

10 COMMUNITY DISASTER PREVENTION PLAN (CDPP) FOR CHISAPANI (AGRICULTURE DEVELOPMENT PLAN)

According to the farmers of Chisapani, potato was introduced in early 1970's and cauliflower in early 1980's. After the introduction of those two cash crops, the living standard of the people has improved dramatically. As a result migration has been completely stopped. Around 1994 carrot cultivation was introduced but it has not been successful because of two reasons, one is irrigation and the other is marketing. Among different crops the most profitable was cauliflower cultivation.

Although the production of some cash crops have been suggested, they are not new and the farmers of the Chisapani are practising these crops. The systematisation of production, marketing, will certainly increase their income. silkworm rearing is proposed as a means of supplementary income and erosion control.

10.1 Promotion of Cash Crops Production

Cauliflower

Cauliflower was found to be the most profitable crop, having 1.97 benefit cost ratio (refer Table 9.4.1). By introducing adequate cultural practices productivity can be increased. Timely supply of chemical fertiliser, pesticide, nutrients and technical support will generate more income and will elevate the living standard of the people. According to the farmers they are cultivating early variety of cauliflower and are getting more profit by exporting it from August to October when it is off season in other parts of the country. Per hectare yield of cauliflower is comparatively higher than other parts of the study areas. Still there is a great potentiality to increase the productivity. According to the Vegetable Development Division Ministry of Agriculture potential yield of cauliflower is 1,500 kg per ropani. As mentioned before, most of the land in Chisapani area is non irrigated and if the water resources around the area properly utilised cauliflower can be produced twice a year.

Farmers in Chisapani reported that they were more interested in the production of cauliflower than any other crop, simply for the fact that it gave them higher return. Considering the positive impact on the standard of living of the farmers, it is assumed that cauliflower lack any alternative in the area.

Potato

Most of the farmers produce potato in Chisapani. Their living standard improved as a result of cash crop production. Production of cereals like maize is declining in this area as the land traditionally being utilised for cereals is being replaced by potato and cauliflower cultivation. Some farmers sale potato seeds in high prices because they can preserve it, owing to its high altitude and cool climate. The cultivation of potato would be more profitable if they sale it at the time of the sowing season instead of the harvesting season. For this purpose, the farmers need technical support from the related agencies.

Carrot

Some farmers are cultivating carrot in small volume and they have a difficulty in marketing. The price of carrot is high in Kathmandu in August to February and if the

farmers produce more quantity and manage it to export to Kathmandu in big volumes it will generate more income.

10.2 Construction of Potato Seed Preservation (Storage) House.

In harvesting season farmers sale it about Rs. 6 per kilo. But in the sowing season price is more than Rs 10 per kg. Because of cool climate farmers preserve the seed for the next season by themselves, but they can not store more potato seed for marketing purposes due to the lack of space. If a potato seed preservation house is constructed and farmers store their production there and sale them at the time of sowing season, there income from potato will increase by more than 65%.

10.3 Silkworm Rearing

The farmers can generate more income from their marginal land by planting mulberry and rearing silkworms than cultivating traditional cereal crops. Mulberry trees can be grown in marginal lands, steep slopes edges of the terraces and road side etc. According to the Eighth five year plan, degraded forest land with potentialities for sericulture will be more available through the assistance of forestry development programme to farmers or farmers' group on lease. The government farms will take care of the production and supply arrangements for silk worm eggs.

As mentioned before good quality of cocoon can be sold in Rs 150 per kg and Rs 3,000 can be generated from one ropani of Land. A main characteristic of sericulture is that it creates jobs for women. The increase in job opportunity will improve the social status of women.

Mulberry trees planted in marginal land, slopes, ridges etc., help to conserve the environment and control soil erosion. Mulberry leaves can be used as fodder and its branches can be used as fire wood.

10.4 Plantation of Medicinal Herbs

Some medicinal herbs are found around Chisapani . Those herbs have been used as a source of drugs for treating human ailments traditionally. Some local 'Baidhyas' (indigenous herb practitioners) are using some herbs, and occasionally some brokers from India, Kathmandu and other areas of the country buy the herbs from the local people. The main medicinal herbs described here are found in Phedigaon area as well. Planting those species systematically on marginal land, community forest area, ridges of the terraces etc. will generate more income. The following species which are found wildy in Chisapani area are proposed .

Among those herbs the following 5 items (from No 1 to 5) are described in the chapter of Phedigaon (Chapter 6).

- (1) Chiratio (Swertia Chirayita)
- (2) Jatamansi (Nardostachys)
- (3) Sugandhawal (Valeriana Wallichii)
- (4) Pakhanved (Bergenia Ciliate)
- (5) Indrayani (Indereni, Bitter Apple)

In addition to the above mentioned medicinal herbs the following species may be considered for Chisapani.

Peppermint (Mentha Piperita)

This species can be grown in Chisapani area. This is a medium sized shrub that reaches to a height of up to 50 cm. Leaf stalks are more or less absent. Peppermint is the trade name of the drug obtained from this plant. It is used for the treatment of flatulence, vomiting, diarrhoea, and nausea etc. Medicinal herbs processing companies will buy the product and the estimated net-profit from one ropani of land is about Rs 700.

10.5 Formation of Farmers' organisation

The objective of formation of farmers' organisation is to increase income from vegetable farming and marketing. It also will help them to initiate savings. Presently, individual farmers deal with small volumes, working in group will enhance their bargaining power and confidence in production.

Activities of the organisation are as the same as proposed for Phedigaon/Phatbazar . In Chisapani there should be an additional committee which manages potato seed store. Within farmers' organisation three committees are proposed. The structure of the organisation will be as shown in the chart. This organisation should work in the co-ordination with the organisation of Phedigaon/Phatbazar. The organisation of the Chisapani area may use the collection centre in Phatbazar.

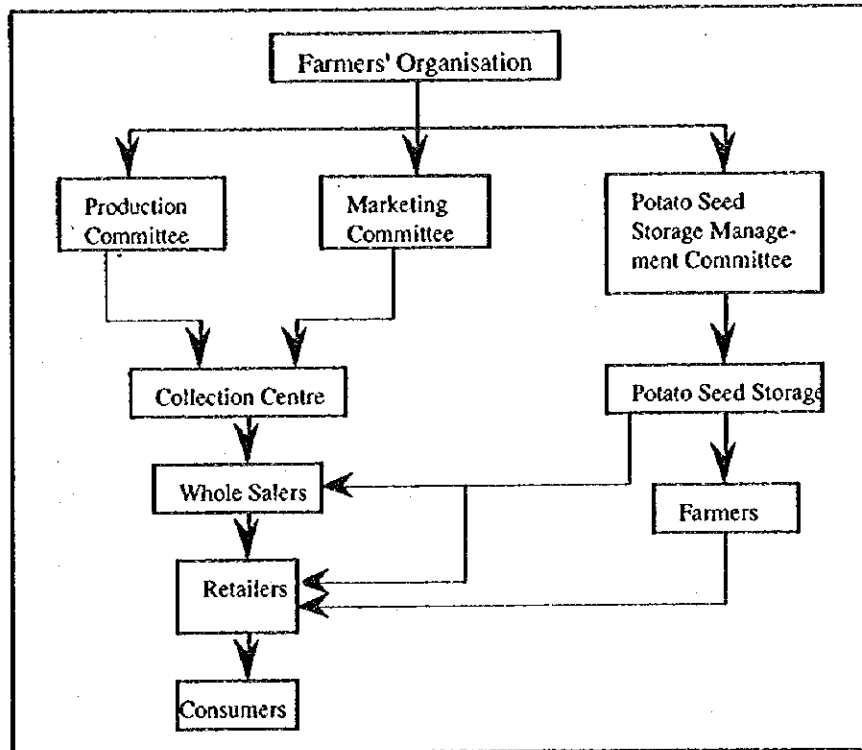


Table : 1.2.1 Population by Ecological Zones

Year	Unit	Mountain	Hill	Mountain & Hill	Terai	Total	Growth Rate
1911	No.	-	-	-	-	5,638,749	-
1920	No.	-	-	-	-	5,573,788	-0.13
1930	No.	-	-	-	-	5,532,574	-0.07
1941	No.	-	-	-	-	6,283,649	1.16
1952/54	No.	-	-	5,349,988 (64.8)	2,906,637 (35.2)	8,256,625	2.30
1961	No.	-	-	5,991,297 (63.6)	3,421,699 (36.4)	9,412,996	1.65
1971	No.	1,138,610 (9.9)	6,071,407 (52.5)	7,210,017 (62.4)	4,345,966 (37.6)	11,555,983	2.07
1981	No.	1,302,896 (8.7)	7,163,115 (47.7)	8,466,011 (56.4)	6,556,828 (43.6)	15,022,839	2.66
1991	No.	1,443,130 (7.8)	8,419,889 (45.5)	9,863,019 (53.3)	8,628,078 (46.7)	18,491,097	2.10

Note : The figure in the parenthesis indicates the percentage
Source : Statistical Pocket Book, CBS, 1994

Table : 1.2.2 Percentage Distribution of Population and Land in Different Development Regions and Administrative Zones, Census Year 1971-1991

Development Regions/ Administrative Zones	Land Area Sq/Km. 1981	Percentage of Land	Percentage of Population		
			1971	1981	1991
Nepal	147,181	100.00	100.00	100.00	100.00
A. Eastern Dev. Region	28,456	19.33	24.84	24.69	24.05
Mechi Zone	8,196	5.57	5.35	6.21	6.05
Kosi Zone	9,669	6.57	9.81	9.48	9.35
Sagarmatha Zone	10,591	7.19	9.68	9.00	8.65
B. Central Dev. Region	27,410	18.62	33.45	32.68	33.44
Janakpur Zone	9,669	6.57	10.95	11.24	11.15
Bagmati Zone	9,428	6.40	12.95	11.86	12.17
Narayani Zone	8,313	5.65	9.55	9.58	10.12
C. Western Dev. Region	29,368	19.97	21.17	20.83	20.39
Gandaki Zone	12,275	8.34	7.83	7.37	6.85
Dhawalagiri Zone	8,148	5.54	3.25	3.02	2.65
Lumbini Zone	8,945	6.09	10.09	10.44	10.89
D. Mid-west. Dev. Region	42,378	28.79	12.88	13.02	13.04
Rapti Zone	10,482	7.12	6.11	5.84	5.66
Bheri Zone	10,545	7.16	4.98	5.57	5.97
Karnali Zone	21,351	14.51	1.79	1.61	1.41
E. Far-West. Dev Region	19,539	13.28	8.29	8.78	9.08
Seti Zone	12,550	8.53	5.17	5.29	5.49
Mahakali Zone	6,989	4.75	3.12	3.49	3.59

Source: Central Bureau of Statistics - Population Census 1971, Vol. 1, Table 1

- Population Census 1981, Vol. I, Part 1, Table 3
- Statistical Pocket Book 1984
- Statistical Year Book of Nepal, 1995

Table : 1.3.1 In-Migration and Out-Migration Among Ecological-Development Regions, Nepal, 1991

Sub-regions	In-Migrants No.	Percentage	Out-Migrants No.	Percentage	Net-migration (% of total volume of migration)
Eastern Mountain	12,439	0.88	94,568	6.67	-5.79
Central Mountain	11,333	0.80	52,560	3.71	-2.91
Western Mountain	2,584	0.18	5,140	0.36	-0.18
Mid-West. Mountain	4,931	0.35	12,711	0.90	-0.55
Far-west Mountain	8,464	0.60	36,427	2.57	-1.97
Total	39,751	2.81	201,406	14.21	-11.40
Eastern Hill	40,433	2.85	315,666	22.26	-19.41
Central Hill	157,435	11.10	155,298	10.95	0.15
Western Hill	30,452	2.15	306,821	21.63	-19.48
Mid-West. Hill	22,447	1.58	124,130	8.75	-7.17
Far-west Hill	16,349	1.15	119,124	8.40	-7.25
Total	267,116	18.83	1,021,039	71.99	-53.16
Eastern Terai	362,486	25.56	74,639	5.26	20.30
Central Terai	235,313	16.59	71,636	5.05	11.54
Western Terai	197,915	13.96	15,210	1.07	12.89
Mid-West. Terai	128,232	9.04	28,151	1.98	7.06
Far-west Terai	187,393	13.21	6,125	0.43	12.78
Total	1,111,339	78.36	195,761	13.79	64.57
Total	1,418,206	100	1,418,206	100	

Source : Population Monograph of Nepal, CBS, 1995

Table : 1.4.1 Percentage of Economically Active Population by Agricultural and Non- Agricultural sector

Year	Agriculture	Manufacturing	Service
1950	93.8	2.1	4.5
1960	94.4	2.1	3.5
1971	94.4	2.2	3.4
1981	91.4	3.1	3.2
1991	81.1	4.2	12.3

Source: Nepal Agriculture Sector Strategy study, ADB/HMG, 1982
Statistical Year Book of Nepal, CBS, 1995

Table : 1.4.2 Economically Active Population 10 years of Age and Over by Major Occupation for Development Region and Ecological Zone, 1991

	Total	Prof/Tech workers	Administrative workers	Clerical workers	Sales workers	Service workers	Farm, fish workers	Prod. labour workers	Other	Occupation not stated	Farm, fish workers
Eastern Development Region	1,728,866	32,001	2,973	15,766	56,377	158,573	1,358,135	63,237	36,967	4,837	78.56%
Hill zone sub-total	660,041	10,591	588	4,850	8,882	12,610	601,883	12,678	6,660	1,299	91.19%
Mountain zone sub-total	172,980	3,353	137	1,244	2,234	3,986	157,623	2,854	1,179	370	91.12%
Terai zone sub-total	895,845	18,057	2,248	9,672	45,261	141,977	598,629	47,705	29,128	3,168	66.82%
Eastern Development Region	2,331,767	47,860	14,189	37,882	97,810	165,150	1,734,667	150,361	76,534	7,386	74.39%
Hill zone sub-total	1,122,451	26,982	11,787	26,037	55,898	62,680	787,787	99,980	47,238	4,134	70.18%
Mountain zone sub-total	252,695	2,949	174	1,304	3,594	3,674	231,950	5,853	2,676	521	91.79%
Terai zone sub-total	956,621	17,929	2,228	10,541	38,318	98,796	714,930	44,528	26,620	2,731	74.73%
Eastern Development Region	1,511,698	28,499	2,636	11,093	37,229	67,543	1,314,180	45,255	19,818	3,445	86.93%
Hill zone sub-total	1,020,179	21,058	1,648	6,524	21,453	25,642	920,338	27,873	11,659	1,984	90.21%
Mountain zone sub-total	10,939	524	64	410	297	1,402	7,632	528	58	24	69.77%
Terai zone sub-total	480,580	6,917	924	4,159	15,479	40,499	386,210	16,854	8,101	1,437	80.36%
Eastern Development Region	1,023,458	13,221	1,398	7,758	16,995	41,026	898,315	32,014	10,308	2,459	87.77%
Hill zone sub-total	556,691	6,355	438	2,938	4,985	9,674	513,786	13,062	4,439	1,014	92.29%
Mountain zone sub-total	147,483	2,075	98	1,333	966	2,062	137,960	2,266	489	234	93.54%
Terai zone sub-total	319,284	4,791	862	3,487	11,044	29,290	246,569	16,686	5,380	1,211	77.23%
Eastern Development Region	743,797	9,072	782	5,198	10,085	21,447	664,768	19,619	10,101	2,743	89.37%
Hill zone sub-total	347,548	3,536	237	1,987	2,456	5,013	323,453	6,177	3,671	1,018	93.07%
Mountain zone sub-total	170,969	2,569	116	1,077	1,165	2,519	157,040	5,151	1,109	223	91.85%
Terai zone sub-total	225,280	2,967	429	2,134	6,464	13,915	184,275	8,291	5,321	1,502	81.80%
Nepal	7,339,586	130,653	21,978	77,697	218,496	453,739	5,970,065	310,486	153,728	20,870	81.34%
Hill zone total	3,706,910	68,522	14,698	42,336	93,674	115,619	3,147,247	159,770	73,667	9,449	84.90%
Mountain zone total	755,066	11,470	589	5,368	8,256	13,643	692,205	16,652	5,511	1,372	91.67%
Terai zone total	2,877,610	50,661	6,691	29,993	116,566	324,477	2,130,613	134,064	74,550	10,049	74.04%

Source : Statistical Yearbook of Nepal CBS, 1993

Table : 1.5.1 Real Gross Domestic Products (in 1984/85 Prices)

(Million Rupees)

Year	Agriculture	Share (%)	Non-Agriculture	Share (%)	Total	Share (%)
1984/85	22,761	51.2	21,680	48.8	44,441	100.0
1985/86	23,376	50.3	23,136	49.7	46,512	100.0
1986/87	23,213	48.9	24,214	51.1	47,427	100.0
1987/88	24,735	48.7	26,026	51.3	50,761	100.0
1988/89	26,260	49.1	27,258	50.9	53,518	100.0
1989/90	27,774	49.5	28,377	50.5	56,151	100.0
1990/91	28,372	47.5	31,396	52.5	59,768	100.0
1991/92	28,070	44.9	34,461	55.1	62,531	100.0
1992/93	27,896	43.2	36,690	56.8	64,586	100.0
1993/94	29,910	43.2	39,372	56.8	69,282	100.0

Source: Economic Survey 1994/95, MoF, 1995;
Statistical Year Book of Nepal, CBS, 1995

Table : 1.5.2 Gross Domestic Product by Industrial Origin 1974/75, 1984/85 and 1993/94

(Rs. Million)

Industry	1974/75		1984/85		1993/94	
	Amount	Share (%)	Amount	Share (%)	Amount	Share (%)
1. Agriculture Forestry and Fisheries	11,550	69.79	24,171	53.68	81,621	43.79
2. Mining and quarrying	22	0.13	140	0.31	1,092	0.60
3. Manufacturing	664	4.01	2,511	5.58	17,227	9.24
4. Electricity, Gas and Water	34	0.21	196	0.44	1,778	0.95
5. Construction	583	3.52	3,583	7.96	19,621	10.54
6. Trade, Restaurant and Hotels	540	3.26	1,837	4.08	8,806	4.72
7. Transport, Communication and Storages	690	4.17	2,764	6.14	12,625	6.77
8. Financial and Real Estate	1,095	6.62	3,987	8.85	18,122	9.72
9. Community and Social Services	873	5.27	3,691	8.20	17,023	9.13
Total GDP at factor Cost	16,051	96.98	42,880	95.24	177,915	95.46
Net Indirect taxes	635	3.84	2,571	5.71	12,930	6.94
Imputed Bank Service Charges	136	0.82	425	0.95	4,473	2.40
GDP At Producers Prices	16,550	100.00	45,026	100.00	186,372	100.00

Source: Statistical year book, CBS, 1995.
Economic survey 1994/95, MoF, 1995

Table : 2.1.1 Land Use Patterns

	Types	Land (In Hectare)	Percentage
1	Agriculture	3,954,915	26.62%
	Cultivated	2,968,017	19.98%
	Uncultivated	986,898	6.64%
2	Forest	6,306,460	42.45%
	Forest Land	5,618,052	37.82%
	Shrubs	688,408	4.63%
3	Pastures	1,757,345	11.83%
4	Others	2,836,324	19.09%
	Snow Capped Areas	506,317	3.41%
	Rocky Surface	1,966,092	13.24%
	Stone/Sand	322,428	2.17%
	Steep Terrain	5,575	0.04%
	Barren Land	13,414	0.09%
	Lake/Pond	11,584	0.08%
	Urban Area	10,914	0.07%
	Total	14,855,044	100.00%

Source: NPC, The Eighth Plan (1992 – 1997)

Table : 2.2.1 Percentage Distribution of Land holding in Nepal (1961-1991)

Land holding groups	1961		1971		1981		1991	
	Percentage of households	Percentage of cultivated land	Percentage of household	Percentage of cultivated land	Percentage of households	Percentage of cultivated land	Percentage of households	Percentage of cultivated land
Less than 1 ha	72.00	23.60	63.50	10.50	66.60	17.30	69.40	30.50
1 to 3 ha	19.20	27.20	19.50	18.00	24.50	34.50	25.80	43.00
3 to 5 ha	4.80	15.00	7.10	12.00	5.50	19.30	3.30	12.60
5 to 10 ha	2.90	16.50	5.80	21.00	2.70	15.80	1.20	8.10
above 10 ha	1.20	17.80	4.10	38.50	0.70	13.10	0.30	5.80

Source: Rural Landlessness in Nepal, IDS, 1985
 Statistical Pocket Book, CBS.1994

Table : 2.4.1 Change in Area and Production of Cereal Crops Between 1978/79 and 1993/94

	Paddy		Wheat		Maize		Millet		Barley	
	Area	Production	Area	Production	Area	Production	Area	Production	Area	Production
Mountain										
1978/79	26,780	56,900	13,340	12,410	42,190	70,300	16,510	18,940	9,230	7,900
1993/94	46,610	93,700	40,550	43,410	51,920	84,930	31,360	33,605	10,330	10,010
Growth (%)	74.05%	64.67%	203.97%	249.80%	23.06%	20.81%	89.90%	77.40%	11.92%	26.71%
Hills										
1978/79	203,100	479,400	115,480	142,620	281,210	462,840	87,460	96,600	9,980	8,790
1993/94	344,320	721,900	236,380	297,420	526,810	812,140	177,127	195,652	17,140	16,370
Growth (%)	69.53%	50.58%	104.69%	108.54%	87.34%	75.47%	102.50%	102.50%	71.74%	86.23%
Terai										
1978/79	1,032,770	1,802,980	227,360	260,220	130,740	209,450	19,370	17,600	6,950	6,000
1993/94	1,063,120	2,677,200	343,120	531,730	172,420	312,800	16,720	16,700	2,960	2,630
Growth (%)	2.94%	48.49%	50.91%	104.34%	31.88%	49.34%	-13.70%	-5.10%	-57.41%	-56.17%
Nepal										
1978/79	1,262,650	2,339,280	356,180	415,250	454,140	742,590	123,340	133,140	26,160	22,690
1993/94	1,453,850	3,492,800	620,050	872,560	751,150	1,209,870	225,207	245,957	30,430	29,010
Growth (%)	15.14%	49.31%	74.08%	110.12%	65.40%	62.93%	82.60%	84.70%	16.32%	27.85%

Source : Statistical Year Book of Nepal. CBS, 1989 and 1995

Table : 2.4.2 Ecological Regionwise Area, Production and Yield of Paddy (1978/79 - 1993/94)

(ha., M.T.)

Year	Mountain			Hills			Terai			Nepal		
	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield
1978/79	26,780	56,900	2.12	203,100	479,400	2.36	1,032,770	1,802,980	1.75	1,262,650	2,339,280	1.85
1979/80	26,500	50,960	1.92	202,120	409,750	2.03	1,025,620	1,599,220	1.56	1,254,240	2,059,930	1.64
1980/81	24,680	47,290	1.92	210,190	458,220	2.18	1,040,650	1,958,800	1.88	1,275,520	2,464,310	1.93
1981/82	25,650	50,060	1.95	237,600	548,960	2.31	1,033,280	1,961,060	1.90	1,296,530	2,560,080	1.97
1982/83	24,910	44,330	1.78	249,310	490,860	1.97	990,620	1,297,430	1.31	1,264,840	1,832,620	1.45
1983/84	25,150	46,050	1.83	259,120	561,270	2.17	1,049,930	2,149,660	2.05	1,334,200	2,756,980	2.07
1984/85	31,010	53,310	1.72	295,720	594,460	2.01	1,050,130	2,061,660	1.96	1,376,860	2,709,430	1.97
1985/86	34,540	61,150	1.77	310,220	587,850	1.89	1,046,280	2,155,490	2.06	1,391,040	2,804,490	2.02
1986/87	35,420	59,770	1.69	313,910	581,170	1.85	984,030	1,731,080	1.76	1,333,360	2,372,020	1.78
1987/88	35,500	65,300	1.84	337,890	667,390	1.98	1,049,900	2,249,090	2.14	1,423,290	2,981,780	2.09
1988/89	38,200	73,940	1.94	345,790	764,630	2.21	1,066,380	2,444,640	2.29	1,450,370	3,283,210	2.26
1989/90	41,350	82,510	2.00	335,410	771,690	2.30	1,056,090	2,535,470	2.40	1,432,850	3,389,670	2.37
1990/91	39,900	84,160	2.11	346,110	823,200	2.38	1,069,160	2,594,800	2.43	1,455,170	3,502,160	2.41
1991/92	40,430	79,940	1.98	341,380	764,840	2.24	1,030,000	2,377,760	2.31	1,411,810	3,222,540	2.28
1992/93	39,970	72,780	1.82	337,320	671,500	1.99	884,550	1,840,620	2.08	1,261,840	2,584,900	2.05
1993/94	46,410	93,700	2.02	344,320	721,900	2.10	1,063,120	2,677,200	2.52	1,453,850	3,492,800	2.40

Source: Statistical Year Book of Nepal, CBS, 1989 and 1995 ;
Statistical Information on Nepalese Agriculture, MoA, 1993/94

Table : 2.4.3 Ecological Regionwise Area, Production and Yield of Wheat (1978/79 - 1993/94)

(ha., M.T.)

Year	Mountain			Hills			Terai			Nepal		
	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield
1978/79	13,340	12,410	0.93	115,480	142,620	1.24	227,360	260,220	1.14	356,180	415,250	1.17
1979/80	13,340	13,080	0.98	116,190	140,230	1.21	237,330	286,680	1.21	366,860	439,990	1.20
1980/81	15,000	15,020	1.00	126,200	144,420	1.14	250,590	317,750	1.27	391,790	477,190	1.22
1981/82	16,410	17,040	1.04	134,420	177,860	1.32	249,060	331,030	1.33	399,890	525,930	1.32
1982/83	15,410	16,980	1.10	152,850	195,190	1.28	315,560	444,460	1.41	483,820	656,630	1.36
1983/84	19,100	19,630	1.03	150,940	197,760	1.31	301,710	416,310	1.38	471,750	633,700	1.34
1984/85	23,120	21,950	0.95	163,260	176,060	1.08	265,510	335,710	1.26	451,890	533,720	1.18
1985/86	34,930	29,260	0.84	189,060	206,450	1.09	258,830	362,290	1.40	482,820	598,000	1.24
1986/87	35,760	31,820	0.89	207,010	238,860	1.15	292,760	430,360	1.47	535,530	701,040	1.31
1987/88	40,610	38,740	0.95	242,860	272,110	1.12	313,280	433,750	1.38	596,750	744,600	1.25
1988/89	42,020	43,140	1.03	243,010	293,060	1.21	314,260	493,850	1.57	599,290	830,050	1.39
1989/90	42,340	44,360	1.05	244,990	303,480	1.24	316,910	507,120	1.60	604,240	854,960	1.41
1990/91	42,210	44,870	1.06	242,270	301,180	1.24	308,260	490,020	1.59	592,740	836,070	1.41
1991/92	42,100	44,550	1.06	239,980	289,320	1.21	289,180	445,290	1.54	571,260	779,160	1.36
1992/93	39,200	42,010	1.07	241,140	290,270	1.20	333,640	432,720	1.30	613,980	765,000	1.25
1993/94	40,550	43,410	1.07	236,380	297,420	1.26	343,120	531,730	1.55	620,050	872,560	1.41

Source: Statistical Year Book of Nepal, CBS, 1989 and 1995 ;

Statistical Information on Nepalese Agriculture, MoA, 1993/94

Table: 2.4.4 Ecological Regionwise Area, Production and Yield of Maize (1978/79- 1993/94)

(ha., M.T.)

Year	Mountain			Hills			Terai			Nepal		
	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield
1978/79	42,190	70,300	1.67	281,210	462,840	1.65	130,740	209,450	1.60	454,140	742,590	1.64
1979/80	41,320	56,300	1.36	269,740	358,660	1.33	121,280	160,950	1.33	432,340	575,910	1.33
1980/81	42,910	68,390	1.59	282,890	453,510	1.60	131,650	221,040	1.68	457,450	742,940	1.62
1981/82	41,130	63,910	1.55	303,730	473,870	1.56	130,630	213,740	1.64	475,490	751,520	1.58
1982/83	39,260	56,730	1.44	323,060	434,230	1.34	148,450	227,280	1.53	510,770	718,240	1.41
1983/84	41,200	58,770	1.43	317,450	437,470	1.38	145,120	264,870	1.83	503,770	761,110	1.51
1984/85	47,350	74,910	1.58	402,180	541,140	1.35	129,190	203,800	1.58	578,720	819,850	1.42
1985/86	47,780	70,170	1.47	432,650	591,940	1.37	134,250	211,640	1.58	614,680	873,750	1.42
1986/87	49,170	73,770	1.50	439,200	579,430	1.32	138,340	215,150	1.56	626,710	868,350	1.39
1987/88	53,380	72,310	1.35	482,940	621,480	1.29	137,490	207,710	1.51	673,810	901,500	1.34
1988/89	52,190	73,400	1.41	522,030	749,180	1.44	147,650	249,030	1.69	721,870	1,071,610	1.48
1989/90	59,740	83,970	1.41	532,790	827,380	1.55	158,640	289,640	1.83	751,170	1,200,990	1.60
1990/91	58,550	88,300	1.51	537,320	846,290	1.58	161,840	296,360	1.83	757,710	1,230,950	1.62
1991/92	57,700	86,690	1.50	535,800	826,000	1.54	160,590	292,020	1.82	754,090	1,204,710	1.60
1992/93	59,950	90,370	1.51	546,880	874,690	1.60	168,400	325,440	1.93	775,230	1,290,500	1.66
1993/94	51,920	84,930	1.64	526,810	812,140	1.54	172,420	312,800	1.81	751,150	1,209,870	1.61

Source: Statistical Year Book of Nepal, CBS, 1989 and 1995 ;
Statistical Information on Nepalese Agriculture, MoA, 1993/94

Table : 2.4.5 Ecological Regionwise Area, Production and Yield of Millet (1978/79/1993/94)

(ha., M.T.)

Year	Mountain			Hills			Terai			Nepal		
	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield
1978/79	16,510	18,940	1.15	87,460	96,600	1.10	19,370	17,600	0.91	123,340	133,140	1.08
1979/80	16,510	17,130	1.04	86,940	84,800	0.98	19,070	17,410	0.91	122,520	119,340	0.97
1980/81	16,120	15,890	0.99	85,450	87,880	1.03	19,200	18,120	0.94	120,770	121,890	1.01
1981/82	15,510	15,300	0.99	86,790	88,220	1.02	18,870	18,130	0.96	121,170	121,650	1.00
1982/83	16,050	16,130	1.00	92,120	87,100	0.95	20,130	17,840	0.89	128,300	121,070	0.94
1983/84	16,580	16,170	0.98	90,560	83,110	0.92	16,150	15,940	0.99	123,290	115,220	0.93
1984/85	21,710	20,380	0.94	101,370	93,470	0.92	11,740	10,450	0.89	134,820	124,300	0.92
1985/86	22,570	21,230	0.94	116,370	105,240	0.90	12,790	10,470	0.82	151,730	136,940	0.90
1986/87	21,930	20,740	0.95	117,670	106,700	0.91	12,100	10,190	0.84	151,700	137,630	0.91
1987/88	23,510	21,840	0.93	127,920	115,930	0.91	14,990	12,400	0.83	166,420	150,170	0.90
1988/89	22,310	21,620	0.97	148,520	149,500	1.01	11,730	11,970	1.02	182,560	183,090	1.00
1989/90	24,480	26,920	1.10	156,790	184,670	1.18	12,220	13,190	1.08	193,490	224,780	1.16
1990/91	25,080	27,750	1.11	160,780	189,950	1.18	12,710	13,930	1.10	198,570	231,630	1.17
1991/92	25,120	27,470	1.09	160,100	187,450	1.17	13,020	13,740	1.06	198,240	228,660	1.15
1992/93	25,740	28,090	1.09	162,370	194,320	1.20	13,660	14,340	1.05	201,770	236,750	1.17
1993/94	31,360	33,605	1.07	177,127	195,652	1.10	16,720	16,700	1.00	225,207	245,957	1.09

Source: Statistical Year Book of Nepal, CBS, 1989 and 1995 ;
Statistical Information on Nepalese Agriculture, MoA, 1993/94

Table : 2.4.6 Ecological Regionwise Area, Production and Yield of Barley (1978/79-1993/94)

Year	Mountain						Hills			Terai			Nepal		
	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield
	(ha., M.T.)														
1978/79	9,230	7,900	0.86	9,980	8,790	0.88	6,950	6,000	0.86	26,160	22,690	0.87			
1979/80	9,220	8,050	0.87	9,940	9,070	0.91	6,860	6,170	0.90	26,020	23,290	0.90			
1980/81	9,220	8,460	0.92	10,620	9,140	0.86	6,840	5,430	0.79	26,680	23,030	0.86			
1981/82	9,620	8,520	0.89	10,810	9,310	0.86	6,590	5,490	0.83	27,020	25,320	0.86			
1982/83	8,980	7,860	0.88	10,940	9,410	0.86	4,420	3,890	0.88	24,340	21,160	0.87			
1983/84	8,580	7,540	0.88	11,310	10,000	0.88	4,940	4,730	0.96	24,830	22,270	0.90			
1984/85	9,980	8,590	0.86	13,350	11,250	0.84	4,240	3,800	0.90	27,570	23,640	0.86			
1985/86	10,760	8,680	0.81	15,120	11,730	0.78	3,440	3,020	0.88	29,320	23,430	0.80			
1986/87	10,650	9,000	0.85	14,350	12,390	0.86	3,560	3,280	0.92	28,560	24,670	0.86			
1987/88	11,130	9,380	0.84	14,500	11,860	0.82	3,480	3,050	0.88	29,110	24,290	0.83			
1988/89	10,810	10,060	0.93	15,290	13,790	0.90	3,350	3,160	0.94	29,450	27,010	0.92			
1989/90	10,850	10,120	0.93	15,310	14,030	0.92	3,380	3,240	0.96	29,540	27,390	0.93			
1990/91	10,830	10,150	0.94	15,390	14,410	0.94	3,390	3,280	0.97	29,610	27,840	0.94			
1991/92	10,910	10,190	0.93	15,410	14,250	0.92	3,340	3,200	0.96	29,660	27,640	0.93			
1992/93	11,090	10,390	0.94	15,430	14,360	0.93	3,160	2,860	0.91	29,680	27,610	0.93			
1993/94	10,330	10,010	0.97	17,140	16,370	0.96	2,960	2,630	0.89	30,430	29,010	0.95			

Source: Statistical Year Book of Nepal, CBS, 1989 and 1995 ;
Statistical Information on Nepalese Agriculture, MoA, 1993/94

Table: 2.4.7 Per Hectare Yield of Major Crops in Some Selected Countries (1989 - 1991)

Country	Paddy	Wheat	Maize	Millet	Barley
Bangladesh	1.96	1.7	NA	NA	NA
India	1.73	2.2	1.5	0.63	1.6
Pakistan	1.55	1.84	1.4	0.4	0.84
Sri Lanka	2.94	NA	1.42	0.73	NA
Japan	4.9	3.4	NA	NA	3.2
Nepal	2.3	1.3	1.6	1.1	0.9

Note : Figures for Nepal are 1991/92 -- 1993/94 Average

NA : Not Available

Source : Statistical Year Book for Asia and the Pacific, UN,1992

Statistical Year Book of Nepal, CBS, 1995

Table : 2.5.1 Food Balance Sheet of Nepal (1984/85 – 1993/94)

Year	Production	Requirement	Balance
1980/81	2,409,347	2,060,551	348,796
1981/82	2,708,593	2,247,624	460,969
1982/83	1,896,526	2,307,468	-410,942
1983/84	2,739,791	2,499,335	240,456
1984/85	2,594,853	2,499,857	94,996
1985/86	2,752,229	2,578,859	173,370
1986/87	2,588,823	2,652,468	-63,645
1987/88	3,005,939	2,726,214	279,725
1988/89	3,417,569	2,921,214	496,355
1989/90	3,549,587	3,559,011	-9,424
1990/91	3,618,955	3,486,776	132,179
1991/92	3,373,448	3,561,838	-188,390
1992/93	3,292,126	3,633,724	-341,598
1993/94	3,585,113	3,723,722	-138,609

Note : Includes Rice, Maize, Wheat Millet and Barley

Source: Statistical Year Book of Nepal, 1989 and 1995

Table : 2.6.1 Change in Area and Production of Cash Crops Between 1978/79 and 1993/94

	Potato		Oilseed		Sugarcane		Tobacco	
	Area	Production	Area	Production	Area	Production	Area	Production
Mountain								
1978/79	12,530	67,470	1,440	690	120	1,230	90	50
1993/94	19,770	154,560	2,510	1,480	160	1,850	40	40
Growth (%)	57.78%	129.08%	74.31%	114.49%	33.33%	50.41%	-55.56%	-20.00%
Hills								
1978/79	29,680	169,470	25,880	14,930	1,780	23,480	320	230
1993/94	47,100	389,400	37,620	21,430	2,500	43,520	700	620
Growth (%)	58.69%	129.78%	45.36%	43.54%	40.45%	85.35%	118.75%	169.57%
Terai								
1978/79	8,490	41,850	116,660	76,880	20,090	345,220	7,180	5,210
1993/94	22,360	236,450	125,430	75,220	37,630	1,385,200	6,370	5,750
Growth (%)	163.37%	464.99%	7.52%	2.16%	87.31%	301.25%	-11.28%	10.36%
Nepal								
1978/79	50,700	278,790	143,980	92,500	21,990	369,930	7,590	5,490
1993/94	89,230	780,410	165,560	98,130	40,290	1,430,570	7,110	6,410
Growth (%)	76.00%	179.93%	14.99%	6.10%	83.22%	286.71%	-6.32%	16.76%

Source : Statistical Year Book of Nepal. CBS, 1989 and 1995

Table : 2.6.2 Ecological Regionwise Area, Production and Yield of Sugarcane (1978/79 - 1993/94)

(ha., M.T.)

Year	Mountain			Hills			Terai			Nepal		
	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield
1978/79	120	1,230	10.25	1,780	23,480	13.19	20,090	345,220	17.18	21,990	369,930	16.82
1979/80	110	1,280	11.64	1,720	23,000	13.37	20,590	360,790	17.52	22,420	385,070	17.18
1980/81	60	800	13.33	1,670	23,680	14.18	22,230	455,300	20.48	23,960	479,780	20.02
1981/82	50	660	13.20	1,640	26,160	15.95	23,480	563,180	23.99	25,170	590,000	23.44
1982/83	50	650	13.00	2,580	40,700	15.78	22,780	574,740	25.23	25,410	616,090	24.25
1983/84	70	990	14.14	1,960	29,770	15.19	20,710	478,310	23.10	22,740	509,070	22.39
1984/85	80	1,200	15.00	1,450	24,900	17.17	15,950	382,160	23.96	17,480	408,260	23.36
1985/86	100	1,330	13.30	1,960	31,320	15.98	20,950	525,690	25.09	23,010	558,340	24.27
1986/87	160	2,440	15.25	2,010	33,090	16.46	22,740	581,050	25.55	24,910	616,580	24.75
1987/88	170	2,240	13.18	2,180	36,340	16.67	27,170	775,820	28.55	29,520	814,400	27.59
1988/89	110	1,770	16.09	2,200	40,040	18.20	27,240	861,200	31.62	29,550	903,010	30.56
1989/90	100	1,470	14.70	2,570	43,100	16.77	28,830	943,730	32.73	31,500	988,300	31.37
1990/91	100	1,490	14.90	2,490	40,990	16.46	30,370	1,063,480	35.02	32,960	1,105,960	33.55
1991/92	100	1,540	15.40	2,360	40,300	17.08	34,950	1,249,500	35.75	37,410	1,291,340	34.52
1992/93	110	1,510	13.73	2,020	36,040	17.84	36,200	1,328,320	36.69	38,330	1,365,870	35.63
1993/94	160	1,850	11.56	2,500	43,520	17.41	37,630	1,385,200	36.81	40,290	1,430,570	35.51

Source: Statistical Year Book of Nepal, CBS, 1989 and 1995 ;
Statistical Information on Nepalese Agriculture, MoA, 1993/94

Table : 2.6.3 Ecological Regionwise Area, Production and Yield of Potato (1978/79 - 1993/94)

(ha., M.T.)

Year	Mountain			Hills			Terai			Nepal		
	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield
1978/79	12,530	67,470	5.38	29,680	169,470	5.71	8,490	41,850	4.93	50,700	278,790	5.50
1979/80	12,700	67,650	5.33	30,000	170,160	5.67	8,630	40,590	4.70	51,330	278,400	5.42
1980/81	11,430	67,230	5.88	29,090	165,790	5.70	9,060	47,520	5.25	49,580	280,540	5.66
1981/82	11,120	67,990	6.11	30,460	191,290	6.28	10,430	61,820	5.93	52,010	321,100	6.17
1982/83	12,260	77,830	6.35	31,690	190,620	6.02	15,250	104,520	6.85	59,200	372,970	6.30
1983/84	11,970	77,340	6.46	33,720	216,780	6.43	13,190	88,960	6.74	58,880	383,080	6.51
1984/85	13,390	85,230	6.37	35,720	223,770	6.26	16,430	111,160	6.77	65,540	420,160	6.41
1985/86	15,860	86,100	5.43	37,260	191,980	5.15	16,840	78,640	4.67	69,960	356,720	5.10
1986/87	17,790	96,440	5.42	38,750	212,230	5.48	17,770	86,440	4.86	74,310	395,110	5.32
1987/88	18,830	122,530	6.51	42,600	275,110	6.46	18,750	168,310	8.98	80,180	565,950	7.06
1988/89	19,140	128,750	6.73	43,600	314,790	7.22	18,830	197,370	10.48	81,570	640,910	7.86
1989/90	19,710	132,440	6.72	45,220	338,900	7.49	18,420	200,470	10.88	83,350	671,810	8.06
1990/91	19,490	148,600	7.62	46,560	370,150	7.95	18,230	219,280	12.03	84,280	738,030	8.76
1991/92	19,450	148,840	7.65	46,950	358,890	7.64	18,900	225,130	11.91	85,300	732,860	8.59
1992/93	19,870	154,950	7.80	47,420	377,170	7.95	19,730	201,180	10.20	87,020	733,300	8.43
1993/94	19,770	154,560	7.82	47,100	389,400	8.27	22,360	236,450	10.57	89,230	780,410	8.75

Source: Statistical Year Book of Nepal, CBS, 1989 and 1995 ;

Statistical Information on Nepalese Agriculture, MoA, 1993/94

Table : 2.6.4 Ecological Regionwise Area, Production and Yield of Oilseed (1978/79 - 1993/94)

(ha., M.T.)

Year	Mountain			Hills			Terai			Nepal		
	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield
1978/79	1,440	690	0.48	25,880	14,930	0.58	116,660	76,880	0.66	143,980	92,500	0.64
1979/80	1,390	720	0.52	24,880	13,150	0.53	91,860	48,000	0.52	118,130	61,870	0.52
1980/81	1,410	680	0.48	21,250	11,740	0.55	99,620	64,720	0.65	122,280	77,140	0.63
1981/82	1,350	720	0.53	19,920	11,410	0.57	92,630	66,990	0.72	113,900	79,120	0.69
1982/83	990	520	0.53	24,100	13,320	0.55	85,250	55,750	0.65	110,340	69,590	0.63
1983/84	1,490	810	0.54	22,500	13,670	0.61	86,710	58,870	0.68	110,700	73,350	0.66
1984/85	1,560	800	0.51	25,730	16,290	0.63	100,530	66,940	0.67	127,820	84,030	0.66
1985/86	1,720	900	0.52	25,650	14,870	0.58	111,090	62,890	0.57	138,460	78,660	0.57
1986/87	1,810	940	0.52	27,120	15,480	0.57	113,960	66,080	0.58	142,890	82,500	0.58
1987/88	2,180	1,200	0.55	28,290	16,910	0.60	121,020	76,260	0.63	151,490	94,370	0.62
1988/89	2,630	1,540	0.59	29,330	17,750	0.61	122,900	79,600	0.65	154,860	98,890	0.64
1989/90	2,360	1,540	0.65	29,430	19,070	0.65	121,870	77,450	0.64	153,660	98,060	0.64
1990/91	1,600	1,090	0.68	29,580	19,240	0.65	125,130	71,810	0.57	156,310	92,140	0.59
1991/92	1,840	930	0.51	28,790	15,760	0.55	123,940	71,150	0.57	154,570	87,840	0.57
1992/93	1,650	910	0.55	29,280	16,820	0.57	134,310	75,960	0.57	165,240	93,690	0.57
1993/94	2,510	1,480	0.59	37,620	21,430	0.57	125,430	75,220	0.60	165,560	98,130	0.59

Source: Statistical Year Book of Nepal, CBS, 1989 and 1995 ;
Statistical Information on Nepalese Agriculture, MoA, 1993/94

Table : 2.6.5 Ecological Regionwise Area, Production and Yield of Tobacco (1978/79 - 1993/94)

(ha., M.T.)

Year	Mountain			Hills			Terai			Nepal		
	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield
1978/79	90	50	0.56	320	230	0.72	7,180	5,210	0.73	7,590	5,490	0.72
1979/80	90	50	0.56	350	240	0.69	7,080	5,210	0.74	7,520	5,500	0.73
1980/81	90	50	0.56	350	230	0.66	6,770	5,210	0.77	7,210	5,490	0.76
1981/82	70	40	0.57	360	240	0.67	6,410	4,540	0.71	6,840	4,820	0.70
1982/83				240	160	0.67	8,720	6,480	0.74	8,960	6,640	0.74
1983/84				280	180	0.64	8,770	6,700	0.76	9,050	6,880	0.76
1984/85				320	230	0.72	8,230	6,200	0.75	8,550	6,430	0.75
1985/86				250	160	0.64	8,430	4,520	0.54	8,680	4,680	0.54
1986/87	30	20	0.67	250	130	0.52	8,540	4,740	0.56	8,820	4,890	0.55
1987/88	20	10	0.50	160	100	0.63	6,290	4,350	0.69	6,470	4,460	0.69
1988/89				120	70	0.58	7,180	5,310	0.74	7,300	5,380	0.74
1989/90				140	100	0.71	7,470	6,500	0.87	7,610	6,600	0.87
1990/91				140	100	0.71	7,150	6,880	0.96	7,290	6,980	0.96
1991/92				130	105	0.81	6,390	5,900	0.92	6,520	6,005	0.92
1992/93				140	110	0.79	6,520	5,910	0.91	6,660	6,020	0.90
1993/94	40	40	1.00	700	620	0.89	6,370	5,750	0.90	7,110	6,410	0.90

Source: Statistical Year Book of Nepal, CBS, 1989 and 1995 :

Statistical Information on Nepalese Agriculture, MoA, 1993/94

Table: 2.6.6 Vegetable Cropped Area and Production (1989/90)

(in 1000)		
Vegetables	Area (ha)	Production (ton)
Cauliflower	19.267	150.280
Cabbage	15.514	150.490
Radish	7.331	66.712
Onion	8.001	110.015
Peas	6.688	20.060
Tomato	10.530	72.657
Broad Leaf Mustard	7.495	45.720
Eggplant	9.283	64.985
Chillies	9.513	13.320
Beans	5.991	47.930
Pumpkin	4.109	36.970
Ladies Fingers	7.244	50.700
Sponge/gourd	5.116	49.625
Others	24.442	90.738
Total	140.524	970.202

Source: Vegetable Development Division, MoA, 1990

Table : 2.7.1 Consumption of Chemical Fertiliser (1984/85 - 1993/94)

(Nutrients : M.T.)	
Year	Total Consumption
1984/85	42,829
1985/86	43,408
1986/87	45,050
1987/88	54,181
1988/89	56,839
1989/90	67,286
1990/91	72,718
1991/92	84,443
1992/93	83,332
1993/94	73,810

Source : Statistical Yea Book of Nepal, CBS, 1995

Table : 2.7.2 Consumption of Improved Seeds (1984/85 - 1993/94)

(M.T.)			
Year	Paddy	Wheat	Maize
1984/85	238	1,786	93
1985/86	154	2,242	69
1986/87	141	2,198	72
1987/88	212	2,243	96
1988/89	213	1,714	121
1989/90	146	2,122	126
1990/91	156	2,075	44
1991/92	277	1,910	66
1992/93	206	1,577	77
1993/94	242	3,229	105

Source : Statistical Yea Book of Nepal, CBS, 1995

Table : 2.7.3 Outstanding Loans of ADB/N by Geographic Region (mid-July 1992)

Regions	Office		Loan Outstanding	
	Number	Percent	Amount (Rs. 000)	Percent
Mountain	29	13.6	213,932	4.8
Hills	105	49.3	2,395,328	53.5
Terai	79	37.1	1,871,613	41.7
Total	213	100	4,480,873	100

Source : Nepal Country Report, ICIMOD, 1995

Table : 2.7.4 SFDP Operations by Geographic Region (As of Mid-July 1992)

Regions	Outstanding Loan ('000)		Groups Formed		Group Members		
	Number	Percent	Amount (Rs'000)	Percent	Female	Male	Total
Mountain	45,179	6.6	1,506	7.5	1,746	9,338	11,084
Hills	316,278	46.2	9,936	49.6	11,628	51,395	63,023
Terai	322,766	47.2	8,604	42.9	21,516	46,104	67,620
Total	684,223	100	20,046	100	34,890	106,837	141,727

Source : Nepal country Report, ICIMOD, 1995

Table : 2.8.1 Number of Livestock by Development Regions, 1981/82 and 1992/93

Unit :
Nos.

	Cattle		Buffalo		Sheep/goat		Pig		Fowl		Duck	
	1981/82	1992/93	1981/82	1992/93	1981/82	1992/93	1981/82	1992/93	1981/82	1992/93	1981/82	1992/93
Eastern Dev.	1,646,406	1,486,618	475,745	606,115	1,214,871	1,539,204	226,631	297,993	2,273,873	2,773,022	13,553	160,782
Hills	648,585	603,108	234,992	260,184	608,965	804,335	158,631	175,782	1,208,038	1,513,481	10,325	11,377
Mountains	231,387	196,716	56,937	77,637	168,380	256,367	36,458	66,531	390,818	493,244	720	1,686
Terai	766,434	686,794	183,814	268,294	437,526	478,502	31,542	55,680	675,017	766,297	2,508	147,719
Central Dev.	1,696,573	1,476,144	613,205	781,550	1,396,461	1,800,298	61,862	81,868	2,497,319	5,530,813	2,604	123,040
Hills	714,619	677,085	282,824	390,599	686,841	929,507	43,963	52,988	1,401,938	3,980,558	1,135	21,362
Mountains	203,332	206,777	102,557	115,362	268,351	275,933	5,652	10,983	402,058	565,797	280	303
Terai	778,622	592,282	227,824	275,589	441,269	594,858	12,247	17,897	693,323	984,458	1,189	101,375
Western Dev.	1,123,132	1,257,947	676,102	847,842	681,198	1,140,679	66,761	88,422	1,619,259	2,614,921	1,065	63,876
Hills	707,600	790,340	553,927	669,422	506,135	876,070	56,149	76,113	1,171,812	2,135,185	682	12,520
Mountains	7,277	9,737	31	146	12,799	57,314	57	160	6,979	15,219	0	52
Terai	408,255	457,870	122,144	178,274	162,264	207,295	10,555	12,149	440,468	464,517	383	51,304
Mid West Dev.	1,246,338	1,267,247	356,854	499,472	696,131	1,392,410	55,576	103,456	1,335,272	2,048,532	2,164	15,121
Hills	781,607	742,557	223,087	295,298	414,103	713,060	26,773	46,265	878,062	1,150,526	1,162	5,006
Mountains	177,133	171,520	37,546	29,901	176,509	384,069	1,630	3,508	60,560	122,868	958	0
Terai	287,598	353,170	96,221	174,273	105,519	295,281	27,173	53,683	396,650	775,138	44	10,115
Far West Dev.	789,128	749,275	260,819	337,703	332,101	490,398	22,777	33,217	473,613	633,519	984	28,899
Hills	318,816	357,873	119,397	166,917	158,229	184,408	13,813	1,909	116,377	159,968	207	278
Mountains	191,837	224,858	58,345	94,257	73,710	194,350	463	493	50,984	77,764	508	4,668
Terai	278,475	166,544	83,077	76,529	100,162	111,640	8,501	30,815	306,252	395,787	269	23,953
Nepal	6,501,577	6,237,231	2,382,723	3,072,682	4,320,762	6,362,989	433,607	604,956	8,199,336	13,600,807	20,370	391,718
Hills	3,71,227	3,170,963	1,414,227	1,782,420	2,374,273	3,507,380	299,329	353,057	4,776,227	8,939,718	13,511	50,543
Mountains	810,966	809,608	255,416	317,303	699,749	1,168,033	44,260	81,675	911,399	1,274,892	2,466	6,709
Terai	2,519,384	2,256,660	713,080	972,959	1,246,740	1,687,576	90,018	170,224	2,511,710	3,386,197	4,393	334,466

Source : Statistical Yearbook of Nepal 1993, CBS, 1981/82
Agricultural Statistics of Nepal MoA, 1992/93.

The Study

Table : 2.9.1 Distribution of Fish Pond, Area, Water Surface Area and Production by Ecological Belt (1992/93)

Total	Pond (Nos)	Total Area (ha)	Total WSA (ha)	Fish Production (mt)
Mountain	14	2	1	1
Hill	854	138	105	175
Terai	16,420	8,116	4,699	8,433
Total	17,288	8,256	4,805	8,609

Source: Agricultural Statistics of Nepal ,MoA, 1992/93

Table: 2.10.1 Institutional Arrangements for Agricultural Research in Nepal

1920s	The Department of Agriculture was created under the then Nepal Government. A farm was established in Singhadurbar, Kathmandu.
1940s	Research/production/demonstration farms were established in Janakpur, Parwanipur, and Pokhara.
1950s	Various sections within the Department of Agriculture: Agronomy, Horticulture, Livestock and Dairy, Veterinary, Plant Pathology, Entomology and Fisheries.
1960s	The Ministry of Agriculture was reorganised to head the existing Department of Agriculture and five new departments were created. They were i) Department of Agricultural Education and Research, ii) Department of Agricultural Extension, iii) Department of Horticulture, iv) Department of Livestock and Veterinary Sciences, and v) Department of Fisheries.
1970s	All departments were merged to form a single department, Agricultural research was brought under the direct control of the Deputy director of the department. Multi-disciplinary commodity research was introduced.
1980s	A new Department for livestock and Veterinary Services was carved out of the existing department. There were now two departments under the MOA. The National Agriculture Research Services' Centre (NARSC) was created under the Department of Agriculture. Control of NARSC was shifted from the department to the Ministry; the Secretary of Agriculture chaired the centre.
1990s	The Nepal Agricultural Research Council (NARC) was created as an autonomous research centre governed by a high-powered board chaired by the Minister of Agriculture.

Source: Nepal Country Report, ICIMOD, 1995

Table : 2.10.2 Agricultural Farm Under the Department of Agricultural Development

S. No.	Name and Location of the Farm	Agro-ecological Region	Major Activity	Remarks
1	Dhankuta Agricultural Station, Paripatle, Dhankuta District	Hills	Hill crops and fruits crops, mainly citrus	Has recently been shifted to NARC
2	Seed Multiplication Farm, jhumka, Sunsari District	Terai	Cereal crops's seed multiplication	
3	Fatehpur Fish Farm, Fatehpur, Saptari District	Terai	Fish	
4	Yak Farm, Salleri, Solukhumbu District	Mountains	Yak	
5	Solu Horticultural Farm, Salleri, Solukhumbu District	Mountain	Temperate	
6	Nawalpur Horticultural Farm, Nawalpur, Sarlahi District	Terai	Tropical and subtropical fruits and vegetables	
7	Jiri Livestock Farm, Jiri, Dolakha District	Mountains	Livestock	
8	Horticultural Farm, Boch, Dolakha District	Mountains	Temperate fruits	
9	Helambu Horticultural Farm, helambu, Sindhupalchok District	Mountains	Temperate fruits	Has recently been shifted to the Ministry of Tourism
10	Panchkhal horticultural Farm, Panchkhal Kaverpalanchok District	Hills	Tropical and subtropical fruits and vegetables	Is in the process of privatisation
11	Rasuwa Agricultural Farm, Dhunche, Rasuwa District	Hills	Temperate fruits and vegetables	Has recently been handed over the Ministry of Forests and Environment
12	Dhunibesi Horticultural Farm, Dhunibesi, Dhading District	Hills	Tropical and subtropical fruits and vegetables	Is in the process of privatisation
13	Kakani Agricultural Farm, Kakani, Nuwakot District	Hills	Temperate fruits and hill crops (maize and millet)	Has recently been shifted to the Ministry of Tourism
14	Sheep and Goat Farm, Makawanpur	Hills	Sheep and goats	Is in the process of privatisation
15	Daman Horticultural Farm, Daman Makawanpur District	Hills	Temperate fruits	
16	Yagyapuri Horticultural Farm, Yagyapuri, Chitwan District	Terai	Tropical and sub-tropical fruits	Is being replaced by a Cancer Hospital
17	Hetauda Fish Farm, Hetauda, Makawanpur District	Terai	Fish	
18	Bhairahawa Fish Farm, Siddharthanagar, Rupandehi District	Terai	Fish	
19	Palpa Agricultural Farm, Tansen, Palpa District	Hills	Citrus fruits and vegetable seeds	
20	Gulmi Coffee Farm, Amchaur, Gulmi District	Hills	Coffee	
21	Vegetables Seeds Farm Chaurjahari Rukum District	Hills	Vegetable seeds multiplication	
22	Dolpa Yak Farm, Dolpa District	Mountains	Yak	
23	Dailekh Horticultural Farm, Dullu, Dailek District	Hills	Citrus	
24	Humla Horticultural Farm, Nalma, Humla District	Mountains	Temperate fruits	is in the process of privatisation
25	Tibrikot Sheep Farm, Guthichaur, Jumla District	Mountains	Sheep and goats	
26	Geta Fish farm, Geta, Kailali District	Terai	Fish	
27	Kailali Goat Farm, Buditola, Kailali District	Terai	Goats	Farm is located in the hill area of the district
28	Dadeldhura Farm, Dotighatal, Dadeldhura District	Hills	Vegetables seeds multiplication	
29	Baitadi horticultural Farm, Satbanjh, Baitadi District	Hills	Temperate fruits	

Source: Nepal Country Report, ICIMOD, 1995

Table : 2.10.3 The Research Network of Nepal Agricultural Research Council

Research Centre	Research Areas
A. Sub-tropical	
1. Trarahara	Paddy, Maize, Wheat, Pulses, Oilseeds, Sugarcane, Potato and Winter grass-crops, Litchi, Dried ginger, Betel-leaf, Spices like black pepper, vegetable crops, Buffalo, Poultry, Pigs, Cattle and organic manure.
2. Itahari	Jute crop
3. Belachapi	Tobacco crop
4. Janakpur	Pond fish farming.
5. Jitpur	Sugarcane crop.
6. Parwanipur	Paddy, Maize, Wheat, Pulses and Potato crops, Mango, Banana, Fruits like litchi and vegetable crops.
7. Rampur	Maize, Paddy, Wheat, Millet, Buck wheat, Pulses, Oilseeds and Ginger grass crops.
8. Yagyapuri	Banana, Fruits like Pineapple and Papaya
9. Bhairahawa	Wheat, Paddy, Pulses, Oilseeds, Sugarcane, Potato and winter grass crops.
10. Nepalgunj	Paddy, Maize, Wheat, Pulses, Oilseeds, Tobacco, Cotton and Potato crops, Mango, Banana, Papaya, fruits like grapes, vegetable crops, Organic manure, Buffalo and grass crops
11. Dhangadi	Goat, Sheep and Silviculture
12. Ranighat	Research in agricultural tools and animal power-driven equipment.
B. Warm Temperate	
13. Khumaltar	Subject specific research, Potato and Vegetable crops, Animal research Paddy, Maize, Millet, Buckwheat, Barley, Amaranth, Pulses and Oilseed, Genetic materials protection and organic manure.
14. Kirtipur	Pear, Grapes, Peach, Fruits like Plums and Citrus fruits.
15. Tripureshwar	Animal health research
16. Godavari	Fish farming in natural water reservoirs (for cold water)
17. Kavre	Hill crops, Paddy, Maize and Wheat crops
18. Pakhribas	Paddy, Maize, Wheat, Hill crops, Pulses, Potato and Oilseeds, Banana, Pineapple, Pear, Peach, Grapes, Fruits like plums, Vegetable Crops, Cardamom, Cattle, Pig, Silviculture and grazing field management.
19. Kanyam	Tea
20. Phikkal	Cardamom and dried ginger
21. Khairnitar	Maize and the crop system based on Maize crop
22. Nigale	Potato crop
23. Bandipur	Goat, summer grass crops and silviculture.
24. Pokhara	Pond fish farming, Orange, Vegetable and potato crops, Dried Ginger, Goats and sheep Buffalo, Pig, Poultry, Silviculture and grazing field management, summer grass crops.
25. Lumle	Paddy, Maize, Wheat, Hill crops, Pulses, Oil seeds, Vegetable and potato crops, Orange, Pear, Peach, Grapes, Fruits like plums, Cattle, Silviculture, grazing field/pasture management, and Organic manure.

- | | |
|-----------------|---|
| 26. Surkhet | Paddy, Wheat, Hill crops, Pulses, Oilseeds, Vegetable and potato crops, organic manure, summer grass crops. |
| 27. Dhankutta | Orange and vegetable crops. |
| 28. Salyan | Ginger |
| 29. Gulmi | Coffee |
| 30. Rukum | Vegetable crops. |
| 31. Dandeldhura | Vegetable crops. |
| 32. Dailekh | Orange and pear. |
| 33. Baitadi | Apple and walnut. |
| 34. Trishuli | River fish farming. |
- C. Cool-Temperate
- | | |
|----------------|---|
| 35. Marpha | Hills crops, Vegetable and potato crops, Apple and walnut, Pasture and grazing field management, hill goat and Tibetan sheep. |
| 36. Syangboche | Yak, hill goat and grazing field management. |
| 37. Guthichour | Sheep, pasture and grazing field management and Daruwal sheep. |
| 38. Jumla | Paddy, Wheat, Hill crops and potato crops. |
- D. Miscellaneous
- | | |
|--|--|
| 39. Central food
Laboratory | Food technology |
| 40. Dairy Development
Board | Dairy science |
| 41. Department of
Forest and Botanical
Research | Agro-forestry, silvipasture and soil conservation. |
| 42. Institute of
Agriculture and
Animal sciences | Basic research in various subjects. |
-

Source: The Eight Plan (1992-1997) HMG, National Planning Commission, Nepal, 1992

Table : 2.12.1 Agricultural Production and Productivity
Targets for the Eighth Plan

Crops	Output		Targeted Output Increase Rate Per Year (%)	Productivity (M/Ha)	
	Base Year	1996/97		Base Year	1996/97
Food Grains			5.4		
Paddy	3,392	4,452	5.5	2.350	2.850
Maize	1,168	1,476	4.7	1.570	1.930
Wheat	840	1,258	8.4	1.400	2.040
Millet	213	236	2.1	1.110	1.140
Barley	27	32	3.4	0.930	1.140
Buck Wheat	23	32	6.8	0.540	0.640
Pulse Crops	124	186	8.4	0.600	0.820
Cash Crops			9.1		
Oil seeds (including peanut)	108	174	10.0	0.647	0.906
Sugarcane	1106	1,530	6.7	33.560	38.250
Tobacco	6	10	8.6	0.854	0.990
Jute Fibre	16	25	8.8	1.125	1.400

Source: The Eight Plan (1992-1997) HMG, National Planning Commission, Nepal, 1992

Table : 2.12.2 Priority Districts for Off-season Vegetable Production

1. Off - Seasonal Vegetables	Makwanpur, Nuwakot, Dhading, Kavre, Kathmandu, Bhaktapur
2. Tomato, Bell pepper	Sarlahi, Dhanusha, Mhottari, Dhading, Kavre, Chitawan
3. Onion	Saptari, Siraha, Dhanusha, Mahottari, Sarlahi
4. Water Melon	Dhanusha, Mohottari, Sarlahi

Source: The Eight Plan (1992-1997) HMG, National Planing Commission, Nepal, 1992

Table 2.12.3 Priority Roadsides for Fruits Production

Highway Sector	Fruits to be accorded Priority
1. East-West Highway	Mango, Litchi, Pineapple, Banana
2. Kathmandu-Pokhara-Tansen Highway	Citrus fruits, Banana
3. Kathmandu—Jiri Highway	Citrus fruits, Banana, Mango
4. North-South Link Roads	
4.1 Taplejung-Phidim-Ilam-Birtamod Highway	Orange, Sweet Orange, Pear
4.2 Basantapur-Dhankutta-Dharan-Biratnagar Highway	Orange, Sweet Orange, Mango, banana, Pineapple
4.3 Sindhuli-Bardibas Highway	Mango, Litchi, Banana
4.4 Kodari-Lamosangu Highway	Citrus fruits
4.5 Somdang-Trishuli-Kathmandu Highway	Apple, Pear, Mango, Banana, Litchi
4.6 Kathmandu-Daman-Hetauda-Birgunj Highway	Apple, Mango, Banana Litchi
4.7 Gorkha-Khaireni-Muling-Narayan Ghat Highway	Citrus fruits, pineapple, Banana
4.8 Beshinshahar-Dumre Highway	Citrus fruits
4.9 Baglung-Kusma-Pokhara Highway	Citrus fruits
4.10 Tamghas-Tansen-Siddhartha Nagar Highway	Citrus fruits, Mango, Banana
4.11 Sandhikharka-Gorusinge Highway	Citrus fruits, Pear
4.12 Salyan-Tulsipur-Lamahi Highway	Mango, Banana
4.13 Surkhet-Nepalgunj Highway	Mango, Banana
4.14 Dhangadi-Dadeldhura Highway	Mango, Banana, Citrus fruits

Source: The Eight Plan (1992–1997) HMG, National Planning Commission, Nepal, 1992

Table 2.12.4 Priority Districts Selected under Comparative Advantage
 for Fruit Farming in the Eighth Plan

S.N.	Crops	Subsidiary Crops	Districts
1.	Apple	Other Temperate Fruits	Rolpa, Rukum, Jumla, Dolpa, Mustang, Kalikot, Jajarkot, Doti
2.	Walnut, Lemon, Almond	Other Temperate Fruits	Darchula, Bajhang, Humla Mugu
3.	Orange	Other Citrus Fruits	Bhojpur, Sankhuwasabha, ailekh, Acchham
4.	Nepal Sweet Orange	Other Citrus Fruits	Ramechhap, Sindhuli, Okhaldhunga, Khotang Bhojpur
5.	Coconut and Betel Nut	Black pepper, Pineapple, Banana, Apple	Jhapa, Sunsari, Morang
6.	Grapes	Other Citrus Fruits	Banke, Bardiya
7.	Coffee		Palpa, Arghakhanchi and Gulmi

Source: The Eight Plan (1992-1997) HMG, National Planing Commission, Nepal, 1992

Table: 2.12.5 Major Research Agenda for the Eighth Plan

Research Area	Major	Research Topics
1. Crop Research	a.	Development of suitable varieties for rainfed sloping land (Pakho) and farms.
	b.	Development of appropriate technology for commercial farming in easily accessible, irrigated and fertile Terai and Terai like areas.
	c.	Development of crop management and cost-effective technologies.
	d.	Integrated disease and pest management.
	e.	Development of post-harvest loss control technology.
	f.	Development of appropriate technology for the promotion of import-substituting cash and industrial crops.
	g.	Development of high quality varieties for export.
2. Horticultural Research	a.	Development of suitable varieties for different agro-ecological systems.
	b.	Development of appropriate technology for low weight-high value crops.
	c.	Development of appropriate technology for orchard management and horticultural crop management.
	d.	Development of post-harvest and post-processing preservation technology.
	e.	Development of varieties of sweet potato and other appropriate technologies.
	f.	Development of horticultural crop seed production technology for export promotion.
3. Livestock and Poultry Research	a.	Development of nutrition and feed technology.
	b.	Development of livestock and poultry management.
	c.	Improvement of breeds for production sectors.
	d.	Improvement of disease control technology.
	e.	Development of appropriate technology for the production of high quality wool required for carpet industry.
4. Fishery Research	a.	Development of nursery management and breeding technology.
	b.	Development of appropriate technology for fish feed.
	c.	Development of fish farming technologies suited to different types of water reservoirs.
	d.	Disease and insect control.
5. Environmental Research	a.	Studies on the effect of pesticides and chemical fertilisers on the environment.
	b.	Development of fodder-crop management and systems technology.
	c.	Agro-forestry research
	d.	hill silvipasture studies and research.
	e.	Genetic materials protection and promotion.
	f.	Development of appropriate technologies for the conservation and rehabilitation of marginal land and for the soil fertility promotion and fertility reduction control.
	g.	Study of the impact on the environment or the existing unsystematic livestock farming in urban areas.
6. Miscellaneous	a.	Development of appropriate technology for sustainable farming system.
	b.	Small and medium size bull-driven agricultural equipment.
	c.	Bio-technology.
	d.	Food technology and milk processing.
	e.	Studies on social, economic and agricultural extension technologies.
	f.	Development of appropriate technology for mushroom farming.

Source: The Eight Plan (1992-1997) HMG, National Planning Commission, Nepal, 1992

Table: 2.12.6 Allocation of Total Agricultural Development Outlay for the Eighth Plan

(in millions of rupees)

Programme Area	Total
1. Agricultural Extension and Subsidies (Agricultural Inputs)	
1.1 Food Crop and Cash Crops	5,035.6
1.2 Livestock	1,434.1
1.3 Fruits	919.5
1.4 Fishery	1.6
2. Agricultural Research	1,182.3
3. Agricultural Education and Training	437.8
4. Agricultural Marketing and Price Management	437.8
5. Agricultural Statistics and Analysis	164.2
6. Cooperative Development	131.5
7. Planning, Monitoring and Evaluation	109.5
8. Food Technology	54.8
9. Agricultural and Rural Credit	766.3
Total	10,947.0

Source: The Eight Plan (1992-1997) HMG, National Planing Commission, Nepal, 1992

Table: 2.13.1 Established Markets in Nepal (1989/90)

Regions	Locally Established	Established by DFAMs	Total
Eastern Development	434	20	454
Central Development	290	21	311
Western Development	99	32	131
Mid Western Development	94	30	124
Far Western Development	7	25	32
Total	924	128	1,052

Source : Handbook of Agricultural Statistics of Nepal, Marketing Services Division
 DFAMS ,1991

Table: 2.13.2 Average Number of Agents and Vegetables Origins in Selected Market

Markets	Total no of sellers	percentage of Farmers	Others	Vegetable origin
Kalimati	500	40	60	Dhading, Palung, Ranipauwa, Sarlahi, India, Thankot, Balaju, Swyambu.
Ratnapark	200	95	5	Lukkanthali, Manoharaside, Bayakha, Nagadesh (Thimi)
Sukuldhoka	30	65	35	Nagadesh, Bode (Thimi), Ranipauwa and local areas
Suryavinayak	10	50	50	Kalimati wholesales market and local area
Tarkari bazaar	100	10	90	Kalimati wholesale market and local area
Lagankhel	40	10	90	Thimi, Kalimati wholesale market and local areas.
Jawalakhel	35	0	100	Kalimati market, Lagankhel

Source: Fresh Vegetable and Vegetable Seed Production Project, Nepal, Series, Vegetable supply to selected Urban centres in Nepal Volume 2, HMG/N, MoA, DoAD, 1995

Table: 2.13.3 Volumes Supplied to Markets in the Valley

Main Markets	Approx. Daily Supply (mt)	Approx. Monthly Supply (mt)
<u>Kathmandu</u>		
Ratnapark	20-30	600-900
Jaisideval/La gantole	1-2	30-50
Kilagal	1-2	30-50
Cheetrapati	1-2	30-50
Balkhu	1-2	30-50
Maitidevi	2-3	50-80
New Baneswor	3-5	80-100
Chabahill	2-3	50-80
Balaju	1-2	30-50
Koteshworchowk	3-4	80-100
Ranamukteshwor	5-8	150-200
<u>Lalitpur</u>		
Lagankhel	5-8	150-200
Tarkari Bazaar	4-5	100-150
Jawalakhel	4-5	100-150
<u>Bhaktapur</u>		
Sukuldhoka	1-2	30-50
Suravinayak	1-2	30-50
Kalimati Market	65-300	2,000-10,000 (Average 6,000 mt/month)
Grand Total	150-400 (depending on the season)	4,500-12,000

Source: Fresh Vegetable and Vegetable Seed Production Project, Nepal, Series, Vegetable supply to selected Urban centres in Nepal Volume 2, HMG/N, MoA, DoAD, 1995

Table: 2.13.4 The Kalimati Wholesale Market Design Assumptions

Population/ Consumers	Urban Area Consumption (Per annum = pa)		Kalimati Participation	
	Per capita (kg/pa)	Commercial Volumes (mt/pa)	% of total	Monthly Aveg/ Vol.
To calculate floor space requirements				
Design Popul. 1988: 411,000	41.50	13,650	30	340 mt
- Vegetables				
- Fruits				
(Incl: import)	22.19	7,300	20	120 mt
Average Throughput/month				460 mt
Peak Throughput (2.5 X)				1,150 mt
Design Popul. 1990: 422,000	50.90	18,000	30	450 mt
- Vegetables				
- Fruits				
(incl. Import)	24.1	8,630	20	140 mt
Average Throughput/month				590 mt
Peak Throughput (2.5 X)				1,480 mt
Design Popul. 2000: 700,000	65.00	36,480	60	1,820 mt
- Vegetables				
- Fruits				
(incl. Import)	35.20	19,170	60	990 mt
Average Throughput/month				2,810 mt
Peak Throughput (2.5 X)				5,620 mt

Source: Fresh Vegetable and Vegetable Seed Production Project, Nepal, Series,
Vegetable supply to selected Urban centres in Nepal Volume 2, HMG/N, MoA,
DoAD, 1995

Table 2.13.5 Urban Population in the Kathmandu Valley

Urban Area	1971	1981	1991
Kathmandu	150,402	235,160	421,258
Lalitpur	59,049	79,875	115,865
Bhaktapur	40,112	48,472	61,405
Total	249,563	363,507	598,528

Source: Statistical Year Book of Nepal, CBS, 1989 and 1995

Table 2.13.6 Volumes Transacted in Kalimati Wholesale Market

(Volume in Ton)

Months	Years				
	1989/1990	1990/1991	1991/1992	1992/1993	1993/1994
Baishak (Apr/May)	1,314	1,091	3,652	1,933	5,344
Jestha (May/Jun)	2,354	1,338	3,545	2,880	6,001
Ashad (Jun/Jul)	2,220	2,074	3,025	3,095	4,795
Shrawan (Jul/Aug)	642	1,883	2,897	3,522	2,065
Bhadra (Aug/Sept)	357	2,300	3,190	3,942	4,425
Aswin (Sept/Oct)	1,642	3,486	4,513	3,808	5,140
Kartik (Oct/Nov)	1,685	2,232	4,029	2,836	10,898
Marga (Nov/Dec)	1,953	1,653	4,212	3,455	10,102
Poush (Dec/Jan)	1,207	1,316	5,922	2,734	9,210
Magh (Jan/Feb)	783	1,725	3,775	2,795	10,750
Falgun (Feb/Mar)	672	2,001	2,847	3,435	6,397
Chaitra (Mar/Apr)	602	1,271	1,454	6,306	11,377
TOTALS	15,453 (1)	22,370 (2)	46,396 (3)	40,741 (4)	86,504

NOTE: (1) 14 major vegetables plus 6 fruits; (2) 11 major vegetables plus orange; (3) 10 major vegetables plus orange; (4) All produce = average 48 produce per month: during previous years only the major produce were reported. The latest data includes practically all produce being transacted

Source: Fresh Vegetable and Vegetable Seed Production Project, Nepal, Series, Vegetable supply to selected Urban centres in Nepal Volume 2, HMG/N, MoA, DoAD, 1995

Table : 2.13.7 Kathmandu Valley Participation in the Kalimati Transactions
(Volumes in Kg)

Months	Total Transactions	Kathmandu Valley	Percent of Total
Baishak (Apr/May)	5,344,300	268,800	5.02%
Jestha (May/Jun)	6,001,870	411,800	6.86%
Ashad (Jun/Jul)	4,795,822	342,300	7.13%
Shrawan (Jul/Aug)	2,065,694	268,344	12.99%
Bhadra (Aug/Sept)	4,425,400	410,400 ⁽¹⁾	9.27%
Aswin (Sept/Oct)	5,140,435	795,800 ⁽²⁾	15.48%
Kartik (Oct/Nov)	10,898,857	1,813,557 ⁽³⁾	16.60%
Marga (Nov/Dec)	10,102,000	889,000 ⁽⁴⁾	8.80%
Poush (Dec/Jan)	9,210,802	930,000 ⁽⁵⁾	10.09%
Magh (Jan/Feb)	10,750,750	949,900 ⁽⁶⁾	8.80%
Falgun (Feb/Mar)	6,397,670	403,200 ⁽⁷⁾	6.30%
Chaitra (Mar/Apr)	11,377,400	369,600	3.25%

Notes:

- (1) 45.68% of the supplies from Kathmandu Valley were Green Pumpkin, Pears (local) and Lapsi (non-cultivated)
- (2) 79.20% of the supplies from the valley were : Guava, Pears, Lapsi, Green Pumpkin and Chayote.
- (3) Out of the supplies from the valley:
Potatoes: 6%
Guava, Pear, Orange, Lapsi and Nibuwa: 16.7%
Dry chilli, Green Pumpkin and Ginger: 19.36%
- (4) Out of the supplies from the Valley:
Potatoes: 33.75%
- (5) Out of the supplies from the Valley:
Potatoes: 34.40%
- (6) Out of the supplies from the Valley:
Potatoes: 33.30%
- (7) Out of the supplies from the Valley:
Cauliflower and Cabbage: 33.2%

Source: Fresh Vegetable and Vegetable Seed Production Project, Nepal, Series, Vegetable supply to selected Urban centres in Nepal Volume 2, HMG/N, MoA, DoAD, 1995

Table 2.13.8 Reported Areas Under Vegetable Cultivation (in Ha)

Districts	Season	
	1982/83	1991/92
Kathmandu	1,200	1,177
Bhaktapur	1,087	1,080
Lalitpur	245	633
Total	2,532	2,890

Source: Fresh Vegetable and Vegetable Seed Production Project, Nepal, Series, Vegetable supply to selected Urban centres in Nepal Volume 2, HMG/N, MoA, DoAD, 1995

Table 3.1.1 Topographical Distribution of Land in Makwanpur District

(ha)

Land	Agriculture					
Area	Cultivated	Non-Cultivated	Grazing	Forest	Others	Total
Mid Mountain	16,070	11,316	2,461	64,411	689	94,947
Siwalik	24,772	7,499	675	103,037	8,141	144,124
Terai	0	0	0	5	0	5
Total	40,842	18,815	3,136	167,453	8,830	239,076

Source: Nepal District Profile, NRA, 1994

Table : 3.2.1 Population of Makwanpur District (1971-1991)

	1971	1981	1991
Total	163,766	243,411	314,599
Male	83,059	125,480	159,562
Female	80,671	117,931	155,037

Source: Population Census, CBS, 1971, 1981, 1991

Table : 3.3.1 Area, Production and Yield of Cereal Crops in Makwanpur District (1978/79-1993/94)

Crops Year	Paddy			Wheat			Maize			Millet			Barley		
	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield
1978/79	10,300	24,640	2.39	3,800	4,940	1.30	15,470	32,460	2.10	2,400	3,360	1.40	150	130	0.87
1979/80	10,300	19,710	1.91	4,180	5,850	1.40	14,700	22,050	1.50	2,700	2,840	1.05	160	120	0.75
1980/81	10,230	22,510	2.20	3,260	4,400	1.35	15,000	30,000	2.00	2,500	2,840	1.14	180	160	0.89
1981/82	7,910	19,770	2.50	4,070	5,290	1.30	15,000	30,000	2.00	3,280	2,620	0.80	180	160	0.89
1982/83	11,970	25,690	2.15	5,590	9,890	1.77	18,150	25,870	1.43	2,800	1,680	0.60	160	140	0.88
1983/84	12,050	27,870	2.31	5,650	10,730	1.90	18,000	32,680	1.82	2,000	1,800	0.90	240	240	1.00
1984/85	12,260	29,930	2.44	6,160	9,240	1.50	19,740	33,990	1.72	1,400	1,260	0.90	600	540	0.90
1985/86	12,670	27,870	2.20	6,270	10,030	1.60	18,200	21,650	1.19	2,950	2,360	0.80	500	420	0.84
1986/87	12,640	27,740	2.19	6,500	11,050	1.70	17,330	22,130	1.28	2,940	2,440	0.83	480	450	0.94
1987/88	12,640	31,070	2.46	6,200	10,040	1.62	18,230	27,910	1.53	4,000	3,440	0.86	250	210	0.84
1988/89	12,630	31,620	2.50	6,000	9,000	1.50	18,280	28,640	1.57	3,600	4,800	1.33	240	240	1.00
1989/90	13,310	35,170	2.64	6,100	10,370	1.70	21,080	33,990	1.61	4,150	5,500	1.33	230	220	0.96
1990/91	12,950	33,940	2.62	5,800	9,740	1.68	19,310	33,040	1.71	4,200	5,580	1.33	200	180	0.90
1991/92	12,950	34,410	2.66	5,710	9,650	1.69	19,200	38,620	2.01	3,800	4,560	1.20	210	180	0.86
1992/93	13,510	26,880	1.99	5,790	9,610	1.66	18,000	38,000	2.11	3,750	4,880	1.30	220	190	0.86
1993/94	8,000	16,000	2.00	4,920	7,120	1.45	18,000	34,340	1.91	9,210	10,400	1.13	50	50	1.00

Source: Statistical Year Book of Nepal, CBS, 1989 and 1995

Table 3.4.1 Area, Production and Yield of Cash Crops in Makwanpur Districts (1978/79-1993/94)

Crops	Potato			Oilseed			Sugarcane			Tobacco		
	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield
1978/79	1,800	11,700	6.50	400	220	0.55	150	2,100	14.00			
1979/80	1,800	11,700	6.50	400	220	0.55	150	2,110	14.07			
1980/81	1,200	5,400	4.50	500	300	0.60	150	2,250	15.00			
1981/82	1,320	7,920	6.00	230	140	0.61	150	3,000	20.00			
1982/83	1,800	10,800	6.00	400	200	0.50	350	7,000	20.00			
1983/84	1,960	15,680	8.00	1,750	1,380	0.79	30	600	20.00	20	10	0.50
1984/85	2,010	15,070	7.50	2,010	1,560	0.78	50	850	17.00	30	20	0.67
1985/86	1,960	8,430	4.30	1,200	720	0.60	50	750	15.00	20	10	0.50
1986/87	2,050	12,300	6.00	2,000	1,200	0.60	30	450	15.00	20	10	0.50
1987/88	2,100	17,280	8.23	1,770	1,070	0.60	30	450	15.00	20	10	0.50
1988/89	2,110	21,100	10.00	2,300	1,380	0.60	30	450	15.00	20	10	0.50
1989/90	2,010	18,000	8.96	2,200	1,320	0.60	30	450	15.00	20	10	0.50
1990/91	2,370	28,030	11.83	2,330	1,390	0.60	30	450	15.00	20	10	0.50
1991/92	2,200	18,400	8.36	2,310	1,360	0.59	30	450	15.00	20	10	0.50
1992/93	2,250	20,250	9.00	1,820	1,090	0.60	30	450	15.00	20	10	0.50
1993/94	1,940	18,700	9.64	2,330	1,400	0.60	30	450	15.00	20	10	0.50

Source: Statistical Year Book of Nepal, CBS, 1989 and 1995

Table 3.5.1 Livestock Production in Makwanpur District

Livestock	Number
Cattle	76,963
Buffalo	30,325
Sheep	270
Goat	149,305
Pigs	3,400
Fowl	351,921
Duck	7,495

Source: Agricultural Statistics Nepal, CBS, 1993/94,

Table : 4.1.1 Topographical Distribution of Land in Sindhuli District

Land	Agriculture		Grazing	Forest	Others	Total
	Area	Cultivated				
High Mountain	0	0	0	70	0	70
Mid Mountain	17,116	13,349	1,110	62,043	1,409	95,027
Siwalik	22,369	6,012	304	116,017	7,910	152,612
Total	39,485	19,361	1,414	178,130	9,319	247,709

Source: Nepal District Profile, NRA, 1994

Table : 4.2.1 Population of Sindhuli District (1971-1991)

	1971	1981	1991
Total	147,409	183,705	223,900
Male	73,601	93,251	111,409
Female	73,808	90,454	112,490

Source: Population Census, CBS, 1971, 1981, 1991

Table : 4.3.1 Area, Production and Yield of Cereal Crops in Sindhuli District (1978/79 - 93/94)

Crops Year	Paddy			Wheat			Maize			Millet			Barley		
	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield
1978/79	7,830	15,660	2.00	3,150	3,780	1.20	9,100	16,350	1.80	2,050	2,400	1.17	100	80	0.80
1979/80	9,370	19,530	2.08	3,150	4,100	1.30	9,250	12,260	1.33	2,050	2,400	1.17	100	80	0.80
1980/81	9,400	19,680	2.09	3,200	4,160	1.30	9,150	14,640	1.60	2,040	2,390	1.17	220	190	0.86
1981/82	7,960	16,540	2.08	4,750	6,170	1.30	9,150	14,640	1.60	2,040	2,450	1.20	220	190	0.86
1982/83	5,530	10,960	1.98	3,650	4,380	1.20	5,900	9,440	1.60	2,040	2,450	1.20	220	200	0.91
1983/84	7,870	15,680	1.99	4,360	5,230	1.20	9,150	14,640	1.60	2,040	1,830	0.90	360	360	1.00
1984/85	11,770	21,290	1.81	4,990	4,490	0.90	22,530	31,540	1.40	2,260	2,260	1.00	300	270	0.90
1985/86	8,100	15,500	1.91	5,520	7,180	1.30	12,100	18,220	1.51	1,000	800	0.80	220	190	0.86
1986/87	8,040	14,220	1.77	4,950	6,430	1.30	11,700	17,700	1.51	1,000	800	0.80	230	210	0.91
1987/88	7,810	15,150	1.94	4,500	5,990	1.33	10,370	12,700	1.22	2,150	2,150	1.00	200	200	1.00
1988/89	6,300	12,720	2.02	4,200	5,880	1.40	10,000	14,240	1.42	2,160	2,180	1.01	210	200	0.95
1989/90	9,850	25,750	2.61	4,260	6,390	1.50	15,400	23,140	1.50	2,200	2,750	1.25	220	200	0.91
1990/91	10,820	28,190	2.61	4,250	6,350	1.49	17,000	26,410	1.55	3,300	4,130	1.25	210	200	0.95
1991/92	10,930	32,600	2.98	4,290	6,320	1.47	17,050	27,260	1.60	3,300	4,140	1.25	230	210	0.91
1992/93	9,710	21,850	2.25	4,300	6,060	1.41	19,350	33,090	1.71	3,800	4,750	1.25	240	200	0.83
1993/94	11,600	22,040	1.90	3,000	4,430	1.48	22,000	33,120	1.51	6,000	6,600	1.10	190	160	0.84

Source: Statistical Year Book of Nepal, CBS, 1989 and 1995

Table : 4.4.1 Area, Production and Yield of Cash Crops in Sindhuli District (1978/79 - 93/94)

Crops	Potato			Oilseed			Sugarcane			Tobacco		
	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield
1978/79	900	4,950	5.50	3,850	2,690	0.70	80	1,200	15.00	50	40	0.80
1979/80	950	4,750	5.00	3,500	2,100	0.60	100	1,550	15.50	60	50	0.83
1980/81	950	5,220	5.49	2,300	1,610	0.70	70	1,200	17.14	40	30	0.75
1981/82	950	5,460	5.75	2,500	1,500	0.60	70	1,120	16.00	50	40	0.80
1982/83	1,200	6,900	5.75	4,420	2,650	0.60	70	1,050	15.00	50	40	0.80
1983/84	1,050	7,240	6.90	3,540	2,650	0.75	110	1,650	15.00	50	40	0.80
1984/85	1,100	6,600	6.00	3,860	2,700	0.70	100	1,800	18.00	80	60	0.75
1985/86	1,200	5,080	4.23	3,860	2,120	0.55	70	1,050	15.00	50	30	0.60
1986/87	1,350	5,400	4.00	3,650	2,190	0.60	80	1,300	16.25	60	30	0.50
1987/88	1,300	9,750	7.50	4,760	2,860	0.60	100	1,500	15.00	50	30	0.60
1988/89	1,310	9,820	7.50	5,260	3,420	0.65	70	1,400	20.00	60	30	0.50
1989/90	1,300	10,410	8.01	5,300	3,710	0.70	80	2,000	25.00	60	40	0.67
1990/91	1,320	10,410	7.89	5,400	3,850	0.71	80	2,120	26.50	60	40	0.67
1991/92	1,300	10,470	8.05	5,430	2,900	0.53	80	1,920	24.00	60	50	0.83
1992/93	1,350	10,530	7.80	5,440	2,990	0.55	80	1,920	24.00	60	50	0.83
1993/94	1,350	11,310	8.38	4,060	1,170	0.29	80	1,980	24.75	60	50	0.83

Source: Statistical Year Book of Nepal, CBS, 1989 and 1995

Table : 4.5.1 Livestock Production in Sindhuli District

Livestock	Number
Cattle	120,860
Buffalo	44,475
Sheep	4,215
Goat	124,603
Pigs	11,591
Fowl	276,429
Duck	4,264

Source: Agricultural Statistics Nepal , CBS, 1993/94

Table 5.1.1 Grouping of vegetable crops by altitudes and season

	Summer/rainy season	Winter/rainy season
Highland and Hills	Chinese cabbage *	Cauliflower, broccoli
	Cauliflower *	Cabbage, Carrot
	Cabbage *	Radish
	Radish *	Peas
	Bean, Onion *	Onion
	Peas	Carrot
	Cucumber	Lettuce
	Chilies, tomato, Carrot *, Eggplant	Rayo
Lowland and Terai	Watermelon	Tomato
	Cucumber	Eggplant
	Okra	Capsicum
	Pumpkin	Cauliflower
	Amaranthus	Cabbage
	Bitter gourds	Raddish
	Bottle gourds	Peas
	Sponge gourds	Beans
	Parwal	Winter sqash
	Tomato *	Onion
	Radish *	Carrot
	Cauliflower *	Squash *
	Cabbage *	Swisschard *
	Carrot *	

Note : * Improved or hybrid varieties suitable for adverse climatic conditions.

Source : Fresh Vegetable and Vegetable Seed Production Project, HMG/N, MoA-DoAD FAO, 1995

Table : 5.2.1 Monthly (Average) Wholesale Price of Some Fruits and Vegetable of Kaimati Market of Kathmandu, Year: 2051 (1994/95)

Unit :Rs/Kg		Baishak Apr/May	Jestha May/June	Ashad June/July	Shrawan July/Aug	Bhadra Aug/Sep	Aswin Sep/Oct	Kartia Oct/Nov	Marga Nov/Dec	Poush Dec/Jan	Magh Jan/Feb	Falgun Feb/Mar	Chaitra Mar/Apr	Average
S.N	Commodities													
1	Amar	27.50	13.73	7.74	28.05	30.45	19.28	30.09	42.40	41.98	33.01	36.61	52.50	23.44
2	Bhindekursani	10.67	6.69	14.79	16.09	15.79	12.47	18.53	16.64	23.00	20.84	22.08	18.86	27.24
3	Bhindi	9.33	9.80	7.57	7.92	7.45	15.20	15.72	15.56	12.03	11.56	11.00	18.31	14.07
4	Bodi	10.81	3.71	14.44	13.74	13.53	13.53	14.34	14.22	8.82	5.71	4.90	5.58	13.47
5	Cabbage	4.53	5.15	6.80	6.80	6.81	13.53	14.34	14.22	8.82	5.71	4.90	5.58	7.84
6	Cauliflower	16.10	10.81	16.75	18.13	26.65	18.41	16.87	14.67	10.80	9.69	11.18	11.26	15.11
7	Chlohindo	7.79	10.46	9.27	7.70	6.14	6.46							8.01
8	Cucumber	8.99	16.65	13.30	12.80	10.46	10.70	9.81	16.64	14.81	39.33	34.58	15.61	16.14
9	Dhaniya	26.53	29.10	34.20	32.50		38.13	36.91	33.75	32.31	31.38	31.60	33.33	32.70
10	D. Bhanu	6.46	4.99	4.60	5.86	4.63	6.27	8.27	7.14	5.82	4.71	6.13	6.96	5.98
11	Dry Fish	52.08	50.83	49.35	65.30	55.00	57.50	58.75	62.50	55.36		52.50		55.92
12	Dry Garlic	21.86	20.19	23.91	27.73	33.61	33.88	30.13	40.23	43.68	54.73	43.17	24.19	33.11
13	Dry Khursani	44.25	52.70	49.53	55.13	25.25	51.50	69.50	64.17	62.17	54.07	49.38	58.28	52.99
14	Dry Onion	4.78	5.38	6.85	7.43	10.24	10.63	12.91	10.27	8.54	6.68	5.38	5.96	7.92
15	Gajar	13.49	13.50	14.86	18.49	32.34	30.95	32.37	30.39	25.79	26.51	20.66	18.01	23.11
16	Ghiraula	9.13	8.38	7.49	7.54	6.46	6.17	6.44		21.00		13.25	12.11	9.85
17	Ginger	29.16	28.43	27.22	26.16	17.01	17.18	17.96	15.65	16.15	19.81	23.03	28.23	22.16
18	Green Garlic	8.21	8.62	8.90				15.20	10.23	9.82	11.77	11.03	17.18	11.22
19	Green Mango	8.19	8.46	7.36	10.25						10.37	10.43	16.25	10.19
20	Green Onion	8.84	8.97	8.87	10.50								11.04	9.70
21	G. Simi	11.31	10.00	12.94	12.89	14.24	18.11	15.88	14.57	11.53	12.94	8.89	9.54	12.73
22	G. Khursani	10.04	11.29	9.74	10.24	15.68	17.14	16.76	21.18	13.84	17.24	20.39	17.95	15.12
23	Lauka	6.34	5.58	6.01	7.69	7.07	6.43	7.57	6.50	7.76	4.70	5.68	6.21	6.46
24	Lemon	37.40	38.67	31.19	28.55	28.99	27.95	26.59	26.22	25.23	33.26	37.89	49.63	32.63
25	Lichi	24.75	21.00	19.43		9.50								18.67
26	Matarkosa	13.42	26.20	14.99	10.40			19.46	16.78	10.83	8.96	10.53	16.78	15.52
27	Methi Ko Sag	9.39	9.45	9.25										9.36
28	Naspati	7.50	9.13	9.13	7.89	6.48	7.69	7.45						7.69
29	Papaya	17.73	18.78	17.40	17.45	18.53	16.33	17.50	16.88	16.50	17.36	17.86	17.85	17.51
30	Pidalu	7.50			9.99	8.19		7.51	8.23	9.45	8.10	10.09	12.00	9.00
31	Pointed Gaurd	14.07	11.55	8.22	10.32	10.77	13.99	12.70	13.19	10.98		38.07		14.39
32	Red Bhanu	7.27	4.66	5.37	5.23	5.00	6.50							5.67
33	Red Potato	5.45	6.48	7.54	9.29	9.81	10.31	11.24	10.19	6.53	5.50	5.08	5.08	7.71
34	Red Radish	5.86	5.37	5.03	4.10	4.78	5.67	5.53	4.86	4.33	5.44	8.49	5.77	5.27
35	Salgum	7.01	6.81	6.71	7.17	6.95	8.29	7.78	7.43	5.83	6.25	6.65	6.92	6.98
36	Tama	22.05	25.50	23.60	20.30	17.90	16.90	16.73	16.10	22.07	20.71	17.50	18.44	20.06
37	Tite Karela	10.05	8.23	8.83	10.52	10.22	13.58	15.59	17.44	13.83	9.11	21.14	10.182	14.63
38	Tomato	7.88	7.82	13.00	22.11	18.20	25.07	24.36					13.88	14.85
39	Tree Karahar	7.38	8.47	6.13	8.94	9.50							19.00	10.50
40	White Bhanu	5.91	4.38	6.11	5.67	4.89	6.14	5.76	5.06	5.15	3.98	5.43	6.27	5.42
41	White Potato	4.52	5.12	5.84	7.32	7.58	6.54	10.45	9.06	5.25	5.19	4.82	5.30	6.41
42	White Radish	6.50	6.50	5.84	3.97	4.77	5.15	4.50	3.67	4.19	4.70	3.88	4.41	4.55

Source : Agricultural Marketing Information Bulletin Special Issue, Department of Agriculture Development, Agricultural Marketing Development Division, 1995

Table : 5.3.1 Land holding Size in Palung VDC and Ward No. 9

Area in Ropani	Households No.			
	Ward No. 9	Percentage to Total	Palung VDC	Percentage to Total
Landless	22	8.4	84	8.8
0 to 5	66	25.2	302	31.8
5 to 10	70	26.7	257	27.1
10 to 20	72	27.5	217	22.8
20 and above	32	12.2	90	9.5
Total	262	100.0	950	100.00

Source : Palung VDC

- Note : (1) The average estimated size of land holding in Ward No. 9 is about 12.5 ropani and for the whole VDC is about 13 ropani (1.9 ropani of Khet land and 11.1 ropani of Pakho land)
- (2) In Palung VDC total agricultural land is 11,219 ropani (561 ha) of which 1,625 ropani (81 ha) is Khet land and 9,594 ropani (480 ha) is Pako land.

Table : 5.4.1 Cost of Production and Net Profit from Potato and Cauliflower

	Potato	Cauliflower
Yield Kg/Ropani	1,000	800
Value (Rs)	6,000	14,400
Cost Per Ropani (Variable and Fixed cost Rs)	4,623	3,044
Marketing Cost (Rs)	250	200
Total Cost (Rs)	4,873	3,244
Net Profit	1,127	11,156

Source : Hearing Survey by the Study Team, 1996

Table : 6.3.1 Some Medicinal Herbs and its Cost of Production and Net Profit

Name of Medicinal Herbs	Planting Season	Expenditure Per ha (Rs)	Average Production per ha/kg	Price per kg (Rs)	Annual Income per ha. (Rs)	Net Income Per year (Rs)
1. CHIRAITO (Swertia Chirayita)	Feb/Mar to Apr/May	21,190 (Rs. 1,060 per Ropani)	1,000 (50 kg per Ropani)	50	50,000 (Rs. 2,500 per Ropani)	28,810 (Rs. 1,440 Per Ropani)
2. JATAMANSI (Nardostachys Jatamansi DC.)	Mar/Apr	14,400 Rs. 720 per Ropani)	750 (38 kg per Ropani)	30	22,500 (Rs. 1,125 per Ropani)	8,100 (Rs. 405 Per Ropani)
3. Sugandhawal (Valeriana Wallichii)	Feb/Mar (can be harvested after two years)	44,000 (Rs. 2,200 per Ropani)	3,000 (150 kg per Ropani)	45	135,000 (Rs. 6,750 per Ropani)	91,000 (Rs. 4,550 Per Ropani)
4. Paakhan Ved (bergenia Ciliata)	-	-	-	-	-	-
5. Indrayani, Indreni	-	-	-	-	-	-

Source : Nepal Herb Production and Processing Company Ltd.

**Table : 7.2.1 National Annual Average Retail Price of Some Agricultural Commodities
(1984/85 – 1994/95)**

S.No.	Commodities	84/85	85/86	86/87	87/88	88/89	89/90	90/91	91/92	92/93	93/94	94/95
1	Paddy Coarse	2.65	3.00	3.52	4.39	4.68	5.57	-	-	-	-	-
2	Paddy Medium	3.40	3.54	3.86	4.67	5.78	7.56	-	-	-	-	-
3	Paddy Fine	3.28	3.49	4.25	5.13	6.22	7.15	-	-	-	-	-
4	Rice Coarse	5.28	5.40	6.56	7.00	7.65	7.73	7.70	9.81	11.41	11.54	12.45
5	Raw Rice Medium	6.14	6.63	7.77	8.63	8.19	9.20	9.09	11.71	13.57	14.09	12.19
6	Raw Rice Fine	6.64	7.26	8.25	9.20	10.36	11.03	12.57	14.18	16.57	17.99	19.11
7	Parboiled Rice	4.33	4.73	5.77	6.90	7.15	7.40	7.39	9.30	10.77	12.01	12.79
8	Flattened Rice	9.10	9.15	10.32	11.71	9.51	11.67	13.18	14.76	16.45	16.90	18.55
9	Wheat	3.14	3.89	4.17	4.87	5.91	5.68	5.67	7.16	7.68	7.46	8.74
10	Wheat Flour	4.71	4.50	5.74	6.33	7.21	6.75	7.27	9.17	10.61	10.09	11.68
11	Maize	2.88	3.62	3.79	4.36	4.73	4.81	4.76	6.19	6.96	6.35	8.00
12	Millet	3.17	4.11	4.58	5.06	5.88	6.09	6.86	7.96	8.89	-	-
13	Blackgram	9.91	11.72	12.02	13.90	16.44	18.78	20.49	21.61	23.03	21.98	30.86
14	Arahar	10.83	11.08	12.51	16.54	19.45	19.52	22.28	27.05	28.52	26.48	32.91
15	Greengram	9.48	13.75	14.73	15.57	21.63	22.40	23.53	24.29	28.02	29.89	31.82
16	Lentil broken	6.89	10.27	10.67	10.76	14.62	15.39	16.71	20.95	22.28	21.40	24.67
17	Soyabean	6.17	7.62	8.15	9.53	11.29	13.65	13.53	13.26	15.64	15.13	18.11
18	Ghee purified	49.93	56.01	59.91	70.63	78.99	81.74	94.12	114.3	121.1	120.9	126.1
19	Mustard Oil	26.69	25.25	32.25	45.54	44.07	40.23	47.99	61.19	55.18	53.55	57.57
20	Mustard Seed	7.90	7.88	12.22	14.98	13.83	12.38	15.39	21.75	20.96	18.93	-
21	Mutton	28.90	33.31	40.21	46.58	43.00	55.50	66.65	75.18	84.12	89.98	95.53
22	Chicken	32.30	35.69	41.98	48.64	52.81	60.54	66.94	69.87	75.48	84.42	87.21
23	Buff Meat	13.74	13.74	17.15	20.47	21.57	24.05	27.36	31.57	34.83	37.19	43.87
24	Pork	17.85	19.53	21.18	25.83	27.09	28.87	38.76	41.72	45.90	-	-
25	Fish Fresh	24.67	25.07	32.81	37.86	41.22	46.10	50.86	57.10	65.90	67.95	67.53
26	Hen Egg	1.30	1.39	1.53	1.73	1.95	2.24	2.31	2.42	2.63	2.93	3.20
27	Milk	4.88	5.36	6.31	7.15	7.57	8.64	9.57	11.01	11.47	12.72	13.31
28	Jute	8.11	7.06			7.13				11.79	-	-
29	Tobacco	28.12	38.69	45.64	44.11	55.15	63.70	48.08	51.35	57.24	-	-
30	Potato	2.80	3.43	4.75	4.47	4.68	5.69	5.67	6.28	6.15	7.20	8.18
31	Onion	4.84	4.95	5.92	8.73	7.92	8.28	10.68	9.52	9.16	13.40	13.79
32	Tomato	6.75	8.34	8.43	10.97	10.50	11.61	12.50	14.25	14.56	16.81	18.74
33	Radish	2.59	2.75	3.39	3.97	3.92	4.61	4.59	4.45	4.74	-	-
34	Ginger	10.14	8.06	8.11	13.46	17.22	15.55	15.27	15.30	16.28	21.86	29.02
35	Chilli Dry	26.03	32.49	27.99	30.46	49.42	48.16	41.07	71.10	81.32	53.95	62.32
36	Orange	1.26	1.34	1.26	1.85	2.05	1.98	2.80	2.14	-	-	-
37	Lemon	0.55	0.57	0.59	0.69	0.75	0.87	1.02	0.79	-	-	-
38	Apple	9.45	11.70	18.96	23.38	28.03	29.45	30.04	32.86	-	-	-

Source : Agricultural marketing Information Bulletin 2052
HMG Ministry of Agriculture

Table : 7.3.1 Land Holding Size in Namtar VDC & Ward No. 2

Area in Ropani	Households No			
	ward No. 2	% to Total	VDC	% to Total
Landless	11	7.7	53	4.2
0 to 5	33	23.1	265	21.1
5 to 10	54	37.8	315	25.1
10 to 20	25	17.5	472	37.6
20 and above	20	13.9	151	12.0
Total	143	100.0	1256	100.0

Source : Namtar VDC

Note : (1) The average land holding size of households in the whole Namtar VDC excluding landless farmers is 10.9 ropani (2.9 ropani Khet land and 8.0 ropani Pakho land)
(2) The average land holding size of the households in ward No. 2 is 10.9 ropani (4.5 ropani Khet land and 6.4 ropani of Pako land).

Table : 7.4.1 Cost of Production and Net Profit of some Main Crops.

Rops	Yield Kg/ropani	Value (Rs)	Cost Per ropani (Variable and Fixed Cost Rs)	Marketing Cost (Rs)	Total Cost (Rs)	Net Profit (Rs)
(1) Paddy	200	900	1,246	200	1,446	-546
(2) Maize	200	1,060	1,318	200	1,260	-458
(3) Wheat	100	600	928	100	1,028	-428
(4) Potato	600	3,600	2,160	600	2,760	840
(5) Cauliflower	1,200	10,800	1,525	1,200	2,725	8,075
(6) Ginger	1,000	14,000	3,478	1,000	4,478	9,522
(7) Garlic	750	13,500	3,364	750	4,114	9,386

Source : The Hearing Survey by the Study Team, 1996

Table : 9.2.1 Land Holding Size in Agra VDC and Ward No. 4

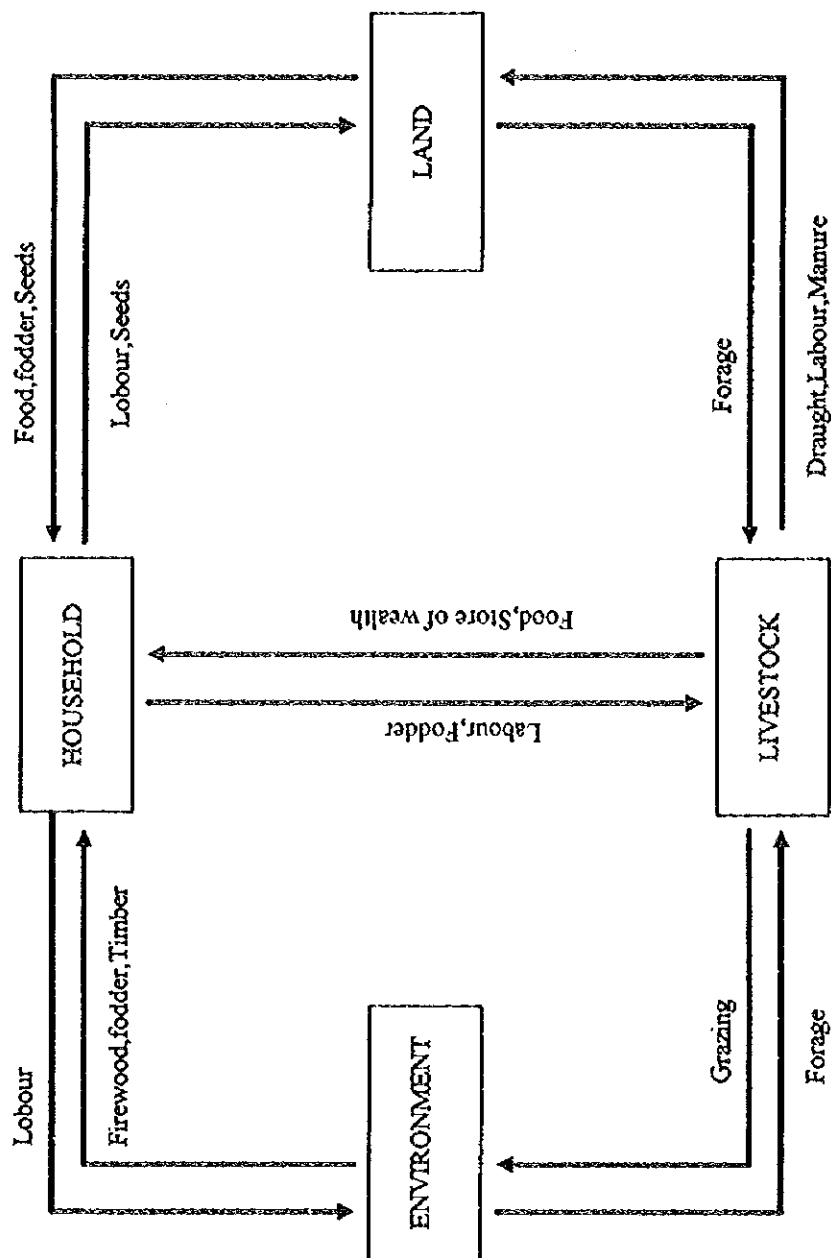
Area in Ropani	Households No			
	Ward No. 9	% to Total	VDC	% to Total
Landless	0	0	2	0.2
0 to 5	2	1.6	40	3.3
5 to 10	33	26.4	158	13.2
10 to 20	80	64.0	700	58.3
20 and above	10	8.0	300	25.0
Total	125	100.0	1,200	100.0

Source : Hearing with VDC Chairman

Table : 9.4.1 Cost of Production and Net Profit from Potato and Cauliflower Production in Chisapani

	Potato	Cauliflower
Yield Kg/Ropani	1,300	950
Value (Rs)	7,800	17,100
Cost per Ropani (Rs) (Variable and Fixed Cost)	4,660	4,558
Marketing Cost (Rs)	1,625	1,188
Total Cost (Rs)	6,285	5,746
Net Profit (Rs)	1,515	11,345

Source : Based on Hearing Survey



Source: HMG/SATA Tinau Watershed Management Plan, Kathmandu, 1980, P. 51

Fig. 2.3.1
Interactions of the Simplified Subsistence
Farming Systems

<p><i>His Majesty's Government of Nepal</i> Ministry of Forest and Soil Conservation/Department of Soil Conservation</p> <p>THE STUDY ON THE DISASTER PREVENTION PLAN FOR SEVERELY AFFECTED AREAS BY 1993 DISASTER IN THE CENTRAL DEVELOPMENT REGION OF NEPAL.</p> <p>JAPAN INTERNATIONAL COOPERATION AGENCY</p>

Crops	January	February	March	April	May	June	July	August	September	October	November	December	Remarks
1. Potato		Sow			Harvest								
2. Cauliflower						Planted		Harvest					
3. Cabbage						Planted		Harvest					
4. Mustard			Harvest								Sow		
5. Maize			Sow					Harvest					
6. Wheat					Harvest						Sow		
7. Paddy							Planting			Harvest			
8. Millet		Harvest					Planted					Harvest	
9. Carrot			Sow			Harvest							

Fig. 5.1.1
Seasonal Calendar of Main Crops in
Phedigaon/Phatbazar

His Majesty's Government of Nepal
 Ministry of Forest and Soil Conservation/Department of Soil Conservation
 THE STUDY ON THE DISASTER PREVENTION PLAN
 FOR SEVERELY AFFECTED AREAS BY 1993 DISASTER
 IN THE CENTRAL DEVELOPMENT REGION OF NEPAL.
 JAPAN INTERNATIONAL COOPERATION AGENCY

PRODUCE	PERIOD OF THE YEAR											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
BEANS (SIMI)											
BITTER GOURD					
BOTTLE GOURD					
CABBAGE											
CAPSICUM											
CARROT											
CAULIFLOWER											
CUCUMBER			
EGG PLANT											
OKRA					
ONION							
PARWAL											
PEAS											
POTATO											
RADISH											
RAYO											
TOMATO											

Source : Fresh Vegetable and Vegetable Seed Production Project, Nepal
HMG/N-MoA-DoAD-Vegetable Development Division
Food and Agriculture Organisation of the United Nations
Kathmandu, August 1995

Fig. 5.1.2
Low Supply of Important Vegetables in Terai Markets by Month

His Majesty's Government of Nepal
Ministry of Forest and Soil Conservation/Department of Soil Conservation
THE STUDY ON THE DISASTER PREVENTION PLAN FOR SEVERELY AFFECTED AREAS BY 1993 DISASTER IN THE CENTRAL DEVELOPMENT REGION OF NEPAL
JAPAN INTERNATIONAL COOPERATION AGENCY

PRODUCE	PERIOD OF THE YEAR											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
BEANS (SIMI)	*****											*****
BITTER GOURD	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
BOTTLE GOURD	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
CABBAGE					*****	*****	*****	*****	*****	*****	*****	*****
CAPSICUM	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
CARROT			*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
CAULIFLOWER			*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
EGG PLANT	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
OKRA	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
ONION	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
PARWAL	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
PEAS		*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
POTATO	*****											*****
RADISH		*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
RAYO		*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
TOMATO	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****

Source : Fresh Vegetable and Vegetable Seed Production Project, Nepal
HMG/N-MoA-DoAD-Vegetable Development Division
Food and Agriculture Organisation of the United Nations
Kathmandu, August 1995

Fig.5.1.3
Low Supply of Important Vegetables
in Hills Markets by Month

His Majesty's Government of Nepal
Ministry of Forest and Soil Conservation/Department of Soil Conservation
THE STUDY ON THE DISASTER PREVENTION PLAN
FOR SEVERELY AFFECTED AREAS BY 1993 DISASTER
IN THE CENTRAL DEVELOPMENT REGION OF NEPAL
JAPAN INTERNATIONAL COOPERATION AGENCY

Crops	January	February	March	April	May	June	July	August	September	October	November	December	Remarks
I. Khet Land													
(1) Paddy						Planting	Planting		Harvesting	Harvesting	Harvesting		Early Paddy Late Paddy
(2) Wheat			Harvesting							Sowing			
(3) Maize		Sowing				Harvesting							
(4) Potato		Harvesting								Sowing			
(5) Cauliflower		Harvesting								Planting			
(6) Mustard			Harvesting							Sowing			
(7) Tomato			Planting				Harvesting						
(8) Garlic			Harvesting								Sowing		
II. Pakho Land													
(1) Maize					Sowing			Harvesting					
(2) Cauliflower or Cabbage								Planting			Harvesting		
(3) Potato		Harvesting							Sowing				
(4) Mustard		Harvesting							Sowing				
(5) Ginger		Harvesting	Planting										It can be harvest ed according to market prices

Fig. 7.1.1
Seasonal Calendar of Main Crops in
Namtar

His Majesty's Government of Nepal
Ministry of Forest and Soil Conservation/Department of Soil Conservation
THE STUDY ON THE DISASTER PREVENTION PLAN
FOR SEVERELY AFFECTED AREAS BY 1973 DISASTER
IN THE CENTRAL DEVELOPMENT REGION OF NEPAL
JAPAN INTERNATIONAL COOPERATION AGENCY

Crops	January	February	March	April	May	June	July	August	September	October	November	December	Remarks
1. Potato		Sow					Harvest						
2. Cauliflower Cabbage					Planted			Harvest		Harvest			
3. Carrot				Sow					Harvest				
4. Barely	Harvest							Sow				Harvest	
5. Maize				Sow				Harvest					

Fig. 9.1.1
Seasonal Calendar of Main Crops in
Chisapani

His Majesty's Government of Nepal
 Ministry of Forest and Soil Conservation/Department of Soil Conservation
 THE STUDY ON THE DISASTER PREVENTION PLAN
 FOR SEVERELY AFFECTED AREAS BY 1973 DISASTER
 IN THE CENTRAL DEVELOPMENT REGION OF NEPAL
 JAPAN INTERNATIONAL COOPERATION AGENCY