

District Model Land Use Plan District – Azamgarh Uttar Pradesh

Final Report

By

Bimal Kumar

Sponsored By

State Land Use Board, Uttar Pradesh
Department of Planning, Government of U. P.
Yojana Bhawan, Lucknow – 226 001



G. B. Pant Social Science Institute
Jhusi, Allahabad – 211 019

Phone: (0532) 667214, 667206, Fax: (0532) 667206, E-mail: bimal1950@rediffmail.com

Study Team

Project Director

Sri Bimal Kumar

Research Assistants

Mohd. Israil

Sri Gyan Nath Jha

Research Investigators

Sri Atul Mishra

Sri Sandeep Srivastava

Sri Ashok Kumar Dwivedi

Computer Assistant

Sri Sandip Kumar Jaiswal

Contents

	Study Team	i
	Contents	ii-iv
	List of Tables	v-xi
	Preface	xii
	Location Map	xiii
Chapter - 1	Introduction	1-5
	1.1 Relevance of Study	2
	1.2 Objectives	3
	1.3 Methodology	3
	1.4 Data Source	3-4
	SECTION - I	
Chapter - 2	Population and Land Resources	6-12
	2.1 Demographic Profile	6-7
	2.1.1 Settlement	6
	2.1.2 Urbanisation	7
	2.2 Population	7-8
	2.3 Occupational Structure	8-10
	2.3.1 Block-wise Analysis of Occupational Structure	10
	2.4 Distribution of Landholdings	11-12
Chapter - 3	PART-A: Land Use Related to Agriculture	13-37
	3.1 Net Sown Area	13
	3.2 Cropping Intensity	13
	3.3 Irrigation	14
	3.4 Gross Irrigated Area as Percentage of Net Irrigated Area	14-16
	3.5 Source of Irrigation	17-21
	3.6 Cropping Pattern	21-26
	3.7 Fertilizer Use	26-28
	3.8 Extent of Mechanisation	29-30
	3.9 Livestock	31-32
	PART-B: Land Use Plan Related to Agricultural Land	33-37
	3.10 Agricultural Production System and Framework for Land Use Plan	34-35
	Factors Inhibiting Growth	35
	Framework of Agricultural Work	35-36
	3.11 Model for Restructuring Farming System	36-37
	Collective Farming Society	36-37
	Confederation of Collective Farming Societies	37
Chapter - 4	Land Use Plan (Other than Agricultural Land)	38-91

PART-A		
4.1	District Level Analysis of Land Use Pattern and Land Use Plan	38-43
4.1.1	Forest	38-39
4.1.2	Land Put to Non-agricultural Uses	39-41
4.1.3	Barren and Unculturable Land	41
4.1.4	Culturable Waste Land	41-42
4.1.5	Land under Miscellaneous Trees, Crops, and Groves not included in Net Sown Area	42-43
4.2	Some General Suggestions	44-49
4.2.1	District Level	44
4.2.2	Block Level	44-48
4.2.3	Village Level	48-49

PART-B		
4.3	Block-wise Analysis of Land Use Pattern and Land Use Plan	50-91
4.3.1	Block – Maharajganj	50-51
4.3.2	Block – Bilariyaganj	52-53
4.3.3	Block – Harriya	54-55
4.3.4	Block – Azmatgarh	56-57
4.3.5	Block – Mirzapur	58-59
4.3.6	Block – Mohammadpur	60-61
4.3.7	Block – Tahbarpur	62-63
4.3.8	Block – Palhani	64-65
4.3.9	Block – Rani-Ki-Sarai	66-67
4.3.10	Block – Sathiyav	68-69
4.3.11	Block – Jahanaganj	70-71
4.3.12	Block – Atrauliya	72-73
4.3.13	Block – Koylasa	74-75
4.3.14	Block – Ahiraula	76-77
4.3.15	Block – Pawai	78-79
4.3.16	Block – Phulpur	80-81
4.3.17	Block – Martinganj	82-83
4.3.18	Block – Thekma	84-85
4.3.19	Block – Lalganj	86-87
4.3.20	Block – Mehnagar	88-89
4.3.21	Block – Tarvan	90-91

SECTION – II		
Chapter - 5	Village Level Plan (Based on Village Level Survey)	92-160
	5.1 Village Study – I (Village-Jalalpur, Block-Bilariyaganj)	93-109
	(A) Village Profile	93-97
	5.1.1 Land Use Pattern	93
	5.1.2 Demographic Profile	94
	5.1.3 Land Ownership	95
	5.1.4 Occupational Structure	96
	5.1.5 Livestock	97
	5.1.6 Housing Condition	97
	(B) <i>Responses of Selected Households in Village Jalalpur</i>	98-108
	5.1.7 Change in Size of Land Holding	98-99
5.1.8 Conversion of Agricultural Land for Non-agricultural Purposes	100	
5.1.9 Land Reclamation	101	
5.1.10 Water Harvesting	102-103	
5.1.11 Orchards	104-105	

5.1.12 Livestock	106
5.1.13 Agriculture	107-108
(C) Land Use Plan for Jalalpur Village	
5.2 Village Study – II (Village-Surjipur, Block-Bilariyaganj)	110-126
(A) Village Profile	110-114
5.2.1 Land Use Pattern	110
5.2.2 Demographic Profile	111
5.2.3 Land Ownership	112
5.2.4 Occupational Structure	113
5.2.5 Livestock	114
5.2.6 Housing Condition	114
(B) Responses of Selected Households in Village Surjipur	
5.2.7 Change in Size of Land Holding	115-116
5.2.8 Conversion of Agricultural Land for Non-agricultural Purposes	117
5.2.9 Land Reclamation	118
5.2.10 Water Harvesting	119-120
5.2.11 Orchards	121-122
5.2.12 Livestock	123
5.2.13 Agriculture	124-125
(C) Land Use Plan for Surjipur Village	
5.3 Village Study – III (Village - Bargahan, Block – Thekma)	127-143
(A) Village Profile	127-131
5.3.1 Land Use Pattern	127
5.3.2 Demographic Profile	128
5.3.3 Land Ownership	129
5.3.4 Occupational Structure	130
5.3.5 Livestock	131
5.3.6 Housing Condition	131
(B) Responses of Selected Households in Village Bargahan	
5.3.7 Change in Size of Land Holding	132-133
5.3.8 Conversion of Agricultural Land for Non-agricultural Purposes	134
5.3.9 Land Reclamation	135
5.3.10 Water Harvesting	136-137
5.3.11 Orchards	138-139
5.3.12 Livestock	140
5.3.13 Agriculture	141-142
(C) Land Use Plan for Bargahan Village	
5.4 Village Study – IV (Village – Madanpur, Block – Thekma)	144-160
(A) Village Profile	144-148
5.4.1 Land Use Pattern	144
5.4.2 Demographic Profile	145
5.4.3 Land Ownership	146
5.4.4 Occupational Structure	147
5.4.5 Livestock	148
5.4.6 Housing Condition	148
(B) Responses of Selected Households in Village Madanpur	
	149-159

	5.4.7 Change in Size of Land Holding	149-150
	5.4.8 Conversion of Agricultural Land for Non-agricultural Purposes	151
	5.4.9 Land Reclamation	152
	5.4.10 Water Harvesting	153-154
	5.4.11 Orchards	155-156
	5.4.12 Livestock	157
	5.4.13 Agriculture	158-159
		160
	(C) Land Use Plan for Madanpur Village	
Chapter - 6		161-199
	Conclusion and Recommendations	
	6.1 Land Use Plan Related to Agricultural Land	161-166
	6.2 District Level Analysis of Land Use Pattern and Land Use Plan (Other than Agricultural Land)	166-170
	6.3 Some General Suggestions	170-176
	6.3.1 District Level	170-170
	6.3.2 Block Level	170-174
	6.3.3 Village Level	174-176
	6.4 Block Level Plan for Year 2010	177-197
	6.5 Village Level Plan for Selected Villages	198-199
	6.5.1 Land Use Plan for Jalalpur Village	198
	6.5.2 Land Use Plan for Surjipur Village	198
	6.5.3 Land Use Plan for Bargahan Village	198
	6.5.4 Land Use Plan for Madanpur Village	199
Appendix-1	List of Harbal Plants	200-208
Appendix-2	खगु उ{क= okfVdkvka dk jki .k	209-210

List of Tables

Tables	Title	Page. No.
2.1.1	Settlement Profile of the District Azamgarh	6
2.2.1	Growth Rate of Population in District Azamgarh	7
2.2.2	Demographic Profile of the District Azamgarh	8
2.3	Classification of Workers in the District Azamgarh (In percent)	9
2.3.1	Block-wise Distribution of Workers by Economic Category in Azamgarh District, (in percent)	10
2.4	Block-wise Distribution of Landholding (Size & Area) in Azamgarh District (In percent)	11
2.4.1	Block-wise Distribution of Landholding (Size & Area) in Azamgarh District (In percent)	11
2.4.2	Block-wise Distribution of Landholding (Size & Area) in Azamgarh District (In percent)	12
3.1	Year-wise Irrigation and Cropping Intensity of Azamgarh District	14
3.1.1	Block-wise Cropping Intensity in Azamgarh District	15
3.1.2	Block-wise Net Sown Area as % of Total Reporting Area	15
3.1.3	Block-wise Irrigation Intensity in Azamgarh District	16
3.1.4	Block-wise Gross Irrigated Area as % of Net Irrigated Area	16
3.2	Year-wise Irrigated Area by Different Sources in Azamgarh District, (in Percent)	18
3.2.1	Block-wise Irrigated Area by Different Sources in Azamgarh District (in Percent)	19-21
3.3(a)	Area Under Major Crops and Productivity (as percentage of net sown area) (Qt./Hectare) in Azamgarh District	22
3.3(b)	Cropping Patter in Azamgarh District, Area under Different Crops as %age of Net Sown Area	23
3.3.1	Block-wise Cropping Pattern in Azamgarh District, (in Percent)	24-26
3.4.1	Use of Fertiliser in Azamgarh District (in MT)	27
3.4.2	Block-wise Use of Fertiliser in Azamgarh District (in MT)	27-28
3.5.1	Technology Available in Azamgarh District	29
3.5.2	Block-wise Technology Available in Azamgarh District	29-30
3.6.1	Details of Livestock in Azamgarh District	31
3.6.2	Block-wise Details of Livestock in Azamgarh District	32
4.1	Total Reporting Area (TRA) and Land Use Pattern in Azamgarh District, (in percent)	43
4.3.1	Total Reporting Area (TRA) and Land Use Pattern in Mahrajganj Block, (in percent)	50
4.3.2	Total Reporting Area (TRA) and Land Use Pattern in Bilariyaganj Block, (in percent)	52
4.3.3	Total Reporting Area (TRA) and Land Use Pattern in Harriya Block, (in percent)	54
4.3.4	Total Reporting Area (TRA) and Land Use Pattern in Azmatgarh Block, (in percent)	56
4.3.5	Total Reporting Area (TRA) and Land Use Pattern in Mirzapur Block, (in percent)	58
4.3.6	Total Reporting Area (TRA) and Land Use Pattern in Mohammadpur Block, (in percent)	60
4.3.7	Total Reporting Area (TRA) and Land Use Pattern in Tahbarpur Block, (in percent)	62

4.3.8	Total Reporting Area (TRA) and Land Use Pattern in Palhani Block, (in percent)	64
4.3.9	Total Reporting Area (TRA) and Land Use Pattern in Rani-ki-Sarai Block, (in percent)	66
4.3.10	Total Reporting Area (TRA) and Land Use Pattern in Sathiyav Block, (in percent)	68
4.3.11	Total Reporting Area (TRA) and Land Use Pattern in Jahanaganj Block, (in percent)	70
4.3.12	Total Reporting Area (TRA) and Land Use Pattern in Atraulia Block, (in percent)	72
4.3.13	Total Reporting Area (TRA) and Land Use Pattern in Koyalasa Block, (in percent)	74
4.3.14	Total Reporting Area (TRA) and Land Use Pattern in Ahiraula Block, (in percent)	76
4.3.15	Total Reporting Area (TRA) and Land Use Pattern in Pawai Block, (in percent)	78
4.3.16	Total Reporting Area (TRA) and Land Use Pattern in Phulpur Block, (in percent)	80
4.3.17	Total Reporting Area (TRA) and Land Use Pattern in Martinganj Block, (in percent)	82
4.3.18	Total Reporting Area (TRA) and Land Use Pattern in Thekma Block, (in percent)	84
4.3.19	Total Reporting Area (TRA) and Land Use Pattern in Lalganj Block, (in percent)	86
4.3.20	Total Reporting Area (TRA) and Land Use Pattern in Mehnagar Block, (in percent)	88
4.3.21	Total Reporting Area (TRA) and Land Use Pattern in Tarwan Block, (in percent)	90
5.1.1	Land Use Pattern in the Jalalpur Village of the Azamgarh District	93
5.1.2.1	Caste and Gender-wise Distribution of Population in the Village Jalalpur	94
5.1.2.2	Caste and Gender-wise Distribution of Education in the Village Jalalpur	94
5.1.3.1	Distribution of Per Family/Per Adult Size of Landholdings in Different Size Groups in the Village Jalalpur	95
5.1.3.2	Caste-wise Distribution of Landholdings in Different Size Groups in the Village Jalalpur	95
5.1.4.1	Present and Past Occupations of Households in the Village Jalalpur	96
5.1.4.2	Caste and Gender-wise Distribution of Occupation of Workers in the Village Jalalpur	96
5.1.5	Distribution of Animal in Different Categories of Landholding Size Groups Households in the Village Jalalpur	97
5.1.6	Caste-wise Distribution of Housing Condition in the Village Jalalpur	97
5.1.7.1	Caste and Landholding wise Distribution of Selected Households in Villages Jalalpur	98
5.1.7.2	Reason of Changes in Total Land Owned During the Last 20 years in Selected Households	98
5.1.7.3	Number of Households Whose Landholding Increased	99
5.1.7.4	Number of Households Whose Landholding Decrease	99
5.1.8.1	Reason of Conversion of Agricultural land for Non-agricultural Uses of Owned Land by Selected Households	100
5.1.8.2	Reasons of Conversion of Agricultural Land for Non-agricultural Purposes in the Village (As Suggested by Respondents)	100
5.1.8.3	Distribution of Respondents on the Basis of Responses to Query "Reasons for not cultivating the agriculture land"	100
5.1.9.1	Distribution of Responses to the query "Barren land could be put to which uses"	101
5.1.9.2	Distribution of Responses to the question "Are you aware of the Government Programmes to reclaim Usar Land"	101
5.1.9.3	Distribution of Responses to the Query "Reasons for Not-availing the	101

	Facilities of Schemes for Land Reclamation"	
5.1.10.1	Distribution of Responses to the Query "What measures could be adopted to avoid water logging due to rain water"	102
5.1.10.2	Distribution of Responses to the Query "What could be done to Conserve rain water in the village"	102
5.1.10.3	Distribution of Responses to Query "If more water could be conserved in the village then, it could be put to what uses?"	102
5.1.10.4	Distribution of Responses to the Query "What is the present use of land of those ponds, which have totally or partially disappeared"	103
5.1.10.5	Distribution of Responses to the Query "What efforts could be made for renovation of ponds"	103
5.1.10.6	Distribution of Responses to query "In what way the renovation of Ponds will help villagers"	103
5.1.10.7	Distribution of Responses to query "What is the Present Use of Existing Ponds"	103
5.1.11.1	Distribution of Responses to query "Whether the area under orchards has increased/decreased"	104
5.1.11.2	Distribution of Perception of Respondent about Reason of Decrease of Orchard	104
5.1.11.3	Distribution of Responses to query "Why the potential of growth of orchards is low"	104
5.1.11.4	Distribution of Responses to query "On which type of land area under orchards could be increased"	105
5.1.11.5	Distribution of Responses to query "What kind of facilities would be required to increase area under orchard"	105
5.1.12.1	Distribution of Responses to query "Reasons for decrease in livestock"	106
5.1.12.2	Distribution of Responses to query "Reasons for increase in livestock"	106
5.1.12.3	Distribution of Responses to query "Number of which type of livestock has decreased"	106
5.1.12.4	Distribution of Responses to query "What type of livestock will improve your economic condition"	106
5.1.12.5	Distribution of Responses to query "What are the main constraints in increasing livestock"	106
5.1.13.1	Cropping Pattern of Selected Household, Average Production and Use of Fertilizer	107
5.1.13.2	Distribution of Responses to query "Reason for lower productivity of respondents farm from other farms"	107
5.1.13.3	Distribution of Responses to query "What are the main constraints in better utilisation of agricultural land"	107
5.1.13.4	Distribution of Responses to query "How above mentioned constraints could be removed"	108
5.1.13.5	Distribution of Responses to query "Reasons for leasing out the land"	108
5.1.13.6	Distribution of Responses to query "Reasons for leasing in by tenants"	108
5.2.1	Land Use Pattern in the Surjipur Village of the Azamgarh District	110
5.2.2.1	Caste and Gender-wise Distribution of Population in the Village Surjipur	111
5.2.2.2	Caste and Gender-wise Distribution of Education in the Village Surjipur	111
5.2.3.1	Landholding Size : Per Family/Per Adult in the Village Surjipur	112
5.2.3.2	Caste-wise Distribution of Landholdings Size in the Village Surjipur	112
5.2.4.1	Present and Past Occupation of Households in the Village Surjipur	113
5.2.4.2	Caste and Gender-wise Distribution of Occupation of Workers in the Village Surjipur	113
5.2.5	Distribution of Animal in Different Categories of Landholding Households in the Village Surjipur	114
5.2.6	Caste-wise Distribution of Housing Condition in the Village Surjipur	114
5.2.7.1	Caste and Landholding wise Distribution of Selected Households in Villages Surjipur	115
5.2.7.2	Reason of Changes in Total Land Owned During the Last 20 years in Selected Households	115
5.2.7.3	Number of Households Whose Landholding Increased	116

5.2.7.4	Number of Households Whose Landholding Decrease	116
5.2.8.1	Reason of Conversion of Agricultural land for Non-agricultural Uses of Owned Land by Selected Households	117
5.2.8.2	Other Reasons of Conversion of Agricultural Land for Non-agricultural Purpose in the Village (As Suggested by Respondents)	117
5.2.8.3	Distribution of Respondents on the Basis of Responses to Query "Reasons for not cultivating the agriculture land"	117
5.2.9.1	Distribution of Responses to the query "Barren land could be put to which uses"	118
5.2.9.2	Distribution of Responses to the question "Are you aware of the Government Programmes to reclaim Usar Land"	118
5.2.9.3	Distribution of Responses to Query "Which Department Undertook the work of Reclamation of Usar Land"	118
5.2.9.4	Distribution of Responses to the Query "Reasons for Not-availing the Facilities of Schemes for Land Reclamation"	118
5.2.10.1	Distribution of Responses to the Query "What measures could be adopted to avoid water logging due to rain water"	119
5.2.10.2	Distribution of Responses to the Query "What could be done to Conserve rain water in the village"	119
5.2.10.3	Distribution of Responses to Query "If more water could be conserved in the village then, it could be put to what uses?"	119
5.2.10.4	Distribution of Responses to the Query "What is the present use of land of those ponds, which have totally or partially disappeared"	120
5.2.10.5	Distribution of Responses to the Query "What efforts could be made for renovation of ponds"	120
5.2.10.6	Distribution of Responses to query "In what way the renovation of Ponds will help villagers"	120
5.2.10.7	Distribution of Responses to query "What is the Present Use of Existing Ponds"	120
5.2.11.1	Distribution of Responses to query "Whether the area under orchards has increased/decreased"	121
5.2.11.2	Distribution of Perception of Respondent about Reason of Decrease of Orchard	121
5.2.11.3	Perception of Respondent about Reason of Increase of Orchard	121
5.2.11.4	Distribution of Responses to query "Why the potential of growth of orchards is low"	122
5.2.11.5	Distribution of Responses to query "On which type of land area under orchards could be increased"	122
5.2.11.6	Distribution of Responses to query "What kind of facilities would be required to increase area under orchard"	122
5.2.12.1	Distribution of Responses to query "Reasons for decrease in livestock"	123
5.2.12.2	Distribution of Responses to query "Reasons for increase in livestock"	123
5.2.12.3	Distribution of Responses to query "Number of which type of livestock has decreased"	123
5.2.12.4	Distribution of Responses to query "What type of livestock will improve your economic condition"	123
5.2.12.5	Distribution of Responses to query "What are the main constraints in increasing livestock"	123
5.2.13.1	Cropping Pattern of Selected Household, Average Production and Use of Fertilizer	124
5.2.13.2	Distribution of Responses to query "Reason for lower productivity of respondents farm from other farms"	124
5.2.13.3	Distribution of Responses to query "What are the main constraints in better utilisation of agricultural land"	124
5.2.13.4	Distribution of Responses to query "How above mentioned constraints could be removed"	125
5.2.13.5	Distribution of Responses to query "Reasons for leasing-out the land"	125
5.2.13.6	Distribution of Responses to query "Reasons for leasing-in by tenants"	125

5.3.1	Land Use Pattern in the Bargahan Village of the Azamgarh District	127
5.3.2.1	Caste and Gender-wise Distribution of Population in the Village Bargahan	128
5.3.2.2	Caste and Gender-wise Distribution of Education in the Village Bargahan	128
5.3.3.1	Distribution of Per Family/Per Adult Size of Landholdings in Different Size Groups in the Village Bargahan	129
5.3.3.2	Caste-wise Distribution of Landholdings in Different Size Groups in the Village Bargahan	129
5.3.4.1	Present and Past Occupations of Households in the Village Bargahan	130
5.3.4.2	Caste and Gender-wise Distribution of Occupation of Workers in the Village Bargahan	130
5.3.5	Distribution of Animal in Different Categories of Landholding Size Groups Households in the Village Bargahan	131
5.3.6	Caste-wise Distribution of Housing Condition in the Village Bargahan	131
5.3.7.1	Caste and Landholding wise Distribution of Selected Households in Villages Bargahan	132
5.3.7.2	Reason of Changes in Total Land Owned During the Last 20 years in Selected Households	133
5.3.7.3	Number of Households Whose Landholding Increased	133
5.3.7.4	Number of Households Whose Landholding Decrease	133
5.3.7.5	Number of Households Whose Land was Acquired	133
5.3.8.1	Reason of Conversion of Agricultural land for Non-agricultural Uses of Owned Land by Selected Households	134
5.3.8.2	Reasons of Conversion of Agricultural Land for Non-agricultural Purposes in the Village (As Suggested by Respondents)	134
5.3.8.3	Distribution of Respondents on the Basis of Responses to Query "Reasons for not cultivating the agriculture land"	134
5.3.9.1	Distribution of Responses to the query "Barren land could be put to which uses"	135
5.3.9.2	Distribution of Responses to the question "Are you aware of the Government Programmes to reclaim Usar Land"	135
5.3.9.3	Distribution of Responses to Query "Which Department Undertook the work of Reclamation of Usar Land"	135
5.3.9.4	Distribution of Responses to the Query "Reasons for Not-availing the Facilities of Schemes for Land Reclamation"	135
5.3.10.1	Distribution of Responses to the Query "What measures could be adopted to avoid water logging due to rain water"	136
5.3.10.2	Distribution of Responses to the Query "What could be done to Conserve rain water in the village"	136
5.3.10.3	Distribution of Responses to Query "If more water could be conserved in the village then, it could be put to what uses?"	136
5.3.10.4	Distribution of Responses to the Query "What is the present use of land of those ponds, which have totally or partially disappeared"	137
5.3.10.5	Distribution of Responses to the Query "What efforts could be made for renovation of ponds"	137
5.3.10.6	Distribution of Responses to query "In what way the renovation of Ponds will help villagers"	137
5.3.10.7	Distribution of Responses to query "What is the Present Use of Existing Ponds"	137
5.3.11.1	Distribution of Responses to query "Whether the area under orchards has increased/decreased"	138
5.3.11.2	Distribution of Perception of Respondent about Reason of Decrease of Orchard	138
5.3.11.3	Distribution of Perception of Respondent about Reason of Increase of Orchard	138
5.3.11.4	Distribution of Responses to query "Why the potential of growth of orchards is low"	139
5.3.11.5	Distribution of Responses to query "On which type of land area under orchards could be increased"	139

5.3.11.6	Distribution of Responses to query "What kind of facilities would be required to increase area under orchard"	139
5.3.12.1	Distribution of Responses to query "Reasons for decrease in livestock"	140
5.3.12.2	Distribution of Responses to query "Reasons for increase in livestock"	140
5.3.12.3	Distribution of Responses to query "Number of which type of livestock has decreased"	140
5.3.12.4	Distribution of Responses to query "What type of livestock will improve your economic condition"	140
5.3.12.5	Distribution of Responses to query "What are the main constraints in increasing livestock"	140
5.3.13.1	Cropping Pattern of Selected Household, Average Production and Use of Fertilizer	141
5.3.13.2	Distribution of Responses to query "Reason for lower productivity of respondents farm from other farms"	141
5.3.13.3	Distribution of Responses to query "What are the main constraints in better utilisation of agricultural land"	141
5.3.13.4	Distribution of Responses to query "How above mentioned constraints could be removed"	142
5.4.1	Land Use Pattern in the Madanpur Village of the Azamgarh District	144
5.4.2.1	Caste and Gender-wise Distribution of Population in the Village Madanpur	145
5.4.2.2	Caste and Gender-wise Distribution of Education in the Village Madanpur	145
5.4.3.1	Distribution of Per Family/Per Adult Size of Landholdings in Different Size Groups in the Village Madanpur	146
5.4.3.2	Caste-wise Distribution of Landholdings in Different Size Groups in the Village Madanpur	146
5.4.4.1	Present and Past Occupations of Households in the Village Madanpur	147
5.4.4.2	Caste and Gender-wise Distribution of Occupation of Workers in the Village Madanpur	147
5.4.5	Distribution of Animal in Different Categories of Landholding Size Groups Households in the Village Madanpur	148
5.4.6	Caste-wise Distribution of Housing Condition in the Village Madanpur	148
5.4.7.1	Caste and Landholding wise Distribution of Selected Households in Villages Madanpur	149
5.4.7.2	Reason of Changes in Total Land Owned During the Last 20 years in Selected Households	149
5.4.7.3	Number of Households Whose Landholding Increased	150
5.4.7.4	Number of Households Whose Landholding Decrease	150
5.4.8.1	Reason of Conversion of Agricultural land for Non-agricultural Uses of Owned Land by Selected Households	151
5.4.8.2	Reasons of Conversion of Agricultural Land for Non-agricultural Purposes in the Village (As Suggested by Respondents)	151
5.4.8.3	Distribution of Respondents on the Basis of Responses to Query "Reasons for not cultivating the agriculture land"	151
5.4.9.1	Distribution of Responses to the query "Barren land could be put to which uses"	152
5.4.9.2	Distribution of Responses to the question "Are you aware of the Government Programmes to reclaim Usar Land"	152
5.4.9.3	Distribution of Responses to Query "Which Department Undertook the work of Reclamation of Usar Land"	152
5.4.9.4	Distribution of Responses to the Query "Reasons for Not-availing the Facilities of Schemes for Land Reclamation"	152
5.4.10.1	Distribution of Responses to the Query "What measures could be adopted to avoid water logging due to rain water"	153
5.4.10.2	Distribution of Responses to the Query "What could be done to Conserve rain water in the village"	153
5.4.10.3	Distribution of Responses to Query "If more water could be conserved in the village then, it could be put to what uses?"	153

5.4.10.4	Distribution of Responses to the Query "What is the present use of land of those ponds, which have totally or partially disappeared"	154
5.4.10.5	Distribution of Responses to the Query "What efforts could be made for renovation of ponds"	154
5.4.10.6	Distribution of Responses to query "In what way the renovation of Ponds will help villagers"	154
5.4.10.7	Distribution of Responses to query "What is the Present Use of Existing Ponds"	154
5.4.11.1	Distribution of Responses to query "Whether the area under orchards has increased/decreased"	155
5.4.11.2	Distribution of Perception of Respondent about Reason of Decrease of Orchard	155
5.4.11.3	Distribution of Perception of Respondent about Reason of Increase of Orchard	155
5.4.11.4	Distribution of Responses to query "Why the potential of growth of orchards is low"	156
5.4.11.5	Distribution of Responses to query "On which type of land area under orchards could be increased"	156
5.4.11.6	Distribution of Responses to query "What kind of facilities would be required to increase area under orchard"	156
5.4.12.1	Distribution of Responses to query "Reasons for decrease in livestock"	157
5.4.12.2	Distribution of Responses to query "Reasons for increase in livestock"	157
5.4.12.3	Distribution of Responses to query "Number of which type of livestock has decreased"	157
5.4.12.4	Distribution of Responses to query "What type of livestock will improve your economic condition"	157
5.4.12.5	Distribution of Responses to query "What are the main constraints in increasing livestock"	157
5.4.13.1	Cropping Pattern of Selected Household, Average Production and Use of Fertilizer	158
5.4.13.2	Distribution of Responses to query "Reason for lower productivity of respondents farm from other farms"	158
5.4.13.3	Distribution of Responses to query "What are the main constraints in better utilisation of agricultural land"	158
5.4.13.4	Distribution of Responses to query "How above mentioned constraints could be removed"	159
5.4.13.5	Distribution of Responses to query "Reasons for leasing-in by tenants"	159

Preface

Preparation of a separate land use plan for a district has its own importance because of growing population and limited land resource. The carrying capacity of land is under stress due to environmental pollution and land degradation.

We, therefore, focus not only on quantification of required land for each land use category but also on quality land use.

Secondly, we have tried to emphasize that there is need for block level and village level land use planning as well. Hence an attempt has been made to prepare land use plans for each block of the district and four selected villages of the district. We have also suggested for formation/revamping of institutions for this purpose.

The plans also include policy framework, besides general suggestions and specific tasks. These are based on informations collected from primary and secondary sources, discussions with villagers and observations made by members of the survey team.

We gratefully acknowledge our thanks to State Land Use Board for sponsoring the study. We are specially obliged to Mrs. Mridula Singh, Additional Director, State Land Use Board for constant interaction and help in course of this study. We are also thankful to DSTO in particular and other district level functionaries in general who supported us in collection of data and also provided important insights to the problem of land use.

I am also indebted to Prof. R.C. Tripathi, Director, G.B. Pant Social Science Institute, Jhusi, Allahabad, for reposing faith on me to conduct the study and for providing facilities, without which this study would not have completed.

I am also thankful to members of the research team viz. Mohd. Israil, Sri. Gyan Nath Jha, Sri Ashok Dwivedi, Sri Atul Mishra, Sri Sandeep Srivastava and Sri Sandip Kumar Jaiswal for their dedicated work in collecting data and helping me in analysis. Special thanks are due to Sri Sandip Kumar Jaiswal, who also worked as Computer Assistant, for his painstaking effort in typing and formatting of this report despite many odds.

Chapter - 1

Introduction

Location and Boundaries:

The district of Azamgarh comprises a somewhat irregularly shaped tract of country lying south of the Ghaghra river, between the parallels of 25°38' and 26°27' North latitude and the meridians of 82°40' and 83°52' east longitude. It is bounded on the east by Ballia, on the south-east by Ghazipur on the south-west by Jaunpur, on the west for a short distance by Sultanpur, on the north-west by Faizabad, on the north by Gorakhpur and on the north-east by Deoria districts. The river Ghaghra separates the district from the Gorakhpur and Deoria districts while the boundary with the other district is purely artificial.

Topography:

In its general aspect the district is a level plain without any hills, the only variations in the surface being caused by the bad lands along the streams that drain it. Except in the proximity of the Ghaghra the country slopes towards the south-east.

There are only two natural division - the southern low-lying tract and the northern high-lying tract. The northern tract is divisible into two portions, the uplands known as the *bangar* and the lowlands in the vicinity of the Ghaghra called the *kachhar*. The southern tract is drained by the Gangi, Udanti, Besu, Mangai and Bhainsahi rivers.

The stream of the tons is perennial but during the dry months of the year only a sluggish current of water flows in the bottom of its bed.

Lakes:

Lakes and jhils of the district are not only very numerous, but in many cases of considerable size.

Flora:

There are no forests of any great importance in the district. In the interior of the district, near the tons or some of the other streams, there are a few woods of *paras* or *dhak*, *sihor*, *babul* and other wild trees. Pasture land for cattle is very deficient in Azamgarh. Except during the rains

and in the alluvial tracts near the Ghaghra, there is very little grazing land and the cattle have to be mostly stall-fed. The whole of Azamgarh district, except be southern tract, is, however, fairly well wooded.

1.1 Relevance of Study

With growing population and limited land resources the relevance of land use planning is obvious. Land has limited carrying capacity beyond which there will be degradation and loss in productivity due to excessive use. In order to meet various demands of the growing population the land degrading trend needs to be checked.

We should also attach due important to problem of rural communities, specially those below poverty line in whose hands this resource has to be efficiently utilized and whose minimum needs the efficient use of such resources is meant to serve.

The revenue department classifies land uses in following categories: (i) Land put to non-agricultural uses, (ii) Barren and uncultivable land, (iii) Pastures and grazing land, (iv) Land under trees and groves, (v) culturable waste land, (vi) current fallow, (vii) Fallow other than current fallow, (viii) Net Sown area, (ix) Forest.

The study also focusses on waste lands. Wastelands are such degraded lands which can be brought under vegetative cover, with reasonable effort, and which are currently under-utilized, and lands which are deteriorating due to lack of appropriate water and soil management or on account of natural causes.

A model land use plan for a district has been sought to be prepared on the basis of its land capability and feasibility to change present land use pattern, development and urbanisation have their own pressure on land use pattern. There are some major areas of concern as well. Forest area is being reduced by pushing the frontier of agriculture. On the other side good agricultural land is being usurped by urban sprawls, industrial establishments and expansion of human settlements and infra-structural facilities.

We have also investigated into the reasons of land degradation and the reasons for conversion of agricultural land to non-agricultural uses. And also how area under fallow land, culturable waste and barren/uncultivable land could be reduced.

A new strategy is needed to protect grazing land, land under trees, bushes etc. as well as protection of land for chak road and drainage system is also necessary. Common resource property should be brought under communal ownership which should become non transferable and any activity that leads to their destruction should become unlawful.

The role of common resource property and its allocation systems becomes crucial in management of these natural resources. It must be emphasised that management of such resources be vested with the local communities who will take a longer view. Outside commercial interest will come and go with narrow economic interest only.

Effective communal property rights and resource management systems could be developed by empowering panchayats to develop modes of their use in their respective panchayats and by providing them technical and managerial skill as well as needed capital resources.

1.2 Objectives

The major objectives of preparing Model Land Use Plan for District are as follows:

- (i) To review the existing land use patterns and preparation of data base.
- (ii) Projection of desirable and attainable optimal land use Plan.
- (iii) Suggestion of Action Plan including institutional changes and resource management policies to achieve optimal land use Plan.
- (iv) Identify areas under different types of wasteland and make suggestions for their reclamation.

1.3 Methodology

The present report is based on a three tier study of the districts.

- (i) District level
- (ii) Block level
- (iii) Village level

In order to select villages two blocks namely Bilariyaganj and Thekma were selected from the district. The two villages were selected randomly from each of the selected blocks. Thus the villages selected are:

- (i) Jalalpur (Block – Bilariyaganj)
- (ii) Surjipur (Block – Bilariyaganj)
- (iii) Bargahan (Block – Thekma)
- (iv) Madanpur (Block – Thekma)

1.4 Data Source

The data for preparing district and block level plans was collected from secondary sources, while village level plans are based on primary data. Three types of schedules were canvassed to elicit required information. These are (i) Village Schedule and (ii) Household Schedule, and (iii) Listing Schedule.

The information for village schedule was gathered from Gram Pradhan, Ex-gram Pradhan, Lekhpal, Village level functionary and also from well informed citizens of the village.

The household schedule was canvassed among 20 farmers of the village. The care was taken that these farmers represent all categories and communities of the village.

The listing schedule was canvassed to collect critical information about all households of the village such as demography, land use pattern, land ownership, occupational structure, literacy, livestock, housing condition etc. It also found the sample frame from which sample was drawn for detailed study of households.

Besides generating the primary data, information was also gathered from secondary sources. These included both published data and unpublished data (generated by various line departments). Different line departments were also approached to provide information, which has a bearing on land use pattern of the district.

Chapter - 2

Population and Land Resources

2.1 Demographic Profile

2.1.1 Settlement

The total area of Azamgarh district reduced from 5740.00 sq.km. in 1981 to 4234.00 sq.km. in 1991 due to carving out of new districts.

There had also been obvious changes in the number of residential houses and number of households during the last 40 years.

The number of residential houses increased from 367128 in 1961 to 393898 in 1971 which shows an increase of 7.29 per cent during the decade. The trend in the increase of residential houses increased to 23.41 per cent during decades 1971-81 and 1981-91.

Thus the number of residential houses have been increasing at the rate of around 24 per cent or more per decade. Though this is an obvious off shoot of increase in population, it will have serious implication for land use planning during the coming decades. These implications would have two aspects. One, more and more land would be brought under the category 'land put to non-agricultural purposes'. Secondly, planning for housing in both urban and rural areas will have to be given serious thought such as:

- (i) how land saving devices could be adopted;
- (ii) how civic amenities could be provided;
- (iii) what kind of infra-structural facilities will be needed to be developed; and
- (iv) what kind of common use facilities will be required to be developed.

Table – 2.1.1
Settlement Profile of the District Azamgarh

Particular	Area	1991	1981	1971	1961
Area in Sq.Km.	Rural	4195.05	5671.5	5722.2	5723.8
	Urban	38.95	68.5	21.8	21.9
	Total	4234.00	5740.0	5744.0	5745.7
Number of Residential Houses	Rural	405905	443838	375219	350716
	Urban	27301	42397	18770	16412
	Total	433206	486235	393989	367128
Number of Households	Rural	420004	486299	410757	NA
	Urban	28786	45935	22930	NA
	Total	448790	532234	433687	NA

2.1.2 Urbanisation

Another feature of settlement and area is related to urbanisation. In urban area the number of residential houses have been increasing and the share of urban population has also been increasing because of migration. But even more importantly, the area under urban limits have also been increasing. Azamgarh had been divided therefore true picture could only be inferred from increase in urban area during 1971-81. The area under urban limits increased from 21.8 sq.km. in 1971 to 68.5 sq.km. in 1981. i.e. an increase of 214.22 per cent during two decade. The share of urban population has increased from 5.21 per cent in 1971 to 7.16 per cent in 1991 and to 7.64 per cent in 2001.

2.2 Population

The population pressure started to increase on agriculture since 1931. The decennial growth rate of population had been very high during the last three decades. This has resulted in the pressure of population on land (**See table 2.2.1 & 2.2.2**).

The density of population of the district was 938 persons per squire kilometer in 2001.

The literacy rate increased from 19.1 per cent in 1971 to 39.2 per cent in 1991. The literacy rate among males and females was 56.1 per cent and 22.7 per cent respectively in 1991. The sex ratio was found to be favourable to women as it was 1007 females per thousand males.

**Table – 2.2.1
Growth Rate of Population in District Azamgarh**

Year	Decadal Variation		
	Rural	Urban	Total
1901-1911	-2.0	-29.0	-4.0
1911-1921	2.0	13.0	2.0
1921-1931	2.0	16.0	3.0
1931-1941	16.0	15.0	16.0
1941-1951	16.0	20.0	15.0
1951-1961	15.0	7.0	14.0
1961-1971	18.0	29.0	19.0
1971-1981*	-13.0	12.0	-12.0
1981-1991	25.0	35.0	26.0
1991-2001	24.64	33.63	25.27

Note: * Changes during 1971-81 do not reflect real changes due to division of the district.

**Table – 2.2.2
Demographic Profile of the District Azamgarh**

	Area	2001			1991			1981		
			Female	Total	Male	Female	Total	Male	Female	Total
		Male								
Total Pop.	Rural	NA	NA	3649000	1453543	1474623	2928166	1582902	1635157	3218059
	Urban	NA	NA	302000	118050	107669	225719	170924	155147	326071
	Total	NA	NA	3951000	1571593	1582292	3153885	1753826	1790304	3544130
SC Pop.	Rural	NA	NA	NA	379881	399621	779502	405583	439330	849913
	Urban	NA	NA	NA	14649	13461	28110	18062	16785	34847
	Total	NA	NA	NA	344530	413082	807612	423645	456115	879760
ST Pop.	Rural	NA	NA	NA	117	72	189	66	74	140
	Urban	NA	NA	NA	14	7	21	-	-	-
	Total	NA	NA	NA	131	79	210	66	74	140
Literate Person	Rural	NA	NA	NA	621185	242804	863989	576132	167591	743723
	Urban	NA	NA	NA	64812	40375	105187	95042	50822	145864
	Total	NA	NA	NA	685997	283179	969176	671174	218413	889587
Den. Per sq.km.	Rural	-	-	-	-	-	-	-	-	567
	Urban	-	-	-	-	-	-	-	-	4757
	Total	-	-	938	NA	NA	745	-	-	617
Total Pop.			1971		1961					
	Rural	1351911	1356706	2708617	1123748	1169131	2292879			
	Urban	79356	69511	148867	61260	53913	11573			
	Total	1431267	2426217	2857484	1185008	1223044	2408052			

2.3 Occupational Structure

The pressure on land in Azamgarh continues to increase because a sizable work-force was found to be engaged in agricultural activities.

As per the 1991 census 60.43 per cent workers were cultivators and 19.24 per cent workers were engaged as agricultural labourers. The high proportion of agricultural workers shows that employment in secondary and tertiary sector was growing very slowly. This is evident from the fact that number of workers engaged in household industry was 4.55 per cent while those engaged in other than household industry was 2.46 per cent only. The number of workers engaged in trade and commerce and other services was 4.83 per cent and 6.49 per cent respectively.

It could also be seen from table 2.3 that whereas the proportion of agricultural labourers has marginally increased during 1981-91, the proportion of workers in household industry and in other services have declined during the same period.

This trend was in evidence in all the blocks of Azamgarh district.

Table – 2.3
Classification of Workers in the District Azamgarh (In percent)

Sl. No.	Particular		1991			1981			1971			1961		
			Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
1	Main Workers	Rural	92.73	94.84	93.08	90.46	89.02	90.22	94.52	91.70	94.05	95.08	95.43	638.66
		Urban	7.27	5.16	6.92	9.55	10.98	9.78	5.48	8.30	5.95	4.92	4.57	32.24
		Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
2	Cultivators	Rural	67.55	47.64	64.24	71.96	39.89	66.87	63.90	25.53	54.02	72.97	55.44	67.40
		Urban	9.47	6.87	9.15	9.17	2.74	8.01	4.09	1.17	3.41	4.37	1.71	3.57
		Total	63.32	45.53	60.43	65.97	35.81	61.11	60.62	23.50	54.42	69.59	52.99	431.58
3	Agricultural Labour	Rural	15.53	44.05	20.26	13.08	49.40	18.84	22.77	64.03	29.48	11.98	29.38	17.51
		Urban	5.26	7.39	5.52	4.21	9.51	5.17	3.58	4.00	3.68	0.72	0.68	0.71
		Total	14.78	42.16	19.24	12.23	45.02	17.51	21.72	59.04	27.94	11.43	28.07	112.08
4	Livestock, Forestry, Fishing, Hunting, Plantation, Orchards & Allied Activities	Rural	0.34	0.18	0.31	-	-	-	0.45	0.57	0.47	0.27	0.27	0.27
		Urban	1.29	0.49	1.19	-	-	-	0.15	0.09	0.14	0.45	0.36	0.42
		Total	0.41	0.20	0.37	-	-	-	0.43	0.53	0.45	0.28	0.27	1.87
5	Mining and Quarrying	Rural	0.03	0.01	0.03	-	-	-	0.04	0.02	0.04	-	-	-
		Urban	0.03	-	0.02	-	-	-	0.31	0.02	0.24	-	-	-
		Total	0.03	0.01	0.03	-	-	-	0.05	0.02	0.05	-	-	-
6	Manufacturing, Processing, Servicing, Repairs in Households Industry	Rural	2.53	3.11	2.62	3.63	6.14	4.03	3.78	5.89	4.12	6.90	10.60	8.08
		Urban	26.47	59.62	30.50	38.45	72.30	44.56	42.18	83.26	51.74	41.52	84.44	54.44
		Total	4.27	6.03	4.55	6.95	13.40	7.99	5.89	12.31	6.96	8.61	13.97	69.15
7	Manufacturing, Processing, Servicing, Repairs in other than Households Industry	Rural	2.48	1.08	2.24	-	-	-	1.55	0.72	1.41	0.64	0.27	0.52
		Urban	5.80	1.80	5.31	-	-	-	9.21	2.26	7.59	6.73	0.81	4.95
		Total	2.72	1.12	2.46	-	-	-	1.97	0.84	1.78	0.75	0.29	4.05
8	Construction	Rural	0.61	0.18	0.54	-	-	-	0.15	0.05	0.13	0.28	0.01	0.20
		Urban	1.21	0.06	1.07	-	-	-	1.58	0.09	1.23	1.79	0.27	1.33
		Total	0.65	0.17	0.57	-	-	-	0.23	0.05	0.20	0.36	0.02	1.69
9	Trade and Commerce	Rural	3.70	1.07	3.27	-	-	-	2.13	0.63	1.89	2.26	0.89	1.83
		Urban	28.39	6.47	25.73	-	-	-	17.02	2.28	13.59	17.48	4.17	13.47
		Total	5.50	1.35	4.83	-	-	-	2.95	0.76	2.59	3.01	1.04	16.02
10	Transport, Storage Commerce	Rural	1.08	0.08	0.92	-	-	-	0.38	0.02	0.32	0.59	0.00	0.40
		Urban	2.79	0.27	2.48	-	-	-	2.29	0.01	1.76	5.48	0.08	3.85
		Total	1.21	0.09	1.03	-	-	-	0.49	0.02	0.41	0.83	0.01	3.82
11	Other Services	Rural	6.15	2.59	5.56	11.34	4.57	10.26	4.85	2.55	4.48	3.95	3.13	3.69
		Urban	19.29	17.02	19.01	48.17	15.45	42.26	2.07	71.42	13.90	3.22	57.28	-
		Total	7.11	3.34	6.49	14.86	5.76	13.39	5.66	2.91	5.20	4.81	3.33	29.12

2.3.1 Block-wise Analysis of Occupational Structure

There were only two blocks namely Sathiyav and Jahanaganj, where number of workers engaged in household industries was above 5.0 per cent of total workers (See table 2.3.1). It could also be seen from the table that the number of marginal workers was quite high in many blocks. This shows that employment duration was less among many workers indicating non-availability of work.

Table 2.3.1
Block-wise Distribution of Workers by Economic Category in Azamgarh District,
(In percent)

Block	Years	Cultivators	Agriculture Labour	Live-stock, Forestry Plantation etc.	Mining & Quarrying	Household Industry	Other than Household Industry	Construction	Trade & Commerce	Transport, Storage & Communication	Other Workers	Total Main Worker	Marginal Worker	Total Worker
Mahrajganj	1971	61.35	28.46	1.15	0.02	0.92	0.92	0.12	1.79	0.21	4.04			100.0
	1991	59.11	19.63	0.20	0.01	2.27	0.82	0.32	2.07	0.41	4.29	89.14	10.86	100.0
Bilariyaganj	1971	58.65	29.43	0.61	0.39	1.06	1.06	0.10	1.71	0.17	4.85			100.0
	1991	56.18	19.11	0.81	0.02	2.07	2.88	0.65	3.01	1.02	5.24	91.00	9.00	100.0
Harraiya	1971	62.20	32.09	0.32	0.01	0.52	0.52	0.24	1.01	0.08	2.45			100.0
	1991	63.55	15.98	0.15	0.01	1.32	0.89	0.40	2.29	3.42	4.11	89.04	10.96	100.0
Ajmatgarha	1971	61.98	27.16	1.08	0.02	1.08	1.08	0.11	1.83	0.31	4.01			100.0
	1991	47.50	21.16	0.85	0.02	3.25	2.95	0.55	2.92	0.92	5.64	85.75	14.25	100.0
Mirzapur	1971	57.06	30.66	0.80	0.00	3.56	0.81	0.07	2.43	0.15	4.46			100.0
	1991	61.86	17.77	0.19	0.02	1.76	1.79	0.44	2.86	0.91	4.52	92.12	7.88	100.0
Muhamadpur	1971	77.03	21.38	0.57	0.04	2.10	1.14	0.11	1.52	0.45	3.13			100.0
	1991	57.50	24.10	0.18	0.01	1.20	0.80	0.20	2.34	0.64	3.47	90.43	9.57	100.0
Tahbarpur	1971	58.88	27.19	0.54	0.04	2.21	1.50	0.25	1.97	0.72	6.71			100.0
	1991	58.10	17.89	0.25	0.03	1.51	1.79	0.48	3.42	0.98	6.47	90.93	9.07	100.0
Palhani	1971	59.80	26.42	0.39	0.04	2.18	1.25	0.32	2.23	0.70	6.66			100.0
	1991	40.78	20.81	0.60	0.06	2.71	4.41	2.03	6.48	3.14	11.73	92.76	7.24	100.0
Ranikisrai	1971	57.47	28.33	0.68	0.01	2.26	1.74	0.25	1.89	0.62	6.76			100.0
	1991	56.21	17.58	0.41	0.04	1.94	2.15	0.79	4.79	1.68	6.18	90.99	9.01	100.0
Sathiyav	1971	49.72	31.35	0.45	0.03	8.51	3.31	0.20	1.59	0.41	4.42			100.0
	1991	45.17	16.10	0.19	0.03	16.57	7.40	0.60	2.45	0.97	5.70	95.17	4.83	100.0
Jahanaganj	1971	54.09	29.55	0.48	0.03	6.94	1.74	0.13	2.30	0.31	4.43			100.0
	1991	29.65	13.55	0.21	0.04	5.68	2.04	0.25	2.74	0.46	4.59	86.20	13.80	100.0
Atrauliya	1971	62.25	27.28	0.10	0.00	1.90	0.82	0.08	1.78	0.18	4.01			100.0
	1991	55.68	20.08	0.07	0.02	0.94	2.63	0.27	1.80	0.39	4.43	86.31	13.69	100.0
Koylasa	1971	64.39	25.72	0.09	0.00	3.01	0.83	0.07	1.71	0.24	3.94			100.0
	1991	52.48	15.72	0.16	0.05	0.83	1.06	0.26	3.52	0.63	4.54	79.24	20.76	100.0
Ahiraula	1971	65.89	25.85	0.06	0.02	2.39	0.40	0.10	1.51	0.13	3.65			100.0
	1991	54.63	17.44	0.22	0.01	0.65	1.17	0.32	3.15	0.71	4.33	82.65	17.35	100.0
Pawai	1971	61.93	29.11	0.11	0.00	2.14	0.73	0.08	1.76	1.62	3.72			100.0
	1991	61.06	18.22	0.06	0.00	1.22	1.08	0.32	2.74	0.56	4.85	90.10	9.90	100.0
Phulpur	1971	58.84	31.28	0.13	0.00	2.26	0.86	0.09	2.02	0.50	3.95			100.0
	1991	62.77	14.95	0.07	0.00	0.96	1.22	0.38	2.53	0.72	3.92	87.52	12.48	100.0
Martinganj	1971	63.78	28.57	0.48	0.01	1.56	0.66	0.02	1.55	0.21	3.15			100.0
	1991	63.54	14.24	0.19	0.03	0.66	1.35	0.31	2.31	0.33	2.99	85.96	14.04	100.0
Thekma	1971	59.95	30.00	0.39	0.00	2.79	1.14	0.10	1.87	0.22	3.53			100.0
	1991	52.94	21.45	0.22	0.01	1.21	1.44	0.20	2.22	0.66	3.47	83.90	16.10	100.0
Lalganj	1971	59.14	26.10	0.32	0.03	3.02	1.18	0.15	2.37	0.20	4.15			100.0
	1991	51.79	15.43	0.16	0.04	0.70	0.91	0.69	2.65	0.53	4.33	77.66	22.34	100.0
Mehnar	1971	61.50	27.17	0.17	0.01	3.53	1.05	0.05	2.69	0.20	3.64			100.0
	1991	57.93	15.72	0.15	0.05	0.68	0.98	0.16	1.45	0.38	3.18	80.71	19.29	100.0
Tarvan	1971	58.81	31.43	0.39	0.02	2.66	1.07	0.04	1.83	0.21	3.53			100.0
	1991	56.32	12.60	0.26	0.03	0.88	1.30	0.29	2.37	0.42	4.13	78.60	21.40	100.0

Source: District Statistical Handbook (of various years).

2.4 Distribution of Landholdings

The average size of landholding was 0.66 hectare during 1980-81 and declined to 0.56 hectares as per the 1995-96 agricultural census. It could also be seen from the table that during 1995-96, 95.18 per cent holdings belonged to the small and marginal farmers, while they accounted for only 72.28 per cent of total area under all landholdings, while during 1980-81, 93.93 per cent holdings belonged to small and marginal farmers, and these categories accounted for 67.46 per cent of area under total holdings (See table 2.4, 2.4.1 & 2.4.2).

Table 2.4
Block-wise Distribution of Landholding (Size & Area) in Azamgarh District (In percent)

Ye ar s	Bellow 1.0 Hect.		1.0 to 2.0 Hect		2.0 to 3.0 Hect.		3.0 to 5.0 Hect.		Above 5.0 Hect.		Total		Aver- age size in ha
	Num- ber	Area	Num- ber	Area	Num- ber	Area	Num- ber	Area	Num- ber	Area	Num- ber	Area	
1980-81	84.61	41.20	9.37	26.26	3.25	12.26	1.91	10.72	0.86	9.56	100.0	100.0	0.66
1990-91	83.28	41.02	10.17	23.21	3.54	13.43	2.07	11.82	0.94	10.52	100.0	100.0	0.65
Ye ar	Bellow 0.5 Hect.		0.5 to 1.0 Hect.		1.0 to 2.0 Hect.		2.0 to 4.0 Hect.		4.0 to 10.0 Hect.		10 Hect. & Above		Aver- age size in ha
	Num- ber	Area	Num- ber	Area	Num- ber	Area	Num- ber	Area	Num- ber	Area	Num- ber	Area	
1995-96	68.13	28.26	17.74	21.63	9.31	22.39	3.90	18.47	0.88	8.33	0.04	0.92	0.56

Table 2.4.1
Block-wise Distribution of Landholding (Size & Area) in Azamgarh District, 1995-96 (In percent)

Bloc ks	Bellow 0.5 Hect.		0.5 to 1.0 Hect.		1.0 to 2.0 Hect.		2.0 to 4.0 Hect.		4.0 to 10.0 Hect.		10 Hect. & Above		Aver- age size in ha
	Num- ber	Area	Num- ber	Area	Num- ber	Area	Num- ber	Area	Num- ber	Area	Num- ber	Area	
Mahrajganj	80.48	45.28	10.81	17.53	6.06	16.96	2.21	11.66	0.40	7.58	0.03	0.97	0.51
Bilariyaganj	50.46	22.76	39.03	21.19	6.62	23.30	3.35	20.63	0.53	11.67	0.01	0.46	0.42
Harraiya	67.01	21.65	18.13	23.80	10.27	24.95	3.97	18.79	0.61	10.69	0.01	0.11	0.56
Ajmatgarha	77.16	33.84	12.26	20.64	7.10	22.57	2.78	15.95	0.69	6.63	0.01	0.37	0.46
Mirzapur	75.56	36.75	13.25	19.47	7.70	21.81	2.83	15.35	0.62	5.01	0.05	1.63	0.49
Muhammadpur	71.42	28.80	14.29	19.83	9.72	24.86	3.74	18.41	0.73	5.64	0.10	2.46	0.56
Tahbarpur	57.29	33.52	22.44	19.63	13.97	23.69	5.25	16.82	1.01	5.61	0.04	0.72	0.82
Palhani	67.26	24.24	15.92	16.88	9.76	20.08	5.37	20.99	1.65	17.06	0.04	0.76	0.70
RaniKiSrai	73.20	37.82	14.70	19.90	8.41	22.20	3.19	15.88	0.49	3.68	0.01	0.53	0.54
Sathiyav	64.98	25.46	17.45	18.10	11.27	22.69	4.91	20.77	1.36	12.30	0.04	0.68	0.69
Jahanaganj	63.75	23.25	17.19	17.82	10.75	20.56	6.11	20.59	2.10	16.05	0.10	1.72	0.78
Atrauliya	70.59	29.83	15.76	24.58	9.06	17.57	3.88	20.55	0.66	6.23	0.05	1.24	0.46
Koylasa	66.79	25.31	21.12	29.26	8.46	22.22	3.01	17.08	0.56	5.03	0.05	1.11	0.48
Ahiraula	72.30	35.04	15.85	20.75	8.42	24.49	2.88	14.82	0.52	4.31	0.02	0.60	0.52
Pawai	64.87	24.70	21.55	26.01	9.05	23.26	3.68	18.68	0.84	6.94	0.02	0.42	0.53
Phulpur	68.93	30.59	19.01	29.57	8.86	23.20	2.79	12.70	0.40	3.35	0.02	0.59	0.52

Martinganj	72.64	29.31	14.19	20.39	8.81	25.14	3.50	17.51	0.85	7.32	0.01	0.33	0.49
Thekma	17.59	26.08	43.07	21.44	24.43	22.90	12.21	21.31	2.51	6.97	0.19	1.30	1.50
Lalganj	67.27	23.44	16.74	21.87	10.09	22.61	4.45	19.77	1.39	11.32	0.06	1.00	0.63
Mehnagar	66.32	21.92	17.89	22.23	10.13	23.19	4.46	20.15	1.17	11.66	0.03	0.85	0.59
Tarvan	63.92	25.96	17.59	21.41	12.19	21.25	5.22	23.22	1.03	6.96	0.05	1.20	0.60

Source: District Statistical Handbook of different years.

Table 2.4.2
Block-wise Distribution of Landholding (Size & Area) in Azamgarh District, 1980–81
(In percent)

Bloc ks	Bellow 1.0 Hect.		1.0 to 2.0 Hect.		2.0 to 3.0 Hect.		3.0 to 5.0 Hect.		Above 5.0 Hect.		Total		Average size in ha
	Num-ber	Area	Num-ber	Area	Num-ber	Area	Num-ber	Area	Num-ber	Area	Num-ber	Area	
Mahrajganj	84.61	41.20	9.37	26.26	3.25	12.26	1.91	10.72	0.86	9.56	100.0	100.0	0.66
Bilariyaganj	84.64	42.68	8.94	22.45	3.48	13.17	2.03	11.39	0.91	10.31	100.0	100.0	0.62
Harraiya	84.81	41.20	8.94	22.96	3.44	11.69	1.93	13.27	0.88	10.87	100.0	100.0	0.61
Ajmatgarha	84.14	43.64	9.22	21.24	3.45	12.17	2.21	9.85	0.98	13.10	100.0	100.0	0.63
Mirzapur	78.88	37.91	12.14	18.12	5.19	17.14	2.60	12.30	1.19	14.52	100.0	100.0	0.76
Muhammadpur	78.78	35.54	12.19	18.38	5.34	17.51	2.38	13.50	1.32	15.07	100.0	100.0	0.77
Tahbarpur	79.42	40.35	11.57	18.57	5.69	15.82	2.21	12.34	1.12	12.91	100.0	100.0	0.79
Palhani	78.66	39.07	12.09	16.15	5.09	17.60	2.52	12.73	1.64	14.45	100.0	100.0	0.73
RaniKiSrai	81.06	38.37	10.46	17.98	4.71	17.01	2.44	12.70	1.33	13.93	100.0	100.0	0.61
Sathiyav	80.19	39.28	11.76	23.14	4.21	13.21	2.76	13.76	1.08	10.60	100.0	100.0	0.76
Jahanaganj	77.69	39.24	13.42	23.18	4.62	12.91	3.04	13.91	1.24	10.76	100.0	100.0	0.85
Atrauliya	88.18	49.38	7.45	23.68	2.54	10.76	1.30	9.36	0.53	6.81	100.0	100.0	0.50
Koylasa	86.55	31.49	9.13	31.10	2.47	15.08	1.35	12.89	0.50	9.43	100.0	100.0	0.34
Ahiraula	87.36	48.03	8.41	23.45	2.40	11.69	1.35	9.50	0.48	7.33	100.0	100.0	0.45
Pawai	87.15	48.33	8.58	25.84	2.54	11.08	1.25	9.07	0.48	5.68	100.0	100.0	0.50
Phulpur	87.80	52.40	8.15	20.09	2.22	10.47	1.29	10.86	0.54	6.17	100.0	100.0	0.54
Martinganj	85.75	54.40	9.21	19.88	2.83	11.48	1.59	8.24	0.61	5.99	100.0	100.0	0.70
Thekma	82.37	36.86	10.73	27.59	3.83	14.01	2.02	11.53	1.04	10.00	100.0	100.0	0.75
Lalganj	84.47	40.05	9.09	21.37	3.59	15.07	1.95	12.35	0.90	11.17	100.0	100.0	0.66
Mehnagar	84.41	40.39	9.24	20.14	3.31	15.43	2.14	12.68	0.90	11.36	100.0	100.0	0.65
Tarvan	80.37	39.36	12.13	20.75	3.60	16.10	2.69	12.39	1.22	11.40	100.0	100.0	0.67

Source: District Statistical Handbook of different years.

Chapter – 3

Land Use Related to Agriculture

3.1 Net Sown Area

When we discuss about land use, agriculture finds the dominant place in various categories of land use. This is true of Azamgarh district as well. The proportion of net sown area in the district varied around 75.0 per cent during 1960-61 to 1989-90 period. But the net sown area as percentage of total reporting area decreased slightly to around 72 per cent after 1990-91 (**See table 3.1**). This is so, because the blocks which have remained with Azamgarh district had slightly lower proportion of net sown area.

Block-wise analysis of net sown area as percentage of total reporting area in Azamgarh block shows large variations among blocks, even through it was around or above 70.0 per cent in all the blocks. There were only 8 blocks out of 21 blocks where the proportion of net sown area was above 75 per cent. These are Bilariyaganj, Muhammadpur, Tahbarpur, Solhiyava, Jahanganj, Atraulia, Koyalsa and Mehnagar.

There are also two blocks where net sown area as percentage of total reporting area has consistently declined since 1975-76. These are Maharajganj and Ajamatgarh

3.2 Cropping Intensity

In agriculture, the land use has another characteristic also. The same land could be cultivated more than once in a year. The cropping intensity thus shows the proportion of gross sown area as percentage of net sown area. The cropping intensity of the Azamgarh district had increased since 1960-61, slowly during the period 1960-61 to 1975-76. It has increased from 125.33 in 1960-61 to 131.36 in 1975-76. Thereafter it increased to 163.26 in 2000-01.

Block-wise analysis of cropping intensity during 2000-01 shows that cropping intensity was on the lower side (i.e. below 150) in following blocks – Maharajganj (148.10), Bilariaganj (135.68) and Harraiya (138.83).

Blocks where cropping intensity was in the medium range (i.e. between 150-170) include following blocks. Azmatgarh (163.81), Mirzapur (160.29), Muhammadpur (155.12), Tahbarpur (151.91), Palhani (162.19) Sathiyav (167.22), Atraulia (156.82, Koyalsa (161.36), Phulpur (160.78) and Martinganj (159.97).

Only eight blocks had shown high cropping intensity (i.e. above 170). These included Raniki Sarai (170.43), Jahanagaj (178.49), Ahiraula (180.60), Pawai (172.25) Thekma (173.49), Lalganj (173.16), Mehnagar (171.81 and Tarvan (170.42).

The most important factor which has effected cropping intensity is irrigation.

3.3 Irrigation

The Azamgarh district had long back shifted from rain-fed farming to irrigation farming. The irrigation intensity i.e. net irrigated area as percentage of net sown area has increased from 50.38 per cent in 1960-61 to 88.33 per cent in 2000-01. This trend was discernible in all the blocks of the district as well. The irrigation intensity was reported to be very high i.e. above 90.0 per cent in eleven blocks namely Mirzapur, Mohammadpur, Palhani, Rani-Ki Sarai, Sathiyava, Atraulia, Pawai, Martinganj, Lalganj, Mehnagar and Tarvan during 2000-01 (See table 3.1 and 3.1.2).

3.4 Gross Irrigated Area as Percentage of Net Irrigated Area

Furthermore, gross irrigated area as percentage of net irrigated area has also increased during the last twenty five years from around 108.82 in 1976-77 to 127.45 1999-2K, which shows that it is still low (See table 3.1 and 3.1.3).

Block-wise analysis of gross irrigated area as percentage of net irrigated area is shown in table 3.1.4. We can categories the blocks in three groups. In the first category we put those blocks where gross irrigated area as percent of net irrigated area was very low (i.e. below 120), these include Mirzapur, Mohammadpur, Tahbarpur, Rani-Ki-Sarai, Martinganj, Lalganj and Mehnagar.

In the next category those blocks are included where gross irrigated area as percentage of net irrigated area was between 120 to 140. The blocks included in this category are Balariaganj, Palhani, Sathiyav, Jahanaganj, Pawai, Phulpur and Thekma.

The blocks where gross irrigated area as percentage of net irrigated area was not low (i.e. above 140) are: Maharajganj, Harriaya, Azmatgarh, Atraulia, Koyalsa and Ahiraula.

Table 3.1
Year-wise Irrigation and Cropping Intensity of Azamgarh District

Year	Irrigation Intensity	Net sown Area as % of Total Reporting Area	Cropping Intensity
1960-61	50.38	75.18	125.33
1965-66	49.32	75.79	124.54
1970-71	53.10	77.00	125.80
1975-76	52.69	74.67	131.36
1980-81	68.68	75.66	146.42
1985-86	67.76	74.36	152.52
1990-91	77.90	72.58	160.95
1994-95	82.30	72.70	161.26
1998-99	87.47	71.90	163.26
1999-2K	88.23	72.93	163.50

Table 3.1.1

Block-wise Cropping Intensity in Azamgarh District

Blocks	1976-77	1980-81	1984-85	1990-91	1999-00
Mahrajganj	133.91	147.27	144.01	149.39	148.10
Bilariyaganj	135.87	143.05	147.51	159.12	135.68
Harraiya	117.24	146.63	150.68	145.67	136.83
Ajmatgarha	129.61	456.42	151.85	206.87	163.81
Mirzapur	122.07	144.02	148.74	145.17	160.29
Muhammadpur	126.96	145.71	140.00	125.23	155.12
Tahbarpur	130.23	151.18	147.65	148.54	151.91
Palhani	132.13	144.04	158.86	140.79	162.19
RaniKiSrai	149.41	148.74	159.64	162.41	170.43
Sathiyav	132.92	151.04	152.04	162.18	167.22
Jahanaganj	129.25	151.63	157.46	169.07	178.49
Atrauliya	133.17	123.67	153.26	153.12	156.82
Koylasa	146.79	154.67	135.22	193.59	161.36
Ahiraula	130.81	131.17	145.69	170.85	180.60
Pawai	129.69	134.29	143.12	158.92	172.25
Phulpur	116.07	131.02	133.02	149.14	160.78
Martinganj	131.76	127.04	138.01	159.08	159.97
Thekma	130.40	135.99	135.12	168.19	173.49
Lalaganj	136.60	148.90	124.37	167.59	173.16
Mehnagar	120.33	151.47	146.25	178.69	171.86
Tarvan	130.74	149.69	148.38	169.76	170.42
Rural		146.41		161.49	163.47
Urban		149.08		139.90	174.34
Total District	132.61	146.42	148.09	161.43	163.50

Source: District Statistical Handbook (of various years).

Table 3.1.2

Block-wise Net Sown Area as % of Total Reporting Areas

Block	1976-77	1980-81	1984-85	1990-91	1999-00
Mahrajganj	75.34	71.11	69.56	69.87	69.20
Bilariyaganj	83.94	85.00	79.78	82.25	82.12
Harraiya	74.12	68.94	68.96	69.31	70.00
Ajmatgarha	81.56	80.30	76.93	75.60	71.77
Mirzapur	74.39	74.00	74.47	74.85	69.21
Muhammadpur	80.97	80.24	79.22	80.10	75.42
Tahbarpur	79.51	77.01	79.08	78.53	75.29
Palhani	78.95	75.36	73.03	76.75	69.55
RaniKiSrai	77.67	75.52	75.65	75.99	72.71
Sathiyav	80.77	81.60	78.41	80.00	77.20
Jahanaganj	80.85	75.98	76.64	79.13	77.74
Atrauliya	73.15	79.43	74.11	66.54	77.15
Koylasa	66.63	75.71	81.16	61.13	75.75
Ahiraula	74.56	78.49	72.43	67.13	69.31
Pawai	74.97	73.87	74.66	72.32	70.18
Phulpur	77.44	71.60	70.51	72.97	68.83
Martinganj	74.04	77.44	74.65	71.37	72.53
Thekma	75.93	86.23	72.07	69.32	71.10

Lalganj	71.32	74.85	73.07	75.17	72.48
Mehnagar	73.22	75.48	74.48	80.97	75.92
Tarvan	74.56	62.66	73.37	73.40	74.40
Rural		75.74		73.86	73.16
Urban		39.06		34.79	32.45
Total District	75.79	75.66	74.45	73.66	72.93

Table 3.1.3
Block-wise Irrigation Intensity in Azamgarh District

Blocks	1976-77	1980-81	1984-85	1990-91	1999-00
Mahrajganj	36.40	51.21	55.07	67.73	64.96
Bilariyaganj	50.95	63.32	77.31	76.83	78.86
Harraiya	44.48	46.85	56.61	64.93	65.46
Ajmatgarha	48.97	68.65	85.19	79.94	81.20
Mirzapur	67.34	78.36	76.20	73.22	99.42
Muhammadpur	60.08	61.72	67.79	60.42	93.09
Tahbarpur	64.04	77.39	72.83	70.10	85.93
Palhani	77.24	79.76	79.32	68.46	
RaniKiSrai	70.37	48.20	81.20	75.58	99.64
Sathiyav	67.91	77.66	85.99	77.57	93.04
Jahanaganj	58.05	68.14	80.06	78.71	89.58
Atrauliya	51.44	68.72	77.80	91.29	90.90
Koylasa	45.10	58.85	67.03	89.37	84.65
Ahiraula	55.16	42.85	73.32	81.20	89.53
Pawai	56.56	77.96	67.99	71.81	96.83
Phulpur	53.76	89.31	64.17	69.85	89.39
Martinganj	43.64	87.82	52.65	75.62	99.28
Thekma	47.46	57.25	74.20	77.02	84.51
Lalganj	51.62	67.44	76.32	82.76	93.92
Mehnagar	46.03	73.21	77.92	83.99	94.70
Tarvan	47.05	76.36	73.71	79.24	92.79
Rural		68.66		75.81	88.31
Urban		93.87		73.03	94.76
Total District	55.22	68.68	73.58	75.80	88.33

Source: District Statistical Handbook (of various years).

Table 3.1.4

Block-wise Gross Irrigated Area as % of Net Irrigated Area

Blocks	1976-77	1980-81	1984-85	1990-91	1999-00
Mahrajganj	105.15	104.78	105.76	109.33	140.57
Bilariyaganj	103.97	104.93	106.94	122.11	130.89
Harraiya	102.37	100.22	104.47	123.51	150.66
Ajmatgarha	103.48	103.46	107.76	156.56	150.49
Mirzapur	103.14	104.76	103.84	113.22	107.86
Muhammadpur	114.07	106.01	110.39	110.57	110.32
Tahbarpur	114.23	105.50	103.20	126.87	118.82
Palhani	114.79	104.95	108.71	125.99	130.81
RaniKiSrai	100.71	105.95	104.75	122.25	118.15
Sathiyav	101.67	103.16	105.88	116.03	125.61
Jahanaganj	102.53	103.55	103.94	110.68	130.35
Atrauliya	136.48	105.70	112.01	126.39	146.43
Koylasa	157.09	108.11	102.71	132.92	146.48
Ahiraula	112.57	104.00	105.56	130.40	149.12
Pawai	107.66	102.82	103.17	118.40	129.63
Phulpur	100.35	103.06	102.04	113.63	120.87
Martinganj	102.86	102.42	107.96	114.19	112.11
Thekma	103.25	104.63	106.42	117.94	127.75
Lalganj	110.93	103.78	103.54	110.56	116.47

Mehnagar	109.94	104.29	109.12	125.76	116.27
Tarvan	112.93	105.07	105.38	113.82	118.88
Rural		104.42		120.87	127.37
Urban		118.95		112.48	161.14
Total District	108.82	104.44	107.99	120.85	127.45

Source: District Statistical Handbook (of various years).

3.5 Source of Irrigation

If we analyse the sources of irrigation in Azamgarh district, we can witness two distinct phases during the period of year 1960-61 to year 2000-01.

The first phase covers the period 1960-61 to 1969-70. This is the phase when traditional sources of irrigation continued to be significant. Canals and tubewells together covered less than 30 per cent of net irrigated area. The fact that other wells accounted for irrigation of more than 60 per cent of net irrigated area during this phase showed continuing importance of traditional sources of irrigation during this phase.

The next phase covers the period after 1970-71. In this phase, area irrigated through traditional sources declined very fast. The area irrigated through canals increased from around 8.6 per cent to around 18.0 per cent, and the area irrigated through tubewells increased from around 35.0 per cent to around 80.0 per cent. This trend was discernible in all the blocks of the district.

Block-wise analysis of sources of irrigation also shows that there was only one block i.e. Martinganj where canal still accounted for more than 30.0 per cent of net irrigated area in 1999-2K **(See table 3.2.1).**

Table – 3.2
Year-wise Irrigated Area by Different Sources in Azamgarh District, (in Percent)

Years	Net irrigated area	Canal	Tube wells (Govt.+Pvt.)	Other wells	Tanks, Lakes, Ponds	Other sources
1960-61	50.38	2.59	7.05	70.95	12.09	7.32
1961-62	49.73	3.18	6.86	68.24	14.01	7.72
1962-63	50.37	3.94	6.48	67.07	14.10	8.41
1963-64	49.96	4.41	6.86	65.37	14.76	8.61
1964-65	49.75	5.74	7.59	64.50	13.66	8.52
1965-66	49.32	8.40	10.24	59.70	11.37	10.30
1966-67	52.12	7.82	11.18	63.32	8.30	9.38
1967-68	52.12	7.82	11.18	63.32	8.30	9.38
1968-69	50.79	8.66	13.82	61.10	7.78	8.63
1969-70	50.28	8.56	19.69	62.46	4.32	4.97
1970-71	53.11	12.44	35.14	39.27	6.70	6.23
1971-72	53.05	12.44	35.14	39.27	6.70	6.23
1972-73	52.32	13.62	44.04	28.90	7.38	6.05
1973-74	52.34	14.85	53.28	17.90	8.09	5.87
1974-75	53.41	14.85	53.28	17.90	8.09	5.87
1975-76	54.83	12.47	54.59	18.12	8.47	6.36
1976-77	55.22	12.59	56.48	17.10	7.81	6.01
1977-78	58.20	10.94	61.04	14.59	8.16	5.26
1978-79	56.53	13.44	61.42	14.94	6.10	4.10
1979-80	66.41	13.80	73.20	8.38	2.63	1.99
1980-81	68.68	18.42	69.17	8.85	2.36	1.20
1981-82	69.50	16.84	75.77	4.53	1.93	0.93
1982-83	70.61	17.08	76.93	3.55	1.55	0.88
1983-84	69.80	17.18	77.39	2.98	1.55	0.89
1984-85	73.58	21.02	74.59	1.48	0.74	0.89
1985-86	67.76	21.69	75.90	1.07	0.67	0.68
1986-87	70.99	23.21	73.93	1.36	0.82	0.67
1987-88	72.17	19.41	78.33	0.98	0.72	0.56
1988-89	72.76	18.40	79.51	1.07	0.54	0.48
1989-90	NA	NA	NA	NA	NA	NA
1990-91	77.91	16.52	79.62	3.15	0.42	0.29
1991-92	75.80	17.14	80.86	1.60	0.25	0.15
1992-93	76.94	17.23	81.91	0.60	0.20	0.06
1993-94	76.28	16.30	83.22	0.34	0.09	0.05
1994-95	82.26	16.64	83.06	0.20	0.06	0.04
1995-96	76.72	17.50	82.27	0.18	0.03	0.03
1996-97	84.70	16.92	82.97	0.07	0.04	0.00
1997-98	78.15	17.54	82.25	0.14	0.04	0.02
1998-99	87.47	16.22	83.64	0.05	0.03	0.05
1999-2K	88.33	17.35	82.25	0.33	0.06	0.00
2000-01	89.65	18.42	81.40	0.12	0.04	0.01

Table 3.2.1

Block-wise Irrigated Area by Different Sources in Azamgarh District (in Percent)

Blocks	Years	Net irrigated area	Canal	Govt. tube wells	Pvt. tube wells	Other wells	Tanks, Lakes, Ponds	Other Sources
Mahrajganj	1976-77	36.40	2.52	15.01	34.36	45.80	2.31	0.00
	1980-81	51.21	16.26	74.92		6.75	0.54	1.49
	1984-85	55.07	12.96	83.86		1.97	0.65	0.55
	1991-92	67.73	1.68	8.13	89.31	0.01	0.48	0.37
	1995-96	72.25	8.31	10.79	80.80	0.00	0.09	0.00
	1999-2K	64.96	6.59	8.54	84.70	0.09	0.08	0.00
Bilariyaganj	1976-77	50.95	1.10	21.83	37.61	36.32	3.14	0.00
	1980-81	63.32	0.00	98.09		0.71	0.43	0.77
	1984-85	77.31	8.86	89.43		0.83	0.57	0.31
	1991-92	76.83	6.24	2.15	91.37	0.00	0.13	0.11
	1995-96	78.77	4.78	2.71	92.44	0.00	0.08	0.00
	1999-2K	78.86	4.94	3.99	90.65	0.39	0.04	0.00
Harraiya	1976-77	44.48	0.00	21.29	31.23	44.94	2.54	0.00
	1980-81	46.85	0.00	85.30		9.91	2.67	2.12
	1984-85	56.61	5.81	88.86		2.08	1.36	1.89
	1991-92	64.93	2.90	14.65	82.30	0.00	0.03	0.12
	1995-96	60.51	6.68	10.06	83.18	0.00	0.09	0.00
	1999-2K	65.46	7.34	7.62	84.12	0.83	0.08	0.00
Ajmatgarha	1976-77	48.97	1.02	21.53	36.22	36.72	4.52	0.00
	1980-81	68.65	7.34	87.16		3.16	0.69	1.65
	1984-85	85.19	5.36	91.49		0.49	0.35	2.31
	1991-92	79.94	8.86	6.30	83.23	1.43	0.09	0.08
	1995-96	69.42	2.63	6.00	91.35	0.00	0.00	0.00
	1999-2K	81.20	3.95	6.09	89.66	0.25	0.04	0.00
Mirzapur	1976-77	67.34	5.34	18.39	48.29	25.15	2.83	0.00
	1980-81	78.36	18.65	68.29		11.70	0.96	0.40
	1984-85	76.20	27.94	68.97		1.71	1.02	0.36
	1991-92	73.22	16.29	1.31	82.06	0.00	0.00	0.34
	1995-96	67.62	22.67	4.72	73.61	0.00	0.00	0.00
	1999-2K	99.42	15.59	0.97	83.35	0.00	0.09	0.00
Muhammadpur	1976-77	60.08	2.43	9.84	48.23	36.94	2.56	0.00
	1980-81	61.72	14.28	62.36		18.43	3.81	1.12
	1984-85	67.79	29.85	67.70		1.04	1.05	0.36
	1991-92	60.42	29.25	0.98	65.55	1.85	1.08	1.29
	1995-96	76.64	31.05	1.44	67.50	0.00	0.00	0.00
	1999-2K	93.09	27.65	0.73	71.62	0.00	0.00	0.00
Tahbarpur	1976-77	64.04	20.90	2.76	12.17	59.91	4.26	0.00
	1980-81	77.39	20.85	57.59		20.10	1.19	0.20
	1984-85	72.83	27.88	69.81		1.62	0.41	0.29
	1991-92	70.10	33.05	0.64	66.11	0.06	0.00	0.13
	1995-96	73.06	24.04	0.02	75.86	0.00	0.08	0.00
	1999-2K	85.93	13.48	0.34	86.14	0.00	0.04	0.00
Palhani	1976-77	77.24	0.17	20.32	63.34	15.22	0.95	0.00
	1980-81	79.76	3.05	89.03		6.39	0.09	1.45
	1984-85	79.32	9.06	85.52		3.37	0.70	1.35
	1991-92	68.46	5.01	2.78	90.16	1.76	0.28	0.00
	1995-96	77.95	0.97	4.73	93.57	0.55	0.07	0.11
	1999-2K	84.76	1.92	2.85	95.23	0.00	0.00	0.00

Contd...

Blocks	Years	Net irrigated area	Canal	Govt. tube wells	Pvt. tube wells	Other wells	Tanks, Lakes, Ponds	Other Sources
Rani Ki Srai	1976-77	70.37	2.30	19.96	51.74	21.61	4.26	0.00
	1980-81	48.20	24.97	51.42		16.31	4.43	2.88
	1984-85	81.20	21.51	74.90		1.84	0.70	1.04
	1991-92	75.58	20.28	6.14	72.20	0.84	0.46	0.08
	1995-96	69.61	12.81	7.90	77.12	2.06	0.00	0.11
	1999-2K	99.64	17.69	1.78	80.53	0.00	0.00	0.00
Sathiyav	1976-77	67.91	0.00	53.29	44.25	0.80	1.66	0.00
	1980-81	77.66	0.00	97.96		0.52	0.98	0.54
	1984-85	85.99	0.00	95.87		1.81	0.97	1.35
	1991-92	77.57	0.25	0.22	99.54	0.00	0.00	0.00
	1995-96	79.66	0.00	0.98	99.50	0.00	0.00	0.00
	1999-2K	93.04	0.19	3.52	96.29	0.00	0.00	0.00
Jahanaganj	1976-77	58.05	0.00	48.53	48.30	1.22	1.94	0.00
	1980-81	68.14	4.03	89.60		4.55	1.72	0.19
	1984-85	80.06	20.57	74.36		2.26	0.41	2.41
	1991-92	78.71	7.62	0.77	91.58	0.00	0.03	0.00
	1995-96	79.10	15.91	1.16	82.13	0.80	0.00	0.00
	1999-2K	89.58	18.89	1.34	79.33	0.39	0.04	0.00
Atrauliya	1976-77	51.44	26.28	37.88	3.32	22.98	9.56	0.00
	1980-81	68.72	15.73	24.50		55.88	2.96	0.93
	1984-85	77.80	21.34	76.55		0.24	0.14	1.73
	1991-92	91.29	15.02	3.08	75.69	6.21	0.00	0.00
	1995-96	84.12	10.69	2.43	86.88	0.00	0.00	0.00
	1999-2K	90.90	7.58	3.60	87.83	0.89	0.00	0.11
Koylasa	1976-77	45.10	8.88	11.74	23.09	39.27	17.02	0.00
	1980-81	58.85	20.94	57.67		14.33	6.24	0.83
	1984-85	67.03	21.77	72.82		2.60	0.59	2.23
	1991-92	89.37	18.20	1.95	79.85	0.00	0.00	0.00
	1995-96	79.12	14.52	1.01	84.48	0.00	0.00	0.00
	1999-2K	84.65	22.06	2.14	73.92	1.89	0.00	0.00
Ahiraula	1976-77	55.16	16.31	15.22	11.59	48.46	8.42	0.00
	1980-81	70.69	30.92	59.04		8.64	0.85	0.55
	1984-85	73.32	19.37	71.58		1.11	0.12	7.82
	1991-92	81.20	19.26	0.00	80.49	0.13	0.11	0.00
	1995-96	79.67	26.46	1.22	72.32	0.00	0.00	0.00
	1999-2K	89.53	27.17	1.16	71.26	0.41	0.00	0.00
Pawai	1976-77	56.56	7.09	3.82	63.38	20.81	4.90	0.00
	1980-81	77.96	68.30	18.39		11.89	1.05	0.36
	1984-85	67.99	33.38	62.21		2.52	0.26	1.64
	1991-92	71.81	18.19	2.51	74.00	5.02	0.26	0.00
	1995-96	77.66	28.37	3.84	67.15	0.64	0.00	0.00
	1999-2K	96.83	23.43	1.10	75.22	0.14	0.11	0.00
Phulpur	1976-77	53.76	27.18	1.81	25.24	21.20	24.57	0.00
	1980-81	89.31	14.10	69.58		12.73	2.93	0.66
	1984-85	64.17	26.47	71.97		0.40	0.33	0.82
	1991-92	69.85	21.42	0.38	76.59	0.46	1.13	0.02
	1995-96	75.09	13.04	0.00	86.63	0.00	0.01	0.32
	1999-2K	89.39	13.46	0.00	86.41	0.09	0.04	0.00

Contd...

Blocks	Years	Net irrigated area	Canal	Govt. tube wells	Pvt. tube wells	Other wells	Tanks, Lakes, Ponds	Other Sources
Martinganj	1976-77	43.64	25.99	8.46	10.95	30.73	23.87	0.00
	1980-81	87.82	43.31	39.15		12.84	3.97	0.73
	1984-85	52.65	41.48	57.62		0.41	0.30	0.20
	1991-92	75.62	49.62	0.96	47.95	0.53	0.69	0.26
	1995-96	76.71	41.69	0.00	58.16	0.00	0.14	0.00
	1999-2K	99.28	39.78	0.09	59.96	0.08	0.09	0.00
Thekma	1976-77	47.46	19.40	30.64	27.12	10.08	12.76	0.00
	1980-81	57.25	18.99	68.09		5.20	6.13	1.59
	1984-85	74.20	28.85	70.20		0.51	0.32	0.11
	1991-92	77.02	24.61	0.86	73.91	0.01	0.47	0.15
	1995-96	84.15	25.96	0.45	73.51	0.00	0.03	0.04
	1999-2K	84.51	24.24	0.40	74.33	0.73	0.29	0.00
Lalganj	1976-77	51.62	13.80	31.18	33.54	7.89	13.59	0.00
	1980-81	67.44	14.38	79.07		1.73	3.14	1.68
	1984-85	76.32	25.81	68.56		1.92	0.94	2.76
	1991-92	82.76	22.38	0.68	69.33	7.61	0.00	0.00
	1995-96	83.76	17.54	0.65	81.80	0.00	0.02	0.00
	1999-2K	93.92	22.20	0.21	77.41	0.06	0.12	0.00
Mehnagar	1976-77	46.03	23.73	15.62	28.77	15.21	16.66	0.00
	1980-81	73.21	22.55	67.20		5.79	2.71	1.75
	1984-85	77.92	27.43	66.64		1.74	1.11	3.08
	1991-92	83.99	21.20	0.28	78.18	0.00	0.35	0.00
	1995-96	89.00	26.73	0.21	72.98	0.00	0.01	0.06
	1999-2K	94.70	24.14	0.21	75.32	0.27	0.05	0.00
Tarvan	1976-77	47.05	3.79	25.15	33.65	13.23	24.19	0.00
	1980-81	76.36	16.82	76.73		4.69	0.96	0.80
	1984-85	73.71	27.64	64.90		0.68	0.42	6.37
	1991-92	79.24	12.77	2.43	79.40	5.18	0.00	0.22
	1995-96	74.34	15.89	0.49	83.38	0.21	0.00	0.02
	1999-2K	92.79	18.80	0.55	80.03	0.55	0.06	0.00

Source: District Statistical Handbook (of various years).

3.6 Cropping Pattern

The cropping pattern in the district shows that paddy and wheat are the major crops and pulses and sugarcane is also cultivated in some area (**See table 3.3**). Area under paddy cultivation increased from around 44.96 per cent of net sown area in 1960-61 to around 66.23 per cent during 1998-99. Area under wheat cultivation increased from 45.05 per cent in 1960-61 to 70.47 per cent of net sown area in 1999-2K. But area under different coarse grains declined during this period, for example area under barley declined from 24.87 per cent to 1.61 per cent, gram cultivation declined from 5.25 per cent to 2.18 per cent, and peas cultivation declined from 12.51 per cent to 3.34 per cent during 1960-61 to 1998-99. The area under pulses cultivation declined from 14.79 per cent in 1981-82 to 8.49 per cent in 1999-2K.

Whereas paddy is by and large a rain fed crop, others are highly irrigated crops (**See table 3.3.1**). If we analyse other factor namely productivity, we find that area under cultivation has increased in case of only those crops, whose productivity has also increased significantly. The productivity of paddy increased from 6.13 qt./ha in 1960-61 to 17.42 qt./ha in 1998-99. The productivity of wheat increased from 9.95 qt./ha in 1960-61 to 24.51 qt./ha in 1998-99. As regards

cash crops, the productivity of potato increased from 46.12 qt./ha in 1960-61 to 220.48 qt./ha in 1998-99.

Thus, farmers have shifted to crops, which are highly irrigated, fertilizer use is higher on them and whose productivity is also comparatively very high.

We need to make efforts to increase production of more pulses, oilseeds and spices. Cropping rotation also needs to be changed. Following steps are imperative to achieve it.

- (a) More thrust be given for developing high yielding varieties of pulses, oil seeds and spices.
- (b) Rain fed areas should be encouraged to cultivate these crops.
- (c) Orchards, fallow land and land under social forestry could be used for growing such crops.
- (d) Processing industries of oilseeds and spices be promoted at local level with support for technology up gradation, packaging and market access facilities.

Table – 3.3(a)

Area Under Major Crops and Productivity (as percentage of net sown area) (Qt./Hectare) in Azamgarh District

Crops	Area/ Productivity	1960- 61	1965- 66	1970- 71	1975- 76	1980- 81	1985- 86	1990- 91	1994- 95	1998- 99
Paddy	Area	44.96	45.71	46.60	47.88	54.44	58.66	59.88	62.67	65.28
	Productivity	6.13	5.25	7.89	6.50	8.78	13.15	17.89	18.27	17.42
Maize	Area	4.00	3.78	5.13	5.49	4.47	3.45	3.44	2.98	2.64
	Productivity	8.27	11.43	8.17	6.30	7.47	7.75	3.15	11.45	7.34
Wheat	Area	5.05	5.51	11.83	24.14	47.54	52.95	65.20	66.33	69.37
	Productivity	9.95	8.54	12.24	14.07	15.29	18.28	22.36	22.47	24.51
Barley	Area	24.87	23.68	22.86	16.34	6.45	4.11	2.37		1.61
	Productivity	12.04	12.90	11.94	12.46	12.91	14.54	20.34		14.94
Gram	Area	5.25	5.04	4.36	5.50	5.95	5.42	4.32	3.36	2.18
	Productivity	4.46	5.40	6.44	7.28	8.55	9.39	12.99	8.30	11.80
Peas	Area	12.51	12.33	10.99	6.24	2.64	2.89	3.18		3.34
	Productivity	10.47	9.23	9.59	8.71	7.04	9.74	12.22		12.42
Arhar	Area	5.28	5.60	5.70	5.83	5.46	4.83	4.77		3.17
	Productivity	3.66	8.02	7.00	7.74	6.71	6.02	7.35		9.22
Potato	Area	0.71	0.84	0.98	1.08	1.36	1.50	1.80		1.86
	Productivity	46.12	93.40	93.27	134.18	125.01	91.90	155.52		220.48
Sugarcane	Area	9.08	8.92	8.96	9.14	9.71	8.87	9.30		8.13
	Productivity	433.08	318.19	309.78	497.25	331.92	390.00	398.32		438.64

Block wise analysis of cropping pattern confirms this trend, except that in some blocks pulses and sugarcane was also grown at significant level.

The blocks where area under pulse cultivation as percentage of net sown area was above 10 per cent are Azmatgarh (10.19 per cent), Mirzapur (11.92 per cent), Tahbarpur (10.21 per cent), Palhani (13.15 per cent) and Rani-Ki Sarai (12.28 per cent).

Table 3.3(b)
Cropping Pattern in Azamgarh District, Area under Different Crops as Percentage of Net Sown Area

Years	Paddy		Wheat		Barley		Pulses		Oil Seed		Sugarcane		Potato	
	Total	Irrigated	Total	Irrigated	Total	Irrigated	Total	Irrigated	Total	Irrigated	Total	Irrigated	Total	Irrigated
1976-77	9.03	9.00	22.84	14.10										
1980-81	54.45	2.52	47.54	95.82	6.46	87.96	0.59	68.05	0.17	43.52	8.83	92.70	1.36	98.85
1981-82	55.77	2.11	48.98	97.15	5.49	86.46	14.79	55.60	0.16	46.53	9.67	94.81	1.46	99.47
1982-83	54.47	8.51	50.97	97.39	5.06	85.92	14.41	53.49	0.16	48.25	9.92	94.34	1.52	99.50
1983-84	54.24	8.51	50.96	97.20	4.97	86.22	14.31	53.55	0.16	49.40	9.88	94.34	1.52	99.54
1984-85	56.47	9.59	52.87	96.74	4.26	89.86	13.21	54.16	0.18	56.33	9.27	94.02	1.48	98.26
1991-92	63.46	9.81	63.76	98.89	2.07	93.85	11.72	57.13	0.24	90.50	9.78	96.50	1.78	99.67
1992-93	64.38	13.25	64.80	99.71	2.03	96.44	11.14	60.44	0.25	87.22	9.35	96.29	1.87	99.91
1993-94	56.97	33.95	64.09	98.63	1.81	94.90	11.63	55.51	0.33	83.73	8.95	97.08	1.97	99.79
1994-95	62.68	28.17	66.31	99.10	1.65	96.86	10.96	55.36	0.27	81.62	9.14	96.72	1.92	99.78
1995-96	80.55	42.91	85.03	98.86	2.20	92.48	13.72	50.47	0.46	75.50	12.22	96.28	2.46	99.81
1997-98	65.79	44.60	67.52	99.33	1.57	93.35	9.20	52.76	0.35	66.17	8.98	99.74	1.82	99.75
1998-99	65.28	36.16	69.77	99.43	1.61	93.03	9.01	55.72	0.49	79.79	8.14	97.97	1.86	99.88
1999-2K	66.23	36.87	70.47	99.40	1.39	93.95	8.49	54.85	0.40	76.66	7.54	97.59	1.87	99.95

Table 3.3.1
Block-wise Cropping Pattern in Azamgarh District, (in Percent)

Blocks	Years	Paddy		Wheat		Barley		Pulses		Oil Seed		Sugarcane		Potato	
		Total	Irrigat ed	Total	Irrigat ed	Total	Irrigat ed	Total	Irrigat ed	Total	Irrigat ed	Total	Irrigat ed	Total	Irrigat ed
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Maharajanj	1976-77	5.74	4.21	2.60	98.95										
	1980-81	46.30	1.60	49.03	70.34	8.46	61.17	14.91	36.26	0.25	65.12	9.63	60.10	1.54	87.50
	1984-85	45.34	0.67	50.31	74.66	5.44	70.14	11.50	46.26	0.17	10.34	8.76	61.76	1.34	93.30
	1991-92	56.44	0.48	62.31	92.77	2.50	81.38	9.14	49.84	0.13	100.0	10.27	54.53	1.77	97.31
	1995-96	67.27	21.33	76.35	99.78	1.99	84.46	9.45	39.90	0.36	75.47	12.06	97.21	1.48	100.0
	1999-2K	60.50	26.95	64.94	99.44	1.61	89.55	5.77	48.59	0.20	82.35	8.83	86.83	1.33	100.0
Bilariyaganj	1976-77	6.41	4.74	3.31	100.0										
	1980-81	49.27	1.08	46.43	100.0	8.40	99.56	17.30	58.98	0.12	63.16	9.01	100.0	1.55	99.60
	1984-85	54.63	7.91	55.06	100.0	3.60	100.0	15.43	53.20	0.06	44.44	9.41	100.0	1.52	100.0
	1991-92	63.21	10.15	66.21	99.98	1.81	97.64	11.08	54.63	0.21	82.86	10.01	100.0	1.29	100.0
	1995-96	64.51	32.17	71.62	99.89	1.71	98.90	10.18	49.82	0.29	67.39	11.47	98.47	1.35	94.88
	1999-2K	67.35	26.18	73.12	99.48	1.11	93.41	8.34	36.26	0.35	68.42	6.39	99.62	1.33	100.0
Harraiya	1976-77	5.39	5.87	2.85	100.0										
	1980-81	43.58	0.71	47.48	67.37	9.33	47.32	23.13	25.90	0.21	33.33	10.36	64.12	0.96	92.53
	1984-85	50.37	5.85	57.23	65.35	7.39	58.33	12.80	39.01	0.25	15.56	11.52	75.10	0.80	75.86
	1991-92	53.80	12.24	63.66	89.70	3.03	61.98	8.46	45.64	0.11	25.00	9.75	84.24	0.79	93.10
	1995-96	52.57	47.85	60.52	99.77	1.70	87.03	6.99	37.78	0.17	64.52	9.96	97.30	0.78	100.0
	1999-2K	42.50	72.93	57.54	99.42	1.68	96.46	6.09	54.62	0.35	26.15	8.31	87.83	1.15	100.0
Ajmatgarh	1976-77	5.18	2.27	2.98	100.0										
	1980-81	48.66	4.67	43.70	94.78	4.67	97.95	16.95	52.49	0.15	36.00	9.50	96.54	1.01	100.0
	1984-85	54.26	25.20	57.42	95.16	3.75	94.49	15.80	43.75	0.25	45.00	10.54	97.92	1.14	100.0
	1991-92	61.62	52.24	62.36	99.25	2.00	99.35	15.43	44.62	0.30	82.61	18.31	100.0	1.17	100.0
	1995-96	56.13	75.49	62.13	98.71	2.06	92.26	10.23	53.47	0.77	24.80	11.24	97.17	2.02	100.0
	1999-2K	65.34	59.84	71.46	99.69	1.56	95.65	10.19	35.82	1.00	38.78	8.62	99.53	1.97	100.0
Mirzapur	1976-77	10.26	0.00	29.28	99.65										
	1980-81	46.02	0.04	47.03	99.30	7.80	91.10	16.31	47.60	0.06	87.50	9.91	100.0	1.31	100.0
	1984-85	50.49	10.90	48.88	99.54	6.28	94.25	15.82	46.25	0.08	90.00	9.89	99.92	1.43	100.0
	1991-92	39.74	0.35	57.26	99.94	2.92	98.34	16.78	52.91	0.30	100.0	9.28	100.0	2.13	100.0
	1995-96	49.62	27.36	63.48	99.29	2.35	100.0	16.54	45.53	0.50	72.88	9.75	98.19	2.22	100.0
	1999-2K	57.69	33.74	65.88	99.13	1.78	97.55	11.92	56.08	0.49	94.64	9.63	99.64	2.63	100.0
Muhamma dpur	1976-77	14.54	89.60	29.66	99.91										
	1980-81	60.21	0.19	41.10	99.56	3.11	94.15	8.91	55.17	0.09	92.86	6.50	100.0	0.67	100.0
	1984-85	56.73	8.17	51.28	99.95	2.93	97.75	12.71	56.49	0.12	63.16	6.78	100.0	1.18	100.0
	1991-92	48.32	2.84	46.41	100.0	2.14	100.0	11.29	59.79	0.17	100.0	6.89	100.0	1.49	100.0
	1995-96	66.38	38.74	54.62	99.48	2.33	93.58	11.81	55.29	0.37	88.46	6.76	99.37	1.98	100.0
	1999-2K	65.33	30.51	67.46	99.39	1.19	90.12	7.90	71.04	0.53	93.51	5.74	99.64	1.69	100.0
Tahbarpur	1976-77	12.88	0.00	7.81	99.82										
	1980-81	51.50	1.13	41.64	99.31	12.77	94.64	20.02	49.06	0.06	37.50	9.39	100.0	1.89	100.0
	1984-85	49.40	0.80	44.95	99.22	9.76	98.16	19.03	51.85	0.09	66.67	8.63	100.0	1.64	97.37
	1991-92	49.49	12.71	52.38	99.63	5.61	98.07	15.40	58.07	0.03	100.0	11.70	100.0	2.11	100.0
	1995-96	55.06	31.08	52.62	96.64	3.22	91.14	14.28	54.94	0.12	100.0	13.67	97.22	1.79	100.0
	1999-2K	57.30	25.58	61.70	99.28	2.56	94.08	10.21	54.64	0.28	83.78	10.39	99.56	2.02	100.0
Palhani	1976-77	19.98	0.00	32.16	99.08										
	1980-81	43.42	0.99	52.09	98.64	9.59	84.65	18.88	50.08	0.14	64.29	9.24	100.0	1.36	100.0
	1984-85	43.50	4.68	52.90	98.25	9.72	88.69	20.59	90.92	0.12	75.00	9.76	100.0	1.52	100.0
	1991-92	41.45	12.30	53.10	99.31	4.66	94.07	15.55	49.57	0.08	100.0	10.70	100.0	2.13	100.0
	1995-96	47.88	42.23	53.44	99.96	4.40	92.01	15.40	40.58	0.13	100.0	12.16	97.02	2.88	100.0
	1999-2K	44.76	60.16	53.55	98.95	2.30	88.00	13.15	54.76	0.34	56.76	8.94	100.0	2.63	100.0

Contd...

Blocks	Years	Paddy		Wheat		Barley		Pulses		Oil Seed		Sugarcane		Potato	
		Total	Irrigat ed	Total	Irrigat ed	Total	Irrigat ed	Total	Irrigat ed	Total	Irrigat ed	Total	Irrigat ed	Total	Irrigat ed
		3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Rani Ki Srai	1976-77	11.59	24.61	48.90	99.50										
	1980-81	52.96	0.02	47.83	98.15	8.93	88.74	18.46	57.52	0.04	75.00	10.08	100.0	1.67	100.0
	1984-85	53.72	11.73	47.72	98.93	9.09	84.36	18.43	57.52	0.05	60.00	10.20	100.0	1.79	97.40
	1991-92	54.16	7.17	58.20	99.17	4.97	93.52	16.75	56.64	0.23	75.00	11.77	100.0	2.18	100.0
	1995-96	52.68	68.58	67.38	99.48	3.35	94.29	16.03	50.92	0.17	100.0	14.81	96.77	2.50	100.0
	1999-2K	61.03	44.46	66.84	99.17	3.56	94.44	12.28	61.40	0.48	65.31	9.08	99.67	2.61	100.0
Sathiyav	1976-77	15.64	0.00	40.89	83.39										
	1980-81	52.01	0.00	53.62	99.52	7.11	92.36	15.38	55.08	0.04	83.33	9.19	100.0	1.06	100.0
	1984-85	55.04	4.33	61.37	99.89	4.16	97.78	14.43	55.86	0.15	68.42	11.94	100.0	1.12	100.0
	1991-92	63.51	0.00	66.36	99.77	2.73	99.44	11.54	55.12	0.02	66.67	11.75	100.0	1.37	100.0
	1995-96	26.50	44.09	72.71	98.47	2.98	94.36	9.23	45.99	0.10	100.0	8.70	96.66	1.15	100.0
	1999-2K	66.80	23.02	74.21	99.25	1.96	91.94	9.00	56.05	0.30	63.16	8.28	99.62	2.32	100.0
Jahanagan j	1976-77	17.25		25.45	100.0										
	1980-81	66.46	0.24	34.39	99.90	5.33	99.46	11.65	58.16	0.04	83.33	8.71	100.0	0.89	100.0
	1984-85	69.24	5.12	57.84	100.0	3.28	100.0	11.74	68.59	0.22	87.10	8.69	99.83	1.38	100.0
	1991-92	77.99	0.00	67.40	100.0	2.38	99.12	8.86	76.97	0.04	100.0	7.41	100.0	1.34	100.0
	1995-96	74.47	5.18	69.26	98.98	2.23	95.57	9.46	65.50	0.12	88.24	8.30	94.48	2.01	100.0
	1999-2K	80.65	16.57	79.63	99.47	1.97	92.81	7.47	83.24	0.18	84.00	5.71	99.63	2.22	100.0
Atrauliya	1976-77	0.00		29.36	99.97										
	1980-81	53.68	0.28	41.85	99.96	6.78	99.88	16.86	55.57	0.25	93.75	7.82	100.0	1.84	100.0
	1984-85	59.73	7.62	53.65	100.0	6.03	100.0	18.75	53.28	0.20	83.33	9.98	100.0	2.54	100.0
	1991-92	34.63	34.15	74.61	100.0	2.05	100.0	19.12	52.85	0.61	100.0	11.26	100.0	2.40	100.0
	1995-96	61.73	96.09	77.72	99.52	0.81	100.0	12.03	52.02	0.60	100.0	9.09	95.54	2.19	100.0
	1999-2K	67.35	58.92	67.92	99.25	0.98	91.74	9.05	46.24	0.65	98.75	8.93	99.73	1.88	100.0
Koylasa	1976-77	0.26		30.17	99.97										
	1980-81	51.59		50.59	84.22	7.12	100.0	17.99	58.00	0.27	52.94	8.84	100.0	2.33	100.0
	1984-85	50.15	2.70	43.05	99.48	5.69	99.87	12.72	53.95	0.22	63.33	8.64	100.0	2.60	100.0
	1991-92	77.21	20.11	73.12	100.0	2.70	100.0	14.28	60.39	0.58	93.22	11.08	100.0	3.08	100.0
	1995-96	58.80	95.70	54.25	98.29	1.98	100.0	9.52	54.90	0.42	92.73	10.11	96.29	2.75	100.0
	1999-2K	65.26	58.90	67.15	99.27	1.29	93.79	8.98	51.11	0.45	87.50	9.16	99.48	2.23	100.0
Ahiraula	1976-77			24.24	99.94										
	1980-81	47.99	0.39	39.02	99.18	9.16	87.59	11.77	49.53	0.25	71.05	9.02	99.71	1.89	100.0
	1984-85	54.20	7.03	43.54	98.92	6.28	100.0	17.96	56.04	0.21	90.00	11.31	100.0	2.18	97.10
	1991-92	63.89	17.00	66.61	99.79	1.78	95.30	12.24	54.35	0.50	100.0	13.14	100.0	2.11	100.0
	1995-96	60.75	65.18	69.83	89.44	1.52	100.0	10.82	49.50	0.30	85.37	11.89	96.97	2.26	100.0
	1999-2K	76.43	45.79	72.74	99.38	1.03	92.86	9.37	42.73	0.57	76.62	10.30	99.64	1.96	100.0
Pawai	1976-77	0.22		23.72	100.0										
	1980-81	43.21	0.62	41.57	99.86	7.76	97.80	18.17	50.05	0.14	72.73	9.88	100.0	1.95	100.0
	1984-85	44.29	0.07	63.71	69.35	4.60	100.0	14.97	48.02	0.25	100.0	10.61	100.0	2.67	98.78
	1991-92	62.39	1.52	60.41	99.98	0.86	100.0	11.10	53.07	0.44	92.42	12.21	100.0	2.17	100.0
	1995-96	62.98	35.54	67.56	98.97	1.13	88.75	11.77	44.67	0.72	79.21	8.36	95.34	2.37	100.0
	1999-2K	66.71	53.05	72.20	99.43	0.60	88.51	9.00	49.89	0.52	82.89	9.69	99.57	2.07	100.0
Phulpur	1976-77	0.36		25.06	99.89										
	1980-81	41.60		40.46	99.96	6.22	99.88	16.54	48.14	0.11	66.67	7.73	100.0	1.91	100.0
	1984-85	46.33	0.14	44.67	99.77	3.57	100.0	13.69	36.78	0.13	66.67	8.65	100.0	2.09	100.0
	1991-92	54.74	1.79	58.24	99.95	0.39	100.0	9.31	50.35	0.59	84.34	8.33	100.0	2.39	100.0
	1995-96	46.90	56.60	61.65	98.54	0.35	100.0	9.36	44.85	0.99	69.29	9.09	95.90	2.25	100.0
	1999-2K	55.39	28.96	69.71	99.55	0.74	89.69	9.69	43.84	0.66	95.40	6.19	99.75	2.26	100.0
Martinganj	1976-77			20.86	100.0										
	1980-81	57.76		32.15	100.0	6.19	100.0	8.39	42.58	0.13	52.17	5.31	100.0	1.56	100.0
	1984-85	62.73		32.61	99.72	5.20	99.89	10.54	51.67	0.09	93.33	6.28	100.0	1.26	100.0
	1991-92	66.80	5.56	64.97	100.0	0.80	100.0	9.58	58.25	0.36	95.00	7.44	100.0	1.85	100.0
	1995-96	62.18	38.36	64.02	99.72	0.60	100.0	8.77	49.64	0.33	86.21	6.39	95.81	1.68	100.0
	1999-2K	67.73	40.00	71.77	99.50	0.62	97.12	6.83	63.51	0.45	93.42	5.10	99.42	1.50	100.0

Contd...

Blocks	Paddy	Wheat	Barley	Pulses	Oil Seed	Sugarcane	Potato
--------	-------	-------	--------	--------	----------	-----------	--------

1	Years	Total	Irrigat ed	Total	Irrigat ed	Total	Irrigat ed	Total	Irrigat ed	Total	Irrigat ed	Total	Irrigat ed	Total	Irrigat ed
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Thekma	1976-77	1.25		12.00	100.0										
	1980-81	47.75	2.54	50.86	70.92	2.96	99.66	7.71	56.01	0.15	40.00	5.55	99.72	1.11	100.0
	1984-85	57.72	14.02	49.38	99.91	1.27	100.0	9.59	58.45	0.10	94.12	7.88	100.0	1.31	97.67
	1991-92	72.02	8.08	67.15	100.0	0.56	100.0	10.11	57.99	0.23	100.0	7.77	100.0	1.62	100.0
	1995-96	64.50	25.26	66.75	99.97	0.64	87.38	9.30	48.93	0.34	100.0	7.86	95.71	1.57	100.0
	1999-2K	72.87	25.97	74.72	99.51	0.75	97.52	7.62	60.86	0.27	86.36	6.27	99.70	1.61	100.0
Lalganj	1976-77	7.12		26.20	100.0										
	1980-81	59.66	1.17	55.48	99.94	2.48	99.13	9.26	66.65	0.15	81.48	6.30	100.0	1.40	100.0
	1984-85	66.84	1.85	59.99	99.99	1.30	91.60	9.81	70.28	0.21	97.37	7.15	100.0	1.52	98.19
	1991-92	71.55	4.59	71.33	100.0	0.45	100.0	9.19	67.94	0.21	94.87	6.18	100.0	1.66	100.0
	1995-96	66.50	25.75	65.14	99.90	0.42	100.0	10.22	57.29	0.32	87.72	6.68	95.57	1.32	100.0
	1999-2K	76.27	24.42	78.12	99.28	0.72	96.90	7.38	65.58	0.35	100.0	4.46	99.00	1.70	100.0
Mehnagar	1976-77	3.19		20.49	100.0										
	1980-81	63.40	18.63	50.73	100.0	4.81	100.0	9.66	70.94	0.04	100.0	7.88	78.05	1.53	100.0
	1984-85	64.46	11.31	53.34	100.0	2.40	100.0	11.43	71.36	0.12	100.0	7.99	100.0	1.89	100.0
	1991-92	80.43	17.14	76.82	94.95	1.16	100.0	9.15	77.45	0.05	100.0	7.45	100.0	1.51	100.0
	1995-96	78.29	60.85	67.49	99.88	1.11	75.00	9.41	60.01	0.12	100.0	7.54	85.00	1.66	100.0
	1999-2K	80.29	28.79	74.24	99.66	1.08	100.0	6.38	71.66	0.14	100.0	4.68	99.23	1.56	100.0
Tarvan	1976-77	5.89		17.47	100.0										
	1980-81	68.50	5.54	43.59	99.99	5.29	97.24	15.55	72.00	0.10	94.12	8.84	100.0	1.69	100.0
	1984-85	60.68	3.03	56.25	99.90	1.92	100.0	11.31	65.04	0.15	100.0	8.15	100.0	1.56	100.0
	1991-92	73.06	3.36	66.39	99.98	1.30	100.0	11.39	65.80	0.10	65.00	7.68	100.0	1.91	100.0
	1995-96	67.76	29.35	65.24	99.79	1.05	80.10	8.00	41.09	0.30	52.54	5.84	100.0	2.44	100.0
	1999-2K	71.89	27.95	76.26	99.41	1.26	97.56	6.90	54.05	0.13	80.77	6.91	92.58	1.57	99.02

Source: District Statistical Handbook (of various years).

3.7 Fertilizer Use

Use of fertilizer had been increasing in all the blocks. But their balanced and proportionate application has not been reported (See table 3.4).

There is need to adopt following strategy to combat this menace:

- Lay guidelines for each gram-panchayat the proportion of fertilizer which is required to be applied on the basis of soil-testing.
- Farmers meeting be organised at village level before every cropping season to make them aware about such guidelines.
- Farmers be also informed about hazardous impact of non-proportionate application of urea.
- Government functionaries, specially at the gram-panchayat level be sensitized regarding these aspects.

Table 3.4.1

Use of Fertiliser in Azamgarh District (in MT)

Years	Nitrogen	Phosphate	Potash	Total Fertilizer
1980-81	17896	5783	2158	25837
1981-82	18689	5639	2657	26985
1982-83	18810	5592	3878	28280
1983-84	23594	7909	2681	34184
1988-89	25335	7517	2135	34987
1992-93	33024	7633	764	41421
1993-94	27438	6225	394	31057
1994-95	27856	8369	1233	37458
1995-96	29020	5117	979	35116
1997-98	37767	10676	1536	49979
1998-99	35626	9111	1716	46453
1999-2K	32927	9770	1570	44267

Table 3.4.2

Block-wise Use of Fertiliser in Azamgarh District (in MT)

Blocks	Years	Nitrogen	Phosphate	Potash	Total Fertilizer
Mahrajganj	1983-84	531	117	95	743
	1988-89	1169	330	98	1570
	1995-96	1363	224	48	1635
	1999-2K	1612	478	76	2166
Bilariyaganj	1983-84	588	160	54	802
	1988-89	1349	421	93	1863
	1995-96	1343	224	48	1615
	1999-2K	1621	488	74	2183
Harraiya	1983-84	539	130	89	758
	1988-89	1306	445	81	1832
	1995-96	1343	224	48	1615
	1999-2K	1614	499	78	2191
Ajmatgarha	1983-84	846	250	87	1183
	1988-89	1284	396	88	1768
	1995-96	1343	223	48	1614
	1999-2K	1610	499	73	2182
Mirzapur	1983-84	244	164	108	516
	1988-89	869	371	82	1322
	1995-96	1336	220	45	1601
	1999-2K	1463	485	78	2026
Muhammadpur	1983-84	322	166	80	568
	1988-89	1141	240	81	1462
	1995-96	1338	220	45	1603

	1999-2K	1618	490	76	2184
Tahbarpur	1983-84	785	260	105	1150
	1988-89	779	158	83	1020
	1995-96	1337	220	45	1602
	1999-2K	1510	487	79	2076
Palhani	1983-84	1333	694	114	2141
	1988-89	1321	425	159	1905
	1995-96	1473	340	53	1866
	1999-2K	1312	375	69	1756

Contd...

Blocks	Years	Nitrogen	Phosphate	Potash	Total Fertilizer
Rani Ki Srai	1983-84	921	310	106	1137
	1988-89	1047	402	76	1525
	1995-96	1338	219	48	1605
	1999-2K	1321	376	65	1762
Sathiyav	1983-84	1152	319	102	1573
	1988-89	1169	320	81	1570
	1995-96	1463	223	44	1730
	1999-2K	1509	451	75	2035
Jahanaganj	1983-84	766	237	102	1105
	1988-89	1555	371	74	2000
	1995-96	1338	220	45	1603
	1999-2K	1608	450	73	2131
Atrauliya	1983-84	280	154	64	498
	1988-89	915	323	114	1332
	1995-96	1433	840	52	1625
	1999-2K	1510	490	67	2067
Koylasa	1983-84	854	230	16	1100
	1988-89	1141	318	92	1551
	1995-96	1338	220	44	1602
	1999-2K	1512	480	75	2067
Ahiraula	1983-84	830	275	118	1223
	1988-89	1129	347	170	1646
	1995-96	1338	220	44	1602
	1999-2K	1612	478	76	2166
Pawai	1983-84	598	194	107	899
	1988-89	1174	426	87	1687
	1995-96	1338	220	44	1602
	1999-2K	1710	482	75	2267
Phulpur	1983-84	1295	384	105	1784
	1988-89	1114	330	171	1615
	1995-96	1643	340	51	2034
	1999-2K	1511	436	76	2023
Martinganj	1983-84	868	232	102	1202
	1988-89	991	308	89	1388
	1995-96	1343	220	44	1607
	1999-2K	1610	445	75	2130
Thekma	1983-84	712	236	85	1033
	1988-89	1193	333	91	1617
	1995-96	1338	220	44	1602
	1999-2K	1521	440	76	2037
Lalganj	1983-84	1142	218	90	1450
	1988-89	1595	405	114	2114
	1995-96	1558	340	51	1949
	1999-2K	1710	480	77	2267
Mehnnagar	1983-84	702	230	80	1012
	1988-89	1600	459	101	2160
	1995-96	1338	220	44	1602
	1999-2K	1720	475	79	2274
Tarvan	1983-84	843	305	76	1224
	1988-89	1494	416	110	2020
	1995-96	1338	220	44	1602
	1999-2K	1713	486	78	2277

Source: District Statistical Handbook (of various years).

3.8 Extent of Mechanization

The extent of mechanization has increased in the district. The number of tractors, sowing machine, sprayers, threshing machine etc. have increased, while the number of wood plough have decreased during the last 20 years. The number of wood plough decreased from around 4.5 lacs in 1978 to 2 lacs during 1997 in the district while the number of iron plough increased from 61962 to 122405 during the same period. The number of thresher increased by around 169 per cent and sprayer by 795 per cent and tractor by 345 per cent during 1978 to 1997. The number of improved sowing machine increased till 1993 but then declined during 1993-97. The trend of increasing mechanization despite the fact that average size of landholdings has been decreasing indicates a new type of resource sharing in rural area. Those who cannot afford to purchase the machine, hire its services. Be it irrigation water, tractor, thresher or any other resource, their services are being hired by those who cannot afford to purchase or maintain them. Very poor farmers do not keep draught animals and hire services of new machines because they cannot afford to feed draught animals throughout the year.

Block wise analysis shows that, while mechanization has increased at a significant pace in all the blocks, the number of even wood plough remains significant in all the blocks (**See table 3.5**).

Tenancy and share cropping was found in our survey in selected villages of the district. Thus sharing of land resource as well as services of machines indicates emergence of a new type of land-labour-capital relations.

**Table – 3.5.1
Technology Available in Azamgarh District**

Years	Wood Plough	Iron Plough	Harrow & Cultivator	Threshing Machine	Sprayer	Sowing Machine	Tractor
1978	449413	61992	2345	19061	297	-	1642
1982	258523	95948	3789	13679	973	288	2197
1988	232658	107361	331726	32394	895	2505	2871
1993	209392	120244	126056	76774	823	5374	5589
1997	210685	122405	2263	51327	2669	1192	7306

**Table – 3.5.2
Block-wise Technology Available in Azamgarh District**

Blocks	Years	Wood Plough	Iron Plough	Harrow & Cultivator	Threshing Machine	Sprayer	Sowing Machine	Tractor
Mahrajganj	1978	15982	1780	640	499	50	-	53
	1982	11827	3815	520	555	99	-	62
	1997	9530	5530	100	2315	116	54	329
Bilariyaganj	1978	19252	11240	242	684	84	-	72
	1982	14190	26118	282	754	166	-	86
	1997	12039	7007	119	2930	129	64	415
Harraiya	1978	12208	1127	43	362	-	-	75
	1982	9193	2519	213	518	24	-	85
	1997	9690	5640	95	2361	113	55	335

Contd...

Blocks	Years	Wood Plough	Iron Plough	Harrow & Cultivator	Threshing Machine	Sprayer	Sowing Machine	Tractor
Ajmatgarha	1978	37174	2211	54	431	-	-	58
	1982	27323	2744	223	476	30	-	68
	1997	10906	6348	108	2157	110	62	377
Mirzapur	1978	15905	213	4	892	-	-	45
	1982	11771	2152	132	972	33	-	2
	1997	9963	5535	96	2554	114	57	345
Muhammadpur	1978	18100	633	23	567	-	-	47
	1982	13443	1515	144	620	35	-	2
	1997	8851	5410	98	2210	108	56	323
Tahbarpur	1978	13438	1527	4	496	-	-	44
	1982	9911	3277	129	540	38	-	13
	1997	8851	5152	96	2570	112	51	306
Palhani	1978	13034	1462	3	342	25	-	83
	1982	9637	3171	131	485	49	-	14
	1997	10340	6630	97	2315	125	53	329
RaniKiSrai	1978	13442	1390	55	452	-	-	41
	1982	9934	3043	178	501	32	-	1
	1997	59501	5152	89	2187	116	65	306
Sathiyav	1978	14383	2061	85	395	-	-	80
	1982	10627	4404	212	435	36	-	2
	1997	8872	16019	95	2519	122	50	358
Jahanaganj	1978	17100	2622	75	541	-	-	42
	1982	12627	5622	316	593	23	-	42
	1997	10214	5146	101	2162	118	59	307
Atrauliya	1978	11475	2785	18	451	20	-	45
	1982	8459	5972	113	495	43	-	1
	1997	8494	5727	82	2070	109	59	308
Koylasa	1978	15765	1276	96	611	-	-	62
	1982	11622	2746	107	665	16	-	3
	1997	9501	5531	93	2315	111	55	329
Ahiraula	1978	12806	1245	-	571	-	-	85
	1982	9472	2735	94	620	34	-	3
	1997	10466	6093	103	2550	122	59	362
Pawai	1978	12987	1230	47	532	6	-	18
	1982	9560	2677	111	577	37	-	3
	1997	9543	5946	102	2488	116	57	354
Phulpur	1978	15800	978	20	1430	-	-	37
	1982	11658	2278	138	1551	29	-	1
	1997	9145	5555	101	2328	113	52	316
Martinganj	1978	21380	3305	48	742	26	-	78
	1982	15714	7196	170	808	52	-	8
	1997	9530	5323	90	2228	113	52	316
Thekma	1978	33825	571	123	923	-	-	75
	1982	24896	1428	143	892	49	-	67
	1997	9954	5885	95	2463	118	58	350
Lalganj	1978	13665	1288	115	548	-	-	95
	1982	10081	2774	132	599	45	-	70
	1997	11486	6203	109	2806	109	65	398
Mehnagar	1978	11185	135	22	475	-	-	26
	1982	8255	1775	152	518	55	-	11
	1997	11640	6208	112	2836	118	54	403
Tarvan	1978	11271	3224	104	461	-	-	60
	1982	8323	6997	143	505	48	-	12
	1997	11241	6044	103	2729	111	55	389

Source: District Statistical Handbook (of various years).

3.9 Livestock

Livestock plays two types of roles in rural economy. One, it provides draught animals or animals for pulling carts. Secondly, it generates income through animal products, which has serious implications for diversification of rural economy.

But the size of livestock has also a serious bearing on land use. The increase in livestock would mean that more land under pasture will be required, as well as more fodder will be required. The analysis of livestock during 1972-1997 shows interesting trends. Whereas the number of cattles declined, the number of buffaloes has increased.

There are nine blocks in which the number of livestock has increased during 1982-97. These include Bilariyaganj, Ajmatgarh, Mirzapur, Sathiyav, Ahiraula, Pawai, Lalganj, Mehnagar and Tarwan.

Table 3.6.1
Details of Livestock in Azamgarh District

Years	Total Cattles (Cows & Oxen etc.)	Total Buffaloes	Sheep	Goats	Pig	Horse and Tattoos	Other Livestock	Total Livestock	Total Poultry
1972	645937	146403	56730	200346	37937	3263	8189	1098805	234182
1978	781532	284241	65117	338812	48454	3318	9433	1530937	219847
1982	639823	236761	42568	228090	52248	3034	10670	1213194	453781
1988	619296	244815	31178	226513	54144	3221	104870	1284037	367654
1993	600836	300162	35818	294157	62752	1383	107359	1402461	469632
1997	496934	334862	29625	293434	66091	860	6448	1226254	603206

Table 3.6.2
Block-wise Details of Livestock in Azamgarh District

Blocks	Years	Total Cattles (Cows & Oxen etc.)	Total Buffaloes	Sheep	Goats	Pig	Horse and Tattoos	Other Livestock	Total Livestock	Total Poultry
Mahrajganj	1982	30612	1365	2093	10953	2402	143	509	58077	20869
	1997	23003	15169	1336	13034	2553	38	272	55405	29651
Bilariyaganj	1982	30754	11485	2184	11527	2749	147	515	59361	21960
	1997	28389	19014	1699	16815	3558	48	344	69867	33780
Harraiya	1982	30124	3970	1981	10877	2221	157	508	56957	20804
	1997	22592	15471	1367	13293	2908	39	277	55947	27189
Ajmatgarha	1982	31876	11873	2009	12708	2989	162	572	62189	22133
	1997	25448	17413	1538	14961	3274	44	312	62990	30599
Mirzapur	1982	27888	10931	1903	10107	2405	103	547	53884	21889
	1997	23201	15907	1406	13667	2990	40	285	57496	27948
Muhamma dpur	1982	29141	10986	1977	10204	2298	97	546	55249	21279
	1997	21796	14902	1317	12804	2801	38	267	53925	26188
Tahbarpur	1982	31202	11418	2002	10871	2246	89	509	58337	21906
	1997	21215	14136	1248	13142	2657	36	253	52687	24830
Palhani	1982	32195	11272	2025	10684	2475	171	411	59233	21494
	1997	22126	15169	1354	13034	2851	38	253	54825	26601
Rani Ki Srai	1982	31215	11192	2214	10492	2704	143	417	58270	21589
	1997	21014	14131	1245	12936	2757	36	273	52392	24880
Sathiyav	1982	30919	11188	2068	10013	2575	112	397	57272	21742
	1997	24054	16509	1458	13171	3103	42	254	58591	28991
Jahanaganj	1982	29640	11263	1964	10082	2567	113	542	56171	21937
	1997	21060	14165	1247	14012	2763	36	292	53575	24898
Atrauliya	1982	30211	10646	2005	10491	2449	163	496	56461	21652
	1997	19566	13647	1199	12653	2550	34	243	49892	23837
Koylasa	1982	30179	11054	1985	10272	2470	161	532	56653	21686
	1997	21125	15260	1341	13034	2851	38	272	53921	26650
Ahiraula	1982	29292	10762	1962	10570	2416	187	473	55632	21617
	1997	23494	16709	1477	14357	3141	42	299	59519	29367
Pawai	1982	28521	10998	1882	10687	2415	163	501	55167	21510
	1997	23787	16408	1442	13091	3065	36	290	58119	28659
Phulpur	1982	30423	11360	2009	10885	2237	168	512	57594	21952
	1997	22222	15236	1347	13092	2779	38	280	54990	26775
Martinganj	1982	29679	11034	1869	10092	2496	156	593	55919	21714
	1997	21297	14598	1290	12540	3029	43	262	53059	25655
Thekma	1982	30214	11326	2133	12863	2550	160	500	59746	22329
	1997	23544	16079	1426	13871	3333	41	289	58583	28359
Lalganj	1982	32219	11815	2118	11322	2498	145	556	60676	23696
	1997	26919	18183	1625	15801	3116	44	330	66018	32311
Mehnagar	1982	31950	11787	2147	11103	2533	133	500	60153	23356
	1997	27152	17061	1643	14044	3494	47	333	63774	29650
Tarvan	1982	31569	11917	2128	11317	2553	161	534	60179	23313
	1997	25799	17500	1595	14309	3374	45	321	62943	31532

Source: District Statistical Handbook (of various years).

PART – B

Land Use Plan Related to Agricultural Land

In Azamgarh district the average size of landholding was 0.56 hectares as per the 1995-96 agricultural census and 95.18 per cent holdings belonged to the small and marginal farmers, while they accounted for only 72.28 per cent of total area under all landholdings.

The net sown area as percentage of total reporting area varied around 75.0 per cent till 1989-90, and thereafter declined to around 72.0 per cent during the decade 1990-91 to 1999-2K.

But the analysis of block-wise net sown area shows that in most of the blocks the proportion of net sown area had been around or above 70.0 per cent during 2000-01 or during some past years.

The cropping intensity of the Azamgarh district had almost consistently increased since 1960-61, and has increased to 163.26 during the period 2000-01.

The most important factor which has affected cropping intensity is irrigation.

The irrigation intensity i.e. net irrigated area as percentage of net sown area has increased from 50.38 per cent in 1960-61 to 88.33 per cent in 2000-01. This trend was discernible in all the blocks of the district as well.

However, gross irrigated area as percentage of net irrigated area has increased slowly during the last twenty five years from around 108.82 in 1980-81 to around 127.45 in 1999-2K which shows, it is still low.

Tubewells are now the major sources of irrigation in Azamgarh district, and account for 80.0 per cent of net irrigated area.

The cropping pattern in the district has vastly changed during the last 30 years.

The main crops viz. paddy, wheat and sugarcane have witnessed large increases in their productivity also during the period 1960-61 to 1998-99.

Thus farmers have shifted to crops, which are highly irrigated, fertilizer use is higher on them and whose productivity is also comparatively very high.

We need to make efforts to increase production of more pulses, oilseeds and spices. Cropping rotation also needs to be changed. Following steps are imperative to achieve it.

- (a) More thrust be given for developing high yielding varieties for these crops.
- (b) Rain fed areas should be encouraged to cultivate these crops.
- (c) Orchards, fallow land and land under social forestry could be used for growing such crops.
- (d) Processing industries of oilseeds and spices be promoted at local level with support for technology up gradation, packaging and market access facilities.

Use of fertilizer had been increasing in all the blocks. But their balanced and proportionate application has not been reported.

There is need to adopt following strategy to combat this menace:

- (a) Circulate guidelines for each gram-panchayat-on the basis of soil-testing – the proportion of fertilizer which is required to be applied.

- (b) Farmers' meeting be organised at village level before every cropping season to make them aware about such guidelines.
- (c) Farmers be also informed about hazardous impact of non-proportionate application of urea.
- (d) Government functionaries, specially at the gram-panchayat level be sensitised regarding these aspects.

The extent of mechanisation has increased in the district. The number of tractors, sowing machine, sprayers, threshing machine etc. have increased, while the number of wood plough have decreased during the last 20 years.

The trend of increasing mechanisation despite the fact that average size of landholdings has been decreasing indicates a new type of resource sharing in rural area. Those who cannot afford to purchase the equipment or machine, hire its services. Be it irrigation water, tractor, thresher or any other machine, their services are being hired by those who cannot afford to purchase or maintain them. Very poor farmers do not keep draught animals and hire services of new machines because they cannot afford to feed draught animals throughout the year.

Tenancy and share cropping was found in our survey in selected villages of the district. Thus sharing of land resource as well as services of machines indicates emergence of a new type of land-labour-capital relations.

Livestock plays two types of roles in rural economy, one it provides draught animals or for pulling carts. Secondly it generates income through animal products, which has serious implications for diversification of rural economy.

But the size of livestock has also a serious bearing on land use. The increase in livestock would mean that more land under pasture will be required, as well as more fodder will be required.

3.10 Agricultural Production System and Framework for Restructuring

It was found that the majority of land owners who leased out their land belonged to medium, small or marginal farmers. The fact that even small and marginal farmers were leasing out their land, revealed two trends - one, in case of uneconomic holdings farmers want to search other opportunities and will be content to get the market rent for their land yet they would prefer to retain the land instead of selling it out right. Moreover, the new generation, if educated seeks jobs in cities, and prefers to lease out the land. The other aspect was in regard to changing relationship. The exploitative relationship between tenant/share cropper and the land lord is fast changing. It is now purely an economic arrangement of mutual interests. Small and marginal farmers also lease-out land to other small and marginal farmers. Thus enterprising farmers are continuing agricultural activities by pooling resources from fellow farmers, while some other farmers are trying to make efforts in non-agricultural activities also.

Thus the new form of economic arrangement under tenancy was giving way to emergence of new enterprising farmers who were seeking ways to pool resources for higher productivity and application of new technology.

Dependency relationship based tenancy was declining because not many cultivators wanted to be tied up for the whole of year with some small parcel of land which they did not own, and further depend on the landlord for resources and credit. Landless or near landless people also now want to

keep options open for seeking job elsewhere as well. So they preferred to work as casual agricultural labour during peak periods rather than working as an attached labour or as a tenant.

On the other hand leasing-out by small farmers was on the increase because many small farmers wanted to get job outside agriculture and at the same time wanted some income from their land also. This was possible only by leasing-out land to fellow farmers at mutually agreed terms. This kind of tenancy was free from both the dependency and exploitative relationship.

Sharing of machines and equipments was also found to be widely prevalent among farmers of this district. It was found that almost all farmers owning agricultural machines and equipments hired out or shared their services with other farmers. many agricultural tools were also found to be shared among farmers on the exchange basis.

Factors Inhibiting Growth

The immediate factors which inhibited growth among small and marginal farmers were: lack of resources, capital deficiency and lack of facility to sell at remunerative prices. The other factors included the problems of water logging, floods, drying of canals during summer, etc.

Framework for Agricultural Growth

Among small and marginal farmers, agricultural productivity is hampered by poor logistical support and weak infrastructure. If food production is to be increased in a sustainable way, these deficiencies must be corrected and favourable economic framework for agriculture should be evolved. Such actions need to be backed up by practices aimed at maintaining or enhancing fertility and productivity.

The first step is to protect the best land for agriculture. In view of the scarcity of high quality arable land and the rising demand for food and other agricultural products, the land that is most suitable for crops should be reserved for agriculture. Government should map and monitor the more productive areas of farm land and adopt planning and zoning policies to prevent the loss of prime land to urban settlements. Village Land Management Committee and local authorities should be entrusted with responsibility to ensure that these policies are implemented in their areas.

We have found that the number of small and marginal farmers in the district is predominant. It was also found that the immediate factors which inhibited growth among small and marginal farmers were lack of resources, capital deficiency and lack of facility to sell at remunerative prices. The most important factor which could become basis for future restructuring of agricultural production system related to tenancy. It was found the majority of land owners who leased out their land (without entering into any written or formal contract) belonged to the category of medium, small or marginal farmers. This was for two reasons – one in case of uneconomic holdings, farmers wanted to search other opportunities and would be content to get the market rent for their land. Yet they would prefer to retain the land instead of selling it outright. The other aspect was in regard to non-exploitative nature of relationship between the lessor and the lessess. It is now purely an economic arrangement in which small and marginal farmers are also leasing out land to other small and marginal farmers. Thus enterprising farmers are continuing agricultural activities by pooling resources from fellow farmers, while some other farmers are seeking opportunities in non-agricultural activities also. Thus the new form of economic arrangement was giving way to pooling of resources by enterprising farmers, while other farmers who were leasing out their land were treating

their land as a share capital for which they will receive the rent as well as the share in profit. The process of pooling of resources was further strengthened by a simultaneous process of sharing of machines and equipments. It was found that almost all farmers owning agricultural machines and equipments hired out or shared their services with other farmers.

It seems to us that a limited restructuring of the production process in agriculture can be such that it serves the interests of small and marginal farmers and at the same time protects wider interests of the farming community.

One major step in this direction would be to allow formation of Collective Farming Society and Confederation of Farming Societies. In the collective farming society framework, tenancy to such farming societies could be permitted under specified conditions. In particular such societies may be formed of small and marginal farmers for a complete package of inputs, and it may then be permissible for any member of such a society to lease out land to the society or to any other member of the society.

At the next level, a confederation of such Collective Farming Societies could be formed which will work as service societies. These confederations would provide high cost machinery and equipments to Collective Farming Societies on rent. The idea essentially is that it should be possible to increase number of viable farms by permitting some of the non-viable farmers to go out of agricultural business and seek other jobs and economic opportunities. This should on the one hand, improve productivity of labour on the expanded farms and on the other aid in much needed shift of labour away from agriculture.

3.11 Model for Restructuring Farming System

Collective Farming Society

1. Collective farming units be allowed to be registered under a separate Collective Farming Society Registration Act.
2. Only small and marginal farmers be allowed to become members of such a society.
3. The number of members of a society should not be above twenty and below five.
4. Those who become members of such a collective farming society will be allowed to lease out their land to the society for a minimum of ten years on a fixed annual rent.
5. A collective farming society will not bring under its purview more than ten hectares of irrigated land.
6. A collective farming society will be allowed to pool its resources on hire or through raising capital from its members.
7. The produce will be shared among members in proportion to the share amount of each member.
8. The share amount of each member will be the weighted sum of (a) money invested under capital raising scheme plus, (b) the amount fixed as annual rent for the land leased out to the society, (c) operational holdings of actual cultivators.

Confederation of Collective Farming Societies

For storage facilities, providing transportation facilities and to work as marketing syndicates of farming societies, a confederation of ten to twenty corporate farming societies be allowed to be formed.

These confederations will work in the following areas:

1. Marketing of agricultural goods at national and international level.
2. Provide transportation and storage facilities to Collective Farming Societies against such stored goods.
3. Function as cushions against speculative prices.
4. The confederation will also act as counselling centre for farmers projecting the production and demands of each agricultural commodity for the next two years.
5. Provide high costing tools and machines to Collective Farming Societies for land levelling, soil testing, land reclamation and other activities related to land and water management on rental basis.
6. Help in technological innovations and in increasing productive efficiency.

Chapter - 5

Village Level Plans

(Based on Village Level Survey)

Village Study – I	Jalalpur (Block – Bilariyaganj)
Village Study – II	Surjipur (Block – Bilariyaganj)
Village Study – III	Bargahan (Block – Thekma)
Village Study – IV	Madanpur (Block – Thekma)

Village Study – I

Village – Jalalpur (Block – Bilariyaganj)

(A) Village Profile

Jalalpur is located at a distance of 8 kilometers from the block headquarter Bilariyaganj. Jalalpur is a relatively prosperous village and activities other than agriculture was also reported in the village.

One special feature of this village is that, many landowners rented out their land to brick kiln. Many areas have become low level land. As a result of this the problem of waterlogging has increased in the village. The problem has aggravated due to seepage of canal also.

The natural drainage in the village has also been obstructed due to construction of houses.

5.1.1 Land Use Pattern

Village Jalalpur is a semi medium size village with 150.0 hectares of total reporting area. In village Jalalpur, land use pattern shows that it continues to be predominantly agricultural as 70.0 per cent of total reporting area was under cultivation. Another important feature was that around 7 per cent was under water bodies. The share of current fallow was very high because some of the land has been rented out to brick kilns (See table 5.1.1).

Table – 5.1.1

Land Use Pattern in the Jalalpur Village of the Azamgarh District

Land Use Categories	In hectare	In percent
Total reporting area	150	100.00
Water bodies	10	6.67
Habitation	18	12.0
Other uses	1	0.67
Culturable waste	1	0.67
Orchards	4	2.67
Current fallow	11	7.33
Net sown area	105	70.0
(a) Irrigated	93	88.57
(b) Un-irrigated	12	11.73
Area sown more than once	74	
(a) Irrigated	12	
(b) Un-irrigated	62	

Source: Revenue department.

5.1.2 Demographic Profile

The average family size was 8.3 in the village. The population in the working age group i.e. in the age group (14-60) years comprised 51.20 per cent of total population. That is around 49.0 per cent persons constituted dependents in the family. The village also shows adverse sex ratio. This is evident from the fact that the number of female population per thousand male population was around only 890.16. It would be interesting to note that sex ratio in the age group below five year was 1012.35 while the sex ratio in the age group 5 to 14 was 837.61. We could infer from it that mortality of female child was higher than the male child in the age group 5 to 14 years (**See table 5.1.2.1**).

The literacy rate was 71.60 per cent. It could also be seen from table 5.1.2.2 that number of illiterates was much higher among females (37.9 per cent) than among males (19.9 per cent). On the other hand in each category of education group the number of males was much higher than females.

Table – 5.1.2.1
Caste and Gender-wise Distribution of Population in the Village Jalalpur

Particulars	Gender	Chamar			Vishvakarma	Restagi	Gupta	Maurya	Yadav	Thakur	Brahmins	Muslims	Total
			Dhobi	Rajbhar									
Total population	Male	75	6	133	1	7	14	21	28	52	38	66	441
	Female	65	4	108	3	12	12	22	25	45	33	64	393
	Total	140	10	241	4	19	26	43	53	97	71	130	834
Below 5 year population	Male	7	1	33	-	1	-	3	6	10	4	16	81
	Female	11	2	20	2	3	1	7	3	10	4	19	82
	Total	18	3	53	2	4	1	10	9	20	8	35	163
5 to 14 year population	Male	22	4	30	-	3	7	3	6	11	9	22	117
	Female	19	1	27	-	-	6	3	8	7	10	17	98
	Total	41	5	57	-	3	13	6	14	18	19	39	215
14 to 60 year population	Male	43	1	67	1	6	6	14	16	29	24	26	233
	Female	33	1	54	1	6	4	11	14	26	19	25	194
	Total	76	2	121	2	12	10	25	30	55	43	51	427
Above 60 year population	Male	3	-	3	-	-	1	1	-	2	1	2	13
	Female	2	-	7	-	-	1	1	-	2	-	3	16
	Total	5	-	10	-	-	2	2	-	4	1	5	29
Family size		8.2	10.0	7.8	4.0	9.5	8.7	10.7	10.6	9.7	8.8	7.2	8.3

Table – 5.1.2.2
Caste and Gender-wise Distribution of Education in the Village Jalalpur

Particulars	Gender	Chamar			Vishvakarma	Restagi	Gupta	Maurya	Yadav	Thakur	Brahmins	Muslims	Total	%age
			Dhobi	Rajbhar										
Graduation and above	Male	-	-	5	-	-	3	2	1	13	6	-	30	6.8
	Female	-	-	1	-	-	-	-	-	2	1	-	4	1.0
	Total	-	-	6	-	-	3	2	1	15	7	-	34	4.1
Intermediate and high school	Male	10	1	4	-	4	1	4	7	13	12	-	56	12.7
	Female	1	-	1	-	-	1	-	-	6	2	-	11	2.8
	Total	11	1	5	-	4	2	4	7	19	14	-	67	8.0
Below high school	Male	30	4	54	-	2	8	8	15	7	6	32	166	37.6
	Female	13	1	24	-	6	7	4	10	9	14	20	108	27.5
	Total	43	5	78	-	8	15	12	25	16	20	52	274	32.9
Illiterate	Male	24	-	29	1	-	2	3	2	5	3	19	88	19.9

	Female	32	1	53	1	-	3	10	10	9	7	23	149	37.9
	Total	56	1	82	2	-	5	13	12	14	10	42	237	28.4

5.1.3 Land Ownership

In Jalalpur, the average size of landholding per family was 1.44 acres and per adult person only 0.31 acres (**See table 5.1.3.1**). The low size of land holdings per adult person also indicates that the land available for cultivation was not enough to engage all the adults in agriculture for full time work. The pressure of land has therefore forced many others to search for jobs outside agriculture. The fact that per adult person land was around 0.96 acres in even the landholding group (5-10) acres, shows that in future, population pressure on land would be tremendous in all size groups. The village is thus moving towards a situation in which it will be dominated by landless and near landless households who already constitute around 60 per cent of total households in the village. Village Jalalpur has a mixed population from the point of view of distribution of castes in the village population. Rajbhar, Chamars, Muslims and Thakurs & Brahmins are the major castes in the village as 84.0 per cent households belonged to these castes (**See table 5.1.3.2**). And therefore the caste wise land distribution in the village was similar as land distribution among the these castes. Majority of Thakurs owned more than 5 acres of land, while majority among Chamars, Rajbhars and Muslims was landless or near land less.

**Table – 5.1.3.1
Distribution of Per Family/Per Adult Size of Landholdings in Different Size Groups in the Village Jalalpur**

Landholding size	Total households	Total adult pop. (>14 year)	Total land in acre	Average landholding in acre (Per adult person)	Average landholding in acre(Per family)
Land-less	18	57	-	-	-
Below 0.63 Acre	38	160	8.0	0.05	0.21
0.63 to 1.0 Acre	7	25	5.4	0.21	0.77
1.0 to 2.5 Acre	21	113	36.8	0.32	1.75
2.5 to 5.0 Acre	4	27	12.6	0.46	3.15
5.0 to 10.0 Acre	11	72	69.8	0.96	6.34
Above 10.0 Acre	1	2	11.4	5.70	11.4
Total	100	456	144.0	0.31	1.44

**Table – 5.1.3.2
Caste-wise Distribution of Landholdings in Different Size Groups in the Village Jalalpur**

Landholding size	Chamar	Dhobi	Rajbhar	Vishva karma	Restagi	Gupta	Maurya	Yadav	Thakur	Brahmins	Muslims	Total	%age
Land-less	-	-	2	1	-	2	-	-	-	-	13	18	18.0
Below 0.63 Acre	9	-	23	-	-	-	1	1	-	-	4	38	38.0
0.63 to 1.0 Acre	5	-	1	-	-	-	-	1	-	-	-	7	7.0
1.0 to 2.5 Acre	3	1	4	-	1	-	2	2	-	7	1	21	21.0
2.5 to 5.0 Acre	-	-	1	-	-	-	1	-	2	-	-	4	4.0
5.0 to 10.0 Acre	-	-	-	-	1	1	-	1	7	1	-	11	11.0
Above 10.0 Acre	-	-	-	-	-	-	-	-	1	-	-	1	1.0
Total	17	1	31	1	2	3	4	5	10	8	18	100	100.0

5.1.4

Occupational Structure

The occupation-wise distribution of households showed that the main occupation of only 37 out of 100 households was cultivation, while that of 34 households it was service and that of 22 households, it was wage work.

The occupation of many households have also changed as a result of increasing pressure on land and non-availability of work in the village. The change in main occupation has taken place mainly among cultivators and wage workers. Out of 43 households whose main occupation was cultivation in the past, now only 30 i.e. 69.77 per cent are continuing with it, and 12 (i.e. 27.91 per cent) are engaged in service. Interestingly all those 13 households who have shifted to other occupations, still continue to be engaged in cultivation as their supplementary occupation. Similarly other work and shop running was supplementary occupation of many cultivators. The number of households whose main occupation was wage work has also reduced from 48 in the past to 22 presently (**See table 5.1.4.1**).

There were 403 workers in the village out of which 229 were males and 174 were females. Occupation wise distribution of workers in the village showed that out of 403 workers 118 i.e. 29.3 per cent were cultivators, 78 i.e. 19.4 per cent were agricultural labourers, 132 i.e. 32.8 per cent were other labourers, 54 i.e. 13.6 per cent were in service and 21 i.e. 5.2 per cent were engaged in other work. Gender wise distribution of occupation of workers showed that proportion of female workers was higher than male workers among agricultural labourers and other labourers. Males predominated in the category of service class (**See table 5.1.4.2**).

Table – 5.1.4.1

Present and Past Occupations of Households in the Village Jalalpur

Past occupation	Present main occupation					Supplementary occupation			
	Occupation	Total HHs	Cultivator	Wage	Service	Other works	Cultivator	Wage	Shop
Cultivator	43	30	-	12	1	13	-	6	5
Wage	48	7	22	18	1	19	8	5	-
Service	4	-	-	4	-	4	-	-	-
Other Works	5	-	-	-	5	2	2	2	-
Total	100	37	22	34	7	38	10	6	5

Table – 5.1.4.2

Caste and Gender-wise Distribution of Occupation of Workers in the Village Jalalpur

Particulars	Gender	Chamar			Vishvakarma	Restagi	Gupta	Maurya	Yadav	Thakur	Brahmins	Muslims	Total	%age
			Dhobi	Rajbhar										
Cultivator	Male	4	-	12	-	6	3	13	12	10	12	-	72	31.4
	Female	5	-	13	-	-	2	12	14	-	-	-	46	26.4
	Total	9	-	25	-	6	5	25	26	10	12	-	118	29.3
	Male	5	-	20	-	-	-	-	-	-	-	10	35	15.3

Agricultural labour	Male	5	-	20	-	-	-	-	-	-	-	10	35	15.3
	Female	16	-	28	-	-	-	-	-	-	-	20	48	20.7
Agricultural labour	Male	19	-	28	-	-	-	-	-	-	-	12	59	25.8
	Female	28	-	30	-	-	-	-	-	-	-	15	73	43.0
	Total	47	-	58	-	-	-	-	-	-	-	27	132	32.8
Service	Male	13	-	10	-	-	-	1	4	12	8	4	52	22.7
	Female	-	-	-	-	-	-	-	-	-	2	-	2	1.1
	Total	13	-	10	-	-	-	1	4	12	10	4	54	13.4
	Male	2	1	-	1	-	3	1	-	-	-	3	11	4.8
	Female	-	1	-	1	6	2	-	-	-	-	-	10	5.7
	Total	2	2	-	2	6	5	1	-	-	-	3	21	5.2

5.1.5 Livestock

The animal population in proportion to the number of households was not very high in the village (See table 5.1.5). This was so because landless and near landless households owned less bovine animals than those who owned more than 1 acre of land. It could be seen from the table that cows and buffaloes were the main income supporting animals in the village. If we work out the average number of cattles (that is cows and buffaloes taken together), average cattle owned was found to be 0.95 per household in the village. Landless and near landless households possessed other types of live stock in larger number.

Table – 5.1.5
Distribution of Animal in Different Categories of Landholding Size Groups Households in the Village Jalalpur

Landholding size	Total HHs.	Cow	Buffalo	Calf	Other	Total
Land-less	18	1	3	3	4	11
Below 0.63 Acre	38	3	26	20	25	74
0.63 to 1.0 Acre	7	2	3	4	5	14
1.0 to 2.5 Acre	21	15	13	32	12	72
2.5 to 5.0 Acre	4	1	6	5	6	18
5.0 to 10.0 Acre	11	11	9	17	5	42
Above 10.0 Acre	1	2	-	3	-	5
Total	100	35	60	84	57	236

5.1.6 Housing Condition

There were 129 built houses owned by 100 households i.e. about 29 households owned more than one house. These are generally those households who own a pucca house along with a kutcha /semi pucca house. There is a tendency to shift to a pucca house whenever possible and then kutcha or semi pucca house is put to other uses or as storage. Out of 129 houses in the village 41 i.e. 31.78 per cent were kutcha houses, 60 i.e. 46.51 per cent were pucca houses, and 28 i.e. 21.71 per cent were semi pucca houses (See table 5.1.6).

Table – 5.1.6
Caste-wise Distribution of Housing Condition in the Village Jalalpur

Housing condition	Chamar			Vishva karma	Restagi	Gupta	Maurya	Yadav	Thakur	Brahmins	Muslims	Total
		Dhobi	Rajbhar									
Katcha	11	-	15	-	-	1	3	1	6	-	4	41
Pakka	11	-	10	-	2	2	4	4	10	5	12	60
Semi Pakka	-	1	13	1	1	-	-	-	6	4	2	28

Total	22	1	38	1	3	3	7	5	22	9	18	129
Total HHs.	17	1	31	1	2	3	4	5	10	8	18	100

(B) Responses of Selected Households in Village Jalalpur

Twenty households in the village Jalalpur were selected to elicit information about land use behaviour at household level.

5.1.7 Change in Size of Land Holding

The distribution of households on the basis of landholdings showed that 40 per cent owned 1.0 to 2.5 acre of land, and 20 per cent owned between 2.5 acres to 5.0 acres of land. Thus 70 per cent farmers were marginal farmer 20 per cent farmers were small farmers and the rest 20 per cent owned more than (See table 5.2.7.1).

In Jalalpur, out of 20 households 13 reported that the size of landholdings changed during the last 20 years.

The reason of changes in the total land owned during the last 20 years in selected households showed that in 7 households (i.e. 35 per cent), division of family was the major cause, while in case of one household due to change took place due to consolidation of holdings and five households it was purchase of land (See table 5.1.7.2).

**Table – 5.1.7.1
Caste and Landholding wise Distribution of Selected Households in Villages Jalalpur**

Caste	Below 0.63 Acre	0.63 to 1.0 Acre	1.0 to 2.5 Acre	2.5 to 5.0 Acre	5.0 to 10.0 Acre	Above 10 Acre	Total
Chamar	1	-	2	-	-	-	3
Yadav	-	1	1	1	-	-	3
Kushwaha	-	-	-	1	-	-	1
Rajbhar	1	-	2	1	-	-	4
Brahmin	-	-	2	1	-	1	4
Thakur	-	-	-	-	-	3	3
Rastogi	-	-	1	-	-	-	1
Muslims	-	1	-	-	-	-	1
Total	2	2	8	4	-	4	20
Percentage	10.0	10.0	40.0	20.0	-	20.0	100.0

Table – 5.1.7.2

Reason of Changes in Total Land Owned During the Last 20 years in Selected Households

Reason	Number	Percent
Division of family	7	35.0
Purchased	5	25.0
Due to consolidation of holdings	1	5.0
Not applicable	7	35.0
Total Respondents	20	100.0

In Jalalpur village, 5 (i.e. 25 per cent) households reported that their landholding increased during the last 20 years. The average change per reporting household was found to be 0.49 acres. That shows the purchase of land was at a very small scale (**See table 5.1.7.3**).

The number of households who reported decrease in their landholdings was 8 (i.e. 40 per cent) of total sampled households, and the average change per reporting households was 3.05 acres (**See table 5.1.7.4**).

Table – 5.1.7.3

Number of Households Whose Landholding Increased

Number of HHs.	Land owned at present (in acre)	Land owned 20 years ago (in acre)	Change during 20 years (in acre)	Average change per reporting HHs. (in acre)
5	15.37	12.91	2.46	0.49

Table – 5.1.7.4
Number of Households Whose Landholding Decreased

Number of HHs.	Land owned at present (in acre)	Land owned 20 years ago (in acre)	Change during 20 years (in acre)	Average change per reporting HHs. (in acre)
8	18.69	43.14	24.45	3.05

5.1.8 Conversion of Agricultural Land for Non-Agricultural Purposes

In Jalalpur 10 out of 20 respondents (i.e. 40 per cent) reported that they had converted some of their agricultural land for non-agricultural purposes. All of them reported that it was due to division in family and consequent need of more land for non-agricultural purposes. Three households also suggested that the conversion of agricultural land for non-agricultural purposes was due to its use for brick kiln **(See table 5.1.8.1)**.

It was also reported by respondents that reasons of conversion of agricultural land for non-agricultural purposes in the village was –

- (i) Division of family and consequent need of land for construction of houses;
- (ii) To construct cattle shed; and
- (iii) For brick kiln **(See table 5.1.8.2)**.

The respondents were also asked whether they had discontinued cultivation of any part of agricultural land owned by them. In village Jalalpur, all the respondents replied in negative **(See table 5.1.8.3)**.

Table 5.1.8.1
Reason of Conversion of Agricultural land for Non-agricultural Uses of Owned Land by Selected Households

Reason	Number	Percent
Division of family for construction of houses	10	50.0
Brick kiln	3	15.0
Not applicable	10	50.0
Total Respondents	20	100.0

Table – 5.1.8.2
Reasons of Conversion of Agricultural Land for Non-agricultural Purposes in the Village (As Suggested by Respondents)

Reason	Number	Percent
Division of family for construction of houses	20	100.0
Cattle shed	2	10.0
Brick kiln	3	15.0
Total Respondents	20	100.0

Table 5.1.8.3
Distribution of Respondents on the Basis of Responses to Query "Reasons for not cultivating the agriculture land"

Reasons	Number	Percent
Not applicable	20	100.0
Total Respondents	20	100.0

5.1.9 Land Reclamation

All villages have some land which is barren and uncultivable. We wanted to know villagers perception about the possible uses of barren land. Only 15 out of 20 respondents replied to our query that barren land could be put to which uses. The suggestions were: Barren land could be used for ((i) construction of houses; (ii) construction of new ponds and tanks for fisheries (iii) to develop small industries/commercial place and (iv) for plantation **(See table 5.1.9.1)**.

Only 14 out of 20 respondents were aware about the government programmes to reclaim usar land **(See table 5.1.9.2)**.

However, facility could not be availed as the programme was not implemented in the village **(See table 5.1.9.3)**.

Table – 5.1.9.1

Distribution of Responses to the query "Barren land could be put to which uses"

Reason	Number	Percent
Construction of House/Colony	5	25.0
Develop Small Industry/Commercial Place	4	20.0
Construction of New Ponds/Fisheries	2	10.0
Plantation	4	20.0
Total Respondents	20	100.0

Table – 5.1.9.2

Distribution of Responses to the question "Are you aware of the Government Programmes to recalim Usar Land"

Responses	Number	Percent
Yes	14	70.0
No	6	30.0
Total Respondents	20	100.0

Table – 5.1.9.3

Distribution of Responses to the Query "Reasons for Not-availing the Facilities of Schemes for Land Reclamation"

Responses	Number	Percent
Scheme not implemented in the village	6	30.0
Don't need	8	40.0
Not applicable	6	30.0
Total Respondents	20	100.0

5.1.10 Water Harvesting

Water harvesting is a serious challenge at the village level. It has two aspects one is water logging and the other is water conservation. The problem of water logging is a serious problem in the village Jalalpur. When asked, what measures could be adopted to avoid water logging due to rain water, 19 suggested that nullah be cleaned and 9 out of 20 (i.e. 45 per cent) respondents suggested that there was need to construct new nullah (**See table 5.1.10.1**).

As regards water conservation, when farmers were asked, what could be done to conserve rain water in the village, 4 (i.e. 20 per cent) suggested that old ponds be renovated, while 3 others (i.e. 15 per cent) suggested that new ponds should be constructed. Thus ponds are considered by most of the reporting farmers as most suitable way to conserve rain water (**See table 5.1.10.2**).

Farmers were also asked as to what would be the potential use of water. If more water could be conserved in the village. Farmers suggested that it could be used for irrigation and for animals (**See table 5.1.10.3**).

Table – 5.1.10.1
Distribution of Responses to the Query "What measures could be adopted to avoid water logging due to rain water"

Reasons	Number	Percent
Drainage system linked to nullah	1	5.0
Cleaning of nullah	9	45.0
Construction of new nullah	9	45.0
No problem	5	25.0
Total Respondents	20	100.0

Table – 5.1.10.2
Distribution of Responses to the Query "What could be done to Conserve rain water in the village"

Reason	Number	Percent
Renovation of old Ponds	4	20.0
Construct new Ponds	3	15.0
Not needed	12	60.0
No response	2	10.0
Total Respondents	20	100.0

Table – 5.1.10.3
Distribution of Responses to Query "If more water could be conserved in the village then, it could be put to what uses?"

Responses	Number	Percent
Irrigation	5	25.0
For animal	3	15.0
Fisheries	2	10.0
No use	12	50.0
Total Respondents	20	100.0

We also enquired about the present status/use of those ponds, which have totally or partially disappeared. It was reported by respondents that such land had been encroached upon (**See table 5.1.10.4**).

When asked what efforts should be made to renovate/revive those ponds, farmers said that desiltation and removal of encroachments were necessary for renovation of ponds (**See table 5.1.10.5**).

We also enquired from farmers as to what benefits would accrue if ponds could be revived. Villagers expected various benefits if disappeared ponds could be renovated/revived. The water thus available then could be used for irrigation, for cattle and also for fisheries (**See table 5.1.10.6**).

The present use of ponds showed that 17 respondents considered it of no use. It was used for cattle, and for irrigation according to other 3 respondents (**See table 5.1.10.7**).

Table – 5.1.10.4
Distribution of Responses to the Query "What is the present use of land of those ponds, which have totally or partially disappeared"

Reason	Number	Percent
Encroachment	20	100.0
Total Respondents	20	100.0

Table – 5.1.10.5
Distribution of Responses to the Query "What efforts could be made for revival of ponds"

Reason	Number	Percent
Cleaning of pond	7	35.0
Remove encroachments	9	45.0
No response	5	25.0
Total Respondents	20	100.0

Table – 5.1.10.6
Distribution of Responses to query "In what way the revival of Ponds will help villagers"

Reason	Number
Irrigation	4
For Cattle use	3
Fisheries	3
Fire extinction	2
Remove waterlogging	1
Total Respondents	20

Table 5.1.10.7
Distribution of Responses to query "What is the Present Use of Existing Ponds"

Reason	Number
For cattle use	2
Irrigation	1
No uses	17
Total Respondents	20

5.1.11 Orchards

Farmers were also asked whether the area under orchards has increased or decreased. All the twenty farmers suggested that it has decreased (**See table 5.1.11.1**).

The main reason for decrease of orchards according to farmers were its long gestation period and because trees are being cut (**See table 5.1.11.2**).

When asked that why the potential of growth of orchards was low in the village, 15 farmers suggested that it was so because more land was needed for agriculture and that fruit trees are not being planted (**See table 5.1.11.3**).

Table – 5.1.11.1
Distribution of Responses to query "Whether the area under orchards has increased/decreased"

Response	Number	Percent
Decreased	20	100.0
Total Respondents	20	100.0

Table – 5.1.11.2
Distribution of Perception of Respondent about Reason of Decrease of Orchard

<i>Reasons</i>	Number	Percent
Long gestation	4	20.0
Cutting of trees	8	40.0
New orchards not coming	7	35.0
No response	2	10.0
Total Respondents	20	100.0

Table – 5.1.11.3
Distribution of Responses to query "Why the potential of growth of orchards is low"

Reason	Number	Percent
More land need for agriculture	15	75.0
Long gestation	3	15.0
Scarcity of water	2	10.0
Fruit tree are not being planted	14	70.0
Total Respondents	20	100.0

For some farmers the scope for developing new orchards in the village seemed to be very limited as 8 farmers felt that new orchards could be developed on agricultural land while 4 farmers suggested that it could be developed on road side in hamlets (**See table 5.1.11.4**).

When asked, what kind of facilities would be required to increase area under orchard, 25 per cent farmers suggested that G.S. land be made available for the purpose, while 20 per cent suggested that high yielding variety plants be given for the purpose (**See table 5.1.11.5**).

Table – 5.1.11.4
Distribution of Responses to query "On which type of land area under orchards could be increased"

Type of Land	Number	Percent
Agricultural land	8	40.0
Barren land	3	15.0
Hamlet and road side	4	20.0
All type land	3	15.0
No response	3	15.0
Total Respondents	20	100.0

Table – 5.1.11.5
Distribution of Responses to query "What kind of facilities would be required to increase area under orchard"

Reason	Number	Percent
G.S. land be made available for the purpose	5	25.0
H.Y.V. plants be given	4	20.0
Awareness campaign	6	30.0
No response	4	20.0
Total Respondents	20	100.0

5.1.12 Livestock

In Jalalpur, 15 out of 20 selected respondents reported that size of their livestock has decreased, while 2 reported increase in the livestock.

The main reasons suggested for decrease in livestock by respondents were low income, of there was no one in the family to look after livestock and also because of increasing use of tractors (See table 5.1.12.1).

Out of the two respondents who reported increase in number of cattles, one said that he intended to increase income while the other attributed the increase in number of cattles to family need (See table 5.1.12.2).

When asked that number of which type of livestock has decreased; respondents reported that number of only two types namely bovine and bullocks had decreased (See table 5.1.12.3).

All the respondents suggested that their economic condition would improve if they increase bovine cattle (See table 5.1.12.4).

The main constraints in increasing livestock were: lack of manpower, economic constraint and scarcity of fodder/grazing land (See table 5.1.12.5).

Table – 5.1.12.1
Distribution of Responses to query "Reasons for decrease in livestock"

Reason	Number	Percent
Low income	3	15.0
Lack of manpower	4	20.0
Now use tractors	10	50.0
Not applicable (2 increased + 3 constant)	5	25.0
Total Respondents	20	100.0

Table – 5.1.12.2
Distribution of Responses to query "Reasons for increase in livestock"

Reason	Number
Increase income	1
Family need	1
Not applicable	18
Total Respondents	20

Table – 5.1.12.3
Distribution of Responses to query "Number of which type of livestock has decreased"

Type of Cattles	Number
Bovine	9
Bullock	10
Not applicable	5
Total Respondents	20

Table – 5.1.12.4
Distribution of Responses to query "What type of livestock will improve your economic condition"

Types of Cattle	Number
Bovine	20
Total Respondents	20

Table – 5.1.12.5
Distribution of Responses to query "What are the main constraints in increasing livestock"

Reason	Number
Economic constraint	8
Lack of manpower	9
Scarcity of fodder/grazing land	3
No problem	2
Total Respondents	20

5.1.13 Agriculture

The main crops grown in the village Jalalpur were wheat and paddy. The average production of wheat and paddy was 9.0 Qt./acre and 13.3 Qt./acre respectively (**See table 5.13.1**).

Out of 20 selected farmers, 14 reported that productivity in their farms was lower than other farms. The main reasons for lower productivity were low irrigation, economic constraint, scarcity of manpower and inability to look after farming, secondly lower use of fertilizer, pesticide, compost etc. (**See table 5.1.13.2**).

Farmers were also asked about the main constraints in better utilization of agricultural land. The constraints suggested included low irrigation, usar land, low productivity of land and economic constraint (**See table 5.1.13.3**).

Table – 5.1.13.1
Cropping Pattern of Selected Household, Average Production and Use of Fertilizer

Crops	Net sown area (in acre)	Production (in Qt./Acre)	Compost (per acre)	DAP (in kg./acre)	Urea (in kg./acre)	Potas (in kg./acre)	Pesticide (Rs./Acre)
Wheat	37.37	9.0	1.2 Trolley	30.5	35.5	25.0	-
Paddy	25.37	13.3	-	30.0	60.0	-	350.00
Peas	4.0	5.5	-	33.0	-	-	-
Bajara	8.0	6.3	-	-	30.0	-	-
Arhar	3.71	6.5	-	20.0	-	-	-
Sugarcane	5.43	325.0	-	100.0	75.0	50.0	300.0
Potato	5.43	72.0	2 Trolley	160.0	80.0	80.0	350.0

Table – 5.1.13.2
Distribution of Responses to query "Reason for lower productivity of respondents farm from other farms"

Reason	Number	Percent
Low use of fertilizer/pesticide/compost etc.	3	15.0
Low irrigation	4	20.0
Scarcity of resources	2	10.0
Economic constraint	4	40.0
Scarcity of manpower and inability to look after farming	2	10.0
Not applicable	6	30.0
Total Respondents	20	100.0

Table – 5.1.13.3
Distribution of Responses to query "What are the main constraints in better utilisation of agricultural land"

Constraints	Number	Percent
Low irrigation	7	35.0
Economic constraint	2	10.0
Low productivity of land	2	10.0
Usar land	4	30.0
Not applicable	6	30.0
Total Respondents	20	100.0

The suggestions made by farmers to remove these constraints included increase in irrigation facility. Power supply be increased, land reclamation, economic assistance should be provided, HYV seeds be made available (**See table 5.1.13.4**).

Tenancy: One of the selected farmers leased-out land (**See table 5.1.13.5**). Only two selected farmers reported that they leased-in land. The reason was that they owned very small piece of land (**See table 5.1.13.6**).

Table – 5.1.13.4
Distribution of Responses to query "How above mentioned constraints could be removed"

Measures	Number	Percent
Increase irrigation facility	6	30.0
Economic/Credit assistance	2	10.0
Increase power supply	4	20.0
HY Varieties be made available	1	5.0
Land reclamation	4	20.0
Not applicable	6	30.0
Total Respondents	20	100.0

Table – 5.1.13.5
Distribution of Responses to query "Reasons for leasing-out the land"

Reason	Number	Percent
Not applicable	20	100.0
Total Respondents	20	100.0

Table – 5.1.13.6
Distribution of Responses to query "Reasons for leasing-in by tenants"

Reason	Number	Percent
Economic constraint and Owned land is small	2	10.0
Not applicable	18	90.0
Total Respondents	20	100.0

(C) Land Use Plan for Jalalpur Village

The main problem of the village is water logging and effects of brick kilns.

It is therefore necessary to check seepage and overflow of water from canals. The sides of canal should have brick lining.

Secondly, operation of brick kilns be regulated in the village.

Houses are being constructed in haphazard manner, even on agricultural land. There is need to check this tendency.

The drainage system in the village could improve if nullah (a natural drainage passage) is regularly cleaned.

The village pond has been encroached upon. Encroachers should be evicted and pond be revived in the village.

Besides above suggestions following steps could be taken to regulate land use in the village:

- (i) Land Management Committee be reconstituted with representations of all sections and entrusted with specific responsibilities related to land use in the village.
- (ii) After consolidation, conversion of agricultural land for non-agricultural purposes be prohibited. Those who have violated this norm should be penalized. A fine based on current value of land and house be imposed.
- (iii) Building tax should be collected every year from those farmers who have constructed any house/building on farm land.
- (iv) Stringent action should be taken against those who have encroached upon pond of the village. They should be debarred from getting benefit of any government scheme and also debarred from contesting any elections.
- (v) Desiltation of drainage course should be done regularly.

Village Study – II

Village – Surjipur (Block – Bilariyaganj)

(A) Village Profile

Village Surjipur is at distance of 19 kilometers from block headquarter Bilariyaganj. There is no approach road upto village. The nearest road is at a distance of 2 kms. from the village. Only around 20 per cent landowners owned problem free land. Land area ranging from 20 per cent to 50 per cent of other land owners was reported to be usar. Earlier usar land or less productive land was not used for agricultural purposes. But now even such land is being cultivated. Efforts have also been made to reclaim/increase productivity of such land.

5.2.1 Land Use Pattern

Village Surjipur is a small village with 85.0 hectares of total reporting area. The present land use pattern showed that 85.88 per cent of the total reporting area was net sown area out of which 76.71 per cent was irrigate. The land under water bodies was small (2.35 per cent) and 2.35 per cent was culturable waste land (See table 5.2.1).

Table – 5.2.1

Land Use Pattern in the Surjipur Village of the Azamgarh District

Land Use Categories	In hectare	In percent
Total reporting area	85	100.0
Water bodies	2	2.35
Habitation	4	4.7
Barren	1	1.17
Pasture	1	1.17
Culturable waste	2	2.35
Current fallow	2	2.35
Net sown area	73	85.88
(a) Irrigated	56	76.71
(b) Un-irrigated	17	23.29
Area sown more than once	56	
(a) Irrigated	26	
(b) Un-irrigated	30	

Source: Revenue department.

5.2.2 Demographic Profile

The average family size was 8.5 in the village. (See table 5.2.2.1). The population in the working age group i.e. in the age group (14-60) years comprised 54.71 per cent of total population. That is the rest of 45 per cent persons constituted dependents in the family. The sex ratio (i.e. number of females per thousand males) was 836.41.

The literacy rate was 77.29 per cent in the village. It could also be seen from table 5.2.2.2 that number of illiterates was much higher among females than among males. On the other hand in each category of education group, the number of males was much higher than females.

Table – 5.2.2.1
Caste and Gender-wise Distribution of Population in the Village Surjipur

Particulars	Gender	Chamar	Dhobi	Badhai	Patel	Bhumihar	Brahmin	Muslim	Total
Total population	Male	242	62	9	34	8	14	65	434
	Female	213	47	8	30	6	12	47	363
	Total	455	109	17	64	14	26	112	797
Below 5 year population	Male	30	9	3	7	1	2	19	71
	Female	22	11	1	8	-	1	10	53
	Total	52	20	4	15	1	3	29	124
5 to 14 year population	Male	66	19	-	5	3	3	18	114
	Female	62	8	1	6	3	6	10	96
	Total	128	27	1	11	6	9	28	210
14 to 60 year population	Male	143	29	6	20	4	9	23	234
	Female	127	24	6	15	3	5	22	202
	Total	270	53	12	35	7	14	45	436
Above 60 year population	Male	3	5	-	2	-	-	5	15
	Female	2	4	-	1	-	-	5	12
	Total	5	9	-	3	-	-	10	27
Family size		8.1	7.8	8.5	8.0	14.0	26.0	10.2	8.5

Table – 5.2.2.2
Caste and Gender-wise Distribution of Education in the Village Surjipur

Particulars	Gender	Chamar	Dhobi	Badhai	Patel	Bhumihar	Brahmin	Muslim	Total	%age
Graduation and above	Male	14	-	-	3	-	-	-	17	3.92
	Female	-	-	-	-	-	-	-	-	-
	Total	14	-	-	3	-	-	-	17	2.13
Intermediate and high school	Male	30	7	-	10	3	4	2	56	12.90
	Female	9	1	-	4	2	2	-	18	4.96
	Total	39	8	-	14	5	6	2	74	9.28
Below high school	Male	137	41	6	10	3	6	36	239	55.07
	Female	87	12	5	14	3	7	19	147	40.50
	Total	224	53	11	24	6	13	55	386	48.43
Illiterate	Male	27	5	-	3	1	2	7	45	10.37
	Female	84	23	2	4	1	2	21	137	37.74
	Total	111	28	2	7	2	4	28	182	22.71

5.2.3 Land Ownership

In Surjipur, the average size of landholding per family was 1.4 acres and per adult person only 0.28 acres (See table 5.2.3.1). The low size of land holdings per adult person also indicates that the land available for cultivation was not enough to engage all the adults in agriculture for full time work. The pressure of land has therefore forced many others to search for jobs outside agriculture. The fact that per person land was around 0.98 acres in even the landholding group (5-10) acres, and that around 85 per cent households owned less than 2.5 acres of land, shows that in future, population pressure on land would be tremendous in all size groups. The village is thus moving towards a situation in which it will be dominated by landless and marginal farmer households. The village has mixed population. Chamars constitute the largest caste group followed by Dhobi, Muslims and Patels as other major castes in the village. Caste-wise distribution of landholdings in different size categories is shown in the table 5.2.3.2.

Table – 5.2.3.1

Landholding Size : Per Family/Per Adult in the Village Surjipur

Landholding size	Total households	Total adult pop. (>14 year)	Total land	Average landholding (Per adult person)	Average landholding (Per family)
Land-less	2	16	-	-	-
Below 0.63 Acre	26	126	4.4	0.03	0.16
0.63 to 1.0 Acre	16	77	10.6	0.13	0.66
1.0 to 2.5 Acre	35	180	52.7	0.30	1.51
2.5 to 5.0 Acre	9	44	34.8	0.80	3.87
5.0 to 10.0 Acre	5	28	27.4	0.98	5.48
Total	93	463	129.9	0.28	1.40

Table – 5.2.3.2
Caste-wise Distribution of Landholdings Size in the Village Surjipur

Landholding size	Chamar	Dhobi	Badhai	Patel	Bhumihar	Brahmin	Muslim	Total	%age
Land-less	-	-	-	1	-	-	1	2	2.15
Below 0.63 Acre	12	13	-	-	-	-	1	26	27.96
0.63 to 1.0 Acre	11	-	2	-	-	-	3	16	17.20
1.0 to 2.5 Acre	29	1	-	-	1	1	3	35	37.63
2.5 to 5.0 Acre	4	-	-	4	-	-	1	9	9.68
5.0 to 10.0 Acre	-	-	-	3	-	-	2	5	5.38
Total	56	14	2	8	1	1	11	93	100.0

5.2.4

Occupational Structure

The occupation-wise distribution of households showed that the main occupation of 31 out of 93 households i.e. 33.33 per cent was cultivation, while that of 16 households i.e. 17.2 per cent it was wage work and 26 i.e. 27.96 per cent were engaged in service. Main occupation of 20 households i.e. 21.51 per cent was other works.

The occupation of many households have also changed as a result of increasing pressure on land and non-availability of work in the village. The change in main occupation has taken place mainly among cultivators. Out of 52 households whose main occupation was cultivation in the past, now only 26 i.e. 50.0 per cent are continuing with it, 19 (i.e. 36.54 per cent) are engaged in service and 3 (i.e. 5.77 per cent) are engaged in other work. Interestingly among those 26 households who have shifted to other occupations, 19 still continue to be engaged in as cultivation as their supplementary occupation. Similarly those households who continue cultivation as their main occupation are also engaged in supplementary occupations. Wage work running a shop and other work was supplementary occupation of many cultivators (**See table 5.2.4.1**).

There were 343 workers in the village out of which 221 were males and 122 were females. It could also be seen from the **table 5.2.4.2** that out of 343 workers 40.52 per cent were cultivators, 14.58 per cent were agricultural labourers, 12.24 per cent were non-agricultural labour, 13.41 per cent were in service and 19.24 per cent were engaged in other work.

Table – 5.2.4.1

Occupation	Past occupation	Present main occupation				Supplementary occupation			
	Total HHs.	Cultiva tor	Wage	Servic e	Other works	Cultiva tor	Wage	Shop	Other work
Cultivator	52	26	4	19	3	19	10	10	5
Wage	23	5	12	5	1	5	5	3	5
Service	2	-	-	2	-	2	-	-	-
Other works	16	-	-	-	16	16	-	-	-
Total	93	31	16	26	20	42	15	13	10

Present and Past Occupation of Households in the Village Surjipur

Table – 5.2.4.2

Caste and Gender-wise Distribution of Occupation of Workers in the Village Surjipur

Particulars	Gender	Chamar	Dhobi	Badhai	Patel	Bhumihar	Brahmin	Muslim	Total	%age
	Cultivator	Male	64	-	-	22	-	-	-	86
Female		37	-	-	16	-	-	-	53	43.40
Total		101	-	-	38	-	-	-	139	40.52
Agricultural labour	Male	22	-	-	-	-	-	6	28	12.67
	Female	7	-	-	-	-	-	15	22	18.03
	Total	29	-	-	-	-	-	21	50	14.58
Non-agricultural labour	Male	-	10	-	-	-	-	6	16	7.24
	Female	-	8	6	-	-	-	12	26	21.31
	Total	-	18	6	-	-	-	18	42	12.24
Service	Male	35	-	-	-	3	3	4	45	20.36
	Female	-	-	-	-	-	1	-	1	0.82
	Total	35	-	-	-	3	4	4	46	13.41
Others	Male	4	24	6	-	-	-	12	46	20.81

	Female	-	20	-	-	-	-	-	20	16.39
	Total	4	44	6	-	-	-	12	66	19.24

5.2.5 Livestock

Even the animal population per households was not very large in the village (See table 5.2.5). It could be seen from the table that cows and buffaloes were the main income supporting animals in the village. If we work out the average number of cattles (that is cows and buffaloes taken together), average cattle owned was found to be 0.97 per household in the village.

Table – 5.2.5
Distribution of Animal in Different Categories of Landholding Households in the Village Surjipur

Landholding size	Total HHs.	Cow	Buffalo	Calf	Other	Total
Land-less	2	1	1	1	-	3
Below 0.63 Acre	26	5	12	15	20	52
0.63 to 1.0 Acre	16	6	8	9	10	33
1.0 to 2.5 Acre	35	18	22	38	10	88
2.5 to 5.0 Acre	9	6	3	7	2	18
5.0 to 10.0 Acre	5	5	3	5	1	14
Total	93	41	49	75	43	208

5.2.6 Housing Condition

There were 116 built houses owned by 93 households i.e. 23 households owned more than one house. These are generally those households who own a pucca house along with a kutcha /semi pucca houses. There is a tendency to shift to a pucca house whenever possible and then kutcha or semi pucca house are put to other uses or as storage. Out of 116 houses in the village 66 i.e. 56.90 per cent were kutcha houses, 39 i.e. 33.62 per cent were pucca houses, and 11 i.e. 9.48 per cent were semi pucca houses (See table 5.4.6).

Table – 5.2.6
Caste-wise Distribution of Housing Condition in the Village Surjipur

Housing condition	Chamar	Dhobi	Badhai	Patel	Bhumihaar	Brahmin	Muslim	Total
Katcha	37	9	2	8	1	-	8	66
Pakka	25	5	-	5	-	-	4	39
Semi Pakka	4	3	-	2	-	1	2	11
Total	66	17	2	15	1	1	14	116
Total Households	56	14	2	8	1	1	11	93

(B) Responses of Selected Households in Surjipur Village

Twenty households in the village Surjipur were selected to elicit information about land use behaviour at household level. We selected only those households who owned some land.

5.2.7 Change in Size of Land Holding

The distribution of households on the basis of landholdings showed that 5 (i.e. 25 per cent) owned less than 1 acre of land and 7 (i.e. 35 per cent) owned between 1 to 2.5 acres of land. Thus 60 per cent farmers were marginal farmer, 20 per cent farmers were small farmers and 20 per cent belonged to medium size group (See table 5.2.7.1).

In Surjipur, out of 20 households 10 reported that the size of landholdings changed during the last 20 years.

The reason of changes in the total land owned during the last 20 years in selected households showed that in 6 households (i.e. 30 per cent), division of family was the major cause, while in case of 1 (i.e. 5 per cent) household changes took place due to purchase of land and three households (i.e. 15 per cent) sold land (See table 5.2.7.2).

Table – 5.2.7.1
Caste and Landholding wise Distribution of Selected Households in Villages Surjipur

Caste	Below 0.63 Acre	0.63 to 1.0 Acre	1.0 to 2.5 Acre	2.5 to 5.0 Acre	5.0 to 10.0 Acre	Above 10 Acre	Total
Chamar	-	2	2	2	-	-	6
Dhobi	2	-	1	-	-	-	3
Patel	-	-	-	2	3	-	5
Badhai	-	1	-	-	-	-	1
Brahmin	-	-	1	-	-	-	1
Bhumihar	-	-	1	-	-	-	1
Muslims	-	-	2	-	1	-	3
Total	2	3	7	4	4	-	20
Percentage	10.0	15.0	35.0	20.0	20.0	-	100.0

Table – 5.2.7.2
Reason of Changes in Total Land Owned during the Last 20 years in Selected Households

Reason	<i>Number</i>	Percent
Division of family	6	30.0
Purchased	1	5.0
Sold	3	15.0
Not applicable	10	50.0
Total Respondents	20	100.0

In Surjipur village, only one household reported that his landholding increased during the last 20 years. The change of the reporting household was found to be 3.42 acres. That shows the purchase of land was of a very small scale (**See table 5.2.7.3**).

The number of households who reported decrease in their landholdings was 9 (i.e. 45 per cent) of total sampled households, and the average change per reporting households was 4.39 acres (**See table 5.2.7.4**).

Table – 5.2.7.3

Number of Households Whose Landholding Increased

Number of HHs.	Land owned at present (in acre)	Land owned 20 years ago (in acre)	Change during 20 years (in acre)	Average change per reporting HHs. (in acre)
1	9.02	5.60	3.42	3.42

Table – 5.2.7.4

Number of Households Whose Landholding Decreased

Number of HHs.	Land owned at present (in acre)	Land owned 20 years ago (in acre)	Change during 20 years (in acre)	Average change per reporting HHs. (in acre)
9	34.46	73.94	39.48	4.39

5.2.8 Conversion of Agricultural Land for Non-Agricultural Purposes

In Surjipur 8 out of 20 respondents (i.e. 40 per cent) reported that they had converted some part of their agricultural land for non-agricultural purposes. All the eight of them reported that it was due to division in family and consequent need of more land for non-agricultural purposes (See table 5.2.8.1).

It was also reported by respondents that reasons of conversion of agricultural land for non-agricultural purposes in the village were (See table 5.2.8.2)–

Division of family and consequent need of land for construction of houses.

The respondents were also asked whether they had discontinued cultivation of any part of agricultural land owned by them. In village Surjipur, only two respondents replied in affirmative, and the reasons for it was waterlogging (See table 5.2.8.3).

Table 5.2.8.1
Reason of Conversion of Agricultural land for Non-agricultural Uses of Owned Land by Selected Households

Reason	Number	Percent
Division of family for construction of houses	8	40.0
Not applicable	12	60.0
Total Respondents	20	100.0

Table – 5.2.8.2
Other Reasons of Conversion of Agricultural Land for Non-agricultural Purpose in the Village (As Suggested by Respondents)

Reason	Number	Percent
Division of family for construction of houses	20	100.0
Total Respondents	20	100.0

Table 5.2.8.3
Distribution of Respondents on the Basis of Responses to Query "Reasons for not cultivating the agriculture land"

Reasons	Number	Percent
Waterlogging	2	10.0
Not applicable	18	90.0
Total Respondents	20	100.0

5.2.9 Land Reclamation

All villages have some land which is barren and uncultivable. We wanted to know villagers' perception about the possible uses of barren land. Seventeen of 20 respondents replied to our query that barren land could be put to which uses. The suggestions were: Barren land could be used for (i) construction of houses; (ii) construction of new ponds and tanks for fisheries (iii) to develop small industries/commercial place and (iv) for plantation (**See table 5.2.9.1**).

All the 20 respondents were aware about the government programmes to reclaim usar land (**See table 5.2.9.2**). However, they did not avail the facility as the programme was not implemented in the village.

Table – 5.2.9.1

Distribution of Responses to the query "Barren land could be put to which uses"

Reason	Number	Percent
Plantation	3	15.0
Construction of House	4	20.0
Construction of New Ponds/Fisheries	3	15.0
Develop Small Industry/Commercial Place	1	5.0
Fodder/grazing	3	15.0
No uses	4	20.0
No response	3	15.0
Total Respondents	20	100.0

Table – 5.2.9.2

Distribution of Responses to the question "Are you aware of the Government Programmes to reclaim Usar Land"

Responses	Number	Percent
Yes	20	100.0
Total Respondents	20	100.0

Table – 5.1.9.3

Distribution of Responses to Query "Which Department Undertook the work of Reclamation of Usar Land"

Agency	Number	Percent
Usar Sudhar Nigam	2	10.0
Reporting respondents	2	10.0
Total Respondents	20	100.0

Table – 5.1.9.4

Distribution of Responses to the Query "Reasons for Not-availing the Facilities of Schemes for Land Reclamation"

Responses	Number	Percent
Scheme not implemented in the village	6	30.0
Don't need	9	45.0
Not approachable	3	15.0
Not applicable	2	10.0
Total Respondents	20	100.0

5.2.10 Water Harvesting

Water harvesting is a serious challenge at the village level. It has two aspects one is water logging and the other is water conservation. The problem of water logging either due to floods or seepage was a serious problem in some parts of village Surjipur. When asked, what measures could be adopted to avoid water logging due to rain water 5 respondents wanted cleansing of nullah while only two respondent suggested that there was need to construct new nullah (**See table 5.2.10.1**).

As regards water conservation, most of them suggested that there was no need for it (**See table 5.2.10.2**).

Table – 5.2.10.1
Distribution of Responses to the Query "What measures could be adopted to avoid water logging due to rain water"

Reasons	Number	Percent
Construction of new nullah	2	10.0
No problem	2	10.0
Cleaning of nullah	5	25.0
Not applicable	11	55.0
Total Respondents	20	100.0

Table – 5.2.10.2
Distribution of Responses to the Query "What could be done to Conserve rain water in the village"

Reason	Number	Percent
Not needed	19	95.0
No response	1	5.0
Total Respondents	20	100.0

Table – 5.2.10.3
Distribution of Responses to Query "If more water could be conserved in the village then, it could be put to what uses?"

Responses	Number	Percent
No uses	19	95.0
No response	1	5.0
Total Respondents	20	100.0

We also enquired about the present status/use of those ponds, which have totally or partially disappeared. It was reported by 3 respondents that such land had been encroached upon, and/or is being used for cultivation (**See table 5.1.10.4**).

When asked what efforts should be made to renovate/revive those ponds, farmers said that desiltation and removal of encroachments were necessary for renovation of ponds (**See table 5.1.10.5**).

We also enquired from farmers as to what benefits would accrue if ponds could be revived. Only few villagers expected various benefits if disappeared ponds could be renovated/revived. The water thus available then could be used for irrigation, for cattle and also for fisheries (**See table 5.1.10.6**).

The present use of ponds showed an encouraging sign. As it was used for bathing/washing and for cattle (**See table 5.1.10.7**).

Table – 5.1.10.4
Distribution of Responses to the Query "What is the present use of land of those ponds, which have totally or partially disappeared"

Reason	Number	Percent
Grazing by animals	4	20.0
Encroachment	3	15.0
No reply	13	65.0
Total Respondents	20	100.0

Table – 5.1.10.5
Distribution of Responses to the Query "What efforts could be made for revival of ponds"

Reason	Number	Percent
Cleaning of pond and make bundhi	3	15.0
Remove encroachments	3	15.0
No response	14	70.0
Total Respondents	20	100.0

Table – 5.1.10.6
Distribution of Responses to query "In what way the revival of Ponds will help villagers"

Reason	Number
Irrigation	2
For Cattle use	2
Fisheries	3
No benefits	1
Total Respondents	20

Table 5.1.10.7
Distribution of Responses to query "What is the Present Use of Existing Ponds"

Reason	Number
Bathing/Washing	11
For cattle use	9
Not any uses	4
Total Respondents	20

5.2.11 Orchards

Farmers were also asked whether the area under orchards had increased or decreased. Nine (i.e. 45.0 per cent) farmers suggested that it has decreased, while only 20 per cent reported increase in area under orchards (**See table 5.2.11.1**).

The main reason for decrease of orchards according to farmers were increase in felling of trees and need for agricultural land and long gestation period of orchards (**See table 5.2.11.2**).

The reason for increase in the area under orchards, and/or coming up of new orchards was mentioned by four farmers only. Two suggested that plantation was being done by forest department while two of them attributed it to tendency for commercial groves (**See table 5.2.11.3**).

Table – 5.2.11.1
Distribution of Responses to query "Whether the area under orchards has increased/decreased"

Response	Number	Percent
Increased	4	20.0
Decreased	9	45.0
Constant	7	35.0
Total Respondents	20	100.0

Table – 5.2.11.2
Distribution of Perception of Respondent about Reason of Decrease of Orchard

Reasons	Number	Percent
Tree felling increased	1	5.0
New orchards not coming	2	10.0
Long gestation	2	10.0
Need for Agricultural Land	5	25.0
Not applicable	11	55.0
Total Respondents	20	100.0

Table – 5.2.11.3
Perception of Respondent about Reason of Increase of Orchard

Reason	Number	Percent
H.V Plants given	2	10.0
Tendency for commercial groves	2	10.0
Not applicable	16	80.0
Total Respondents	20	100.0

When asked as to why the potential of growth of orchards was low in the village, 8 (i.e. 40 per cent) farmers suggested that it was so because more land was needed for agriculture, one suggested that it was difficult to protect from animals while two others attributed to its long gestation period (**See table 5.2.11.4**).

The scope for developing new orchards in the village seemed to be very limited as most farmers felt that new orchards could be developed on agricultural land (**See table 5.2.11.5**).

When asked, what kind of facilities would be required to increase area under orchard, various suggestions were made, which included high yielding variety plants be given for the purpose, protection of trees, gram sabha land be made available for the purpose, etc. (**See table 5.2.11.6**).

Table – 5.2.11.4
Distribution of Responses to query "Why the potential of growth of orchards is low"

Reason	Number	Percent
More land needed for agriculture	8	40.0
Long gestation period	2	10.0
Tendency declined	3	15.0
Difficulty to protect from animals	1	5.0
Not applicable	11	55.0
Total Respondents	20	100.0

Table – 5.2.11.5
Distribution of Responses to query "On which type of land area under orchards could be increased"

Type of Land	Number	Percent
Agricultural land	12	60.0
Road side and around hamlet	5	25.0
G.S. Land	3	15.0
No response	2	10.0
Total Respondents	20	100.0

Table – 5.2.11.6
Distribution of Responses to query "What kind of facilities would be required to increase area under orchard"

Reason	Number	Percent
G.S. land be made available for the purpose	3	15.0
H.Y.V. plants be given	8	40.0
Awareness campaign	5	25.0
Protection of tree	3	15.0
Not response	2	10.0
Total Respondents	20	100.0

5.2.12 Livestock

In Surjipur, 12 out of 20 selected respondents reported that size of their livestock has decreased, while only 4 reported increase in the livestock.

The main reasons suggested for decrease in livestock by respondents were there was no one in the family to look after livestock and also because of increasing use of tractors (**See table 5.2.12.1**).

Among the respondents who reported increase in number of cattles. Two suggested that the number of cattle was increased to increase family income while 3 attributed it to family requirement (**See table 5.2.12.2**).

When asked that number of which type of livestock has decreased; the respondents reported that number of only two types namely bovine and bullocks had decreased (**See table 5.2.12.3**).

The overwhelming majority of respondents suggested that their economic condition would improve if they increase bovine cattle (**See table 5.2.12.4**).

The main constraints in increasing livestock were: lack of manpower to manage, economic constraint and scarcity of fodder/grazing land (**See table 5.2.12.5**).

Table – 5.2.12.1
Distribution of Responses to query "Reasons for decrease in livestock"

Reason	Number	Percent
Sold (scarcity of money)	1	5.0
No one to look after them	5	25.0
Death	1	5.0
Now use tractors	5	25.0
Not applicable (4 increased + 4 constant)	8	40.0
Total Respondents	20	100.0

Table – 5.2.12.2
Distribution of Responses to query "Reasons for increase in livestock"

Reason	Number
Increase income	2
Family requirement	3
Attachment of animals	1
Not applicable	16
Total Respondents	20

Table – 5.2.12.3
Distribution of Responses to query "Number of which type of livestock has decreased"

Type of Cattles	Number
Bovine	7
Goat	2
Bullock	3
All type	1
Total Respondents	20

Table – 5.2.12.4
Distribution of Responses to query "What type of livestock will improve your economic condition"

Types of Cattle	Number
Bovine	18
Goat	2
Total Respondents	20

Table – 5.2.12.5
Distribution of Responses to query "What are the main constraints in increasing livestock"

Reason	Number
Economic constraint	3
Lack of manpower to manage	15
Scarcity of fodder/grazing land	8
Scarcity of animal's doctors	1
Total Respondents	20

5.2.13 Agriculture

The main crops grown in the village Surjipur were wheat and paddy groundnuts and peas. The average productivity of wheat and paddy was 10.1 Qt./acre and 12.2 Qt./acre respectively (**See table 5.2.13.1**).

Out of the 20 selected farmers, 10 reported that productivity in their farms was lower than other farms. The main reasons for lower productivity were reported as economic constrains, and low productivity of land (**See table 5.2.13.2**).

Farmers were also asked about the main constraints in better utilization of agricultural land. The constraints suggested included, low productivity of land, erratic power supply, and economic constraint (**See table 5.2.13.3**).

Table – 5.2.13.1

Cropping Pattern of Selected Household, Average Production and Use of Fertilizer

Crops	Net sown area (in acre)	Production (in Qt./Acre)	Compost (per acre)	DAP (in kg./acre)	Urea (in kg./acre)	Potas (in kg./acre)	Pesticide (Rs./Acre)
Wheat	42.14	10.1	2 Trolley	35.0	40.0	-	-
Paddy	39.71	12.2	-	40.0	40.0	-	285.0
Peas	5.71	7.5	-	25.0	-	-	-
Bajara	11.71	6.5	-	-	25.0	-	-
Arhar	7.71	6.2	-	-	25.0	-	-
Sugarcane	6.00	330.0	-	100.0	75.0	60.0	300.0
Potato	3.43	69.5	2 Trolley	200.0	100.0	100.0	350.0

Table – 5.2.13.2

Distribution of Responses to query "Reason for lower productivity of respondents farm from other farms"

Reason	Number	Percent
Low use of fertilizer/pesticide/compost etc.	1	5.0
No one look after them	2	10.0
Scarcity of resources	2	10.0
Economic constraint	10	50.0
Low productivity of land	4	20.0
Not applicable	10	70.0
Total Respondents	20	100.0

Table – 5.2.13.3

Distribution of Responses to query "What are the main constraints in better utilisation of agricultural land"

Constraints	Number	Percent
Low irrigation	1	5.0
Economic constraint	5	25.0
Low productivity of land	11	55.0
Scarcity of electricity for irrigation	5	25.0
Not applicable	2	10.0
Total Respondents	20	100.0

The various suggestions made by farmers to remove these constraints included, power supply be increased, economic assistance should be provided, and soil testing should be done (**See table 5.2.13.4**).

Tenancy: One out of twenty farmers leased out land. The main reason for leasing out land was non-availability of workers (**See table 5.2.13.5**). Only one selected farmer reported that he leased in land. The reason was that they wanted to augment income and because his landholding was small (**See table 5.2.13.6**).

Table – 5.2.13.4
Distribution of Responses to query "How above mentioned constraints could be removed"

Measures	Number	Percent
Economic/Credit assistance	6	30.0
Soil testing	5	25.0
Land reclamation	2	10.0
More electricity for irrigation	6	30.0
Not applicable	4	20.0
Total Respondents	20	100.0

Table – 5.2.13.5
Distribution of Responses to query "Reasons for leasing out the land"

Reason	Number	Percent
Scarcity of manpower	1	5.0
Not applicable	19	95.0
Total Respondents	20	100.0

Table 5.2.13.6
Distribution of Responses to query "Reasons for leasing in by tenants"

Reason	Number	Percent
Augment income and small size of land holdings	1	5.0
Not applicable	19	95.0
Total Respondents	20	100.0

(C) Land Use Plan for Surjipur Village

There is a nullah near the village. Many pits have developed around the route of this nullah, and some area gets waterlogged during rainy season due to it. This nullah is linked to a canal which is at around 2 kms. from the village. During rainy season even the canal overflows and causes waterlogging.

There is a pond in the village which is under gram sabha land which is being used by washerman for washing clothes. Some part of it has been encroached upon by them.

There is need to cleanse the pond and raise embankments for its general use.

In the less productive cultivated land agro-forestry could be promoted.

Besides above suggestions following steps could be taken to regulate land use in the village:

- (i) Land Management Committee be reconstituted with representations of all sections and entrusted with specific responsibilities related to land use in the village.
- (ii) After consolidation, conversion of agricultural land for non-agricultural purposes be prohibited. Those who have violated this norm should be penalized. A fine based on current value of land and house be imposed.
- (iii) Building tax should be collected every year from those farmers who have constructed any house/building on farm land.
- (iv) Stringent action should be taken against those who have encroached upon pond of the village. They should be debarred from getting benefit of any government scheme and also debarred from contesting any elections.
- (v) Desiltation of drainage course should be done regularly.

Village Study – III

Village – Bargahan (Block – Thekma)

(A) Village Profile

Village Bargahan is located at a distance of 16 kilometers from block headquarter Thekma. It is a politically sensitive village as one former minister of Government of U.P. belongs to this village. The village has a mixed population from the point of view of caste composition. More than 86 per cent holdings were marginal holdings.

5.3.1 Land Use Pattern

Village Bargahan is a big village with 454 hectares of total reporting area. In village Bargahan land use pattern shows that it continues to be predominantly agricultural as 71.8 per cent of total reporting area was under cultivation and about 94 per cent of it was irrigated. Besides net sown area, some area was reported, under water bodies and some fallow land was also reported, which could become an important aspect of land use planning of the village. The village has also some area under pasture land (**See table 5.3.1**).

Table – 5.3.1

Land Use Pattern in the Bargahan Village of the Azamgarh District

Land Use Categories	In hectare	In percent
Total reporting area	454	100.0
Water bodies	32	7.05
Habitation	22	4.84
Other uses	2	0.44
Barren	1	0.22
Pasture	13	2.86
Banjar	7	1.54
Culturable waste	1	0.22
Other trees and plantations	4	0.88
Current fallow	46	10.13
Net sown area	326	71.80
(a) Irrigated	305	93.56
(b) Un-irrigated	21	6.44
Area sown more than once	241	
(a) Irrigated	1	
(b) Un-irrigated	240	

Source: Revenue department.

5.3.2 Demographic Profile

The average family size was 7.8 in the village. The population in the working age group i.e. in the age group (14-60) years comprised about 52.15 per cent of total population. That is less than 48 per cent persons constituted dependents in the family. The village also shows adverse sex ratio. This is evident from the fact that the number of female population per thousand male population was only 922.14 (See table 5.3.2.1).

The literacy rate was 61.39 per cent. It could also be seen from table 5.3.2.2 that number of illiterates was much higher among females than among males. On the other hand in each category of education group, the number of males was much higher than females.

Table – 5.3.2.1
Caste and Gender-wise Distribution of Population in the Village Bargahan

Caste	Total population			Below 5 year population			5 to 14 year population			14 to 60 year population			Above 60 year population			Family size
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	
Harijan	370	358	728	84	84	168	93	89	182	186	179	365	7	6	13	7.1
Rajbhar	285	270	555	44	54	98	77	62	139	161	151	312	3	3	6	7.7
Nai	11	8	19	3	1	4	3	3	6	5	4	9	-	-	-	6.7
Kahar	62	54	116	9	9	18	26	18	44	26	25	51	1	2	3	6.4
Lohar	3	2	5	-	-	-	-	-	-	3	2	5	-	-	-	5.0
Kashyap	30	28	58	5	7	12	9	8	17	16	13	29	-	-	-	5.8
Prajapati	11	7	18	-	1	1	5	3	8	6	3	9	-	-	-	9.0
Maurya	34	33	67	8	10	18	6	6	12	20	17	37	-	-	-	7.4
Yadav	96	78	174	24	18	42	27	20	47	45	40	85	-	-	-	7.5
Chauhan	65	60	125	10	11	21	18	15	33	31	31	62	6	3	9	6.0
Thakur	92	108	199	13	170	30	220	28	50	51	59	110	5	4	9	13.0
Brahmin	31	31	62	5	2	7	6	8	14	17	18	35	3	3	6	8.8
Muslim	144	100	244	32	25	57	38	17	55	72	55	127	2	3	5	11.1
Total	1233	1137	2370	237	239	476	330	277	607	639	597	1236	27	24	51	7.8

Table – 5.3.2.2
Caste and Gender-wise Distribution of Education in the Village Bargahan

Caste	Graduation and above			Intermediate and high school			Below high school			Illiterate		
	M	F	T	M	F	T	M	F	T	M	F	T
Harijan	8	2	10	24	2	26	130	88	218	99	174	273
Rajbhar	8	-	8	51	7	58	128	69	197	48	99	149
Nai	-	-	-	1	-	1	3	3	6	3	4	7
Kahar	1	-	1	9	2	11	40	30	70	3	12	15
Lohar	-	-	-	-	-	-	3	-	3	-	2	2
Kashyap	1	-	1	4	-	4	16	10	26	4	12	16
Prajapati	1	-	1	4	-	4	5	2	7	-	2	2
Maurya	-	-	-	-	-	-	13	9	22	13	14	27

Yadav	6	-	6	24	9	33	40	27	67	3	23	26
Chauhan	-	-	-	8	3	11	35	19	54	14	25	39
Thakur	19	8	27	23	13	36	22	44	66	3	15	18
Brahmin	7	2	9	9	4	13	16	21	37	-	1	1
Muslim	2	-	2	6	-	6	82	21	103	22	56	78
Total	53	12	65	163	40	203	533	343	876	212	439	651
Percentage	4.3	1.06	2.74	13.22	3.52	8.57	43.23	30.17	36.96	17.19	38.61	27.47

5.3.3 Land Ownership

In Bargahan, the average size of landholding per family was 1.61 acres and per adult person only 0.38 acres (See table 5.3.3.1). The low size of land holdings per adult person also indicates that the land available for cultivation was not enough to engage all the adults in agriculture for full time work. The pressure of land has therefore forced many others to search for jobs outside agriculture. The fact that per adult person land was around 0.6 acres in the landholding group (2.5-5.0) acres shows that in future population pressure on land would be tremendous in all size groups. The village is thus moving towards a situation in which it will be dominated by landless and near landless households and marginal farmers who already constitute around 86.0 per cent of total households in the village. Village Bargahan had a mixed population from the point of view of distribution of castes in the village population. Harijans (Chamars, a schedule caste) was the predominant caste in the village as 102 out of 305 i.e. around 33.44 per cent households belonged to this caste (See table 5.3.3.2). Other caste with sizable households was Rajbhars.

Table – 5.3.3.1
Distribution of Per Family/Per Adult Size of Landholdings in Different Size Groups in the Village Bargahan

Landholding size	Total households	Total adult pop. (>14 year)	Total land	Average landholding (Per adult person)	Average landholding (Per family)
Land-less	36	117	-	-	-
Below 0.63 Acre	62	215	17.3	0.08	0.28
0.63 to 1.0 Acre	67	267	42.8	0.16	0.63
1.0 to 2.5 Acre	98	407	145.8	0.35	1.48
2.5 to 5.0 Acre	22	117	70.8	0.60	3.21
5.0 to 10.0 Acre	14	89	98.7	1.11	7.05
Above 10 Acre	6	75	115.3	1.54	19.22
Total	305	128	490.7	0.38	1.61

Table – 5.3.3.2

Caste-wise Distribution of Landholdings in Different Size Groups in the Village Bargahan

Caste	Land-less	Below 0.63 Acre	0.63 to 1.0 Acre	1.0 to 2.5 Acre	2.5 to 5.0 Acre	5.0 to 10.0 Acre	Above 10 Acre	Total HHs.
Harijan	24	37	27	13	-	1	-	102
Rajbhar	4	4	11	42	10	-	1	72
Nai	3	-	-	-	-	-	-	3
Kahar	-	11	6	-	1	-	-	18
Lohar	1	-	-	-	-	-	-	1
Kashyap	-	2	2	6	-	-	-	10
Prajapati	-	-	-	2	-	-	-	2
Maurya	-	-	2	4	2	1	-	9
Yadav	-	-	3	14	4	2	-	23
Chauhan	3	5	4	8	1	-	-	21
Thakur	-	-	-	1	2	8	4	15

Brahmin	-	-	2	2	2	1	-	7
Muslim	1	3	10	6	-	1	1	22
Total	36	62	67	98	22	14	6	305
Percentage	11.80	20.33	21.96	32.13	7.21	4.59	1.97	100.0

5.3.4 Occupational Structure

The occupation-wise distribution of households showed that the main occupation of 100 out of 305 households i.e. 32.75 per cent was cultivation, while that of 132 households i.e. around 43.28 per cent households it was service.

The occupation of many households have also changed as a result of increasing pressure on land and non-availability of work in the village. The change in main occupation has taken place mainly among cultivators and wage labour. Out of 140 households whose main occupation was cultivation in the past, now 80 i.e. 57.14 per cent are continuing with it, 50 (i.e. 35.71 per cent) are engaged in service and 10 (i.e. 7.14 per cent) are engaged in other work. All of 60 households who have shifted to other occupations, continue to be engaged in cultivation as their supplementary occupation (See table 5.3.4.1).

Occupation wise distribution of workers in the village showed that out of 1079 workers 28.5 per cent were cultivators 34.3 per cent were agricultural labour, 7.0 per cent were other labourers, 20.8 per cent were in service and 9.5 per cent were engaged in other work. Gender wise distribution of occupation of workers showed that proportion of female workers was higher among cultivators, agricultural labourers, and other works. The proportion of males was higher in the category of service class. But proportion of females and males was almost similar higher among the category of non-agricultural, labourers (See table 5.3.4.2).

**Table – 5.3.4.1
Present and Past Occupations of Households in the Village Bargahan**

Past occupation		Present main occupation				Supplementary occupation			
Occupation	Total HHS.	Cultiva tor	Wage	Service	Other works	Cultiva tor	Wage	Shop	Others work
Cultivator	140	80	-	50	10	60	-	10	9
Wage	152	20	47	73	12	15	52	7	12
Service	8	-	-	8	-	8	-	-	-
Other work	5	-	-	1	4	1	-	3	-
Total	305	100	47	132	26	84	52	20	21

Table – 5.3.4.2

Caste and Gender-wise Distribution of Occupation of Workers in the Village Bargahan

Caste	Cultivator			Agricultural Lab.			Non-Ag. Labour			Service			Other Works		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
	Harijan	12	20	32	79	100	179	1	1	2	92	-	92	12	-
Rajbhar	41	45	86	29	37	66	21	11	32	42	-	42	30	14	44
Nai	-	-	-	-	4	4	-	-	-	1	-	1	4	-	4
Kahar	-	2	2	19	24	43	-	-	-	7	-	7	1	-	1
Lohar	-	-	-	-	-	-	3	2	5	-	-	-	-	-	-
Kashyap	7	8	15	-	-	-	6	2	8	1	-	1	1	4	5
Prajapati	2	1	3	-	-	-	-	-	-	3	-	3	-	2	2
Maurya	9	9	18	6	3	9	2	-	2	1	-	1	2	4	6
Yadav	28	40	68	-	-	-	-	-	-	9	-	9	4	-	4
Chauhan	10	13	23	10	11	21	11	8	19	7	-	7	1	1	2

Thakur	21	-	21	-	-	-	-	-	-	24	-	24	7	-	7
Brahmin	10	-	10	-	-	-	-	-	-	10	-	10	-	-	-
Muslim	10	19	29	22	26	48	3	5	8	27	-	27	10	5	15
Total	150	157	307	165	205	370	47	29	76	224	-	224	72	30	102
Percentage	22.8	37.3	28.5	25.1	48.7	34.3	7.1	6.9	7.0	34.1	-	20.8	10.9	7.1	9.5

5.3.5 Livestock

The animal population per household was not very large in the village (See table 5.3.5). It could be seen from the table that cows and buffaloes were the main income supporting animals in the village. If we work out the average number of cattles (that is cows and buffaloes taken together), average cattle owned was found to be 0.71 per household in the village.

Table – 5.3.5

Distribution of Animal in Different Categories of Landholding Size Groups Households in the Village Bargahan

Landholding size	Total HHs.	Cow	Buffalo	Calf	Other	Total
Land-less	36	15	2	19	26	62
Below 0.63 Acre	62	16	7	25	72	120
0.63 to 1.0 Acre	67	23	11	32	81	147
1.0 to 2.5 Acre	98	49	42	95	69	255
2.5 to 5.0 Acre	22	13	17	28	13	71
5.0 to 10.0 Acre	14	10	5	16	8	39
Above 10 Acre	6	7	-	6	1	14
Total	305	133	84	221	270	708

5.3.6 Housing Condition

There were 428 built houses owned by 305 households i.e. 123 households owned more than one house. These are generally those households who own a pucca house along with a kutchha /semi pucca houses. There is a tendency to shift to a pucca house whenever possible and then kutchha or semi pucca house is put to other uses or as storage. Out of 428 houses in the village 204 i.e. 47.66 per cent were kutchha houses, 186 i.e. 43.43 per cent were pucca houses, and 38 i.e. 8.88 per cent were semi pucca houses (See table 5.3.6).

Table – 5.3.6

Caste-wise Distribution of Housing Condition in the Village Bargahan

Caste	Housing Conditions			Total	Total HHs.
	Katchha	Pakka	Semi Pakka		
Harijan	70	52	-	122	102
Rajbhar	54	42	4	100	72
Nai	1	-	2	3	3
Kahar	7	10	5	22	18
Lohar	-	1	-	1	1
Kashyap	8	3	-	11	10
Prajapati	1	1	-	2	2
Maurya	7	1	1	9	9
Yadav	20	19	8	47	23
Chauhan	10	13	4	27	21

Thakur	12	15	5	32	15
Brahmin	5	7	3	15	7
Muslim	9	22	6	37	22
Total	204	186	38	428	305

(B) Responses of Selected Households in Village Bargahan

Twenty households in the village Bargahan were selected to elicit information about land use behaviour at household level. We selected only those households who owned some land.

5.3.7 Change in Size of Land Holding

The distribution of households on the basis of landholdings showed that 9 (i.e. 45 per cent) owned less than 2.5 acres of land and 5 owned between 2.5 to 5 acres of land. Thus 45 per cent farmers were marginal farmer and 30 per cent farmers owned more than 5.0 acres of land (**See table 5.2.7.1**).

In Bargahan, 11 out of 20 households reported that the size of landholdings changed during the last 20 years.

The reason of changes in the total land owned during the last 20 years in selected households showed that in 3 households (i.e. 30 per cent), division of family was the major cause, while in other cases changes took place due to multiple reasons (**See table 5.3.7.2**).

Table – 5.3.7.1
Caste and Landholding wise Distribution of Selected Households in Villages Bargahan

Caste	Below 0.63 Acre	0.63 to 1.0 Acre	1.0 to 2.5 Acre	2.5 to 5.0 Acre	5.0 to 10.0 Acre	Above 10 Acre	Total
Chamar	-	-	3	-	-	-	3
Yadav	-	-	1	1	-	-	2
Chauhan	-	-	1	-	-	-	1
Rajbhar	-	-	2	2	-	1	5
Kahar	-	-	-	1	-	-	1
Brahmin	-	-	-	1	1	-	2
Thakur	-	-	1	-	3	1	5
Muslims	-	1	-	-	-	-	1
Total	-	1	8	5	4	2	20
Percentage	-	5.0	40.0	25.0	20.0	10.0	100.00

Table – 5.3.7.2

Reason of Changes in Total Land Owned During the Last 20 years in Selected Households

Reason	Number	Percent
Division of family	3	15.0
Acquired & Division of family	2	10.0
Sold & Division of family	2	10.0
Sold & Acquired	2	10.0
Due to land distribution programme	2	10.0
Not applicable	9	40.0
Total Respondents	20	100.0

In Bargahan village, 2 (i.e. 10 per cent) households reported that their landholding increased during the last 20 years. The average change per reporting household was found to be 0.86 acres. They were landless households and received land under land distribution programme (**See table 5.3.7.3**).

The number of households who reported decrease in their landholdings was 9 (i.e. 45 per cent) of total sampled households, and the average change per reporting households was 6.71 acres which was a significant change (**See table 5.3.7.4**).

In Bargahan land of four selected households was acquired. The land was acquired by irrigation department. It was unirrigated land, and the size of land acquired was 4.85 acres (**See table 5.3.7.5**).

Table – 5.3.7.3

Number of Households Whose Landholding Increased

Number of HHs.	Land owned at present (in acre)	Land owned 20 years ago (in acre)	Change during 20 years (in acre)	Average change per reporting HHs. (in acre)
2	1.71	-	1.71	0.86

**Table – 5.3.7.4
Number of Households Whose Landholding Decreased**

Number of HHs.	Land owned at present (in acre)	Land owned 20 years ago (in acre)	Change during 20 years (in acre)	Average change per reporting HHs. (in acre)
9	66.08	116.43	60.35	6.71

Table – 5.3.7.5

Number of Households Whose Land was Acquired

Number of HHs.	Land owned at present (in acre)	Land acquired (in acre)	Types of land	Acquired by the Dept.	Purpose	Compensation
4	26.0	4.85	Unirrigated	Irrigation	Road and Canal	Yes

5.3.8 Conversion of Agricultural Land for Non-Agricultural Purposes

In Bargahan 10 out of 20 respondents (i.e. 50 per cent) reported that they had converted some of their agricultural land for non-agricultural purposes. Six of them reported that it was due to division in family and consequent need of more land for non-agricultural purposes. Two households suggested that the conversion of agricultural land for non-agricultural purposes was done to construct shed for animals and 3 other households suggested that conversion of agricultural land for non-agricultural purposes took place due to development of village **(See table 5.3.8.1)**.

It was also reported by respondents that reasons of conversion of agricultural land for non-agricultural purposes in the village was –

- (i) Division of family and consequent need of land for construction of houses;
- (ii) For animal husbandry;
- (iii) For development of village **(See table 5.3.8.2)**.

Respondents were also asked whether they had discontinued cultivation of any part of agricultural land owned by them. In village Bargahan, six respondents replied in affirmative, and the reason for 2 respondents was that, there was water logging/seepage in agricultural land, two respondent discontinued cultivation because their land was near usar land while two others discontinued cultivation due to dispute on the land **(See table 5.3.8.3)**.

Table 5.3.8.1
Reason of Conversion of Agricultural land for Non-agricultural Uses of Owned Land by Selected Households

Reason	Number	Percent
Division of family and need for construction of houses	6	30.0
Shed for animals	2	10.0
Development of village (canal & road)	3	15.0
Not applicable	10	50.0
Total Respondents	20	100.0

Table – 5.3.8.2
Reasons of Conversion of Agricultural Land for Non-agricultural Purposes in the Village (As Suggested by Respondents)

Reason	Number	Percent
Division of family for construction of houses	18	90.0
Animal husbandry	2	10.0
Development of village (canal & road)	5	25.0
Total Respondents	20	100.0

Table 5.3.8.3
Distribution of Respondents on the Basis of Responses to Query "Reasons for not cultivating the agriculture land"

Reasons	Number	Percent
Water logging/seepage	2	10.0
Low productivity/Usar land	2	10.0
Disputed land	2	10.0
Not applicable	14	70.0
Total Respondents	20	100.0

5.3.9 Land Reclamation

All villages have some land which is barren and uncultivable. We wanted to know villagers perception about the possible uses of barren land. Only 15 out of 20 respondents replied to our query that barren land could be put to which uses. The suggestions were: Barren land could be used for (a) construction of new houses and (b) for plantation and (c) for establishing industry and for ponds (**See table 5.3.9.1**).

Seven out of 20 respondents were aware about the government programmes to reclaim usar land (**See table 5.3.9.2**). However, eleven amongst the selected respondents benefited from it. Due to certain misgivings, people did not participate in the land reclamation programme. Therefore it was not a success in the village.

Table – 5.3.9.1

Distribution of Responses to the query "Barren land could be put to which uses"

Reason	Number	Percent
Construction of colony	3	15.0
For pond	2	10.0
School/Panchayat buildings	3	15.0
Plantation	4	20.0
Small industry	2	10.0
Not of any use	2	10.0
Do not know	2	10.0
No response	3	15.0
Total Respondents	20	100.0

Table – 5.3.9.2

Distribution of Responses to the question "Are you aware of the Government Programmes to reclaim Usar Land"

Responses	Number	Percent
Yes	17	85.0
No	1	5.0
No response	2	10.0
Total Respondents	20	100.0

Table – 5.3.9.3

Distribution of Responses to Query "Which Department Undertook the work of Reclamation of Usar Land"

Agency	Number	Percent
Usar Sudhar Nigam/Sudhar Nigam	11	55.0
Did not avail the benefit	9	45.0
Total Respondents	20	100.0

Table – 5.3.9.4

Distribution of Responses to the Query "Reasons for Not-availing the Facilities of Schemes for Land Reclamation"

Responses	Number	Percent
Don't need	4	20.0
Not approachable	2	10.0
Not applicable	3	15.0
Total Respondents	20	100.0

5.3.10 Water Harvesting

Water harvesting is a serious challenge at the village level. It has two aspects – one is water logging and the other is water conservation. The problem of water logging either due to floods or other reasons was reported in the village Bargahan. When asked, what measures could be adopted to avoid water logging due to rain water, 2 out of 20 (i.e. 10 per cent) respondents suggested that there was need to construct new nullah while 8 suggested for cleaning up of old nullah (**See table 5.3.10.1**).

As regards water conservation, when farmers were asked, what could be done to conserve rain water in the village, 12 (i.e. 60 per cent) suggested that old ponds be renovated, while 1 farmer suggested that new ponds should be constructed. Thus ponds are considered by most of the farmers as most suitable way to conserve rain water (**See table 5.3.10.2**).

Farmers were also asked as to what would be the potential use of water, if more water could be conserved in the village. Farmers suggested that it could be used for irrigation, for animals and for bathing/washing clothes etc. (**See table 5.3.10.3**).

Table – 5.3.10.1
Distribution of Responses to the Query "What measures could be adopted to avoid water logging due to rain water"

Reasons	Number	Percent
Drainage system link to pond	2	10.0
Cleaning of nullah	8	40.0
Construction of new nullah	2	10.0
Not applicable	10	50.0
Total Respondents	20	100.0

Table – 5.3.10.2
Distribution of Responses to the Query "What could be done to Conserve rain water in the village"

Reason	Number	Percent
Renovation of old Ponds	12	60.0
Construct new Ponds	1	5.0
Not Needed	8	40.0
Total Respondents	20	100.0

Table – 5.3.10.3
Distribution of Responses to Query "If more water could be conserved in the village then, it could be put to what uses?"

Responses	Number	Percent
Irrigation	12	60.0
For animal	10	50.0
Fisheries	3	15.0
Bathing/Washing	4	20.0
No response	2	10.0
Total Respondents	20	100.0

We also enquired about the present status/use of those ponds, which have totally or partially disappeared. It was reported by respondents that such land had been encroached upon, and/or is being used as grazing land (**See table 5.3.10.4**).

When asked what efforts should be made to renovate/revive those ponds, farmers said that desiltation and removal of encroachments were necessary for renovation of ponds (**See table 5.3.10.5**).

We also enquired from farmers as to what benefits would accrue if ponds could be revived. Villagers expected various benefits if disappeared ponds could be renovated/revived. The water thus available then could be used for irrigation, for cattle etc. (**See table 5.3.10.6**).

The present use of ponds showed an encouraging sign. As it was used for irrigation for cattle, and for agriculture (**See table 5.3.10.7**).

Table – 5.3.10.4
Distribution of Responses to the Query "What is the present use of land of those ponds, which have totally or partially disappeared"

Reason	Number	Percent
Encroachment	14	70.0
Grazing by animals	3	15.0
No response	1	5.0
Not applicable	4	20.0
Total Respondents	20	100.0

Table – 5.3.10.5

Distribution of Responses to the Query "What efforts could be made for revival of ponds"

Reason	Number	Percent
Renovation/Cleaning of pond	17	65.0
Raise bunding	2	10.0
Remove the encroachment	4	20.0
Not applicable	4	20.0
Total Respondents	20	100.0

Table – 5.3.10.6
Distribution of Responses to query "In what way the revival of Ponds will help villagers"

Reason	Number	Percent
Irrigation	16	80.0
For Cattle use	7	35.0
Fire extinction	2	10.0
Fisheries	2	10.0
Total respondents	20	100.0

Table 5.3.10.7
Distribution of Responses to query "What is the Present Use of Existing Ponds"

Reason	Number	Percent
Irrigation	2	10.0
For cattle use	5	25.0
Fisheries	1	5.0
Agriculture	2	10.0
Not of any use	12	60.0
Total Respondents	20	100.0

5.3.11 Orchards

Farmers were also asked whether the area under orchards has increased or decreased. Nineteen (i.e. 95 per cent) farmers suggested that it has decreased, while only one i.e. 5 per cent reported increase in area under orchards (**See table 5.3.11.1**).

The main reason for decrease of orchards according to farmers were waterlogging and need for agricultural land (**See table 5.3.11.2**).

The reason for increase in the area under orchards, and/or coming up of new orchards was mentioned by one farmer only. He attributed it to tendency for commercial groves (See table 5.3.11.3).

Table – 5.3.11.1
Distribution of Responses to query "Whether the area under orchards has increased/decreased"

Response	Number	Percent
Increased	1	5.0
Decreased	19	95.0
Total Respondents	20	100.0

Table – 5.3.11.2
Distribution of Perception of Respondent about Reason of Decrease of Orchard

Reasons	Number	Percent
Low quality of land	2	10.0
Water logging/seepage	10	50.0
Pollution	2	10.0
Need for agricultural land	8	40.0
Not applicable	1	5.0
Total Respondents	20	100.0

Table – 5.3.11.3
Perception of Respondent about Reason of Increase of Orchard

Reason	Number	Percent
Tendency for commercial groves	1	5.0
Not applicable	19	95.0
Total Respondents	20	100.0

When asked that why the potential of growth of orchards was low in the village, 9 (i.e. 45 per cent) farmers suggested that it was so because more land was needed for agricultural purposes while 8 attributed it to waterlogging (See table 5.3.11.4).

The scope for developing new orchards in the village seemed to be very limited as most of reporting farmers felt that new orchards could be developed on agricultural land while some suggested that barren land or road side land could be used for the purpose (See table 5.3.11.5).

When asked, what kind of facilities would be required to increase area under orchard, 25 per cent farmers suggested for economic assistance, 10 per cent farmers suggested that high yielding variety plants be given for the purpose while protection of trees was considered as an important factor by 15 per cent farmers. Twenty percent farmers suggested that gram sabha land be made available for the purpose (See table 5.3.11.6).

Table – 5.3.11.4
Distribution of Responses to query "Why the potential of growth of orchards is low"

Reason	Number	Percent
More land needed for agriculture	9	45.0
Waterlogging/Seepage from canal	8	40.0
Pollution	2	10.0
No response	1	5.0
Total Respondents	20	100.0

Table – 5.3.11.5
Distribution of Responses to query "On which type of land area under orchards could be increased"

Type of Land	Number	Percent
Agricultural land	7	35.0
G.S. Land	3	15.0
Road side and around hamlet	4	20.0
All type land	5	25.0
No response	2	10.0
Total Respondents	20	100.0

Table – 5.3.11.6
Distribution of Responses to query "What kind of facilities would be required to increase area under orchard"

Reason	Number	Percent
Awareness campaign	6	30.0
H.Y.V. plants be given	2	10.0
Protection of tree	3	15.0
Economic assistance	5	25.0
G. S. Land be made available for the purpose	4	20.0
No response	2	10.0
Total Respondents	20	100.0

5.3.12 Livestock

In Bargahan, 13 out of 20 selected respondents reported that size of their livestock has decreased, while 3 reported increase in the livestock.

The main reason suggested for decrease in livestock by respondents was increasing use of tractors, other reasons mentioned by them included scarcity of fodder and grazing, there was no one in the family to look after livestock and low income (**See table 5.3.12.1**).

Out of the three respondents who reported increase in number of cattles, two said that they increased cattle to meet family needs while one wanted to increase income (**See table 5.3.12.2**).

When asked that number of which type of livestock has decreased; the respondents reported that number of mainly two types namely bovine and bullocks had decreased (**See table 5.3.12.3**).

The overwhelming majority of respondents suggested that their economic condition would improve if they increase bovine cattle (**See table 5.3.12.4**).

The main constraints in increasing livestock were: economic constraint, scarcity of manpower to look after livestock, and scarcity of fodder/grazing land, (**See table 5.3.12.5**).

Table – 5.3.12.1
Distribution of Responses to query "Reasons for decrease in livestock"

Reason	Number	Percent
Low income	2	10.0
Scarcity of fodder/Grazing land	1	5.0
Scarcity of manpower	3	15.0
Death	2	10.0
Now use tractors	12	60.0
Not applicable (3 increased + 4 constant)	7	35.0
Total Respondents	20	100.0

Table – 5.3.12.2
Distribution of Responses to query "Reasons for increase in livestock"

Reason	Number
Need for family	2
Increased income	1
NA (13 dec. + 4 constant)	17
Total respondents	20

Table – 5.3.12.3
Distribution of Responses to query "Number of which type of livestock has decreased"

Type of Cattles	Number
Bovine	7
Bullock	9
No applicable	7
Total Respondents	20

Table – 5.3.12.4
Distribution of Responses to query "What type of livestock will improve your economic condition"

Types of Cattle	Number
Bovine	19
Goat	2
Total Respondents	20

Table – 5.3.12.5
Distribution of Responses to query "What are the main constraints in increasing livestock"

Reason	Number
Economic constraint	12
Scarcity of manpower	8
Scarcity of fodder/grazing land	4
Illness of animals	2
Total Respondents	20

5.3.13 Agriculture

The main crops grown in the village Bargahan were wheat and paddy and sugarcane. The average production of wheat and paddy was 10.5 Qt./acre and 10.0 Qt./acre respectively (**See table 5.13.1**).

All 20 selected farmers reported that productivity in their farms was lower than other farms. The main reasons for lower productivity were: low productivity of land, scarcity of manpower and inability to look after farming, scarcity of resources and lower use of fertilizer, pesticide, compost etc. (**See table 5.3.13.2**).

Farmers were also asked about the main constraints in better utilization of agricultural land. The constraints suggested included low productivity of land, water logging, economic constraint, low irrigation and scarcity of resources etc. (**See table 5.3.13.3**).

**Table – 5.3.13.1
Cropping Pattern of Selected Household, Average Production and Use of Fertilizer**

Crops	N e t s o w n a r e a (in acre)	Production (in Qt./Acre)	Compost (per acre)	DAP (in kg./acre)	Urea (in kg./acre)	Potas (in kg./acre)	Pesticide (Rs./Acre)
Wheat	52.5	10.5	1 Trolley	45.0	45.0	30.0	-
Paddy	53.2	10.0	-	40.0	40.0	-	350.00
Potato	4.71	60.0	1.2 Trolley	133.0	90.0	-	-
Peas	3.30	6.5	-	30.0	-	-	-
Gram	2.15	7.0	-	25.0	-	-	-
Sugarcane	13.86	200.0	-	100.0	90.0	60.0	300.00
Arhar	9.43	6.2	-	30.0	-	-	-
Bajra	3.86	5.5	-	-	25.0	-	-

**Table – 5.3.13.2
Distribution of Responses to query "Reason for lower productivity of respondents farm from other farms"**

Reason	Number	Percent
Low use of fertilizer/pesticide/compost etc.	3	15.0
Low Irrigation	2	10.0
Scarcity of resources	3	15.0
Low productivity of soil	12	60.0

Scarcity of manpower and inability to look after farming	4	20.0
Small size of land and long distance	1	5.0
Economic constraint	2	10.0
Total Respondents	20	100.0

Table – 5.3.13.3

Distribution of Responses to query "What are the main constraints in better utilisation of agricultural land"

Constraints	Number	Percent
Scarcity of manpower	1	5.0
Irrigation	1	5.0
Economic constraint	2	10.0
Scarcity of resources	2	10.0
Water logging/seepage	8	40.0
Low productivity of soil	16	80.0
Pollution	2	10.0
Total Respondents	20	100.0

Various suggestions made by farmers to remove these constraints included soil testing, cleansing of drainage system, HYV seeds be made available, power supply be increased, economic assistance should be provided, and irrigation facility be increased (**See table 5.3.13.4**).

Tenancy: None of the selected farmers leased-out land, nor any selected farmer reported that he leased-in land.

Table – 5.3.13.4

Distribution of Responses to query "How above mentioned constraints could be removed"

Measures	Number	Percent
Increase irrigation facility	3	15.0
Economic/Credit assistance	2	10.0
Soil testing	10	50.0
drainage system linked to pond	3	15.0
Increase power supply	5	25.0
Disease resistant	2	10.0
Total Respondents	20	100.0

(C) Land Use Plan for Bargahan Village

The major problem of the village is that a large part of land is unusable. The other problem is related to waterlogging. A canal passes through the village and seepage in the canal causes waterlogging. Secondly height of the road on the northern side of village has been raised several times in the past. The height of the road on the western side of the village has also been raised by digging fields. The drainage of water has been obstructed. There was a nullah on the other side of the road, which has largely been encroached upon by people and a very narrow passage now remains.

There are many ponds in the village which have been encroached upon.

Some plantation work was done under social forestry, plants had been eaten by animals.

The programme of land reclamation did not succeed in the village due to lack of people's participation.

There is need to revive ponds, construct a drainage passage in the village and launch land reclamation programme again with participation of people.

Besides above suggestions following steps could be taken to regulate land use in the village:

- (i) Land Management Committee be reconstituted with representations of all sections and entrusted with specific responsibilities related to land use in the village.
- (ii) After consolidation, conversion of agricultural land for non-agricultural purposes is prohibited. Those who have violated this norm should be penalized. A fine based on current value of land and house be imposed.
- (iii) Building tax should be collected every year from those farmers who have constructed any house/building on farm land.
- (iv) Stringent action should be taken against those who have encroached upon pond of the village. They should be debarred from getting benefit of any government scheme and also debarred from contesting any elections.
- (v) Desiltation of drainage course should be done regularly.

Village Study – IV

Village – Madanpur (Block – Thekma)

(A) Village Profile

Madanpur village is located at a distance of 8 kilometers from the block headquarter of Thekma. A minor canal passes through the village, which is linked to a *tal* which in turn is linked with Besov river. When Besav river overflows, the drainage system works in the reverse direction and large area gets waterlogged. The level of minor is higher when it reaches outside village. This again causes waterlogging in the village.

Some of the land in the village is usar land.

5.4.1 Land Use Pattern

Village Madanpur is a small village with 73 hectares of total reporting area. In village Madanpur land use pattern shows that 73.97 per cent of total reporting area was net sown area with around 85 per cent irrigated area. Another important feature was that the land under current fallow was 12.33 per cent and the land under the water bodies was 4.11 per cent (**See table 5.4.1**).

Table – 5.4.1

Land Use Pattern in the Madanpur Village of the Azamgarh District

Land Use Categories	In hectare	In percent
Total reporting area	73	100.0
Water bodies	3	4.11
Habitation	3	4.11
Pasture	1	1.37
Banjar	1	1.37
Culturable waste	2	2.74
Current fallow	9	12.33
Net sown area	54	73.97
(a) Irrigated	48	88.89
(b) Un-irrigated	6	11.11
Area sown more than once	46	
(a) Irrigated	6	
(b) Un-irrigated	40	

Source: Revenue department.

5.4.2 Demographic Profile

The average family size was 9.4 in the village. The population in the working age group i.e. in the age group (14-60) years comprised around 58.74 per cent of total population. That is around 41.0 per cent persons constituted dependents in the family. The village also shows adverse sex ratio. This is evident from the fact that the number of female population per thousand male population was 947.37 (See table 5.4.2.1).

The literacy rate was 72.6 per cent. It could also be seen from table 5.4.2.2 that number of illiterates was much higher among females (39.3 per cent) than among males (16.1 per cent). On the other hand in each category of education group above high school the number of males was much higher than females.

Table – 5.4.2.1
Caste and Gender-wise Distribution of Population in the Village Madanpur

P a r t i c u l a r s	Gender	Kahar	Nai	Pal	Maurya	Yadav	Bhumiha r	Muslims	Total
	Total population	Male	27	30	31	34	75	30	58
	Female	21	35	19	36	78	26	55	270
	Total	48	65	50	70	153	56	113	555
Below 5 year population	Male	4	8	5	3	15	5	14	54
	Female	2	7	-	6	16	-	11	42
	Total	6	15	5	9	31	5	25	96
5 to 14 year population	Male	4	5	8	10	13	6	13	59
	Female	3	12	4	9	15	4	20	67
	Total	7	17	12	19	28	10	33	126
14 to 60 year population	Male	19	17	17	21	46	18	31	169
	Female	16	16	13	21	46	21	24	157
	Total	35	33	30	42	92	39	55	326
Above 60 year population	Male	-	-	1	-	1	1	-	3
	Female	-	-	2	-	1	1	-	4
	Total	-	-	3	-	2	2	-	7
Family size		6.8	16.2	7.1	7.8	10.2	8.0	11.3	9.4

Table – 5.4.2.2

Caste and Gender-wise Distribution of Education in the Village Madanpur

<i>P</i> <i>a</i> <i>r</i> <i>t</i> <i>i</i> <i>c</i> <i>u</i> <i>l</i> <i>a</i> <i>r</i> <i>s</i>		Kahar	Nai	Pal	Maurya	Yadav	Bhumi har	Muslim s	Total	%age
	Graduation and above	Male	3	2	3	-	8	5	-	21
Female		-	-	-	-	-	-	-	-	-
Total		3	2	3	-	8	5	-	21	3.8
Intermediate and high school	Male	4	5	6	3	17	11	1	47	16.5
	Female	-	2	2	-	9	12	-	25	9.3
	Total	4	7	8	3	26	23	1	72	13.0
Below high school	Male	7	12	13	17	26	8	25	108	37.9
	Female	3	16	6	10	23	7	21	86	31.9
	Total	10	28	19	27	49	15	46	194	35.0
Illiterate	Male	9	3	4	7	6	-	17	46	16.1
	Female	16	10	11	19	26	1	23	106	39.3
	Total	25	13	15	26	32	1	40	152	27.4

5.4.3 Land Ownership

In Madanpur, the average size of landholding per family was 2.61 acres and per adult person only 0.44 acres (See table 5.4.3.1). The low size of land holdings per adult person also indicates that the land available for cultivation was not enough to engage all the adults in agriculture for full time work. The pressure of land has therefore forced many others to search for jobs outside agriculture. The fact that per adult person land was around 0.40 acres in even the landholding group (2.5-5.0) acres, shows that in future population pressure on land would be tremendous in all size groups. The village is thus moving towards a situation in which it will be dominated by landless, near landless and marginal farmer households who already constitute 61.0 per cent of all households in the village. The distribution of caste in the village population showed that there were six major castes. These were Yadavas, Muslims, Maurya, Bhumihar, Pal and Kahar. Only Bhumihars and Yadavas owned more than 5.0 acres of land (See table 5.4.3.2).

Table – 5.4.3.1
Distribution of Per Family/Per Adult Size of Landholdings in Different Size Groups in the Village Madanpur

Landholding size	Total households	Total adult pop. (>14 year)	Total land	Average landholding (Per adult person)	Average landholding (Per family)
Land-less	5	30	-	-	-
Below 0.63 Acre	8	45	2.6	0.05	0.32
0.63 to 1.0 Acre	9	33	5.7	0.17	0.63
1.0 to 2.5 Acre	14	79	17.7	0.22	1.26
2.5 to 5.0 Acre	11	85	34.8	0.40	3.16
5.0 to 10.0 Acre	10	57	63.3	1.11	6.33
Above 10 Acre	2	18	30.0	1.66	15.0
Total	59	347	154.1	0.44	2.61

Table – 5.4.3.2

Caste-wise Distribution of Landholdings in Different Size Groups in the Village Madanpur

Landholding size	Kahar	Nai	Pal	Maurya	Yadav	Bhumihar	Muslims	Total	%age
Land-less	-	3	-	1	-	-	1	5	8.5
Below 0.63 Acre	2	1	-	3	-	-	2	8	13.6
0.63 to 1.0 Acre	1	-	2	3	-	-	3	9	15.3
1.0 to 2.5 Acre	4	-	3	1	2	-	4	14	23.7
2.5 to 5.0 Acre	-	-	2	1	8	-	-	11	18.6
5.0 to 10.0 Acre	-	-	-	-	5	5	-	10	16.9
Above 10 Acre	-	-	-	-	-	2	-	2	3.4
Total	7	4	7	9	15	7	10	59	100.0

5.4.4

Occupational Structure

The occupation-wise distribution of households showed that the main occupation of 15 out of 59 households was cultivation, while that of 33 households i.e. around 56 per cent households it was service. The occupation of many households have also changed as a result of increasing pressure on land and non-availability of work in the village. The change in occupation has taken place due to spread of education. The change in main occupation has also taken place mainly among cultivators. Out of 46 households whose main occupation was cultivation in the past, now only 13 i.e. 28.26 per cent are continuing with it, while 25 (i.e. 54.35 per cent) are engaged in service and 8 (i.e. 17.39 per cent) are engaged in wage work. Interestingly among the 33 households who have shifted to other occupations, 32 still continue to maintain farming as their supplementary occupation. Similarly some of those households who continue cultivation as their main occupation are also engaged in supplementary occupations (**See table 5.4.4.1**).

Occupation wise distribution of workers in the village showed that out of 155 workers 139 were males and only 16 were females showing that participation of females in work force was very low. It could also be seen from the table that out of 155 workers 80 i.e. 51.6 per cent were cultivators 105 i.e. 3.2 per cent were agricultural labourers, 55 i.e. 39.6 per cent were in service and 13 i.e. 8.4 per cent were engaged in other work (**See table 5.4.4.2**).

**Table – 5.4.4.1
Present and Past Occupations of Households in the Village Madanpur**

Past occupation		Present main occupation				Supplementary occupation			
Occupation	Total HHs.	Cultiva tor	Wage	Servic e	Other works	Cultiva tor	Wage	Shop	Other work
Cultivator	46	13	-	25	8	32	-	6	1
Wage	4	2	2	-	-	-	2	1	-
Service	3	-	-	3	-	3	-	-	-
Other work	6	-	2	2	2	2	4	-	-
Total	59	15	4	33	10	37	6	7	1

**Table – 5.4.4.2
Caste and Gender-wise Distribution of Occupation of Workers in the Village Madanpur**

Particulars	Gender	Kahar	Nai	Pal	Maurya	Yadav	Bhumi har	Muslim s	Total	%age
Cultivator	Male	12	1	5	4	24	11	10	67	48.2
	Female	6	1	-	6	-	-	-	13	81.3
	Total	18	2	5	10	24	11	10	80	51.6
Agricultural Labour	Male	-	1	-	1	-	-	-	2	1.4
	Female	-	1	-	2	-	-	-	3	18.8
	Total	-	2	-	3	-	-	-	5	3.2
Labour	Male	-	-	-	-	-	-	2	2	1.4
	Female	-	-	-	-	-	-	-	-	-
	Total	-	-	-	-	-	-	2	2	1.3
Service	Male	5	3	1	11	17	6	12	55	39.6
	Female	-	-	-	-	-	-	-	-	-
	Total	5	3	1	11	17	6	12	55	35.5
Others work	Male	-	-	4	5	-	1	3	13	9.4
	Female	-	-	-	-	-	-	-	-	-
	Total	-	-	4	5	-	1	3	13	8.4

5.4.5 Livestock

The animal population per household was not very small in the village (**See table 5.4.5**). Cows and buffaloes were the main income supporting animals in the village. If we work out the average number of cattles (that is cows and buffaloes taken together), average cattle owned was found to be 1.31 per household in the village. Villagers also owned other animals.

**Table – 5.4.5
Distribution of Animal in Different Categories of Landholding Size Groups Households in the Village Madanpur**

Landholding size	Total HHs.	Cow	Buffalo	Calf	Other	Total
Land-less	5	-	-	-	-	-
Below 0.63 Acre	8	3	4	5	4	16
0.63 to 1.0 Acre	9	7	3	8	2	20
1.0 to 2.5 Acre	14	11	4	12	10	37
2.5 to 5.0 Acre	11	10	10	17	13	50
5.0 to 10.0 Acre	10	8	11	16	4	39
Above 10 Acre	2	3	3	8	-	14
Total	59	42	35	66	33	176

5.4.6 Housing Condition

There were 76 built houses owned by 59 households i.e. 17 households owned more than one house. These are generally those households who own a pucca house along with a kutcha /semi pucca houses. There is a tendency to shift to a pucca house whenever possible and then kutcha or semi pucca house are put to other uses or as storage. Out of 176 houses in the village 27 i.e. 35.53 per cent were kutcha houses, 43 i.e. 56.58 per cent were pucca houses, and 6 i.e. 7.89 per cent were semi pucca houses (**See table 5.4.6**).

**Table – 5.4.6
Caste-wise Distribution of Housing Condition in the Village Madanpur**

Housing condition	Kahar	Nai	Pal	Maurya	Yadav	Bhumi har	Muslims	Total
Katcha	1	1	-	3	10	7	5	27
Pakka	5	3	5	8	11	7	4	43
Semi Pakka	-	1	2	-	-	3	-	6
Total	6	5	7	11	21	17	9	76
Total HHs.	7	4	7	9	15	7	10	59

(B) Responses of Selected Households in Village Madanpur

Twenty households in the village Madanpur were selected to elicit information about land use behaviour at household level. We selected only those households who owned some land.

5.4.7 Change in Size of Land Holding

The distribution of households on the basis of landholdings showed that 12 (i.e. 60 per cent) were marginal farmers, 2 were small farmers and 5 belonged to the category of semi medium farmers (See table 5.2.7.1).

In Madanpur, out of 20 households 10 reported that the size of landholdings changed during the last 20 years.

The reason of changes in the total land owned during the last 20 years in selected households showed that in 7 households (i.e. 35 per cent), division of family was the major cause, One household purchased land while only 2 (i.e. 10 per cent) reportedly received land under land distribution programme (See table 5.4.7.2).

Table – 5.4.7.1
Caste and Landholding wise Distribution of Selected Households in Villages Madanpur

Caste	Below 0.63 Acre	0.63 to 1.0 Acre	1.0 to 2.5 Acre	2.5 to 5.0 Acre	5.0 to 10.0 Acre	Above 10 Acre	Total
Yadav	-	-	1	-	3	-	4
Pal	-	-	1	1	-	-	2
Kushwaha	-	1	1	1	-	-	3
Kahar	-	1	2	-	-	-	3
Bhumihar	-	-	-	-	2	1	3
Muslims	-	1	4	-	-	-	5
Total	-	3	9	2	5	1	20
Percentage	-	15.0	45.0	10.0	25.0	5.0	100.0

Table – 5.4.7.2

Reason of Changes in Total Land Owned During the Last 20 years in Selected Households

Reason	Number	Percent
Division of family	7	35.0
Purchased	1	5.0
Land distribution	2	10.0
Not applicable	10	50.0
Total Respondents	20	100.0

In Madanpur village, 3 (i.e. 30 per cent) households reported that their landholding increased during the last 20 years. The average change per reporting household was found to be 0.7 acres (**See table 5.4.7.3**).

The number of households who reported decrease in their landholdings was 7 (i.e. 35 per cent) of total sampled households, and the average change per reporting household was 4.1 acres (**See table 5.4.7.4**).

Table – 5.4.7.3

Number of Households Whose Landholding Increased

Number of HHs.	Land owned at present (in acre)	Land owned 20 years ago (in acre)	Change during 20 years (in acre)	Average change per reporting HHs. (in acre)
3	10.68	8.57	2.11	0.70

Table – 5.4.7.4
Number of Households Whose Landholding Decrease

Number of HHs.	Land owned at present (in acre)	Land owned 20 years ago (in acre)	Change during 20 years (in acre)	Average change per reporting HHs. (in acre)
7	20.71	49.43	28.72	4.10

5.4.8 Conversion of Agricultural Land for Non-Agricultural Purposes

In Madanpur 7 out of 20 respondents (i.e. 37 per cent) reported that some part of their agricultural land had been converted for non-agricultural purposes. All the seven of them reported that it was due to division in family and consequent need of more land for non-agricultural purposes (See table 5.4.8.1).

It was also reported by respondents that reasons of conversion of agricultural land for non-agricultural purposes in the village was – division of family and consequent need of land for construction of houses, development of village and for animal husbandry (See table 5.4.8.2).

The respondents were also asked whether they had discontinued cultivation of any part of agricultural land owned by them. In village Madanpur, only five respondents replied in affirmative. Multiple reasons were given by them for it. The main reasons were preoccupation in other work, land being usar and litigation (See table 5.4.8.3).

Table – 5.4.8.1
Reason of Conversion of Agricultural land for Non-agricultural Uses of Owned Land by Selected Households

Reason	Number	Percent
Division of family for construction of houses	7	35.0
Not applicable	13	65.0
Total Respondents	20	100.0

Table – 5.4.8.2
Reasons of Conversion of Agricultural Land for Non-agricultural Purposes in the Village (As Suggested by Respondents)

Reason	Number	Percent
Division of family for construction of houses	16	80.0
Development of village	4	20.0
Animal husbandry	3	15.0
No response	1	5.0
Total Respondents	20	100.0

Table 5.4.8.3
Distribution of Respondents on the Basis of Responses to Query "Reasons for not cultivating the agriculture land"

Reasons	Number	Percent
Disputed land	2	10.0
Low productivity land/Usar land	1	5.0
Engaged in other works	2	10.0
Not applicable	15	75.0
Total Respondents	20	100.0

5.4.9 Land Reclamation

All villages have some land which is barren and uncultivable. We wanted to know villagers perception about the possible uses of barren land. Only 15 out of 20 respondents replied to our query that barren land could be put to which uses. The suggestions were: Barren land could be used for ((i) construction of houses; and buildings (ii) construction of new ponds and tanks for fisheries (iii) for plantation, and for (iv) industries (**See table 5.4.9.1**).

All the 20 respondents were aware about the government programmes to reclaim usar land (**See table 5.4.9.2**). However only six benefitted from such scheme. Reason for not availing the facility of land reclamation programme were either it was not needed or it became they could not approach to concerned functionaries.

Table – 5.4.9.1

Distribution of Responses to the query “Barren land could be put to which uses”

Reason	Number	Percent
Construction of House/Colony	4	20.0
Small industry	3	15.0
Construction of School/Panchayat Bhawan	2	10.0
Plantation	4	20.0
Construction of new ponds/fisheries	2	10.0
No response	5	25.0
Total Respondents	20	100.0

Table – 5.4.9.2

Distribution of Responses to the question "Are you aware of the Government Programmes to recalme Usar Land"

Responses	Number	Percent
Yes	20	100.0
Total Respondents	20	100.0

Table – 5.4.9.3

Distribution of Responses to Query "Which Department Undertook the work of Reclamation of Usar Land"

Agency	Number	Percent
Usar Sudhar Nigam/Sudhar Nigam	6	30.0
Not applicable	14	70.0
Total Respondents	20	100.0

Table – 5.4.9.4

Distribution of Responses to the Query "Reasons for Not-availing the Facilities of Schemes for Land Reclamation"

Responses	Number	Percent
Don't need	6	30.0
Not approachable	5	25.0
No response	3	15.0
Not applicable	6	30.0
Total Respondents	20	100.0

5.4.10 Water Harvesting

Water harvesting is a serious challenge at the village level. It has two aspects one is water logging and the other is water conservation. The problem of water logging either due to floods or other reasons was reported in Madanpur. When asked, what measures could be adopted to avoid water logging due to rain water, 5 out of 20 (i.e. 25 per cent) respondents suggested drainage system should be linked with ponds while all the 14 suggested cleansing of drainage system (**See table 5.4.10.1**).

As regards water conservation, when farmers were asked, what could be done to conserve rain water in the village, 11 (i.e. 55 per cent) suggested that old ponds be renovated. Thus ponds are considered by most of the farmers as most suitable way to conserve rain water (**See table 5.4.10.2**).

Farmers were also questioned about the potential use if more water could be conserved in the village. Farmers suggested that if more water could be conserved in the village, then it could be used for irrigation, for animals, for fisheries and for bathing/washing clothes etc. (**See table 5.4.10.3**).

Table – 5.4.10.1
Distribution of Responses to the Query "What measures could be adopted to avoid water logging due to rain water"

Reasons	Number	Percent
Drainage system linked to pond	5	25.0
Cleaning of nullah	14	70.0
No Response	6	30.0
Total Respondents	20	100.0

Table – 5.4.10.2
Distribution of Responses to the Query "What could be done to Conserve rain water in the village"

Reason	Number	Percent
Renovation of old Ponds	8	40.0
Renovation of old ponds & link with drainagesystem	3	15.0
Not needed	9	45.0
Total Respondents	20	100.0

Table – 5.4.10.3
Distribution of Responses to Query "If more water could be conserved in the village then, it could be put to what uses?"

Responses	Number	Percent
Irrigation	8	40.0
For animal	3	15.0
Fisheries	4	20.0
Bathing/Washing	5	25.0
Not of any use	4	20.0
Total Respondents	20	100.0

We also enquired about the present status/use of those ponds, which have totally or partially disappeared. It was reported by respondents that such land had been encroached upon, and some part is also being used for agricultural purposes and as grazing land (See table 5.4.10.4).

When asked what efforts should be made to renovate/revive those ponds, farmers said that desiltation, and removal of encroachments were necessary for renovation of ponds (See table 5.4.10.5).

Villagers expected various benefits if disappeared ponds could be renovated/revived. The water thus available then could be used for irrigation, for cattle, for fisheries, for domestic use and it would help in managing water logging (See table 5.4.10.6).

The present use of ponds showed that it was used for cattle, for irrigation and was used for domestic purposes while 10 reported that it was unusable (See table 5.4.10.7).

Table – 5.4.10.4
Distribution of Responses to the Query "What is the present use of land of those ponds, which have totally or partially disappeared"

Reason	Number	Percent
Grazing land	2	10.0
Encroachment	15	75.0
Agriculture	3	15.0
No response	2	10.0
Total Respondents	20	100.0

Table – 5.4.10.5
Distribution of Responses to the Query "What efforts could be made for revival of ponds"

Reason	Number
Renovation of old pond	17
Remove encroachments	8
Total Respondents	20

Table – 5.4.10.6
Distribution of Responses to query "In what way the revival of Ponds will help villagers"

Reason	Number
Irrigation	9
For Cattle use	11
Fisheries	5
Manage water logging	4
Domestic use	3
Total Respondents	20

Table 5.4.10.7
Distribution of Responses to query "What is the Present Use of Existing Ponds"

Reason	Number	Percent
For irrigation	5	25.0
For cattle use	9	45.0
Domestic use	2	10.0
Unusable	10	50.0
Total Respondents	20	100.0

5.4.11 Orchards

Farmers were also asked whether the area under orchards has increased or decreased. Twelve (i.e. 60 per cent) farmers suggested that it has decreased, while only 3 farmers reported increase in area under orchards (**See table 5.4.11.1**).

The main reason for decrease of orchards according to farmers were need for agricultural land, water logging and increase in felling of trees (**See table 5.4.11.2**).

The reason for increase in the area under orchards, and/or coming up of new orchards was mentioned by three farmers only. Two of them suggested that non-fruit trees were being planted while one told that he wanted to develop it as a commercially viable orchard (**See table 5.4.11.3**).

Table – 5.4.11.1
Distribution of Responses to query "Whether the area under orchards has increased/decreased"

Response	Number	Percent
Increased	3	15.0
Decreased	12	60.0
Constant	5	25.0
Total Respondents	20	100.0

Table – 5.4.11.2
Distribution of Perception of Respondent about Reason of Decrease of Orchard

Reasons	Number	Percent
Old tree felling increased	2	10.0
New orchards not coming	2	10.0
Water logging/seepage of canal	4	20.0
Need for Agricultural Land	9	45.0
No response	1	5.0
Not applicable	8	40.0
Total Respondents	20	100.0

Table – 5.4.11.3
Perception of Respondent about Reason of Increase of Orchard

Reason	Number	Percent
Non-fruit tree are being planted	2	10.0
Tendency for commercial groves	1	5.0
Not applicable	17	85.0
Total Respondents	20	100.0

When asked that why the potential of growth of orchards was low in the village, 15 (i.e. 75 per cent) farmers suggested that it was so because more land was needed for agriculture and 4 attributed to its long gestation period (**See table 5.4.11.4**).

The scope for developing new orchards in the village seemed to be very limited as majority most of the farmers felt that new orchards could be developed on agricultural land (**See table 5.4.11.5**).

When asked, what kind of facilities would be required to increase area under orchard, four farmers suggested that gram sabha land be made available for the purpose, while five others suggested that high yielding variety plants be given for the purpose. Development of water drainage system, economic assistance for the purpose and protection of trees were the other suggestions made by farmers (**See table 5.4.11.6**).

Table – 5.4.11.4
Distribution of Responses to query "Why the potential of growth of orchards is low"

Reason	Number	Percent
More land needed for agriculture	15	75.0
Tendency declined	2	10.0
Long gestation period	4	20.0
Total Respondents	20	100.0

Table – 5.4.11.5
Distribution of Responses to query "On which type of land area under orchards could be increased"

Type of Land	Number	Percent
Agricultural land	12	60.0
G. S. Land	3	15.0
Road/pond side and around hamlet	3	15.0
All type land	4	20.0
Total Respondents	20	100.0

Table – 5.4.11.6
Distribution of Responses to query "What kind of facilities would be required to increase area under orchard"

Reason	Number	Percent
G.S. land be made available for the purpose	4	20.0
H.Y.V. plants be given	5	25.0
Economic assistance	3	15.0
System of water drainage be developed	2	10.0
Protection for tree	3	15.0
No response	4	20.0
Total Respondents	20	100.0

5.4.12 Livestock

In Madanpur, 16 out of 20 selected respondents reported that size of their livestock has decreased, while 7 reported increase in the livestock.

The main reasons suggested for decrease in livestock by respondents were increasing use of tractors, low income, scarcity of fodder and grazing land and also because, there was no one in the family to look after livestock (**See table 5.4.12.1**).

Out of the four (i.e. 20 per cent) respondents who reported increase in number of cattles, two said that they increased cattle to meet family needs, while two others increased number of cattles in order to increase income (**See table 5.4.12.2**).

When asked that number of which type of livestock has decreased; the respondents reported that number of only two types namely bovine and bullocks had decreased (**See table 5.4.12.3**).

The overwhelming majority of respondents suggested that their economic condition would improve if they increase bovine cattle (**See table 5.4.12.4**).

The main constraints in increasing livestock were: lack of manpower to manage, economic constraint and scarcity of fodder/grazing land (**See table 5.4.12.5**).

**Table – 5.4.12.1
Distribution of Responses to query "Reasons for decrease in livestock"**

Reason	Number	Percent
Low income	2	10.0
Scarcity of fodder/ Grazing land	2	10.0
No one to look after them	2	10.0
Now use tractors	13	65.0
Sold	1	5.0
Not applicable	4	20.0
Total Respondents	20	100.0

**Table – 5.4.12.2
Distribution of Responses to query "Reasons for increase in livestock"**

Reason	Number
Family need	2
Income increase	2
Not applicable	16
Total Respondents	20

**Table – 5.4.12.3
Distribution of Responses to query "Number of which type of livestock has decreased"**

Type of Cattles	Number
Bovine	10
Bullock	11
Goat	2
All type animal	2
Total Respondents	20

**Table – 5.4.12.4
Distribution of Responses to query "What type of livestock will improve your economic condition"**

Types of Cattle	Number
Bovine	17
Goat	5
Total Respondents	20

**Table – 5.4.12.5
Distribution of Responses to query "What are the main constraints in increasing livestock"**

Reason	Number
Economic constraint	6
Lack of manpower to manage	7
Scarcity of fodder/grazing land	11
Total Respondents	20

5.4.13 Agriculture

The main crops grown in the village Madanpur were wheat and paddy. The average production of wheat and paddy was 11.5 Qt./acre and 13.5 Qt./acre respectively (**See table 5.43.1**).

Out of the 20 selected farmers, 15 reported that productivity in their farms was lower than other farms. The main reasons for lower productivity were economic constraint, scarcity of resources, scarcity of manpower and inability to look after farming, low irrigation and lower use of fertilizer, pesticide, compost etc. (**See table 5.4.13.2**).

Farmers were also asked about the main constraints in better utilization of agricultural land. The constraints suggested included low productivity of land, water logging, low irrigation, erratic power supply, scarcity of manpower, economic constraint etc. (**See table 5.4.13.3**).

Table – 5.4.13.1
Cropping Pattern of Selected Household, Average Production and Use of Fertilizer

Crops	Net sown area (in acre)	Production (in Qt./Acre)	Compost (per acre)	DAP (in kg./acre)	Urea (in kg./acre)	Potas (in kg./acre)	Pesticide (Rs./Acre)
Wheat	43.71	11.5	2 Trolley	50.0	50.0	-	-
Paddy	38.63	13.5	-	25.0	50.0	-	300.00
Gram	4.0	6.0	-	25.0	-	-	-
Peas	5.29	6.0	-	25.0	-	-	-
Potato	8.43	65.0	2 Trolley	150.0	75.0	75.0	400.0
Sugarcane	10.29	250.0	-	120.0	75.0	75.0	500.0
Makka	16.73	10.5	2 Trolley	25.0	40.0	20.0	-
Bajra	4.29	6.5	-	-	25.0	-	-
Arhar	5.29	-	-	25.0	-	-	-

Table – 5.4.13.2
Distribution of Responses to query "Reason for lower productivity of respondents farm from other farms"

Reason	Number	Percent
Low use of fertilizer/pesticide/compost etc.	1	5.0
Low irrigation	2	10.0
Scarcity of resources	1	5.0
Economic constraint	4	20.0
Scarcity of manpower and inability to look after farming	10	50.0
Not applicable	5	25.0
Total Respondents	20	100.0

Table – 5.4.13.3
Distribution of Responses to query "What are the main constraints in better utilisation of agricultural land"

Constraints	Number	Percent
Scarcity of manpower to manage	3	15.0
Low irrigation	3	15.0
Economic constraint	2	10.0
Low productivity of land	9	45.0
Scarcity of resources	1	5.0
Water logging/Seepage	3	15.0
Long distance of land	1	5.0
Total Respondents	20	100.0

Various suggestions made by farmers to remove these constraints included support for land reclamation, irrigation facility be increased economic assistance should be provided and soil testing should be done **(See table 5.4.13.4).**

Tenancy: No case of leasing-out by sampled farmers was reported from the village. However, three amongst the selected farmers reported that they leased-in land due to economic constraint and also because they owned small pieces of land.

Table – 5.4.13.4
Distribution of Responses to query "How above mentioned constraints could be removed"

Measures	Number	Percent
Increase irrigation facility	5	25.0
Economic/Credit assistance	4	20.0
Soil testing	5	25.0
New technique available	4	20.0
Land reclamation	6	30.0
Total Respondents	20	100.0

Table – 5.4.13.5
Distribution of Responses to query "Reasons for leasing-in by tenants"

Reason	Number	Percent
Economic constraint and Owned land is small	3	15.0
Not applicable	17	85.0
Total Respondents	20	100.0

(C) Land Use Plan for Madanpur Village

The drainage of the water is not a problem in normal times because of a minor canal which is linked to a *tal* which, in turn, is linked to Besav river. However when the river overflows, its water enters the village through the same minor end causes waterlogging.

The nallah should be regularly cleaned.

There is possibility of developing dairy in the village if its marketing is assured.

Land reclamation programme will help in increasing productivity in usar land.

Besides above suggestions following steps could be taken to regulate land use in the village:

- (i) Land Management Committee be reconstituted with representations of all sections and entrusted with specific responsibilities related to land use in the village.
- (ii) After consolidation, conversion of agricultural land for non-agricultural purposes is prohibited. Those who have violated this norm should be penalized. A fine based on current value of land and house be imposed.
- (iii) Building tax should be collected every year from those farmers who have constructed any house/building on farm land.
- (iv) Stringent action should be taken against those who have encroached upon pond of the village. They should be debarred from getting benefit of any government scheme and also debarred from contesting any elections.
- (v) Desiltation of drainage course should be done regularly.

Chapter - 6

Conclusion and Recommendations

The total area of Azamgarh district reduced from 5740.00 sq.km. in 1981 to 4234.00 sq.km. in 1991 due to carving out of new districts.

There had also been obvious changes in the number of residential houses and number of households during the last 40 years.

The number of residential houses increased from 367128 in 1961 to 393898 in 1971, which shows an increase of 7.29 per cent during the decade. The trend in the increase of residential houses increased to 23.41 per cent during decades 1971-81 and 1981-91.

Thus the number of residential houses have been increasing at the rate of around 24 per cent or more per decade. Though this is an obvious off shoot of increase in population, it will have serious implication for land use planning during the coming decades. These implications would have two aspects. One, more and more land would be brought under the category 'land put to non-agricultural purposes'. Secondly, planning for housing in both urban and rural areas will have to be given serious thought such as:

- (i) how land saving devices could be adopted;
- (ii) how civic amenities could be provided;
- (iii) what kind of infra-structural facilities will be needed to be developed; and
- (iv) what kind of common use facilities will be required to be developed.

Azamgarh had been divided therefore true picture could only be inferred from increase in urban area during 1971-81. The area under urban limits increased from 21.8 sq.km. in 1971 to 68.5 sq.km. in 1981. i.e. an increase of 214.22 per cent during two decade. The share of urban population has increased from 5.21 per cent in 1971 to 7.16 per cent in 1991 and to 7.64 per cent in 2001.

The population pressure started to increase on agriculture since 1931. The decennial growth rate of population had been very high during the last three decades.

It could also that whereas the proportion of agricultural labourers has marginally increased during 1981-91, the proportion of workers in household industry and in other services have declined during the same period.

6.1 Land Use Plan Related to Agricultural Land

In Azamgarh district the average size of landholding was 0.56 hectares as per the 1995-96 agricultural census and 95.18 per cent holdings belonged to the small and marginal farmers, while they accounted for only 72.28 per cent of total area under all landholdings.

The net sown area as percentage of total reporting area varied around 75.0 per cent till 1989-90, and thereafter declined to around 72.0 per cent during the decade 1990-91 to 1999-2K.

But the analysis of block-wise net sown area shows that in most of the blocks the proportion of net sown area had been around or above 70.0 per cent during 2000-01 or during some past years.

The cropping intensity of the Azamgarh district had almost consistently increased since 1960-61, and has increased to 163.26 during the period 2000-01.

The most important factor which has affected cropping intensity is irrigation.

The irrigation intensity i.e. net irrigated area as percentage of net sown area has increased from 50.38 per cent in 1960-61 to 88.33 per cent in 2000-01. This trend was discernible in all the blocks of the district as well.

However, gross irrigated area as percentage of net irrigated area has increased slowly during the last twenty five years from around 108.82 in 1980-81 to around 127.45 in 1999-2K which shows, it is still low.

Tubewells are now the major sources of irrigation in Azamgarh district, and account for 80.0 per cent of net irrigated area.

The cropping pattern in the district has vastly changed during the last 30 years.

The main crops viz. paddy, wheat and sugarcane have witnessed large increases in their productivity also during the period 1960-61 to 1998-99.

Thus farmers have shifted to crops, which are highly irrigated, fertilizer use is higher on them and whose productivity is also comparatively very high.

We need to make efforts to increase production of more pulses, oilseeds and spices. Cropping rotation also needs to be changed. Following steps are imperative to achieve it.

- (a) More thrust be given for developing high yielding varieties for these crops.
- (b) Rain fed areas should be encouraged to cultivate these crops.
- (c) Orchards, fallow land and land under social forestry could be used for growing such crops.
- (d) Processing industries of oilseeds and spices be promoted at local level with support for technology up gradation, packaging and market access facilities.

Use of fertilizer had been increasing in all the blocks. But their balanced and proportionate application has not been reported.

There is need to adopt following strategy to combat this menace:

- (a) Circulate guidelines for each gram-panchayat-on the basis of soil-testing – the proportion of fertilizer which is required to be applied.
- (b) Farmers' meeting be organised at village level before every cropping season to make them aware about such guidelines.
- (c) Farmers be also informed about hazardous impact of non-proportionate application of urea.
- (d) Government functionaries, specially at the gram-panchayat level be sensitised regarding these aspects.

The extent of mechanisation has increased in the district. The number of tractors, sowing machine, sprayers, threshing machine etc. have increased, while the number of wood plough have decreased during the last 20 years.

The trend of increasing mechanisation despite the fact that average size of landholdings has been decreasing indicates a new type of resource sharing in rural area. Those who cannot afford to purchase the equipment or machine, hire its services. Be it irrigation water, tractor, thresher or any other machine, their services are being hired by those who cannot afford to purchase or maintain them. Very poor farmers do not keep draught animals and hire services of new machines because they cannot afford to feed draught animals throughout the year.

Tenancy and share cropping was found in our survey in selected villages of the district. Thus sharing of land resource as well as services of machines indicates emergence of a new type of land-labour-capital relations.

Livestock plays two types of roles in rural economy, one it provides draught animals or for pulling carts. Secondly it generates income through animal products, which has serious implications for diversification of rural economy.

But the size of livestock has also a serious bearing on land use. The increase in livestock would mean that more land under pasture will be required, as well as more fodder will be required.

Agricultural Production System and Framework for Restructuring

It was found that the majority of land owners who leased out their land belonged to medium, small or marginal farmers. The fact that even small and marginal farmers were leasing out their land, revealed two trends - one, in case of uneconomic holdings farmers want to search other opportunities and will be content to get the market rent for their land yet they would prefer to retain the land instead of selling it out right. Moreover, the new generation, if educated seeks jobs in cities, and prefers to lease out the land. The other aspect was in regard to changing relationship. The exploitative relationship between tenant/share cropper and the land lord is fast changing. It is now purely an economic arrangement of mutual interests. Small and marginal farmers also lease-out land to other small and marginal farmers. Thus enterprising farmers are continuing agricultural activities by pooling resources from fellow farmers, while some other farmers are trying to make efforts in non-agricultural activities also.

Thus the new form of economic arrangement under tenancy was giving way to emergence of new enterprising farmers who were seeking ways to pool resources for higher productivity and application of new technology.

Dependency relationship based tenancy was declining because not many cultivators wanted to be tied up for the whole of year with some small parcel of land which they did not own, and further depend on the landlord for resources and credit. Landless or near landless people also now want to keep options open for seeking job elsewhere as well. So they preferred to work as casual agricultural labour during peak periods rather than working as an attached labour or as a tenant.

On the other hand leasing-out by small farmers was on the increase because many small farmers wanted to get job outside agriculture and at the same time wanted some income from their land also. This was possible only by leasing-out land to fellow farmers at mutually agreed terms. This kind of tenancy was free from both the dependency and exploitative relationship.

Sharing of machines and equipments was also found to be widely prevalent among farmers of this district. It was found that almost all farmers owning agricultural machines and equipments

hired out or shared their services with other farmers. many agricultural tools were also found to be shared among farmers on the exchange basis.

Factors Inhibiting Growth

The immediate factors which inhibited growth among small and marginal farmers were: lack of resources, capital deficiency and lack of facility to sell at remunerative prices. The other factors included the problems of water logging, floods, drying of canals during summer, etc.

Framework for Agricultural Growth

Among small and marginal farmers, agricultural productivity is hampered by poor logistical support and weak infrastructure. If food production is to be increased in a sustainable way, these deficiencies must be corrected and favourable economic framework for agriculture should be evolved. Such actions need to be backed up by practices aimed at maintaining or enhancing fertility and productivity.

The first step is to protect the best land for agriculture. In view of the scarcity of high quality arable land and the rising demand for food and other agricultural products, the land that is most suitable for crops should be reserved for agriculture. Government should map and monitor the more productive areas of farm land and adopt planning and zoning policies to prevent the loss of prime land to urban settlements. Village Land Management Committee and local authorities should be entrusted with responsibility to ensure that these policies are implemented in their areas.

We have found that the number of small and marginal farmers in the district is predominant. It was also found that the immediate factors which inhibited growth among small and marginal farmers were lack of resources, capital deficiency and lack of facility to sell at remunerative prices. The most important factor which could become basis for future restructuring of agricultural production system related to tenancy. It was found the majority of land owners who leased out their land (without entering into any written or formal contract) belonged to the category of medium, small or marginal farmers. This was for two reasons – one in case of uneconomic holdings, farmers wanted to search other opportunities and would be content to get the market rent for their land. Yet they would prefer to retain the land instead of selling it outright. The other aspect was in regard to non-exploitative nature of relationship between the lessor and the lessess. It is now purely an economic arrangement in which small and marginal farmers are also leasing out land to other small and marginal farmers. Thus enterprising farmers are continuing agricultural activities by pooling resources from fellow farmers, while some other farmers are seeking opportunities in non-agricultural activities also. Thus the new form of economic arrangement was giving way to pooling of resources by enterprising farmers, while other farmers who were leasing out their land were treating their land as a share capital for which they will receive the rent as well as the share in profit. The process of pooling of resources was further strengthened by a simultaneous process of sharing of machines and equipments. it was found that almost all farmers owning agricultural machines and equipments hired out or shared their services with other farmers.

It seems to us that a limited restructuring of the production process in agriculture can be such that it serves the interests of small and marginal farmers and at the same time protects wider interests of the farming community.

One major step in this direction would be to allow formation of Collective Farming Society and Confederation of Farming Societies. In the collective farming society framework, tenancy to such farming societies could be permitted under specified conditions. In particular such societies may be formed of small and marginal farmers for a complete package of inputs, and it may then be permissible for any member of such a society to lease out land to the society or to any other member of the society.

At the next level, a confederation of such Collective Farming Societies could be formed which will work as service societies. These confederations would provide high cost machinery and equipments to Collective Farming Societies on rent. The idea essentially is that it should be possible to increase number of viable farms by permitting some of the non-viable farmers to go out of agricultural business and seek other jobs and economic opportunities. This should on the one hand, improve productivity of labour on the expanded farms and on the other aid in much needed shift of labour away from agriculture.

Model for Restructuring Farming System

Collective Farming Society

1. Collective farming units be allowed to be registered under a separate Collective Farming Society Registration Act.
 2. Only small and marginal farmers be allowed to become members of such a society.
3. The number of members of a society should not be above twenty and below five.
4. Those who become members of such a collective farming society will be allowed to lease out their land to the society for a minimum of ten years on a fixed annual rent.
5. A collective farming society will not bring under its purview more than ten hectares of irrigated land.
6. A collective farming society will be allowed to pool its resources on hire or through raising capital from its members.
7. The produce will be shared among members in proportion to the share amount of each member.
8. The share amount of each member will be the weighted sum of (a) money invested under capital raising scheme plus, (b) the amount fixed as annual rent for the land leased out to the society, (c) operational holdings of actual cultivators.

Confederation of Collective Farming Societies

For storage facilities, providing transportation facilities and to work as marketing syndicates of farming societies, a confederation of ten to twenty corporate farming societies be allowed to be formed.

These confederations will work in the following areas:

1. Marketing of agricultural goods at national and international level.
2. Provide transportation and storage facilities to Collective Farming Societies against such stored goods.
3. Function as cushions against speculative prices.

4. The confederation will also act as counselling centre for farmers projecting the production and demands of each agricultural commodity for the next two years.
5. Provide high costing tools and machines to Collective Farming Societies for land levelling, soil testing, land reclamation and other activities related to land and water management on rental basis.
6. Help in technological innovations and in increasing productive efficiency.

6.2 District Level Analysis of Land Use Pattern and Land Use Plan (Other than Agricultural Land)

Our focus in preparing land use plan has been four fold –

- (i) *Agricultural land be transferred for use to other purposes.*
- (ii) *Maximum area should not be brought under vegetative cover i.e.*
 - (a) *Increase forest*
 - (b) *Increase area under miscellaneous trees and groves.*
 - (c) *Increase area under pasture and grazing land.*
- (iii) *Use culturable waste and other fallow land for such purposes. Therefore, efforts should be made to convert land under these categories into forest, orchards or grazing land.*
- (iv) *Barren and unculturable land be used for constructing buildings or infra-structural facilities.*

Forest

The forest land had been almost non-existent in the district. It has varied between 0.02 per cent to 0.04 per cent of total reporting area. There are scattered trees and bushes in some areas. The source of hope is that there are a number of commonest trees in the district which are all to be found singly or in clumps around the village sites or in the fields. Hence micro forests could be developed in or around villages (**See table 4.1**).

The area under micro forests could be increased, if some part of the land under other fallow and some part of land under culturable waste is brought under forest. This could be done by forming Joint Forest Management Committees consisting of plant growers from poor peasantry class and representatives of forest department and land use committee. A cell should be formed to provide them the financial support and infra-structural support so that they could get suitable plants, methods to protect them and finally marketing of forest produce.

Secondly, development of such forests should be linked with watershed management in the area. For this purpose an area of 500 hectares to 1000 hectares should be chosen as unit for micro-watershed management.

This would include (i) construction of water retention structures (ii) clearing and desilting of natural courses of drainage systems and (iii) restoration/reconstruction of ponds/ tanks in totally barren lands or low lying lands.

Thirdly programmes like Pradhan Mantri Rojgar Yojana etc. should be now utilised for construction of bundhis, management of wild resources including fisheries, drainage maintenance and enhancement etc.

Fourthly, more emphasis will have to be laid on energy plantation which would provide fuel wood besides growing of fruit trees rather than timber linked growth of forests.

Private Micro Forests

Private micro forest is different from orchards, as orchards generally comprise fruit bearing plants. The concept of private micro forest envisages that private individuals could also grow various varieties of plants. We have in the past found that eucalyptus had been grown in private land because it was expected to fetch good amount. The private waste land could also be used for growing timber, energy plants, etc. This could also be linked with purification of surroundings. For this purpose plants related to different planets (Navgrah) and different Nakshatra which are 27 in numbers could be planted as per specified arrangement.

Even plants with medicinal value could be grown in such land if people could be informed about their medicinal and commercial value.

Land Put to Non-agricultural Uses

Area under land put to non-agricultural uses has been continuously increasing over the past 40 years. It was around 9.0 per cent during 1960-61 and has risen to around 12.6 per cent by the end of year 2000.

Land in this category has been steadily increasing. However, this increase is faster in blocks where small markets have also grown over time. There were three blocks in the district, where land under this category was found to be high. These are: Maharajganj (17.91 per cent) Harraiya (16.03 per cent) and Palhani (15.54 per cent).

Regulation of Land Use at Urban Fringes

There is need to regulate land use at urban fringes. This could be done by setting up an Azamgarh Urban Fringe Development Authority. The UFDA could decide on the following:

- (i) Conservation of green areas such as orchards, agriculture, social forestry and allied activities.
- (ii) Development of water management and drainage system. Ponds and other water retention structures be revived. Any encroachment on such land should be identified and legal proceedings against encroachers be initiated.
- (iii) The provisions made under Zamindari Abolition and Land Reforms Acts (specially section 143 and 154) and Consolidation of Holdings Act be used effectively to check diversion of agricultural land for non-agricultural purposes.
- (iv) Heavy fine should be imposed (say ten times the cost of the land) in case of such diversion on the owner of the land.
- (v) In addition to it, if the agricultural land had been sold then capital gain tax should be imposed on purchaser of the land. Because huge capital gain accrues to the builders who develop colonies in such land.
- (vi) First priority should be given to development of social services in the fringe areas which will include hospitals, educational centres, training centres for farmers and agro-based industries.
- (vii) Barren and uncultivable land should be identified for development of micro-industrial estates and then for developing multistoried residential complexes which are land saving as well.

Besides urban fringes there is need to restrict the rate of increase of area under land put to non-agricultural uses, in rural areas in general.

This could be made possible by adopting following steps.

- (a) Discourage migration of people of nearby villages. This could be done by increasing transport facility and by improving road networks.
- (b) Strengthen household industries of rural areas by providing them institutional support and market facilities.
- (c) Develop green belt around city and any construction in the green belt area be strictly prohibited.
- (d) Encourage multi-storey buildings and economic flats to weaker sections.

One important aspect of land put to non-agricultural uses is increasing number of residential houses. However, since population growth rate is faster, per person living area is decreasing. Even more disturbing factor is that per person open area in house premises is also declining. This is the trend in even rural areas. Hence space for community uses and common recreation places must be developed even in rural areas. In city planning we leave space for parks, playgrounds and recreation spots. Such planning should also be done for rural areas. Watershed management could then be linked with development of parks and recreation places. Some area could also be reserved for floriculture and horticulture.

Regulation of Land Use along Road Side

There has been a tendency to change land use along road side – specially national highways and state highways. Houses and shops are constructed or such land is put to even other non-agricultural uses. As a result of this contiguous effect leads to further expansion of settlements near highways and such places become accident prone. Therefore, there is need to regulate land use along roadside. Following measures could be adopted in this respect:

- (i) A green strip be developed on both sides of road. Such green strip on each side should not be less than 10 meter wide.
- (ii) Wherever highways are connected with other roads, construction along side even such connecting roads be prohibited for a length of at least one kilometer.
- (iii) Those who construct houses or buildings on agricultural lands along side road should be fined heavily (say ten times the cost of the land).

The rate of increase of area under the category of land put to non-agricultural uses could then be restricted to around 1.0 per cent of total reporting area during decade 2000- 2010.

Barren and Unculturable Land

Area under barren and unculturable land has declined from 4.4 per cent in 1960-61 to 1.69 per cent in 2000-01. Barren and unculturable land could be used for further expansion of residential places, playgrounds and construction of building for common uses such as school or panchayat bhawan. It could also be used as Khalian if it is nearby fields. And it could be used for cremation ground or graveyard if it is far away from habitation.

Thus, barren and unculturable land could be shifted for use as land put to non-agricultural purposes. Some part of it could also be used for developing as pasture and grazing land.

We hope that through these measures, area under barren and unculturable land could be reduced by 1.0 per cent of reporting area in district Azamgarh.

Culturable Waste Land

This is a category showing non-enterprise. To our mind, there should be no such category. If cultivation is not possible then it could be converted into area for social forestry or developed as pasture and other grazing land.

Currently area under culturable waste is 1.45 per cent of total reporting area (**See table 4.1**). A part of it could be converted into social forestry and the rest could be developed as pasture and other grazing land. At some places, such land could also be used for fodder cultivation – specially those areas, which are owned by private individuals.

Support should be provided for developing pasture land and growing fodder.

Culturable Waste along River Side

Azamgarh has one major river and there are many tributaries which traverse the district. The patches of land along side these rivers are undulating with depressions of varying depth and extent. and at some places with high mounds. These areas could be developed as reserved forest strips with one to two kilometers' width. Plant varieties which suit the local soils could be grown in these reserved forest strips.

Development of these reserved forest strips should also be linked with river water pollution control systems. It means that water which goes through drainage courses and which meets these rivers should be treated before it reaches the river. The management of reserved strip forest should be entrusted with the responsibility to operate the treatment plants.

Besides reserved forest strips, parks and picnic spots could be developed at various points along the river route. Such parks/picnic spots could become centres of sight seeing and attraction for tourists as well.

Land under Miscellaneous Trees, Crops, and Groves not included in Net Sown Area

Land use under this category had changed little in the district.

Land under this category could be increased by 1.0 per cent of total reporting area by converting 1.0 per cent of total reporting area under other fallow land for growing miscellaneous trees and groves. We propose this because we feel that it would be difficult to bring back all the other fallow land under cultivation.

Reduction of such area increases run off of rain water. Such areas are best suited for agro-forestry. The main types of agro-forestry system are:

- (a) alley cropping – where annual crops are grown between lines of trees that produce valuable mulching material.
- (b) orchard systems – where the trees provide edible fruits, medicines and fuel wood, while the ground layer is cropped or grazed.
- (c) growth of scattered trees with pasture at the ground or grazing land.

Conserve Genetic Resources: Land under the above category should also be used to conserve genetic resources. This could be done by focussing on following programmes.

- ◆ Support grassroots associations of farmers and gardeners for the maintenance of traditional and local cultivars and breeds. Involve women's groups, Record farmers knowledge of traditional and local cultivars and breeds,
- ◆ Develop a common information service for exchange in information and germplasm among grassroots, state and national agencies.

6.2 Some General Suggestions

6.3.1 District Level

- (i) District Land Use Committee should be strengthened. The Committee must meet at least once in a year and take stock of changes which have occurred during past one year. It should also be informed about up-dating of records and changes which have taken place during the year.
- (ii) As regards its constitution, it should also include District Panchayat Adyaksha, BDOs and some more representatives of farmers.
- (iii) Each line department and BDO should be asked to furnish informations in a pre-structured proforma.
- (iv) The annual proceedings be documented and action plans drawn in the meeting be circulated to all concerned departments and functionaries.

6.3.2 Block Level

(i) Need for Block Level Land Use Committee (BLUC)

There is Land Use Committee at district level. There are Land Management Committees at the village level. But there are no land use committees at the block level.

Land records were maintained with a view to fix land revenue by the revenue department. There had been no systematic effort to maintain land records to identify land use categories on the basis of their potential development and quality.

The development perspective requires that unit for land use planning be made at block level. Because at district level it remains too generalised, while at village level, it would create operational problems in coordinating various line departments who have bearing on the land use. Therefore, there is need to create a planning cum implementing agency at the block level.

The Block level Land Use Committee may be formed with following as their members:

Block Pramukh	-	President
B.D.O.	-	Convenor
A.D.O. (Statistics)	-	Secretary

Other Members will include representatives from concerned line departments and some specialists, and

Three B.D.C. Members (to be selected by Kshetra Panchayat Members)

Block level Land Use Committee may take up the following issues for planning and implementation in the block:

(ii) Salinity and Alkalinity

The problem of alkalinity arises when infiltration rate of water in soil is low. This results in higher run off of surface water and creates problems of water logging in adjoining areas. As the water gets muddy, it also creates pollution of water streams. Reclamation of such land will have multiple effect. Such as increase in the infiltration rate, increase in recharge of ground water, reduction in water logging and control on water pollution.

Following steps should be encouraged for reclamation of such land:

- (a) Construction of field bunds – through boundary mounds,

- (b) Levelling of fields,
- (c) Use of gypsum/pyrites, depending upon the degree of alkalinity,
- (d) Rotation of crops.

Group of farmers be formed for their collective action. Then such groups could be provided financial, technical and infra-structural support for reclamation of alkaline land.

(iii) Water Management

Reforms are needed to facilitate water management systems for various reasons:

- (a) rain and surface water needs to be preserved instead of being allowed to go waste via drain courses;
- (b) natural drain courses should not be allowed to be obstructed otherwise it leads to avoidable water-logging

Increase in the number of private tubewells results in the lowering of level of ground water, therefore water management should include recharging by using rain/surface water.

By reducing run off we can check removal of top fertile soil on the one hand and maintain infiltration on the other. the catchment area of each water route should be mapped out and the programme to manage rain water should start from the highest land and end at the drainage basin.

Water harvesting will involve shaping farm land and sometimes also the catchment area of water course to slow the flow of water and thereby increase infiltration into soil. There are several cheap ways to make contours, if this is taken up collectively.

The sloppy areas and those along the drainage or field boundary which otherwise are not suitable for agriculture needs conservation efforts with optimum plant productivity. The strip plantations of multipurpose trees or shelter belts for crop lands will provide wood/leaf fodder and also ameliorate environment.

Water reservoir tanks/ponds/bundhis be constructed at places where main drain routes meet. Such land should be mapped and brought under community/panchayat ownership. No other construction be allowed to take place on such land through suitable modification in laws.

Drain network-allowing disposal of waste household water as well as community water using posts should be linked with natural drainage (by gravity flow) courses. Thus there should be micro drains (for disposal of household waste water), which will have to be connected to a community drain and finally the entire waste water has to be drained to other reservoir sites after proper treatment.

Area along the drainage route should be allowed for fodder cultivation and if possible for farm forestry. Fodder cultivation and farm forestry needs to be developed in chronically water-logged areas. To facilitate this, land along drain routes and water-logged land be kept outside the purview of tenancy provisions. Secondly, land owners of such land be permitted to form fodder or farm forest production units and lease out their land to such collective production units.

(iv) Protection of Communal Land

Common resource property has been one of the most important source of sustenance of livelihood of less privileged communities in many backward and remote areas.

A support system for maintenance and quality improvement in land use is needed to protect grazing land, land under trees, bushes etc. as well as protection of land for chak road and drainage system is also necessary. Through detailed mapping of each village, community management and these (water recharging, drainage, trees) etc. should be brought under communal ownership which should become non transferable and any activity that leads to their destruction should become unlawful.

The role of common resource property and its allocation systems becomes crucial in management of these natural resources. It must be emphasized that management of such resources be vested with the local communities who will take a longer view. Outside commercial interest will come and go with narrow economic interest only.

Effective communal property rights and resource management systems could be developed by empowering panchayats to develop modes of their use in their respective panchayats and by providing them technical and managerial skill as well as the needed capital resources.

(v) Culturable Waste Lands and Fallow Land

Culturable waste land could be brought under vegetative cover by providing necessary institutional and infra-structural support.

We suggest following measures to facilitate their proper use.

- (a) Identification of Records:** Presently such lands are identified and delineated through revenue records. Block Level Land Use Committee (BLUC) be entrusted with the responsibility to identify and delineate such land in each block. Land Management Committees of each Gram Panchayat should be involved in the process.
- (b) Preparation of Land Use Maps:** Land use maps for all the villages be prepared by the proposed BLUC.
- (c) Put Such Land outside the Purview of Tenancy Clause:** These types of land require huge investment and long waitings for their reclamation. If they remain within the purview of Tenancy Clause, it would be difficult for farmers to pool such land and invest on them, because farmers generally prefer to invest on prime land rather than on degraded land.
- (d) Lease Out Such Land to Landless Peasants' Societies:** Most of such land is under *State* or *Gram Samaj* ownership. Distribution of small parcel of such land to individual small farmers or land less peasants will not work. Because individual peasants in these categories have neither the sufficient capital to invest nor they could wait for longer periods to reap the profits of their investments. Landless Peasants' Societies could be expected to make long term heavy investments provided such land are leased out to

them for sufficiently a longer duration, and they are provided cheaper loans for this purpose.

(vi) A New Model for Culturable Waste and Degraded Land

For taking up regeneration activities of culturable waste and degraded land we will have to keep the following factors in mind:

- (a) Size of such land in contiguity;
- (b) Nature of regeneration programme;
- (c) Raising of capital and acquisition of technical support
- (d) Incentive for participation of interested landless peasants and capacity building;
- (e) Changes in the tenural rights over such land; and
- (f) Distribution of benefits.

Keeping these in view we suggest another model in which local people could be involved, and its economic viability could be ensured.

We suggest that a joint venture of state sector with local organisation be formed for this purpose.

As a first step a Collective Land Development Society (or Self Help Group for Land Development) be formed at local level. This Collective Land Development Society or SHG should enter into a contract with any state department, which has been approved for the purpose by the government.

(vii) Land Development Society/SHG for Land Development

- (a) A Land Development Society or SHG shall be formed for a land chunk of 10 to 25 acres.
- (b) The chunk of land be divided into 10-20 equal size sub-chunks.
- (c) Lease out around 1 acre of such sub-chunk land piece to one landless family each.
- (d) The tenure holder, in turn, will have to become member of the Land Development Society or SHG.

(viii) Joint Venture

A Public Corporate Organisation (approved by the government for the purpose) will then enter into an agreement with Land Development Society or SHG for a minimum of ten years for jointly developing the land and for its utilization.

- (a) Members of Land Development Society or SHG would provide land and labour;
- (b) Public Corporate Organisation will provide capital, technology and technical know-how;
- (c) A joint management system will be evolved;
- (d) One-third of the profit shall be ploughed back for further raising the capital stock of the joint venture.
- (e) The rest of the profit shall be shared on 50:50 basis between the state unit and Land Development Society.

6.3.3 Village Level

(i) The land use plan is almost finalized after consolidation of holdings is implemented in a village. It provides land for various purposes in the village besides consolidating holdings. These include -

- (a) provision of roads and public irrigation channels,
- (b) provision of land for house sites for scheduled castes and other weaker sections,
- (c) provision of sector roads, inter village roads and link roads,
- (d) provision of land for community purposes namely – schools, playgrounds, panchayat ghar, hospital, cremation ground, graveyards, threshing floor, manure pits, pasture land, plantation trees, flaying sites etc.
- (e) solving of common disputes in the village regarding roads/naalis for irrigation for each field through chak roads and chak naalis.

The problem is that powerful persons in the village influence functionaries of the consolidation work and get some of government and community land located near their farms. And once consolidation work is over, they easily encroach upon such community land.

Therefore effort should be made that **Bachat** and Gram Sabha land is not left scattered at many places. The consolidation process should also consolidate government and gram sabha land in one or two large consolidated chaks.

The land which had been carved out as orchard, grazing land or pond/tank in the past, should not be allowed to be transferred for other purposes by new rounds of consolidation – neither through chak carving nor through readjustment of gram sabha land.

(ii) Whenever chakbandi is declared, illegal felling of trees takes place, land under orchards or pasture or such other uses is sought to be shown as land under cultivation. This happens on a large scale specially on Gaon Sabha and government land. In order to check such changes in land use on the eve of consolidation, revenue officials and consolidation officials should jointly prepare reports and send report to concerned courts for quick action. The power to decide such cases should be assigned to concerned SDM.

Similarly provisions of Consolidation of Holdings Act and Manual regarding provision of inter-village link road, bachat land, Gaon Sabha and Government land and other common property resources should be widely made known to people so that its strict implementation is done with peoples participation.

(iii) After consolidation is over land use for each plot of the villages is well defined.

It should be the responsibility of LMC to see that land use is not alterned. There should be training of LMC members to make them aware of their roles and responsibilities.

(iv) Land Management Committee should be treated as Chakbandi Committee during the period of consolidation. Formation of separate committee does not prove helpful as it is at the mercy of consolidation department and Pradhan only and ceases to exist after consolidation work is over.

(v) All members of Chakbandi Committee should sign the final land use map prepared after consolidation work is over.

- (vi) The map of the village should be made available to all the members of Land Management Committee, free of cost.
- (vii) Encroachers of government and/or gram sabha land should be severely penalised and eviction proceedings against them should be made more stringent.
- (viii) Land capability maps be prepared for each village. The land use of each type of land could then be planned for effective, efficient, sustainable and profitable use.
The land capability map will indicate about the texture and quality of soil. It will also give information about limitations of the land such as erosion, water logging, degree of alkalinity or salinity etc.
Thus land capability maps would provide necessary inputs for land use planning i.e. suitability of land for agriculture, horticulture, forestry etc. It will also indicate as to what measures would be needed for improving land for its optimum utilisation.
- (ix) The Land Management Committee at the village level be revamped. And there should be fair representation of weaker sections, beneficiaries of land allottees, self help groups and all the hamlets/communities of the village.
The committee should meet once every six months, develop plans for water conservation, drainage channels, regeneration of degraded land, effective use of lands in the category of (a) barren and uncultivable land, (b) pastures, (c) orchards groves and land under trees and (d) fallow land.
- (x) There are already legal provisions under consolidation of Holdings Act and Supreme Court Judgements in regard to protection of land uses. These should be widely circulated among members of Land Management Committee. Proceedings for eviction of encroachers should be launched in right earnest. The provision should be made in law for eviction of unauthorised occupation of Gram Sabha land by summary proceedings.
- (xi) The gaon sabha land or pond or forest land should be given on lease to self help groups or tree growers society or such other collective groups rather than to individuals.

6.4 Block Level Plans for Year 2010

The proposed land use plan of the Maharajganj block for year 2010 will have land use pattern as follows:

Box – 6.1.1
Proposal of Land Use Plan for Maharajganj Block

Land Use Categories	Present Level in Percentage (Year 1999-2K)	Proposed Level in Percentage (for Year 2010)	Remarks
Forest	0.02	0.52	Around 0.5 per cent from culturable waste
Barren and Unculturable land	1.12	0.37	Shift 0.75 per cent for land for non-agricultural purposes
Land put to non-agricultural uses	17.91	18.66	Around 0.75 per cent from barren and unculturable land
Culturable waste	0.81	0.31	Around 0.5 per cent to forest
Pasture and grazing land	0.17	0.17	-
Current Fallow	6.49	6.49	-
Other Fallow	2.60	3.60	1.0 per cent for orchard and groves
Land Under Miscellaneous trees and groves	1.68	2.68	1.0 per cent from other fallow
Net Sown Area	69.20	69.20	-
Total reporting area (in Hectares)	24,006.00	24,006.00	-

The proposed land use plan of the Bilariyaganj block for year 2010 will have land use pattern as follows:

Box – 6.1.2
Proposal of Land Use Plan for Bilariyaganj Block

Land Use Categories	Present Level in Percentage (Year 1999-2K)	Proposed Level in Percentage (for Year 2010)	Remarks
Forest	0.06	0.56	0.5 per cent from culturable waste
Barren and Unculturable land	1.08	0.58	Shift 0.5 per cent for land for non-agricultural purposes
Land put to non-agricultural uses	11.29	11.79	Around 0.5 per cent from barren and unculturable land
Culturable waste	0.67	0.17	Around 0.5 per cent to forest
Pasture and grazing land	0.08	0.08	-
Current Fallow	2.53	2.53	-
Other Fallow	1.56	1.56	-
Land Under Miscellaneous trees and groves	0.61	0.61	-
Net Sown Area	82.12	82.12	-
Total reporting area (in Hectares)	19,927.00	19,927.00	-

The proposed land use plan of the Harraiya block for year 2010 will have land use pattern as follows:

**Box – 6.1.3
Proposal of Land Use Plan for Harraiya Block**

Land Use Categories	Present Level in Percentage (Year 1999-2K)	Proposed Level in Percentage (for Year 2010)	Remarks
Forest	-	0.5	Around 0.5 per cent from culturable waste
Barren and Unculturable land	0.87	0.37	Shift 0.5 per cent of land for non-agricultural purposes
Land put to non-agricultural uses	16.03	16.53	Around 0.5 per cent from barren and unculturable land
Culturable waste	1.07	0.57	Around 0.5 per cent to forest
Pasture and grazing land	0.05	0.05	-
Current Fallow	7.51	7.51	-
Other Fallow	2.33	1.33	1.0 per cent for orchard & groves
Land Under Miscellaneous trees and groves	2.13	3.13	1.0 per cent from other fallow
Net Sown Area	70.00	70.00	-
Total reporting area (in Hectares)	26,391.00	26,391.00	-

The proposed land use plan of the Azmatgarh block for year 2010 will have land use pattern as follows:

Box – 6.1.4
Proposal of Land Use Plan for Azmatgarh Block

Land Use Categories	Present Level in Percentage (Year 1999-2K)	Proposed Level in Percentage (for Year 2010)	Remarks
Forest	-	0.50	Around 0.5 per cent from culturable waste
Barren and Unculturable land	1.43	0.43	Shift 1.0 per cent of such land for non-agricultural purposes
Land put to non-agricultural uses	12.22	13.22	Around 1.0 per cent from barren and unculturable land
Culturable waste	1.04	0.54	Around 0.5 per cent to forest
Pasture and grazing land	0.08	0.08	-
Current Fallow	8.62	8.62	-
Other Fallow	2.64	1.64	Around 1.0 per cent to orchards
Land Under Miscellaneous trees and groves	2.21	3.21	1.0 per cent from other fallow land
Net Sown Area	71.77	71.77	-
Total reporting area (in Hectares)	20,535.00	20,535.00	-

The proposed land use plan of the Mirzapur block for year 2010 will have land use pattern as follows:

Box – 6.1.5
Proposal of Land Use Plan for Mirzapur Block

Land Use Categories	Present Level in Percentage (Year 1999-2K)	Proposed Level in Percentage (for Year 2010)	Remarks
Forest	0.02	1.52	Around 1.5 per cent from culturable waste land
Barren and Unculturable land	1.66	0.66	Shift 1.0 per cent for land for non-agricultural purposes
Land put to non-agricultural uses	13.11	14.11	Around 1.0 per cent from barren and unculturable land
Culturable waste	2.11	3.61	Around 1.5 per cent to forest
Pasture and grazing land	0.54	0.54	-
Current Fallow	6.23	6.23	-
Other Fallow	4.26	3.26	1.0 per cent for orchard & groves
Land Under Miscellaneous trees and groves	2.86	3.86	1.0 per cent from other fallow
Net Sown Area	69.21	69.21	-
Total reporting area (in Hectares)	16,556.00	16,556.00	-

The proposed land use plan of the Mohammadpur block for year 2010 will have land use pattern as follows:

Box – 6.1.6
Proposal of Land Use Plan for Mohammadpur Block

Land Use Categories	Present Level in Percentage (Year 1999-2K)	Proposed Level in Percentage (for Year 2010)	Remarks
Forest	0.2	0.52	Around 0.5 per cent from culturable waste
Barren and Unculturable land	1.74	0.74	Shift 1.0 per cent for land for non-agricultural purposes
Land put to non-agricultural uses	12.51	13.51	Around 1.0 per cent from barren and unculturable land
Culturable waste	1.17	0.67	Around 0.5 per cent to forest
Pasture and grazing land	0.70	0.70	-
Current Fallow	5.22	5.22	-
Other Fallow	2.42	1.42	1.0 per cent for orchard & groves
Land Under Miscellaneous trees and groves	0.81	1.81	1.0 per cent from other fallow
Net Sown Area	75.42	75.42	-
Total reporting area (in Hectares)	19,192.00	19,192.00	-

The proposed land use plan of the Tahabarpur block for year 2010 will have land use pattern as follows:

Box – 6.1.7
Proposal of Land Use Plan for Tahabarpur Block

Land Use Categories	Present Level in Percentage (Year 1999-2K)	Proposed Level in Percentage (for Year 2010)	Remarks
Forest	0.02	2.02	2.0 per cent from culturable waste
Barren and Unculturable land	0.80	0.30	Shift 0.5 per cent for land for non-agricultural purposes
Land put to non-agricultural uses	10.92	11.42	Around 1.0 per cent from barren and unculturable land
Culturable waste	3.43	0.43	Around 2.0 per cent to forest and 1.0 per cent for pasture and grazing land
Pasture and grazing land	0.43	1.43	1.0 per cent from culturable waste
Current Fallow	4.55	4.55	-
Other Fallow	2.29	1.29	1.0 per cent for orchards
Land Under Miscellaneous trees and groves	2.28	3.28	1.0 per cent from other fallow land
Net Sown Area	75.29	75.29	-
Total reporting area (in Hectares)	17,526.00	17,526.00	-

The proposed land use plan of the Palhani block for year 2010 will have land use pattern as follows:

Box – 6.1.8
Proposal of Land Use Plan for Palhani Block

Land Use Categories	Present Level in Percentage (Year 1999-2K)	Proposed Level in Percentage (for Year 2010)	Remarks
Forest	0.02	1.02	Around 1.0 per cent from culturable waste
Barren and Unculturable land	1.0	0.50	0.5 per cent to land for non-agricultural purposes
Land put to non-agricultural uses	1.65	0.65	-
Culturable waste	0.53	0.53	Around 1.0 per cent to forest
Pasture and grazing land	5.46	5.46	-
Current Fallow	3.22	2.22	-
Other Fallow	3.05	4.05	1.0 per cent for orchard and groves
Land Under Miscellaneous trees and groves	3.05	4.05	1.0 per cent from other fallow
Net Sown Area	69.55	69.55	-
Total reporting area (in Hectares)	12,738.00	12,738.00	-

The proposed land use plan of the Ranni-ki-Sarai block for year 2010 will have land use pattern as follows:

Box – 6.1.9
Proposal of Land Use Plan for Rani-Ki-Sarai Block

Land Use Categories	Present Level in Percentage (Year 1999-2K)	Proposed Level in Percentage (for Year 2010)	Remarks
Forest	0.01	1.51	Around 1.5 per cent from culturable waste
Barren and Unculturable land	2.35	1.35	Shift 1.0 per cent for land for non-agricultural purposes
Land put to non-agricultural uses	13.52	14.52	Around 1.0 per cent from barren and unculturable land
Culturable waste	2.15	0.65	Around 1.5 per cent to forest
Pasture and grazing land	0.96	0.96	-
Current Fallow	5.58	5.58	-
Other Fallow	1.92	1.42	0.5 per cent for orchard and groves
Land Under Miscellaneous trees and groves	0.79	1.29	0.5 per cent from other fallow
Net Sown Area	72.71	72.71	-
Total reporting area (in Hectares)	13,901.00	13,901.00	-

The proposed land use plan of the Sathiyav block for year 2010 will have land use pattern as follows:

Box – 6.1.10
Proposal of Land Use Plan for Sathiyav Block

Land Use Categories	Present Level in Percentage (Year 1999-2K)	Proposed Level in Percentage (for Year 2010)	Remarks
Forest	0.01	1.01	1.0 per cent from culturable waste
Barren and Unculturable land	1.50	0.50	Shift 1.0 per cent for land for non-agricultural purposes
Land put to non-agricultural uses	1.76	12.76	Around 0.5 per cent from barren and unculturable land
Culturable waste	1.31	0.31	Around 1.0 per cent to forest
Pasture and grazing land	0.10	0.10	-
Current Fallow	4.43	4.43	-
Other Fallow	2.32	1.32	1.0 per cent for orchard and groves
Land Under Miscellaneous trees and groves	1.36	2.36	1.0 per cent from other fallow
Net Sown Area	77.20	77.20	-
Total reporting area (in Hectares)	16,416.00	16,416.00	-

The proposed land use plan of the Jahanaganj block for year 2010 will have land use pattern as follows:

Box – 6.1.11
Proposal of Land Use Plan for Jahanaganj Block

Land Use Categories	Present Level in Percentage (Year 1999-2K)	Proposed Level in Percentage (for Year 2010)	Remarks
Forest	0.02	0.52	Around 0.5 per cent from culturable waste
Barren and Unculturable land	1.80	0.80	Shift 1.0 per cent for land for non-agricultural purposes
Land put to non-agricultural uses	8.36	9.36	Around 1.0 per cent from barren and unculturable land
Culturable waste	0.89	0.39	Around 0.5 per cent to forest
Pasture and grazing land	0.26	0.26	-
Current Fallow	7.96	7.96	-
Other Fallow	2.40	1.40	1.0 per cent for orchard & groves
Land Under Miscellaneous trees and groves	0.58	1.58	1.0 per cent from other fallow
Net Sown Area	77.74	77.74	-
Total reporting area (in Hectares)	18,189.00	18,189.00	-

The proposed land use plan of the Atrauliya block for year 2010 will have land use pattern as follows:

Box – 6.1.12
Proposal of Land Use Plan for Atrauliya Block

Land Use Categories	Present Level in Percentage (Year 1999-2K)	Proposed Level in Percentage (for Year 2010)	Remarks
Forest	0.04	1.04	Around 1.0 per cent from culturable waste
Barren and Unculturable land	0.72	0.22	Shift 0.5 per cent such land for non-agricultural purposes
Land put to non-agricultural uses	11.36	11.86	Around 1.0 per cent from barren and unculturable land
Culturable waste	1.90	0.90	Around 1.0 per cent to forest
Pasture and grazing land	0.06	0.06	-
Current Fallow	5.80	5.80	-
Other Fallow	2.43	1.43	Around 1.0 per cent for orchards
Land Under Miscellaneous trees and groves	0.53	1.53	1.0 per cent from other fallow land
Net Sown Area	77.15	77.15	-
Total reporting area (in Hectares)	16,016.00	16,016.00	-

The proposed land use plan of the Koyalsa block for year 2010 will have land use pattern as follows:

Box – 6.1.13
Proposal of Land Use Plan for Koyalsa Block

Land Use Categories	Present Level in Percentage (Year 1999-2K)	Proposed Level in Percentage (for Year 2010)	Remarks
Forest	0.02	1.02	Around 1.0 per cent from culturalbe waste
Barren and Unculturable land	0.86	0.36	Shift 0.5 per cent for land for non-agricultural purposes
Land put to non-agricultural uses	11.51	12.01	Around 0.5 per cent from barren and uncultivable land
Culturable waste	1.25	0.25	Around 1.0 per cent to forest
Pasture and grazing land	0.11	0.11	-
Current Fallow	6.01	6.01	-
Other Fallow	1.43	0.93	0.5 per cent for orchard & groves
Land Under Miscellaneous trees and groves	3.07	3.57	0.5 per cent from other fallow
Net Sown Area	75.75	75.75	-
Total reporting area (in Hectares)	16,539.00	16,539.00	-

The proposed land use plan of the Ahiraula block for year 2010 will have land use pattern as follows:

**Box – 6.1.14
Proposal of Land Use Plan for Ahiraula Block**

Land Use Categories	Present Level in Percentage (Year 1999-2K)	Proposed Level in Percentage (for Year 2010)	Remarks
Forest	0.05	1.05	Around 1.0 per cent from culturable waste
Barren and Unculturable land	0.73	0.23	Shift 0.5 per cent for land for non-agricultural purposes
Land put to non-agricultural uses	11.85	12.35	Around 0.5 per cent from barren and unculturable land
Culturable waste	2.28	0.28	Around 1.0 per cent to forest and around 1.0 per cent for pasture and grazing land
Pasture and grazing land	0.19	1.19	Around 1.0 per cent from culturable waste land
Current Fallow	7.50	7.50	-
Other Fallow	3.77	2.27	Shift 1.5 per cent to land under trees and groves
Land Under Miscellaneous trees and groves	4.32	5.82	1.5 per cent from culturable waste
Net Sown Area	69.31	69.31	-
Total reporting area (in Hectares)	19,592.00	19,592.00	-

The proposed land use plan of the Pawai block for year 2010 will have land use pattern as follows:

**Box – 6.1.15
Proposal of Land Use Plan for Pawai Block**

Land Use Categories	Present Level in Percentage (Year 1999-2K)	Proposed Level in Percentage (for Year 2010)	Remarks
Forest	0.03	1.03	1.0 per cent from culturable waste
Barren and Unculturable land	1.46	0.46	Shift 1.0 per cent for land for non-agricultural purposes
Land put to non-agricultural uses	12.52	13.52	Around 1.0 per cent from barren and unculturable land
Culturable waste	1.56	0.56	Around 0.5 per cent to forest
Pasture and grazing land	0.14	0.14	-
Current Fallow	9.13	9.13	-
Other Fallow	2.96	1.96	Shift 1.0 per cent for orchards
Land Under Miscellaneous trees and groves	2.03	3.03	1.0 per cent from other fellow land
Net Sown Area	70.18	70.18	-
Total reporting area (in Hectares)	20,699.00	20,699.00	-

The proposed land use plan of the Phulpur block for year 2010 will have land use pattern as follows:

**Box – 6.1.16
Proposal of Land Use Plan for Phulpur Block**

Land Use Categories	Present Level in Percentage (Year 1999-2K)	Proposed Level in Percentage (for Year 2010)	Remarks
Forest	0.04	1.04	Around 1.0 per cent from culturable waste
Barren and Unculturable land	1.58	0.58	Shift 1.0 per cent for land for non-agricultural purposes
Land put to non-agricultural uses	14.27	15.27	Around 1.0 per cent from barren and unculturable land
Culturable waste	1.64	0.64	Around 1.0 per cent to forest
Pasture and grazing land	0.17	0.17	-
Current Fallow	8.53	8.53	-
Other Fallow	2.68	1.68	1.0 per cent for orchard and groves
Land Under Miscellaneous trees and groves	2.26	3.26	1.0 per cent from other fallow
Net Sown Area	68.83	68.83	-
Total reporting area (in Hectares)	19,120.00	19,120.00	-

The proposed land use plan of the Martinganj block for year 2010 will have land use pattern as follows:

Box – 6.1.17
Proposal of Land Use Plan for Martinganj Block

Land Use Categories	Present Level in Percentage (Year 1999-2K)	Proposed Level in Percentage (for Year 2010)	Remarks
Forest	0.02	0.52	Around 0.5 per cent from culturable waste
Barren and Unculturable land	2.26	1.26	Shift 1.0 per cent for land for non-agricultural purposes
Land put to non-agricultural uses	14.42	15.42	Around 1.0 per cent from barren and unculturable land
Culturable waste	1.09	0.59	Around 0.5 per cent to forest
Pasture and grazing land	0.18	0.18	-
Current Fallow	6.53	6.53	-
Other Fallow	1.93	0.93	1.0 per cent for orchard & groves
Land Under Miscellaneous trees and groves	1.03	2.03	2.0 per cent from other fallow
Net Sown Area	72.53	72.53	-
Total reporting area (in Hectares)	23,235.00	23,235.00	-

The proposed land use plan of the Thekma block for year 2010 will have land use pattern as follows:

**Box – 6.1.18
Proposal of Land Use Plan for Thekma Block**

Land Use Categories	Present Level in Percentage (Year 1999-2K)	Proposed Level in Percentage (for Year 2010)	Remarks
Forest	0.01	1.01	Around 1.0 per cent from culturable waste
Barren and Unculturable land	2.76	1.76	Shift 1.0 per cent for land for non-agricultural purposes
Land put to non-agricultural uses	12.34	13.34	Around 1.0 per cent from barren and unculturable land
Culturable waste	1.74	0.74	Around 1.0 per cent to forest
Pasture and grazing land	0.65	0.65	-
Current Fallow	7.98	7.98	-
Other Fallow	2.28	1.28	1.0 per cent for orchard & groves
Land Under Miscellaneous trees and groves	1.14	2.14	1.0 per cent from other fallow
Net Sown Area	71.10	71.10	-
Total reporting area (in Hectares)	27,768.00	27,768.00	-

The proposed land use plan of the Lalganj block for year 2010 will have land use pattern as follows:

Box – 6.1.19
Proposal of Land Use Plan for Lalganj Block

Land Use Categories	Present Level in Percentage (Year 1999-2K)	Proposed Level in Percentage (for Year 2010)	Remarks
Forest	0.05	1.05	Around 1.0 per cent from culturable waste
Barren and Unculturable land	3.31	2.31	Shift 1.0 per cent for land for non-agricultural purposes
Land put to non-agricultural uses	11.63	12.63	Around 1.0 per cent from barren and unculturable land
Culturable waste	2.23	0.23	Around 1.0 per cent to forest and 1.0 per cent for pastures & grazing land
Pasture and grazing land	0.27	1.27	2.0 per cent from culturable waste
Current Fallow	8.10	8.10	-
Other Fallow	1.82	0.82	1.0 per cent for orchard & groves
Land Under Miscellaneous trees and groves	0.12	1.12	1.0 per cent from other fallow
Net Sown Area	72.48	72.48	-
Total reporting area (in Hectares)	24,707.00	24,707.00	-

The proposed land use plan of the Mehnagar block for year 2010 will have land use pattern as follows:

Box – 6.1.20
Proposal of Land Use Plan for Mehnagar Block

Land Use Categories	Present Level in Percentage (Year 1999-2K)	Proposed Level in Percentage (for Year 2010)	Remarks
Forest	0.01	0.51	Around 0.5 per cent from culturable waste
Barren and Unculturable land	2.75	1.75	Shift 1.0 per cent of such land for non-agricultural purposes
Land put to non-agricultural uses	10.12	11.12	Around 1.0 per cent from barren and unculturable land
Culturable waste	0.76	0.26	Around 0.5 per cent to forest
Pasture and grazing land	0.51	0.51	-
Current Fallow	7.66	7.66	-
Other Fallow	2.07	1.07	Shift 1.0 per cent for orchard development
Land Under Miscellaneous trees and groves	0.20	1.20	1.0 per cent from other fallow land
Net Sown Area	75.92	75.92	-
Total reporting area (in Hectares)	25,494.00	25,494.00	-

The proposed land use plan of the Tarvan block for year 2010 will have land use pattern as follows:

Box – 6.1.21
Proposal of Land Use Plan for Tarvan Block

Land Use Categories	Present Level in Percentage (Year 1999-2K)	Proposed Level in Percentage (for Year 2010)	Remarks
Forest	0.02	1.02	Around 1.0 per cent from culturable waste
Barren and Unculturable land	1.94	0.94	Shift 1.0 per cent of such land for non-agricultural purposes
Land put to non-agricultural uses	9.06	10.06	Around 1.0 per cent from barren and unculturable land
Culturable waste	2.52	0.52	Around 1.0 per cent to forest and 1.0 per cent for pasture and grazing land
Pasture and grazing land	0.60	1.60	1.0 per cent from culturable waste land
Current Fallow	9.48	9.48	-
Other Fallow	1.80	0.80	Shift 1.0 per cent for orchard development
Land Under Miscellaneous trees and groves	0.18	1.18	1.0 per cent from other fallow land
Net Sown Area	74.40	74.40	-
Total reporting area (in Hectares)	26,204.00	26,204.00	-

6.5 Village Level Plans for Selected Villages

6.5.1 Land Use Plan for Jalalpur Village

The main problem of the village is water logging and effects of brick kilns.

It is therefore necessary to check seepage and overflow of water from canals. The sides of canal should have brick lining.

Secondly, operation of brick kilns be regulated in the village.

Houses are being constructed in haphazard manner, even on agricultural land. There is need to check this tendency.

The drainage system in the village could improve if nullah (a natural drainage passage) is regularly cleaned.

The village pond has been encroached upon. Encroachers should be evicted and pond be revived in the village.

6.5.2 Land Use Plan for Surjipur Village

There is a nullah near the village. Many pits have developed around the route of this nullah, and some area gets waterlogged during rainy season due to it. This nullah is linked to a canal which is at around 2 kms. from the village. During rainy season even the canal overflows and causes waterlogging.

There is a pond in the village which is under gram sabha land which is being used by washerman for washing clothes. Some part of it has been encroached upon by them.

There is need to cleanse the pond and raise embankments for its general use.

In the less productive cultivated land agro-forestry could be promoted.

6.5.3 Land Use Plan for Bargahan Village

The major problem of the village is that a large part of land is usar. The other problem is related to waterlogging. A canal passes through the village and seepage in the canal causes waterlogging. Secondly height of the road on the northern side of village has been raised several times in the past. The height of the road on the western side of the village has also been raised by digging fields. The drainage of water has been obstructed. There was a nullah on the other side of the road, which has largely been encroached upon by people and a very narrow passage now remains.

There are many ponds in the village which have been encroached upon.

Some plantation work was done under social forestry, plants had been eaten by animals.

The programme of land reclamation did not succeed in the village due to lack of peoples participation.

There is need to revive ponds, construct a drainage passage in the village and launch land reclamation programme again with participation of people.

6.5.4 Land Use Plan for Madanpur Village

The drainage of the water is not a problem in normal times because of a minor canal which is linked to a *tal* which, in turn, is linked to Besav river. However when the river overflows, its water enters the village through the same minor end causes waterlogging.

The nallah should be regularly cleaned.

There is possibility of developing dairy in the village if its marketing is assured.

Land reclamation programme will help in increasing productivity in usar land.

Besides above suggestions following steps could be taken to regulate land use in all the village:

- (i) Land Management Committee be reconstituted with representations of all sections and entrusted with specific responsibilities related to land use in the village.
- (ii) After consolidation, conversion of agricultural land for non-agricultural purposes is prohibited. Those who have violated this norm should be penalized. A fine based on current value of land and house be imposed.
- (iii) Building tax should be collected every year from those farmers who have constructed any house/building on farm land.
- (iv) Stringent action should be taken against those who have encroached upon pond of the village. They should be debarred from getting benefit of any government scheme and also debarred from contesting any elections.
- (v) Desiltation of drainage course should be done regularly.

List of Herbal Plants

	Botanical Name	Family Name	fglnh uke
1	<i>Abrus precatorius</i>	LEGUMINOSAE (FABACEAE)	xqk
2	<i>Abutilon indicum</i>	MALVACEAE	vfrcyk
3	<i>Acacia catechu</i>	LEGUMINOSAE (MIMOSAE)	[kfnj
4	<i>Acacia collicinna</i>	LEGUMINOSAE (MIMOSAE)	f'kdldkbl
5	<i>Acacia nilotica</i>	LEGUMINOSAE (MIMOSAE)	ccny
6	<i>Acalypha hispida</i>	EUPHORBIACEAE	lgyrku
7	<i>Achyranthus aspera</i>	AMARANTHACEAE	vikexl
8	<i>Aconitum heterophyllum</i>	RANUNCULACEAE	vfrfo"kk
9	<i>Acorus calamus</i>	ARACEAE	opk
10	<i>Adallsonia digitata</i>	BOMBACACEAE	xkj{kh
11	<i>Adhatoda vasica</i> (Nees)	ACANTHACEAE	vMk
12	<i>Adiantum lunu1atum</i> (Burm)	POLYPODIACEAE	gll i knh
13	<i>Aegle marmelos</i> (Corr)	RUTACEAE	fcYo
14	<i>Agave americana</i> (Linn)	AGAVACEAE	dWkyk
15	<i>Aijallthusexcelsa</i> (Roxb)	SIMARUBACEAE	vjyoks
16	<i>Albizzia lebbek</i> (Bellth)	LEGUMINOSAE (MIMOSAE)	f'kjh"k
17	<i>Allium cepa</i> (Linn)	LILIACEAE	iyk. Mq
18	<i>Allium sativum</i> (Linn)	LILIACEAE	yl q
19	<i>Alocasia indica</i> (Roxb)	ARACEAE	ekudn
20	<i>Aloe barbadensis</i> (Mill)	IJILIACEAE	?krdøkjh
21	<i>Alpinia galanga</i> (Willd)	ZINGIBERACEAE	egkHkjhop
22	<i>Alstonia scholaris</i> (R.Br)	APOCYANACEAE	l Iri .kz
23	<i>Althea officinalis</i> (Linn)	ACEAE	[k#
24	<i>Amaranthus spinosus</i> (Lilln)	AMARANTHACEAE	r. Mgyh;
25	<i>Amarryllis beladonna</i> (Linn)	AMARRYLLIDACEAE	cSykMksik fyfy
26	<i>Amomum subulatum</i> (Roxb)	ZINGIBERACEAE	cgnsyk
27	<i>AmorphophaJlus companulatus</i> (Blume)	ARACEAE	l jjudn
28	<i>Anacardium occidentales</i> (Linn)	ANACARDIACEAE	crkM+
29	<i>Anacyclus pyrethrum</i> (D.C)	ASTERACEAE (COMPOSITEAE)	vkdj dje
30	<i>Ananas cosmosum</i> (Merr)	BROMELIACEAE	vUukukl
31	<i>Andrographis paniculata</i> (Nees)	ACANTHACEAE	HkñuEc
32	<i>Annonasquamosa</i> (Linn)	ANNONACEAE	l hrkQy
33	<i>Anthocephalus cadamba</i> (Miq)	RUBIACEAE	dnEc

34	<i>Apium graveolens</i> (Linn)	UMBELLIFERAE	vtekr
35	<i>Aralia nudicaulis</i> (Linn)	ARALIACEAE	y{e.kk

	Botanical Name	Family Name	fglnh uke
36	Arec~catechu (Linn)	PALMAE	i wkhQy
37	ArgeiT1one maxicana (Linn)	PAPAVARACEAE	dVq .khz
38	Argyreia speciosa (Sweet Syn)	CONVOL VULACEAE	o) nkjd
39	Aristolochia indica, (Linn)	ARISTOLOCHACEAE	bžyh
40	Artemissia yulgaris (Linn)	ASTERACEAE (COMPOSITAE)	neud
41	Artocarpusintegrifolia (Linri)	MORACEAE	i u'k
42	Ascleplas curassavica (Linn)	ASCLEPIADACEAE	dkdukl k
43	Asparagus adscendens (Roxb)	LILIACEAE	yretkyh
44	Asparagus recemosus (Willd)	LILIACEAE	'krkoj
45	Asteracantha longifolia (Nees)	ACANTHACEAE	dkfdyk{k
46	A verrhoa carambola	OXALIDACEAE	dej [k
47	Azadirachta indica	MELIACEAE	uhe
48	Bacopa monieri (Linn)	SCROPHULARIACEAE	tyuhe
49	Balanites roxbu ghi (Planch)	SIMARUBACEAE	bxqh
50	Bombusa arundnacla (Willd)	POACEAE (GRAMINAE)	oákykpu
51	Barleria prionitis (Linn)	ACANTHACEAE	i hkokl k
51	Basella alba (Linn)	CHENOPODIACEAE	i frdk
53	Bauhinia purpurea (Linn)	LEGUMINOSAE (CAESALPINACEAE)	dkfonkj ½ky½
54	Bauhin.ia v~riegata (Linn)	LEGUMINOSAE (CAESALPINACEAE)	dpukj
55	Berberis arlstata (D.C)	BERBERIDACEAE	nk#gYnh
56	Biophytum sensitivum (Linn)	GERANIACEAE (OXALIDACEAE)	vyEcqkk
57	Boerhaavia diffusa (Linn)	NYCTAGINACEAE	yky i quzbk
58	Brassica campestris	CRUCIFERAE (BRASSICACEAE)	l j l ka
59	Brassica Juncea (Linn)	BRASSICACEAE (CRUCIFERAE)	ykyjkbz
60	Brassica oleracea (Linn)	BRASSICACEAE (CRUCIFERAE)	i Rrk xtklkh
61	Bryophyllum calycinum Salib	CRASSULACEAE	i RFkj pj
62	Butea frondosa koenex (Roxb)	LEGUMINOSAE (FABACEAE)	i yk' k
63	Caesalpinia bonducela Fleming	LEGUMINOSAE (CAESALPINACEAE)	i frdjat
64	Callicarpa macrophylla (Linn)	VERBENACEAE	fç; xq
65	Calotropis procera (Aif)	ASCLEPIADACEAE	vydz
66	Cannabis indica (Linn)	CANNABINACEAE	nofdyh
67	Cannabis Sativa (Linn)	CANNABINACEAE	Hkkax
68	Capsicum annum (Linn)	SOLANACEAE	fejpk
69	Carica papaya (Linn)	CARICACEAE	i i hrk
70	Carum copticum (Benth & Hook)	UMBELLIFERAE	vtok; u
71	Cassa auriculata (Linn)	CAESALPINACEAE	vcj
72	Cassia absus (Linn)	LEGUMINOSAE (CAESALPINACEAE)	p{kt; k
73	Cassia angustifolia (Vahl)	LEGUMINOSAE (CAESALPINACEAE)	l uk;

	Botanical Name	Family Name	fglnh uke
74	Cassia fistula (Linn), Cassia rhombifolia	LEGUMINOSAE (CAESALPINACEAE)	veyrkl
75	Cassia occidentalis (Linn)	LEGUMINOSAE, (CAESALPINACEAE)	dkl enl
76	Cassiatora (Linn)	LEGUMINOSAE (CAESALPINACEAE)	pøenl
77	Catharanthes roseus (L.) vincarosea	APOCYANACEAE	l nckgkj
78	Cedrela toona (Roxb Syn) toona ciliata roem	MELIACEAE	ru
79	Cedrus deodara. (Roxb) Loud	PINACEAE	nønkj
80	Celastrus paniculatus (Willd)	CELASTRACEAE	eky dkxuh
81	Celosia argentea. (Linn)	AMARANTHACEAE	f' kfrkj
82	Centella asiatica (Linn) (Hydrocotyle asiatica)	UMBELLIFERAE	eMdi .klz
83	Cestrum diuranum (Linn)	SOLANACEAE	fnu dk jtkk
84	Cestrum nocturnum (Linn)	SOLANACEAE	jkrjkuh
85	Chenopodium albu (Linn)	CHENOPODIACEAE	cFkq/k
86	Chlorophytum borivilianum (Sant & Ferm)	LILIACEAE	l Qn et yh
87	Cicerarietinum (Linn)	LEGUMINOSAE (FABACEAE)	puk
88	Cinnamomum camphora (Nees & Eberm)	LAURACEAE	phud diij
89	Cinnamomum tamala (Nees & Eberm)	LAURACEAE	rstikr
90	Cinnamomum zeylanicum (Blume Syn)	LAURACEAE	nkyphu
91	Cissampelos pareira (Linn)	MENISPERMACEAE	i kBk
92	Cissus quadrangularis (Linn)	VITACEAE	gMt kM+
93	Citrullus colocynthis (Schrader)	CUCURBITACEAE	blk; .k
94	Citrus medica var. acida watt.)	RUTACEAE	dkxth uhew
95	Citrus medica (Linn)	RUTACEAE	fctlgk
96	Cleome viscosa (Linn Syn)	CAPPARIDACEAE	i hyk ggij
97	Clerodendron inerme (Lil111)	VERBENACEAE	Nk/k vjuh
98	Clerodendron phlomidis (Linn)	VERBENACEAE	vjuh
99	Clerodendron serratum (Spreng)	VERBENACEAE	Hkkj> -h
100	Clitoria ternatea (Linn)	FABACEAE (LEGUMINOSAE)	vijkftrk
101	Coccinia indica (W & A)	CUCURBITACEAE	dtn:
102	Coleus aromaticus (Benth)	LABIATAE	i RFkj pj
103	Commiphora mukul (Hook & Exstocks)	BURSERACEAE	xlxxy
104	Convolvulus pluricaulis (Choisy)	CONVOLVULACEAE	' k[ki ti h
105	Cordia myxa (Ro.xbSyn) Cordia dichotoma	BORAGINACEAE	fyI kM/k
106	Coriandrum sativum (Linn)	UMBELLIFERAE	/kfu; k
107	Costus speciosus (Koen) smith	ZINGIBERACEAE	døp dln

	Botanical Name	Family Name	fglnh uke
108	<i>Crataeva nurvala</i> (Buch-Ham)	CAPPARIDACEAE	c#.k
109	<i>Crinum asiaticum</i> (Linn)	AMARYLLIDACEAE	l q' kZ
110	<i>Croton tiglium</i> (Linn)	EUPHORBIACEAE	tekyxk/k
111	<i>Cuminum Cyminum</i> (Linn)	UMBELLIFERAE	l On thjk
112	<i>Curculigo orchoides</i> (Gaertn.)	AMARYLLIDACEAE	dkyh e# yh
113	<i>Curcuma amada</i> (Roxb)	ZINGIBERACEAE	vkek gYnh
114	<i>Curcuma domestica</i> (Valsyn) longa	ZINGIBERACEAE	gYnh
115	<i>Cuscuta reflexa</i> (Roxb)	CONVOLVULACEAE	vejosy
116	<i>Cymbopogon citratus</i> (Andropogon citratus)	POACEAE (GRAMINAE)	Hkr'.k
117	<i>Cymbopogon Schoenanthus</i> (Linn)	POACEAE (GRAMINAE)	jkfg" k ?kkl
118	<i>Cynodon dactylon</i> (Linn) Pefs	POACEAE (GRAMINAE)	gjh nnc
119	<i>Cyperus rotundus</i> (Linn)	CYPERACEAE	ekfkk
120	<i>Dalbergia sissoo</i> (Roxb)	FABACEAE (LEGUMINOSAE)	'khl e
121	<i>Datura metal</i> (Linn. Syn) <i>Datura innoxia</i>	SOLANACEAE	dkyk /krjk
122	<i>Datura Stramonium</i> (Linn)	SOLANACEAE	dud /krjk
123	<i>Daucus Carota</i> L. Var. <i>Sativa</i> D. C.	UMBELLIFERAE	xktj
124	<i>Desmodium gangeticum</i> (D.C.)	FABACEAE (LEGUMINOSAE)	'kkyi .khl
125	<i>Digitalis purpurea</i> (Linn)	SCROPHULARIACEAE	fryi R=h
126	<i>Dillenia indica</i> (Linn)	DILLENACEAE	fpYVk
127	<i>Dioscorea bulbifera</i> (Linn)	DIOSCORIACEAE	okjgh dm
128	<i>Eclipta alba</i> (Hassk.)	ASTERACEAE (COMPOSITAE)	Hkxjkt
129	<i>Elettaria Cardamomum</i> (Maton.)	ZINGIBERACEAE	Nk/h byk; ph
130	<i>Embelia ribes</i> (Burm. F.)	MYRSINACEAE	ok; foMa -
131	<i>Emblca officinalis</i> (Geartn.)	EUPHORBIACEAE	vkeydh
132	<i>Erioborya Japonica</i> (Linn)	ROSACEAE	yfJKV
133	<i>Ervatamia Coronaria</i> (Jacq. Syn) <i>Tabernaemontana divaricata</i>	APOCY ANACEAE	plmuh
134	<i>Erythrina indica</i> (Lam)	FABACEAE (LEGUMINOSAE)	i kfjHknz
135	<i>Euphorbia antiquorum</i> (Linn)	EUPHORBJACEAE	ctd.Vd
136	<i>Euphorbia hirta</i> (Linn) <i>E.pilllilitera</i> (Ljnn)	EUPHORBIACEAE	nq/kdk
137	<i>Euphorbianeriifolia</i> (Linn)	EUPHORBIACEAE	l gqM
138	<i>Euphorbia tirucalli</i> (Linn)	EUPHORBIACEAE	'kkryk
139	<i>Euryale ferox</i> (Salisb)	NYMPHAEACEAE	e[kkuk
140	<i>Evolvulus alsinoides</i> (Linn)	CONVOLVULACEAE	uhy 'k[ki qi h
141	<i>Feronia elephantum</i> (Correa)	RUTACEAE	dfi jFk
142	<i>Ferula foetida</i> (Regd. Syn) <i>feruala narthex</i> (Boiss)	UMBELLIFERAE	ghx
143	<i>Ficus bengalensis</i> (Linn)	MORACEAE	oV
144	<i>Ficus Carica</i> (Linn)	MORACEAE	va:hj

	Botanical Name	Family Name	fglnh uke
145	Ficus glomerata (Roxb. Syn) F. recemosa	MORACEAE	xnyj
146	Ficus religiosa (Linn)	MORACEAE	i hi y
147	Foel1iculum Vulgare (Mill)}	UMB.ELLIFERAE	l kD
148	Fumaria indica (Pugsley)	FUMARIACEAE	fi Rr i ki Mk
149	Gardenia gummifera (Linn)	RUBIACEAE	Mhdkeyh
150	Gloriosa superba. (Linn)	LILIACEAE	dfygkjh
151	Glycyrrhiza glabra (Bois)	FABACEAE (LEGUMINOSAE)	e/kq SBh
152	Gmelina arborea (Roxb)	VERBINACEAE	xEgkj
153	Gossypium herbaceum (Linn)	MALVACEAE	dikl
154	Grewia subinaequalis (D.c.Syn) gasiatica	TILIACEAE	Qky l k
155	Grevillea robusta. (A.Cunn.)	PROTEACEAE	fl Yoj vktD
156	Gymnema Sylvestre (R. Br.)	ASCLEPIADACEAE	xMekj
157	Gynandropsis pentaphylla. (D.C.)	CAPPARIDACEAE	'or gj&gj
158	Hedychium spicatum (Hamex. smith)	ZINGIBERACEAE	xzk i yk' kh
159	Helianthus Annuus (Linn)	ASTERACEAE (COMPOSIT AE)	l w Bqkh
160	Hemidesmus indicus (R.Br.)	ASCLEPIADACEAE	l kfjok
161	Hibiscus rosa-sinesis (Linn)	MALVACEAE	xMgy
162	Holarrhena antidysenterica (Wall)	APOCY ANACEAE	dWt
163	Jasminum grandiflorum (Linn)	OLEACEAE	peyh
164	Jasminum Sambac (Ait.)	OLEACEAE	eksjk
165	Jatropha Curcas (Linn)	EUPHORBIACEAE	0; k/kz , j.M
166	Jatropha gossypifolia (Linn)	EUPHORBIACEAE	jrutkr
167	Juniperus communis (Linn)	CLJPRESSACEAE	gi tkk
168	Lagerstroemia speciosa (Pers. Syn.)	LYTHRACEAE	tk: y
169	Lantana camara (Linn)	VERBINACEAE	ou rnyl h
170	Lawsonia inermis Linn. L. alba.	LYTHRACEAE	eDndk
171	Lepidium Sativum Linn	BRASSICACEAE (CRUCIFERAE)	peyDl=h
172	Leptadenia reticulata. W & A	ASCLEPIADACEAE,	thouh
173	Leucas Cephalotes spreng	LAMIACEAE (LABIATAE)	nkski qih
174	Linum Usitatissimum. (Linn)	LNACEAE	vyl h
175	Litchi chil1ensis Syl1. Nephelium litchi comb.	SAPINDACEAE	fyph
176	Loral1thus lol1gitlorus Desrsyn. Dendrophoe falcata	LORANTHACEAE	oknk
177	Luffaacutangula (Linn) Roxb Var.amaraclark.	CUCURBITACEAE	dMeh rkjbZ
178	Lycopersicon esculentum Mill	SOLANACEAE	VelVj
179	MallotusPhillippinensis Mue'l Arg	EUPHORBIACEAE	dihyk
180	Mangifera indica. (Linn)	ANACARDIACEAE	vke

	Botanical Name	Family Name	fglnh uke
181	Melia azedarach. (Linn)	MELIACEAE	odk; u
182	Mentha Piperata (Linn)	LAMIACEAE	fi i jfelV
183	Mentha Spicata (Linn)	LAMIACEAE (LABIATAE)	i qhuk
184	Mesua ferrea	GUTTIFERAE	ukxds kj
185	Michelia champaca (Linn)	MANGNOLIACEAE	l kspEi k
186	Mimosa pudica (Linn)	MIMOSAE (LEGUMINOSAE)	yTtkolrh
187	Mimusops elengi (Linn)	SAPOTACEAE.	cdy
188	Mirabilis jalapa (Lil111)	NYCTAGINACEAE	xyokl
189	Momordica charantia (Linn)	CUCURBITACEAE	djyk
190	Momordica dioica (Roxb)	CUCURBITACEAE	ddk/dh
191	Moringa pterygosperma (Gaertn)	MORINGACEAE	l fgat uk
192	Morus indica (Griff.)	MORACEAE	l gr r
193	Mucuna Pruriens (Bek.)	FABACEAE (LEGUMINOSAE)	dkp
194	Murraya koenigii. Spreng	RUTACEAE	ehBh uhe
195	Murraya paniculata Jack Syn. M.exotica	RUTACEAE	dkfeuh
196	Musa sapientum (Linn) M. paradisiaca.	MUSACEAE	dyyk
197	Myrica nagi Thunb. M.esculanta ct1lq	MYRICACEAE	dk; Qy
198	Myristica fragrans Houtt.	MYRISTICACEAE	tk; Qy
199	Myristica fragrans Houtt	MYRISTICACEAE	tkfo=li
200	Nardostachys jatamansi	VALERIANACEAE	tVked h
201	Nelumbium speciosum (Willd)	NYMPHAEACEAE	dey
202	Nerium odorum Soland.	APOCYANACEAE	duj
203	Nigella Sativa Linn	RANUNCULACEAE	dylk h
204	Nyctanthes arbor-tristis (Linn)	OLEACEAE	gjfl xkj
205	Ocimum basilicum (Linn)	LAMIACEAE (LABIATAE)	dij ryl h
206	Ocimum canum sines. o. americanum	LAMIACEAE (LABIATAE)	ou ryl h
207	Ocimum grattissimum (Linn)	LAMIACEAE (LABIATAE)	jke ryl h
208	Ocimum sanctum (Linn)	LAMIACEAE (LABIATAE)	xgh ryl h
209	Oldenlandia Corymbosa (Linn)	RUBIACEAE	{ks- iiV
210	Operculina terperthum Silva Manso. Ipomoea terperthum	CONVOLVULACEAE	fu' ksk
211	Oroxylum indicum Vent.	BIGNONIACEAE	l ksk i kBk
212	Oxalis Corniculata (Linn)	OXALIDACEAE	pkxjh
213	Pandanus odoratissimus Roxb	PANDANACEAE	dkMk
214	Papaver Somniferum (Linn)	PAPAVERACEAE	vOhe
215	Pedaliium murex (Linn)	PEDALIACEAE	cMk xsk k#
216	Peucedonum graveolens (Linn)	UMBELLIFERAE	'kri qik
217	Phaseolus trilobus. Alt	FABACEAE (LEGUMINOSAE)	ou ek
218	Phyllanthus niruri (Linn) P. asperulatus	EUPHORBIACEAE	HkVZ vkbyk

	Botanical Name	Family Name	fglnh uke
219	Physalis minima (Linn)	SOLANACEAE	Vd kjh
220	Phyla nodiflora. Lippia nodiflora Rich	VERBENACEAE	ty ih iy
221	Picrosida kurroa. Royle exbenth.	SCROPHULARIACEAE	dV ph
222	Pinus longifolia Roxb.	PINACEAE	phM+
223	Piper betle Linn.	PIPERACEAE	i ku
224	Piper longum (Linn)	PIPERACEAE	fi li yh
225	Piper nigrum (Linn)	PIPERACEAE	dkyh efjp
226	Piper Sylvaticum Roxb	PIPERACEAE	igkMh ih iy
227	Pluchea lanceolata Oliver & Hiern.	COMPOSITAE (ASTERACEAE)	Nf=e v'kkd
228	Plumbago Zeylanica Linn.	PLUMBAGINACEAE	fp=d
229	Plumeria acutifolia Poir.	APOCYNACEAE	jkl uk
230	Pluchea lanceolata Oliver & Hiern.	COMPOSITAE (ASTERACEAE)	[kj pEik
231	Pongamia pinnata Syn P. glabra. Vent	FABACEAE (LEGUMINOSAE)	dja
232	Portulaca oleracea (Linn)	PORTULACACEAE	cMh yk k
233	Portulaca quadrifida (Linn)	PORTULACACEAE	y?kq yk k
234	Prosopis spicigera	MIMOSAE (LEGUMINOSAE)	'keh
235	Prunus amygdalus Batsch.	ROSACEAE	cknke
236	Prunus persica Batsch.	ROSACEAE	vkMw
237	Psoralea corylifolia (Linn)	FABACEAE (LEGUMINOSAE)	ckdph
238	Psidium guajava (Linn)	MYRTACEAE	ve: n
239	Pterocarpus marsupium. Roxb.	FABACEAE (PAPILIONACEAE)	vl u
240	Pueraria tuberosa D.C.	FABACEAE (LEGUMINOSAE)	fokjh dm
241	Punica granatum. (Linn)	PUNICACEAE	vukj
242	Putranjiva roxburghii. Wall	EUPHORBIACEAE	fi rkt ; k
243	Pyrus malus (Linn)	ROSACEAE	l d
244	Quisqualis indica (Linn)	COMBRETACEAE	e/kyrh
245	Randia dumetorum Lam.	RUBIACEAE	enu
246	Raphanus sativus Linn	BRASICACEAE (CRUCIFERAE)	ewh
247	Rauwolfia serpentina Benth. ex. kurz.	APOCYNACEAE	l i kzk
248	Ricinus communis Linn	EUPHORBIACEAE	, j. M
249	Rosa centifolia (Linn)	ROSACEAE	xgyc
250	Rubia cordifolia Linn	RUBIACEAE	efit" Bk
251	Saccharum officinarum. Linn	POACEAE (GRAMINAE)	bzk
252	Salvia malabarica.	BOMBACEAE	ley
253	Santalum album Linn.	SANTALACEAE	l Qn plnu
254	Sansevieria roxburghiana Schult.	HAEMODORACEAE	ukxneu
255	Sapindus trifoliatus (Linn)	SAPINDACEAE	jhbK
256	Saraca indica	CAESALPINACEAE (LEGUMINOSAE)	v'kkd

	Botanical Name	Family Name	fglnh uke
257	Saxifraga ligulata Wall.	SAXIFRAGACEAE	i k"kk. kHkn
258	Sesamum indicum'Linn.	PEDALIACEAE	fry
259	Shorea robusta gaertn.	DIPTEROCARPACEAE	' kky
260	Sida Cordifolia (Linn)	MALVACEAE	cyk
261	Sida rhombifolia (Linn)	MALVACEAE	egkcyk
262	Smilax china (Linn)	LILIACEAE	pki phuh
263	Solanum indicum (Linn)	SOLANACEAE	cgrh
264	Solanum melongena (Linn)	SOLANACEAE	cXq
265	Solanum nigrum (Linn)	SOLANACEAE	edks
266	Solanum Surattense Brumt. S.Xanthocarpum.	SOLANACEAE	d\dkfjdk y?kq
267	Soymida febrifuga. A. Juss	MELIACEAE	jksgh
268	Spinacia oleracea (Linn)	CHENOPODIACEAE	iky d ' kkd
269	Strychnos nux vomica (Linn)	LOGANIACEAE	dpyk
270	Swertia chirayata Roxb.Syn.	GENTIANACEAE	fpjk; rk
271	Symplocos racemosa Roxb. Syn. mu	SYMPLOCACEAE	ykskz
272	Syzygium aromatica. Meril & Perry.	MYRTACEAE	yks
273	Syzygium cumini Skeels Syn.	MYRTACEAE	cMh tkeq
274	Tagetes erecta (Linn)	ASTERACEAE	xnk
275	Tamarindus indica (Linn)	CAESALPINACEAE LEGUMINOCEAE	beyh
276	Tamarix articulata. Vahl.	TAMARICACEAE	Nksh i=okl
277	Tamarix gallica (Linn)	TAMARICACEAE	cMh i=okl
278	Tectona grandis (Linn)	VERBINACEAE	l kxoku
279	Tephrosia purpurea Linn	FABACEAE (LEGUMINOSAE)	'kj i k
280	Teramnus labialis spreng	FABACEAE (LEGUMINOSAE)	ek"ki .khz
281	Terminalia arjuna. Bedd.	COMBRETACEAE	vtq
282	Terminalia belerica. Roxb.	COMBRETACEAE	foHkhrd
283	Terminalia chebula Retz.	COMBRETACEAE	gjhrdh 1/2cMh
284	Terminalia tomentosa. W & A.	COMBRETACEAE	vl u
285	Thevetia neriifolia Juss.	APOCYANCEAE	i hyk duj
286	Thuja orientalis	CUPRESSACEAE	e; j i k
287	Tinospora cordifolia (Willd) Miers.	MENISPERMACEAE	fxys
288	Trapa natans (Linn)	TRAPACEAE	fl 2kkMk
289	Tribullis terrestris (Linn)	ZYGOPHYLLACEAE	xkskj
290	Trichosanthes dioica. Roxb.	CUCURBITACEAE	ijoy
291	Trigonella foenum graecum (Linn)	FABACEAE (LEGUMINOSAE)	esfkd
292	Tylophora indica (Burm.f.) Merr.	ASCLEPIADACEAE	vd i .khz
293	Uraria picta. Desv.	FABACEAE (LEGUMINOSAE)	ifji .khz

	Botanical Name	Family Name	fglnh uke
294	<i>Urginia indica</i> . kunth.	LILIACEAE	txyh l;kt
295	<i>Vernonia anthelmintica</i> (Willd)	ASTERACEAE (COMPOSITAE)	ou thjk
296	<i>Vernonia cinerea</i> Less.	ASTERACEAE (COMPOSITAE)	l gnøh
297	<i>Vetiveria zizanioides</i> (Linn) Nash.	POACEAE (GRAMINAE)	ohj .key
298	<i>Viola odorata</i> Linn	VIOLACEAE	xgy cui 'kk
299	<i>Vitex negundo</i> (Linn)	VERBENACEAE	fuxq Mh
300	<i>Vitis Vinifera</i> (Linn)	VITACEAE	nk{kk
301	<i>Withania Somnifera</i> Dunal.	SOLANACEAE	výxalkk
302	<i>Wrightia tinctoria</i> R. Br. Syn.	APOCYANACEAE	ehBk blnzt o
303	<i>Zingiber officinale</i> Roscoe.	ZINGIBERACEAE	vnj [k
304	<i>Zizyphus Vulgaris</i> Lam.	RHAMNACEAE	jkt cnj

xg u{k= okfVdkvka dk jks .k

gekjs _f"ka&efu;ka us çR;çd xg ,oa u{k= ls lEcfU/kr iksks ds cks ea tkudkj ,d= dh Fkh rFk uoxg ,oa u{k= okfVdk,a LFkfir dh FkhA lnb ls ;g ekU;rk jgh gS fd xg&u{k=ka ds dç:Hkkoka ls o{k ,oa ouLifr; kll/lekr ;k de dj ldrh gA

Hkkjrh; ekU;rk es l w Æ. My ds lelR lnl;ka o milnl;ka ¼ftlea l w l o plnek Hkh 'kkfey g% dks xg dgk x;k gA ;g /kjr dh djhc gks ls budh flFkr rst cnyrh jgrh gA u{k= /kjr ls vr; r nij gks ls LFku cnys ugha çhr gks vr% flFkj vFkz u{k= dgs x; A Hkkjrh; euhf"ka us vkl eku ea l unek ds ;k=k&fK dks 27 Hkkxka ea ck/k rFk gj 27oa Hkkx ea iMus okys rkjkeMy ds chp dñ fof"kv rkjka dh igpku dj mlga ,d uke fn;k ftlga u{k= dgk x;ka bl çdkj uoxgka rFk 27 u{k=ka dh igpku dh x;hA

fdlh 0;fDr ds tle ds le; pnek /kjr ls ftl u{k= dh lh/k ea jgrk g% ;g ml 0;fdr dk tle u{k= dgykrk gA

xg] u{k=} ikska dk mYy[k ikskf.kd] T;ksr"k] vk; pñnd] rki=d o vl; xBFka ea feyrk g% buea ls iæ[k xBFk g% %

- ikskf.kd xBFk ukjn igk.k
- T;ksr"k xBFk ukjn ligrk
- vk; pñnd xBFk jkt fu?k/ q ogr~ l p q] ukjk; .kh ligrk
- rki=d xBFk 'kkjnk fryd] ea=egk.kb] Jh fo|k.kb ræ vfn
- vl; xBFk vkulnJe izk'ku] ouLifr&v/;kre] u{k=&o{k vfn

lHkh rF;ka ij fopkj djus ds ckn fofHku xgka ,oa u{k=ka ds fy, ftu ikska ds uke fu"d"lz ea vk;s gA mudk fooj.k rkfydk 1 o 2 ea n'kkz k x;k gA

ikrduk'ku ,oa 'kkjhfd d"V fuokj.k gsrq xgka ds vuq kj jRuka ds /kkj.k djus dk T;ksr"k 'kkL= ea ito/kku gA mlh izdkj xgka ,oa u{k=ka ls lEcfU/kr ikska dks mxkus ls Hkh ykxka dks eukok{kr Qy fey ldrk gA egf"lz pjd ds vuq kj /ke] vFk] dke] ek{k dks ikr djus gsrq vkjkk; jguk vko';d gA

LoLFk 'kjhj ,oa nh?kzthou ikr djus ds fy, Hkstu] 'kq] ok; q ty rFk inkk.k jgr i;kbj.k vko';d gA egkrek ry/hkl us fy[kk g%

"xxu lehj vuy ty /kjuhA budh ukFk lgt tM+ djuhAA"

blga e;kznr djus ea o{kouLifr;ka dh vge Hkedk lnb ls jgh gA yxHkx lHkh dkyka ea ^ou] cks] miou] okfVdk l j dii oklh lksgh* dh iFk jgh gA vkt Hkh gfj;kyh rFk 'kq] i;kbj.k ds ifr ge tkx: d gA

xgka dh 'kkār grq iutk&i kB] ;K&gou ea fo'kšk iztkfr ds iYyo] i[i] Qy] dk"B dh vko'; drk iMfh gS tks fd uoxg ,oa u{k=ka ls lEcfl/kr iškks gh ns ldrs gA ijk.kka ds vuq kj ftl u{k= ea xg fo|eku gka ml le; ml u{k= lca/kh iškks dk ; RuiwZ l j{k.k rFkk iutu ls xg dh 'kkār gksh gS rFkk tkrd dks eukokā{kr Qy feyrk gA

rkfydk% 1
u{k=ka ls lEcfl/kr iškks

Ø- l a	u{k=	nork	j{k' k	iškks dk uke	
				l kdr	fglnh
1-	vf' ouh	vf' ouh	ešk	dkjdjk	dfpyk
2-	Hkj.kh		ešk	/kko	vkoyk
3-	dfrdk	vfXu	ešk@o" k	mnfcj	xnyu
4-	jkfg.kh	cgek	o" k	tEcw	tkep
5-	exf' kjk	l ke	o" k@feFkp	[kfnj	[kš
6-	vkntZ	: nz	feFkp	d".k	' kh' ke
7-	i qoZ q	vf nfr	feFkp@ddZ	oZ k	ckd
8-	i ti	cgLifr	ddZ	v' oRFk	i hi y
9-	vk' yšk	l wZ	ddZ	tkx	ukxdj
10-	e/kk	fi rj	fl g	oV	cjxn
11-	i wZ QkYxqih	Hkx	fl g	i yk' k	Bkd
12-	mRrjh QkYxqih	vHkZ k	fl g@dU; k	ly{k	i kdM+
13-	gLr	l fork	dU; k	vfjoV	jhBk
14-	fp	Ro"Vk	dU; k@eryk	foY;	cy
15-	Lokrh	ok; q	ryk	vtq	vtq
16-	fo' kk [kk	bnkfxu	ryk@of' pd	foddr	dVbz
17-	vuqj/kk	fe=	of' pd	ody	ekyJh
18-	T; SBk	bnz	of' pd	l jy	phM+
19-	eyk	fu_fr	/kuq	l xZ	l ky
20-	i wZkk<k	ty	/kuq	oxy	tyorl
21-	mRrjk"kk<k	fo' onD	/kuq@edj	i ul	dVgy
22-	Jo.k	fo".kq	edj	vdZ	enkj
23-	?kfu"Bk	ol q	edj@dtk	' keh	N; kZj
24-	' krfe"kd	o: .k	dtk	dnEc	dnEc
25-	i wZ Hkknz n	vtZin	dtk@ehu	vkez	vke
26-	mRrjk Hkknz n	vfgZqk;	ehu	fuEc	uhe
27-	jorh	i kk	ehu	e/kud	egyk

rkfydk% 2
xgka ls lEcfl/kr iškks

Ø- l a	xg dk uke	intu@gou grq iškks
1-	jfo	enkj
2-	l ke	i yk' k
3-	eaxy	[kš
4-	cdk	vi kexZ ¼yVthjk½
5-	cgLifr	i hi y
6-	' kØ	xgyj
7-	' kfu	' keh
8-	jkq	nrc
9-	drq	dq k

uoxg okVdk
mRrj

	dq k ¼dr½	i hi y ¼cgLifr½	vi kexZ ¼yVthjk½ ¼cdk½
if'pe	' keh ¼' kfu½	enkj ¼jfo½	Xgyj ¼' kØ½
	nrc ¼jkq½	[kš ¼eaxy½	i yk' k ¼l ke½

nf{k.k

List of Herbal Plants

	Botanical Name	Family Name	fglnh uke
1	<i>Abrus precatorius</i>	LEGUMINOSAE (FABACEAE)	xqk
2	<i>Abutilon indicum</i>	MALVACEAE	vfrcyk
3	<i>Acacia catechu</i>	LEGUMINOSAE (MIMOSAE)	[kfnj
4	<i>Acacia collicinna</i>	LEGUMINOSAE (MIMOSAE)	f'kdldkbl
5	<i>Acacia nilotica</i>	LEGUMINOSAE (MIMOSAE)	ccny
6	<i>Acalypha hispida</i>	EUPHORBIACEAE	lgyrku
7	<i>Achyranthus aspera</i>	AMARANTHACEAE	vikexl
8	<i>Aconitum heterophyllum</i>	RANUNCULACEAE	vfrfo"kk
9	<i>Acorus calamus</i>	ARACEAE	opk
10	<i>Adallsonia digitata</i>	BOMBACACEAE	xkj{kh
11	<i>Adhatoda vasica</i> (Nees)	ACANTHACEAE	vMk
12	<i>Adiantum lunu1atum</i> (Burm)	POLYPODIACEAE	gll i knh
13	<i>Aegle marmelos</i> (Corr)	RUTACEAE	fcYo
14	<i>Agave americana</i> (Linn)	AGAVACEAE	dWkyk
15	<i>Aijallthusexcelsa</i> (Roxb)	SIMARUBACEAE	vjyoks
16	<i>Albizzia lebbek</i> (Bellth)	LEGUMINOSAE (MIMOSAE)	f'kjh"k
17	<i>Allium cepa</i> (Linn)	LILIACEAE	iyk. Mq
18	<i>Allium sativum</i> (Linn)	LILIACEAE	yl q
19	<i>Alocasia indica</i> (Roxb)	ARACEAE	ekudn
20	<i>Aloe barbadensis</i> (Mill)	IJILIACEAE	?krdøkjh
21	<i>Alpinia galanga</i> (Willd)	ZINGIBERACEAE	egkHkjhop
22	<i>Alstonia scholaris</i> (R.Br)	APOCYANACEAE	l Iri .kz
23	<i>Althea officinalis</i> (Linn)	ACEAE	[k#
24	<i>Amaranthus spinosus</i> (Lilln)	AMARANTHACEAE	r. Mgyh;
25	<i>Amarryllis beladonna</i> (Linn)	AMARRYLLIDACEAE	cSykMksik fyfy
26	<i>Amomum subulatum</i> (Roxb)	ZINGIBERACEAE	cgnsyk
27	<i>AmorphophaJlus companulatus</i> (Blume)	ARACEAE	l jjudn
28	<i>Anacardium occidentales</i> (Linn)	ANACARDIACEAE	crkM+
29	<i>Anacyclus pyrethrum</i> (D.C)	ASTERACEAE (COMPOSITEAE)	vkdj dje
30	<i>Ananas cosmosum</i> (Merr)	BROMELIACEAE	vUukukl
31	<i>Andrographis paniculata</i> (Nees)	ACANTHACEAE	HkñuEc
32	<i>Annonasquamosa</i> (Linn)	ANNONACEAE	l hrkQy
33	<i>Anthocephalus cadamba</i> (Miq)	RUBIACEAE	dnEc

34	<i>Apium graveolens</i> (Linn)	UMBELLIFERAE	vtekr
35	<i>Aralia nudicaulis</i> (Linn)	ARALIACEAE	y{e.kk

	Botanical Name	Family Name	fglnh uke
36	Arec~catechu (Linn)	PALMAE	i wkhQy
37	ArgeiT1one maxicana (Linn)	PAPAVARACEAE	dVq .kiz
38	Argyreia speciosa (Sweet Syn)	CONVOL VULACEAE	o) nkjd
39	Aristolochia indica, (Linn)	ARISTOLOCHACEAE	bžyjh
40	Artemissia yulgaris (Linn)	ASTERACEAE (COMPOSITAE)	neud
41	Artocarpusintegrifolia (Linri)	MORACEAE	i u'k
42	Ascleplas curassavica (Linn)	ASCLEPIADACEAE	dkdukl k
43	Asparagus adscendens (Roxb)	LILIACEAE	yretkyh
44	Asparagus recemosus (Willd)	LILIACEAE	'krkoj
45	Asteracantha longifolia (Nees)	ACANTHACEAE	dkfdyk{k
46	A verrhoa carambola	OXALIDACEAE	dejlk
47	Azadirachta indica	MELIACEAE	uhe
48	Bacopa monieri (Linn)	SCROPHULARIACEAE	tyuhe
49	Balanites roxbu ghi (Planch)	SIMARUBACEAE	bxqph
50	Bombusa arundnacla (Willd)	POACEAE (GRAMINAE)	oákykpu
51	Barleria prionitis (Linn)	ACANTHACEAE	i hkokl k
51	Basella alba (Linn)	CHENOPODIACEAE	i frdk
53	Bauhinia purpurea (Linn)	LEGUMINOSAE (CAESALPINACEAE)	dkfonkj ½ky½
54	Bauhin.ia v~riegata (Linn)	LEGUMINOSAE (CAESALPINACEAE)	dpukj
55	Berberis arlstata (D.C)	BERBERIDACEAE	nk#gYnh
56	Biophytum sensitivum (Linn)	GERANIACEAE (OXALIDACEAE)	vyEcqkk
57	Boerhaavia diffusa (Linn)	NYCTAGINACEAE	ykyi quzbk
58	Brassica campestris	CRUCIFERAE (BRASSICACEAE)	l j l ka
59	Brassica Juncea (Linn)	BRASSICACEAE (CRUCIFERAE)	ykyjkbz
60	Brassica oleracea (Linn)	BRASSICACEAE (CRUCIFERAE)	i Rrk xtklkh
61	Bryophyllum calycinum Salib	CRASSULACEAE	i RFkj pj
62	Butea frondosa koenex (Roxb)	LEGUMINOSAE (FABACEAE)	i yk' k
63	Caesalpinia bonducela Fleming	LEGUMINOSAE (CAESALPINACEAE)	i frdjat
64	Callicarpa macrophylla (Linn)	VERBENACEAE	fç; xq
65	Calotropis procera (Aif)	ASCLEPIADACEAE	vydz
66	Cannabis indica (Linn)	CANNABINACEAE	nofdyh
67	Cannabis Sativa (Linn)	CANNABINACEAE	Hkkx
68	Capsicum annum (Linn)	SOLANACEAE	fejpk
69	Carica papaya (Linn)	CARICACEAE	i i hrk
70	Carum copticum (Benth & Hook)	UMBELLIFERAE	vtok; u
71	Cassa auriculata (Linn)	CAESALPINACEAE	vcj
72	Cassia absus (Linn)	LEGUMINOSAE (CAESALPINACEAE)	p{kt; k
73	Cassia angustifolia (Vahl)	LEGUMINOSAE (CAESALPINACEAE)	l uk;

	Botanical Name	Family Name	fglnh uke
74	Cassia fistula (Linn), Cassia rhombifolia	LEGUMINOSAE (CAESALPINACEAE)	veyrkl
75	Cassia occidentalis (Linn)	LEGUMINOSAE, (CAESALPINACEAE)	dkl enl
76	Cassiatora (Linn)	LEGUMINOSAE (CAESALPINACEAE)	pøenl
77	Catharanthes roseus (L.) vincarosea	APOCYANACEAE	l nckgkj
78	Cedrela toona (Roxb Syn) toona ciliata roem	MELIACEAE	ru
79	Cedrus deodara. (Roxb) Loud	PINACEAE	nønkj
80	Celastrus paniculatus (Willd)	CELASTRACEAE	eky dkxuh
81	Celosia argentea. (Linn)	AMARANTHACEAE	f' kfrkj
82	Centella asiatica (Linn) (Hydrocotyle asiatica)	UMBELLIFERAE	eMdi .klz
83	Cestrum diuranum (Linn)	SOLANACEAE	fnu dk jtkk
84	Cestrum nocturnum (Linn)	SOLANACEAE	jkrjkuh
85	Chenopodium albu (Linn)	CHENOPODIACEAE	cFkq/k
86	Chlorophytum borivilianum (Sant & Ferm)	LILIACEAE	l Qn et yh
87	Cicerarietinum (Linn)	LEGUMINOSAE (FABACEAE)	puk
88	Cinnamomum camphora (Nees & Eberm)	LAURACEAE	phud diij
89	Cinnamomum tamala (Nees & Eberm)	LAURACEAE	rstikr
90	Cinnamomum zeylanicum (Blume Syn)	LAURACEAE	nkyphuh
91	Cissampelos pareira (Linn)	MENISPERMACEAE	i kBk
92	Cissus quadrangularis (Linn)	VITACEAE	gMt kM+
93	Citrullus colocynthis (Schrader)	CUCURBITACEAE	blk; .k
94	Citrus medica var. acida watt.)	RUTACEAE	dkxth uhew
95	Citrus medica (Linn)	RUTACEAE	fctlgk
96	Cleome viscosa (Linn Syn)	CAPPARIDACEAE	i hyk ggij
97	Clerodendron inerme (Lil111)	VERBENACEAE	Nk/k vjuh
98	Clerodendron phlomidis (Linn)	VERBENACEAE	vjuh
99	Clerodendron serratum (Spreng)	VERBENACEAE	Hkkj> -h
100	Clitoria ternatea (Linn)	FABACEAE (LEGUMINOSAE)	vijkftrk
101	Coccinia indica (W & A)	CUCURBITACEAE	dtn:
102	Coleus aromaticus (Benth)	LABIATAE	i RFkj pj
103	Commiphora mukul (Hook & Exstocks)	BURSERACEAE	xlxxy
104	Convolvulus pluricaulis (Choisy)	CONVOLVULACEAE	' k[ki ti h
105	Cordia myxa (Ro.xbSyn) Cordia dichotoma	BORAGINACEAE	fyI kMk
106	Coriandrum sativum (Linn)	UMBELLIFERAE	/kfu; k
107	Costus speciosus (Koen) smith	ZINGIBERACEAE	døp dln

	Botanical Name	Family Name	fglnh uke
108	<i>Crataeva nurvala</i> (Buch-Ham)	CAPPARIDACEAE	c#.k
109	<i>Crinum asiaticum</i> (Linn)	AMARYLLIDACEAE	l q' kZ
110	<i>Croton tiglium</i> (Linn)	EUPHORBIACEAE	tekyxk/k
111	<i>Cuminum Cyminum</i> (Linn)	UMBELLIFERAE	l On thjk
112	<i>Curculigo orchoides</i> (Gaertn.)	AMARYLLIDACEAE	dkyh e# yh
113	<i>Curcuma amada</i> (Roxb)	ZINGIBERACEAE	vkek gYnh
114	<i>Curcuma domestica</i> (Valsyn) longa	ZINGIBERACEAE	gYnh
115	<i>Cuscuta reflexa</i> (Roxb)	CONVOLVULACEAE	vejosy
116	<i>Cymbopogon citratus</i> (Andropogon citratus)	POACEAE (GRAMINAE)	Hkr'.k
117	<i>Cymbopogon Schoenanthus</i> (Linn)	POACEAE (GRAMINAE)	jkfg" k ?kkl
118	<i>Cynodon dactylon</i> (Linn) Pefs	POACEAE (GRAMINAE)	gjh nnc
119	<i>Cyperus rotundus</i> (Linn)	CYPERACEAE	ekfkk
120	<i>Dalbergia sissoo</i> (Roxb)	FABACEAE (LEGUMINOSAE)	'khl e
121	<i>Datura metal</i> (Linn. Syn) <i>Datura innoxia</i>	SOLANACEAE	dkyk /krjk
122	<i>Datura Stramonium</i> (Linn)	SOLANACEAE	dud /krjk
123	<i>Daucus Carota</i> L. Var. <i>Sativa</i> D. C.	UMBELLIFERAE	xktj
124	<i>Desmodium gangeticum</i> (D.C.)	FABACEAE (LEGUMINOSAE)	'kkyi .khl
125	<i>Digitalis purpurea</i> (Linn)	SCROPHULARIACEAE	fryi R=h
126	<i>Dillenia indica</i> (Linn)	DILLENACEAE	fpYVk
127	<i>Dioscorea bulbifera</i> (Linn)	DIOSCORIACEAE	okjgh dm
128	<i>Eclipta alba</i> (Hassk.)	ASTERACEAE (COMPOSITAE)	Hkxjkt
129	<i>Elettaria Cardamomum</i> (Maton.)	ZINGIBERACEAE	Nk/h byk; ph
130	<i>Embelia ribes</i> (Burm. F.)	MYRSINACEAE	ok; foMa -
131	<i>Emblca officinalis</i> (Geartn.)	EUPHORBIACEAE	vkeydh
132	<i>Erioborya Japonica</i> (Linn)	ROSACEAE	yfJKV
133	<i>Ervatamia Coronaria</i> (Jacq. Syn) <i>Tabernaemontana divaricata</i>	APOCY ANACEAE	plmuh
134	<i>Erythrina indica</i> (Lam)	FABACEAE (LEGUMINOSAE)	i kfjHknz
135	<i>Euphorbia antiquorum</i> (Linn)	EUPHORBJACEAE	ctd.Vd
136	<i>Euphorbia hirta</i> (Linn) <i>E.pilllilitera</i> (Ljnn)	EUPHORBIACEAE	nq/kdk
137	<i>Euphorbianeriifolia</i> (Linn)	EUPHORBIACEAE	l gqM
138	<i>Euphorbia tirucalli</i> (Linn)	EUPHORBIACEAE	'kkryk
139	<i>Euryale ferox</i> (Salisb)	NYMPHAEACEAE	e[kkuk
140	<i>Evolvulus alsinoides</i> (Linn)	CONVOLVULACEAE	uhy 'k[ki qi h
141	<i>Feronia elephantum</i> (Correa)	RUTACEAE	dfi jFk
142	<i>Ferula foetida</i> (Regd. Syn) <i>feruala narthex</i> (Boiss)	UMBELLIFERAE	ghx
143	<i>Ficus bengalensis</i> (Linn)	MORACEAE	oV
144	<i>Ficus Carica</i> (Linn)	MORACEAE	va:hj

	Botanical Name	Family Name	fglnh uke
145	Ficus glomerata (Roxb. Syn) F. recemosa	MORACEAE	xnyj
146	Ficus religiosa (Linn)	MORACEAE	i hi y
147	Foel1iculum Vulgare (Mill)}	UMB.ELLIFERAE	l kD
148	Fumaria indica (Pugsley)	FUMARIACEAE	fi Rr i ki Mk
149	Gardenia gummifera (Linn)	RUBIACEAE	Mhdkeyh
150	Gloriosa superba. (Linn)	LILIACEAE	dfygkjh
151	Glycyrrhiza glabra (Bois)	FABACEAE (LEGUMINOSAE)	e/kq SBh
152	Gmelina arborea (Roxb)	VERBINACEAE	xEgkj
153	Gossypium herbaceum (Linn)	MALVACEAE	dikl
154	Grewia subinaequalis (D.c.Syn) gasiatica	TILIACEAE	Qky l k
155	Grevillea robusta. (A.Cunn.)	PROTEACEAE	fl Yoj vktD
156	Gymnema Sylvestre (R. Br.)	ASCLEPIADACEAE	xMekj
157	Gynandropsis pentaphylla. (D.C.)	CAPPARIDACEAE	'or gj&gj
158	Hedychium spicatum (Hamex. smith)	ZINGIBERACEAE	xzk i yk' kh
159	Helianthus Annuus (Linn)	ASTERACEAE (COMPOSIT AE)	l w Bqkh
160	Hemidesmus indicus (R.Br.)	ASCLEPIADACEAE	l kfjok
161	Hibiscus rosa-sinesis (Linn)	MALVACEAE	xMgy
162	Holarrhena antidysenterica (Wall)	APOCY ANACEAE	dWt
163	Jasminum grandiflorum (Linn)	OLEACEAE	peyh
164	Jasminum Sambac (Ait.)	OLEACEAE	eksjk
165	Jatropha Curcas (Linn)	EUPHORBIACEAE	0; k/kz , j.M
166	Jatropha gossypifolia (Linn)	EUPHORBIACEAE	jrutkr
167	Juniperus communis (Linn)	CLJPRESSACEAE	gi tkk
168	Lagerstroemia speciosa (Pers. Syn.)	LYTHRACEAE	tk: y
169	Lantana camara (Linn)	VERBINACEAE	ou rnyl h
170	Lawsonia inermis Linn. L. alba.	LYTHRACEAE	eDndk
171	Lepidium Sativum Linn	BRASSICACEAE (CRUCIFERAE)	peyDl=h
172	Leptadenia reticulata. W & A	ASCLEPIADACEAE,	thouh
173	Leucas Cephalotes spreng	LAMIACEAE (LABIATAE)	nkski qih
174	Linum Usitatissimum. (Linn)	LNACEAE	vyl h
175	Litchi chil1ensis Syl1. Nephelium litchi comb.	SAPINDACEAE	fyph
176	Loral1thus lol1gitlorus Desrsyn. Dendrophoe falcata	LORANTHACEAE	oknk
177	Luffaacutangula (Linn) Roxb Var.amaraclark.	CUCURBITACEAE	dMeh rkjbZ
178	Lycopersicon esculentum Mill	SOLANACEAE	VelVj
179	MallotusPhillippinensis Mue'l Arg	EUPHORBIACEAE	dihyk
180	Mangifera indica. (Linn)	ANACARDIACEAE	vke

	Botanical Name	Family Name	fglnh uke
181	Melia azedarach. (Linn)	MELIACEAE	odk; u
182	Mentha Piperata (Linn)	LAMIACEAE	fi i jfelV
183	Mentha Spicata (Linn)	LAMIACEAE (LABIATAE)	i qhuk
184	Mesua ferrea	GUTTIFERAE	ukxdš kj
185	Michelia champaca (Linn)	MANGNOLIACEAE	l kspEi k
186	Mimosa pudica (Linn)	MIMOSAE (LEGUMINOSAE)	yTtkolrh
187	Mimusops elengi (Linn)	SAPOTACEAE.	cdy
188	Mirabilis jalapa (Lil111)	NYCTAGINACEAE	xyokl
189	Momordica charantia (Linn)	CUCURBITACEAE	djyk
190	Momordica dioica (Roxb)	CUCURBITACEAE	ddk/dh
191	Moringa pterygosperma (Gaertn)	MORINGACEAE	l fgat uk
192	Morus indica (Griff.)	MORACEAE	l gr r
193	Mucuna Pruriens (Bek.)	FABACEAE (LEGUMINOSAE)	dkp
194	Murraya koenigii. Spreng	RUTACEAE	ehBh uhe
195	Murraya paniculata Jack Syn. M.exotica	RUTACEAE	dkfeuh
196	Musa sapientum (Linn) M. paradisiaca.	MUSACEAE	dyyk
197	Myrica nagi Thunb. M.esculanta ct1lq	MYRICACEAE	dk; Qy
198	Myristica fragrans Houtt.	MYRISTICACEAE	tk; Qy
199	Myristica fragrans Houtt	MYRISTICACEAE	tkfo=li
200	Nardostachys jatamansi	VALERIANACEAE	tVked h
201	Nelumbium speciosum (Willd)	NYMPHAEACEAE	dey
202	Nerium odorum Soland.	APOCYANACEAE	duj
203	Nigella Sativa Linn	RANUNCULACEAE	dylk h
204	Nyctanthes arbor-tristis (Linn)	OLEACEAE	gjfl xkj
205	Ocimum basilicum (Linn)	LAMIACEAE (LABIATAE)	dij ryl h
206	Ocimum canum sines. o. americanum	LAMIACEAE (LABIATAE)	ou ryl h
207	Ocimum grattissimum (Linn)	LAMIACEAE (LABIATAE)	jke ryl h
208	Ocimum sanctum (Linn)	LAMIACEAE (LABIATAE)	xlgh ryl h
209	Oldenlandia Corymbosa (Linn)	RUBIACEAE	{ks- iiV}
210	Operculina terperthum Silva Manso. Ipomoea terperthum	CONVOLVULACEAE	fu' ksk
211	Oroxylum indicum Vent.	BIGNONIACEAE	l ksk i kBk
212	Oxalis Corniculata (Linn)	OXALIDACEAE	pkxjh
213	Pandanus odoratissimus Roxb	PANDANACEAE	dpMk
214	Papaver Somniferum (Linn)	PAPAVERACEAE	vOhe
215	Pedaliium murex (Linn)	PEDALIACEAE	cMk xsk k#
216	Peucedonum graveolens (Linn)	UMBELLIFERAE	'kri qik
217	Phaseolus trilobus. Alt	FABACEAE (LEGUMINOSAE)	ou ek
218	Phyllanthus niruri (Linn) P. asperulatus	EUPHORBIACEAE	HkVZ vkbyk

	Botanical Name	Family Name	fglnh uke
219	Physalis minima (Linn)	SOLANACEAE	Vd kjh
220	Phyla nodiflora. Lippia nodiflora Rich	VERBENACEAE	ty ih iy
221	Picrolepis kurroa. Royle ex Benth.	SCROPHULARIACEAE	dV ph
222	Pinellia longifolia Roxb.	PINACEAE	ph M+
223	Piper betle Linn.	PIPERACEAE	i ku
224	Piper longum (Linn)	PIPERACEAE	fi li yh
225	Piper nigrum (Linn)	PIPERACEAE	dk yh efjp
226	Piper sylvaticum Roxb	PIPERACEAE	ig kM i hi y
227	Pluchea lanceolata Oliver & Hiern.	COMPOSITAE (ASTERACEAE)	Nf=e v' kkd
228	Plumbago zeylanica Linn.	PLUMBAGINACEAE	fp=d
229	Plumeria acutifolia Poir.	APOCYNACEAE	jkl uk
230	Pluchea lanceolata Oliver & Hiern.	COMPOSITAE (ASTERACEAE)	[kj pEik
231	Pongamia pinnata Syn P. glabra. Vent	FABACEAE (LEGUMINOSAE)	dja
232	Portulaca oleracea (Linn)	PORTULACACEAE	cM yk k
233	Portulaca quadrifida (Linn)	PORTULACACEAE	y?k yk k
234	Prosopis spicigera	MIMOSAE (LEGUMINOSAE)	'keh
235	Prunus amygdalus Batsch.	ROSACEAE	cknke
236	Prunus persica Batsch.	ROSACEAE	vkM
237	Psoralea corylifolia (Linn)	FABACEAE (LEGUMINOSAE)	ckd ph
238	Psidium guajava (Linn)	MYRTACEAE	ve: n
239	Pterocarpus marsupium. Roxb.	FABACEAE (PAPILIONACEAE)	vl u
240	Pueraria tuberosa D.C.	FABACEAE (LEGUMINOSAE)	fokjh dm
241	Punica granatum. (Linn)	PUNICACEAE	vukj
242	Putranjiva roxburghii. Wall	EUPHORBIACEAE	fi rkt ; k
243	Pyrus malis (Linn)	ROSACEAE	l d
244	Quisqualis indica (Linn)	COMBRETACEAE	e/kyrh
245	Randia dillmetorum Lam.	RUBIACEAE	enu
246	Raphanus sativus Linn	BRASICACEAE (CRUCIFERAE)	ewh
247	Rauwolfia serpentina Benth. ex. kurz.	APOCYNACEAE	l i kdk
248	Ricinus communis Linn	EUPHORBIACEAE	, j.M
249	Rosa centifolia (Linn)	ROSACEAE	xgyc
250	Rubia cordifolia Linn	RUBIACEAE	ef t" Bk
251	Saccharum officinarum. Linn	POACEAE (GRAMINAE)	b k
252	Salvia malabarica.	BOMBACEAE	l ey
253	Santalum album Linn.	SANTALACEAE	l Qn plnu
254	Sansevieria roxburghiana Schult.	HAEMODORACEAE	ukxneu
255	Sapindus trifoliatus (Linn)	SAPINDACEAE	jhBk
256	Saraca indica	CAESALPINACEAE (LEGUMINOSAE)	v' kkd

	Botanical Name	Family Name	fglnh uke
257	Saxifraga ligulata Wall.	SAXIFRAGACEAE	i k'kk. kHkn
258	Sesamum indicum Linn.	PEDALIACEAE	fry
259	Shorea robusta Gaertn.	DIPTEROCARPACEAE	'kky
260	Sida cordifolia (Linn)	MALVACEAE	cyk
261	Sida rhombifolia (Linn)	MALVACEAE	egkcyk
262	Smilax china (Linn)	LILIACEAE	pki phuh
263	Solanum indicum (Linn)	SOLANACEAE	cgrh
264	Solanum melongena (Linn)	SOLANACEAE	cXq
265	Solanum nigrum (Linn)	SOLANACEAE	edks
266	Solanum Surattense Brumt. S.Xanthocarpum.	SOLANACEAE	d\dkfjdk %y?kq
267	Soymida febrifuga. A. Juss	MELIACEAE	jksgh
268	Spinacia oleracea (Linn)	CHENOPODIACEAE	iky d 'kcd
269	Strychnos nux vomica (Linn)	LOGANIACEAE	dpyk
270	Swertia chirayata Roxb.Syn.	GENTIANACEAE	fpjk; rk
271	Symplocos racemosa Roxb. Syn. mu	SYMPLOCACEAE	yk/kz
272	Syzygium aromaticum. Meril & Perry.	MYRTACEAE	yk&
273	Syzygium cumini Skeels Syn.	MYRTACEAE	cMh tkeq
274	Tagetes erecta (Linn)	ASTERACEAE	xnk
275	Tamarindus indica (Linn)	CAESALPINACEAE LEGUMINOCEAE	beyh
276	Tamarix articulata. Vahl.	TAMARICACEAE	Nk/h i=okl
277	Tamarix gallica (Linn)	TAMARICACEAE	cMh i=okl
278	Tectona grandis (Linn)	VERBINACEAE	l kxoku
279	Tephrosia purpurea Linn	FABACEAE (LEGUMINOSAE)	'kji d k
280	Teramnus labialis Spreng	FABACEAE (LEGUMINOSAE)	ek'ki. khz
281	Terminalia arjuna. Bedd.	COMBRETACEAE	vtq
282	Terminalia bellerica. Roxb.	COMBRETACEAE	foHkhrd
283	Terminalia chebula Retz.	COMBRETACEAE	gjhrdh 1/2cMh
284	Terminalia tomentosa. W & A.	COMBRETACEAE	vl u
285	Thevetia neriifolia Juss.	APOCYNACEAE	i hyk duj
286	Thuja orientalis	CUPRESSACEAE	e; j i d k
287	Tinospora cordifolia (Willd) Miers.	MENISPERMACEAE	fxys
288	Trapa natans (Linn)	TRAPACEAE	fl 2kkMk
289	Tribulus terrestris (Linn)	ZYGOPHYLLACEAE	xkqkj
290	Trichosanthes dioica. Roxb.	CUCURBITACEAE	ijoy
291	Trigonella foenum graecum (Linn)	FABACEAE (LEGUMINOSAE)	esfdk
292	Tylophora indica (Burm.f.) Merr.	ASCLEPIADACEAE	vd7. khz
293	Uraria picta. Desv.	FABACEAE (LEGUMINOSAE)	ifji. khz

	Botanical Name	Family Name	fglnh uke
294	<i>Urginia indica</i> . kunth.	LILIACEAE	txyh l;kt
295	<i>Vernonia anthelmintica</i> (Willd)	ASTERACEAE (COMPOSITAE)	ou thjk
296	<i>Vernonia cinerea</i> Less.	ASTERACEAE (COMPOSITAE)	l gnøh
297	<i>Vetiveria zizanioides</i> (Linn) Nash.	POACEAE (GRAMINAE)	ohj .keyy
298	<i>Viola odorata</i> Linn	VIOLACEAE	xgy cui 'kk
299	<i>Vitex negundo</i> (Linn)	VERBENACEAE	fuxqMh
300	<i>Vitis Vinifera</i> (Linn)	VITACEAE	nk{kk
301	<i>Withania Somnifera</i> Dunal.	SOLANACEAE	výxalkk
302	<i>Wrightia tinctoria</i> R. Br. Syn.	APOCYANACEAE	ehBk blnzt o
303	<i>Zingiber officinale</i> Roscoe.	ZINGIBERACEAE	vnj [k
304	<i>Zizyphus Vulgaris</i> Lam.	RHAMNACEAE	jkt cnj

xg u{k= okfVdkvka dk jks .k

gekjs _f"ka&efu; ka us çR; çd xg ,oa u{k= ls lEcfU/kr iksks ds ckjs ea tkudkj ,d= dh Fkh rFkk uoxg ,oa u{k= okfVdk, a LFkfir dh FkhA Inb ls ;g ekU;rk jgh gS fd xg&u{k=ka ds dçHkkoka ls o{k ,oa ouLifr; kll lekr ;k de dj ldrh gA

Hkkjrh; ekU;rk es l w Æ. My ds leLr InL; ka o milnL; ka ¼tlea l w l o plnek Hkh 'kkfey g% dks xg dgk x; k gA ;g /kjr dh ds djhc gksus ls budh fLFkr rst cnyrh jgrh gA u{k= /kjr dh ls vr; r nij gksus ls LFkku cnysr ugha çhr gks vr% fLFkj vFkkzr u{k= dgs x; A Hkkjrh; euhf"ka; ka us vkl eku ea lUnek ds ;k=k&iFk dks 27 Hkkxka ea ck/kk rFkk gj 27oa Hkkx ea iMus okys rkjkeMy ds chp dñ foF'k"V rkjka dh igpku dj mlga ,d uke fn; k ftlga u{k= dgk x; kA bl çdkj uoxgka rFkk 27 u{k=ka dh igpku dh x; hA

fdlh 0; fDr ds tle ds le; pnek /kjr dh ls ftl u{k= dh lh/k ea jgrk g% ;g ml 0; fdr dk tle u{k= dgykrk gA

xg] u{k=] ikska dk mYys[k ikskf.kd] T; ksr"ka] vk; pñd] rka=d o vl; xBFka ea feyrk g% buea ls ied[k xBFk g% %

- ikskf.kd xBFk ukjn igk.k
- T; ksr"ka xBFk ukjn l fgrk
- vk; pñd xBFk jkt fu?k/w] ogr- l p] ukj; .kh l fgrk
- rka=d xBFk 'kkjnk fryd] ea=egk.kb] Jh fo|k.kb ræ vfn
- vl; xBFk vkulnkJe idk'ku] ouLifr&v/; kRe] u{k=&o{k vkfn

lHkh rF; ka ij fopkj djus ds ckn foFHKUu xgka ,oa u{k=ka ds fy, ftu ikska ds uke fu"d"z ea vk; s gA mudk fooj.k rkfydk 1 o 2 ea n'kkz k x; k gA

ikrduk'ku ,oa 'kkjhfd d"V fuokj.k gsrq xgka ds vuq kj jRuka ds /kkj.k djus dk T; ksr"ka 'kkL= ea iko/kku gA mlh idkj xgka ,oa u{k=ka ls lEcfU/kr ikska dks mxkus ls Hkh ykska dks eukok{kr Qy fey ldrk gA egf"z pjd ds vuq kj /ke] vFk] dke] eksk dks ikr djus gsrq vkjkk; jguk vko'; d gA

LoLFk 'kjhj ,oa nh?kzthou ikr djus ds fy, Hkkstu] 'kq] ok; j ty rFkk inkk.k jgr i; kbj.k vko'; d gA egkRek ry/hnkl us fy[kk g%

"xxu lehj vuy ty /kjuhA budh ukFk lgt tM+ djuhAA"

blga e; kznr djus ea o{kouLifr; ka dh vge Hkkedk Inb ls jgh gA yxHkx lHkh dkya ea ^ou] ckx] miou] okfVdk l j dñ oklh lksgh* dh iFkk jgh gA vkt Hkh gfj; kyh rFkk 'kq] i; kbj.k ds ifr ge tkx: d gA

xgka dh 'kkār grq iutk&i kB] ;K&gou ea fo'kšk iztkfr ds iYyo] i[i] Qy] dk"B dh vko'; drk iMfh gS tks fd uoxg ,oa u{k=ka ls lEcfu/kr iškks gh ns ldrs gA ijk.kka ds vuq kj ftl u{k= ea xg fo|eku gla ml le; ml u{k= lca/kh iškks dk ; RuiwZ l j{k.k rFkk iutu ls xg dh 'kkār gksh gS rFkk tkrd dks eukokā{kr Qy feyrk gA

rkfydk% 1
u{k=ka ls lEcfu/kr iškks

Ø- l a	u{k=	nork	jfk' k	iškks dk uke	
				l kdr	fglnh
1-	vf' ouh	vf' ouh	ešk	dkjdjk	djpyk
2-	Hkj.kh		ešk	/kko	vkoyk
3-	dfrdk	vfXu	ešk@o" k	mnfcj	xnyu
4-	jkfg.kh	cgek	o" k	tEcw	tkep
5-	exf' kjk	l ke	o" k@feFkp	[kfnj	[kš
6-	vkntZ	: nz	feFkp	d".k	' kh' ke
7-	i qoZ q	vf nfr	feFkp@ddZ	oā k	ckā
8-	i ti	cgLifr	ddZ	v' oRFk	i hi y
9-	vk' yšk	l wZ	ddZ	tkx	ukxdj
10-	e/kk	fi rj	fl g	oV	cjxn
11-	i wZ QkYxqih	Hkx	fl g	iyk' k	Bkd
12-	mRrjh QkYxqih	vHkZ k	fl g@dU; k	ly{k	ikdM+
13-	gLr	l fork	dU; k	vfjoV	jhBk
14-	fp	Ro"Vk	dU; k@eryk	foY;	cy
15-	Lokrh	ok; q	ryk	vtū	vtū
16-	fo' kk [kk	bntfxu	ryk@of' pd	foddr	dVkbZ
17-	vuqj/kk	fe=	of' pd	ody	ekyJh
18-	T; SBk	bnz	of' pd	l jy	phM+
19-	eyk	fu_fr	/kuq	l xZ	l ky
20-	i wZkk<k	ty	/kuq	oxy	tyorl
21-	mRrjk"kk<k	fo' onD	/kuq@edj	iul	dVgy
22-	Jo.k	fo".kq	edj	vdZ	enkj
23-	?kfu"Bk	ol q	edj@dtk	' keh	N; kZj
24-	'krfe"kd	o: .k	dtk	dnEc	dnEc
25-	i wZ Hkknā n	vtāin	dtk@ehu	vkez	vke
26-	mRrjk Hkknā n	vfgZqkū;	ehu	fuEc	uhe
27-	jorh	i wkk	ehu	e/kud	egyk

rkfydk% 2
xgka ls lEcfu/kr iškks

Ø- l a	xg dk uke	intu@gou grq iškks
1-	jfo	enkj
2-	l ke	iyk' k
3-	eaxy	[kš
4-	cdk	vikexZ ¼yVthjk½
5-	cgLifr	i hi y
6-	' kØ	xgyj
7-	' kfu	' keh
8-	jkq	nrc
9-	drq	dqk

uoxg okVdk
mRrj

	dqk ¼drk½	i hi y ¼cgLifr½	vikexZ ¼yVthjk½ ¼cdk½
if'pe	' keh ¼' kfu½	enkj ¼jfo½	Xgyj ¼' kØ½
	nrc ¼jkq½	[kš ¼eaxy½	iyk' k ¼l ke½

nf{k.k

Location Map

