

POST SCRIPT

In the first edition, I had tried to tell the story of the life of the Punjab over the first seven decades of the twentieth century, the central theme being the birth, and growth of the agricultural cooperative movement, its progress under the British to 1947; the dramatic changes of policies in independent India, and their results in the Punjab, leading to the Green Revolution, which unfortunately still remains largely a Punjab phenomena. The Punjab story could not be really told by itself in insolation. Cooperative policy is a national endeavour, and I traced it from Curzon to Nehru. In the execution of the policy, I placed the Punjab in comparison to the other major States. Thus only could one judge its achievements. In effect, therefore, the Book looks at the Indian Cooperative Policies and Achievements.

The possibility has now arisen to up-date it, and to look over the happenings of the eighties. An opportunity to work from 1985 to 89 as Development Commissioner, Punjab, once again gave me an inside view of the situation. As I said, in the first edition, Cooperation must in the last analysis, be judged by the economic results in terms of higher production, better returns to the farmer, and an overall improvement in rural living. It must also be judged on its success or failure, in creating a self reliant peasantry, which recognises the values of thrift, economy, credit and mutual help, and the growth of collective human endeavour for betterment, through the evolution of a positive leadership within the community.

Foodgrains production has continued to rise over the decade of the eighties. In 1961 grains (wheat and rice) production was 2 million tonnes. In 1973 it has risen to 6.3 million tonnes, and in 1991 to 19 million tonnes. When we recall that at independence, the Punjab was itself deficit by 35 thousand tonnes, the full measure of the achievements becomes obvious. The following 4 Tables, give the up dated production progress in major crops:

Table 1

PROGRESS IN PRODUCTION OF RICE

Year	All India		Punjab	
	Production (mil. tonnes)	Yield (Kg./Ha.)	Production (mil. tonnes)	Yield (Kg./Ha.)
1972-73	39.25 (-8.87)	1070 (-6.22)	1.0 (8.70)	2008(-1.76)
1975-76	48.74 (8.06)	1235 (5.14)	1.45(15.0)	2552(9.03)
1979-80	42.33 (-3.29)	1074 (-3.26)	3.04(27.41)	2606(0.53)
1982-83	47.12 (3.77)	1231 (4.87)	4.15(12.17)	3144(6.88)
1985-86	63.83 (11.82)	1552 (8.69)	5.45(10.44)	3179(0.37)
1986-87	60.56 (-5.12)	1471 (-5.22)	6.02(10.46)	3329(4.72)
1987-88	56.86 (-6.11)	1465 (-0.41)	5.44(-9.63)	3164(-4.96)
1988-89	70.49 (23.97)	1689 (15.29)	4.93(-9.38)	2770(-12.45)
1989-90	73.57 (4.37)	1745 (3.32)	6.70(35.90)	3510(26.71)
1990-91	74.59 (1.39)	1751 (0.34)	6.54(-2.39)	3229(-8.10)
1991-92	74.56 (-0.04)	1762 (0.63)	6.76(3.36)	3257(0.87)

Source: Data compiled from Agricultural Statistics at a Glance 1992.

Note: Figures in brackets indicate the annual growth rate over the previous year.

Table 2

PROGRESS IN PRODUCTION OF WHEAT

Year	All India		Punjab	
	Production (mil.tonnes)	Yield (Kg./Ha.)	Production (mil.tonnes)	Yield (Kg./Ha.)
1972-73	24.74(-6.32)	1271 (-7.90)	5.37(-4.45)	2233(-7.19)
1975-76	28.84 (5.52)	1410 (3.65)	5.79 (2.61)	2373 (2.09)
1979-80	31.83 (2.59)	1436 (0.46)	7.90 (9.11)	2797 (4.47)
1982-83	42.79 (11.48)	1816 (8.82)	9.16 (5.32)	3005 (2.48)
1985-86	47.05 (3.32)	2046 (4.22)	10.99 (6.66)	3531 (5.83)
1986-87	44.32 (-5.80)	1916 (-6.35)	9.46 (-13.92)	2966 (-16.00)
1987-88	46.17 (4.17)	2002 (4.49)	11.08 (17.12)	3540 (19.35)
1988-89	54.11 (17.20)	2244 (12.09)	11.58 (4.51)	3667 (3.59)
1989-90	49.85 (-7.87)	2121 (-5.48)	11.68 (0.86)	3593 (-2.02)
1990-91	54.52 (9.37)	2274 (7.21)	12.16 (4.11)	3715 (3.40)
1991-92	55.17 (1.19)	2353 (3.47)	12.20 (0.33)	3757 (1.13)

Source: Data compiled from Agricultural Statistics at a Glance 1992

Note: Figures in brackets indicate the annual growth rate over the previous year.

Table 3

PROGRESS IN PRODUCTION OF SUGARCANE

Year	All India		Punjab	
	Production (mil. tonnes)	Yield (Kg./Ha.)	Production (mil. tonnes)	Yield (Kg./Ha.)
1972-73	124.87 (9.95)	50933 (7.20)	4.69(16.38)	45756(16.95)
1975-76	140.60 (4.20)	50903 (-0.02)	6.13 (10.23)	53678 (5.77)
1979-80	128.83 (-2.09)	49358 (-0.76)	3.93 (-8.97)	51039 (-1.23)
1982-83	189.51 (15.70)	56441 (4.78)	6.34 (20.44)	60962 (6.48)
1985-86	170.65 (-3.32)	59889 (2.04)	5.05 (-6.78)	64744 (2.07)
1986-87	186.09 (9.05)	60444 (0.93)	6.11 (20.99)	62990 (-2.71)
1987-88	196.74 (5.72)	60006 (-0.72)	5.82 (-4.75)	54906 (-12.83)
1988-89	203.04 (3.20)	60992 (1.64)	6.00 (3.09)	61856 (12.66)
1989-90	225.57 (11.10)	65612 (7.57)	6.50 (8.33)	63107 (2.02)
1990-91	240.29 (6.53)	65269 (-0.52)	5.59 (-14.00)	55366 (-12.27)
1991-92	250.28 (4.16)	66071 (1.23)	6.92 (23.79)	63486 (14.67)

Source: Data compiled from Agricultural Statistics at a Glance 1992

Note: Figures in brackets indicate the annual growth rate over the previous year

Table 4

PROGRESS IN PRODUCTION OF COTTON

Year	All India		Punjab	
	Production (mil.bales)	Yield (Kg./Ha.)	Production (mil.bales)	Yield (Kg./Ha.)
1972-73	5.74 (-17.41)	127(-15.89)	1.08(4.85)	362(-1.63)
1975-76	5.95 (1.22)	138 (2.89)	1.24 (4.94)	362
1979-80	7.65 (7.14)	160 (3.99)	1.21 (-0.60)	326 (-2.49)
1982-83	7.53 (-0.52)	163 (0.63)	1.22 (0.28)	286 (-4.09)
1985-86	8.73 (5.31)	197 (6.95)	1.40 (4.92)	426 (16.32)
1987-88	6.38 (-13.46)	168 (-7.36)	1.86 (16.43)	509 (9.74)
1988-89	8.74 (36.99)	202 (20.24)	2.12 (13.98)	475 (-6.68)
1989-90	11.42 (30.66)	252 (24.75)	2.45 (15.57)	570 (20.00)
1990-91	9.76 (-14.54)	224 (-11.11)	1.91 (-22.04)	463 (-18.77)
1991-92	9.84 (0.82)	217 (-3.13)	2.36 (23.56)	607 (31.10)

Source: Data compiled from Agricultural Statistics at a Glance 1992

Note: Figures in brackets indicate the annual growth rate over the previous year.

The Tables show that Punjab has continued to lead the country in the production, & growth, particularly of rice, wheat and cotton. In potatoes too, production increased from 2.16 lakh tonnes in 1970-71 to 3.63 lakh tonnes in 1989-90. With these increases, particularly in wheat and rice, the State has continued to be a dominant contributor to the Central foodgrains pool. In 1990 the Punjab contributed 42% to the rice pool and 62% to the wheat one. Table 5 indicates the position.

Table 5

PROCUREMENT OF FOODGRAINS

(in lakh tonnes)

State	1978-79	1980-81	1982-83	1984-85	1986-87	1989-90
<u>RICE</u>						
Punjab	27.25	25.31	32.52	42.93	43.78	50.03
Haryana	8.87	6.72	7.06	9.77	6.78	9.57
Uttar Pradesh	8.37	5.88	5.59	11.21	10.15	15.16
Andhra Pradesh	10.42	6.97	16.9	17.89	14.71	24.90
Madhya Pradesh	3.06	3.46	1.82	3.61	4.59	3.42
Orissa	0.58	1.23	0.63	1.11	1.23	2.35
Tamilnadu	0.71	1.82	4.27	8.07	8.87	9.50
West Bengal	1.45	1.43	0.14	0.96	0.49	1.02
All India	63.34	56.09	70.47	98.63	69.02	118.60
<u>WHEAT</u>						
Punjab	42.00	37.68	51.77	61.51	44.19	67.44
Uttar Pradesh	18.83	14.96	14.45	21.74	11.52	16.01
Haryana	13.89	11.21	13.99	19.59	22.47	25.90
Rajasthan	3.01	0.10	1.78	0.37	0.62	1.35
All India	80.00	65.95	82.92	103.47	78.80	110.74

Source: Data compiled from Statistical Abstract of Punjab 1991

The Punjab revolution is the result of a combination of factors, namely, enhanced irrigation, increased and balanced fertilizers use, improved seeds, land and water management, plant protection, improved package of practices through PAU research, taken to the farmer by Agriculture Department and University Extension staff, and above all enhanced Cooperative and commercial Banks credit. The entire group of endeavours, need the vital input of administrative will, and focussed endeavour of the State Government to make them happen.

Given rich soil and plenty of sun, the limiting factor in the Punjab agriculture has been irrigation. Water remains the most vital input. At independence, Pakistan got 70 per cent of the British created irrigation; the East Punjab only 30 per cent. The Bhakhra project in the sixties, increased canal irrigation, and 54% of the net sown area, could get this water by the sixties. Unlike other Indian States, the Punjab always gave priority to electricity for agriculture in the shape of tubewells. By imposing a flat charge per horse power of the motor, agricultural usage was kept cheap. The Cooperative Land Mortgage Banks, launched major programmes of minor irrigation. By 1971 one hundred thousand tubewells had already been sunk. During the eighties this effort continued and by 1991, 8.10 lakh tubewells had been put in. Medium term cooperative credit, well focussed for productive use, has led to this phenomenal increase in farmer owned tubewells. The increase in irrigation is shown in Table 6.

Table 6

NET AREA IRRIGATED BY VARIOUS SOURCES IN PUNJAB

(000' ha.)

Year	Canal	Tubewells	Other sources	Total
1966-67	1272	982	19	2276
1970-71	1293	1591	6	2888
1979-80	1515	1997	11	3523
1983-84	1478	2207	8	3609
1984-85	1399	2164	10	3621
1985-86	1412	2229	4	3609
1986-87	1440	2263	4	3717
1987-88	1414	2287	53	3774
1988-89	1458	2306	9	3777
1989-90	1466	2422	16	3918

Source: Statistical Abstract of Punjab 1991

TUBEWELLS SINKING - PROGRESS

Year	No. of tubewells (in lakhs)	
	Put in	Electrified
1970-71	1.92	0.91
1979-80	5.85	2.62
1984-85	6.47	4.00
1986-87	6.73	4.90
1987-88	6.83	5.10
1991-92	8.10	6.00

A major programme of the Punjab Government every year, has been an ambitious target of tubewell electrification. It is due to this, that about 75 % of the tubewells already use electric power. Electrification along with a flat rate, has shown that the Punjab is the highest user of electric power for agriculture. In 1990 this stood at 43.4 per cent of the total power used by the State. This focus on creating cheap irrigation, increased the percentage of gross irrigated area to total cropped area, from 75% in 1971 to 92% in 1990, and is primarily responsible for the enhanced rice production.

Fertiliser consumption has continued to grow and the Punjab remains a leader in the country as Table 7 and 8 would show:

Table 7
CONSUMPTION OF CHEMICAL FERTILIZERS

Year	('000 Tonnes)				
	Total consumption		% of India to Punjab	Consumption of fertilizers - Kg/ha.	
	India	Punjab		India	Punjab
1974-75	2576	254	9.86	15.67	43.07
1975-76	2894	295	10.19	16.91	47.19
1976-77	3411	371	10.88	20.39	59.00
1977-78	4286	453	10.57	24.88	70.90
1978-79	5117	594	11.61	29.21	89.55
1979-80	5256	682	12.98	30.98	104.39
1980-81	5516	754	13.67	31.83	111.63
1981-82	6064	820	13.52	34.25	118.34
1982-83	6388	886	13.87	37.00	128.19
1983-84	7710	992	12.87	42.75	142.15
1984-85	8211	1048	12.76	46.67	149.38
1985-86	8474	1098	12.96	47.39	153.40
1986-87	8645	1116	12.91	48.94	154.60
1987-88	8784	1111	12.65	51.13	151.72
1988-89	11040	1197	10.84	61.30 (Estt.)	151.00
1989-90	11568	1145	9.90	64.23	154.78
1990-91	12546	1198	9.55	69.66	161.93
1991-92	12997	1178	9.06	72.17	159.26

Source: Deptt. of Agri. & Coopn., Ministry of Agriculture.

Table 8
CONSUPTION OF FERTILIZER PER HECTARE IN
IMPORTANT STATES

(in Kg.)

State	1983-84	1984-85	1985-86	1988-89	1989-90
Andhra Pradesh	71.16	76.77	69.53	111.50	126.08
Karnataka	43.69	52.97	49.82	65.32	63.62
Tamilnadu	97.31	114.51	110.83	114.24	116.26
Gujarat	49.30	49.52	41.35	61.97	66.97
Maharashtra	32.17	29.12	33.47	42.96	56.98
Haryana	61.47	63.44	70.14	108.66	114.27
U.P.	66.49	65.28	79.83	87.44	85.63
West Bengal	52.70	57.93	58.36	75.78	80.10
Punjab	130.41	151.50	158.82	152.46	156.32
All India	44.66	47.56	50.61	63.86	66.91

Source: Data compiled from Statistical Abstract of Punjab, 1991.

Towards the end of the 70s an effort was made to push up use of phosphatic fertilizers, and to improve the balance between N, P & K. Subsidies were given, and a major extension campaign launched. Today the Punjab maintains a reasonable balance of N, P and K. The current ratio is 5.2:2:0.1.

As I said in the past, the Green Revolution is basically a revolution of inputs. Given the new wheat and rice seeds, more fertilizers and more water, both of which need greater credit at reasonable rates, would accomplish the job. The Land Development Banks continued to grow with membership increasing from 0.136 millions in 1971 to 0.459 in 1990. Share capital during the same period went up from Rs.41 million to Rs.269 million. Table 9 shows the progress of advances.

Table 9

PROGRESS OF ADVANCES BY PLDB IN PUNJAB

Year	Advances made (Rs. in million)
1970-71	195.7
1972-73	162.7
1974-75	160.0
1976-77	279.9
1978-79	224.6
1982-83	456.6
1984-85	449.5
1986-87	656.6
1988-89	800.1

Source: Cooperative movement in Punjab: PCU

The Punjab would have absorbed even more investment credit, but for deliberate Government policy, which ensured that States with outstandings exceeding Rs.60 per hectare, were allocated lesser funds. With this, allocations for the Punjab, Andhra Pradesh, Tamil Nadu, Maharashtra, Gujarat and Haryana were reduced, presumably to enhance the allocation for less developed States. More important than total allocation, is the use to which the loans are put, as Table 10 shows:

Table 10

PURPOSE WISE ADVANCES MADE BY CLDB PUNJAB

(Rs. in lakhs)

Purpose	1982-83	1984-85	1986-87	1989-90
Tubewells	170.57	631.71	952..19	654.4
Tractors	2185.09	1311.40	935.69	1225.7
Land Levelling	239.91	284.24	348.41	306.2

(Table 10 contd.)		(Rs. in lakhs)		
Purpose	1982-83	1984-85	1986-87	1989-90
Gardening	108.66	135.98	224.23	245.69
Conservation	138.08	150.64	266.18	90.90
Implements	605.35	516.86	911.64	592.90
Poultry	229.79	213.81	264.40	408.20
Dairy	431.18	588.81	1293.40	2185.00
Purchase of land	84.20	157.97	145.60	6.62
Land redumption	159.11	89.64	256.00	89.94
Others	112.11	430.74	219.92	789.39

Source: Statistical Abstract of Punjab 1991 and Punjab State Land Development Bank Statistics.

The Punjab has maintained its policy of productive use of these loans. The emphasis continues to be on tubewells and tractors. However, as Development Commissioner, I reduced the loans somewhat for tubewells and tractors, which were beginning to go to very small holdings, and for poor returns. I pushed increases for land levelling and improvements, poultry, dairy and horticulture, which would particularly benefit the small farmers. It has not been possible to give loans for non-farm activities, such as village and cottage industries, which have an intimate linkage with farming. A policy change is needed, to allow this, for a more total harmonious development of the village community.

In the first edition I had complimented the Punjab Land Development Banks (LDBs) for being free from the disease of over dues. But I did mention that "a tiny cloud is beginning to appear on their sunny horizon". Unfortunately the cloud has begun to pour, as Table 11 shows:

Table 11

POSITION OF OVERDUES IN CENTRAL LAND DEVELOPMENT BANKS
(Rs. in million)

State	1972-73	1978-79	1983-84	1989-90	1991-92
Andhra Pradesh	16.23	84.98	374.69	919.20	1089.19
Gujarat	82.58	468.29	224.70	348.63	320.84
Karnataka	16.76	115.20	135.56	570.39	1200.60
Madhya Pradesh	10.00	48.71	153.68	1090.00	869.25
Maharashtra	210.18	131.89	246.32	838.71	1041.49
Punjab	2.87	4.50	85.63	436.00	768.96
Tamilnadu	3.74	435.57	196.33	876.08	710.63
U.P.	21.82	118.07	174.49	1301.03	846.56
All India	407.15	1662.60	1999.32	10957.69	9365.32

Source: Statistical statements - National Bank for Agriculture & Rural Development (NABARD).

The problem of recovery of over dues which has lately become a crisis, partly due to State encouragement, is affecting Punjab Banks as much as the others.

The short-term cooperative credit structure has also continued to progress. The membership of the Primary Credit Societies (PACS), has gone up from 2.5 million to 3.8 million, and the paid up share capital from Rs.611 million to Rs.3399 million, over the same period. The number of Central Cooperative Bank branches, has gone up from 200 in the 70s to 643 in 1990. Growth of deposits, is a good indicator of health and progress. Table 12 shows the current situation.

Table 12

TREND OF DEPOSITS MOBILISATION BY
COOPERATIVE BANKS IN PUNJAB

(Rs. in millions)

Year	Apex Bank	C. C. Bank
1971	2.3	4.6
1982	NA	1585.0
1984	1192.0	1847.0
1985	1455.0	2283.0
1986	1568.0	2736.0
1987	1388.0	3267.0
1988	2469.0	4358.0
1989	2842.0	4574.0
1990	3306.0	5411.0

Source: Cooperative Movement in Punjab 1990 - PCU.

The expansion of short-term crop loans has been remarkable, from Rs.471.6 million in 1973 to Rs.3631.3 million during 1991. In the past, a major part of the advance, had always been in chemical fertilizers, and explains the increase in their usage, as Table 13 shows:

Table 13

SHORT TERM LOANS ADVANCED BY COOPERATIVES IN PUNJAB

(Rs. in millions)

Year (1)	Cash (2)	Kind (3)	Total (4)	%age of Col.3 & 4 (5)
1973	80.60	391.0	471.60	83.01
1974	63.40	471.0	540.40	88.26
1975	49.20	514.7	563.90	91.27
1976	55.50	604.7	660.20	91.57
1977	25.40	621.70	647.10	96.07
1978	46.70	721.00	767.70	93.91

(Table 13 contd.)

Year (1)	Cash (2)	Kind (3)	Total (4)	%age of Col.3 & 4 (5)
1979	301.70	992.00	1293.70	76.72
1980	626.00	1208.80	1834.80	65.91
1981	733.50	1439.30	2172.80	66.24
1982	958.20	1923.40	2881.60	66.74
1983	973.10	2244.70	3217.80	69.75
1984	1078.80	1959.90	3038.70	64.49
1985	1239.60	2184.90	4424.50	63.80
1986	1159.70	2021.50	3182.20	63.54
1987	1399.80	1759.20	3157.00	55.66
1988	1859.80	1755.30	3615.10	48.55
1989	2491.00	2545.30	5036.40	50.53
1990	1820.80	1810.50	3631.30	49.85

Source: Cooperative Credit Statistics, Punjab State Cooperative Bank.

The performance of the Primary Credit Societies of the State, as compared to the All India average, is much better as Table 14 shows:

Table 14

PERFORMANCE OF PACS IN ALL INDIA AND PUNJAB

Indicators	All India				Punjab			
	1978-79	83-84	87-88	89-90	78-79	83-84	87-88	89-90
Average per society Share capital (Rs. in '000)	49.2	79.6	110.7	133.0	77.1	106.5	135.4	167.1
Deposits (Rs. in '000)	22.5	47.7	89.7	145.3	78.4	66.9	103.8	145.9
Loan advanced (Rs. in '000)	151.6	237.6	409.3	542.1	383.8	696.1	844.8	1360.7

(Table 14 contd.)

Indicators	All India				Punjab			
	1978-79	83-84	87-88	89-90	78-79	83-84	87-88	89-90
<u>Average per member</u>								
Share capital (in Rs.)	88.7	109.4	114.2	144.6	150.7	257.8	294.5	296.9
Deposits (in Rs.)	41.1	65.7	92.5	158.0	152.8	161.9	225.6	259.1
Loan advanced (in Rs.)	276.9	393.8	422.0	589.5	749.8	1701.0	1836.7	2417.2

Source: RBI/NABARD statistics.

The short-term credit structure too, as I had warned, is threatened by the growing menace of rising overdues. Table 15 shows the dismal picture.

Table 15

POSITION OF OVERDUES AT THE LEVEL OF PRIMARY COOPERATIVE AGRICULTURAL CREDIT/SERVICE SOCIETIES

(Rs. in lakhs)

S.No.	Item	1983	1985	1987	1989	1990
1.	Loan outstanding - Total	18537.2	24262.2	29759.5	40262.0	46228.0
2.	Amount of overdues total	5610.9	10294.3	13578.0	12858.0	16944.0
3.	Amount of total recovery	24809.2	37669.4	25521.3	17914.0	39424.0
4.	%age of overdues to outstanding for short term/medium term together	30.3	42.4	45.6	NA	NA
5.	%age of overdues to demand from ST/MT together	18.4	21.5	34.7	41.8	30.1
6.	%age of recoveries (total demand)	81.6	78.5	65.3	58.2	69.9
7.	Total demand	30420.1	47963.7	39099.3	30772.0	56368.0

Source: (1) Statistical Statements Relating to the Cooperative Movement in India (Part I) published by NABARD.

(2) Important Items of Data Credit and Non-Credit Cooperative Societies published by NABARD.

Poor recoveries and rising overdues, has become a major national issue, which will determine the future health and growth of the cooperative and commercial bank credit structure. The British concept of credit through the thrift of the members, essentially a movement of community help for each other, had given way after 1947, to a government dominated movement, which made the cooperatives, an administrative structure, for funnelling large resources into agricultural development. This led to its own kind of problems, and I recall in the 70s, two major States, attempting to write off loans. This was strongly argued against, by the RBI and the Govt. of India, as it might damage the ethos of repayment, created over 60 years of effort. The policy then had been, not to write off, but to convert into cheaper long-term loans. The 1989 decision to write off all loans by the cooperative or commercial banks, of less than Rs.10,000 for all categories of farmers, may have its social benefits, but was a major setback, for the climate of repayment, which prevailed in the past. A total of Rs.7714 crores were so written off. In the case of the cooperative banks, the burden of this relief, was born half and half by the Govt. of India and the States concerned. Cooperation, which was defined by Sir Malcolm Darling, as morality applied to business, and a gospel of self-sufficiency through self-help, has lost much of its conceptual meaning. Government then announced that the loan waiver, was a one time phenomenon only. Unfortunately, recipients are aware, that no Government can bind future ones, and a precedent once created, can be pressed for again. In spite of these difficulties, the Punjab cooperatives have continued, to perform better than most others, as the following figures show:

Table 16

Performance of Primary Agricultural Credit Cooperatives
(Position as on 30.6.90)

(Rs. Millions)

States	No. of Societies	Member-ship ('000)	Paid up share capital	Short-term loan advanced	% of recovery
Andhra Pradesh	4637	92.99	531.7	394.7	37.7
Bihar	7057	60.72	266.0	1691.5	55.6
Gujarat	6828	21.94	1084.0	3094.2	63.8
Haryana	2350	15.92	420.8	3656.9	65.8
Karnataka	4623	37.68	693.7	2768.9	44.2
Maharashtra	18593	78.00	2900.0	5550.0	50.0
Punjab	3537	19.91	591.1	4679.4	69.9
Tamil Nadu	4618	59.39	580.7	3442.2	59.6
Uttar Pradesh	8597	120.79	1155.6	3696.7	25.9

Sources: NABARD Statistical Statement.

In spite of Punjab's unfortunate internal problems, it was possible for me, as Development Commissioner, to push up recoveries. The Punjab farmers were receptive to the argument, that credit is a cycle of borrowing and repayment, which properly used, leads to greader production and income.

The Punjab MARKFED has continued to grow as figures in Table 17 shows:

Table 17

BUSINESS TURN OVER OF MARKFED

(Rs. in millions)

Year	Agricultural produce marketed	Fertilizer distributed	Sale of consumer goods	Total States	Profit(+)/ Loss(-)
1977-78	1209.56	824.49	115.15	2155.32	(-) 56.07
1980-81	2045.77	891.91	216.84	3268.38	(-) 47.49
1982-83	2359.31	1321.66	267.26	3894.65	(-) 84.96
1983-84	432.32	1001.86	575.43	4029.29	(-) 55.24
1984-85	1993.30	1931.72	396.12	4630.49	(-) 72.47
1985-86	3441.49	1781.28	410.28	5960.47	(+) 12.00
1986-87	4078.66	1272.96	499.03	6090.00	(+)104.16
1987-88	2663.23	908.00	436.71	4171.46	(+)156.33
1988-89	3177.53	1034.22	637.43	5134.82	(+)223.68
1989-90	3863.36	1374.02	706.75	6335.72	(+)301.11

Source: Cooperative Movement in Punjab 1989-90 - PCU

It has wide ranging activities in the supply of agricultural inputs to the farmers, and processing and export of produce. Rice mills, cotton ginners, oil plant, Vanaspati plant and vegetable processing plant are some of its major industries. MARKFED's links with the Primary Marketing Societies (PCMSs), once very strong, are now very fragile. It extends little support to the 113 PCMSs, and the federal concept has been weakened. It has opened its own branches, which compete with the business of the PCMSs. The cooperative concept of a link with the members at the village levels, through the PCMSs is missing. I had urged, that what is required in the Punjab, is a genuine cooperative marketing structure, intent on organising the farmers

for their own protection, rather than on one kind or the other of agency work for the Government. This has not happened nor is it now likely to.

MARKFED has continued to grow. Its share capital has risen from Rs.69 million in 1981 to Rs.279 million in 1990. Of this, Government has contributed 89 per cent. This too is evidence of the tenuous link between the primary marketing societies and the growers. While its business has grown, the Federation incurred losses continuously from 1976 to 85. However, from 1986 on, it has turned the corner and earned profits totalling Rs.797 million during the next four years. Its business continues to be dominated, by input distribution to the farmers, and procurement of grain, on behalf of the Central pool. It has managed to export 300 tonnes of Basmati rice in 1991, and occasionally some cotton. My efforts as Development Commissioner during 1985-89, to use this powerful agency, for stronger support to farmers in marketing, in the areas of grapes, other fruits, honey, and processed fruits and vegetables, have yielded only limited success. Its weakest link, is the lack of a professional marketing promotion wing. I believe that it has not realised its potential, in the support of the farmers, in agro-processing and marketing. It remains, largely a Government dominated organisation, doing its major business in input distribution and grain purchase, for the Central pool.

In 1963, when I was Joint-Registrar, Sugarmills, the Punjab was in the process, of setting up the first four sugar mills of 1250 tonnes per day crushing under Chief Minister Kairon. In 1980 we still had the same four mills. When I took over in 1985 one of my major

programmes, was to try to diversify and balance Punjab agriculture. While much praised during the 60s, 70s and early 80s, the Punjab in my view, had become not the leading agriculture State of India, as much as the leading grain growing State only. I felt that for both economic and ecological reasons, an effort must be made to restore to the Punjab, a balanced agricultural profile. Accordingly a Committee under Dr. S. S. Johl, was appointed to make suggestions for the diversification of Punjab's agriculture. Among the thrust areas considered, was an immediate increase in sugarcane growing and processing. Surprisingly, the Punjab was a net importer of sugar, even for its own use, from Maharashtra and elsewhere, when it was in a position to do the opposite.

A major programme was pushed through for new sugar mills. In 1986 two 1250 TCD cooperative mills, were commissioned in Patiala and Fazilka. In 1987 the Budhewal (Ludhiana) Cooperative Mills of 1250 TCD was commissioned, and by 1988 similar plants were commissioned at Tarn Tarn and Nakodar. At the same time, work was started on four new 2500 TCD Cooperative Sugar Mills at Jagraon (Ludhiana), Budhlada (Bhatinda), Ajnala (Amritsar) and Faridkot which were commissioned by 1990. The capacity of the old Morinda Cooperative mill, was also enhanced from 2250 TCD to 2500 TCD; the old Nawanshahr mill from 1250 TCD to 2500 TCD; of old Batala mill from 1250 TCD to 1500 TCD, and of Zira mill from 1250 TCD to 2500 TCD. The total crushing capacity of the Cooperative sugar mills, which was only 5500 TCD in 1985, has been enhanced by this massive effort, to 28350 TCD by 1991. Tables 18, 19 and 20 give the details of membership, crushing and recovery

results of the Punjab Sugar Mills.

TABLE 18

MEMBERSHIP OF PUNJAB SUGAR MILLS AS ON 31.3.1992

	Growers	Non-growers	Coop. Insti-tutions	Punjab Govt.	Others	Total
Bhogpur	22380	627	2028	1	-	25036
Batala	28451	360	772	1	8	29592
Morinda	30029	89	647	1	-	30766
N/Shahr	14592	1625	447	1	-	16665
Gurdaspur	11980	-	1	1	-	11982
Zira	2456	-	11	1	-	2468
Patiala	6654	-	667	1	-	7322
Fazilka	8191	-	196	1	-	8388
Budhewal	14049	311	476	1	-	14837
Nakodar	4690	-	388	1	-	5079
Taran Taran	2309	-	189	1	-	2499
Jagraon	3668	-	162	1	-	3831
Budhlada	4573	-	186	1	-	4760
Ajnala	1345	-	28	1	-	1374
Faridkot	3952	-	285	1	-	4238

Source: Punjab Cooperative Federation of Sugar Mills.

(Table 18 contd.)

PAID UP SHARE CAPITAL

(Figures in lakhs)

	Growers	Non-growers	Coop. Insti-tutions	Punjab Govt.	Others	Total
Bhogpur	39.42	0.69	7.87	125.50	-	173.48
Batala	130.36	0.48	3.56	83.43	0.08	217.91
Morinda	230.64	0.04	6.09	144.37	-	381.14
N/Shahr	129.91	5.25	5.29	42.50	-	182.95
Gurdaspur	177.28	-	132.00	123.00	-	432.28
Zira	40.56	-	157.10	123.00	-	320.66
Patiala	36.73	-	65.83	345.44	14.92	462.92
Fazilka	87.05	-	17.22	418.69	-	522.96
Budhewal	81.03	1.72	39.36	453.93	-	576.04
Nakodar	31.45	-	55.33	453.93	-	540.71
Taran Taran	21.21	-	28.76	482.94	-	532.91
Jagraon	17.31	-	16.16	1065.15	-	1098.62
Budhlada	16.82	-	7.29	1046.70	-	1070.81
Ajnala	6.06	-	12.23	1099.38	-	1117.67
Faridkot	30.30	-	6.88	1131.88	-	1169.06

Source: Punjab Cooperative Federation of Sugar Mills.

TABLE 19

CANE CRUSHED BY PUNJAB COOPERATIVES IN LAST 12 YEARS

(Figures in tonnes)

	1980-81	1985-86	1987-88	1989-90	1991-92
Bhogpur	59220	156949	161803	175261	152871
Batala	114860	159552	107436	171168	217858
Morinda	137450	304901	353201	295045	416828
N/Shahr	77480	215444	245270	346363	455638
Gurdaspur	48610	230777	265609	307117	315261
Zira	14210	176575	194765	84469	180496
Patiala	-	42526	118539	186409	188006
Fazilka	-	3823	147470	158840	232905
Taran Taran	-	-	48301	155882	145158
Budhewal	-	-	173112	186491	280873
Nakodar	-	-	63649	239837	234295
Jagraon	-	-	-	-	191614
Budhlada	-	-	-	-	80006
Ajnala	-	-	-	-	132129
Faridkot	-	-	-	-	88485

TABLE 20

RECOVERY PERCENTAGE OF COOPERATIVE SUGAR MILLS IN INDIA

	1979-80	1982-83	1984-85	1987-88	1989-90	1990-91
Punjab	10.32	10.76	10.76	10.19	9.30	8.77
Andhra Pradesh	8.15	8.69	8.53	8.42	9.43	9.10
Gujarat	10.58	9.57	10.84	10.20	10.96	10.91
Haryana	8.97	10.20	9.25	9.81	9.70	9.43
Karnataka	10.18	10.23	10.22	10.30	10.41	10.25
Maharashtra	10.65	10.97	11.13	10.85	10.72	10.77
Tamilnadu	9.40	9.11	9.71	9.29	9.31	8.95
Uttar Pradesh	9.79	8.91	9.17	9.30	8.82	8.77

Today the Punjab Cooperative Sugar Federation, is one of the major players on the national sugar industry scene. The sugarcane recovery, which in the 60s and 70s, rarely touched 8 per cent, has, due to intensive sugarcane research work by PAU, gone as high as 10.76 per cent, and compares favourably with Maharashtra or any other climatically more fortunate States. While this may be a small achievement, there are concerns for the future. COJ 64 cane variety, has been largely responsible for the recovery results. Unfortunately PAU and the Department, have lost the thrust, which is necessary to move on to new varieties, and to maintain and even improve this recovery level. As Table 20

shows, there is a disturbing fall in recovery level already, from the high of 10.76% in 1985, to below 9% in 1991.

Having created a large crushing capacity, it is necessary for the Punjab, to do adequate work, not only on cane development, but cane production. Else, these mills will show financial sickness in the future. It is also a matter worth considering, whether the Punjab should push on for more and more sugar mills. Cane is a heavy irrigation crop, and too much of sugarcane, could put a strain on the water resources, as it has done in Maharashtra, and also on the ecological systems. It will be necessary also, to maintain a professional and stable management of the Sugar Federation, and its large number of industrial units. Its large economic resources are bound to attract undesirable interference.

Cooperative Dairying was another area chosen for diversification of Punjab agriculture. The State with its near total irrigation, can supply all the needed fodder. The Punjab buffalo is the best in the world. The State has already managed over the past decades, to convert 50 per cent of its one million cattle, to hybrid Holstein Friesian, Jersey and Swiss Brown stocks. Given adequate attractions of income, the Punjab farmer is fully capable of taking to dairying, as an economic activity.

The MILKFED structure in 1991 consisted of 265 lakh dairy farming families, who are members of 4642 village level milk producers' societies. These are affiliated to 11 District Cooperative Milk Units, which then link to the state MILKFED. In 1991 they procured 144 million Kgs. of milk. Table 21 gives the MILKFED's performance:

Performance of Milk Supply Cooperatives in Punjab

Years	No. of Societies	No. of Members (in '000)	Milk Procured (in '000 kg. per day)
1980-81	2431	90.00	72.00
1983-84	3038	115.89	320.90
1986-87	4561	251.39	418.53
1987-88	4882	268.38	362.79
1988-89	5045	279.99	373.26
1989-90	5217	287.14	399.93
1990-91	5726	304.32	394.24

Source: Dairy Development Division of Deptt. of Agriculture & Cooperation and National Dairy Development Board (NDDB).

The Federation provides a variety of services. These include veterinary cover, fodder, seed, cattle feed supply, and a strong cooperative education programme at the milkshed level. Unlike MARKFED, the SUGARFED and MILKFED have direct links with farmers, due to purchase of cane in one case, and milk in the other, at the village level, along with supply of services and inputs, to the members. It is my belief, that the MILKFED could achieve a major expansion, and be a vehicle, for enhancing the income of small peasants, and the balancing of agriculture. Its full potential has not been realised. Unlike Gujarat and most other States, richly endowed as the Punjab is, in land, irrigation, cattle and buffalo breeds, it is in a position to do commercial dairying. I have seen 15 acre farm owners, using part of the land to grow fodder, and maintain the finest hybrid cattle, along with some other crop and horticulture growing. The cattle are kept in well built sheds, complete with fans for the summer heat. Unfortunately, over centralisation of national

dairy policy, programmes and financing, and a continuous effort to maintain low prices for milk, due to concerns for the consumer, have not given the flexibility of operations, which could see the Punjab dairy industry, take off to near European levels.

I had described in the first edition, the drastic change in the cooperative laws in post independence India, towards Government supervision and control. In the decades since independence, cooperative laws had been invariably amended, to transfer more and more powers, to the Registrars and the State Governments, allowing them to compulsorily amend the bye-laws, appoint Chairmen and Managing Directors, veto resolutions of elected Directors, appoint Administrators for almost unlimited periods, and issue directives on almost anything. While the cooperative movement too has shown its limitations in democratic functioning, the centralisation and bureaucratic controls, have been contrary to Nehru's vision. If the belief that elected members, cannot be trusted with power in cooperatives, is accepted, its implications for democracy as a whole, would be most worrying. Nehru had asserted again and again, that democracy rests on the three-legged stool, of the village cooperative society, the village panchayat, and the village school. If these roots are weakened, the structure, and the overall democratic fabric, is bound to suffer. In the early years of independence, some of the most famous leaders, had graduated from the cooperative democratic schools, upwards to national service. This stream, has slowly dried away, due to perpetually superceded societies, at the village level.

In 1987, we felt that it was necessary to make an effort to reverse the process. Accordingly, a Committee was appointed under my chairmanship, to review the Punjab Cooperative Societies Act 1961. The only two officials on the Committee of 12, were the Chairman and

the RCS, who was the Secretary. The rest were members of the State Assembly, and the other well known cooperative leaders of the State. A unanimous report was quickly hammered out, and submitted to the Punjab Governor, providing a new draft of a Cooperative Act, for consideration of a future elected Government. The main features of the amended draft are:

- (a) The institution of government nominees, on boards of management, has been restricted to only large cooperatives, wherein government has contributed at least Rs.50 lakhs as share capital, or guaranteed loans of an equal amount. In such cases also government nominees, would be limited to three or one-third of the total members of the managing committee. Only government servants, would be nominated, and they would not have rights, either to seek election within the board, or to vote in such election matters. This has been done as, over the years, governments had begun to nominate individuals, who lacked support, on to major federations, and push them to the chairmen's position.
- (b) In the general body of a society, government would have the right henceforth to send only one representative, irrespective of the number of shares it held. This nominee, would have no right to vote in election matters.
- (c) Supercession of societies and appointment of administrators, has been going on for as long as a decade or more, in some State in the country. The Punjab movement too has suffered. It is, therefore, proposed that administrators, would be appointed only in exceptional cases, for a period not exceeding one year, under any circumstances. Within this period elections must be held.

- (d) In the existing Act, there is a provision to appoint an administrator, if the term of the Committee, has expired, and elections not held - often due to government's lack of interest. Under the revised provisions, one-third of the members of the apex and central societies, would retire every year, thus maintaining continuity of elected management.
- (e) The provision for appointment of chairmen by government has been deleted.
- (f) The provision which debar an individual from becoming a member of the committees of more than two primary societies has also been dropped.
- (g) The provision which gives powers to arrest a loan defaulter, has been amended, to provide that power to arrest, may be invoked only in case of defaulters, whose loans are overdue for more than three years.
- (h) A new provision has been provided, to debar members of the State Assembly and of the National Parliament, from becoming members of the cooperative societies. This seeks to reduce political control, and also allow new leadership to grow from below.

These and many more provisions have been put in the draft in an attempt to reduce the control of Government and to once again encourage the growth of true democratic cooperative leadership. The report could have been even more wide-ranging, but in a large group of members with multiple background, a unanimous reasonable compromise had to be reached. It still remains the strongest proposal for democratisation of the movement in the country. Copies were sent all over

the country in the hope that it will excite debate and effort. We recognised that this may not be enacted immediately even in the Punjab, but we rushed to complete our job, and to leave a detailed blueprint in the hope that future democratic structures, will push for its adoption. Fortunately, after the recent Punjab elections, this has begun to happen, and the new Government is actively examining the suggestions.

Since 1974, a comparison of the two Punjabs, Indian and Pakistani, has been one of my interests. In the first edition, I had pointed out to the large disparity between the productivity of the Punjab (I) and the Punjab (P). In 1991 winter, I had an opportunity to make a short visit to Lahore. A drive to Nankana Saheb, only confirmed my past assumptions. The quality of wheat fields was no where comparable to the Punjab (I). There also appear to be considerable problems of salinity and water logging. Tubewells and tractors were few and far between. In the Indian Punjab, every one of the 10,000 villages has electricity and tractors are common. Such a scene is not repeated in the West. While Lahore is a major city and prospers, the villages are largely historical mud dwellings. In our Punjab most village houses are brick built with considerable amenities.

The partitioned Punjab (P) retained 62% of the area, 55% of the population, and 69% of the income. 70% of the irrigation too went to Punjab (P). Today the geographical area of Punjab (P) is 170 lakh ha., and of Punjab (I) 50 lakh ha. The population of Punjab (P) is 60 million and of Punjab (I) 20 million. In the Punjab (I) 84% of the total land is cultivated, 4.5% under forest, .74% culturable land, and 10% is not available for cultivation. In Punjab (P) the figures are 71%, 3%, 10%, and 16%. The intensity of cropping in Punjab (P) is 134% compared to 176 % in Punjab (I).

It is interesting to see that on the basis of area and population, the pressure of population on land in Punjab (P) is 3.87 persons per ha., as against 4.01 persons per ha. in Punjab (I). But when the crop area is considered, the pressure of population on land in Punjab (P) is 60 % higher compared to Punjab (I). In Punjab (I) 94 % of the gross cropped area is irrigated against 85 % in Punjab (P).

Due to flood irrigation over a long period in this century, both suffer from water logging and salinity. In Punjab (I), in the fifties and the early sixties, the Chief Minister, Sardar Kairon launched a major drainage programme and saved the State to a large extent. In Punjab (P), the issue has never been tackled with that kind of zeal and, therefore, 37 lakh ha. constituting 22 % of geographical area is suffering from the problem of salinity and water logging. Of this, 12.4 % of the area is severely affected by salinity. In Punjab (I), at present 9.7 % of the geographical area is classified as water logged and saline, and 2.4 % suffers from severe salinity. The Punjab (I) continues to push a major programme of land reclamation, through the Cooperative Department, and the State Land Reclamation Corporation. Loans for tubewells and subsidised gypsum, have helped to reclaim large parts of the affected area.

The gap in mechanisation between the two Punjabs continues to the detriment of Punjab (P). In Punjab (P) there are 154,000 tractors, 4670 harvester combines and 283,000 tubewells. In Punjab (I) there are 2,75,000 tractors, half of India's total, 5,000 combines and about 8,00,000 tubewells. In addition to this there are a large number of mechanical threshers and other machinery. Punjab (P) has 13 tractors per 1,000 hectares to Punjab (I)'s 65; one combine for 2533 hectares of cultivated area to Punjab (I)'s one for 850 hectares; Punjab (P) has 24 tubewells per 1,000 hectares, while there are 182 in Punjab (I).

In fertiliser application too, Punjab (P) uses 95 kgs. per ha. against a 155 kgs. in Punjab (I). What are the reasons for this contrast? It is true that Punjab (P) has considerable areas of poor quality ground water, but the Punjab (I) also has the problem, though to a lesser extent. The major reason in my view, as I said, is the lack of cheap credit through cooperatives. Punjab (I) as I have described owes its major input success to rapidly expanded cheap credit. In Punjab (P), while the cooperative credit structure had been neglected, after independence, no worthwhile substitute has been created. In Punjab (I), since the early seventies a policy of cheap electric power to rural areas, has encouraged tubewells irrigation development, and today owned tubewells, account for more than 50 % of the total irrigation of the State. In Punjab (P) this has not happened.

The reason in my view, remains the same that I indicated in 1974. In post independent India, a democratic structure, ensured as a matter of policy, rapidly expending cheap credit through cooperatives to agriculture. This ensured the creation in the Punjab, of tubewells, land improvements, greater use of fertilisers and overall increasing creation of infrastructure for agriculture. It was supported by parallel efforts in the creation of well organised and supervised market yards, currently about a thousand, and the provision of 30,000 Km of metalled link roads, to the 10,000 villages. During my tenure as Development Commissioner in 1985-89, these were machine metalled, and resurfaced in their entirety. A 100% electrification of all villages, with cheap power was provided in the early 70s. Primary education in the villages has been pushed up and literacy in 1991 stands at 57.14%. In Punjab (P) such a democratic thrust towards the amelioration of the large rural population, has not been available to the same extent. Due to land

reforms as already discribed, the Punjab (I) is a land of self cultivating peasant proprietors. The Punjab (P) in spite of small efforts by President Ayub Khan and Prime Minister Bhutto, is largely land lord dominated. This explains to me the prosperity of Lahore, and the contrasting tenant inhabited mud villages in the country side. 'The Raunaq' of the Punjab (I) village, was not visible to me in the Lahore country side. In Punjab (P) link roads, rural electrification and education have not received the same attention.

Table 22 below gives the current comparative picture:

	Punjab (P)	Punjab (I)
Area (M.Ha.)	17.0	5.0
Population (millions)	60	20
Tractors (per 1000 ha)	13	65
Tubewells "	24	182
Nutrients "	95	155
<u>Yield (kg. per ha.)</u>		
Cotton	2041	1710
Wheat	1840	3593
Rice	1127	3510
Sugarcane	3735	6312

Thus Punjab (I) is far ahead in grain production. Some facts, partially explain this poor performance of Punjab (P). Cotton and basmati are major foreign exchange earners for Pakistan, and are harvested too late, to allow optimum wheat sowing days. While a considerable part of the wheat is rainfed, tubewell irrigation is limited and canal water is inadequate, and not supplied on time. Poorer yield of sugarcane in Punjab (P),

can be partly attributed to the drier climate, but not entirely. Possibly the research effort is lacking. In cotton, Punjab (P) has certainly excelled Punjab (I). The yields in Punjab (P) are higher, due to better evolved high yielding varieties, and an excellent Pest Control Management effort. Punjab (P) also excels in basmati production. Its basmati-385, is qualitatively and quantitatively, superior to the Indian varieties. Pakistani Punjab has, therefore, managed to create a major basmati export situation, which has not been possible for a number of reasons, in the Indian Punjab. Pakistani kinno is of much better quality, shape, size and jucier. It is clear, that the Indian Punjab has to learn much from the other Punjab in cotton, basmati and kinno production.

The situation, therefore, still remains, of an overall better productive performance in the Indian Punjab. Another factor, that should cause concern is that of population increase, at more than 3.1% in Punjab (P) against 2 % in Punjab (I). There does not seem to be in Punjab (P), a worthwhile population control effort, whereas Punjab (I), though not able to compare with the achievements of Kerala, has made fair progress in reducing the birth rate. I also noticed, that the widening industrial growth of Lahore and other cities, is causing considerable ecological damage to rich agricultural lands. It is my impression, that while in recent years, India and the Indian Punjab, have created strong legal and policy focuses, on pollution control, similar worries and efforts, do not appear to be as much visible on the other side of the border. Both Punjabs continue to face challenges of pollution control, and growing ecological imbalances. Both need to enhance production, balance agriculture, and create more and more jobs off the land, by well designed, and supported agro-industry programmes based on their fecund lands. There is need for both of them, to learn from each others' policies, as well as mistakes.

To go back to the story of the Indian Punjab, the turmoil of the eighties has caused much suffering to the rural people. While production has continued to grow, in spite of handicaps, it could have been much better. In the 90s the Indian Punjab faces the challenge of producing more and more from its limited land area. It must do so without doing long-term ecological damage to its only resource of land and water. It must severely limit population in order to increase per capita incomes. To achieve these sophisticated programmes and balances, it appears to me that above all the Indian Punjab must push up literacy from 57% to the Kerala achievement of more than 90% within this century. Without education, further improvements in agriculture and rural productivity will not be easy, nor will it be possible without relevant technical education to move people off the land into the industrial sector. Population control and literacy appears to me to be major programmes even for better agriculture. I am also convinced that population control too is very much dependent on literacy. For all these economic development programmes to prosper, the Punjab must strengthen and enhance its democratic management structure from the village upwards to the State headquarters. The people of the Punjab in their inherent nature are fiercely democratic, and equality oriented. This impulse, above all, must be constantly nurtured in order to give full play to their true development possibilities.

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