations wishing to develop speedy dispute-resolution systems. This might lead to a system for registration of contracts. The government’s facilitative role needs to be stressed, since, to be successful, such measures are best designed by the interested parties.

- Direct commercial involvement of the state should be minimal. In some of the models being adopted this is not the case as PAFC is exposing itself to a high degree of risk by contracting to buy output from farmers in case the buyer backs out.\(^{12}\)

The Johl committee, in fact, did not discuss in detail the complexities of contract farming. It did not examine the administrative environment and absence of the any agency in the state to enforce such contracts in case of any dispute arising between contracting parties i.e. farmers and agriculture based business companies. The committee also did not examine the issue of costs of contract enforcements in the eventuality of disputes. At the same time, the committee did not examine the issue of risks and uncertainties. The uncertainties of market reflected in gluts and scarcities or risk caused by weather changes in the form of excessive rainfalls or floods, extreme cold/hot conditions affecting the quality and quality of the produce are very well known in agriculture of the region. The committee, therefore, has no recommendations on these issues.

In the current debate the failure of diversification programme to take off in the state has been attributed to “total lack of coordination” among various departments headed by bureaucrats. In the absence of countervailing power of the farmers (with assistance of the government), the transactions would work in the same way as it has happened during the last few years. The bureaucratic apathy and mis-governance is very well known for the last two decades and more in the state.

Even after the restoration of the elected governments since 1992 and cessation of terrorist violence, this apathy has not been controlled and corrected in Punjab by the Congress and Akali Dal-BJP combine who have ruled over Punjab alternatively. This political reality is a factor that has caused the economic non-performance of the state in comparison to other progressive states. A policy design has to take into consideration this grim reality and save the farmers from major frauds from any corner. At the same time, the whole thrust of ecological sustainability is discussed in view of paddy crop but such arguments are extended to wheat, the natural crop of this region. It is neither creating water scarcity nor environment pollution. It’s clubbing with paddy therefore leads to complete ignoring of the fact that wheat straw converted into fodder is suited to dairying as a subsidiary occupation for many farming households.

Given the natural resource base of the state and its growing vulnerability and stagnation in productivity levels, there is urgent need to devise ways and means to increase the productivity levels of existing crops and introduce new crops with high productivity levels and which put less pressure on the fragile natural resource base of the state. The programme of diversification would succeed if

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the newly recommended crops give higher income to the farmers than from the existing crops on the sustainable basis. The recommended crops failed to give higher income on a sustainable basis due to lack of corresponding conditions for them. There are problems associated with the lack of MSP of these crops, absence of proper market clearance and storage facilities as such infrastructure is not available in the state. This would require careful planning in this regard. The agro-business companies have not invested in such infrastructure. They also have not invested in the development of agricultural research infrastructure as per agro-climate requirements of different zones of the state. The absence of creation of such pre requisite new/recommended crops would not succeed.

The success of contract farming would require creation of elaborate legislative and administrative arrangements for contract enforcement, quick disposal of grievances of contracting parties and insurance against risks and uncertainties. It is very well known that agro-business companies as a part of corporate sector generally resort to collusion sooner or later. This has a natural tendency to work to the disadvantage of the farmers. It would require state sponsored strong regulatory mechanism to safeguard the interests of the farmers. The present nodal agency (PAFC) has no technical and administrative capability to assume this rule. This programme, therefore, needs to be transferred to Agricultural Department of the state in co-ordination with PAU for providing necessary research backup. Along with the establishment of a contract farming regulating agency with adequate legislative and administrative support, this has also to be backed by huge investment in development of market, storage and processing infrastructure in the state. Without making a grand plan for diversification and elaborate arrangements for implementation, this programme would not succeed even in a limited way.

HS Shergill in his study has questioned the viability of Johl Committee’s recommendations of shifting 1 million of hectares from the current

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wheat/paddy practice. He questions the rationality of the formulators of the report and asked the Punjab farmers to stick to the wheat and paddy cultivation. It is so because wheat paddy is the only crop combination that sustains the current income levels of the Punjab farmers. None of the alternative crops being recommended (pulses, oilseeds) to replace wheat and paddy can ensure even half the income being earned by farmers from the cultivation of these two crops. Any other crops do not match the stability of wheat and paddy yield and these crops have never failed during the last 40 years. Moreover, wheat paddy cultivation in Punjab has a high degree of complementarities current as well as future, with country’s food needs and central government’s food security concerns. It is reasonably sure that the existing system of minimum support price and assured purchase of wheat and paddy will continue in the near future. He has added further that the opportunity cost of capital infrastructure in wheat and paddy cultivation is low. Among the crop rotation combination (as suggested in the Johl Report) available to farmers in Punjab today, wheat and paddy rotation is the most suitable for double cropping on an extensive scale. While acknowledging the need of reforming the farm sector, he emphasizes the need of a massive shifting out of labour from wheat and paddy cultivation and not shifting out of area from under these crops. Apart from this, the fall in the water table and environmental degradation are peripheral problem that can be tackled through legislation.

In the absence of creation of proper safeguards, the whole programme would further squeeze the farming community and threaten the viability even of medium farmers and spell dooms for the poor (especially of the marginal and

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16 Shergill was reacting to the idea of alternative crops combination as suggested in the report. He strongly favoured the continuation of this current cropping pattern to meet the expenditure level of the farmers and for the country’s food security, which is looking vulnerable if viewed from the long run perspective. Shergill, HS, "Wheat and Paddy Cultivation and The Question of Optimal Cropping Pattern for Punjab, February 18, 2005."
small farmers as evident from the table), who are finding it hard to sustain the input intensive cropping pattern. As a consequence, their numbers are declining with every passing year. The numbers have fallen to more than 50 per cent over the period 1991-2001 as the table shows. If this trend continues then they might be forced to join the group of agricultural farmers.

Table 4.2: Changes in the Number of Operational Holdings in Punjab

<table>
<thead>
<tr>
<th>Size class of holdings (in hectares) Years</th>
<th>Number</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1990-91</td>
<td>1995-96</td>
<td>2000-01</td>
</tr>
<tr>
<td>Marginal 0-1</td>
<td>2,96,130(26.50)</td>
<td>2,03,876(18.65)</td>
<td>1,22,760(12.31)</td>
</tr>
<tr>
<td>Small 1-2</td>
<td>2,03,842(18.24)</td>
<td>1,83,453(16.70)</td>
<td>1,73,070(17.35)</td>
</tr>
<tr>
<td>Semi-Medium 2-4</td>
<td>2,8,778(25.87)</td>
<td>3,20,340(29.31)</td>
<td>2,28,230(32.91)</td>
</tr>
<tr>
<td>Medium 4-10</td>
<td>2,61,481(23.40)</td>
<td>3,05,794(27.98)</td>
<td>3,00,174(30.17)</td>
</tr>
<tr>
<td>Large Above 10</td>
<td>67,122(6.01)</td>
<td>79,610(7.28)</td>
<td>72,360(7.26)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>11,16,951(100.00)</td>
<td>10,93,073(100.00)</td>
<td>9,97,370(100.00)</td>
</tr>
</tbody>
</table>

Source: Agriculture census.2001.

Note: Figures in parenthesis are in percentage.

The whole issue of diversification of agriculture needs to be evaluated in the light of the above forms of crises faced by the Punjab agriculture. Ignoring any one of them would not generate desired results—either for the state or for the farmers. The fact that the farmers are ignoring recommendations of the intellectuals indicates that the recommendations are far from reality and the intellectuals are entrapped in quagmire. They can come out of quagmire by taking holistic view of the situation and make recommendations which help the farmers and farming come out of the crises.
Any diversification drive aimed at sustaining the rural economy in the near future would not be successful without the support of the farmers. The farmers have been showing their reluctance to diversify the existing cropping pattern because they have made high level of investment in current cropping pattern and any other activity having low level of outcome will not easily find favour with the farmers. Only those cropping pattern therefore can compete with the existing ones whose value productivity are higher than the existing one.

Moreover, given the innovativeness and high competitive spirit of the farmers and exposure to mass media, large number of farmers would quickly adopt a potential profitable crop combination. On the flip side it may result in the huge stocks in the market leading to violent price crash when the commodity is not of importance for mass consumption. Hence, the diversification drive should keep in mind the above-mentioned characteristics of the state’s rural ceremony.

Chand (1999) has advocated three types of diversification for the state’s farmers in Punjab. First, through the items of mass production and consumption, whose production should be encouraged at small scale throughout the state. It includes milk (Dairying), pulses, and oilseeds. These items are of daily use and considering their high value and high prices, even large increase in their production can be observed. It can increase the crop diversity and would ease the strain on natural resources and reduce ecological degradation. Second, area specific enterprises of moderately high value commodities like vegetable, onion, potato, cotton, basmati rice and sugarcane should be encouraged for different agro-climatic sub-zones based on competitiveness. This type of diversification is aimed at enhancing the income of the farmers and to provide the much needed growth impetus to the economy. Third type of diversification strategy is new to the state’s farmers. It includes high value items of elite consumption like floriculture, exotic vegetables, and

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mushrooms and like crops. These commodities involve high use of capital and high risk and their marketing generally requires locating suitable users due to limited demand and perishable nature of these commodities. Therefore, these commodities should be encouraged at the fields of select farmers, who have the ability to bear risk and to locate the market/buyers.

The above practice can be succeeded only if the state develops an efficient system of marketing and commodity specific market infrastructure. Besides, as we have mentioned elsewhere also, farmers have to be prepared and trained to produce for market-based products. Despite having promising prospects, no serious effort is coming from either the state government or the farmers. General type recommendations are being made for the whole of the state (except Johl). To sustain the practice of farming in the state, attention must be directed towards identifying specific enterprises by taking into account the ground water status, soil health and other micro-characteristics of different regions. Hence, such specific pockets should be developed rather than emphasizing many things for each area.

For any diversification exercise to become a success in the state, two aspects needs immediate attention for long term growth prospects of the states rural economy, which have been at the receiving end; one, public investment in agriculture and two, research and development (R & D) in agriculture. Punjab made huge investment of Rs. 319 crore or Rs. 768 per hectare (at 1980/81prices) for agricultural infrastructure during the 1980’s. This was one of the contributing factors for high growth of agricultural output during the 1980.18

As can be seen from the Table, Public investment in the state plummeted to Rs 365 per hectare during the late 1980.

Table 4.3: Annual Capital Outlay on Agriculture and Allied Heads in Punjab.

At 1980-81 Prices. 1975-76 to 1995-96

<table>
<thead>
<tr>
<th></th>
<th></th>
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<tbody>
<tr>
<td>Total, Rs crore</td>
<td>319</td>
<td>293</td>
<td>153</td>
<td>178</td>
</tr>
<tr>
<td>Per/hectare net sown area Rs</td>
<td>768</td>
<td>698</td>
<td>365</td>
<td>424</td>
</tr>
<tr>
<td>As per cent of NSDP Age</td>
<td>13.46</td>
<td>14.34</td>
<td>6.08</td>
<td>7.23</td>
</tr>
<tr>
<td>As per cent of total NSDP</td>
<td>6.90</td>
<td>6.67</td>
<td>2.73</td>
<td>3.36</td>
</tr>
</tbody>
</table>

Source: Taken from a study on ‘Public Investment in Indian Agriculture Implications for Growth and Equity’, National Council for Agricultural Economics and Policy research. New Delhi.

This decline was in real term at a rate of 2.65 per cent per annum during the past two decades. The impact of the declining public investment in the state can be seen from the poor infrastructure facilities like rural roads and grain markets (mandis). Due to non-availability of market yards, lot of farm production is spoiled by the rain the state should step up public investment for improvement in agricultural infrastructure for long-term growth prospect.

As we have discussed in the third chapter that the growth potential of wheat of paddy have plateaued and the state’s agriculture university have not been able to find an alternative technology to break the ceiling of old technology the onus should now on the PAU scientists to evolve new crop strains and varieties to meet the twin challenge, of growth of sustainability. The PAU should shift its R and D to new and emerging crops and enterprises of future importance rather than focusing on wheat and paddy moreover, establishment of agro-based industries of small and medium size in rural area away from urban areas can be of great help in solving two much talked problems of the state; shifting of rural
population (especially youth) and to encourage diversification both of the farming sector and the state economy.

Moreover, the World Bank favoured two broad groups of policy and institutional options have been identified for moving forward on these three fronts. The first group relates to price policies and public expenditures and the second group deal with reform of key institutions serving the agricultural sector—research, extension, irrigation and regulated markets.\textsuperscript{19} An important feature of policies in the sector is that while some, like MSP and fertilizer subsidy, are funded and controlled by GOI, others are financed and determined by GOP. This division of responsibilities complicates enormously the strategic choices and actions that GOP can take by itself. It points out that to resolve existing problems, GOP has to act in concert with parallel reforms by the Central government, and even lead the national effort to reform GOI policies where necessary.

The first priority underlined is to reform the price support and subsidy regime. Output subsidies through the MSP and subsidies on power, fertilizer and water have led to inefficient use of resources and distorted the distribution of farm incomes toward larger farmers who receive the bulk of these subsidies. Over time, these subsidies have also been capitalized into land values as land costs have grown faster than variable costs. These subsidies have to be contained, and over the long run, eliminated. Getting prices right is necessary to provide an appropriate incentive structure for diversification, and also to free resources for key public investments needed to facilitate diversification. Given the political sensibilities, the appropriate transitional arrangement may be to freeze MSPs of rice and wheat in nominal terms until the desired correction in relative prices and GOI stocks is achieved. In addition, some sort of an agreement between GOI and GOP whereby compensation is paid to Punjab in exchange for a cap on grain procurement from the state is apparently being considered. It

\textsuperscript{19} World Bank 2003, et al., p. 35.
is important that such any such agreement be speedily reached, one hurdle to which may be objections from other states to the proposed cash compensation to Punjab, otherwise the situation, both in terms of excess stocks with GOI and environmental degradation in Punjab, will worsen.

With regard to input subsidies, in terms of both fiscal drain and efficient use of groundwater, the removal of the power subsidy is the priority, and is an action within the GOP ambit. A planned and gradual withdrawal may be more acceptable, but must be sustained over time. To be effective, however, agricultural power has to be charged according to consumption, and hence metering of all pump sets has to be considered a priority in sequencing the reforms. Price and subsidy reforms are likely to adversely affect farmer incomes, at least in the short run. Though large farmers will suffer absolutely and relatively more, small farmers will also feel the pain.20

While ‘getting prices right’ is necessary to create an appropriate incentive structure for diversification, it also appears that price and subsidy reform by itself will not be enough. Rough estimates suggest that while removing input subsidies and price support improves profitability of a number of crops relative to rice and wheat, it may not be enough to overcome the low risk associated with these two crops and usher in vast area substitution. Reversing the decline in agricultural public investment in R&D, rural infrastructure and human resource development (which, in turn, needs reduction in subsidies to release resources for these purposes), and institutional reforms in the research, extension, irrigation and marketing systems are equally, if not more, important.

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20 One ‘sweetener’ that has been used in a number of countries (EU, USA, Mexico, Turkey) to reduce price-distorting subsidies has been lump sum annual income support payments made directly to farmers based on their crop area prior to phasing out price support for these programs. These payments are less distortionary in nature as they decouple payments from production decisions and facilitate a transition to a price regime that allows resources to be allocated more efficiently. To date, however, these experiences have been rated as a mixed success. Some lessons have emerged for effective implementation, but it is probably still too early to judge the long-term impact of these programs. It is also not clear whether such a program would be politically acceptable by confining it to Punjab, or even whether the necessary pre-conditions can be met to efficiently and equitably implement it. Refer World Bank Report, 2004.
to create an environment where public services can work more closely with the private sector to respond nimbly to changing farmer and market demands.

The importance of managing Punjab’s water resources in a more efficient and sustainable manner should be given the top priority. Unless this is done, groundwater tables will continue to recede rapidly unless the importance of managing Punjab’s water resources in a more efficient and sustainable manner is emphasized. Rehabilitation of the canal irrigation system and its distributaries, minors, and surface drains is a priority to reduce the dependence on groundwater. To raise resources to enable this, an increase in water tariffs has to be considered. Punjab’s current water rates recover only about 43% of O&M expenditures – these should be revised to at least cover full O&M costs. The institutional arrangements for O&M also need revisiting. Beneficiary involvement is weak. Experience from other states suggests that organized beneficiary participation brings down unit costs, and beneficiary groups can take on maintenance responsibilities, starting with field channels and minors and gradually working up to distributaries and main canals as the groups mature and federate (for example Karnataka). For this to happen, though, political support is required and also legislation, as in other states, that formalizes the role and responsibilities of water user groups and other stakeholders. To help with group mobilization, assistance from NGOs and other social intermediaries will be necessary. These are still relatively little known concepts in Punjab. The depletion of ground water can be arrested if following options are followed:

• Delay of paddy transplantation till the June. Early transplanting in May, practiced by some farmers, adds significantly to evapotranspiration (ET)

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21 GOP has started the task of revising its State Water Policy of 1997. This exercise, had it been completed, could have provided an opportunity to take a holistic and futuristic look at water availability and demands across different sectors. Issues related to water entitlements (for surface water) and water rights (for groundwater), and social, environmental, technical and institutional arrangements should be critically examined to ensure sustainable development in the future.
losses. Delayed transplanting would be facilitated by: (i) ensuring GOI does not begin procurement operations for paddy/rice before October 1 (already in effect); (ii) metering of agricultural power connections, and introduction of higher tariff for the month of May.

- Encouragement to the use of sprinklers/drip systems, through matching grants, to improve water use efficiency in high value crops. Note that this would work effectively only when electricity is metered and adequately priced; otherwise the incentive to shift to alternative (relatively expensive) systems like drip etc. is weak.

- Approve the Punjab Groundwater Control and Regulation Act, which aims to regulate groundwater extraction, and has been in draft since 1998. Enactment of this legislation needs to be expedited, but after addressing gaps in the current draft such as the issue of water rights, specific restrictions on spacing of wells in command and non-command areas, and establishment of an adequate monitoring mechanism to ensure effective implementation.

- Promote efficiency of water use through other water management practices such as bed and furrow planting and limited pounding in rice.

Revamping of the agricultural research and extension system to enhance its overall efficiency and effectiveness has to be an important element of a strategy to renew agricultural growth in the Punjab. Reform of these systems can also contribute to environmental sustainability (e.g., through development and dissemination of management practices to conserve water), and fiscal sustainability (e.g., privatisation of selected services).
Punjab Development Report (2002) and Punjab Human Development report (2004)\textsuperscript{22} have been part of the effort of the Planning Commission, government of India to undertake the mid-term review of the state plans in post-green revolution Punjab. They have much in common in terms of describing as to what ails the state and share even the diagnosis and prescription. The reports show a streak of concern over how Punjab is passing through a costly and painful transitory phase in the changing world order. The Punjab Development Report (PDR) do not offer any cut and paste solutions to reduce Punjab's vulnerability to multiple crises-economic, social, financial and political. It presents them as the challenges and opportunities to change the course of Punjab's destiny. PDR in its recommendations provides strong scaffoldings to the architects to put in place the fault lines in Punjab polity and spruce its façade. Besides this, it also serves as knowledge-quotient that will help clear clouds of ignorance through better understanding of the existing paradoxes of prosperity. The report emphasizes the need of people's involvement at the grassroots (panchayati raj institutions) and decentralization of powers, as per the 73rd and the 74th Constitutional amendments. It also advocates integration of agriculture and rural development to improve quality of life, create job opportunities in villages and make education more meaningful at all levels.\textsuperscript{23}

The PDR as a policy document comes across as an enabling tool for the convenience and benefit of the state's administrative departments concerned. It gives the administrative departments the critical analysis of what is lacking where and why and how to go about to set the house in order. The planning processes, indices and pointers that the report provides are all aimed at carving out a Punjab of tomorrow. The report chronicles and showcases all the minuses and pluses as much as it create awareness on where Punjab is headed. It is not

\textsuperscript{22} The two reports namely Punjab Development Report, 2002, and the Punjab Human Development Report, 2004, have been the products of the efforts of the Planning Commission of India. The Centre for Research in Rural and Industrial Development (CRRID) prepared the text for the first, and the State Planning department prepared the second with the help of Sanket, an NGO.

an end but a beginning to rediscover, reinvent and rebuild Punjab for posterity in tune with the changing world order. For this, the initiative has to come from every Punjabi with an indigenous model, as they have not yet realized their own potential, despite their spirit of resilience and recreation. The bottom-line of the report must be understood in its proper contextual form and not as a background material. It is a referral point, the starting point for a new Punjab. The common thread that weaves all its 17 chapters, stitches a futuristic pattern of fiscal management, rural development, education or youth, labour or employment. It shows an integrated or holistic design woven as a consequence of learning from the past patterns.

The report comes out strongly in favour of good governance. Punjab's development radar today shows that where it lags behind in education, information technology, it also projects skewed sex ratio, flaunts a high percentage of school dropouts and poor infrastructure in terms of roads and railways lines, bridges and communication. The report, while repeating and reiterating the "message" contained in Punjab government's White Paper on financial management and other budget documents also stresses that the economy cannot improve in isolation and that it should be outcome of political consensus. Since financial profligacy in Punjab continues unabated at both the political and administrative levels, one wonders, if all the suggested and promised reforms will help put Punjab economy and finances back on the right track. But reforms must be implemented, if Punjab is to take advantage of the lending agencies, particularly, the World Bank without losing sight of this fact-development with a humane face.

A reading of the report makes it clear that it sets in motion an evolutionary process that will require its constant updating. It is by no means the end product in terms of suggested planning processes and methodologies. Despite grey areas identified in the report, one does see oasis of development, where in

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Punjab still standout, though, in several respects and aspects, it is no longer outstanding. The report is as much a litmus test to see how effectively political and administrative leaders take up cudgels on behalf of the state that sustains and tolerates such leaders. In the development perspective chapter, the report spells out; the “dream” of the people of Punjab as also of those who contributed to the compilation of the report, making it looks like a prism showing Punjab in a wider and different perspective and context. They hope it will provide a “vision” to those who voluntarily or because of call of duty have to reconstruct rather than built anew, a Punjab of tomorrow.  

In the final analysis, as one ponders over Punjab, one cannot but agree with the hypothesis given in the report that for any meaningful change in the state and the state of affairs, the need is to change the “mind-set” of the policy makers and those who are involved in the policy implementation. What is needed is to quote Hari Jaisingh, former editor of The Tribune, is to usher in a ‘revolution of minds’. This hypothesis should also be followed by rejuvenation of socio-economic dynamism, improvement in the quality of life/services as well as habitat in rural/urban areas. The need is also for upgradation/ management of physical/ financial resources/ sources and human development, diversification of economy from agriculture to non-farm sector and making Punjab investment-friendly.

Above all, The PDR persists in the formation of a government that is transparent, corruption-free and where economies and not politics drive policy planning. It is time Punjab took the next step forward and rediscovers itself now and here. There is need to correct the revenue/fiscal deficit and

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substantially reduce public debt. The urgently required measures as suggested in the reports are as under: Fiscal deficit, which at present is around 7 per cent of GDP be reduced to 3.5 per cent by the end of 2007; Revenue deficit be reduced by 0.5 per cent per annum with 1999-2000 as the base year and reduced to zero by 2007; Public debt, as GDP percentage be reduced from 47.16 per cent currently to 25 per cent by 2007; Committed expenditure, 112 per cent of the revenue, should be reduced to 60 per cent by 2007; Revision of user charges for services like transport, drinking water, technical and medical and higher education, secondary and tertiary health care to improve quality; Aggressive disinvestments in public sector undertakings; Power sector reforms and improving the finances of the PSEB by implementing in full the recommendations of the State Electricity Regulatory Commission Report; Diversification of agriculture; Crop diversification with high yielding, remunerative alternate crops supported by pricing and marketing; Soil, water and environmental conservation; Facilitation for contract, commercial and organic farming; Reorientation of subsidies in the light of WTO; Strengthening Panchayati Raj and cooperative systems.28

Now let us refer to a significant World Bank report titled *Resuming Punjab’s Prosperity*.29 It would be pertinent to underline the fact that the World Bank has been a keen observer of the politico-economic developments in this border state and time and again has come forward with the ways and means to the growth in Punjab. The World Bank is optimistic that Punjab’s growth rate can be accelerated to provide more employment opportunities, improve the level and quality of service delivery and address key social sector problems, if the reform agenda is implemented. This will be possible only by developing a financial restructuring plan for the power sector, exploring ways to assist in the

institutionalisation of the Fiscal Responsibility Act\textsuperscript{30} and providing technical support on how best to decentralize control over teachers and medical staff to the panchayati raj institutions. And also by analysing unexplored areas, including problems of slow growth in the industry and need to address the gap between the state’s high-income status and less impressive health and education indicators. The World Bank has again shown its keen interest to work with Punjab to solve its problems as well as take up the developmental challenges facing the state. The objective of the World Bank, through its consistent efforts has been to restore Punjab's status as the leader in growth and development, despite the setbacks received due to terrorism, long spells of the President’s rule and political populism that made a mockery of financial management. This can be achieved through resuscitation of fiscal health and stabilization reforms, administrative or governance reforms, creating an enabling environment for private sector growth and human resource development.\textsuperscript{31}

The World Bank analysis is a telling comment as much on Punjab’s present socio-economic and administrative systems as on political governance. It observes that the state, confronted with the severe financial problems, could end up in bankruptcy, if these problems remained unresolved. As for the present, the state of Punjab still boasts of one of the highest per capita income, nearly Rs 30,000 (2001-02), and the lowest poverty head-count ratio; only 6 per cent (1.5 million poor) of the 25 million people. They are below the official poverty line as compared to 27 per cent for all India.\textsuperscript{32} On an average, a Punjabi earns one-and-a-half times more than an average Indian and three-to-four times


\textsuperscript{31} These observations are made in a concept paper “Punjab Economic Report” the World Bank has submitted to the government. Relying heavily on a plethora of reports, surveys and analyses on various facets of the Punjab economy and politico-administrative systems, the paper is a roadmap for resurgence of the state. Several experts are involved in compiling the final Punjab Economic Report, which has come in the name of \textit{Resuming Punjab's Prosperity: The Opportunities and Challenges Ahead} in 2004.

as much as an average person in the poorest states. The report, however, underlines the fact that Punjab’s prosperity is illusionary if viewed in the mirror of multiple challenges—fiscal crises, stagnant economy and disconnect between its level of income and level of human development. And the magnitude of the fiscal imbalance leaves Punjab with little ‘fiscal space’, endangering future growth prospects and quality of public service delivery.

Punjab also fares poorly in terms of the revenue deficit to revenue receipts. The state's economy is on the decline, while several other states are fast catching up with its high per capita income. It would not be appropriate to blame the pre-green revolution period or the phase of terrorism (1980s) or spells of the President’s rule only for the present deceleration. Punjab has also suffered because of the low level of public investment due to misplaced fiscal policies and spluttering of the productivity growth in the agricultural sector in 1990s. Punjab is credited for its reform agenda and several significant steps to implement it—withdrawal of free power and water to the agriculture sector (during the Congress rule in 2002 though later restored), the Fiscal Responsibility Act, the voluntary retirement scheme and rightsizing of the government (though there are no tangible results, so far), the medium-term fiscal reform programme, power sector reforms, infrastructure development, privatisation, contract farming, disinvestments, deregulation, decentralization and gender equalization by taking up female feticide on priority. While identifying the key challenges before the government, the World Bank also observes that Punjab is not counted among the best-governed states. It takes cognisance of the mark left on the state’s governing machinery by poor fiscal health, past problems while suggesting making the government more efficient, responsive and transparent. Apart from these, effective steps to improve investment climate, to raise levels of human development and to reduce social disparities are the other suggested measures.

How does Punjab agriculture look from the window of the World Bank? The report underlines the fact that agriculture and allied sectors constitute as high as 40 per cent of the gross state domestic product (GSDP), compared to the 24 per cent average of Indian states. Poor performance of agriculture and its stagnation since the mid-90s has shackled Punjab’s economic growth. To the World Bank, sustainability of the wheat-rice cycle for long is a matter of concern. A change in terms of the agricultural diversification is imperative only if the current system of procurement based on minimum support price (MSP) is changed because it provides a powerful economic incentive to prolong this crop rotation. This has to be further coupled with still higher user charges for power and irrigation and shifting to meter-billing, private participation in establishment and management of markets, says the report. Since Punjab is in an unenviable situation, the next one-year is crucial to push through the proposed fiscal, administrative and power reforms, which have backward and forward linkages with agriculture. Agriculture, says the policy report, is an important determinant of Punjab’s overall economic performance. After a growth rate of 4.9 per cent per annum in the 1980s, growth of the agriculture GSDP nearly halved to 2.5 per cent per annum in the ’90s. Wheat and rice is no longer the engine of growth. And in the last decade, productivity growth of rice has slowed significantly and has impacted on the overall slowdown in the sector’s growth. Punjab now needs to be brace itself for “dismantling” of the MSP-regulated procurement system because of the huge stockpile of food grains and its poor off-take under the public distribution system. This has led to the huge fiscal costs. The report also mentions about changeover from zero pricing of power and water, suggesting further hike in user charges. If, on the one hand, it favours introducing metering of the agriculture sector, on the other hand it also talks of the public expenditure in

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34 World Bank, 2003, Revitalizing Punjab’s Agriculture, Rural Development Unit, South Asia Region. New Delhi.
irrigation. The capital investment in irrigation has dropped from 1.2 per cent of the GSDP in 1997/98 to 0.4 per cent in 2001.35

It says that the inadequacy of operation and maintenance (O/M) expenditure on irrigation is another area to which the report draws attention. The non-wage O/M expenditures were Rs 17.5 crore for a total command area of 3.1 million hectares in 2001/02. This is just 20 per cent of what should be spent on O/M, as per the norms of the Finance Commission. The fact that the department expects to realize Rs 60 crore from user charges and intends to plough this back into O/M has been appreciated by the World Bank.36 The report also stresses policy reforms to encourage agricultural diversification and discusses the issue of MSP, water/power pricing and wholesale markets. It favours efficient and scientifically developed wholesale markets for facilitating diversification to high-value crops and suggests Punjab follow Karnataka in involving the private sector in mandis. The report refers to procurement, MSP and unshackling Punjab from the wheat-rice rotation and finds merit in the report titled “Agricultural Production Pattern Adjustment Programme in Punjab for Productivity and Growth”, prepared by the Chief Minister’s Advisory Committee on Agriculture Policy and Restructuring, headed by S.S. Johal.37 The World Bank report succinctly concludes: “At this preliminary stage, it appears that while the income support idea has merit (as suggested in the Johl committee report), its implementation will have to be carefully thought out so as to achieve the desired objective efficiently and at least cost.”38

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35 Stephen Howes, Deepak Ahluwalia, Indira Rajaraman, Kruti Bharucha and Upasana Varma in their report submitted to World Bank (read World Bank, 2003, *Revitalizing Punjab’s Agriculture*, Rural Development Unit, South Asia Region. New Delhi), have selected three areas, not at random, but because these are a ‘reflection of the nature of the challenges facing Punjab’. Their report contends that agriculture is the primary engine of growth without which Punjab will neither be able to accelerate growth nor achieve fiscal sustainability.

36 World Bank, 2003, et al, p. 43

37 During the last few years, the Punjab farmers have suffered a lot due to record production of wheat and paddy with in the state because of the diminishing demand in other states. To achieve this purpose, a Committee under the chairmanship of renowned agriculture expert Dr. Sardara Singh Johal was constituted for diversification in agriculture for enhancing the economic status of the Punjab farmer.

The political decisions that are not based on sound economic principles and are not socially compatible can also debilitate the economy and spell disaster for the society. Unfortunately, Punjab has of late been caught up in this diabolical situation generated by the series of vote-bank based political decisions that defy economic logic and social justification. Being populist in nature these decisions not only mostly remain on paper but also create unfulfilled expectations leading to the crisis of governance. Let us refer first to the performance of the SAD-BJP coalition government during 1997-2002. The Akali-BJP regime after taking over in 1997 from the Congress government had begun with a flush of gusto and engaged the three universities of the state and some other institutes for preparing the block level development plans. Spending a period of more than one and a half years, some three dozen such block level development plans were prepared by these institutions and were presented to the government. The government, however, failed to implement them. Worse, the political leadership subjected the state finances to the depredation of so-called sangat darshans aimed at buying the rural votes on the election eve. Incidentally, State Planning Board with outstanding professionals and experts as members remained idle for most of the time during the rule of SAD as the government was hardly interested in bringing about the long term much needed reforms. Its term was extended almost annually as a ritual. Ironically, no meeting of this board was ever held during this period and it was never called upon to deliberate on the investment planning and projects prioritisation during the Akali regime. Later when Amrinder Singh led Congress government came to power on the agenda of development and good governance, it instead spent its first years on pursuing the corruption charges against Badal family and not doing anything of note on the economic front. For them it was the politics of vendetta that took priority over the politics of reforms.
It has indeed been surprising that the successive state governments in recent Punjab, even under such a severe financial crunch, had no concept of and value for the prioritisation of the projects and programmes. While more than 65 per cent of the budget was being eaten up by the salaries and about 25 per cent on interest payments, less than 10 per cent of the budget was only left for the developmental purposes. It was an irony of fate that these scarce resources have regularly been frittered away with a vengeance on trivialities, perhaps because the non-performing governments have had otherwise very little to show on the development front. Substantive parts of village and approach roads have remained unattended. Most of the village levels produce markets and purchase centres were no more than dusty fields during rains. There had not been adequate pucca floors and sheds to cover the unloaded produce and no requisite covered storage. Some 80 per cent of the total revenue was appropriated for the payment of salaries. The rest got pooled away on the programmes of little significance. Agricultural produce in the market before and after purchase often remained at the mercy of the rain gods. Unfortunately all this happened in the times of tercentenary celebrations of the birth of the Khalsa, which came like a thunder and went like a storm and the Khalsa Panth remained where it was, rather more divided and disoriented. The huge expenditure on the festivities did nothing to rejuvenate the ailing agrarian economy of the state.

The ruling parties in the recent Punjab have, in fact, been very imprudently burnt its financial candle at both the ends in the reckless pursuit of narrow electoral gains. The fund-starved state suffers from the indulgence of the ruling political combine in throwing unsavoury sops to the people. One can refer to the Akali-BJP government led by Badal going for the populist sops like the supply of free water and electricity to the agriculture sector, abolition of land revenue, non-charging of house tax and even water and sewerage charges in the urban areas (abolition of octroi at the end of their rule), which benefited, if at all, only the richer classes in the rural and urban sectors. These sops
boomeranged as in the case of providing free electricity that led to an endemic power crisis in this resource scarce state. On the other hand the cheap vote-bank politics of so-called sangat darshans and unplanned whimsical spending reminded us of the ways of benevolent maharajas, debilitating the state so much that development planning and project prioritisation was left with no meanings in this once ‘model’ state. Perhaps this was the reason that the need of planning board meetings was never felt. As a consequence, these populist policies followed in the agriculture sector, the farm enterprise, the main stay of the state, came under an acute income squeeze and suffered from the lack of capital formation, the very motive force of growth process. The wheat-rice rotation that brought about the Green Revolution in the country became less and less profitable day by day, because of a decline in demand for Punjab food grains in the domestic and international market. This was because the traditionally deficit states of the country started becoming progressively self-sufficient and the Punjab grain was being described inferior in quality in the national and international markets. Huge stocks of over 60 million tonnes in the central pool compelled the centre to drag its feet on procurement (paddy crises of 2001-02).

The partially obliging BJP led NDA government, while bailing out the Akali-BJP regime on this front, had in fact harmed the interests of the farm sector and contributed to the ongoing process of debilitation of the state economy and degradation of the ecology of the state in the long run. These steps carried off all the pressure on the government that would have otherwise dissuaded them from following the disastrous policies like free supply of water and electricity to the farm sector. Consequently, little concerns were expressed in research and extension supported by an effective policy for diversification. Farmers given the uncertainty of the market and fear of crops failure would be finding hardly any reason to shift from the wheat-paddy cultivation to other enterprises without assurance of adequate compensation from the government side. Setting up of the delivering committees on WTO, expenditure restructuring,
diversification, disinvestments not withstanding, as a consequence of these short-sighted policies the farm sector landed into a vicious circle from where it became almost impossible to get out, thanks to the stubbornly ruthless, persistently short-sighted and illogically ad-hoc policies and programmes being pursued by the state government during their five year rule. Ironically it was the first time in the electoral history of the state that the Akalis had been successful in completing their term.

Let us have an overview of the scenario in the post-2002 period when the Congress formed the government led by Amrinder Singh. As promised in their election manifesto before the assembly elections of 2002, The Punjab Congress presented a White Paper on the financial situation to the Vidhan Sabha. The status document, however, was not intended to apportion blame, as mentioned in it. A perusal of the White Paper and the accompanying press note quoting the then Chief Minister, Amarinder Singh, clearly shows that the previous SAD-BJP government has been indicted for the mess in which the state today finds itself. The White Paper treads the familiar ground of how the revenue deficit gap (expected to touch Rs 3,500 crore by the close of this year) had increased; how borrowings had pushed Punjab deep into a debt trap; how payments totalling Rs 400 crore had to be stopped in treasuries; how the state ran into an overdraft of Rs 168 crore (as on March 2); how the pending liabilities were expected to rise to Rs 1,000 crore (by March-end); and how not only socio-economic development was hit but also how various government functions were paralysed. The White Paper, in short, was an “exact mirror image of the bankruptcy of the government” that was finding it hard to even pay salaries and pensions to its employees.

The White Paper referred to the borrowings (expected to reach Rs 33153.33 crore by March-end) by loss-making public sector undertakings (PSUs) and

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also government guarantees (likely to touch Rs 19609.86 crore by March-end of 2002-03). The borrowings and loans were meant not so much as to fund the development projects undertaken by the PSUs but to either repay or service the existing debt and even to meet their consumption requirements. Punjab was deep in debt, it noted. So precarious was the situation, said the document, that debt servicing consumed nearly 30 per cent of the total revenue receipts and the public debt, as percentage of gross domestic product, was a whopping 40.66. Add to this nearly 76 per cent of the revenue receipts out went on salaries and pensions alone. The White Paper made special mention of the state electricity board, which was likely to close the current financial year logging a commercial loss of Rs 2,000 crore. Its repayment obligations (of debt) at Rs 2,136 crore were more than the total loans amounting to Rs 2,023 crore raised by it during the year 2002. Its non-institutional debt had increased six times since 1991-92 and touched Rs 4,396 crore in 2000-01.40

The revenue-sacrificing measures of the previous government cost the exchequer Rs 2,000 crore annually. Since the Congress, too, had made election commitments to the tune of Rs 1,200 crore, therefore, despite this grim situation, the party did reiterate its full commitment to implement all its populist schemes that often go in the name of welfarism.

This despite recognising the grim reality that as a consequence of the economic downward trend (Punjab first became revenue deficit in 1984-85), the growth in the per capita income of the state averaged 2.73 per cent, as compared to the all-India average of 4.76 per cent, during 1993-94 and 1998-99. The White Paper revealed that the large waiver of loans claimed by the previous government was “illusory”. It was allowed only for four years till the financial year of 2000-01. The Centre had agreed to allow only a moratorium for a period of five years. This was bound to add to the existing debt burden. Moreover, the share of Punjab from the devolution of central taxes had consistently declined from 2 per cent to 1.15 per cent. The second part, on

which the White Paper was not forthcoming understandably, so as the party’s poor performance during its tenure revealed succinctly, was how the Congress government proposed to overcome the situation.

The Congress government did not succeed in delivering on its oft-repeated promise to introduce second green revolution by supporting crop diversification, cooperative farming, organic farming and what not. With investments in the industrial sector going to the neighbouring ‘progressive’ states, agro-centric Punjab economy growth rate during 2002-2007 was just 4.8 per cent against the national average of 7 per cent. State’s debt at rupees 53000 crore was much more than the figures in 2002. The debt had stood at rupees 32000 crore in 2002. As per the national sample survey organization (2006) estimates, Punjab has the third highest extent of rural indebtedness in India (65.4 per cent) after Andhra Pradesh and Tamil Nadu (Hindustan Times, February 14, 2007). According to the CAG report, 2007 Punjab’s 13 PSUs have so far incurred a cumulative loss of rupees 3,934 crore. Subsidies and top-heavy bureaucracy bleed the economy. The factors like the fragmentation of landholdings, rapid rise in the cost of inputs, stagnating returns, declining public sector investments, inadequate marketing and pricing, decline in the research inputs from institutes like PAU, Ludhiana, absence of food processing facilities, persistence with two-crop (paddy-wheat) economy, failure of cash crops, extensive use of technology that results in to degradation of environment, loss of most of its wetlands, all have resulted in to a grave agricultural crisis in the state.41 The incumbent Akali-BJP government that has come back to power riding on the populist promises is hardly expected to deliver substantially though under a dynamic new finance minister the promises are being held out.

It must be mentioned that the technical solutions do exit to raise productivity and reduce per unit cost of agricultural produce through harnessing.

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biotechnology. This second green revolution, however, would require massive public investment in frontline technology and strengthening institutional infrastructure like developing agro-processing units. Rising costs along with stagnant technology and nearly freezing of the minimum support price of wheat and paddy have brought indebtedness among the farmers who are being forced to commit suicides especially in the cotton belt.\(^{42}\)

**Academic Discourse**

The academic discourse on the continuing crisis in agriculture has travelled from ‘Diversification’ to the idea of ‘second green revolution’ with no consensus emerging as yet. The committee led by S.S. Johl, chairman of the Punjab Planning Board, came up with ‘Crop Adjustment Programme’, asking for compensating the farmers for not sowing wheat and paddy. The scheme envisaged that the areas with paddy and wheat cultivation would be replaced by the cultivation of the alternative crops. The farmers will be paid in cash for opting for this. Experts have picked holes in the scheme. S.S. Shergill, an economist from Panjab University, Chandigarh, considers it impossible to implement the recommendation for the sheer size being targeted besides other reasons. S.S. Rangi, consultant to the State Farmers Commission, has stated that at present, the diversification options are limited and mostly uneconomical for the farmers to adopt. Shergill went on to suggest that Punjab should stick to wheat and paddy. The salvation of Punjabi farmers lies in further improving their efficiency and competitive advantage in wheat and rice production.\(^{43}\)


\(^{43}\) These are some of the findings in a detailed study titled, “Diversification of Cropping Patterns: A re-examination” by noted farm economist, H.S. Shergill, who heads the “Punjab Studies Unit” of the Institute for Development and Communication (IDC). The study infers that the choice was not between wheat-paddy specialisation versus a diversified cropping pattern, as is naively believed, but the need to explore specialisation in some other crop rotation combination. There is need for a thorough understanding and a holistic approach towards the inherent compulsions of modern commercial farming to clear the current confusion and then formulate a correct policy. *The Hindu*, July 31, 2006.
In our opinion, the so-called second green revolution cannot succeed where first has failed. The green revolution has been a failure considering the impact on the future of farming in the state. It has led to reduced genetic diversity, increased vulnerability to pests, soil erosion, water shortages, reduced soil fertility, micronutrient deficiencies, soil contamination, reduced availability of nutritious food crops for the local population, the displacement of vast numbers of small farmers from their land, rural impoverishment and increased tensions and conflicts.

As for the recent penchant for the creation of special economic zones in order to attract the private investment in the industrial as well as the agro-business sector, there has been question mark. It has been argued that without even questioning the merit and economics of an agro-business model that displaces farmers from their habitat and agricultural land, the states like Punjab have been aggressively adopting it. Corporatising agriculture will do little to help the bulk of the rural population. With its focus on commercial crops, bulk procurement and retail chains, such corporatisation can only weaken the small farmer even more. Already in Punjab, corporate interests such as Monsanto, Reliance and others are making a beeline for the agro-retail trade. With gradual withdrawal of the Government from procurement, more and more of retail trade for agriculture is going to pass into the hands of the trans-national companies. The policymakers led by Manmohan Singh and Montek Singh Ahluwalia have been talking about the need to bring in private capital in a big way in Indian agriculture as the only solution to the agrarian crisis in the country. With its focus on the commercial crops, bulk procurement and retail chains, how will this corporate model of agriculture work for farmers is the question that is not being addressed, though. As one economist rightly puts it, ‘it is strange that the country has already jumped into the second phase of green
revolution without first drawing a balance sheet of the first phase of the technology era."44

**Failure of Politics**

Whichever party wins the assembly election in Punjab; the electorate has to bear with the banality of political discourse and poverty of ideas. The politics of vendetta conducted by the top leadership of the Congress and SAD over the years has grown progressively more abusive and vulgar daily blocking the political process in the state. The live presentation of the electoral debates involving the candidates has exposed the limitation of the political class to think in terms of the state at a time when the state is confronting a crisis.

The failure of the representative politics is also evidenced in the form of the presence of an institutionalised role of money, crime and drugs involving all the major political parties. The spectacular display of unaccounted for money that went into the electioneering rendered the high-voltage accusations of corruption flung at each other by political rivals patently hypocritical. During the 2002 assembly election campaign, Amarinder Singh had seemed to enjoy a relative advantage against Badal, in whose regime corruption was widely believed to have touched new heights. Ironically after five years, it was the turn of the Amrinder Singh and his former colleagues in the government to face a credibility deficit on that count.

Far less appreciated, however, is the progressive waning of the communal and sectarian divides in the rhetoric of the election campaigns since the end of separatist violence in Punjab. During the last five years, tragically it was the Congress that went all out to steal and appropriate much of the traditional political symbolism and panthic agenda propagated by the Akalis. Whether it was the celebration of the Sikh religious ceremonies by the state government,

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its efforts to ensure easy access of Sikhs to Nankana Sahib, its hard line on the question of sharing Punjab river waters with Haryana or the competitive populism of free electricity and water for agriculture—in each, the Congress tended to outdo the Akalis. Fortunately for the first time prime minister and chief of army being both Sikhs, the spectre of ultra Hindu majoritarianism being a threat to the minorities does not carry conviction in Punjab.

The absurdity of the electoral populism was in full public view when both Akalis and Congress tried to win the votes on the basis of the promise of the at a at Rs 4 and dal at Rs 20 per kg. There is a disconnection between the ruling view of ‘development’ and the human needs and capabilities of the vast majority. In the rhetoric of the two parties, ‘development’ had come to mean mainly skyways, SEZs, malls, IT parks and investment. Ideology backed by serious programmatic efforts to translate promises into reality has been absent.

The Punjab Assembly elections in the recent years clearly show the wisdom of the voters. In the election 2007 they simply punished the Congress government for its sheer indifference to their woes and insensitivity to the concept of accountability to the people. They voted for the SAD-BJP combine so that it was able to form a stable government. While being decisive they were also careful in ensuring that there is a strong opposition in the House, which could keep the government under check. Not only that, even within the ruling alliance, neither the SAD nor the BJP can lord it over the other, critically dependent as they are on each other to run the government. The voters also refrained themselves from experimenting with many of the smaller parties that were in the fray. The election results clearly show that the script must have been familiar to the Congress. It lost the power due to lack of governance and corruption—the two things it had accused the SAD to win the elections in 2002. In addition to these, former chief minister Captain Amarinder Singh’s

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197 The Akali Dal in order to win the support of the poor sections of voters pronounced this scheme before the assembly elections of 2007 in their election manifesto.
famous inaccessibility, which many of his Cabinet members emulated, alienated ordinary masses. Rising prices and unemployment completed the list. Amarinder Singh paid a price for alienating his own party colleagues and for his allegedly high-handed ways. His push for SEZs also did not endear him to land owners and farmers. In addition, the rise in prices was also beginning to hurt the citizen. Similarly, voters in other states had their own set of local grievances.

To sum up

The most important factor that is going to determine the pattern and pace of diversification is the market. There are agricultural commodities, which are responsive to the change in the prices and elasticity of supply is quite high. Along with this, the crops which have high income elasticity of demand at the national level have to be identified and promoted through policy as the national market is being opened up and controls on procurement, movement and distribution of commodities are being softened. The competitiveness will also have to be taken care of. The competitive advantage and export to other regions in the country and in the global market will depend upon the right kind of policies and their implementations.

Another important aspect in the diversification of agriculture is the research and development. It has to be strengthened not only for the alternative crops but also for the existing crops. The existing crops of wheat and rice are important from the national food security perspective and it is desirable that their incremental production should come from the productivity growth instead of area only. The growth in the productivity will spare land and other resources from wheat and rice without widening the gap between demand and supply of food grains. Although the country has reached ‘food security threshold’ yet it

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cannot afford to have diversification at the expense of food security and the political directorate of the country will never allow this to happen.\textsuperscript{47} Improvement and stabilization of the productivity of alternative crops is must to make them profitable and risk free as it was done for rice and wheat in past. Currently the productivity variations in the alternative crops are quite high in comparison to wheat and rice.

Still other important aspect for diversification is the education and extension of the farmers. The farmers’ mindset usually accepts the changes that are induced from within the system and these changes ensure higher income and employment. Current studies show that dairying is emerging, from within the system, as the major source of diversification and consequently resulting in the higher proportion of area under fodder crops.\textsuperscript{48} The income and employment growth in dairy is quite high as compared to crop sub sector as shown in the table 6. It can be seen from the table that income per farm from crops at constant prices increased at the compound growth rate of 2.08 percent but in case of dairy the increase was 4.66 percent during the trienniums 1987-90 and 2000-03. The dairy is also absorbing the labour released from the crops due to mechanization of operations. The employment per farm in crops declined from 385 man-days to 297 man-days per year but it increased for dairy from 182 to 257 man-days. Nevertheless importance of education and extension cannot be undermined as instruments of change and bring in other crops/enterprises in the system to increase diversity in production.

\textsuperscript{47} Vyas, Vijay S., 1996, op cit.

Moreover, it is doubtful, given existing farmer yields and the profitability advantage of rice and wheat, if income support payments of Rs 12,500 would be sufficient to shift much area, given current prices, yields and risks. The Johl committee report recognizes that the support payments would only work if they are combined with a concerted research and technology transfer effort to close the yield gap of competing crops, and to improve their marketing systems. Effective MSP support and procurement would be broadened to cover other major crops and reduce their market risks. However, little is said about reforming underlying price distortions from output and input subsidies, and institutional reforms to make markets and public services more efficient.

As a result of the exemplary progress, particularly in the fields of agriculture and industry, Punjab continued to remain at the top in terms of the per capita income till the early nineties. Recently, the rate of growth has slowed down drastically. Worse, in the recent past, as discussed above, barring the states of Bihar and Madhya Pradesh, the growth of the Punjab economy has remained
the slowest in the country during the past decade. The country level picture has shown a similar trend but the pace of deceleration was slower than that of Punjab. The poor performance of the primary sector in the country was mainly due to the emergence of sustainability issues in high potential agriculture states like that of Punjab. After attaining an exemplary rise in production, Punjab agriculture is at a critical stage beyond which sustaining the growth rate is an arduous task. Being mainly an agricultural economy, the overall development of the state has slowed down.

The performance of the manufacturing sector in Punjab almost matches that of the national level. But in recent years, Punjab has shown poor performance in this area too. The recent state policy of over-administration, frequent power shortage and the political turmoil like over the Dera Sacha Sauda issue has led to the business insecurity. The attempt by the radical forces to revive the panthic politics has started once again discouraging the industrial units more in Punjab. The worst performance can be observed in the tertiary sector of Punjab, which is growing by 5-6 per cent as compared to the country average of 7-8 per cent, pulling down the overall economic growth of the state. Various issues associated with the sustainability of Punjab agriculture need to be highlighted with specific focus on policy issues. Obviously, there is remote possibility of attaining miraculous crop production in the state. However, augmenting post harvest technology with value addition is possible to some extent. It can safely be inferred that the shortfall in national food grain production would continue to compel the potential state agriculture in the direction of the rice-wheat system, in spite of genuine ecological problems and slogans of diversification.