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ARTICLES

Impact of Agricultural Trade Liberalisation: Farmers' Indebtedness and Suicides in Kerala

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I

INTRODUCTION

Kerala's agriculture sector is unique in several ways. Some of its special features are (i) highly fragmented and small size of holdings,[1] except the plantation sector, (ii) homestead farming with mixed crops yielding high income, (iii) larger area under commercial crops, especially capital intensive perennial tree crops, (iv) export orientation of crops, such as spices, cashew, rubber, coffee, tea, etc., (v) high credit[2] and hired labour intensive cultivation and (vi) higher indebtedness of farmers. Some of these unique features are now found to be the handicaps of the sector, in the open trade environment which emerged after the formation of World Trade Organisation (WTO). Following trade liberalisation, while exports of agricultural commodities from the State declined, there was rise in imports which led to fall in domestic prices of commodities and rise in price volatility. This intensified the problems already faced by the agricultural sector of the State due to high cost of cultivation, stagnant productivity, etc. (Joseph and Joseph, 2005 and Jeromi, 2005).

Unlike other states in the country, agricultural trade liberalisation adversely affected the agricultural sector in the State as more than 80 per cent of the agricultural commodities/products produced in the State are dependent on the situation of domestic and/or international markets (Government of Kerala, 2003). The export intensity of production of some of the crops like pepper, cardamom, cashew, etc., is high in the State. As the Kerala's economy was a relatively closed economy until mid-1990s, cultivation of commercial crops such a coconut, rubber, tea, coffee, spices, etc., was fairly profitable even without much improvement in productivity and value addition because of protected internal market and prospects for exports. However, with the removal of quantitative restrictions (QRs) and lowering of tariff levels on imports, farmers cultivating commercial crops have been affected following higher imports and stiff competition for exports in the international market. In the

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recent period, there was significant rise in imports of commodities like pepper, cardamom, tea, etc., which seems to have affected domestic prices of these crops in the State and, in turn, the financial position of the cultivators. The imports further increased following Free Trade Agreement (FTA) with countries like Sri Lanka, which produce and export many of the commodities which are produced and exported from the State.[3] In the liberalised trade environment, small and marginal farmers, in particular, are not able to compete with other commodity producing countries due to continued lower yields and high cost of cultivation as no restructuring programme was undertaken to improve the export competitiveness of the commodities to operate in a new trade environment.

During the last few years, the problem aggravated due to deficiency in rainfall, sharp decline in prices, lower production and the consequent increase in debt burden of the farmers. As a result, close to 2,000 farmers committed suicide in the State (Government of Kerala, 2006a). Though it is now four years since the aggravation of the problem, there was no abatement of the situation as measures taken so far were not effective in tackling the issue. In this context, the paper examines (i) the extent of farm crisis in the State and reasons thereof, (ii) the extent of indebtedness and (iii) the various dimensions of suicides of farmers.

The study is based on both primary and secondary data. Primary data were obtained from the surveys conducted by the researchers and NGOs (made available to the author). Secondary data were obtained from the State government sources, Reserve Bank of India (RBI), National Bank for Agriculture and Rural Development (NABARD), National Sample Survey Organisation (NSSO) and various commodity boards. The study broadly covers the period from 1970-71 to 2005-06, though detailed analysis is confined to the recent years. The remaining part of the paper is organised as follows: Section II analyses the extent and factors leading to farm crisis in Kerala. Section III examines the extent of indebtedness of farmers. Details of suicides committed by farmers and factors behind it are analysed in Section IV. The final section summarises the major findings of the study.

II

FARM DISTRESS IN KERALA - EXTENT AND REASONS

Stagnant Agricultural Income

A single most important indicator of health of the farm sector is the growth of income from agriculture. During the last three and half decades, one can identify three distinct phases in the growth of Net State Domestic Product (NSDP) from agriculture (Figure 1). After its prolonged stagnation from early 1970s to mid-1980s (-0.9 per cent per annum), mainly due to rising cost of production following high wages, the sector recovered from mid-1980s to mid-1990s (4.9 per cent per annum), due to shift from labour intensive food crops to high value commercial crops and

turnaround in productivity [Kannan and Pushpangadan (1990) and Joseph and Joseph (2005)]. Since then, income generated in the sector has either declined or remained stagnant (0.3 per cent per annum from 1997-98 to 2005-06), mainly due to fall in prices, stiff competition for its exports and also due to imports after the trade liberalisation [Government of Kerala (2003) and Jeromi (2005)]. As a result, the share of agriculture in total NSDP declined drastically to just 13.2 per cent in 2005-06 (as against 19.0 per cent at the all-India level). Besides the trade related factors, reasons for the near stagnant agricultural income can also be traced to the deficient rainfall[4], stagnant production and productivity and fall in prices.

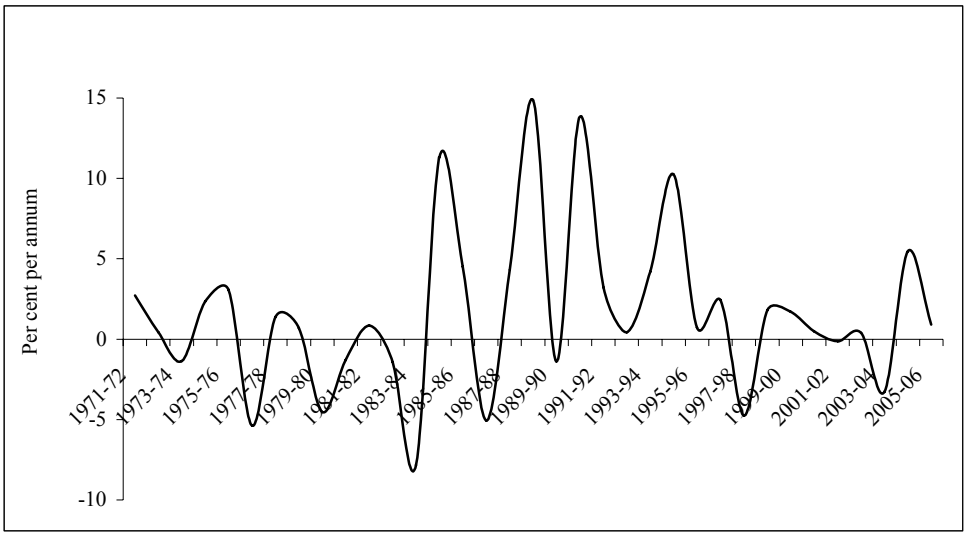

Figure: Trends in Growth of Agricultural Income (At Constant Prices)

Cropping Rigidity

Agricultural sector in Kerala, unlike other states in the country, has historically been dominated by commercial crops such as coconut, rubber, tea, coffee and spices.[5] With more market orientation and better profitability of cultivation, the share of commercial crops in total area under cultivation in the State has been rising at the expense of food crops such as rice and tapioca.[6] The area under major cash crops accounted for nearly two-thirds of total cropped area in the State. Food crops (cereals, pulses and tapioca), on the other hand, now account for only around 14.0 per cent of cropped area (Table 1). Export-oriented or exportable cash crops accounted for nearly 30 per cent of the gross cropped area. Thus, over time, the cropping pattern was more tailored to the demands of the world market.

TABLE 1. SHARE OF AREA UNDER MAJOR CROPS IN TOTAL CROPPED AREA

(per cent)

Crop	1970-71	1980-81	1990-91	2000-01	2005-06
(1)	(2)	(3)	(4)	(5)	(6)
Rice	29.6	27.8	18.5	11.6	9.1
Coconut	24.7	22.6	28.8	31.2	29.6
Rubber	6.4	8.2	12.7	15.8	16.3
Pepper	3.9	3.7	5.6	6.6	7.9
Cardamom	1.6	2.0	2.2	1.4	1.3
Cashewnut	3.4	4.9	3.8	2.9	2.7
Tapioca	10.3	8.5	4.9	3.7	3.1
Coffee	1.1	2.0	2.5	2.8	2.8
Tea	1.3	1.3	1.1	1.2	1.2

Source: Economic Review, State Planning Board, Thiruvananthapuram, various issues.

Nearly 80 per cent of the cultivated land in the State is under perennial/tree crops like coconut, rubber, tea, coffee, pepper, etc. They have long gestation period ranging from 3-4 years for pepper, cardamom and tea and about 7-8 years for rubber and coconut. Once the gestation period is over, production would continue for decades. However, the predominant cultivation of tree crops imparts inflexibility to agricultural operation in the State as, unlike short duration crops, tea crop cultivation cannot be swiftly changed to other crops depending on the market situation.[7] Taking clue from the trends in commodity prices, over time, farmers have been switching from cultivation of multiple crops to mono crops. The exclusive dependence on a single crop, especially on crops yielding only once in a year, affected the regular flow of income of the farmers, especially when prices of commodities were declined drastically. Further, drought in a year will lead to yield reduction for 3 years and more after the drought year. In the recent period, it is the farmers who cultivated the commercial crops who were affected the most. Hence, there is view that the crisis faced by the State is inevitable for any local economy, which is heavily dependent on the world market (Mohankumar and Sharma, 2006).

Stagnant Production and Productivity

Production of most crops has been reasonably good till mid-1990s and since then there was set back. Growth of production of most of the major commodities has either declined or remained near stagnant during the recent period. A decline in the production of rice and deceleration in the case of coconut were quite high (Table 2).

Productivity of most of the major crops decelerated since the mid-1990s, especially in case of coconut, rubber and tea (Table 2). The reasons for the decline in production and productivity are (i) ecological degradation leading to droughts and floods, soil erosion, degradation of traditional systems of water control, (ii) decline in soil fertility following excessive use of fertilisers and pesticides, (iii) root wilt disease affecting crops like coconut and pepper, (iv) aged plantation sector, (v) pest attack and disease of support trees of pepper vines, etc. There was also considerable decline in public investment in the agriculture sector.[8]

TABLE 2. AVERAGE ANNUAL GROWTH OF PRODUCTION AND PRODUCTIVITY OF MAJOR COMMODITIES IN KERALA

(per cent per annum)

Crops	Production		Productivity	
	1984-85 to 1996-97	1997-98 to 2005-06	1984-85 to 1996-97	1997-98 to 2005-06
(1)	(2)	(3)	(4)	(5)
Rice	-2.6	-2.6	1.5	1.6
Coconut	6.1	1.5	3.7	1.6
Rubber	9.3	4.2	7.0	3.1
Tea	1.2	-0.7	0.8	-0.1
Pepper	10.4	5.7	4.8	1.7
Cardamom	18.8	8.8	22.7	11.2

Source: Same as Table 1.

Decline in Exports and Rise in Imports

Traditionally, Kerala has been a major exporter of commodities such as pepper, cardamom, ginger, cashew kernels, coir and coir products, tea and coffee. Export of agricultural commodities from the state has been recording fairly good growth till towards the end of the 1990s. However, during the current decade so far (till 2005-06), export of spices (mainly pepper, cardamom, ginger, etc.), coffee and tea declined (Table 3).

TABLE 3. EXPORT OF MAJOR COMMODITIES FROM KERALA

Commodity	Average annual growth (per cent)			
	1990-91 to 1999-2000		2000-01 to 2005-06	
	Quantity	Value	Quantity	Value
(1)	(2)	(3)	(4)	(5)
Pepper*	17.8	48.5	-11.5	-22.4
Coffee@	13.2	-	-26.8	-25.5
Tea@	26.5	-	-8.0	-18.8
Cashew kernels	2.4	15.5	7.3	5.2

Source: Same as Table 1.

*Total exports from India, of which around 90 per cent is from Kerala.

@ Exports taken place through the Cochin Port.

While exports of commodities from the State suffered in the recent years, there was a rise in the import of commodities which are in fact produced and exported from the State for decades together. The import of rubber, pepper, cardamom, coffee and tea increased significantly (imports to India which have significant bearing on the commodities produced in Kerala). In the case of cardamom, average annual growth of import was as high as 88.6 per cent (Table 4).

TABLE 4. IMPORT OF AGRICULTURAL COMMODITIES TO INDIA

(per cent)

Sr.No.	Commodity	Quantity imported average annual growth During 1996-97 to 2005-06
(1)	(2)	(3)
1.	Natural Rubber	40.1
2.	Pepper	33.6
3.	Cardamom	88.8
4.	Coffee	44.5
5.	Tea	30.5

Source: Same as Table 1.

As a result, imports as a percentage of domestic production increased considerably in the recent period. For example, import of pepper to India is around 22.0 per cent of domestic production (Table 5). The relatively lower productivity levels in India coupled with trade liberalisation seems to have led to larger imports. As the State could not improve the productivity of crops or control the cost of cultivation and minimise the crop damage due to diseases, the State's comparative advantage in respect of crops like pepper, tea, coffee, etc. seems to have been eroded, which is resulting in higher imports.

TABLE 5. IMPORTS AS PROPORTION OF PRODUCTION IN INDIA

(per cent)

Period (1)	Pepper (2)	Ginger (3)	Coffee (4)	Tea (5)	Rubber (6)	Cashew (7)	Coconut (8)
1995-1999	4.3	4.2	0.5	0.4	1.6	28.5	0.0
2000-2004	22.0	8.3	2.6	2.0	0.3	73.5	0.2

Source: Basic data from Food and Agriculture Organisation – calculated by Kerala Agricultural University (2006).

Agricultural Prices – Lower Growth and High Volatility

A manifestation of lower exports and higher imports was decline in the domestic prices of most of the commodities. During the 1990s till 1996-97, farm prices of rice and non-food crops like coconut, rubber and pepper were rising at a robust rate of above 10 per cent. However, with trade liberalisation, the rise in price was very low (for paddy and pepper) or negative (for cardamom and coffee) during the period from 1997-98 to 2005-06. In general, crops with high export intensity or facing import competition experienced wider fluctuations in prices than other crops as evident from the coefficient of variation of prices of pepper, cardamom, arecanut, coconut, etc. (Table 6). The international commodity prices have remained extremely volatile during the implementation of the WTO provisions on agricultural trade (Pal and Wadhwa, 2006). The increased volatility, in turn, was reflected in the movement of domestic prices of export-oriented commodities (Figure 2). (In Figure 2, cyclical element, derived based on the estimate of trend of the variable by Hodric Prescott method, is expressed as a per cent of actual prices).

TABLE 6. TRENDS IN FARM PRICES OF IMPORTANT CROPS

(per cent)

Period (1)	Paddy (2)	Coconut (3)	Pepper (4)	Rubber (5)	Arecanut (6)	Cardamom (7)	Tea (8)	Coffee (9)
				Average Annual Growth				
1991-92 to 1996-97	13.7	15.1	22.8	16.5	6.3	9.9	15.7	-
1997-98 to 2005-06	0.3	3.2	2.3	5.2	3.4	-1.4	3.0	-1.0
				Coefficient of Variation				
1991-92 to 1996-97	24.1	21.8	49.7	39.3	13.8	26.8	10.3	-
1997-98 to 2005-06	5.8	23.1	52.3	31.5	32.7	32.8	15.9	24.8

Source: Same as in Table 1.

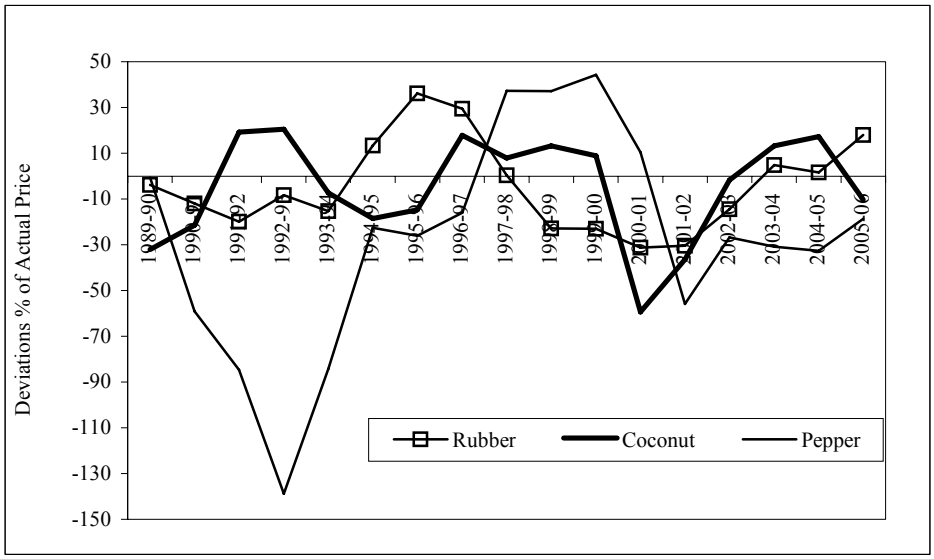

Figure 2: Farm Prices - Deviations from the Trend

While prices received by the farmers were either declining or rising at a lower rate, prices paid by the farmers were increasing at a very high rate. Hence, the price parity, i.e., prices received by farmers as a per cent of prices paid by them, has been declining from 1987 onwards and it stood at 50 in 2006.

Declining Profitability of Cultivation

The decline in productivity and prices affected the profitability of the cultivation, especially in case of farms using hired labour. As per a recent survey, only rubber and cardamom cultivation was found to be reasonably profitable.[9] Profit from cultivation of crops like tea and coconut was marginal. All other crops were not profitable. The loss is more in case of paddy, pepper, arecanut and ginger (Table 7).

TABLE 7. CLASSIFICATION OF CROPS ACCORDING TO PROFITABILITY OF CULTIVATION

More Profitable (1)		Marginally Profitable (2)		Loss (3)		High Loss (4)
Rubber	(Rs.40,470)	Tea	(Rs.7,203)	Paddy	(-Rs.4,592)	Ginger (-Rs.25,913)
Cardamom	(Rs.51,880)	Coffee	(Rs.7,704)	Arecanut	(-Rs.336)	
		Coconut	(Rs.7,203)	Pepper	(-Rs.7,439)	

Source: Kerala Agricultural University (2006).
Figures in parentheses are the net income per hectare.

Another study revealed that average loss per agricultural family (cultivating mixed crops) was Rs.1,689 (Kurup, 2005). An interesting finding of the study was

that when the land holding size is less than one acre, cultivation was marginally profitable and loss in case of land holdings above 1 acre, perhaps because of hiring of labour (Table 8). The above two studies clearly show that the agricultural operation in general is not profitable in the State.

TABLE 8. ESTIMATION OF PROFITABILITY OF CULTIVATION

(Rs.)

Holding size (1)	Average profit/loss per family (2)	Profit/loss per acre of land (3)
Below 1 acre	+ 533	+ 1204
Between 1 - 3 acres	- 3140	-1987
Above 3 acres	-5666	-1260
Total	-1689	-

Source: Kurup (2005).

The above analysis shows that the restructuring of the agricultural sector in the State, to salvage itself from the 'high cost syndrome' during the 1970s and 1980s, has been thwarted by the trade liberalisation in the 1990s and thereafter (Joseph and Joseph, 2005). The opening up of the agricultural sector to international trade has made the farming community in Kerala vulnerable due to surge in imports, decline and high volatility in prices, as happened in case of many other developing economies (Pal and Wadhwa, 2006). The structural limitations like small size of holdings, cultivation of low yielding age-old plants, weak capacity for storing of the produce to take advantage of the market situation, lack of infrastructure, high dependence on weather and susceptibility to natural calamities, etc., affected the farming community, instead of benefiting from the trade liberalisation. Though the indications about the likely adverse impact of WTO agreement on the sector were available as early as from the beginning of the 1990s, the nation/State did not take any serious measures to counter the threat.[10]

III

EXTENT OF INDEBTEDNESS

Incidence and Amount of Indebtedness

The sluggishness in production and decline in prices, *inter alia*, due to lower exports and higher imports, increased the debt burden of the farmers. In general, incidence of indebtedness in rural areas in Kerala is higher than the national average.[11] This is due to factors like concentration on cash crops, higher value of assets per households[12] and availability of credit through the good network of both formal and informal credit agencies.[13] Among the farmer households, the incidence of indebtedness was higher in Kerala at 64.4 per cent (fourth highest incidence among the States) as against the national average of 48.6 per cent. Further, the average amount of loan outstanding per farmer household in Kerala was Rs.33,907 as against the national average of Rs.12,585 (NSSO, 2005). Over the years, the average

amount of cash borrowing per household in rural areas was much higher in Kerala than the national average. During 2002-03, it stood three times higher at Rs.11,066 as against the national average of Rs.3,726 (Table 9).

TABLE 9. AVERAGE AMOUNT OF CASH BORROWINGS PER HOUSEHOLD IN RURAL AREAS

(Rs.)

State	1971-72	1981-82	1991-92	2002-03
(1)	(2)	(3)	(4)	(5)
Kerala	136	919	2,171	11,066
India	174	446	1,160	3,726
Kerala as per cent of India	78.2	706.1	187.2	297.0

Source: NSSO (2006a).

Source and Purpose of Borrowing

The farmer households in rural areas in Kerala mostly borrowed from formal institutional agencies than from informal agencies. In 2003, 82.3 per cent of the outstanding loans of farmer households were taken from formal agencies, which was considerably higher than the national average of 57.7 per cent. A noteworthy feature of the source of borrowing of farmers in Kerala was their lower dependence on money lenders, which was only 7.4 per cent as against the national average of 25.7 per cent (NSSO, 2006b).

It is striking to note that the farmer households borrowed mostly for non-agricultural purposes. In 2003, only 21.4 per cent of the borrowings were utilised for farm related activities (current and capital expenditure in farm), as against the national average of 58.4 per cent. The share of non-farm business in total loans borrowed was more than the share of expenditure in farm. Only around 44.0 per cent of the loan amount was utilised for productive purpose and the rest (66.0 per cent) was utilised for non-productive purposes like consumption, social function, etc. (Table 10). What it shows is that the credit flow to farmer households is more in tune with their household expenditure than farming activity. Needless to mention that this kind of borrowing, sustained over a period, will lead to high level of indebtedness (disproportionate to the level of economic activity undertaken by farmer households).

TABLE 10. PURPOSE OF LOAN TAKEN BY FARMER HOUSEHOLDS – 2003

(Per cent)

Purpose	Kerala	India
(1)	(2)	(3)
Capital expenditure in farm	11.0	30.6
Current expenditure in farm	10.4	27.8
Non-farm business	22.8	6.7
Consumption expenditure	10.2	8.8
Marriages and ceremonies	11.2	11.1
Education	1.4	0.8
Medical treatment	2.5	3.3
Other expenses	30.5	10.8
All purposes	100.0	100.0

Source: NSSO (2006b).

Assessment of Debt Burden

In the case of Kerala, the average outstanding debts of the farmers vary from Rs.33,907 to Rs.1,89,153 depending upon the surveys one uses to assess the level of debt. In the case of the most distressed farmers, the average amount could be around Rs.72,000 (Shreyas, 2006). It is reasonable to infer from the various estimates that in the case of majority of farmers, average loan liability is less than Rs.1 lakh (Table 11). The size of land of the 77 per cent of distressed people was between 10 cents to 2 acres. This shows two things. First, the level of indebtedness is definitely on the higher side. Second, even though the level of indebtedness is higher, value of their assets (mainly land) is higher than the outstanding debt.

TABLE 11. VARIOUS ESTIMATES OF OUTSTANDING LOANS OF FARMERS IN KERALA

(Rs.)

Sl.No. (1)	Details of Estimates (2)	Amount (3)
1.	Average loan outstanding per farmer household in Kerala – 2002 – NSSO (2005)	33,907
2.	Average amount of loan taken- Kerala Sasthra Sahitya Parishat (2006)	44,310
3.	Average debt of farmers who committed suicide in Wayanad District - Shreyas (2006)	72,000+
4.	Average debt of farmers who committed suicide in Wayanad District - Mohanakumar and Sharma (2006)	79,385$
5.	Average debt of farmers in Wayanad District – Kerala Agricultural University (2006)	1,89,153
6.	Average debt of farmers in Wayanad District - Kurup (2005)	36,191@
7.	Average amount of loans written off by commercial banks belonging to farmers who committed suicide (SLBC, 2007)	31,037**

+ Estimated based on a survey among 316 families of farmers who committed suicide.
$ Estimated based on a sample survey among 35 families of farmers who committed suicide.
@ Estimated based on a survey among 250 farmers.
** In respect of 240 farmers who committed suicide in the State.

The debt-asset ratio of cultivators in Kerala was relatively higher at 3.55 per cent as against the national average of 2.49 per cent. Debt-asset ratio was very high among the lowest asset holding class at 37.64 and it progressively declines when the size of assets goes up (Table 12). The severity of the indebtedness is reflected in the high debt-asset ratio among the lowest asset holding class, which may be causing suicides by farmers.

TABLE 12. DEBT-ASSET RATIO AS PER ASSET HOLDING CLASSES AS ON 30.6.2002

(Per cent)

State (1)	Less than Rs. 30,000 (2)	Rs.30,000 to Rs.1 lakh (3)	Rs. 1 to 2 lakh (4)	Rs. 2 to 4.5 lakh (5)	≥ 4.5 lakh (6)	All (7)
Kerala	37.64	9.61	5.57	5.21	3.25	3.86
India	12.23	6.06	3.79	2.78	2.16	2.84

Source: NSSO (2006c).

IV

FARMER SUICIDES: EXTENT AND REASONS

An unfortunate manifestation of the crisis faced by the sector was the rise in the number of farmers who committed suicide. Before examining the suicides committed by farmers in Kerala, it is important to note that suicide (general) rate in Kerala is one of the highest in India - almost three times the national average[14] (Government of Kerala, 2006b). The general suicide rate in farm distressed districts like Idduki, Wayanad and Kannur was relatively high. Further, in the case of farm distressed districts, human development index (HDI) was relatively lower, as compared to other districts. For instance, among the 14 districts, Wayanad ranked 13th and Idduki ranked 12th in the HDI (Table 13).

TABLE 13. DISTRICT-WISE DETAILS OF SUICIDES

Districts	Human Development Index, 2001 and Rank	General Suicide Rate (No. per lakh population)		No. of farmers committed suicide (Upto July 2006)
		1995	2003	
(1)	(2)	(3)	(4)	(5)
Thiruvananthapuram	0.773 (9)	17.2	33.4	9
Kollam	0.787 (6)	32.0	43.6	4
Pathanamthitta	0.795 (3)	23.5	32.9	1
Alappuzha	0.794 (4)	19.9	25.3	7
Kottayam	0.796 (2)	23.5	26.3	3
Idukki	0.754 (12)	48.6	51.7	4
Ernakulam	0.801 (1)	26.0	24.4	86
Thrissur	0.794 (5)	37.5	34.3	86
Palakkad	0.761 (10)	32.3	33.6	43
Malappuram	0.749 (14)	12.0	13.3	0
Kozhikode	0.781 (8)	22.0	23.3	19
Wayanad	0.753 (13)	44.4	46.7	332
Kannur	0.783 (7)	44.4	46.7	138
Kasaragod	0.760 (11)	24.8	24.0	72
Kerala	0.773	28.0	32.8	804

Sources: (i) Government of Kerala (2006b). (ii) Revenue Department, Government of Kerala.
Note: Figures in parentheses are the ranks of the districts in HDI.

As per the State Government's estimates (as on November 22, 2006), a total of 804 farmers committed suicide from 2004 to 2006 (upto July). Another 101 farmers committed suicide till February 2007 (informed in the State Assembly on March 26, 2007), thus taking the total number to 905. The district-wise break-up shows that in Wayanad district alone 332 farmers committed suicide (41.3 per cent), followed by Kannur (138 farmers), Idukki and Thrissur (86 each) and Kasaragod (72). Thus, suicide is mostly concentrated in six districts located in hilly and northern parts of the State (Table 13). In all these districts, the general suicide rate was also relatively high. Thus, it appears that perhaps in some cases even general suicides might have been classified as farmer suicides as most people are having some area of land and cultivating some crops, though agriculture may not be their main activity. In general,

farmers' suicide is more in those districts (especially Wayanad and Idukki) which are concentrating more on cultivation of export-oriented commercial crops.

Farmer Suicides in Wayanad District – Survey Findings

Since Wayanad district was most affected by farmer suicides, let us now examine the details of suicides in that district. A survey, conducted among the families of all the farmers who committed suicides in the district, shows that a total of 316 farmers committed suicide during the years from 2002 to 2006 (upto July) (Shreyas, 2006). During 2004 and 2005, an identical number of 82 farmers each committed suicide. During 2006 (upto July 2006) 40 farmers committed suicide and as per various reports, the trend is still continuing in the district.

The survey revealed that 56.6 per cent of the farmers who committed suicide were in the age group of 41-60 years. Another 27.0 per cent was in a still younger age group of 21 to 40 years. Religion-wise, 55.7 per cent of the deceased farmers were Hindus as against the share of that religion in the total population of district at 50.2 per cent. While Christians constituted only 22.5 per cent of the total population of the district, its share in suicide was high at 38.9 per cent. Among the various religions, the incidence of suicide was the lowest in case of Muslims (1.6 per cent as against the share in the population which stood at 26.9 per cent).

Why the incidence of suicide among the Christians was the highest and lowest in the case of Muslims? Christians are said to more enterprising and engaged in large scale cultivation, even in leased land. Further, Christians are more educated and their aspiration levels are higher and, hence, their household expenditure, especially for education of children, marriage and social functions, is said to be higher. Muslims, on the other hand, are less educated and they have the benefit of some kind of mutual support system available from their community. Further, some of their families are having members working in Gulf countries, who provided regular income.

Agricultural crisis was the reason for suicide in case of 38.9 per cent farmers who committed suicide. The other reasons are family problems (10.1 per cent), physical illness (4.1 per cent), business loss, etc. (Table 14). Around 40 per cent of the surveyed families could not pinpoint the reason for their family member committing suicide. This indicates how fragile is the family set up and communication among the members of the family. What it shows is that agricultural crisis undoubtedly is the major reason, but it is not the sole reason for taking up this drastic step. Perhaps, loss from farming could be a trigger point for already depressed persons due to other sociological and psychological reasons.[15] Mohanakumar and Sharma (2006) reported that accumulation of debt beyond the repayment capacity during a few years was the immediate provocation for resorting to the extreme step of suicide. As indicated earlier, general suicide rate in Wayanad district was higher than the State average and the HDI was one of the lowest. Hence, the issue of farmer suicides cannot be seen in isolation and it should be studied in greater detail by physiologists and sociologists.

TABLE 14. REASONS FOR COMMITTING SUICIDE

Sl.No. (1)	Reasons (2)	No. of Farmers (3)	Per cent of total (4)
1.	Agricultural crisis	122	38.9
2.	Family problems	32	10.1
3.	Physical illness	13	4.1
4.	Mental illness	3	0.9
5.	Business loss	6	1.9
6.	Others	5	1.6
7.	Not known	125	39.6
	Total	306	97.1

Source: Shreyas (2006).

Nearly 60 per cent of the farmers who committed suicide had land area below one acre. About 35 per cent of the farmers had land area between 11 to 50 per cent. Thus, majority of the farmers were marginal or small farmers. Another important finding of the survey was that nearly 42 per cent of the deceased farmers practiced cultivation in leased land. The cultivation in leased land is generally undertaken for making better earnings and also to engage themselves in some activity, as in their own lands they are cultivating perennial crops which do not need constant care and attention.

A revealing finding of the study is that nearly 64.0 per cent of the farmers had no association with any organisations, be it political, social, cultural, and religious, etc. It shows that they were leading a reclusive life without any means for discussing their problems and getting relief and support from the society. One reason for this could be that most of the farmers in Wayanad district are new settlers in the 1950s and 1960s and hence, they do not have extended family connections in the village. This is a sociological and psychological problem which needs to be addressed. Alcohol addiction was present in case of 43 per cent of the farmers who committed suicide and another 19 per cent consumed alcohol sometimes. Around 38 per cent had never consumed alcohol. Chronic illness was prevalent only in case of 18 per cent of the deceased farmers.

Among the surveyed families, nearly 70.0 per cent had taken loans from formal financial institutions and the rest (30.8 per cent) from informal agencies like money lenders. The average amount borrowed (outstanding) was Rs.72,000 per family of the person committed suicide. Half of the deceased farmers had loans below Rs.50,000. Another 30.4 per cent of the farmers had loans between Rs.50,000 to Rs.1 lakh. Thus, nearly half of the farmers had land area below 50 cent and borrowed below Rs.50,000, which can be considered as high. The farmers with loan amount above Rs.1 lakh was only 17.1 per cent.

What emerges from the above is that the problem of suicide is mostly confined to marginal farmers (below one hectare). There is a view that it is not the level of borrowings from formal financial institutions which was leading to suicides, but the borrowings from money lenders, friends and relatives, etc. In local parlance, borrowings from friends and relatives are called "Kai Vayeppa" for which usually no

interest is charged, but one has to return it at the promised date. When farmers were not able to repay the money borrowed from friends and relatives on time, it created tension and family problems as the creditors are very familiar and seen every day.

Some of the farmers resorted to sale of land to solve the problem of indebtedness. Mohanakumar and Sharma (2006) found that 24 per cent of the deceased farmers sold land which constituted 8.4 per cent of their total land. It shows that distress sale was not very high perhaps because land documents are mostly in the custody of financial institutions, who have provided loans. The farmers also resorted to other means like cutting of trees and selling them, which were providing the much needed shade to the standing crops. This, in turn, increased temperature and are said to have affected the crop production.

Besides farmers have been increasing the scale of farming in their urge to make profits without any protection or safety nets. In districts like Wayanad, farmers are increasing the scale of farming by cultivating large area under crops like ginger, vanilla, etc., without taking sufficient safeguards in case of failure of crop or crash in prices. Many farmers lost their money when the ginger crop was damaged due to flood and when price of vanilla declined drastically. Though some farmers joined the National Agricultural Insurance Scheme (NAIC), it takes long time to reach settlement of claim in case of failure of crop and, hence, timely relief was not forthcoming.

V

SUMMARY AND CONCLUDING OBSERVATIONS

The analysis presented in the paper revealed that following trade liberalisation and also due to a host of other factors like deficient rainfall, excessive concentration on export oriented perennial crops, decline in production and productivity, fall in prices, etc., the agricultural sector of the State has been facing a crisis during the last one decade, which led to rise in farmers' indebtedness and suicides. While farm distress continued, there was significant rise in loans issued by formal financial institutions in the recent period, especially short-term loans, thus, raising the indebtedness of the farmers further.

In general, farmers' suicide was reported more in those districts which are concentrating more on cultivation of export-oriented commercial crops. Agricultural crisis was one of the major reasons for suicides, but not the sole reason. Most farmers who committed suicide had land holding below one acre and average loan liability was Rs.72,000. Besides this, many farmers had private borrowings from friends and relatives. Their inability to repay these loans (liquidity) is considered as the proximate reason (trigger point) for committing suicide.

Though the agricultural sector in the State has been facing difficulties from latter part of 1990s onwards, till recently, there was no serious attempt to understand the problem and take corrective measures. To address the problem, the State

Government is providing assistance in several forms like providing cash assistance of Rs.50,000 to the family of the deceased farmer and write off their loans upto Rs.5 lakh, waiver of interest on loans taken from co-operatives and introduced One Time Settlement Scheme (OTS), etc. The state also passed a bill to solve the indebtedness of the farmers.[16] The Central Government has provided some financial assistance, taken up projects for watershed development, cattle rearing and fisheries development, imposed restrictions on import of some of the agricultural commodities like pepper, assisted coffee growers, etc. Commercial banks, on their part, took some steps like writing off loans of the deceased farmers upto Rs. 1 lakh, introduced OTS Scheme, re-scheduled loans, etc.

The impact of these measures, in terms of actual relief received by the farmers and creating conditions for continuation of agricultural operations, on the ground, was not felt in a significant way as evident from the continuation of suicides. Shreyas (2006) found that nearly 58 per cent of the families of the deceased farmers did not receive any assistance from the government. The reasons for the lack of effectiveness of the schemes could be (i) lack of critical minimum effort in redressing the problem, (ii) money spent for *ad hoc* schemes and subsidies went down the drain, (iii) schemes of banks only postponed and increased the debt burden, (iv) some of the measures like watershed development programme may need years to fructify, and (v) Some of the relief measures were announced very late and implemented very slowly (hence people are calling the packages as "paper package"). In short, the measures could not address the issue of debt burden of the farmers in its totality.

So far the problem has been addressed in a piece-meal way without a set of comprehensive and significant measures to improve the plight of the farmers. The undue concerns about the efficacy of subsidies and other forms of state support stood in the way of coming out with a comprehensive set of measures to solve the problem. Paradoxically, this happened when both the Indian economy and State economy were recording high growth. Given the spread and severity of the problem, a critical minimum effort is needed from all concerned institutions. Given the magnitude of the problem, it is worthwhile to consider (i) selective write off of legacy loans (which are very old) of marginal farmers upto Rs.50,000, (ii) introduce incentivised loan repayment scheme for small farmers, (iii) reduce interest on all agricultural loans, (iv) introduce Special Perennial Crop Term Loan Scheme, (v) encourage banks to evolve their own debt relief measures, (vi) cover perennial crops under National Agricultural Insurance Scheme, (vii) limit import of commodities, which we are exporting, (viii) increase the scope and coverage of the Price Stabilisation Fund, (ix) strengthen the agricultural extension support by State Government, (x) introduce advance estimates of production at the flowering stage of the crop and based on that initiate relief measures ex-ante, (xi) counsel farmers, and (xii) increase farmer-banker communication.

The above measures will provide some immediate relief to the farmers. In the long-run, however, it is imperative to increase the competitiveness of the sector by

undertaking comprehensive restructuring programmes for the improvement in yield levels and reduction in cost of production, so as to face the challenges of trade liberalisation. The experience of Kerala, thus, clearly shows that without adequate safety nets and restructuring programmes, if a sector is pushed to the forces of competition there will be severe consequences. After nearly a decade, the government realised the problem and, hence, recently prepared a programme for the revival of the plantation sector.

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NOTES

1.The average size of land holding in the State is only 0.27 hectare as against 1.41 hectares at the All India level.

2. Total agriculture loans issued in the State as a percentage of NSDP from agriculture was high at 55.7 per cent in 2004-05 as against 20.7 per cent at the All India level. The higher proportion of credit in the State could be on account of predominance of commercial crops (which are more credit intensive) than in the rest of the country.

3. It is reported that pepper produced in other countries are also routed to India through Sri Lanka. Though imports are allowed for processing and value addition for re-exports, imported items are reportedly used for domestic sales, which is brining down domestic prices.

4. Rainfall was deficient in the State during three consecutive years - 2002, 2003 and 2004.

5. Kerala has near monopoly in the cultivation of rubber, pepper and cardamom accounting for 92 per cent, 82 per cent and 72 per cent of national production, respectively (Joseph and Joseph, 2005). The state accounts for 45 per cent of plantation crops in the country, which provides employment for nearly 4 lakh workers. Around 20 per cent of population depends on plantation crops for their livelihood (Government of Kerala, 2003).

6. Other major reason for the shift in cropping pattern in favour of commercial crops was the labour shortage and the consequent high wages for agricultural labourers. The shift in cropping pattern was more in favour of least labour intensive crops like coconut and rubber.

7. Even then, when the price had remained very low for a number of years, some farmers removed plants like cocoa, rubber, etc. and planted more remunerative crops. Farmers in districts like Wayanad switched over from coffee to pepper, pepper to vanilla, rice to banana, banana to ginger, etc.

8. Share of agriculture in the State plan declined from around 25 per cent during the Third Plan period in the 1960's to just 8.0 per cent during the Tenth Plan.

9. Based on a survey conducted among 74 sample households in Wayanad District during 2005. Profitability is assessed based on estimation of cost A of cultivation and average price realized by the farmers.

10. Only when the sector suffered heavily, the response came much later in the form of constituting a 'Commission on WTO Concerns in Agriculture' by the State. Though the Commission made a number of recommendations, for strengthening the agriculture sector of the State to face the new challenges posed by the trade liberalisation, most of them are yet to be implemented.

11. Incidence of indebtedness in rural areas was 39 per cent in Kerala as against the national average of 27 per cent in 2002 (NSSO, 2006b).

12. Average value of assets per cultivator households in rural areas was Rs.7.78 lakh as against national average of Rs.3.73 lakh in 2002 (NSSO, 2006c).

13. Kerala has a very large network of financial institutions catering to the credit needs of the agricultural sector. In the formal sector, there are around 6,153 branches of various institutions like banks and cooperatives providing agricultural credit. Total loans issued to the agriculture and allied activities in the State, by all institutional agencies [commercial banks and all co-operatives], recorded an

average annual rate of 16.7 per cent during 2000-01 to 2004-05, which was much higher than the growth of NSDP from agriculture (at current prices) during the above period at 3.5 per cent per annum.

14. Reasons for the high prevalence of suicides in the State are high career expectations which are not fulfilled, family problems, etc. (Government of Kerala, 2006b).

15. There is a view that due to frequent use of pesticides, suicide tolerance level of the farmers has gone down. Consumption of pesticide was the method used by majority of the people who committed suicide.

16. State Government has passed The Kerala Farmers' Debt Relief Commission Bill 2006. The Bill aims at providing relief to the distressed farmers due to agricultural indebtedness. The Bill provides for the constitution of a Commission, with adjudicatory, conciliatory and negotiating functions, for the redressal of the grievances of farmers who have borrowed from state owned institutions and money lenders and to recommend appropriate measures for providing relief to farmer debtors.

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