Acknowledgements

I am greatly appreciative of several individuals who have been instrumental in the completion of this research and thesis. I take this opportunity to thank A.L. Hammett, PhD. for continuous advisement and assistance; my committee members for their comments and insight; and Shashi Kant, PhD. for sharing his valuable wisdom, advice, and encouragement. I also give deep thanks to my mother, Beverly Greene, father, Edward Greene, and my business team for providing a supportive, positive environment which has enabled me to complete this work.

In addition, I give thanks to the Virginia Environmental Endowment Fund for providing financial support for the completion of this research.

Table of Contents

Abstract	11
Acknowledgements	iii
Table of Contents	iv
Index to Figures, and Tables	vi
Chapter 1: Introduction	1
Chapter 2: Background	5
Chapter 3: NTFPs in the Literature	10
3.1 Economic Values of NTFPs	10
3.2 NTFP Marketing Systems	12
3.3 Research Methodologies	19
Chapter 4: Methodology	27
4.1 Natural, Social, and Economic Context	27
4.2 Data Collection	28
4.3 Interpretation of Results	33
Chapter 5: Natural, Social, and Economic Context	35
Chapter 6: NTFP Crafts (grapevine and birdhouses)	43
6.1 Organization of results for NTFP categories	43
6.2 Importance of NTFP crafts	43
6.3 Grapevine wreaths, baskets, and furniture	47
6.3.1 Grapevine ecology	48
6.3.2 Value addition and market outlets	49
6.3.3 Pricing	52
6.3.4 Promotion	53
6.3.5 Distribution and marketing chain	54
6.4 Birdhouses	56
6.4.1 Value addition and market outlets	57
6.4.2 Pricing	58
6.4.3 Promotion	59
6.4.4 Distribution and marketing chain	59
Chapter 7: Medicinal and Herbal Forest Products	61
7.1 Importance of medicinal and herbal NTFPs	61
7.2 Common medicinal and herbal products	64
7.4 Value addition and market outlets	66
7.5 Pricing	68
7.6 Promotion	69
7.7 Distribution and marketing chain	69

Chapter 8: Specialty Wood Products	72
8.1 Products	73
8.2 Value addition and market outlets	75
8.3 Pricing	77
8.4 Promotion	77
8.5 Distribution and marketing chain	78
Chapter 9: Edible Forest Products	80
9.1 Importance of Edible Forest Products	81
9.2 Fruits, berries, and nuts	81
9.2.1 Value addition	83
9.3 Mushrooms	83
9.3.1 Ecology	84
9.3.2 Common mushrooms	84
9.3.3 Shiitake importance in southwest Virginia	85
9.3.4 Value addition	86
9.3.5 Marketing	86
Chapter 10: Interpretation of Interview Results	88
10.1 Identification and discussion of NTFP variables	88
10.2 Identification and discussion of market player variables	92
10.3 Comparisons of marketing elements across	
market player categories	99
10.4 Comparisons between NTFP categories	110
Chapter 11: Conclusions	114
11.1 Conclusions based on research objectives	114
11.2 Marketing Opportunities	116
11.3 Remaining gaps and suggested studies	117
Appendix	120
A. Per capita personal income during 1994 and 1984	121
B. Graph of per capita personal income during 1994 and 1984	121
C. Unemployment data	122
Literature Cited	123
Vita	131

Index to Figures, and Tables

Figure 4.1 Map of Virginia	29
Figure 4.2 Map of southwest Virginia and seven counties in study site	29
Table 4.3 Number of market players interviewed	31
Table 4.4 Direct interview questions	33
Figure 5.1 Map of Appalachian region	36
Figure 6.3.1 Marketing chain for grapevine products in southwest Virginia	56
Figure 6.4.1 Marketing chain for birdhouses in southwest Virginia	60
Figure 7.1 Marketing chain for medicinal and herbal NTFPs from	
southwest Virginia	71
Figure 8.1 Marketing chain for musical instruments manufactured in	
southwest Virginia	79
Table 10.1 Identification variables important to NTFP trade in	
southwest Virginia	89
Table 10.2 Summary of observations critical to policy intervention in	
NTFP marketing	92
Table 10.3 Identification of market player variables for NTFP crafts in	
southwest Virginia	93
Table 10.4 Identification of market player variables for medicinal and	
herbal NTFPs in southwest Virginia	95
Table 10.5 Identification of market player variables for specialty wood	
products in southwest Virginia	97
Table 10.6 Ratings of market player variables and marketing elements	
for NTFP crafts	101
Table 10.7 Critical observations for policy intervention in trade of	
NTFP crafts	104
Table 10.8 Ratings of market player variables and marketing elements	
for medicinal and herbal NTFPs	104
Table 10.9 Critical observations for policy intervention in trade of	
medicinal and herbal NTFPs	106
Table 10.10 Ratings of market player variables and marketing elements	40-
for specialty wood products	107
Table 10.11 Critical observations for policy intervention in trade of	4.4.0
specialty wood products	110