

List of Figures

Figure No.	Titles	Page No.
1.1	The Ergonomic Concept	4
2.1	Right and Wrong position of Back Bone in Standing Posture	52
3.1	Causal Comparative Component of the Research Design	87
3.2 (a)	Conceptual Frame Work of Descriptive Study.	88
3.2 (b)	Conceptual Frame Work of Experimental Study.	89
3.3(a)	Hypothetical Relationship of Variables for Descriptive Work.	90
3.3(b)	Hypothetical Relationships of Variables for Experimental Work	97
3.3(c)	Hypothetical Relationship of Variables for among Physiological Cost of Work	97
3.4 (a)	Map of Uttaranchal	112
3.4 (b)	Agricultural Map of Uttaranchal	112
3.5	Schematic Representation of Sampling Design Adopted for the Study	114
3.6	Equipment and Formula used for Measuring Physical Fitness of Women Farmers	117
3.7	Equipments Used for Measuring Physiological Cost of Work of Women Farmers	120
3.8	Polar Heart Rate Monitor used for Physiological Cost (Heart Rate, beats/min)	121
4.1	Distribution of women farmers according to Age group	131
4.2	Distribution of women farmers according to Educational level	131
4.3	Distribution of women farmers according to their occupation	132
4.4	Distribution of women farmers, women headed household	135
4.5	Distribution of women farmers according to type of family	135
4.6	Distribution of women farmers according to size of family	138
4.7	Distribution of women farmers according to total Family income of the family	138
4.8	Distribution of women farmers according to number of animals and livestock	139

4.9	Body Discomfort experience by women farmers	144
4.10	Mean Difference in Heart Rate (beats/bin) of Women Farmers During Activity with Traditional and Modified Technologies	169
4.11	Mean Difference in Working Heart Rate (beats/bin) of Women Farmers During Activity with Traditional and Modified Technologies in Relation to Output of Work	178
4.12	Mean Difference in Energy Expenditure of Women Farmers During Activity with Traditional and Modified Technologies	187
4.13	Total Cardiac Cost of Work (TCCW) of Women Farmers During Activity with Traditional and Modified Technologies	196
4.14	Mean Difference in Muscular Stress (Grip Strength) of Women Farmers During Activity with Traditional and Modified Technologies	205
4.15	Postural Stress (Angle of Deviation) of Women Farmers During Activity with Traditional and Modified Technologies	215
4.16	Extent of Body Discomfort experienced by women farmers during digging of land with modified technology.	229
4.17	Extent of Body Discomfort experienced by women farmers during digging of land with traditional technology.	229
4.18	Extent of Body Discomfort experienced by women farmers during leveling of land with modified technology.	231
4.19	Extent of Body Discomfort experienced by women farmers during leveling of land with traditional technology.	231
4.20	Extent of Body Discomfort experienced by women farmers during application of manure with modified technology.	233
4.21	Extent of Body Discomfort experienced by women farmers during application of manure with traditional technology.	233
4.22	Extent of Body Discomfort experienced by women farmers during sowing with modified technology.	235
4.23	Extent of Body Discomfort experienced by women farmers during sowing with traditional technology.	235
4.24	Extent of Body Discomfort experienced by women farmer during interculture with modified technology.	237
4.25	Extent of Body Discomfort experienced by women farmers during interculture with traditional technology.	237

4.26	Extent of Body Discomfort experienced by women farmer during hoeing with modified technology.	239
4.27	Extent of Body Discomfort experienced by women farmers during hoeing with traditional technology.	239
4.28	Extent of Body Discomfort experienced by women farmer during weeding with modified technology.	241
4.29	Extent of Body Discomfort experienced by women farmers during weeding with traditional technology.	241
4.30	Extent of Body Discomfort experienced by women farmer during harvesting with modified technology.	243
4.31	Extent of Body Discomfort experienced by women farmers during harvesting with traditional technology.	243
4.32	Extent of Body Discomfort experienced by women farmer during threshing with modified technology.	245
4.33	Extent of Body Discomfort experienced by women farmers during threshing with traditional technology.	245
4.34	Extent of Body Discomfort experienced by women farmer during winnowing with modified technology.	247
4.35	Extent of Body Discomfort experienced by women farmers during winnowing with traditional technology.	247
4.36	Digging of Land with Traditional Hoe	253
4.37	Interculture with (Kudal) Traditional Technology	256
4.38	Hoeing with (Kudal) Traditional Technology	257
4.39	Hoeing with Modified Hoe	262
4.40	Weeding with Traditional Method	263
4.41	Weeding with (Hoe) Modified Technology	264
4.42	Interculture with (Kutla) Modified Technology	267
4.43	Levelling of land with land leveller	270
4.44	Application of Manure with Hand Scraper	274
4.45	Application of Manure with Traditional Method	275
4.46	Modified technology for Sowing (Hand wheel seeder)	278
4.47	Sowing of Seed with Traditional Method	279
4.48	Modified Technology for Dehusking Grains (Tubular Maize Sheller)	282
4.49	Harvesting with Modified Sickle	284