



**TABLE OF CONTENTS**

	<b>Page</b>
Acknowledgements	iii
Abstract (In English)	iv
Abstract (In Thai)	vi
Table of Contents	viii
List of Tables	ix
List of Figures	xiii
Chapter 1 Introduction	1
Chapter 2 Literature Review	11
Chapter 3 Methodology	62
Chapter 4 Results	77
Chapter 5 Conclusions	211
Bibliography	233
Appendix	241
Curriculum Vitae	279

## LIST OF TABLES

<b>Table</b>		<b>Page</b>
1	Population sampling	66
2	Numbers and percentage of farmers by tribes	78
3	Number and percentage of farmers by gender	78
4	Number and percentage of farmers by age	79
5	Education level of farmers	80
6	Number of household members	81
7	Number and Percentage of school' age household member	82
8	Number and Percentage of working age household member	83
9	Number and Percentage of farm households by income	84
10	Number and percentage of total household land area	86
11	Number and Percentage news receiving of the farmer from media	88
12	Contact between farmers and extension staff and government officials	89
13	Farmers' participation in local activities	90
14	Farmers' participation in agricultural activities	91
15	Farmers' participation in training and study tour of agriculture	92
16	Number and Percentage of duration of the resident	93
17	Number and Percentage of the benefits of sustainable agriculture in the highland area	95
18	Number and percentage of farmer's knowledge about sustainable agricultural development in the highland area.	98
19	Number and percentage of farmers' participating in consultation on sustainable agricultural development projects in the plants growing on soil and water conservation in the Royal project in the highland area	102

**LIST OF TABLES (CONT.)**

<b>Table</b>		<b>Page</b>
20	Farmers' participating in proposing the solution and decision making in sustainable agricultural development projects in the plants growing in soil and water conservation of the Royal Project in the highland area	104
21	Farmers' participating in cooperation of sustainable agricultural development projects in the plants grown in soil and water conservation of the Royal Project in the highland area	107
22	Farmers' participating in practice of sustainable agricultural development projects in the plants cultivation in soil and water conservation of the Royal Project in the highland area	110
23	Farmers' participating in caring the sustainable agricultural development projects in the plants cultivation in soil and water conservation of the Royal Project in the highland area	112
24	Farmers' participating in benefits the sustainable agricultural development projects in the plants cultivation in soil and water conservation of the Royal Project in the highland area	114
25	Farmers' participating in the monitoring and evaluation the sustainable agricultural development projects in the plants cultivation in soil and water conservation of the Royal Project in the highland area	117
26	Values take week's New Property correlation between independent variables with the variables	119
27	Multiple Regression Analysis: Stepwise	120

**LIST OF TABLES (CONT.)**

<b>Table</b>		<b>Page</b>
28	Multiple Regression Analysis: Stepwise	121
29	Multiple Regression Analysis: Stepwise	122
30	Multiple Regression Analysis: Stepwise	123
31	The summarized statistics of Multiple Regression Analysis	127
32	Number and Percentage of farmers separated by a problem with participation of farmers	130
33	Farmers of case study in Tin Tok Royal Project Development Center	160
34	Problems found in planting vegetables	163
35	Problems found in planting coffee	163
36	Problems found in planting fruits	163
37	Problems found in term of the natural environmental conservation and tourism	163
38	The Operation Plan of Vegetable Cultivation	167
39	The Operation Plan of Coffee Cultivation	168
40	The Operational Plan of Fruit Cultivation	169
41	Operational plans of natural resources and environmental conservation and tourism in 2010	171
42	Participation level of Farmers in case study in Tin Tok Royal Project Development Center	184
43	Basic Information of the Royal Project Development Center, Chiang Mai Province	248
44	Basic Information of the Royal Project Development Center, Chiang Rai Province	249
45	Basic Information of the Royal Project Development Center, Mae Hong Son Province	249

**LIST OF TABLES (CONT.)**

<b>Table</b>		<b>Page</b>
46	Basic Information of the Royal Project Development Center, Pa Yao Province	249
47	Basic Information of the Royal Project Development Center, Lam Phun Province	250
48	Summary of the Technology Demonstration and Testing of the center (Plant Cultivation)	253
49	Summary of the Technology Demonstration and Testing of the center (Husbandry)	254

## LIST OF FIGURES

<b>Figure</b>		<b>Page</b>
1	Mixed Methodology of Framework of Quantitative Research and Qualitative Research	10
2	Research Conceptual Framework	63
3	Sampling Method	65
4	Quantitative Research Result Frame	133
5	Focus group discussion of Pa Miang Royal Project Development Center	135
6	Focus group discussion of Nong Hoi Royal Project Development Center	139
7	Focus group discussion of Mok Cham Royal Project Development Center	142
8	Focus group discussion of Nong Khiew Royal Project development Center	146
9	Focus group discussion of Huai Som Poi Royal Project Development Center	149
10	Focus group discussion of Mae Poon Luang Royal Project Development Center	152
11	The first meeting and forum	158
12	The second meeting and forum	161
13	The third meeting and forum	165
14	Study tour in Nong Kiaw, Chiang Dao district, Chiang Mai	173
15	Training of farmers in Tin Tok Royal Project Development Center	174
16	The study tour of fruit cultivation at Nong Kiew Development Center	175
17	Visiting by extension staff the Royal Project Development Center	177
18	Grading and packing product before send to market	178

**LIST OF FIGURES (CONT.)**

<b>Figure</b>		<b>Page</b>
19	Coffee product of farmer in Tin Tok Royal Project Development Center	178
20	The extension structure of Tin Tok Royal Project Development Center in research duration	179
21	The production and marketing of agricultural products during the research project	180
22	Farmers' participation in sustainable agricultural development in the highland area Frame	192
23	Visiting plan of extension staff	196
24	Visiting and contact between farmer and extension staff	196
25	Farmers' participation in Community development	197
26	Farmers' participation in growing vertiver grass	198
27	Making the operation plan	200
28	Making a line of fire and weeding along the road	201
29	Process of farmers' participation in SAD in Tin Tok RPDC model	206
30	Process of farmer's participation in SAD in RPDC model	218