

Willett, Lois Schertz

Working Paper

An Economic Analysis of the U.S. Honey Industry: Data Summary

Staff Paper, No. SP 92-13

Provided in Cooperation with:

Charles H. Dyson School of Applied Economics and Management, Cornell University

Suggested Citation: Willett, Lois Schertz (1992) : An Economic Analysis of the U.S. Honey Industry: Data Summary, Staff Paper, No. SP 92-13, Cornell University, Charles H. Dyson School of Applied Economics and Management, Ithaca, NY, <https://doi.org/10.22004/ag.econ.121362>

This Version is available at:

<https://hdl.handle.net/10419/276869>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

October 1992

Paper
A.E. Staff Report 92-13

AN ECONOMIC ANALYSIS OF THE U.S. HONEY INDUSTRY:

DATA SUMMARY

Lois Schertz Willett

**Department of Agricultural Economics
New York State College of Agriculture and Life Sciences
A Statutory College of the State University
Cornell University, Ithaca, New York 14853-7801**

AN ECONOMIC ANALYSIS OF THE U.S. HONEY INDUSTRY:

DATA SUMMARY

Lois Schertz Willett*

Author is Assistant Professor, Cornell University. The author appreciates helpful comments from Fred Hoff, Bob Smith and National Honey Board members. This research was supported in part by U. S. Department of Agriculture Economic Research Service Cooperative Agreements No. 58-3AEK-9-80005 and No. 58-3AEK-9-80006 and the National Honey Board. The author is solely responsible for the views expressed here and for any remaining errors.

TABLE OF CONTENTS

Introduction	1
Summary Tables	3
Producers	4
General Characteristics	5
Region of primary producer headquarters, by type firm	6
State of primary producer headquarters, by type firm	7
Location of primary residence, by type firm	9
Average size of producer households, by type firm and age	10
Major occupation of producers, by type firm and sex	11
Bee colonies and honey production, by type firm and region, 1985-88 average	12
Bee colonies and honey production, by type firm and age, 1985-88 average	13
Average production per colony of producer operations, by honey production, 1988	14
Average production per colony of producer operations, by colony size, 1988	15
Average honey production per colony by type firm and region, 1985-88 average	16
Average honey production per colony, by type firm and age, 1985-88 average	17
Pesticide and winter losses, by type firm, 1988	18
Reasons for a reduction in production, by type firm 1985-88	19
Bee colony transport, by type firm, 1985-88	20
Main purpose of transporting bees to other states, by type firm	21
Marketing	22
Grades of honey marketed, by type firm, 1985-88 average	23
Grades of honey marketed, by program participation and type firm, 1985-88	24
Grades of honey marketed, by beekeepers receiving pollination fees and type firm, 1985-88 average	25
Markets used to dispose of honey crop, by type firm, 1985-88 average	26
Advertising activities of beekeepers, by type firm, 1988	27
Promotional activities of producers, by type firm, 1988, number	28
Promotional activities of producers, by type firm, 1988, percent	29
Advertising activities of beekeepers, by type firm, 1988	30
Pollination Services	31
Receipt of pollination services, by type firm	32
Receipt of pollination fees, by age and firm type, 1988	33
Receipt of pollination fees, by age and firm type, 1988	34
Receipt of pollination fees, by education and firm type, 1988	35
Receipt of pollination fees, by education and firm type, 1988	36
Honey production of producers receiving pollination fees, by type firm, 1985-88	37
Average colony size, by receipt of pollination fees and type firm	38
Bee colonies used for paid pollination services, by type firm, 1988	39
Characteristics of pollination services provided, full time beekeepers, 1988	40

TABLE OF CONTENTS (continued)

Characteristics of pollination services provided, part time beekeepers, 1988	43
Producers receiving pollination fees, by family annual gross income, 1985-88	45
Producers receiving pollination fees, by gross income, 1985-88	46
Producers receiving pollination fees, by net income, 1985-88	47
Producers receiving pollination fees, by total value of assets, 1985-88	48
Producers receiving pollination fees, by total debt, 1985-88	49
 Honey support program	 50
Participation in honey price support program, by type firm	51
Participation in honey price support program, by type firm and year	52
Participation in honey price support program, by age	53
Participation in honey price support program, by education	54
Average products and services produced or provided, by program participation and firm type	55
Size of beekeeping operations, by participation in the honey price support program and type firm	58
Participation in honey price support program, by family annual gross income, 1988	61
Participation in honey price support program, by gross income, 1988	62
Participation in honey price support program, by net income, 1988	63
Participation in honey price support program, by total value of assets, 1988, 1988	64
Participation in honey price support program, by total debt, 1988	65
Average gross receipts from beekeeping products, services, and programs, by firm type	66
 Labor	 69
Beekeeping labor utilization, by type firm and region, 1988	70
Labor utilization of producers, by type firm and honey production, 1988	72
Labor utilization of producers receiving pollination income, by type firm and region, 1988	73
Labor utilization of producers, by type firm and net income, 1988	74
Average wage rate paid for hired labor, by type firm and region, 1988	75
 Average Gross Expenses	 76
Average gross expenses of producer operations, by type firm, 1988	77
Average gross expenses of producer operations who received pollination fees, by type firm, 1988	78
Average gross expenses of producer operations who did not receive pollination fees, by type firm, 1988	79
Average gross expenses of producer operations who received government payments, by type firm, 1988	80
Average gross expenses of producer operations who did not receive pollination fees, by type firm, 1988	81
Average gross expenses of producer operations , by colony size, 1988	82
Average gross expenses of producer operations , by honey production, 1988	83
Average gross expenses of full-time producer operations , by region, 1988	84

TABLE OF CONTENTS (continued)

Average gross expenses of part-time producer operations , by region, 1988	85
Average gross expenses of hobby producer operations , by region, 1988	86
Average Gross Receipts	87
Average gross receipts from beekeeping products, services, and programs, by firm type, 1988	88
Average gross receipts from beekeeping products, services, and programs of operations who received pollination fees, by firm type, 1988	89
Average gross receipts from beekeeping products, services, and programs of operations who did not receive pollination fees, by firm type, 1988	90
Average gross receipts from beekeeping products, services, and programs of operations who received government payments, by firm type, 1988	91
Average gross receipts from beekeeping products, services, and programs of operations who did not receive government payments, by firm type, 1988	92
Average gross receipts from beekeeping products, services, and programs of operations, by colony size, 1988	93
Average gross receipts from beekeeping products, services, and programs of operations, by honey production, 1988	94
Average gross receipts from beekeeping products, services, and programs of full-time operations, by region, 1988	95
Average gross receipts from beekeeping products, services, and programs of part-time operations, by region, 1988	96
Average gross receipts from beekeeping products, services, and programs of hobby operations, by region, 1988	97
Net Income	98
Net income of beekeeping operations, by firm type, 1988	99
Net income less government payments of beekeeping operations, by firm type, 1988	99
Net income of beekeeping operations who received pollination fees, by firm type, 1988	100
Net income of beekeeping operations who did not receive pollination fees, by firm type, 1988	100
Net income of beekeeping operations who received government payments, by firm type, 1988	101
Net income of beekeeping operations who did not receive government payments, by firm type, 1988	101
Net income of beekeeping operations, by colony size, 1988	102
Net income of beekeeping operations, by honey production, 1988	102
Net income of beekeeping operations, by firm type and region, 1988	103
Net income per colony, by firm type, 1988, number	104
Net income per colony, by firm type, 1988, percent	104
Net income per pound, by firm type, 1988, number	105
Net income per pound, by firm type, 1988, percent	105
Net income less government payments per colony, by firm type, 1988, number	106
Net income less government payments per colony, by firm type, 1988, percent	106

TABLE OF CONTENTS (continued)

Net income less government payments per pound, by firm type, 1988, number	107
Net income less government payments per pound, by firm type, 1988, percent	107
Net income per colony by receipt of pollination fees, by firm type, 1988, number	108
Net income per colony by receipt of pollination fees, by firm type, 1988, percent	109
Net income per pound by receipt of pollination fees, by firm type, 1988, number	110
Net income per pound by receipt of pollination fees, by firm type, 1988, percent	111
Net income per colony by receipt of government payments, by firm type, 1988, number	112
Net income per colony by receipt of government payments, by firm type, 1988, percent	113
Net income per pound by receipt of government payments, by firm type, 1988, number	114
Net income per pound by receipt of government payments, by firm type, 1988, percent	115
Correlation Statistics	116
Correlation matrix for selected structural characteristics, all firm, 1985-88 average	117
Correlation matrix for selected structural characteristics, full-time firms, 1985-88 average	118
Correlation matrix for selected structural characteristics, part-time firms, 1985-88 average	119
Correlation matrix for selected structural characteristics, hobby firms, 1985-88 average	120
Packers	121
General Characteristics	122
Packers, by type firm	123
Packers, by sex and type firm	124
Packers, by age and type firm	125
Packers, by occupation and type firm	126
Packers, by education and type firm	127
Packers, by residence and type firm	128
Packers, by average size of household and type firm	129
Packers, by region and type firm	130
Packers, by state and type firm	131
Packers subcontracted honey, by firm type, 1985-88	133
Packers' honey excluding subcontracted, by firm type, 1985-88	134
Marketing	135
Markets used to dispose of packed honey, 1985-88 average	136
Packers' advertising and promotional activities of honey, 1988, number	137
Packers' advertising and promotional activities of honey, 1988, percent	137

TABLE OF CONTENTS (continued)

Packers' advertising and promotional activities of honey with other products, 1988, number	138
Packers' advertising and promotional activities of honey with other products, 1988, percent	138
Packers' advertising and promotional activities of packing activities, 1988, number	139
Packers' advertising and promotional activities of packing activities, 1988, percent	139
Packers' advertising and promotional activities of other products and services 1988, number	140
Packers' advertising and promotional activities of other products and services 1988, percent	140
Financial	141
Packers' household gross income, by firm type, 1988	142
Packers' gross income, by firm type, 1988	143
Packers' net income, by firm type, 1988	144
Packers' total value of assets, by firm type, 1988	145
Packers' total debt, by firm type, 1988	146
Average gross expenses of packers, by type firm, 1988	147
Importers and Brokers	148
General Characteristics	149
Importers and brokers, by type firm	150
Importers and brokers, by sex and type firm	151
Importers and brokers, by age and type firm	152
Importers and brokers, by occupation and type firm	153
Importers and brokers, by education and type firm	154
Importers and brokers, by residence and type firm	155
Importers and brokers, by average size of household and type firm	156
Importers and brokers, by region and type firm	157
Importers and brokers, by state and type firm	158
Importers and brokers negotiated products, by firm type, 1985-88	160
Importers and brokers negotiated honey, by firm type, 1985-88	161
Marketing	162
Markets used to dispose of negotiated honey, 1985-88 average	163
Importers' and brokers' advertising and promotional activities of honey, 1988, number	164
Importers' and brokers' advertising and promotional activities of honey, 1988, percent	164
Importers' and brokers' advertising and promotional activities of honey with other nutritive sweeteners, 1988, number	165
Importers' and brokers' advertising and promotional activities of honey with other nutritive sweeteners, 1988, percent	165
Importers' and brokers' advertising and promotional activities of brokerage and importer services, 1988, number	166
Importers' and brokers' advertising and promotional activities of brokerage and importer services, 1988, percent	166

TABLE OF CONTENTS (continued)

Importers' and brokers' advertising and promotional activities of other products and services, 1988, number	167
Importers' and brokers' advertising and promotional activities of other products and services, 1988, percent	167
Financial	168
Importers' and brokers' household gross income, by firm type, 1988	169
Importers' and brokers' gross income, by firm type, 1988	170
Importers' and brokers' net income, by firm type, 1988	171
Importers' and brokers' total value of assets, by firm type, 1988	172
Importers' and brokers' total debt, by firm type, 1988	173
Average gross expenses of importers' and brokers', by type firm, 1988	174
Appendix: National Survey Instrument	175

AN ECONOMIC ANALYSIS OF THE U.S. HONEY INDUSTRY:

DATA SUMMARY

INTRODUCTION

The U.S. honey industry is undergoing a period of rapid change. The industry has concern about the possible effects of the infiltration of Africanized honey bees into the United States and what those bees might mean for honey production and providing pollination services. Varroa mites have heightened the industry's awareness of the potential effects of spreading bee diseases and parasites on the migratory behavior of beekeepers and the package bee and queen bee industry. There is continuing concern about the influence of pesticides on bees as they forage for food and pollinate crops. The effects of changing the federal honey price support program has industry participants anxious about the ability to maintain a positive cash flow in the future. Industry support of the National Honey Board, which has taken a role in promoting the use of honey in domestic and export markets, is strong. Finally, honey producers, packers, importers and brokers want to insure that all consumers receive a high quality product that is void of chemical alteration or pesticide residues.

To assist in identifying these issues and other issues that are of concern to the U.S. honey industry an economic study of the national honey industry was recommended and funded by the National Honey Board and the U.S. Department of Agriculture in 1989. This study, conducted by Cornell University, had two major components. The first emphasis was on a survey of the national honey industry. The purpose of the survey was to collect information to identify the needs and current economic status of the honey industry. The second emphasis of the research was to develop and expand an economic model of the national honey industry to aid in understanding the economic relationships in the industry. This model was to be used for simulation analysis of alternative

scenarios. The results were to be interpreted and implications for the industry were to be identified.

This report is one in a series of reports that summarizes the research on the economic analysis of the industry. In this report, summary tables compiled from the data collected by the national honey industry survey are presented. These tables identify characteristics of producers, packers, importers and brokers. Services provided by these industry participants, their financial situation, demographic characteristics are a few of the statistics presented. Several of these statistical tables were used as the basis for a U.S. Department of Agriculture publication on the U.S. beekeeping industry.

Other Cornell University reports included in the series that details the economic analysis of the industry include works (1) describing the survey sample and the type of mailing used, (2) summarizing the statistical frequency, mean, median, standard deviation, minimum and maximum of each question (3) identifying the raw data obtained from the survey, and (4) describing the economic model and scenario analyses. Additional works are to be published through the U.S. Department of Agriculture's publication series and in beekeeping trade journals.

SUMMARY TABLES

PRODUCERS

PRODUCERS - GENERAL CHARACTERISTICS

Region of primary producer headquarters, by type firm

Region of primary beekeeping headquarters	Type Firm			Total
	Full time	Part time	Hobby	
	Number			
Northeast	12	41	7	60
Southeast	42	61	36	139
Midwest	91	119	35	245
West	55	38	9	102
Northwest	89	42	10	141
Total	289	301	97	687

Sample Size=687

1 did not respond

NE: CT; DE, MA; MD; ME; NH; NJ; NY; PA; RI; VT
 SE: AL; AR; GA; FL; LA; MO; MS; NC; SC; TN; VA; WV
 MW: IA; IL; IN; KS; KY; MI; MN; OH; WI; OK; TX
 W: AZ; CO; CA; HI; NM; NV; UT; WY
 NW: AK; ID; MT; ND; NE; OR; SD; WA

9

State of primary producer headquarters, by type firm

State of primary beekeeping headquarters	Type Firm			Total
	Full time	Part time	Hobby	
	Number			
Blank	1			1
AK		1		1
AL	6	6	2	14
AR	5	3	3	11
AZ	6	10	3	19
CA	28	16	3	47
CO	4	2	2	8
CT		1		1
FL	12	24	6	42
GA	3	5	4	12
IA	8	14	7	29
ID	9	3		12
IL	3	4	3	10
IN	2	4		6
KS	4	1	1	6
KY	1			1
LA	4	1	2	7
MA		2		2
MD		2		2
ME	2		1	3
MI	16	22	5	43
MN	16	17	6	39
MO	3	2	3	8
MS	3	8	1	12
MT	18	2	1	21

State of primary producer headquarters, by type firm (continued)

State of primary beekeeping headquarters	Type Firm			Total
	Full time	Part time	Hobby	
	Number			
NC	5	1	4	10
ND	14	7		21
NE	10	5	2	17
NH	1			1
NJ		1		1
NM	1	1		2
NV	2			2
NY	4	20	2	26
OH	6	20	6	32
OK	1	3		4
OR	8	11	3	22
PA	3	13	2	18
SC	1	1		2
SD	23	7	1	31
TN		5	5	10
TX	17	18	2	37
UT	5	5	1	11
VA		2	2	4
VT	2	2	2	6
WA	7	6	3	16
WI	17	16	5	38
WV		3	4	7
WY	9	4		13
Total	290	301	97	688

Sample Size=688

Location of primary residence, by type firm

Location	Type Firm			Total
	Full time	Part time	Hobby	
	Number			
Farm	67	78	32	177
Rural, but not farm	87	80	26	193
Community				
Less than 2,500	58	50	6	114
2,500 - 24,999	39	37	12	88
25,000 - 49,999	6	14	4	24
50,000 - 99,999	10	6	2	18
100,000 or more	11	17	7	35

6

Sample Size=649

39 did not respond

Average size of producer households, by type firm and age

Age of household members	Type Firm						Total	
	Full time		Part time		Hobby			
	Number reporting	Number reported	Number reporting	Number reported	Number reporting	Number reported	Number reporting	Number reported
	Number							
Under 6 years old	47	69	43	65	14	24	104	158
6 to 12 years old	62	102	64	106	19	28	145	236
13 to 18 years old	54	83	60	88	19	25	133	196
19 or older	261	560	253	545	80	171	594	1276
Total	267	814	257	804	82	248	606	1866
No Children under 19 years	151		147		45		343	

Sample Size = 606

82 did not respond

Major occupation of producers, by type firm and sex

Occupation	Type Firm						Total	
	Full time		Part time		Hobby			
	Male	Female	Male	Female	Male	Female	Male	Female
	Number							
Clerical	0	0	3	0	0	0	3	0
Professional	15	0	42	1	15	1	72	2
Managerial	8	0	16	0	5	1	29	1
Technician	3	0	19	1	5	1	27	2
Laborer	11	1	30	0	14	0	55	1
Own Business	4	1	21	1	1	1	26	3
Sales	10	1	13	1	2	0	25	2
Beekeeping	198	9	24	5	2	0	224	14
Farmer	5	0	19	1	7	0	31	1
Retired	8	1	52	3	23	0	83	4
Other	5	0	27	3	8	1	40	4

Sample Size = 649

39 did not respond

Bee colonies and honey production, by type firm and region, 1985-88 average

Region of primary beekeeping headquarters	Type Firm									Total		
	Full time			Part time			Hobby			Total		
	Colonies	Production	Beekeepers	Colonies	Production	Beekeepers	Colonies	Production	Beekeepers	Colonies	Production	Beekeepers
	Number	Pounds	Number	Number	Pounds	Number	Number	Pounds	Number	Number	Pounds	Number
Northeast	10,691	711,997	11	4,382	235,713	34	79	5,279	7	15,152	952,989	52
Southeast	62,970	3,940,912	38	5,209	296,218	47	421	25,419	28	68,599	4,262,549	113
Midwest	85,891	8,634,681	78	12,614	916,245	100	363	27,036	29	98,868	9,577,963	207
West	61,089	3,802,451	51	3,993	252,144	26	44	3,022	7	65,126	4,057,616	84
Northwest	186,389	18,247,508	72	5,243	440,023	39	101	7,022	7	191,733	18,694,553	118
Total	407,030	35,337,549	250	31,440	2,140,342	246	1,008	67,778	78	439,478	37,545,669	574

NE: CT; MA; MD; ME; NH; NJ; NY; PA; VT; DE; RI
 SE: AL; AR; GA; FL; LA; MO; MS; NC; SC; TN; VA; WV
 MW: IA; IL; IN; KS; KY; MI; MN; OH; WI; OK; TX
 W: AZ; CO; CA; NM; NV; UT; WY; HI
 NW: AK; ID; MT; ND; NE; OR; SD; WA

Sample Size = 574

114 did not respond

Bee colonies and honey production, by type firm and age, 1985-88 average

Age Class	Type Firm									Total		
	Full time			Part time			Hobby					
	Colonies	Production	Beekeepers	Colonies	Production	Beekeepers	Colonies	Production	Beekeepers	Colonies	Production	Beekeepers
	Number	Pounds	Number	Number	Pounds	Number	Number	Pounds	Number	Number	Pounds	Number
Less than 35 yrs	33,631	2,710,848	24	3,059	259,416	24	124	8,354	9	36,815	2,978,617	57
35-44 yrs	52,202	4,277,687	49	8,442	632,730	61	188	13,888	14	60,832	4,924,305	124
45-54 yrs.	159,252	14,268,474	78	8,501	539,600	62	259	17,827	20	168,012	14,825,900	160
55-64 yrs.	101,552	8,202,457	58	5,800	371,053	49	210	14,126	15	107,561	8,587,636	122
65 yrs or more	49,793	4,513,295	34	4,631	282,528	41	190	10,269	16	54,613	4,806,093	91
Total	396,429	33,972,760	243	30,434	2,085,327	237	971	64,463	74	427,834	36,122,550	554

Sample Size = 554

134 did not respond

Average production per colony of producer operations, by honey production, 1988

Average production per colony	Honey production (pounds)						
	Less than 1,250	1,250 to 14,999	15,000 to 24,999	25,000 to 49,999	50,000 to 249,999	250,000 to 499,999	500,000 or more
	lbs/colony						
	15.6	42.6	57.4	72.9	72.5	90.3	117.8

Sample Size=492

196 did not respond

Less than 1250 = 51

15000 to 24999 = 49

50,000 to 249999 = 106

500000 or more = 13

1250 to 14999 = 183

25000 to 49999 = 64

250000 to 499999 = 26

Average production per colony of producer operations, by colony size, 1988

Average production per colony	Colony size						
	Less than 25	25 to 299	300 to 499	500 to 999	1,000 to 4,999	5,000 to 9,999	10,000 or more
	lbs/colony						
	84.0	72.4	75.8	82.2	94.3	68.4	64.6

Sample Size=492

Less than 25 = 52

25 to 299 = 202

196 did not respond

300 to 499 = 57

500 to 999 = 63

1000 to 4999 = 106

5000 to 9999 = 9

10,000 or more = 3

Average honey production per colony, by type firm and region, 1985-88 average

Region of primary beekeeping headquarters	Type Firm			Total
	Full time	Part time	Hobby	
	lb/colony	lb/colony	lb/colony	lb/colony
Northeast	66.6	53.8	67.0	62.9
Southeast	62.6	56.9	60.4	62.1
Midwest	100.5	72.6	74.5	96.9
West	62.2	63.2	68.3	62.3
Northwest	97.9	83.9	69.4	97.5
Total	86.8	68.1	67.2	85.4

NE: CT; MA; MD; ME; NH; NJ; NY; PA; VT; DE; RI
 SE: AL; AR; GA; FL; LA; MO; MS; NC; SC; TN; VA; WV
 MW: IA; IL; IN; KS; KY; MI; MN; OH; WI; OK; TX
 W: AZ; CO; CA; NM; NV; UT; WY; HI
 NW: AK; ID; MT; ND; NE; OR; SD; WA

Sample Size = 574

114 did not respond

Average honey production per colony, by type firm and age, 1985-88 average

Age Class	Type Firm			Total
	Full time	Part time	Hobby	
	lb/colony	lb/colony	lb/colony	lb/colony
Less than 35 yrs	80.6	84.8	67.2	80.9
35-44 yrs	81.9	74.9	74.0	80.9
45-54 yrs.	89.6	63.5	68.8	88.2
55-64 yrs.	80.8	64.0	67.3	79.8
65 yrs or more	90.6	61.0	54.2	88.0
Total	85.7	68.5	66.4	84.4

Sample Size = 554

134 did not respond

Pesticide and winter losses, by type firm, 1988

Type of loss	Unit	Type firm			Total
		Full-time	Part-time	Hobby	
PESTICIDES					
Beekeepers with losses	Number	147	84	10	241
Colonies affected	Percent	38.8	31.2	50.0	36.6
Colonies with 50% or more loss	Percent	28.8	29.2	49.3	29.5
Location of losses					
Colony	Percent	5.5	15.0	44.4	10.2
Field	Percent	23.3	17.5	33.3	21.7
Both	Percent	71.2	67.5	22.2	68.1
Reimbursement received for losses					
Yes	Percent	0.7	3.7	0.0	1.7
No	Percent	99.3	96.3	100.0	98.3
WINTER KILL					
Beekeepers with losses	Number	255	247	50	552
Colonies affected	Percent	21.8	17.5	22.4	19.9
Colonies with 50% or more loss	Percent	38.2	31.7	31.8	34.7
Method used to replace winter losses					
Purchase package bees	Percent	21.6	18.6	30.0	21.0
Division with purchased queen	Percent	62.0	62.3	52.0	61.2
Division with own queen raised	Percent	57.3	49.8	38.0	52.2

Reasons for a reduction in production, by type firm, 1985-88

Reason	Type firm															Total				
	Full-time					Part-time					Hobby					1985	1986	1987	1988	Average
	1985	1986	1987	1988	Average	1985	1986	1987	1988	Average	1985	1986	1987	1988	Average					
	Number																			
Drought	85	72	80	132	92	39	51	79	108	69	7	9	14	28	15	131	132	173	268	176
Disease	7	6	9	9	8	12	15	20	21	17	4	2	4	3	3	23	23	33	33	28
Mites	13	15	27	63	30	6	9	15	33	16	1	1	2	5	2	20	25	44	101	48
Other	76	81	69	54	70	46	57	47	55	51	12	9	10	10	10	134	147	126	119	132
Reported a loss	148	142	136	178	151	87	108	126	160	120	20	19	6	41	22	254	256	303	360	293

Sample Size = 688

Bee colony transport, by type firm, 1985-88

Transport colonies to other states	Type firm									Total		
	Full-time			Part-time			Hobby					
	Number	Average mileage	Mileage/colony	Number	Average mileage	Mileage/colony	Number	Average mileage	Mileage/colony	Number	Average mileage	Mileage/colony
YES												
1985	103	45,539	20.0	17	3,065	20.0	0			120	39,951	20.0
1986	104	44,982	19.9	21	5,479	35.2	1	1,000	50.0	126	38,470	20.1
1987	108	45,982	19.6	30	5,396	29.1	0			138	37,564	19.8
1988	103	48,674	19.9	29	6,431	26.8	0			132	39,576	20.1
1985, 86, 87 or 88	118	42,106	19.0	34	4,837	27.7	1	250	10.2	153	33,684	19.2
NO												
1985	187	12,475	10.5	284	1,692	11.6	97	80	4.1	568	5,954	10.6
1986	186	13,360	10.8	280	1,711	13.0	96	86	7.1	562	6,189	11.1
1987	182	13,318	10.5	271	1,795	13.4	97	58	3.9	550	5,316	10.8
1988	187	13,701	10.6	272	1,743	12.3	97	74	4.7	556	6,228	10.7
1985, 86, 87 or 88	172	13,287	11.0	267	1,707	13.4	96	82	6.4	535	5,885	11.3

Sample Size = 688

Main purpose of transporting bees to other states, by type firm

Purpose	Type firm															Total				
	Full-time					Part-time					Hobby					1985	1986	1987	1988	Average
	1985	1986	1987	1988	Average	1985	1986	1987	1988	Average	1985	1986	1987	1988	Average					
	Number																			
Paid pollination	36	38	40	43	39	6	8	13	13	10	0	0	0	0	0	42	46	53	56	49
Floral source	37	38	40	36	38	6	6	7	8	7	0	0	0	0	0	43	44	47	44	45
Wintering	49	50	51	48	50	7	9	14	13	11	0	0	0	0	0	56	59	65	61	60
Other	15	14	14	14	14	1	1	3	1	2	0	1	0	0	0	16	16	17	15	16

Sample Size = 688

PRODUCERS - MARKETING

Grades of honey marketed, by type firm, 1985-1988 average

Grade	Type firm			Total
	Full-time	Part-time	Hobby	
	Percent			
White	56.3	39.8	23.4	55.4
Extra light amber	24.3	25.9	28.2	24.4
Light amber	14.7	23.5	22.0	15.2
Amber	4.4	10.2	26.1	4.7
Other	0.2	0.6	0.3	0.2
Total	100.0	100.0	100.0	100.0

Sample Size = 535

Grades of honey marketed, by program participation and type firm, 1985-1988 average

Use honey price support program	Type firm			Total
	Full-time	Part-time	Hobby	
	Percent			
YES				
White	56.7	40.7	23.4	55.8
Extra light amber	24.2	25.9	24.5	24.3
Light amber	14.6	23.7	25.2	15.0
Amber	4.4	9.2	26.5	4.6
Other	0.2	0.6	0.3	0.2
Total	100.0	100.0	100.0	100.0
NO				
White	46.1	29.4	23.7	43.9
Extra light amber	28.2	25.1	41.0	28.0
Light amber	20.4	21.5	10.5	20.4
Amber	5.0	23.7	24.7	7.4
Other	0.3	0.3	0.2	0.3
Total	100.0	100.0	100.0	100.0

Sample Size = 532

Grades of honey marketed, by beekeepers receiving pollination fees and type firm, 1985-1988 average

Receive pollination fees	Type firm			Total
	Full-time	Part-time	Hobby	
	Percent			
YES				
White	54.8	29.6		53.7
Extra light amber	24.2	35.6		24.7
Light amber	12.5	24.8		13.0
Amber	8.2	9.9		8.3
Other	0.3	0.2		0.2
Total	100.0	100.0		100.0
NO				
White	56.9	43.0	23.4	56.1
Extra light amber	24.4	22.8	28.2	24.3
Light amber	15.6	23.1	22.0	16.1
Amber	2.8	10.4	26.1	3.3
Other	0.2	0.7	0.3	0.2
Total	100.0	100.0	100.0	100.0

Sample Size = 533

Markets used to dispose of honey crop, by type firm, 1985-88 average

Market	Type firm			Total
	Full-time	Part-time	Hobby	
	Percent			
Roadside	1.2	6.3	28.2	1.5
Retail stores	3.4	16.3	8.9	4.0
Institutions	0.2	0.5	1.8	0.2
Broker or dealer	5.1	4.4	19.6	5.1
Packer/bottlers				
Independent	35.8	25.0	10.6	35.2
Cooperative	24.2	7.3	6.4	23.3
Direct Export	0.2	1.0	0.0	0.2
Industrial user	2.9	2.5	1.5	2.9
CCC	25.2	32.4	17.6	25.5
Other	0.8	2.1	2.6	0.9
Storage	0.9	2.1	2.8	1.0
Total	100.0	100.0	100.0	100.0

Sample Size = 556

Advertising activities of beekeepers, by type firm, 1988

Type firm and product or service	Advertising activity									
	Local newspaper	Circulars	Beekeeping journals	Magazines	Community bulletin board	Direct mail	Road signs	Word of Mouth	Other	Didn't advertise
	Number									
Full-time										
Honey	24	9	7	7	4	18	20	110	32	146
Honey with other products	7	2	3	3	1	6	3	27	14	243
Beeswax	1	0	3	1	1	1	1	42	10	234
Pollination services	7	3	2	4	1	4	1	62	12	210
Package bees and queens	2	1	8	1	0	3	1	18	6	258
Part-time										
Honey	29	9	1	1	10	6	50	147	25	115
Honey with other products	6	4	1	0	3	3	7	33	7	251
Beeswax	3	1	0	0	1	1	3	40	5	246
Pollination services	3	0	1	2	2	4	2	39	4	243
Package bees and queens	1	3	1	1	2	4	2	17	1	271
Hobby										
Honey	6	0	0	1	4	1	18	48	9	31
Honey with other products	3	1	2	2	0	1	2	3	0	81
Beeswax	0	0	0	0	0	0	1	3	2	81
Pollination services	0	0	0	0	0	0	1	2	0	84
Package bees and queens	0	0	0	0	0	0	1	1	0	85
Total										
Honey	59	18	8	9	18	25	88	305	66	292
Honey with other products	16	7	6	5	4	10	12	63	21	575
Beeswax	4	1	3	1	2	2	5	85	17	561
Pollination services	10	3	3	6	3	8	4	103	16	537
Package bees and queens	3	4	9	2	2	7	4	36	7	614

Sample Size = 663 (Full-time = 286, Part-time = 291, Hobby = 86)

Promotional activities of producers, by type firm, 1988

Activity	Type firm			Total
	Full-time	Part-time	Hobby	
	Number			
Distribute recipes using honey	116	76	15	207
Give demonstrations	92	79	17	188
Distribute honey information	80	52	5	137
Distribute free samples	94	87	23	204
Publish newspaper articles	18	16	0	34
Maintain observation hive	39	38	7	84
Contribute to the National Honey Board	202	142	24	368
Other	36	33	5	74
Did not Participate	34	67	31	132

Sample Size = 606 (Full-time = 271, Part-time = 257, Hobby = 78)

Promotional activities of producers, by type firm, 1988

Activity	Type firm			Total
	Full-time	Part-time	Hobby	
	Percent			
Distribute recipes using honey	42.8	29.6	19.2	34.2
Give demonstrations	33.9	30.7	21.8	31.0
Distribute honey information	29.5	20.2	6.4	22.6
Distribute free samples	34.7	33.9	29.5	33.7
Publish newspaper articles	6.6	6.2	0.0	5.6
Maintain observation hive	14.4	14.8	9.0	13.9
Contribute to the National Honey Board	74.5	55.3	30.8	60.7
Other	13.3	12.8	6.4	12.2
Did not Participate	12.5	26.1	39.7	21.8

Sample Size = 606 (Full-time = 271, Part-time = 257, Hobby = 78)

Advertising activities of beekeepers, by type firm, 1988

Type firm and product or service	Advertising activity									
	Local newspaper	Circulars	Beekeeping journals	Magazines	Community bulletin board	Direct mail	Road signs	Word of Mouth	Other	Didn't advertise
	Percent									
Full-time										
Honey	8.4	3.1	2.4	2.4	1.4	6.3	7.0	38.5	11.2	51.0
Honey with other products	2.4	0.7	1.0	1.0	0.3	2.1	1.0	9.4	4.9	85.0
Beeswax	0.3	0.0	1.0	0.3	0.3	0.3	0.3	14.7	3.5	81.8
Pollination services	2.4	1.0	0.7	1.4	0.3	1.4	0.3	21.7	4.2	73.4
Package bees and queens	0.7	0.3	2.8	0.3	0.0	1.0	0.3	6.3	2.1	90.2
Part-time										
Honey	10.0	3.1	0.3	0.3	3.4	2.1	17.2	50.5	8.6	39.5
Honey with other products	2.1	1.4	0.3	0.0	1.0	1.0	2.4	11.3	2.4	86.3
Beeswax	1.0	0.3	0.0	0.0	0.3	0.3	1.0	13.7	1.7	84.5
Pollination services	1.0	0.0	0.3	0.7	0.7	1.4	0.7	13.4	1.4	83.5
Package bees and queens	0.3	1.0	0.3	0.3	0.7	1.4	0.7	5.8	0.3	93.1
Hobby										
Honey	7.0	0.0	0.0	1.2	4.7	1.2	20.9	55.8	10.5	36.0
Honey with other products	3.5	1.2	2.3	2.3	0.0	1.2	2.3	3.5	0.0	94.2
Beeswax	0.0	0.0	0.0	0.0	0.0	0.0	1.2	3.5	2.3	94.2
Pollination services	0.0	0.0	0.0	0.0	0.0	0.0	1.2	2.3	0.0	97.7
Package bees and queens	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	0.0	98.8
Total										
Honey	8.9	2.7	1.2	1.4	2.7	3.8	13.3	46.0	10.0	44.0
Honey with other products	2.4	1.1	0.9	0.8	0.6	1.5	1.8	9.5	3.2	86.7
Beeswax	0.6	0.2	0.5	0.2	0.3	0.3	0.8	12.8	2.6	84.6
Pollination services	1.5	0.5	0.5	0.9	0.5	1.2	0.6	15.5	2.4	81.0
Package bees and queens	0.5	0.6	1.4	0.3	0.3	1.1	0.6	5.4	1.1	92.6

Sample Size = 663 (Full-time = 286, Part-time = 291, Hobby = 86)

PRODUCERS - POLLINATION SERVICES

Receipt of pollination fees, by type firm

Year	Type Firm			Total
	Full time	Part time	Hobby	
	Number			
Yes				
1985	86	42	1	129
1986	92	45	1	138
1987	96	49	2	147
1988	103	51	0	154
No				
1985	204	259	96	559
1986	198	256	96	550
1987	194	252	95	541
1988	187	250	97	534

Sample Size = 688

Receipt of pollination fees, by age and firm type, 1988

Receipt of pollination fees	Age Class					Total
	Less than 35 years	35-44 years	45-54 years	55-64 years	65 years or more	
Full time			Number			
Yes	4	39	24	19	15	101
No	22	40	42	50	25	179
All	26	79	66	69	40	280
Part time						
Yes	8	16	15	7	5	51
No	22	55	53	51	50	231
All	30	71	68	58	55	282
Hobby						
Yes	0	0	0	0	0	0
No	11	15	21	18	25	90
All	11	15	21	18	25	90
All response						
Yes	12	55	39	26	20	152
No	55	110	116	119	100	500
All	67	165	155	145	120	652

Sample Size = 652

36 did not respond

Receipt of pollination fees, by age and firm type, 1988

Receipt of pollination fees	Age Class					Total
	Less than 35 years	35-44 years	45-54 years	55-64 years	65 years or more	
Full time			Percent			
Yes	4	39	24	19	15	100
No	12	22	23	28	14	100
All	9	28	24	25	14	100
Part time						
Yes	16	31	29	14	10	100
No	10	24	23	22	22	100
All	11	25	24	21	20	100
Hobby						
Yes						
No	12	17	23	20	28	100
All	12	17	23	20	28	100
All response						
Yes	8	36	26	17	13	100
No	11	22	23	24	20	100
All	10	25	24	22	18	100

Sample Size = 652

36 did not respond

Receipt of pollination fees, by education and firm type, 1988

Receipt of pollination fees	Education Class					Total
	1 to 8 years	9 to 11 years	12 years	13 to 15 years	16 years or more	
Full time			Number			
Yes	3	8	30	30	30	101
No	9	14	59	41	56	179
All	12	22	89	71	86	280
Part time						
Yes	1	3	14	11	22	51
No	20	23	82	39	70	234
All	21	26	96	50	92	285
Hobby						
Yes	0	0	0	0	0	0
No	7	5	29	24	25	90
All	7	5	29	24	25	90
All response						
Yes	4	11	44	41	52	152
No	36	42	170	104	151	503
All	40	53	214	145	203	655

Sample Size = 655

33 did not respond

Receipt of pollination fees, by education and firm type, 1988

Receipt of pollination fees	Education Class					Total
	1 to 8 years	9 to 11 years	12 years	13 to 15 years	16 years or more	
Full time			Percent			
Yes	3	8	30	30	30	100
No	5	8	33	23	31	100
All	4	8	32	25	31	100
Part time						
Yes	2	6	27	22	43	100
No	9	10	35	17	30	100
All	7	9	34	18	32	100
Hobby						
Yes						
No	8	6	32	27	28	100
All	8	6	32	27	28	100
All response						
Yes	3	7	29	27	34	100
No	7	8	34	21	30	100
All	6	8	33	22	31	100

Sample Size = 655

33 did not respond

Honey production of producers receiving pollination fees, by type firm, 1985-88

Receive pollination fees	Average honey production							
	Total				Per colony			
	1985	1986	1987	1988	1985	1986	1987	1988
	Pounds							
Full-time								
YES	78,061	111,888	150,640	131,346	52	73	94	78
NO	126,291	157,843	191,142	161,036	76	94	112	94
Part-time								
YES	6,881	6,808	8,581	10,850	50	47	54	62
NO	7,080	7,912	9,767	10,708	62	70	81	79

1985 Sample Size = 418

1986 Sample Size = 452

1987 Sample Size = 475

1988 Sample Size = 478

Average colony size, by receipt of pollination fees and type firm

Receipt of pollination fees	Type Firm			Total
	Full time	Part time	Hobby	
Number				
1985				
Yes	1,426	135	2	1,019
No	1,639	114	11	682
All	1,575	117	11	748
1986				
Yes	1,584	140	2	1,102
No	1,605	114	12	656
All	1,599	118	12	748
1987				
Yes	1,634	154	4	1,121
No	1,674	122	14	671
All	1,661	127	14	768
1988				
Yes	1,732	177		1,217
No	1,666	133	15	656
All	1,690	140	15	783

1985 Sample Size = 635

1986 Sample Size = 653

1987 Sample Size = 670

1988 Sample Size = 678

Bee colonies used for paid pollination services, by type firm, 1988

Cost item	Type Firm			Total
	Full time	Part time	Hobby	
Total miles hauled				
Mean	18,487	1,165		12,590
Median	7,350	455		2,350
Range-Min	10	20		10
Range-Max	150,000	5,000		150,000
Pollination receipts				
Mean	42,730	2,744		29,118
Median	20,127	1,809		7,470
Range-Min	250	117		117
Range-Max	298,866	17,182		298,866
Total colonies				
Mean	1,307	115		902
Median	580	74		300
Range-Min	22	12		12
Range-Max	6,000	581		6,000
Times relocated				
Mean	4	2		3
Median	2	2		2
Range-Min	1	1		1
Range-Max	75	8		75
Miles per colony				
Mean	14	10		14
Median	8	7		8
Range-Min	0	0		0
Range-Max	200	51		200
Receipts per colony				
Mean	32.68	23.81		32.29
Median	26.06	21.91		25.00
Range-Min	6.94	2.99		2.99
Range-Max	92.29	53.71		92.29
Receipts per mile				
Mean	2.31	2.36		2.31
Median	3.57	2.92		3.27
Range-Min	0.08	0.25		0.08
Range-Max	109.79	53.73		109.79

Sample Size = 94 594 did not report complete information

Characteristics of pollination services provided, full time beekeepers, 1988

Crop	State where service provided	Average colonies used per acre	Average fee per colony	Average length of service	Beekeepers pollinating crop
		Number	Dollars	Days	Number
Alfalfa	CA	3.1	17.75	52	6
	ID	3.0	10.00	30	1
	MT			45	1
	UT	1.0	0.00	45	1
Almonds	CA	2.3	26.80	31	35
Apples	AL	1.0	15.00	14	1
	CA	2.4	12.60	22	5
	IL		20.00	10	1
	ME		30.00	30	1
	MI	0.5	18.50	13	3
	MN	1.0	30.00	12	1
	OR	1.0	21.00	30	1
	UT		9.00	30	1
	VT		20.00	10	1
	WA	1.6	21.33	20	6
	WI		20.00	12	1
Apricots	WA	1.0	25.00	10	1
Avocado	CA	2.5	2.50	38	2
Blueberries	ME	1.5	30.00	26	2
	MI	1.0	19.17	22	3
	NC	1.0	15.00	28	1
	CA	5.0	10.00	30	1
Cabbage	CA	1.0	11.00	26	2
	TX	1.0	20.00	40	1
Cantalope	AZ	1.0	15.00	11	2
	ID	5.5	16.50	38	2
Carrots					

Characteristics of pollination services provided, full time beekeepers, 1988 (continued)

Crop	State where service provided	Average colonies used per acre	Average fee per colony	Average length of service	Beekeepers pollinating crop
		Number	Dollars	Days	Number
Cherries	CA	1.7	15.00	21	3
	MI	0.5	22.50	10	1
	OR	1.0	21.00	30	1
	UT		9.00	30	1
	WA	2.5	25.00	15	2
Citrus	CA	3.0	0.00	30	1
Clover	ID	3.0	18.00	30	1
Cotton	AZ	1.0	15.00	13	1
	CA	3.0	0.00	60	1
Cranberries	WI	1.0	30.00	25	1
Cucumbers	MI	0.3	35.00	12	1
	GA	1.0	10.00	30	1
	MI	0.5	21.50	25	2
	TX	2.0	15.00	15	1
Fruit	MI	1.0	25.00	7	1
Kiwi	CA	3.0	20.00	10	1
Melons	CA	1.3	14.17	31	6
	GA	0.5	10.00	30	1
Onions	CA	3.0	14.50	30	2
	ID	5.5	16.50	38	2
	WA	3.0	20.00	30	1
Pears	WA	2.3	25.00	18	2
Pickles	MI	1.0	26.67	45	3
	OH	1.0	30.00	53	2
Plums	AL	1.0	15.00	14	1
	CA	1.7	28.67	19	3

Characteristics of pollination services provided, full time beekeepers, 1988 (continued)

Crop	State where service provided	Average colonies used per acre	Average fee per colony	Average length of service	Beekeepers pollinating crop
		Number	Dollars	Days	Number
Prunes	OR	1.0	21.00	30	1
	CA	1.8	2.83	19	3
Squash	CA	1.5	12.50	57	2
	FL	1.0	20.00	52	1
Sunflowers	MI	1.0	25.00	7	1
	ND	1.0	0.00	28	1
Vegetable Seed	CA	2.5	15.00	35	2

Sample Size = 60

Characteristics of pollination services provided, part time beekeepers, 1988

Crop	State where service provided	Average colonies used per acre	Average fee per colony	Average length of service	Beekeepers pollinating crop
		Number	Dollars	Days	Number
Alfalfa	CA		18.00	60	1
Almonds	CA	2.5	25.77	36	9
Apples	CA		30.00	21	1
	IA	1.0	16.00	10	1
	IL	2.0	15.00	7	1
	MA	0.5	35.00	10	1
	MI	1.3	19.17	9	3
	NE	0.5	15.00	15	1
	NY	0.9	23.50	12	2
	OR	2.5	15.00	23	2
	PA	1.0	20.00	12	3
	UT	2.0	8.00	30	1
	VT	0.4	32.50	9	2
	WA	1.8	22.50	33	2
	Blueberries	ME	0.3	26.00	30
MI			15.00	21	1
OR		2.8	15.33	29	3
PA		1.0	20.00	20	1
MI		1.0	22.50	35	1
Cantalope	MI	1.0	22.50	35	1
	MI	1.0	22.50	35	1
Cherries	OR	2.0	14.00	18	4
	UT	2.0	8.00	30	1
	WA	1.5	25.00	45	1
Clover	OR	1.3	11.33	27	3
Cucumber	OR	2.0	15.00	75	1

Characteristics of pollination services provided, part time beekeepers, 1988 (continued)

Crop	State where service provided	Average colonies used per acre	Average fee per colony	Average length of service	Beekeepers pollinating crop
		Number	Dollars	Days	Number
Fruit	MI	1.0	22.50	65	1
	MI	1.0	22.67	26	4
Pears	NY	1.0	23.00	8	1
	OR	1.5	10.00	10	1
Pickles	PA		20.00	21	1
	OH	1.0	25.00	40	1
Raspberry	OR	2.0	15.00	36	2
Squash	OR	1.0	16.00	30	1
Vetch	OR	1.0	0.00	21	1

Sample Size = 30

Producers receiving pollination fees, by family annual gross income, 1985-88

Receive pollination fees	Family annual gross income										Total
	\$9,999 or less	\$10,000 to \$19,999	\$20,000 to \$39,999	\$40,000 to \$69,999	\$70,000 to \$99,999	\$100,000 to \$149,999	\$150,000 to \$199,999	\$200,000 to \$499,999	\$500,000 to \$1,000,000	Over \$1,000,000	
	Number										
Full-time YES	16	12	25	27	8	6	2	1	1	0	98
NO	18	21	43	40	16	13	1	6	2	0	160
Part-time YES	0	9	24	17	3	3	0	0	0	0	56
NO	30	35	78	52	11	3	0	0	0	0	209

Sample Size = 523

Producers receiving pollination fees, by gross income, 1985-88

Receive pollination fees	Gross Income												Total
	\$2,499 or less	\$2,500 to \$4,999	\$5,000 to \$9,999	\$10,000 to \$19,999	\$20,000 to \$39,999	\$40,000 to \$49,999	\$50,000 to \$99,999	\$100,000 to \$149,999	\$150,000 to \$199,999	\$200,000 to \$499,999	\$500,000 to \$999,999	\$1,000,000 or more	
	Number												
Full-time YES	1	0	3	8	19	7	20	14	7	17	4	0	100
NO	1	1	7	26	29	18	29	22	3	23	4	2	165
Part-time YES	8	14	9	14	7	1	3	0	0	0	0	0	56
NO	69	49	42	33	13	1	2	1	0	0	0	0	210

Sample Size = 531

Producers receiving pollination fees, by net income, 1985-88

Receive pollination fees	Net Income									Total
	Costs exceeded income	Broke even	\$2,499 or less	\$2,500 to \$4,999	\$5,000 to \$9,999	\$10,000 to \$19,999	\$20,000 to \$49,999	\$50,000 to \$99,999	\$100,000 or more	
	Number									
Full-time YES	11	4	5	7	19	17	28	5	2	98
Full-time NO	32	4	8	8	21	35	37	10	6	161
Part-time YES	13	4	16	10	7	4	2	0	0	56
Part-time NO	34	21	86	28	25	11	0	1	0	206

Sample Size = 521

Producers receiving pollination fees, by total value of assets, 1985-88

Receive pollination fees	Total value of assets														Total
	\$2,499 or less	\$2,500 to \$4,999	\$5,000 to \$9,999	\$10,000 to \$19,999	\$20,000 to \$39,999	\$40,000 to \$49,999	\$50,000 to \$99,999	\$100,000 to \$149,999	\$150,000 to \$199,999	\$200,000 to \$499,999	\$500,000 to \$999,999	\$1,000,000 to \$1,499,999	\$1,500,000 to \$1,999,999	\$2,000,000 or more	
	Number														
Full-time YES	0	0	1	2	8	2	18	14	10	24	15	3	2	1	100
NO	0	0	2	1	16	7	32	17	22	41	13	10	2	4	167
Part-time YES	1	3	7	12	20	5	4	2	1	0	0	0	0	0	55
NO	24	26	37	40	42	10	19	6	2	1	0	0	0	1	208

Sample Size = 530

Producers receiving pollination fees, by total debt, 1985-88

Receive pollination fees	Total debt															Total
	No debt	\$2,499 or less	\$2,500 to \$4,999	\$5,000 to \$9,999	\$10,000 to \$19,999	\$20,000 to \$39,999	\$40,000 to \$49,999	\$50,000 to \$99,999	\$100,000 to \$149,999	\$150,000 to \$199,999	\$200,000 to \$499,999	\$500,000 to \$999,999	\$1,000,000 to \$1,499,999	\$1,500,000 to \$1,999,999	\$2,000,000 or more	
	Number															
Full-time YES	28	3	4	6	5	17	3	12	8	4	10	1	0	0	0	101
NO	69	7	6	11	11	17	6	16	15	6	3	2	0	1	0	170
Part-time YES	39	5	3	4	2	1	1	0	0	0	0	0	0	0	0	55
NO	158	12	10	8	8	6	3	1	0	0	0	0	1	0	0	207

Sample Size = 533

PRODUCERS - HONEY SUPPORT PROGRAM

Participation in honey price support program, by type firm

Use honey price support program	Type firm			Total
	Full time	Part time	Hobby	
Yes	268	253	63	584
No	22	48	34	104
Total	290	301	97	688

Sample Size=688

Participation in honey price support program, by type firm and year

Year	Type firm and use of honey price support program							
	Full time		Part time		Hobby		Total	
	Yes	No	Yes	No	Yes	No	Yes	No
	Number							
1981	32	244	5	231	1	61	38	536
1982	37	245	6	242	1	63	44	550
1983	51	232	18	237	1	71	70	540
1984	73	212	34	235	2	73	109	520
1985	127	159	96	185	7	80	230	424
1986	150	139	124	167	16	73	290	379
1987	168	122	177	119	37	55	382	296
1988	210	79	197	98	47	47	454	224

1981 Sample Size = 574

114 Did not Respond

1982 Sample Size = 594

94 Did not Respond

1983 Sample Size = 610

78 Did not Respond

1984 Sample Size = 629

59 Did not Respond

1985 Sample Size = 654

34 Did not Respond

1986 Sample Size = 669

19 Did not Respond

1987 Sample Size = 678

10 Did not Respond

1988 Sample Size = 678

10 Did not Respond

Participation in honey price support program, by age

Use honey price support program	Age Class					Total
	Less than 35 years	35-44 years	45-54 years	55-64 years	65 years or more	
Full time			Number			
Yes	31	75	61	65	34	266
No	2	4	5	4	6	21
All	33	79	66	69	40	287
Part time						
Yes	27	62	64	50	39	242
No	3	9	4	8	16	40
All	30	71	68	58	55	282
Hobby						
Yes	8	11	17	9	15	60
No	3	4	4	9	10	30
All	11	15	21	18	25	90
All response						
Yes	66	148	142	124	88	568
No	8	17	13	21	32	91
All	74	165	155	145	120	659

Sample Size=659

29 Did not Respond

Participation in honey price support program, by education

Use honey price support program	Education Class					Total
	1 to 8 years	9 to 11 years	12 years	13 to 15 years	16 years or more	
Full time			Number			
Yes	12	19	83	65	80	259
No	0	3	5	6	6	20
All	12	22	88	71	86	279
Part time						
Yes	16	20	83	42	84	245
No	5	6	13	8	8	40
All	21	26	96	50	92	285
Hobby						
Yes	2	2	20	16	20	60
No	5	3	9	8	5	30
All	7	5	29	24	25	90
All response						
Yes	30	41	186	123	184	564
No	10	12	27	22	19	90
All	40	53	213	145	203	654

Sample Size=654

34 Did not Respond

Average products and services produced or provided, by program participation and firm type

Use honey price support program	Products and services						
	Honey	Beeswax	Royal jelly, etc	Package bees	Nucs	Queens sold	Pollination colonies
	----- Pounds -----				----- Number -----		
Full time Yes							
1985	126,816	2,036	191	647	95	433	255
1986	166,948	2,566	126	589	105	138	306
1987	201,910	3,317	157	505	127	103	458
1988	163,431	3,333	146	200	155	81	500
No							
1985	85,741	1,770	55	49	106	60	481
1986	111,997	2,071	199	109	121	1,163	476
1987	142,117	2,294	238	51	136	185	445
1988	121,847	1,963	387	82	108	314	441
All							
1985	101,591	1,873	107	280	101	204	394
1986	133,367	2,264	171	296	114	765	410
1987	166,546	2,712	205	237	132	151	450
1988	143,123	2,664	264	142	132	195	471
Part time Yes							
1985	8,434	101	12	0	1	0	19
1986	8,647	115	23	0	1	23	21
1987	10,731	127	55	0	2	0	25
1988	11,140	434	35	0	2	5	28

Average products and services produced or provided, by program participation and firm type (continued)

Use honey price support program	Products and services						
	Honey	Beeswax	Royal jelly, etc	Package bees	Nucs	Queens sold	Pollination colonies
	----- Pounds -----				----- Number -----		
No							
1985	5,570	56	11	0	1	0	26
1986	6,215	64	15	0	4	0	26
1987	7,371	88	10	0	1	30	27
1988	9,120	114	63	0	0	24	34
All							
1985	6,558	72	11	0	1	0	23
1986	7,205	85	18	0	3	9	24
1987	9,162	109	34	0	2	14	26
1988	10,204	286	48	0	1	14	31
Hobby							
Yes							
1985	1,200	25	0	0	0	0	0
1986	781	19	0	0	0	0	1
1987	1,114	10	0	0	0	0	0
1988	1,153	25	0	0	0	0	0
No							
1985	680	7	0	0	0	0	3
1986	728	6	0	0	0	0	3
1987	780	9	0	0	0	0	2
1988	1,088	7	0	0	0	0	2

Average products and services produced or provided, by program participation and firm type (continued)

Use honey price support program	Products and services						
	Honey	Beeswax	Royal jelly, etc	Package bees	Nucs	Queens sold	Pollination colonies
All	----- Pounds -----				----- Number -----		
1985	698	7	0	0	0	0	3
1986	738	9	0	0	0	0	3
1987	902	9	0	0	0	0	2
1988	1,120	16	0	0	0	0	1
All response							
Yes							
1985	75,071	1,191	113	364	54	244	152
1986	85,398	1,305	72	287	51	78	159
1987	86,976	1,403	91	204	52	42	197
1988	77,682	1,676	80	89	70	38	234
No							
1985	40,083	803	28	22	47	26	222
1986	53,600	970	97	50	56	530	228
1987	72,483	1,158	120	25	67	102	228
1988	59,718	947	203	38	50	154	217
All							
1985	51,606	931	56	135	49	98	199
1986	65,458	1,095	88	138	55	361	202
1987	79,094	1,270	107	107	60	74	214
1988	69,045	1,325	139	64	60	94	226

1985 Sample Size=501

187 Did not Respond

1986 Sample Size=539

149 Did not Respond

1987 Sample Size=570

118 Did not Respond

1988 Sample Size=572

116 Did not Respond

Size of beekeeping operations, by participation in the honey price support program and type firm

Use honey price support program	Year				
	1985	1986	1987	1988	85-88 Ave
Full time			Colonies		
Yes					
Mean	1,618	1,662	1,707	1,737	1,668
Median	950	975	1,000	1,000	1,000
Min	175	300	250	168	300
Max	27,367	26,706	28,503	29,640	28,054
No					
Mean	1,060	848	1,105	1,091	1,032
Median	775	650	800	672	788
Min	275	285	350	320	311
Max	5,500	2,910	5,500	5,500	4,263
All					
Mean	1,575	1,599	1,661	1,690	1,620
Median	900	923	1,000	1,000	963
Min	175	285	250	168	300
Max	27,367	26,706	28,503	29,640	28,054
Part time					
Yes					
Mean	121	122	132	148	131
Median	100	110	124	130	125
Min	7	10	20	18	25
Max	600	440	360	600	299

Size of beekeeping operations, by participation in the honey price support program and type firm (continued)

Use honey price support program	Year				
	1985	1986	1987	1988	85-88 Ave
No			Colonies		
Mean	96	95	101	98	98
Median	58	68	62	62	67
Min	15	20	26	25	26
Max	300	325	410	350	275
All					
Mean	117	118	127	140	126
Median	90	100	110	119	115
Min	7	10	20	18	25
Max	600	440	410	600	299
Hobby					
Yes					
Mean	12	13	15	17	14
Median	12	12	15	15	15
Min	2	2	2	2	2
Max	30	31	30	50	25
No					
Mean	9	10	10	10	10
Median	6	8	9	9	9
Min	2	3	1	2	3
Max	40	24	22	30	24

Size of beekeeping operations, by participation in the honey price support program and type firm (continued)

Use honey price support program	Year				
	1985	1986	1987	1988	85-88 Ave
All	Colonies				
Mean	11	12	14	15	13
Median	10	12	15	14	14
Min	2	2	1	2	2
Max	40	31	30	50	25
All response					
Yes					
Mean	828	837	849	869	824
Median	261	250	250	275	251
Min	2	2	2	2	2
Max	27,367	26,706	28,503	29,640	28,054
No					
Mean	292	239	297	279	267
Median	50	52	49	50	55
Min	2	3	1	2	3
Max	5,500	2,910	5,500	5,500	4,263
All					
Mean	748	748	768	783	740
Median	202	202	200	239	203
Min	2	2	1	2	2
Max	27,367	26,706	28,503	29,640	28,054

1985 Sample Size=635 53 Did not Respond 1986 Sample Size=653 35 Did not Respond
 1987 Sample Size=670 18 Did not Respond 1988 Sample Size=678 10 Did not Respond

Participation in honey price support program, by family annual gross income, 1988

Use honey price support program	Family annual gross income										Total
	Less than \$9,999	\$10,000 to \$19,999	\$20,000 to \$39,999	\$40,000 to \$69,999	\$70,000 to \$99,999	\$100,000 to \$149,999	\$150,000 to \$199,999	\$200,000 to \$499,999	\$500,000 to \$1,000,000	Over \$1,000,000	
Full time					Number						
Yes	32	30	62	65	24	19	3	6	3	0	244
No	2	3	6	2	0	0	0	1	0	0	14
All	34	33	68	67	24	19	3	7	3	0	258
Part time											
Yes	22	39	84	65	13	6	0	0	0	0	229
No	8	6	18	4	1	0	0	0	0	0	37
All	30	45	102	69	14	6	0	0	0	0	266
Hobby											
Yes	6	9	28	11	4	0	0	0	0	0	58
No	2	6	9	5	2	0	0	1	0	0	25
All	8	15	37	16	6	0	0	1	0	0	83
All response											
Yes	60	78	174	141	41	25	3	6	3	0	531
No	12	15	33	11	3	0	0	2	0	0	76
All	72	93	207	152	44	25	3	8	3	0	607

Sample Size=607
81 Did not Respond

Size of beekeeping operations, by participation in the honey price support program and type firm (continued)

Use honey price support program	Year				
	1985	1986	1987	1988	85-88 Ave
All			Colonies		
Mean	11	12	14	15	13
Median	10	12	15	14	14
Min	2	2	1	2	2
Max	40	31	30	50	25
All response					
Yes					
Mean	828	837	849	869	824
Median	261	250	250	275	251
Min	2	2	2	2	2
Max	27,367	26,706	28,503	29,640	28,054
No					
Mean	292	239	297	279	267
Median	50	52	49	50	55
Min	2	3	1	2	3
Max	5,500	2,910	5,500	5,500	4,263
All					
Mean	748	748	768	783	740
Median	202	202	200	239	203
Min	2	2	1	2	2
Max	27,367	26,706	28,503	29,640	28,054

1985 Sample Size=635 53 Did not Respond 1986 Sample Size=653 35 Did not Respond
 1987 Sample Size=670 18 Did not Respond 1988 Sample Size=678 10 Did not Respond

Participation in honey price support program, by family annual gross income, 1988

Use honey price support program	Family annual gross income										Total
	Less than \$9,999	\$10,000 to \$19,999	\$20,000 to \$39,999	\$40,000 to \$69,999	\$70,000 to \$99,999	\$100,000 to \$149,999	\$150,000 to \$199,999	\$200,000 to \$499,999	\$500,000 to \$1,000,000	Over \$1,000,000	
					Number						
Full time											
Yes	32	30	62	65	24	19	3	6	3	0	244
No	2	3	6	2	0	0	0	1	0	0	14
All	34	33	68	67	24	19	3	7	3	0	258
Part time											
Yes	22	39	84	65	13	6	0	0	0	0	229
No	8	6	18	4	1	0	0	0	0	0	37
All	30	45	102	69	14	6	0	0	0	0	266
Hobby											
Yes	6	9	28	11	4	0	0	0	0	0	58
No	2	6	9	5	2	0	0	1	0	0	25
All	8	15	37	16	6	0	0	1	0	0	83
All response											
Yes	60	78	174	141	41	25	3	6	3	0	531
No	12	15	33	11	3	0	0	2	0	0	76
All	72	93	207	152	44	25	3	8	3	0	607

Sample Size=607
81 Did not Respond

Participation in honey price support program, by gross income, 1988

Use honey price support program	Gross income												Total
	\$2,499 or less	\$2,500 to \$4,999	\$5,000 to \$9,999	\$10,000 to \$19,999	\$20,000 to \$39,999	\$40,000 to \$49,999	\$50,000 to \$99,999	\$100,000 to \$149,999	\$150,000 to \$199,999	\$200,000 to \$499,999	\$500,000 to \$999,999	\$1,000,000 or more	
Full time					Number								
Yes	2	1	10	31	43	22	45	35	10	38	8	2	247
No	0	0	0	3	5	3	4	1	0	2	0	0	18
All	2	1	10	34	48	25	49	36	10	40	8	2	265
Part time													
Yes	61	52	47	43	20	2	5	1	0	0	0	0	231
No	16	11	4	4	0	0	0	0	0	0	0	0	35
All	77	63	51	47	20	2	5	1	0	0	0	0	266
Hobby													
Yes	55	2	0	1	0	0	0	0	0	0	0	0	58
No	22	0	0	0	0	0	0	0	0	0	0	0	22
All	77	2	0	1	0	0	0	0	0	0	0	0	80
All response													
Yes	118	55	57	75	63	24	50	36	10	38	8	2	536
No	38	11	4	7	5	3	4	1	0	2	0	0	75
All	156	66	61	82	68	27	54	37	10	40	8	2	611

Sample Size=611

77 Did not Respond

Participation in honey price support program, by net income, 1988

Use honey price support program	Net income									Total
	Costs exceeded income	Broke even	\$2,499 or less	\$2,500 to \$4,999	\$5,000 to \$9,999	\$10,000 to \$19,999	\$20,000 to \$49,999	\$50,000 to \$99,999	\$100,000 or more	
					Number					
Full time										
Yes	38	6	13	14	38	47	63	14	8	241
No	5	2	0	1	2	5	2	1	0	18
All	43	8	13	15	40	52	65	15	8	259
Part time										
Yes	39	17	86	36	30	15	2	1	0	226
No	8	8	16	2	2	0	0	0	0	36
All	47	25	102	38	32	15	2	1	0	262
Hobby										
Yes	17	10	29	2	0	0	0	0	0	58
No	8	6	8	0	0	0	0	0	0	22
All	25	16	37	2	0	0	0	0	0	80
All response										
Yes	94	33	128	52	68	62	65	15	8	525
No	21	16	24	3	4	5	2	1	0	76
All	115	49	152	55	72	67	67	16	8	601

Sample Size=601

87 Did not Respond

Participation in honey price support program, by total value of assets, 1988

Use honey price support program	Total value of assets														Total
	\$2,499 or less	\$2,500 to \$4,999	\$5,000 to \$9,999	\$10,000 to \$19,999	\$20,000 to \$39,999	\$40,000 to \$49,999	\$50,000 to \$99,999	\$100,000 to \$149,999	\$150,000 to \$199,999	\$200,000 to \$499,999	\$500,000 to \$999,999	\$1,000,000 to \$1,499,999	\$1,500,000 to \$1,999,999	\$2,000,000 or more	
					Number										
Full time															
Yes	0	0	3	1	23	8	45	28	31	61	27	13	4	5	249
No	0	0	0	2	1	1	5	3	1	4	1	0	0	0	18
All	0	0	3	3	24	9	50	31	32	65	28	13	4	5	267
Part time															
Yes	15	24	37	45	59	14	22	7	2	2	0	0	0	1	228
No	10	5	7	7	3	1	1	1	0	0	0	0	0	0	35
All	25	29	44	52	62	15	23	8	2	2	0	0	0	1	263
Hobby															
Yes	37	15	6	0	0	0	0	0	0	0	0	0	0	0	58
No	18	4	0	0	0	0	0	0	0	0	0	0	0	0	22
All	55	19	6	0	0	0	0	0	0	0	0	0	0	0	80
All response															
Yes	52	39	46	46	82	22	67	35	33	63	27	13	4	6	535
No	28	9	7	9	4	2	6	4	1	4	1	0	0	0	75
All	80	48	53	55	86	24	73	39	34	67	28	13	4	6	610

Sample Size=610
78 Did not Respond

Participation in honey price support program, by total debt, 1988

Use honey price support program	Total debt															Total
	No debt	\$2,499 or less	\$2,500 to \$4,999	\$5,000 to \$9,999	\$10,000 to \$19,999	\$20,000 to \$39,999	\$40,000 to \$49,999	\$50,000 to \$99,999	\$100,000 to \$149,999	\$150,000 to \$199,999	\$200,000 to \$499,999	\$500,000 to \$999,999	\$1,000,000 to \$1,499,999	\$1,500,000 to \$1,999,999	\$2,000,000 or more	
Full time						Number										
Yes	87	8	10	17	14	32	8	26	23	9	13	3	0	1	0	251
No	10	2	0	0	2	2	1	2	0	1	0	0	0	0	0	20
All	97	10	10	17	16	34	9	28	23	10	13	3	0	1	0	271
Part time																
Yes	170	14	12	11	8	6	4	1	0	0	0	0	1	0	0	227
No	27	3	1	1	2	1	0	0	0	0	0	0	0	0	0	35
All	197	17	13	12	10	7	4	1	0	0	0	0	1	0	0	262
Hobby																
Yes	52	4	1	1	0	0	0	0	0	0	0	0	0	0	0	58
No	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23
All	75	4	1	1	0	0	0	0	0	0	0	0	0	0	0	81
All response																
Yes	309	26	23	29	22	38	12	27	23	9	13	3	1	1	0	536
No	60	5	1	1	4	3	1	2	0	1	0	0	0	0	0	78
All	369	31	24	30	26	41	13	29	23	10	13	3	1	1	0	614

Sample Size=614
74 Did not Respond

Average gross receipts from beekeeping products, services, and programs, by firm type

Type firm and year	Products, services, and programs							Total
	Honey	Pollination Services	Beeswax	Package Bees	Queens and nucs	Government payments	Other	
	Dollars							
Full time								
Yes								
1985	8,203	8,304	2,014	4,051	3,044	75,543	3,711	104,871
1986	29,769	8,271	2,449	3,353	1,250	60,983	7,997	114,071
1987	55,668	12,045	3,002	2,777	1,868	73,887	11,382	160,628
1988	52,583	13,486	2,609	1,472	1,626	57,677	9,198	138,651
No								
1985	60,215	14,179	1,913	410	925	0	5,882	83,524
1986	76,690	14,706	1,532	1,336	7,300	0	5,192	106,756
1987	83,470	14,451	2,066	781	2,084	0	4,887	107,739
1988	69,413	17,601	1,693	1,673	3,211	0	1,386	94,977
All								
1985	38,280	11,701	1,956	1,946	1,818	31,859	4,966	92,526
1986	56,665	11,960	1,923	2,197	4,718	26,026	6,389	109,878
1987	71,151	13,385	2,480	1,665	1,989	32,738	7,765	131,174
1988	59,933	15,281	2,187	1,556	2,332	31,524	5,650	118,463
Part time								
Yes								
1985	1,374	420	72	0	20	4,303	33	6,222
1986	2,604	480	103	0	130	4,454	105	7,877
1987	4,549	619	111	2	40	6,409	190	11,921
1988	5,131	499	98	0	32	4,260	206	10,226

Average gross receipts from beekeeping products, services, and programs, by firm type (continued)

Type firm and year	Products, services, and programs							Total
	Honey	Pollination Services	Beeswax	Package Bees	Queens and nucs	Government payments	Other	
	Dollars							
No								
1985	4,006	1,450	53	2	4	0	205	5,721
1986	4,569	551	61	17	3	0	218	5,419
1987	4,725	470	59	23	205	0	208	5,689
1988	6,065	786	88	22	109	0	447	7,517
All								
1985	2,899	1,017	61	1	11	1,810	133	5,932
1986	3,644	518	81	9	63	2,096	165	6,576
1987	4,620	560	90	10	106	3,845	197	9,428
1988	5,508	615	94	9	63	2,541	303	9,132
Hobby								
Yes								
1985	173	0	13	0	0	770	0	955
1986	104	0	8	0	0	401	0	512
1987	266	3	2	0	6	566	5	847
1988	265	0	11	0	0	517	3	796
No								
1985	427	0	3	0	0	0	0	429
1986	403	1	3	0	0	0	0	407
1987	421	2	4	0	0	0	0	427
1988	485	0	3	0	0	0	0	488

Average gross receipts from beekeeping products, services, and programs, by firm type (continued)

Type firm and year	Products, services, and programs							Total
	Honey	Pollination Services	Beeswax	Package Bees	Queens and nucs	Government payments	Other	
All	Dollars							
1985	400	0	4	0	0	81	0	484
1986	324	1	4	0	0	106	0	435
1987	341	2	3	0	3	293	3	644
1988	350	0	8	0	0	318	2	678
All response Yes								
1985	5,069	4,707	1,129	2,208	1,668	43,045	2,037	59,862
1986	15,582	4,217	1,231	1,621	663	31,531	3,914	58,759
1987	24,636	5,147	1,262	1,118	772	32,903	4,671	70,507
1988	25,216	6,107	1,183	643	724	27,099	4,108	65,080
No								
1985	30,944	7,470	953	201	452	0	2,945	42,966
1986	39,197	7,382	771	658	3,560	0	2,615	54,184
1987	46,889	7,989	1,140	431	1,200	0	2,718	60,367
1988	36,561	8,958	867	831	1,620	0	859	49,696
All								
1985	20,732	6,380	1,022	993	932	16,989	2,587	49,634
1986	29,070	6,024	968	1,071	2,318	13,522	3,172	56,146
1987	35,380	6,519	1,203	786	978	17,016	3,728	65,611
1988	30,008	7,311	1,050	722	1,103	15,652	2,735	58,581

1985 Sample Size=451 237 Did not Respond 1986 Sample Size=492 196 Did not Respond

1987 Sample Size=524 164 Did not Respond 1988 Sample Size=535 153 Did not Respond

PRODUCERS - LABOR

Beekeeping labor utilization, by type firm and region, 1988

Region and source	Type firm														
	Full-time					Part-time					Hobby				
	(Jan-Mar)	(Apr-Jun)	(Jul-Sep)	(Oct-Dec)	Total	(Jan-Mar)	(Apr-Jun)	(Jul-Sep)	(Oct-Dec)	Total	(Jan-Mar)	(Apr-Jun)	(Jul-Sep)	(Oct-Dec)	Total
	Average hours per week														
Northeast															
Operator	36.2	54.0	55.2	36.9	45.8	9.3	20.4	18.8	14.1	16.2	0.2	1.0	1.5	1.1	1.1
Other family	19.4	18.5	18.5	13.0	17.3	4.8	3.4	3.6	3.4	3.7	0.0	0.0	0.3	0.0	0.1
Hired labor															
Full-time	19.4	26.6	27.0	23.9	24.3	0.2	0.6	0.6	0.2	0.4	0.0	0.0	0.0	0.0	0.0
Part-time	0.0	8.0	30.9	4.0	11.0	0.2	0.6	0.7	0.4	0.5	0.0	0.0	0.0	0.0	0.0
Sub-total	75.1	107.0	131.6	77.8	98.5	12.9	25.0	23.8	18.2	20.9	0.2	1.0	1.8	1.1	1.1
Southeast															
Operator	36.2	49.2	47.4	35.8	42.1	19.9	24.7	22.4	16.2	21.0	5.6	11.1	8.9	5.4	8.1
Other family	13.6	25.2	22.8	10.6	18.1	4.7	6.0	5.6	4.5	5.2	0.0	2.0	0.7	0.5	0.9
Hired labor															
Full-time	18.2	23.3	28.3	16.7	21.6	0.1	0.4	0.4	0.1	0.3	0.0	0.0	0.0	0.0	0.0
Part-time	17.4	53.2	30.0	19.1	30.0	0.2	2.2	3.0	2.6	2.0	0.0	0.0	0.0	0.0	0.0
Sub-total	85.4	150.7	128.6	82.2	111.8	24.9	33.3	31.3	23.3	28.5	5.6	13.1	9.6	5.9	9.0
Midwest															
Operator	30.6	49.5	52.1	38.3	42.8	9.0	20.4	26.2	15.3	18.2	2.8	5.6	10.2	4.2	5.9
Other family	11.9	21.4	28.6	17.8	20.1	1.5	5.3	6.7	3.1	4.3	4.7	0.9	2.5	1.2	2.2
Hired labor															
Full-time	68.9	82.5	77.4	66.5	74.0	0.0	1.2	0.8	0.0	0.5	0.0	0.6	0.7	0.4	0.5
Part-time	37.4	50.3	26.4	8.7	30.9	0.3	0.8	2.7	0.7	1.2	0.0	0.6	0.7	0.4	0.5
Sub-total	148.8	203.7	184.6	131.2	167.8	10.9	27.7	36.4	19.1	24.2	7.6	7.8	14.1	6.2	9.0
West															
Operator	36.0	50.7	51.7	33.4	43.0	16.2	25.4	27.7	16.3	21.5	2.5	4.0	4.4	2.8	3.4
Other family	14.8	22.6	23.2	11.6	18.1	4.1	7.8	14.3	4.3	7.7	0.0	1.5	0.8	0.0	0.6
Hired labor															
Full-time	13.8	19.7	24.6	13.7	18.0	0.0	0.0	1.8	0.0	0.5	0.0	0.0	0.0	0.0	0.0
Part-time	4.2	14.8	21.5	2.8	10.9	0.1	0.1	0.5	0.9	0.4	0.0	0.0	0.0	0.0	0.0
Sub-total	68.7	107.7	121.0	61.5	90.0	20.4	33.3	44.4	21.5	30.1	2.5	5.5	5.2	2.8	4.0

Beekeeping labor utilization, by type firm and region, 1988 (continued)

Region and source	Type firm														
	Full-time					Part-time					Hobby				
	(Jan-Mar)	(Apr-Jun)	(Jul-Sep)	(Oct-Dec)	Total	(Jan-Mar)	(Apr-Jun)	(Jul-Sep)	(Oct-Dec)	Total	(Jan-Mar)	(Apr-Jun)	(Jul-Sep)	(Oct-Dec)	Total
	Average hours per week														
Northwest															
Operator	40.8	51.8	52.4	40.5	46.6	16.3	25.3	27.2	16.7	21.7	2.3	5.4	6.1	3.0	4.6
Other family	18.4	26.6	30.4	19.5	23.9	4.0	5.8	9.2	4.6	6.0	0.0	0.1	0.0	0.0	0.0
Hired labor															
Full-time	51.7	70.7	71.3	59.0	63.5	0.0	0.3	0.3	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Part-time	5.5	59.6	78.3	6.3	38.4	18.9	2.1	2.4	0.9	5.7	0.0	0.0	0.0	0.0	0.0
Sub-total	116.3	208.7	232.4	125.4	172.3	39.1	33.5	39.1	22.1	33.6	2.3	5.6	6.1	3.0	4.6
All regions															
Operator	35.8	50.6	51.6	37.7	44.1	13.4	22.6	24.8	15.6	19.4	2.8	5.6	10.2	4.2	5.9
Other family	15.0	23.7	27.0	16.0	20.5	3.3	5.6	7.4	3.7	5.1	4.7	0.9	2.5	1.2	2.2
Hired labor															
Full-time	43.7	56.9	57.0	45.7	51.0	0.0	0.7	0.8	0.0	0.4	0.0	0.6	0.7	0.4	0.5
Part-time	16.9	45.7	42.8	8.3	28.8	3.0	1.2	2.2	1.1	1.8	0.0	0.6	0.7	0.4	0.5
Sub-total	111.4	176.9	178.4	107.6	144.3	19.7	30.0	35.2	20.5	26.7	7.6	7.8	14.1	6.2	9.0

Sample Size = 687

Labor utilization of producers, by type firm and honey production, 1988

Type firm	Honey production (pounds)						
	Less than 1,250	1,250 to 14,999	15,000 to 24,999	25,000 to 49,999	50,000 to 249,999	250,000 to 499,999	500,000 or more
	Average hours per week						
Full-time	36.0	54.2	61.6	73.6	100.1	374.1	502.7
Part-time	10.2	20.5	36.2	41.0	160.0		
Hobby	6.9	7.7					
All	8.8	22.7	46.2	62.1	101.2	374.1	502.7

Sample Size = 550

Labor utilization of producers receiving pollination income, by type firm and region, 1988

Receive pollination fees	Region					All Regions
	Northeast	Southeast	Midwest	West	Northwest	
	Average hours per week					
Full-time						
Yes	104.3	153.5	90.2	92.5	145.2	117.0
No	89.1	95.1	194.7	86.9	189.4	160.3
Part-time						
Yes	24.5	39.7	32.9	27.4	16.7	27.3
No	19.6	27.4	22.6	31.9	40.6	26.6

Sample Size = 590

Labor utilization of producers, by type firm and net income, 1988

Type firm	Net income					
	Negative Income	Less than \$2,500	\$2,500 to \$9,999	\$10,000 to \$49,999	\$50,000 to \$99,999	More than \$99,999
	Average hours per week					
Full-time	286.5	80.4	74.2	108.3	116.1	691.8
Part-time	27.8	20.3	31.1	48.0	9.3	
Hobby	10.7	6.6	5.8			
All	124.8	24.1	49.6	101.7	109.1	691.8

Sample Size = 601

Average wage rate paid for hired labor, by type firm and region, 1988

Type firm	Region										All regions	
	Northeast		Southeast		Midwest		West		Northwest			
	Full-time hired	Part-time hired	Full-time hired	Part-time hired	Full-time hired	Part-time hired	Full-time hired	Part-time hired	Full-time hired	Part-time hired	Full-time hired	Part-time hired
	Dollars											
Full-time	8.19	5.06	4.79	4.04	5.71	4.64	5.45	4.81	6.19	4.61	5.83	4.59
Part-time	1.92	3.14	1.38	2.71	1.00	3.24	3.00	9.28	1.67	4.49	1.53	3.93
Hobby												

Sample Size = 687

The 97 Hobbyists did not report any wage rates

PRODUCERS - AVERAGE GROSS EXPENSES

Average gross expenses of producer operations, by type firm, 1988

Cost item	Type Firm						Total	
	Full time		Part time		Hobby			
	Per colony	Per pound	Per colony	Per pound	Per colony	Per pound	Per colony	Per pound
	Dollars							
Labor								
Hired labor	11.74	0.140	2.69	0.036	0.396	0.005	11.06	0.133
Benefits	1.01	0.012	0.17	0.002	0.000	0.000	0.95	0.011
Other	3.85	0.046	0.83	0.011	0.165	0.002	3.62	0.044
Bees								
Bee food	4.23	0.050	2.15	0.028	1.209	0.016	4.07	0.049
Queens and nucs	1.29	0.015	1.64	0.022	3.008	0.040	1.32	0.016
Package bees	0.59	0.007	1.07	0.014	1.168	0.015	0.63	0.008
Supplies								
General	4.35	0.052	5.34	0.071	8.621	0.114	4.43	0.053
Containers etc.	3.10	0.037	4.82	0.064	4.773	0.063	3.23	0.039
Equipment								
Repair and Maint	3.71	0.044	3.48	0.046	2.707	0.036	3.69	0.044
Gas and oil	3.72	0.044	3.92	0.052	5.042	0.067	3.74	0.045
Buildings								
Repair and Maint	1.20	0.014	2.36	0.031	0.863	0.011	1.29	0.015
Mortgage	2.39	0.029	5.13	0.068	0.867	0.011	2.59	0.031
Overhead								
Utilities	1.37	0.016	1.91	0.025	1.122	0.015	1.41	0.017
Insurance	2.15	0.026	1.29	0.017	0.052	0.001	2.09	0.025
Taxes	1.75	0.021	1.57	0.021	0.721	0.010	1.73	0.021
Rent	1.47	0.017	1.31	0.017	0.745	0.010	1.45	0.017
Interest on OC	1.70	0.020	0.60	0.008	0.000	0.000	1.62	0.019
Office expenses	0.46	0.005	0.35	0.005	0.017	0.000	0.45	0.005
Marketing								
Advertising	0.30	0.004	0.17	0.002	0.057	0.001	0.29	0.003
Subscriptions	0.06	0.001	0.16	0.002	0.416	0.005	0.06	0.001
Promotion	0.13	0.002	0.10	0.001	0.000	0.000	0.13	0.002
Fees	0.06	0.001	0.10	0.001	0.011	0.000	0.06	0.001
Other	2.57	0.031	1.60	0.021	1.417	0.019	2.50	0.030
Total	53.20	0.634	42.76	0.566	33.38	0.441	52.41	0.630

Sample Size=492

196 did not respond

Full time = 224

Part time = 210

Hobby = 58

Average gross expenses of producer operations who received pollination fees, by type firm, 1988

Cost item	Type Firm						Total	
	Full time		Part time		Hobby			
	Per colony	Per pound	Per colony	Per pound	Per colony	Per pound	Per colony	Per pound
	Dollars							
Labor								
Hired labor	10.81	0.144	3.39	0.053			10.45	0.140
Benefits	0.82	0.011	0.08	0.001			0.79	0.011
Other	4.31	0.057	1.89	0.030			4.19	0.056
Bees								
Bee food	3.98	0.053	1.62	0.025			3.87	0.052
Queens and nucs	1.27	0.017	1.62	0.025			1.29	0.017
Package bees	1.08	0.014	0.28	0.004			1.04	0.014
Supplies								
General	4.29	0.057	6.94	0.109			4.42	0.059
Containers etc.	2.46	0.033	6.62	0.104			2.66	0.036
Equipment								
Repair and Maint	3.67	0.049	4.51	0.071			3.71	0.050
Gas and oil	4.10	0.055	4.46	0.070			4.12	0.055
Buildings								
Repair and Maint	1.44	0.019	1.42	0.022			1.44	0.019
Mortgage	3.15	0.042	11.85	0.186			3.56	0.048
Overhead								
Utilities	1.34	0.018	1.55	0.024			1.35	0.018
Insurance	2.70	0.036	1.63	0.026			2.65	0.036
Taxes	2.49	0.033	0.94	0.015			2.42	0.033
Rent	1.52	0.020	0.58	0.009			1.47	0.020
Interest on OC	1.60	0.021	0.75	0.012			1.56	0.021
Office expenses	0.52	0.007	0.50	0.008			0.52	0.007
Marketing								
Advertising	0.20	0.003	0.20	0.003			0.20	0.003
Subscriptions	0.05	0.001	0.22	0.003			0.06	0.001
Promotion	0.13	0.002	0.25	0.004			0.13	0.002
Fees	0.05	0.001	0.07	0.001			0.05	0.001
Other	3.11	0.041	2.61	0.041			3.08	0.041
Total	55.08	0.735	54.00	0.845			55.03	0.740

Sample Size=123

Full time = 81

Part time = 42

Hobby = 0

Average gross expenses of producer operations who did not receive pollination fees, by type firm, 1988

Cost item	Type Firm						Total	
	Full time		Part time		Hobby			
	Per colony	Per pound	Per colony	Per pound	Per colony	Per pound	Per colony	Per pound
	Dollars							
Labor								
Hired labor	2.25	0.138	2.47	0.031	0.40	0.005	11.41	0.129
Benefits	1.13	0.013	0.20	0.002	0.00	0.000	1.04	0.012
Other	3.58	0.040	0.49	0.006	0.17	0.002	3.30	0.037
Bees								
Bee food	4.37	0.049	2.32	0.029	1.21	0.016	4.18	0.047
Queens and nucs	1.30	0.015	1.65	0.021	3.01	0.040	1.33	0.015
Package bees	0.31	0.003	1.31	0.017	1.17	0.015	0.40	0.004
Supplies								
General	4.39	0.049	4.83	0.061	8.62	0.114	4.44	0.050
Containers etc.	3.49	0.039	4.25	0.054	4.77	0.063	3.56	0.040
Equipment								
Repair and Maint	3.73	0.042	3.16	0.040	2.71	0.036	3.67	0.042
Gas and oil	3.49	0.039	3.75	0.047	5.04	0.067	3.52	0.040
Buildings								
Repair and Maint	1.06	0.012	2.66	0.034	0.86	0.011	1.20	0.014
Mortgage	1.94	0.022	3.00	0.038	0.87	0.011	2.03	0.023
Overhead								
Utilities	1.39	0.016	2.03	0.026	1.12	0.015	1.44	0.016
Insurance	1.83	0.021	1.18	0.015	0.05	0.001	1.77	0.020
Taxes	1.30	0.015	1.78	0.022	0.72	0.010	1.34	0.015
Rent	1.44	0.016	1.54	0.019	0.75	0.010	1.44	0.016
Interest on OC	1.76	0.020	0.55	0.007	0.00	0.000	1.65	0.019
Office expenses	0.42	0.005	0.30	0.004	0.02	0.000	0.41	0.005
Marketing								
Advertising	0.36	0.004	0.16	0.002	0.06	0.001	0.34	0.004
Subscriptions	0.06	0.001	0.15	0.002	0.42	0.005	0.07	0.001
Promotion	0.13	0.002	0.05	0.001	0.00	0.000	0.13	0.001
Fees	0.06	0.001	0.11	0.001	0.01	0.000	0.07	0.001
Other	2.25	0.025	1.28	0.016	1.42	0.019	2.17	0.025
Total	42.04	0.584	39.20	0.495	33.38	0.441	50.91	0.577

Sample Size=369

Full time = 143

Part time = 168

Hobby = 58

Average gross expenses of producer operations who received government payments, by type firm, 1988

Cost item	Type Firm						Total	
	Full time		Part time		Hobby			
	Per colony	Per pound	Per colony	Per pound	Per colony	Per pound	Per colony	Per pound
	Dollars							
Labor								
Hired labor	12.95	0.153	3.36	0.045	0.22	0.00	12.24	0.146
Benefits	1.46	0.017	0.23	0.003	0.00	0.00	1.37	0.016
Other	4.84	0.057	1.26	0.017	0.32	0.00	4.58	0.054
Bees								
Bee food	5.07	0.060	1.80	0.024	1.44	0.02	4.83	0.057
Queens and nucs	1.46	0.017	1.62	0.021	3.87	0.05	1.48	0.018
Package bees	0.65	0.008	1.62	0.021	2.18	0.03	0.72	0.009
Supplies								
General	4.03	0.048	5.56	0.074	8.18	0.10	4.15	0.049
Containers etc.	3.99	0.047	5.70	0.075	5.10	0.06	4.11	0.049
Equipment								
Repair and Maint	3.70	0.044	2.88	0.038	3.91	0.05	3.64	0.043
Gas and oil	3.69	0.044	3.96	0.052	4.75	0.06	3.71	0.044
Buildings								
Repair and Maint	1.04	0.012	2.55	0.034	1.67	0.02	1.15	0.014
Mortgage	2.38	0.028	7.91	0.105	1.70	0.02	2.78	0.033
Overhead								
Utilities	1.32	0.016	1.89	0.025	0.62	0.01	1.36	0.016
Insurance	2.33	0.028	1.46	0.019	0.10	0.00	2.27	0.027
Taxes	1.72	0.020	1.08	0.014	0.24	0.00	1.67	0.020
Rent	1.73	0.020	1.10	0.015	0.60	0.01	1.68	0.020
Interest on OC	1.90	0.022	0.90	0.012	0.00	0.00	1.83	0.022
Office expenses	0.54	0.006	0.51	0.007	0.00	0.00	0.53	0.006
Marketing								
Advertising	0.43	0.005	0.19	0.003	0.11	0.00	0.41	0.005
Subscriptions	0.08	0.001	0.20	0.003	0.63	0.01	0.09	0.001
Promotion	0.18	0.002	0.08	0.001	0.00	0.00	0.17	0.002
Fees	0.07	0.001	0.05	0.001	0.02	0.00	0.07	0.001
Other	2.70	0.032	2.05	0.027	2.78	0.03	2.65	0.032
Total	58.24	0.687	47.99	0.635	38.44	0.480	57.47	0.683

Sample Size = 266

Full time = 118

Part time = 118

Hobby = 30

Average gross expenses of producer operations who did not receive government payments, by type firm, 1988

Cost item	Type Firm						Total	
	Full time		Part time		Hobby			
	Per colony	Per pound	Per colony	Per pound	Per colony	Per pound	Per colony	Per pound
	Dollars							
Labor								
Hired labor	9.99	0.121	1.74	0.023	0.58	0.008	9.36	0.114
Benefits	0.37	0.004	0.09	0.001	0.00	0.000	0.35	0.004
Other	2.41	0.029	0.21	0.003	0.00	0.000	2.24	0.027
Bees								
Bee food	3.00	0.036	2.64	0.035	0.97	0.014	2.97	0.036
Queens and nucs	1.04	0.013	1.68	0.022	2.12	0.030	1.08	0.013
Package bees	0.52	0.006	0.28	0.004	0.12	0.002	0.50	0.006
Supplies								
General	4.82	0.058	5.02	0.066	9.08	0.128	4.85	0.059
Containers etc.	1.80	0.022	3.58	0.047	4.44	0.062	1.94	0.024
Equipment								
Repair and Maint	3.72	0.045	4.33	0.057	1.46	0.021	3.76	0.046
Gas and oil	3.76	0.046	3.86	0.051	5.34	0.075	3.77	0.046
Buildings								
Repair and Maint	1.45	0.018	2.08	0.028	0.02	0.000	1.49	0.018
Mortgage	2.41	0.029	1.20	0.016	0.00	0.000	2.32	0.028
Overhead								
Utilities	1.45	0.018	1.94	0.026	1.64	0.023	1.48	0.018
Insurance	1.89	0.023	1.04	0.014	0.00	0.000	1.83	0.022
Taxes	1.79	0.022	2.27	0.030	1.22	0.017	1.82	0.022
Rent	1.09	0.013	1.60	0.021	0.90	0.013	1.12	0.014
Interest on OC	1.41	0.017	0.17	0.002	0.00	0.000	1.31	0.016
Office expenses	0.35	0.004	0.12	0.002	0.03	0.000	0.33	0.004
Marketing								
Advertising	0.11	0.001	0.13	0.002	0.00	0.000	0.11	0.001
Subscriptions	0.03	0.000	0.11	0.001	0.19	0.003	0.03	0.000
Promotion	0.06	0.001	0.12	0.002	0.00	0.000	0.06	0.001
Fees	0.03	0.000	0.17	0.002	0.00	0.000	0.04	0.001
Other	2.40	0.029	0.97	0.013	0.00	0.000	2.28	0.028
Total	45.86	0.556	35.34	0.467	28.12	0.396	45.04	0.549

Sample Size = 226

Full time = 106

Part time = 92

Hobby = 28

Average gross expenses of producer operations, by colony size, 1988

Cost item	Colony size													
	Less than 25		25 to 299		300 to 499		500 to 999		1,000 to 4,999		5,000 to 9,999		10,000 or more	
	Per colony	Per pound	Per colony	Per pound	Per colony	Per pound	Per colony	Per pound	Per colony	Per pound	Per colony	Per pound	Per colony	Per pound
	Dollars													
Labor														
Hired labor	0.30	0.004	2.95	0.041	2.76	0.036	7.29	0.089	10.87	0.115	17.10	0.250	15.22	0.236
Benefits	0.00	0.000	0.25	0.003	0.02	0.000	0.65	0.008	0.79	0.008	2.59	0.038	0.68	0.011
Other	0.22	0.003	2.00	0.028	0.02	0.000	3.14	0.038	3.66	0.039	7.71	0.113	1.50	0.023
Bees														
Bee food	1.23	0.015	1.95	0.027	1.89	0.025	2.84	0.035	4.08	0.043	7.16	0.105	3.39	0.052
Queens and nucs	3.96	0.047	1.83	0.025	1.19	0.016	1.60	0.020	1.36	0.014	1.57	0.023	0.39	0.006
Package bees	1.56	0.019	1.53	0.021	0.28	0.004	0.58	0.007	0.84	0.009	0.23	0.003	0.00	0.000
Supplies														
General	6.48	0.077	5.62	0.078	3.94	0.052	2.57	0.031	4.52	0.048	6.66	0.097	2.64	0.041
Containers etc.	6.19	0.074	6.64	0.092	3.15	0.042	15.50	0.189	1.88	0.020	0.76	0.011	0.19	0.003
Equipment														
Repair and Maint	3.08	0.037	3.93	0.054	1.93	0.025	4.18	0.051	3.65	0.039	4.31	0.063	3.34	0.052
Gas and oil	4.29	0.051	4.17	0.058	3.67	0.048	3.69	0.045	4.12	0.044	3.62	0.053	2.20	0.034
Buildings														
Repair and Maint	1.37	0.016	1.94	0.027	1.43	0.019	2.73	0.033	1.15	0.012	1.21	0.018	0.41	0.006
Mortgage	1.15	0.014	5.18	0.072	2.91	0.038	2.56	0.031	3.07	0.033	1.92	0.028	0.10	0.002
Overhead														
Utilities	1.52	0.018	2.02	0.028	1.62	0.021	1.58	0.019	1.43	0.015	1.25	0.018	0.99	0.015
Insurance	0.07	0.001	1.58	0.022	1.04	0.014	1.61	0.020	2.16	0.023	3.90	0.057	0.82	0.013
Taxes	0.94	0.011	2.05	0.028	1.25	0.017	2.58	0.031	1.70	0.018	2.41	0.035	0.47	0.007
Rent	0.96	0.011	1.40	0.019	1.12	0.015	1.31	0.016	1.29	0.014	2.78	0.041	0.90	0.014
Interest on OC	0.00	0.000	0.78	0.011	0.45	0.006	2.00	0.024	1.49	0.016	1.95	0.028	2.31	0.036
Office expenses	0.00	0.000	0.43	0.006	0.22	0.003	0.30	0.004	0.43	0.005	0.32	0.005	0.88	0.014
Marketing														
Advertising	0.06	0.001	0.19	0.003	0.07	0.001	0.94	0.012	0.22	0.002	0.19	0.003	0.31	0.005
Subscriptions	0.54	0.006	0.17	0.002	0.11	0.002	0.25	0.003	0.03	0.000	0.05	0.001	0.00	0.000
Promotion	0.00	0.000	0.10	0.001	0.10	0.001	0.45	0.005	0.12	0.001	0.08	0.001	0.01	0.000
Fees	0.04	0.000	0.16	0.002	0.05	0.001	0.25	0.003	0.03	0.000	0.01	0.000	0.03	0.000
Other	2.11	0.025	1.59	0.022	1.68	0.022	1.98	0.024	2.92	0.031	3.42	0.050	0.95	0.015
Total	36.08	0.429	48.45	0.669	30.93	0.408	60.59	0.737	51.84	0.550	71.21	1.041	37.71	0.584

Sample Size=492

196 did not respond

Less than 25 = 52

300 to 499 = 57

1000 to 4999 = 106

10,000 or more = 3

25 to 299 = 202

500 to 999 = 63

5000 to 9999 = 9

Average gross expenses of producer operations, by honey production, 1988

Cost item	Honey production (pounds)													
	Less than 1,250		1,250 to 14,999		15,000 to 24,999		25,000 to 49,999		50,000 to 249,999		250,000 to 499,999		500,000 or more	
	Per colony	Per pound	Per colony	Per pound	Per colony	Per pound	Per colony	Per pound	Per colony	Per pound	Per colony	Per pound	Per colony	Per pound
	Dollars													
Labor														
Hired labor	1.07	0.068	2.94	0.069	2.15	0.037	4.17	0.057	7.74	0.107	13.79	0.153	21.20	0.180
Benefits	0.00	0.000	0.22	0.005	0.02	0.000	0.29	0.004	0.63	0.009	1.10	0.012	2.03	0.017
Other	0.08	0.005	1.92	0.045	0.00	0.000	0.62	0.008	2.23	0.031	6.32	0.070	5.78	0.049
Bees														
Bee food	2.38	0.152	1.98	0.046	1.41	0.025	2.68	0.037	2.92	0.040	4.83	0.053	7.09	0.060
Queens and nucs	2.77	0.177	1.46	0.034	0.98	0.017	1.44	0.020	1.40	0.019	1.55	0.017	0.89	0.008
Package bees	0.38	0.024	1.04	0.024	1.07	0.019	0.49	0.007	0.73	0.010	0.75	0.008	0.16	0.001
Supplies														
General	5.30	0.339	3.34	0.078	3.58	0.062	4.17	0.057	3.39	0.047	2.49	0.028	8.98	0.076
Containers etc.	2.89	0.185	4.94	0.116	5.12	0.089	2.31	0.032	4.94	0.068	2.16	0.024	0.57	0.005
Equipment														
Repair and Maint	2.79	0.178	3.64	0.085	3.06	0.053	2.52	0.035	3.26	0.045	4.11	0.046	4.63	0.039
Gas and oil	3.10	0.199	3.19	0.075	5.23	0.091	3.65	0.050	3.28	0.045	3.51	0.039	4.74	0.040
Buildings														
Repair and Maint	0.30	0.019	1.35	0.032	1.14	0.020	2.00	0.027	1.07	0.015	1.47	0.016	1.29	0.011
Mortgage	2.09	0.134	1.98	0.047	3.59	0.062	4.27	0.059	2.33	0.032	4.16	0.046	0.91	0.008
Overhead														
Utilities	1.36	0.087	1.44	0.034	2.08	0.036	1.63	0.022	1.10	0.015	1.42	0.016	1.77	0.015
Insurance	1.02	0.065	1.32	0.031	1.37	0.024	1.24	0.017	1.62	0.022	2.62	0.029	3.09	0.026
Taxes	2.26	0.145	1.66	0.039	1.76	0.031	1.40	0.019	1.80	0.025	1.82	0.020	1.62	0.014
Rent	1.56	0.100	1.23	0.029	0.85	0.015	0.83	0.011	1.08	0.015	1.71	0.019	2.28	0.019
Interest on OC	0.00	0.000	0.59	0.014	1.06	0.019	1.36	0.019	1.28	0.018	1.49	0.017	2.92	0.025
Office expenses	0.07	0.004	0.26	0.006	0.58	0.010	0.31	0.004	0.28	0.004	0.49	0.005	0.83	0.007
Marketing														
Advertising	0.03	0.002	0.19	0.004	0.09	0.002	0.11	0.002	0.37	0.005	0.23	0.003	0.32	0.003
Subscriptions	0.17	0.011	0.16	0.004	0.13	0.002	0.08	0.001	0.08	0.001	0.03	0.000	0.03	0.000
Promotion	0.00	0.000	0.07	0.002	0.04	0.001	0.11	0.002	0.17	0.002	0.17	0.002	0.06	0.000
Fees	0.07	0.004	0.14	0.003	0.05	0.001	0.03	0.000	0.07	0.001	0.06	0.001	0.02	0.000
Other	1.34	0.086	1.84	0.043	3.10	0.054	0.75	0.010	1.69	0.023	3.48	0.039	3.73	0.032
Total	31.01	1.984	36.91	0.866	38.46	0.670	36.46	0.500	43.44	0.599	59.77	0.662	74.93	0.636

Sample Size=492
 Less than 1250 = 51
 1250 to 14999 = 183

196 did not respond
 15000 to 24999 = 49
 25000 to 49999 = 64

50,000 to 249999 = 106
 250000 to 499999 = 26

500000 or more = 13

Average gross expenses of full-time producer operations, by region, 1988

Cost item	Region										Total	
	Northwest		Northeast		Southeast		Midwest		West			
	Per colony	Per pound	Per colony	Per pound	Per colony	Per pound	Per colony	Per pound	Per colony	Per pound	Per colony	Per pound
	Dollars											
Labor												
Hired labor	14.83	0.173	17.49	0.230	7.27	0.106	10.47	0.101	8.07	0.114	11.74	0.140
Benefits	1.44	0.017	3.75	0.049	0.11	0.002	0.95	0.009	0.35	0.005	1.01	0.012
Other	4.90	0.057	3.14	0.041	1.73	0.025	3.52	0.034	3.44	0.049	3.85	0.046
Bees												
Bee food	5.78	0.068	2.60	0.034	2.25	0.033	3.96	0.038	2.27	0.032	4.23	0.050
Queens and nucs	1.28	0.015	0.88	0.012	0.76	0.011	1.96	0.019	1.03	0.015	1.29	0.015
Package bees	0.84	0.010	0.69	0.009	0.24	0.004	0.48	0.005	0.37	0.005	0.59	0.007
Supplies												
General	5.45	0.064	1.40	0.018	3.64	0.053	4.57	0.044	2.08	0.030	4.35	0.052
Containers etc.	1.25	0.015	5.13	0.067	1.94	0.028	9.68	0.093	0.96	0.014	3.10	0.037
Equipment												
Repair and Maint	4.04	0.047	2.94	0.039	2.60	0.038	4.61	0.044	2.81	0.040	3.71	0.044
Gas and oil	4.62	0.054	3.15	0.041	2.16	0.032	3.32	0.032	3.25	0.046	3.72	0.044
Buildings												
Repair and Maint	1.28	0.015	1.04	0.014	0.98	0.014	1.45	0.014	0.92	0.013	1.20	0.014
Mortgage	2.30	0.027	1.80	0.024	0.72	0.011	2.77	0.027	3.90	0.055	2.39	0.029
Overhead												
Utilities	1.51	0.018	1.20	0.016	0.94	0.014	1.66	0.016	1.05	0.015	1.37	0.016
Insurance	2.55	0.030	2.09	0.027	1.38	0.020	1.92	0.019	2.08	0.029	2.15	0.026
Taxes	1.88	0.022	1.56	0.020	1.34	0.020	2.08	0.020	1.38	0.020	1.75	0.021
Rent	2.05	0.024	0.75	0.010	0.95	0.014	0.90	0.009	1.11	0.016	1.47	0.017
Interest on OC	1.94	0.023	1.74	0.023	1.16	0.017	2.11	0.020	1.03	0.015	1.70	0.020
Office expenses	0.57	0.007	0.60	0.008	0.10	0.001	0.52	0.005	0.39	0.006	0.46	0.005
Marketing												
Advertising	0.23	0.003	0.32	0.004	0.11	0.002	0.80	0.008	0.06	0.001	0.30	0.004
Subscriptions	0.04	0.000	0.05	0.001	0.02	0.000	0.14	0.001	0.05	0.001	0.06	0.001
Promotion	0.09	0.001	0.00	0.000	0.04	0.001	0.36	0.004	0.07	0.001	0.13	0.002
Fees	0.02	0.000	0.33	0.004	0.01	0.000	0.19	0.002	0.01	0.000	0.06	0.001
Other	3.12	0.037	2.02	0.027	0.40	0.006	3.93	0.038	1.49	0.021	2.57	0.031
Total	62.01	0.725	54.68	0.718	30.86	0.452	62.36	0.602	38.17	0.541	53.20	0.634

Sample Size=224

Northwest = 66

Southeast = 33

West = 47

Northeast = 9

Midwest = 69

Average gross expenses of part-time producer operations, by region, 1988

Cost item	Region										Total	
	Northwest		Northeast		Southeast		Midwest		West			
	Per colony	Per pound	Per colony	Per pound	Per colony	Per pound	Per colony	Per pound	Per colony	Per pound	Per colony	Per pound
	Dollars											
Labor												
Hired labor	2.88	0.041	1.78	0.029	3.34	0.053	2.96	0.034	1.20	0.016	2.69	0.036
Benefits	0.36	0.005	0.14	0.002	0.08	0.001	0.18	0.002	0.00	0.000	0.17	0.002
Other	0.07	0.001	0.62	0.010	0.00	0.000	1.85	0.021	0.00	0.000	0.83	0.011
Bees												
Bee food	2.66	0.038	1.79	0.029	2.17	0.034	2.35	0.027	0.81	0.011	2.15	0.028
Queens and nucs	2.98	0.042	0.79	0.013	1.25	0.020	1.65	0.019	1.16	0.015	1.64	0.022
Package bees	1.03	0.015	0.41	0.007	0.00	0.000	2.07	0.023	0.08	0.001	1.07	0.014
Supplies												
General	7.91	0.112	3.68	0.059	4.24	0.067	5.94	0.067	2.64	0.035	5.34	0.071
Containers etc.	3.04	0.043	6.89	0.111	3.26	0.051	5.25	0.059	6.60	0.087	4.82	0.064
Equipment												
Repair and Maint	3.08	0.043	4.49	0.073	2.14	0.034	4.24	0.048	2.38	0.031	3.48	0.046
Gas and oil	4.08	0.058	2.40	0.039	2.36	0.037	4.14	0.047	8.07	0.106	3.92	0.052
Buildings												
Repair and Maint	4.06	0.057	2.88	0.047	1.94	0.031	1.92	0.022	1.09	0.014	2.36	0.031
Mortgage	2.59	0.037	4.01	0.065	1.58	0.025	7.46	0.084	9.07	0.119	5.13	0.068
Overhead												
Utilities	1.72	0.024	2.28	0.037	1.12	0.018	2.26	0.026	1.92	0.025	1.91	0.025
Insurance	1.28	0.018	1.26	0.020	0.85	0.013	1.45	0.016	1.55	0.020	1.29	0.017
Taxes	1.29	0.018	2.99	0.048	0.76	0.012	1.80	0.020	0.82	0.011	1.57	0.021
Rent	1.70	0.024	1.36	0.022	2.10	0.033	0.69	0.008	1.46	0.019	1.31	0.017
Interest on OC	0.79	0.011	0.31	0.005	0.75	0.012	0.43	0.005	1.03	0.014	0.60	0.008
Office expenses	0.38	0.005	0.31	0.005	0.29	0.005	0.43	0.005	0.12	0.002	0.35	0.005
Marketing												
Advertising	0.11	0.002	0.18	0.003	0.22	0.003	0.16	0.002	0.15	0.002	0.17	0.002
Subscriptions	0.18	0.003	0.21	0.003	0.14	0.002	0.15	0.002	0.16	0.002	0.16	0.002
Promotion	0.04	0.001	0.27	0.004	0.00	0.000	0.14	0.002	0.00	0.000	0.10	0.001
Fees	0.06	0.001	0.00	0.000	0.33	0.005	0.03	0.000	0.14	0.002	0.10	0.001
Other	1.26	0.018	0.57	0.009	2.46	0.039	0.80	0.009	5.29	0.070	1.60	0.021
Total	43.56	0.614	39.62	0.641	31.40	0.496	48.34	0.547	45.73	0.603	42.76	0.566

Sample Size=210

Northwest = 34

Southeast = 41

West = 17

Northeast = 32

Midwest = 86

Average gross expenses of hobby producer operations, by region, 1988

Cost item	Region										Total	
	Northwest		Northeast		Southeast		Midwest		West			
	Per colony	Per pound	Per colony	Per pound	Per colony	Per pound	Per colony	Per pound	Per colony	Per pound	Per colony	Per pound
	Dollars											
Labor												
Hired labor	1.16	0.020	0.00	0.000	0.27	0.005	0.33	0.003	0.00	0.000	0.396	0.005
Benefits	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.000	0.000
Other	0.00	0.000	0.00	0.000	0.39	0.006	0.00	0.000	0.00	0.000	0.165	0.002
Bees												
Bee food	1.15	0.020	0.00	0.000	0.94	0.016	1.90	0.020	0.00	0.000	1.209	0.016
Queens and nucs	0.38	0.007	0.70	0.012	1.23	0.020	4.64	0.050	17.44	0.113	3.008	0.040
Package bees	1.35	0.024	0.00	0.000	0.49	0.008	2.25	0.024	0.00	0.000	1.168	0.015
Supplies												
General	11.89	0.207	2.30	0.040	9.63	0.159	7.73	0.082	1.74	0.011	8.621	0.114
Containers etc.	1.20	0.021	0.63	0.011	4.44	0.073	4.53	0.048	24.42	0.158	4.773	0.063
Equipment												
Repair and Maint	0.23	0.004	1.00	0.017	2.42	0.040	4.53	0.048	1.43	0.009	2.707	0.036
Gas and oil	9.38	0.164	0.38	0.007	5.66	0.093	2.65	0.028	7.44	0.048	5.042	0.067
Buildings												
Repair and Maint	0.00	0.000	0.25	0.004	1.69	0.028	0.40	0.004	0.00	0.000	0.863	0.011
Mortgage	0.00	0.000	0.00	0.000	2.05	0.034	0.00	0.000	0.00	0.000	0.867	0.011
Overhead												
Utilities	0.26	0.005	0.38	0.007	0.82	0.014	0.50	0.005	11.63	0.075	1.122	0.015
Insurance	0.00	0.000	0.00	0.000	0.00	0.000	0.15	0.002	0.00	0.000	0.052	0.001
Taxes	0.28	0.005	0.00	0.000	0.92	0.015	0.65	0.007	1.51	0.010	0.721	0.010
Rent	1.12	0.020	0.00	0.000	0.57	0.009	0.81	0.009	1.40	0.009	0.745	0.010
Interest on OC	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.000	0.000
Office expenses	0.11	0.002	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.017	0.000
Marketing												
Advertising	0.00	0.000	0.00	0.000	0.14	0.002	0.00	0.000	0.00	0.000	0.057	0.001
Subscriptions	0.30	0.005	0.30	0.005	0.26	0.004	0.56	0.006	1.28	0.008	0.416	0.005
Promotion	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.000	0.000
Fees	0.00	0.000	0.00	0.000	0.03	0.000	0.00	0.000	0.00	0.000	0.011	0.000
Other	0.00	0.000	0.00	0.000	3.32	0.055	0.04	0.000	0.00	0.000	1.417	0.019
Total	28.82	0.502	5.93	0.103	35.26	0.582	31.68	0.338	68.29	0.443	33.38	0.441

NE: CT; MA; MD; ME; NH; NJ; NY; PA; VT; DE; RI
 SE: AL; AR; GA; FL; LA; MO; MS; NC; SC; TN; VA; WV
 MW: IA; IL; IN; KS; KY; MI; MN; OH; WI; OK; TX

W: AZ; CO; CA; NM; NV; UT; WY; HI
 NW: AK; ID; MT; ND; NE; OR; SD; WA

Sample Size=58

Northwest = 7

Southeast = 21

West = 4

Northeast = 4

Midwest = 22

PRODUCERS - AVERAGE GROSS RECEIPTS

Average gross receipts from beekeeping products, services, and programs, by firm type, 1988

Type firm and unit	Products, services, and programs							Total
	Honey	Pollination Services	Beeswax	Package Bees	Queens and nucs	Government payments	Other	
	Dollars							
Full-time								
Per colony	33.49	7.20	1.20	0.95	1.40	17.82	2.25	64.31
Per pound	0.399	0.086	0.014	0.011	0.017	0.212	0.027	0.767
Part-time								
Per colony	36.58	3.57	0.64	0.06	0.43	15.96	1.48	58.71
Per pound	0.484	0.047	0.008	0.001	0.006	0.211	0.020	0.777
Hobby								
Per colony	21.34	0.00	0.53	0.00	0.00	15.91	0.11	37.89
Per pound	0.282	0.000	0.007	0.000	0.000	0.210	0.001	0.501
Total								
Per colony	33.68	6.93	1.16	0.88	1.33	17.68	2.19	63.85
Per pound	0.405	0.083	0.014	0.011	0.016	0.212	0.026	0.767

Sample Size = 492 (Full-time = 224, Part-time = 210, Hobby = 58)

Average gross receipts from beekeeping products, services, and programs of operations who received pollination fees, by firm type, 1988

Type firm and unit	Products, services, and programs							Total
	Honey	Pollination Services	Beeswax	Package Bees	Queens and nucs	Government payments	Other	
	Dollars							
Full-time								
Per colony	33.86	19.28	1.45	0.72	0.59	10.46	4.50	70.86
Per pound	0.452	0.257	0.019	0.010	0.008	0.140	0.060	0.946
Part-time								
Per colony	39.20	14.83	0.54	0.00	0.15	12.08	2.40	69.21
Per pound	0.614	0.232	0.008	0.000	0.002	0.189	0.038	1.083
Hobby								
Per colony								
Per pound								
Total								
Per colony	34.12	19.07	1.40	0.68	0.57	10.54	4.40	70.78
Per pound	0.459	0.256	0.019	0.009	0.008	0.142	0.059	0.951

Sample Size = 123 (Full-time = 81, Part-time = 42, Hobby = 0)

Average gross receipts from beekeeping products, services, and programs of operations who did not receive pollination fees, by firm type, 1988

Type firm and unit	Products, services, and programs							Total
	Honey	Pollination Services	Beeswax	Package Bees	Queens and nucs	Government payments	Other	
	Dollars							
Full-time								
Per colony	33.26	0.00	1.06	1.09	1.89	22.21	0.91	60.41
Per pound	0.373	0.000	0.012	0.012	0.021	0.249	0.010	0.677
Part-time								
Per colony	35.74	0.00	0.67	0.08	0.52	17.18	1.19	55.38
Per pound	0.451	0.000	0.009	0.001	0.007	0.217	0.015	0.699
Hobby								
Per colony	21.34	0.00	0.53	0.00	0.00	15.91	0.11	37.89
Per pound	0.282	0.000	0.007	0.000	0.000	0.210	0.001	0.501
Total								
Per colony	33.43	0.00	1.02	1.00	1.76	21.75	0.93	59.90
Per pound	0.379	0.000	0.012	0.011	0.020	0.246	0.011	0.678

Sample Size = 369 (Full-time = 143, Part-time = 168, Hobby = 58)

Average gross receipts from beekeeping products, services, and programs of operations who received government payments, by firm type, 1988

Type firm and unit	Products, services, and programs							Total
	Honey	Pollination Services	Beeswax	Package Bees	Queens and nucs	Government payments	Other	
	Dollars							
Full-time								
Per colony	27.67	6.89	1.44	0.81	0.88	30.04	3.14	70.87
Per pound	0.326	0.081	0.017	0.010	0.010	0.354	0.037	0.836
Part-time								
Per colony	35.32	3.67	0.70	0.00	0.23	27.21	1.52	68.65
Per pound	0.468	0.049	0.009	0.000	0.003	0.360	0.020	0.909
Hobby								
Per colony	19.51	0.00	0.87	0.00	0.00	31.24	0.22	51.83
Per pound	0.243	0.000	0.011	0.000	0.000	0.390	0.003	0.647
Total								
Per colony	28.20	6.65	1.39	0.75	0.83	29.84	3.02	70.67
Per pound	0.335	0.079	0.017	0.009	0.010	0.355	0.036	0.840

Sample Size = 266 (Full-time = 118, Part-time = 118, Hobby = 30)

Average gross receipts from beekeeping products, services, and programs of operations who did not receive government payments, by firm type, 198

Type firm and unit	Products, services, and programs							Total
	Honey	Pollination Services	Beeswax	Package Bees	Queens and nucs	Government payments	Other	
	Dollars							
Full-time								
Per colony	41.97	7.67	0.85	1.15	2.16	0.00	0.95	54.76
Per pound	0.509	0.093	0.010	0.014	0.026	0.000	0.012	0.663
Part-time								
Per colony	38.36	3.42	0.56	0.14	0.70	0.00	1.42	44.61
Per pound	0.507	0.045	0.007	0.002	0.009	0.000	0.019	0.590
Hobby								
Per colony	23.25	0.00	0.17	0.00	0.00	0.00	0.00	23.41
Per pound	0.327	0.000	0.002	0.000	0.000	0.000	0.000	0.330
Total								
Per colony	41.65	7.33	0.83	1.08	2.05	0.00	0.99	53.93
Per pound	0.508	0.089	0.010	0.013	0.025	0.000	0.012	0.658

Sample Size = 226 (Full-time = 106, Part-time = 92, Hobby = 28)

Average gross receipts from beekeeping products, services, and programs of operations, by colony size, 1988

Colony size and unit	Products, services, and programs							Total
	Honey	Pollination Services	Beeswax	Package Bees	Queens and nucs	Government payments	Other	
	Dollars							
Less than 25								
Per colony	27.80	0.00	0.72	0.00	0.00	22.05	0.15	50.72
Per pound	0.331	0.000	0.009	0.000	0.000	0.262	0.002	0.604
25 to 299								
Per colony	35.85	3.75	0.67	0.07	0.35	16.70	1.68	59.07
Per pound	0.495	0.052	0.009	0.001	0.005	0.231	0.023	0.816
300 to 499								
Per colony	29.85	3.80	0.45	0.00	0.69	13.31	1.69	49.79
Per pound	0.394	0.050	0.006	0.000	0.009	0.175	0.022	0.656
500 to 999								
Per colony	38.55	6.81	0.92	0.18	0.12	16.22	0.56	63.35
Per pound	0.469	0.083	0.011	0.002	0.001	0.197	0.007	0.771
1,000 to 4,999								
Per colony	37.83	8.27	1.41	0.90	2.07	17.60	3.40	71.48
Per pound	0.401	0.088	0.015	0.010	0.022	0.187	0.036	0.758
5,000 to 9,999								
Per colony	29.96	7.55	1.33	2.76	1.13	15.60	0.07	58.40
Per pound	0.438	0.110	0.019	0.040	0.017	0.228	0.001	0.854
10,000 or more								
Per colony	18.09	3.78	0.68	0.00	0.24	23.62	1.46	47.86
Per pound	0.280	0.059	0.011	0.000	0.004	0.366	0.023	0.741
Total								
Per colony	33.68	6.93	1.16	0.88	1.33	17.68	2.19	63.85
Per pound	0.405	0.083	0.014	0.011	0.016	0.212	0.026	0.767

Sample Size = 492

Less than 25 = 52

25 to 299 = 202

300 to 499 = 57

500 to 999 = 63

1,000 to 4,999 = 106

5,000 to 9,999 = 9

10,000 or more = 3

Average gross receipts from beekeeping products, services, and programs of operations, by honey production, 1988

Honey production and unit	Products, services, and programs							Total
	Honey	Pollination Services	Beeswax	Package Bees	Queens and nucs	Government payments	Other	
	Dollars							
Less than 1,250								
Per colony	7.51	5.40	0.15	0.00	0.05	3.51	5.19	21.81
Per pound	0.480	0.345	0.010	0.000	0.003	0.225	0.332	1.395
1,250 to 14,999								
Per colony	18.25	4.13	0.45	0.07	0.43	10.55	1.07	34.95
Per pound	0.428	0.097	0.010	0.002	0.010	0.248	0.025	0.820
15,000 to 24,999								
Per colony	30.97	10.17	0.58	0.00	0.16	11.31	3.59	56.78
Per pound	0.540	0.177	0.010	0.000	0.003	0.197	0.062	0.989
25,000 to 49,999								
Per colony	32.91	4.31	0.55	0.24	0.48	16.60	0.06	55.15
Per pound	0.449	0.059	0.008	0.003	0.007	0.226	0.001	0.752
50,000 to 249,999								
Per colony	32.97	7.57	1.03	1.72	0.64	10.98	1.08	55.98
Per pound	0.455	0.104	0.014	0.024	0.009	0.151	0.015	0.772
250,000 to 499,999								
Per colony	38.84	9.71	1.85	0.84	3.30	15.30	6.20	76.05
Per pound	0.430	0.107	0.021	0.009	0.037	0.169	0.069	0.842
500,000 or more								
Per colony	35.54	4.00	1.26	0.00	1.40	36.68	0.89	79.76
Per pound	0.302	0.034	0.011	0.000	0.012	0.311	0.008	0.677
Total								
Per colony	33.68	6.93	1.16	0.88	1.33	17.68	2.19	63.85
Per pound	0.405	0.083	0.014	0.011	0.016	0.212	0.026	0.767

Sample Size = 492

Less than 1250 = 51

1250 to 14999 = 183

15000 to 24999 = 49

25000 to 49999 = 64

50000 to 249999 = 106

250,000 to 499,999 = 26

500,000 or more = 13

Average gross receipts from beekeeping products, services, and programs of full-time operations, by region, 1988

Region and unit	Products, services, and programs							Total
	Honey	Pollination Services	Beeswax	Package Bees	Queens and nucs	Government payments	Other	
	Dollars							
Northwest								
Per colony	29.13	10.45	1.37	0.08	0.81	21.56	4.37	67.78
Per pound	0.340	0.122	0.016	0.001	0.010	0.252	0.051	0.792
Northeast								
Per colony	31.84	2.38	1.19	0.00	0.60	13.12	0.00	49.13
Per pound	0.418	0.031	0.016	0.000	0.008	0.172	0.000	0.645
Southeast								
Per colony	21.63	1.29	0.66	3.33	0.50	8.84	0.02	36.27
Per pound	0.317	0.019	0.010	0.049	0.007	0.129	0.000	0.531
Midwest								
Per colony	47.56	1.48	1.24	0.86	3.99	25.19	0.47	80.79
Per pound	0.459	0.014	0.012	0.008	0.038	0.243	0.005	0.779
West								
Per colony	40.02	11.57	1.22	1.37	0.82	7.32	0.91	63.21
Per pound	0.567	0.164	0.017	0.019	0.012	0.104	0.013	0.896
Total								
Per colony	33.49	7.20	1.20	0.95	1.40	17.82	2.25	64.31
Per pound	0.399	0.086	0.014	0.011	0.017	0.212	0.027	0.767

Sample Size=224

Northwest = 66

Southeast = 33

West = 47

Northeast = 9

Midwest = 69

NE: CT; MA; MD; ME; NH; NJ; NY; PA; VT; DE; RI

W: AZ; CO; CA; NM; NV; UT; WY; HI

SE: AL; AR; GA; FL; LA; MO; MS; NC; SC; TN; VA; WV

NW: AK; ID; MT; ND; NE; OR; SD; WA

MW: IA; IL; IN; KS; KY; MI; MN; OH; WI; OK; TX

Average gross receipts from beekeeping products, services, and programs of part-time operations, by region, 1988

Region and unit	Products, services, and programs							Total
	Honey	Pollination Services	Beeswax	Package Bees	Queens and nucs	Government payments	Other	
	Dollars							
Northwest								
Per colony	24.61	5.32	0.51	0.00	1.72	17.89	3.33	53.37
Per pound	0.347	0.075	0.007	0.000	0.024	0.252	0.047	0.753
Northeast								
Per colony	32.23	4.65	0.98	0.00	0.64	6.35	2.29	47.14
Per pound	0.521	0.075	0.016	0.000	0.010	0.103	0.037	0.762
Southeast								
Per colony	35.19	1.61	0.76	0.00	0.00	9.99	0.81	48.37
Per pound	0.556	0.025	0.012	0.000	0.000	0.158	0.013	0.764
Midwest								
Per colony	41.51	2.36	0.62	0.00	0.08	22.41	0.65	67.63
Per pound	0.470	0.027	0.007	0.000	0.001	0.254	0.007	0.766
West								
Per colony	47.69	7.72	0.24	0.61	0.00	11.45	1.64	69.35
Per pound	0.629	0.102	0.003	0.008	0.000	0.151	0.022	0.914
Total								
Per colony	36.58	3.57	0.64	0.06	0.43	15.96	1.48	58.71
Per pound	0.484	0.047	0.008	0.001	0.006	0.211	0.020	0.777

Sample Size=210

Northwest = 34

Southeast = 41

West = 17

Northeast = 32

Midwest = 86

NE: CT; MA; MD; ME; NH; NJ; NY; PA; VT; DE; RI

W: AZ; CO; CA; NM; NV; UT; WY; HI

SE: AL; AR; GA; FL; LA; MO; MS; NC; SC; TN; VA; WV

NW: AK; ID; MT; ND; NE; OR; SD; WA

MW: IA; IL; IN; KS; KY; MI; MN; OH; WI; OK; TX

Average gross receipts from beekeeping products, services, and programs of hobby operations, by region, 1988

Region and unit	Products, services, and programs							Total
	Honey	Pollination Services	Beeswax	Package Bees	Queens and nucs	Government payments	Other	
	Dollars							
Northwest								
Per colony	24.52	0.00	0.00	0.00	0.00	5.90	0.00	30.42
Per pound	0.427	0.000	0.000	0.000	0.000	0.103	0.000	0.530
Northeast								
Per colony	26.57	0.00	1.88	0.00	0.00	1.47	0.00	29.92
Per pound	0.463	0.000	0.033	0.000	0.000	0.026	0.000	0.521
Southeast								
Per colony	22.26	0.00	0.70	0.00	0.00	6.25	0.00	29.20
Per pound	0.367	0.000	0.011	0.000	0.000	0.103	0.000	0.482
Midwest								
Per colony	18.55	0.00	0.34	0.00	0.00	35.96	0.33	55.18
Per pound	0.198	0.000	0.004	0.000	0.000	0.383	0.003	0.588
West								
Per colony	18.37	0.00	0.70	0.00	0.00	3.49	0.00	22.56
Per pound	0.119	0.000	0.005	0.000	0.000	0.023	0.000	0.146
Total								
Per colony	21.34	0.00	0.53	0.00	0.00	15.91	0.11	37.89
Per pound	0.282	0.000	0.007	0.000	0.000	0.210	0.001	0.501

Sample Size=58

Northwest = 7

Southeast = 21

West = 4

Northeast = 4

Midwest = 22

NE: CT; MA; MD; ME; NH; NJ; NY; PA; VT; DE; RI

W: AZ; CO; CA; NM; NV; UT; WY; HI

SE: AL; AR; GA; FL; LA; MO; MS; NC; SC; TN; VA; WV

NW: AK; ID; MT; ND; NE; OR; SD; WA

MW: IA; IL; IN; KS; KY; MI; MN; OH; WI; OK; TX

PRODUCERS - NET INCOME

Net income of beekeeping operations, by firm type, 1988

Unit	Type firm			Total
	Full-time	Part-time	Hobby	
	Dollars			
Per colony	11.11	15.95	4.51	11.44
Per pound	0.133	0.211	0.060	0.137

Compiled from previous tables.

Net income less government payments of beekeeping operations, by firm type, 1988

Unit	Type firm			Total
	Full-time	Part-time	Hobby	
	Dollars			
Per colony	-6.71	-0.01	-11.40	-6.24
Per pound	-0.079	0.000	-0.150	-0.075

Compiled from previous tables.

Net income of beekeeping operations who received pollination fees, by firm type, 1988

Unit	Type firm			Total
	Full-time	Part-time	Hobby	
	Dollars			
Per colony	15.78	15.21		15.75
Per pound	0.211	0.238		0.211

Compiled from previous tables.

Net income of beekeeping operations who did not receive pollination fees, by firm type, 1988

Unit	Type firm			Total
	Full-time	Part-time	Hobby	
	Dollars			
Per colony	18.37	16.18	4.51	8.99
Per pound	0.093	0.204	0.060	0.101

Compiled from previous tables

Net income of beekeeping operations who received government payments, by firm type, 1988

Unit	Type firm			Total
	Full-time	Part-time	Hobby	
	Dollars			
Per colony	12.63	20.66	13.39	13.20
Per pound	0.149	0.274	0.167	0.157

Compiled from previous tables.

Net income of beekeeping operations who did not receive government payments, by firm type, 1988

Unit	Type firm			Total
	Full-time	Part-time	Hobby	
	Dollars			
Per colony	8.90	9.27	-4.71	8.89
Per pound	0.107	0.123	-0.066	0.109

Compiled from previous tables.

Net income of beekeeping operations, by colony size, 1988

Unit	Colony Size							Total
	Less than 25	25 to 299	300 to 499	500 to 999	1,000 to 4,999	5,000 to 9,999	More than 10,000	
	Dollars							
Per colony	14.64	10.62	18.86	2.76	19.64	-12.81	10.15	11.44
Per pound	0.175	0.147	0.248	0.034	0.208	-0.187	0.157	0.137

Compiled from previous tables.

Net income of beekeeping operations, by honey production, 1988

Unit	Honey production							Total
	Less than 1,250	1,250 to 4,999	15,000 to 24,999	25,000 to 49,999	50,000 to 249,999	250,000 to 499,999	More than 500,000	
	Dollars							
Per colony	-9.20	-1.96	18.32	18.69	12.54	16.28	4.83	11.44
Per pound	-0.589	-0.046	0.319	0.252	0.173	0.180	0.041	0.137

Compiled from previous tables.

Net income of beekeeping operations, by firm type and region, 1988

Region and unit	Region					Total
	Northwest	Northeast	Southeast	Midwest	West	
	Dollars					
Full-time						
Per colony	5.77	-5.55	5.41	18.43	25.04	11.11
Per pound	0.067	-0.073	0.079	0.177	0.355	0.133
Part-time						
Per colony	9.81	7.52	16.97	19.29	23.62	15.95
Per pound	0.139	0.121	0.268	0.213	0.311	0.211
Hobby						
Per colony	1.60	23.99	-6.06	23.50	-45.73	4.51
Per pound	0.028	0.418	-0.100	0.250	-0.297	0.060

Compiled from previous tables.

Net income per colony, by firm type, 1988

Firm type	Net income per colony								Total
	Costs exceeded income	0.00 to 9.99	10.00 to 24.99	25.00 to 49.99	50.00 to 74.99	75.00 to 99.99	100.00 to 149.99	150.00 or more	
	Number								
Full-time	61	27	50	53	16	9	6	2	224
Part-time	62	24	45	46	15	9	7	2	210
Hobby	24	8	6	13	2	2	1	2	58
All	147	59	101	112	33	20	14	6	492

Sample Size = 492 (Full-time = 224, Part-time = 210, Hobby = 58)

104

Net income per colony, by firm type, 1988

Firm type	Net income per colony								Total
	Costs exceeded income	0.00 to 9.99	10.00 to 24.99	25.00 to 49.99	50.00 to 74.99	75.00 to 99.99	100.00 to 149.99	150.00 or more	
	Percent								
Full-time	27	12	22	24	7	4	3	1	100
Part-time	30	11	21	22	7	4	3	1	100
Hobby	41	14	10	22	3	3	2	3	100
All	30	12	21	23	7	4	3	1	100

Sample Size = 492 (Full-time = 224, Part-time = 210, Hobby = 58)

Net income per pound, by firm type, 1988

Firm type	Net income per pound								Total
	Costs exceeded income	0.00 to 0.09	0.10 to 0.24	0.25 to 0.49	0.50 to 0.74	0.75 to 0.99	1.00 to 1.24	1.25 or more	
	Number								
Full-time	61	19	39	55	25	10	9	6	224
Part-time	62	14	22	65	18	15	2	12	210
Hobby	24	5	4	12	5	4	2	2	58
All	147	38	65	132	48	29	13	20	492

Sample Size = 492 (Full-time = 224, Part-time = 210, Hobby = 58)

Net income per pound, by firm type, 1988

Firm type	Net income per pound								Total
	Costs exceeded income	0.00 to 0.09	0.10 to 0.24	0.25 to 0.49	0.50 to 0.74	0.75 to 0.99	1.00 to 1.24	1.25 or more	
	Percent								
Full-time	27	8	17	25	11	4	4	3	100
Part-time	30	7	10	31	9	7	1	6	100
Hobby	41	9	7	21	9	7	3	3	100
All	30	8	13	27	10	6	3	4	100

Sample Size = 492 (Full-time = 224, Part-time = 210, Hobby = 58)

Net income less government payments per colony, by firm type, 1988

Firm type	Net income per colony								
	Costs exceeded income	0.00 to 9.99	10.00 to 24.99	25.00 to 49.99	50.00 to 74.99	75.00 to 99.99	100.00 to 149.99	150.00 or more	Total
	Number								
Full-time	97	29	39	43	9	6	1	0	224
Part-time	106	23	33	29	11	6	1	1	210
Hobby	33	7	6	9	1	0	0	2	58
All	236	59	78	81	21	12	2	3	492

Sample Size = 492 (Full-time = 224, Part-time = 210, Hobby = 58)

Net income less government payments per colony, by firm type, 1988

Firm type	Net income per colony								
	Costs exceeded income	0.00 to 9.99	10.00 to 24.99	25.00 to 49.99	50.00 to 74.99	75.00 to 99.99	100.00 to 149.99	150.00 or more	Total
	Percent								
Full-time	43	13	17	19	4	3	0	0	100
Part-time	50	11	16	14	5	3	0	0	100
Hobby	57	12	10	16	2	0	0	3	100
All	48	12	16	16	4	2	0	1	100

Sample Size = 492 (Full-time = 224, Part-time = 210, Hobby = 58)

Net income less government payments per pound, by firm type, 1988

Firm type	Net income per pound								Total
	Costs exceeded income	0.00 to 0.09	0.10 to 0.24	0.25 to 0.49	0.50 to 0.74	0.75 to 0.99	1.00 to 1.24	1.25 or more	
	Number								
Full-time	97	24	25	49	15	6	6	2	224
Part-time	106	11	26	42	11	5	2	7	210
Hobby	33	5	4	7	6	0	1	2	58
All	236	40	55	98	32	11	9	11	492

Sample Size = 492 (Full-time = 224, Part-time = 210, Hobby = 58)

Net income less government payments per pound, by firm type, 1988

Firm type	Net income per pound								Total
	Costs exceeded income	0.00 to 0.09	0.10 to 0.24	0.25 to 0.49	0.50 to 0.74	0.75 to 0.99	1.00 to 1.24	1.25 or more	
	Percent								
Full-time	43	11	11	22	7	3	3	1	100
Part-time	50	5	12	20	5	2	1	3	100
Hobby	57	9	7	12	10	0	2	3	100
All	48	8	11	20	7	2	2	2	100

Sample Size = 492 (Full-time = 224, Part-time = 210, Hobby = 58)

Net income per colony by receipt of pollination fees, by firm type, 1988

Firm type	Net income per colony								Total
	Costs exceeded income	0.00 to 9.99	10.00 to 24.99	25.00 to 49.99	50.00 to 74.99	75.00 to 99.99	100.00 to 149.99	150.00 or more	
	Number								
Received									
Full-time	16	10	23	17	8	4	3	0	81
Part-time	10	5	10	13	2	2	0	0	42
Hobby									
All	26	15	33	30	10	6	3	0	123
Did not receive									
Full-time	45	17	27	36	8	5	3	2	143
Part-time	52	19	35	33	13	7	7	2	168
Hobby	24	8	6	13	2	2	1	2	58
All	121	44	68	82	23	14	11	6	369

Sample Size = 492 (Full-time = 224, Part-time = 210, Hobby = 58)

Received = 123 (Full-time = 81, Part-time = 42, Hobby = 0)

Did not receive = 369 (Full-time = 143, Part-time = 168, Hobby = 58)

Net income per colony by receipt of pollination fees, by firm type, 1988

Firm type	Net income per colony								Total
	Costs exceeded income	0.00 to 9.99	10.00 to 24.99	25.00 to 49.99	50.00 to 74.99	75.00 to 99.99	100.00 to 149.99	150.00 or more	
	Percent								
Received									
Full-time	20	12	28	21	10	5	4	0	100
Part-time	24	12	24	31	5	5	0	0	100
Hobby									
All	21	12	27	24	8	5	2	0	100
Did not receive									
Full-time	31	12	19	25	6	3	2	1	100
Part-time	31	11	21	20	8	4	4	1	100
Hobby	41	14	10	22	3	3	2	3	100
All	33	12	18	22	6	4	3	2	100

Sample Size = 492 (Full-time = 224, Part-time = 210, Hobby = 58)

Received = 123 (Full-time = 81, Part-time = 42, Hobby = 0)

Did not receive = 369 (Full-time = 143, Part-time = 168, Hobby = 58)

Net income per pound by receipt of pollination fees, by firm type, 1988

Firm type	Net income per pound								Total
	Costs exceeded income	0.00 to 0.09	0.10 to 0.24	0.25 to 0.49	0.50 to 0.74	0.75 to 0.99	1.00 to 1.24	1.25 or more	
	Number								
Received									
Full-time	16	6	10	24	10	6	6	3	81
Part-time	10	2	6	11	1	5	0	7	42
Hobby									
All	26	8	16	35	11	11	6	10	123
Did not receive									
Full-time	45	13	28	32	15	4	3	3	143
Part-time	52	12	17	53	17	10	2	5	168
Hobby	24	5	4	12	5	4	2	2	58
All	121	30	49	97	37	18	7	10	369

Sample Size = 492 (Full-time = 224, Part-time = 210, Hobby = 58)

Received = 123 (Full-time = 81, Part-time = 42, Hobby = 0)

Did not receive = 369 (Full-time = 143, Part-time = 168, Hobby = 58)

Net income per pound by receipt of pollination fees, by firm type, 1988

Firm type	Net income per pound								Total
	Costs exceeded income	0.00 to 0.09	0.10 to 0.24	0.25 to 0.49	0.50 to 0.74	0.75 to 0.99	1.00 to 1.24	1.25 or more	
	Percent								
Received									
Full-time	20	7	12	30	12	7	7	4	100
Part-time	24	5	14	26	2	12	0	17	100
Hobby									
All	21	7	13	28	9	9	5	8	100
Did not receive									
Full-time	31	9	20	22	10	3	2	2	100
Part-time	31	7	10	32	10	6	1	3	100
Hobby	41	9	7	21	9	7	3	3	100
All	33	8	13	26	10	5	2	3	100

Sample Size = 492 (Full-time = 224, Part-time = 210, Hobby = 58)

Received = 123 (Full-time = 81, Part-time = 42, Hobby = 0)

Did not receive = 369 (Full-time = 143, Part-time = 168, Hobby = 58)

Net income per colony by receipt of government payments, by firm type, 1988

Firm type	Net income per colony								Total
	Costs exceeded income	0.00 to 9.99	10.00 to 24.99	25.00 to 49.99	50.00 to 74.99	75.00 to 99.99	100.00 to 149.99	150.00 or more	
	Number								
Received									
Full-time	23	13	27	28	13	7	5	2	118
Part-time	23	15	25	33	10	5	6	1	118
Hobby	10	4	6	5	1	2	1	1	30
All	56	32	58	66	24	14	12	4	266
Did not receive									
Full-time	38	14	23	25	3	2	1	0	106
Part-time	39	9	20	13	5	4	1	1	92
Hobby	14	4	0	8	1	0	0	1	28
All	91	27	43	46	9	6	2	2	226

Sample Size = 492 (Full-time = 224, Part-time = 210, Hobby = 58)

Received = 266 (Full-time = 118, Part-time = 118, Hobby = 30)

Did not receive = 226 (Full-time = 106, Part-time = 92, Hobby = 28)

Net income per colony by receipt of government payments, by firm type, 1988

Firm type	Net income per colony								Total
	Costs exceeded income	0.00 to 9.99	10.00 to 24.99	25.00 to 49.99	50.00 to 74.99	75.00 to 99.99	100.00 to 149.99	150.00 or more	
	Percent								
Received									
Full-time	19	11	23	24	11	6	4	2	100
Part-time	19	13	21	28	8	4	5	1	100
Hobby	33	13	20	17	3	7	3	3	100
All	21	12	22	25	9	5	5	2	100
Did not receive									
Full-time	36	13	22	24	3	2	1	0	100
Part-time	42	10	22	14	5	4	1	1	100
Hobby	50	14	0	29	4	0	0	4	100
All	40	12	19	20	4	3	1	1	100

Sample Size = 492 (Full-time = 224, Part-time = 210, Hobby = 58)

Received = 266 (Full-time = 118, Part-time = 118, Hobby = 30)

Did not receive = 226 (Full-time = 106, Part-time = 92, Hobby = 28)

Net income per pound by receipt of government payments, by firm type, 1988

Firm type	Net income per pound								Total
	Costs exceeded income	0.00 to 0.09	0.10 to 0.24	0.25 to 0.49	0.50 to 0.74	0.75 to 0.99	1.00 to 1.24	1.25 or more	
	Number								
Received									
Full-time	23	8	23	29	17	8	4	6	118
Part-time	23	9	12	41	12	12	2	7	118
Hobby	10	3	2	7	2	4	1	1	30
All	56	20	37	77	31	24	7	14	266
Did not receive									
Full-time	38	11	16	26	8	2	5	0	106
Part-time	39	5	11	23	6	3	0	5	92
Hobby	14	2	2	5	3	0	1	1	28
All	91	18	29	54	17	5	6	6	226

Sample Size = 492 (Full-time = 224, Part-time = 210, Hobby = 58)

Received = 266 (Full-time = 118, Part-time = 118, Hobby = 30)

Did not receive = 226 (Full-time = 106, Part-time = 92, Hobby = 28)

Net income per pound by receipt of government payments, by firm type, 1988

Firm type	Net income per pound								Total
	Costs exceeded income	0.00 to 0.09	0.10 to 0.24	0.25 to 0.49	0.50 to 0.74	0.75 to 0.99	1.00 to 1.24	1.25 or more	
	Percent								
Received									
Full-time	19	7	19	25	14	7	3	5	100
Part-time	19	8	10	35	10	10	2	6	100
Hobby	33	10	7	23	7	13	3	3	100
All	21	8	14	29	12	9	3	5	100
Did not receive									
Full-time	36	10	15	25	8	2	5	0	100
Part-time	42	5	12	25	7	3	0	5	100
Hobby	50	7	7	18	11	0	4	4	100
All	40	8	13	24	8	2	3	3	100

Sample Size = 492 (Full-time = 224, Part-time = 210, Hobby = 58)

Received = 266 (Full-time = 118, Part-time = 118, Hobby = 30)

Did not receive = 226 (Full-time = 106, Part-time = 92, Hobby = 28)

PRODUCERS - CORRELATION STATISTICS

Correlation matrix for selected structural characteristics, all firms, 1985-88 average

Characteristic	Colonies	Honey production per colony	Miles transported per colony	Operator age	Operator education	Gross expenses	Labor expenses	Gross receipts	Pollination receipts	Government payments
	Correlation coefficient									
Colonies	1.0000									
Honey production/colony	0.0831	1.0000								
Miles transported/colony	0.0164	0.1790	1.0000							
Operator age	0.0409	-0.0862	-0.0005	1.0000						
Operator education	0.0317	0.0767	-0.0582	-0.3093	1.0000					
Gross expenses	0.7786	0.2594	0.0675	-0.0129	0.0361	1.0000				
Labor expenses	0.7956	0.2016	0.0194	0.0284	0.0337	0.9571	1.0000			
Gross receipts	0.7800	0.3250	0.0855	-0.0004	0.0209	0.8789	0.8519	1.0000		
Pollination receipts	0.3148	-0.0547	0.0636	0.0094	0.0424	0.2653	0.2110	0.3493	1.0000	
Government payments	0.7176	0.1915	0.0231	-0.0169	0.0400	0.7670	0.8435	0.7762	0.1899	1.0000

Sample Size = 503

Correlation matrix for selected structural characteristics, full-time firms, 1985-88 average

Characteristic	Colonies	Honey production per colony	Miles transported per colony	Operator age	Operator education	Gross expenses	Labor expenses	Gross receipts	Pollination receipts	Government payments
	Correlation coefficient									
Colonies	1.0000									
Honey production/colony	0.0478	1.0000								
Miles transported/colony	-0.0577	0.2067	1.0000							
Operator age	0.1031	-0.0319	0.0621	1.0000						
Operator education	0.0489	0.0344	-0.0557	-0.2708	1.0000					
Gross expenses	0.7490	0.2827	0.0353	0.0127	0.0523	1.0000				
Labor expenses	0.7830	0.2185	-0.0180	0.0648	0.0476	0.9565	1.0000			
Gross receipts	0.7475	0.3652	0.0551	0.0299	0.0253	0.8647	0.8412	1.0000		
Pollination receipts	0.2393	-0.1019	0.0390	0.0380	0.0513	0.1999	0.1547	0.2894	1.0000	
Government payments	0.7110	0.2087	-0.0044	-0.0047	0.0569	0.7583	0.8369	0.7687	0.1464	1.0000

Sample Size = 262

Correlation matrix for selected structural characteristics, part-time, 1985-88 average

Characteristic	Colonies	Honey production per colony	Miles transported per colony	Operator age	Operator education	Gross expenses	Labor expenses	Gross receipts	Pollination receipts	Government payments
	Correlation coefficient									
Colonies	1.0000									
Honey production/colony	0.0969	1.0000								
Miles transported/colony	0.0264	0.0957	1.0000							
Operator age	-0.0273	-0.1401	-0.0232	1.0000						
Operator education	0.0390	0.0768	-0.0650	-0.3153	1.0000					
Gross expenses	0.4085	0.2516	0.0266	-0.0996	0.0509	1.0000				
Labor expenses	0.1579	0.1219	-0.0768	-0.0366	0.1193	0.5587	1.0000			
Gross receipts	0.4936	0.4021	0.1307	-0.0365	0.1488	0.6396	0.5075	1.0000		
Pollination receipts	0.1853	-0.1111	0.0889	-0.0513	0.1990	0.3125	0.6498	0.4436	1.0000	
Government payments	0.3195	0.2657	-0.0081	-0.1767	0.0778	0.1017	0.0979	0.2777	0.1675	1.0000

Sample Size = 196

Correlation matrix for selected structural characteristics, hobby firms, 1985-88 average

Characteristic	Colonies	Honey production per colony	Miles transported per colony	Operator age	Operator education	Gross expenses	Labor expenses	Gross receipts	Pollination receipts	Government payments
	Correlation coefficient									
Colonies	1.0000									
Honey production/colony	0.0465	1.0000								
Miles transported/colony	0.2089	0.2453	1.0000							
Operator age	0.0118	-0.1959	-0.0991	1.0000						
Operator education	-0.0235	0.3943	-0.1114	-0.4444	1.0000					
Gross expenses	0.2852	0.0725	0.0821	0.0327	-0.0246	1.0000				
Labor expenses	-0.0149	0.0403	0.0650	-0.1463	0.0621	0.1197	1.0000			
Gross receipts	0.4025	0.5731	0.2201	-0.0535	0.2372	0.3707	0.0091	1.0000		
Pollination receipts	-0.2209	-0.1669	-0.0436	-0.2270	-0.0771	-0.0904	-0.0301	-0.1323	1.0000	
Government payments	0.2694	0.1293	-0.0337	-0.0047	0.1708	-0.0069	-0.0301	0.1445	-0.0227	1.0000

Sample Size = 45

PACKERS

PACKERS - GENERAL CHARACTERISTICS

Packers, by type firm

	Type firm			Total
	Full time	Part time Other time on beekeeping	Part time Other time on non-beekeeping	
Total	23	59	30	112

Sample Size = 112

Packers, by sex and type firm

Sex	Type firm			Total
	Full time	Part time Other time on beekeeping	Part time Other time on non-beekeeping	
Female	1	5	4	10
Male	20	51	25	96
Total	21	56	29	106

Sample Size = 106

Packers, by age and type firm

Age	Type firm			Total
	Full time	Part time Other time on beekeeping	Part time Other time on non-beekeeping	
	Number			
Less than 35	2	3	1	6
35-44	7	19	5	31
45-54	8	12	12	32
55-64	3	13	8	24
65 years or more	1	6	3	10
Total	21	53	29	103

Sample Size = 103

Packers, by occupation and type firm

Profession	Type firm			Total
	Full time	Part time Other time on beekeeping	Part time Other time on non-beekeeping	
	Number			
Clerical	0	0	1	1
Professional	1	8	3	12
Managerial	5	2	0	7
Technician	0	3	4	7
Labor	0	1	6	7
Own Business	12	6	5	23
Sales	0	1	1	2
Beekeeping	1	32	1	34
Farmer	0	0	1	1
Retired	0	2	4	6
Other	2	2	3	7
Total	21	57	29	107

Sample Size = 107

Packers, by education and type firm

Education	Type firm			Total
	Full time	Part time Other time on beekeeping	Part time Other time on non-beekeeping	
	Number			
1 to 8 years	0	3	1	4
9 to 11 years	0	2	2	4
12 years	7	17	9	33
13 to 15 years	6	14	6	26
16 years or more	8	21	11	40
Total	21	57	29	107

Sample Size = 107

Packers, by residence and type firm

Residence	Type firm			Total
	Full time	Part time Other time on beekeeping	Part time Other time on non-beekeeping	
	Number			
Farm	1	20	13	34
Rural	4	14	6	24
Community				
Less than 2,500	2	9	4	15
2,500-24,999	5	7	4	16
25,000-49,999	0	4	0	4
50,000-99,000	5	0	1	6
100,000 or more	4	2	1	7
Total	21	56	29	106

Sample Size = 106

Packers, by average size of household and type firm

Age of household members	Type firm						Total	
	Full time		Part time Other time on beekeeping		Part time Other time on non-beekeeping			
	Number reporting	Number reported	Number reporting	Number reported	Number reporting	Number reported	Number reporting	Number reported
	Number							
Under 6 years old	4	8	10	14	3	4	17	26
6 to 12 years old	4	7	11	18	4	9	19	34
13 to 18 years old	5	6	11	17	5	6	21	29
19 or older	19	42	51	108	27	59	97	209
Total	19	63	51	157	28	78	98	298

Sample Size = 98

Packers, by region and type firm

Residence	Type firm			Total
	Full time	Part time Other time on beekeeping	Part time Other time on non-beekeeping	
	Number			
Northeast	3	4	4	11
Southeast	5	11	5	21
Midwest	7	26	15	48
West	6	12	0	18
Northwest	1	6	6	13
Total	22	59	30	111

Sample Size = 111

NE: CT, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VT
 SE: AL, AR, GA, FL, LA, MO, MS, NC, SC, TN, VA, WV
 MW: IA, IL, IN, KS, KY, MI, MN, OH, WI, OK, TX
 W: AZ, HI, CO, CA, NM, NV, UT, WY
 NW: AK, ID, MT, ND, NE, OR, SD, WA

Packers, by state and type firm

Residence	Type firm			Total
	Full time	Part time Other time on beekeeping	Part time Other time on non-beekeeping	
	Number			
AK				0
AL	1	2		3
AR	1			1
AZ	1	3		4
CA	3	3		6
CO	2	2		4
CT				0
DE				0
FL	1	1		2
GA	1	1	1	3
HI				0
IA		5	3	8
ID		2	1	3
IL	1	1	1	3
IN		1	1	2
KS	1			1
KY		1		1
LA				0
MA				0
MD				0
ME		1		1
MI		2	3	5
MN	1	7	2	10
MO	1	1	2	4
MS		1		1
MT		1		1
NC		1		1

Packers, by state and type firm (continued)

Residence	Type firm			Total
	Full time	Part time Other time on beekeeping	Part time Other time on non-beekeeping	
	Number			
ND				0
NE			1	1
NH	1			1
NJ			1	1
NM		2		2
NV				0
NY		2		2
OH	1	2	1	4
OK				0
OR		2	2	4
PA	1		2	3
RI				0
SC				0
SD				0
TN		1	1	2
TX	1	4	1	6
UT				0
VA		2		2
VT	1	1	1	3
WA	1	1	2	4
WI	2	3	3	8
WV		1	1	2
WY		2		2
Total	22	59	30	111

Packer's subcontracted honey, by firm type, 1985-88

	Type firm			Total
	Full time	Part time Other time on beekeeping	Part time Other time on non-beekeeping	
Volume Packed (pounds)				
Domestic	1985	29,614,230		29,614,230
	1986	33,959,974		33,959,974
	1987	36,485,368		36,485,368
	1988	19,510,566		19,510,566
Foreign	1985	7,715,000		7,715,000
	1986	6,483,000		6,483,000
	1987	450,000		450,000
	1988	450,000		450,000
Average Cost (\$/pound)				
Domestic	1985	0.40		0.40
	1986	0.40		0.40
	1987	0.38		0.38
	1988	0.39		0.39
Foreign	1985	0.44		0.44
	1986	0.44		0.44
	1987	0.40		0.40
	1988	0.40		0.40
Average Revenue (\$/pound)				
Domestic	1985	0.12		0.12
	1986	0.11		0.11
	1987	0.11		0.11
	1988	0.12		0.12
Foreign	1985	0.67		0.67
	1986	0.67		0.67
	1987	0.67		0.67
	1988	0.67		0.67

1985 Sample Size = 5

1986 Sample Size = 6

1987 Sample Size = 6

1988 Sample Size = 6

Packer's honey excluding subcontracted, by firm type, 1985-88

		Type firm		Total
		Full time	Part time	
Volume Packed (pounds)				
Own	1985	94,488	804,936	899,424
	1986	127,430	829,774	957,204
	1987	1,122,965	1,115,206	2,238,171
	1988	133,030	1,372,027	1,505,057
Domestic	1985	18,492,607	164,075	18,656,682
	1986	20,680,625	247,013	20,927,638
	1987	23,426,008	756,463	24,182,471
Foreign	1985	26,190,444	1,055,998	27,246,442
	1986	5,380,281	41,580	5,421,861
	1987	6,712,684	46,319	6,759,003
	1988	4,710,982		4,710,982
	1988	3,978,465		3,978,465
Average Cost (\$/pound)				
Domestic	1985	0.40	0.51	0.40
	1986	0.44	0.99	0.44
	1987	0.42	0.42	0.42
	1988	0.41	0.41	0.41
Foreign	1985	0.42	0.47	0.42
	1986	0.43	0.50	0.43
	1987	0.44		0.44
	1988	0.44		0.44
Average Revenue (\$/pound)				
Own	1985	2.89	0.88	1.18
	1986	1.14	0.88	0.93
	1987	0.45	0.93	0.61
	1988	1.28	0.89	0.95
Domestic	1985	0.61	1.52	0.62
	1986	0.67	1.36	0.68
	1987	0.69	1.22	0.69
	1988	0.68	0.99	0.68
Foreign	1985	1.05	1.68	1.06
	1986	0.95	1.39	0.96
	1987	1.01		1.01
	1988	1.21		1.21

1985 Sample Size = 61
1986 Sample Size = 65

1987 Sample Size = 74
1988 Sample Size = 77

Markets used to dispose of packed honey, 1985-88 average

Market	Type firm			Total
	Full time	Part time Other time on beekeeping	Part time Other time on non-beekeeping	
	Percent			
Roadside	0.1	3.5	7.7	0.2
Retail stores	36.7	44.8	63.4	37.0
Institutions	8.4	2.7	0.7	8.1
Broker or dealer	0.2	6.5	15.1	0.5
Direct export	0.0	0.4	0.0	0.0
Industrial user	52.6	32.9	0.7	51.8
Other	1.3	4.9	11.5	1.4
Storage	0.8	4.3	1.0	0.9
Total	100.0	100.0	100.0	100.0

Sample Size = 112

Packers' advertising and promotional activities of honey, 1988

Advertisement	Type firm			Total
	Full time	Part time Other time on beekeeping	Part time Other time on non-beekeeping	
	Number			
Newspapers	0	12	4	16
Circulars	4	5	2	11
Beekeeping journals	0	0	0	0
Magazines	3	3	0	6
Bulletin boards	0	2	1	3
Direct mail	3	7	0	10
Road signs	1	13	7	21
Word of mouth	8	43	17	68
Other	9	15	4	28
Didn't advertise	4	6	5	15

Sample Size = 112

Packers' advertising and promotional activities of honey, 1988

Advertisement	Type firm			Total
	Full time	Part time Other time on beekeeping	Part time Other time on non-beekeeping	
	Percent			
Newspapers	0.0	20.3	13.3	14.3
Circulars	17.4	8.5	6.7	9.8
Beekeeping journals	0.0	0.0	0.0	0.0
Magazines	13.0	5.1	0.0	5.4
Bulletin boards	0.0	3.4	3.3	2.7
Direct mail	13.0	11.9	0.0	8.9
Road signs	4.3	22.0	23.3	18.8
Word of mouth	34.8	72.9	56.7	60.7
Other	39.1	25.4	13.3	25.0
Didn't advertise	17.4	10.2	16.7	13.4

Sample Size = 112

Packers' advertising and promotional activities of honey with other products, 1988

Advertisement	Type firm			Total
	Full time	Part time Other time on beekeeping	Part time Other time on non-beekeeping	
	Number			
Newspapers	4	3	0	7
Circulars	1	2	1	4
Beekeeping journal	1	0	0	1
Magazines	4	1	0	5
Bulletin boards	0	0	0	0
Direct mail	2	3	0	5
Road signs	1	2	0	3
Word of mouth	5	7	4	16
Other	2	4	1	7
Didn't advertise	13	43	20	76

Sample Size = 112

Packers' advertising and promotional activities of honey with other products, 1988

Advertisement	Type firm			Total
	Full time	Part time Other time on beekeeping	Part time Other time on non-beekeeping	
	Percent			
Newspapers	17.4	5.1	0.0	6.3
Circulars	4.3	3.4	3.3	3.6
Beekeeping journal	4.3	0.0	0.0	0.9
Magazines	17.4	1.7	0.0	4.5
Bulletin boards	0.0	0.0	0.0	0.0
Direct mail	8.7	5.1	0.0	4.5
Road signs	4.3	3.4	0.0	2.7
Word of mouth	21.7	11.9	13.3	14.3
Other	8.7	6.8	3.3	6.3
Didn't advertise	56.5	72.9	66.7	67.9

Sample Size = 112

Packers' advertising and promotional activities of packing services, 1988

Advertisement	Type firm			Total
	Full time	Part time Other time on beekeeping	Part time Other time on non-beekeeping	
	Number			
Newspapers	0	0	0	0
Circulars	0	0	0	0
Beekeeping journal	0	0	0	0
Magazines	0	0	0	0
Bulletin boards	0	0	0	0
Direct mail	0	0	0	0
Road signs	0	0	0	0
Word of mouth	3	3	3	9
Other	0	1	1	2
Didn't advertise	18	49	21	88

Sample Size = 112

Packers' advertising and promotional activities of packing services, 1988

Advertisement	Type firm			Total
	Full time	Part time Other time on beekeeping	Part time Other time on non-beekeeping	
	Percent			
Newspapers	0.0	0.0	0.0	0.0
Circulars	0.0	0.0	0.0	0.0
Beekeeping journal	0.0	0.0	0.0	0.0
Magazines	0.0	0.0	0.0	0.0
Bulletin boards	0.0	0.0	0.0	0.0
Direct mail	0.0	0.0	0.0	0.0
Road signs	0.0	0.0	0.0	0.0
Word of mouth	13.0	5.1	10.0	8.0
Other	0.0	1.7	3.3	1.8
Didn't advertise	78.3	83.1	70.0	78.6

Sample Size = 112

Packers' advertising and promotional activities of other products and services, 1988

Advertisement	Type firm			Total
	Full time	Part time Other time on beekeeping	Part time Other time on non-beekeeping	
	Number			
Newspapers	1	2	0	3
Circulars	1	1	1	3
Beekeeping journal	0	1	1	2
Magazines	1	0	0	1
Bulletin boards	0	1	0	1
Direct mail	1	3	0	4
Road signs	0	1	0	1
Word of mouth	5	10	3	18
Other	1	4	1	6
Didn't advertise	16	42	21	79

Sample Size = 112

Packers' advertising and promotional activities of other products and services, 1988

Advertisement	Type firm			Total
	Full time	Part time Other time on beekeeping	Part time Other time on non-beekeeping	
	Percent			
Newspapers	4.3	3.4	0.0	2.7
Circulars	4.3	1.7	3.3	2.7
Beekeeping journal	0.0	1.7	3.3	1.8
Magazines	4.3	0.0	0.0	0.9
Bulletin boards	0.0	1.7	0.0	0.9
Direct mail	4.3	5.1	0.0	3.6
Road signs	0.0	1.7	0.0	0.9
Word of mouth	21.7	16.9	10.0	16.1
Other	4.3	6.8	3.3	5.4
Didn't advertise	69.6	71.2	70.0	70.5

Sample Size = 112

PACKERS - FINANCIAL

Packers' household gross income, by firm type - 1988

Firm type	Household gross income										Total
	\$9,999 or less	\$1,000 to \$19,999	\$20,000 to \$39,999	\$40,000 to \$69,999	\$70,000 to \$99,999	\$100,000 to \$149,999	\$150,000 to \$199,999	\$200,000 to \$499,999	\$500,000 to \$1,000,000	Over \$1,000,000	
	Number										
Full time	1	2	4	6	3	3	0	1	0	0	20
Part time	9	8	21	7	4	2	7	7	0	0	65
Other time on beekeeping											
Part time	0	5	10	5	2	1	0	1	0	0	24
Other time on non-beekeeping											
Total	10	15	35	18	9	6	7	9	0	0	109

Sample Size = 109

Packers' gross income, by firm type - 1988

Firm type	Gross income											Total
	\$2,499 or less	\$2,500 to \$4,999	\$5,000 to \$9,999	\$10,000 to \$19,999	\$20,000 to \$39,999	\$40,000 to \$49,999	\$50,000 to \$99,999	\$100,000 to \$149,999	\$150,000 to \$199,999	\$200,000 to \$499,999	\$500,000 to \$999,999	
Full time	0	0	0	1	1	0	1	1	1	2	4	8
Part time	4	5	5	9	11	3	5	2	4	4	2	0
Other firms on beehkeeping	10	7	4	0	3	0	2	0	0	0	0	1
Part time												
Other firms on non-beehkeeping	14	12	9	10	15	3	8	3	6	6	6	9
Total												

Sample Size = 100

Packers' net income, by firm type - 1988

Firm type	Net income									Total
	Costs exceeded income	Broke even	\$2,499 or less	\$2,500 to \$4,999	\$5,000 to \$9,999	\$10,000 to \$19,999	\$20,000 to \$49,999	\$50,000 to \$99,999	\$100,000 or more	
	Number									
Full time	3	0	0	0	5	3	4	1	2	18
Part time	10	1	9	7	11	11	3	3	0	55
Other time on beekeeping										
Part time	5	3	11	1	2	2	0	0	1	25
Other time on non-beekeeping										
Total	18	4	20	8	18	16	7	4	3	98

Sample Size = 98

Packers' total value of assets, by firm type - 1968

Firm type	Total value of assets														Total
	\$2,499 or less	\$2,500 to \$4,999	\$5,000 to \$9,999	\$10,000 to \$19,999	\$20,000 to \$39,999	\$40,000 to \$49,999	\$50,000 to \$99,999	\$100,000 to \$149,999	\$150,000 to \$199,999	\$200,000 to \$499,999	\$500,000 to \$999,999	\$1,000,000 to \$1,499,999	\$1,500,000 to \$1,999,999	\$2,000,000 or more	
	Number														
Full time	0	0	0	0	2	0	2	0	0	6	4	3	0	2	19
Part time	1	4	2	4	6	7	15	2	5	6	1	1	0	1	55
Other time on bookkeeping															
Part time	6	2	2	6	3	0	5	0	0	1	0	0	0	1	26
Other time on non-bookkeeping															
Total	7	6	4	10	11	7	22	2	5	13	5	4	0	4	100

Sample Size = 100

Feature/total debt, by firm type - 1988

Firm type	No debt	Total debt										Total			
		\$2,499 or less	\$2,500 to \$4,999	\$5,000 to \$9,999	\$10,000 to \$19,999	\$20,000 to \$29,999	\$30,000 to \$49,999	\$40,000 to \$69,999	\$50,000 to \$99,999	\$100,000 to \$199,999	\$200,000 to \$499,999		\$500,000 to \$999,999	\$1,000,000 to \$1,999,999	\$2,000,000 or more
Full time	2	0	0	2	1	2	0	0	1	2	1	1	1	0	19
Part time	25	3	7	2	6	5	3	3	0	1	0	0	0	0	57
Other firms on bookkeeping	18	4	1	0	1	1	0	1	1	0	0	0	0	0	27
Other firms on non-bookkeeping	45	7	6	4	8	9	3	6	2	3	3	1	1	0	103

Sample Size = 103

Average gross expenses of packers, by type firm, 1988

Cost item	Firm type			Total
	Full time	Part time other time on beekeeping	Part time other time on non-beekeeping	
	Dollars/pound			
Labor				
Hired labor	0.024	0.169	0.163	0.032
Benefits	0.007	0.021	0.000	0.008
Other	0.022	0.070	0.001	0.024
Bees				
Bee food	0.000	0.021	0.048	0.001
Queens and nucs	0.000	0.014	0.033	0.001
Package bees	0.000	0.037	0.076	0.002
Supplies				
General	0.000	0.040	0.151	0.003
Containers etc.	0.052	0.182	0.238	0.059
Equipment				
Repair and Maint	0.003	0.029	0.037	0.004
Gas and oil	0.004	0.042	0.083	0.006
Buildings				
Repair and Maint	0.003	0.016	0.012	0.004
Mortgage	0.003	0.077	0.089	0.007
Overhead				
Utilities	0.005	0.029	0.050	0.006
Insurance	0.006	0.030	0.028	0.007
Taxes	0.002	0.031	0.037	0.004
Rent	0.004	0.023	0.016	0.005
Interest on OC	0.008	0.007	0.018	0.008
Office expenses	0.003	0.008	0.002	0.003
Marketing				
Advertising	0.003	0.009	0.011	0.003
Subscriptions	0.000	0.001	0.002	0.000
Promotion	0.003	0.002	0.006	0.003
Fees	0.009	0.003	0.000	0.009
Other	0.029	0.023	0.013	0.028
Total	0.190	0.884	1.115	0.227

Sample Size = 72

IMPORTERS AND BROKERS

IMPORTERS AND BROKERS - GENERAL CHARACTERISTICS

Importers and brokers, by type firm

	Type firm						Total
	Full time Importer	Full time Broker	Full time Importer and Broker	Part time Importer	Part time Broker	Part time Importer and Broker	
Total	8	4	2	3	0	0	17

Sample Size = 17

Importers and brokers, by sex and type firm

Sex	Type firm						Total	
	Full time Importer	Full time Broker	Full time Importer and Broker	Part time Importer	Part time Broker	Part time Importer and Broker		
	Number							
Female	1	1	0	0	0	0	2	
Male	6	3	2	3	0	0	14	
Total	7	4	2	3	0	0	16	

Sample Size = 17

Importers and brokers, by age and type firm

Age	Type firm						Total
	Full time Importer	Full time Broker	Full time Importer and Broker	Part time Importer	Part time Broker	Part time Importer and Broker	
	Number						
Less than 35	2	0	0	0	0	0	2
35-44	2	0	1	1	0	0	4
45-54	2	1	1	1	0	0	5
55-64	1	2	0	1	0	0	4
65 years or more	0	1	0	0	0	0	1
Total	4	0	1	1	0	0	16

Sample Size = 16

Importers and brokers, by occupation and type firm

Age	Type firm						Total
	Full time Importer	Full time Broker	Full time Importer and Broker	Part time Importer	Part time Broker	Part time Importer and Broker	
	Number						
Clerical	0	0	0	1	0	0	1
Professional	0	0	0	0	0	0	0
Managerial	3	0	1	0	0	0	4
Technician	0	0	0	0	0	0	0
Labor	0	0	0	0	0	0	0
Own Business	2	3	1	0	0	0	6
Sales	0	1	0	2	0	0	3
Beekeeping	0	0	0	0	0	0	0
Farmer	0	0	0	0	0	0	0
Retired	1	0	0	0	0	0	1
Other	1	0	0	0	0	0	1
Total	7	4	2	3	0	0	16

Sample Size = 16

Importers and brokers, by education and type firm

Education	Type firm						Total
	Full time Importer	Full time Broker	Full time Importer and Broker	Part time Importer	Part time Broker	Part time Importer and Broker	
	Number						
1 to 8 years	0	0	0	0	0	0	0
9 to 11 years	0	0	0	0	0	0	0
12 years	1	1	0	1	0	0	3
13 to 15 years	1	0	1	0	0	0	2
16 years or more	5	3	1	2	0	0	11
Total	7	4	2	3	0	0	16

Sample Size = 16

Importers and brokers, by residence and type firm

Residence	Type firm						Total
	Full time Importer	Full time Broker	Full time Importer and Broker	Part time Importer	Part time Broker	Part time Importer and Broker	
	Number						
Farm	0	0	0	0	0	0	0
Rural	0	1	0	0	0	0	1
Community							0
Less than 2,500	0	1	0	0	0	0	1
2,500-24,999	2	0	2	0	0	0	4
25,000-49,999	0	0	0	0	0	0	0
50,000-99,000	3	0	0	0	0	0	3
100,000 or more	2	2	0	2	0	0	6
Total	7	4	2	2	0	0	15

Sample Size = 15

Importers and brokers, by average size of household and type firm

Age of household members	Type firm								Total	
	Full time Importer		Full time Broker		Full time Importer and Broker		Part time Importer			
	Number reporting	Number reported	Number reporting	Number reported	Number reporting	Number reported	Number reporting	Number reported	Number reporting	Number reported
Under 6 years old	0	0	0	0	1	2	1	2	2	4
6 to 12 years old	0	0	0	0	1	2	1	1	2	3
13 to 18 years old	2	3	1	2	0	0	1	1	4	6
19 or older	6	14	4	8	2	4	2	4	14	30
Total	6	17	4	10	2	8	2	8	14	43

Sample Size = 14

Importers and brokers, by region and type firm

Region	Type firm						Total	
	Full time Importer	Full time Broker	Full time Importer and Broker	Part time Importer	Part time Broker	Part time Importer and Broker		
	Number							
Northeast	5	0	1	0	0	0	6	
Southeast	0	1	0	1	0	0	2	
Midwest	0	1	0	1	0	0	2	
West	3	0	0	0	0	0	3	
Northwest	0	2	1	0	0	0	3	
Total	8	4	2	2	0	0	16	

Sample Size = 16

NE: CT, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VT
 SE: AL, AR, GA, FL, LA, MO, MS, NC, SC, TN, VA, WV
 MW: IA, IL, IN, KS, KY, MI, MN, OH, WI, OK, TX
 W: AZ, HI, CO, CA, NM, NV, UT, WY
 NW: AK, ID, MT, ND, NE, OR, SD, WA

Importers and brokers, by state and type firm

State	Type firm						Total
	Full time Importer	Full time Broker	Full time Importer and Broker	Part time Importer	Part time Broker	Part time Importer and Broker	
	Number						
AK							0
AL							0
AR							0
AZ							0
CA	3						3
CO							0
CT			1				1
DE							0
FL				1			1
GA							0
HI							0
IA							0
ID		1					1
IL							0
IN							0
KS							0
KY							0
LA							0
MA							0
MD							0
ME							0
MI							0
MN							0
MO							0
MS							0
MT		1					1
NC							0

Importers and brokers, by state and type firm (continued)

State	Type firm						Total
	Full time Importer	Full time Broker	Full time Importer and Broker	Part time Importer	Part time Broker	Part time Importer and Broker	
	Number						
ND							0
NE							0
NH							0
NJ	4						4
NM							0
NV							0
NY	1						1
OH		1					1
OK							0
OR							0
PA							0
RI							0
SC							0
SD							0
TN							0
TX				1			1
UT							0
VA		1					1
VT							0
WA			1				1
WI							0
WV							0
WY							0
Total	8	4	2	2	0	0	16

Sample Size = 16

Importers and brokers negotiated products, by firm type

Products	Type firm						Total
	Full time Importer	Full time Broker	Full time Importer and Broker	Part time Importer	Part time Broker	Part time Importer and Broker	
	Number						
Honey	7	3	2	3	0	0	15
Other sweeteners	3	0	1	1	0	0	5
Other Ag products	6	2	0	1	0	0	9
Non-ag products	4	2	0	1	0	0	7

Sample Size = 17

Importers' and brokers' negotiated honey, by firm type, 1985-88**

	Type firm						Total
	Full time Importer	Full time Broker	Full time Importer and Broker	Part time Importer	Part time Broker	Part time Importer and Broker	
Volume Negotiated (pounds)							
Domestic 1985							
1986							
1987							
1988							
Foreign 1985							3,375
1986							253,056
1987							283,494
1988							234,520
Average Cost (\$/pound)							
Domestic 1985							
1986							
1987							
1988							
Foreign 1985							1.33
1986							0.39
1987							0.62
1988							0.52
Average Revenue (\$/pound)							
Domestic 1985							
1986							
1987							
1988							
Foreign 1985							1.33
1986							0.45
1987							0.44
1988							0.62

**Detailed Data not reported due to small sample size.

1985 Sample Size = 2

1986 Sample Size = 3

1987 Sample Size = 4

1988 Sample Size = 6

IMPORTERS AND BROKERS - MARKETING

Markets used to dispose of negotiated honey, 1985-88 average

Market	Type firm						Total
	Full time Importer	Full time Broker	Full time Importer and Broker	Part time Importer	Part time Broker	Part time Importer and Broker	
	Percent						
Roadside	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Retail stores	100.0	0.0	3.0	0.8	0.0	0.0	3.0
Institutions	0.0	0.0	10.2	0.0	0.0	0.0	10.0
Packers							
Independent	0.0	0.0	83.4	99.2	0.0	0.0	82.4
Cooperative	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Direct export	0.0	0.0	1.2	0.0	0.0	0.0	1.2
Industrial user	0.0	100.0	2.2	0.0	0.0	0.0	3.4
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Storage	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	0.0	0.0	100.0

Sample Size = 17

Importers' and brokers' advertising and promotional activities of honey, 1988

Advertisement	Type firm						Total
	Full time Importer	Full time Broker	Full time Importer and Broker	Part time Importer	Part time Broker	Part time Importer and Broker	
	Number						
Newspapers	2	0	1	0	0	0	3
Circulars	3	0	1	0	0	0	4
Beekeeping journals	0	0	0	1	0	0	1
Magazines	1	0	1	0	0	0	2
Bulletin boards	0	0	0	0	0	0	0
Direct mail	1	1	0	0	0	0	2
Road signs	0	0	0	0	0	0	0
Word of mouth	3	0	0	0	0	0	3
Other	1	0	0	0	0	0	1
Didn't advertise	3	0	1	2	0	0	6

Sample Size = 17

Importers' and Brokers' advertising and promotional activities of honey, 1988

Advertisement	Type firm						Total
	Full time Importer	Full time Broker	Full time Importer and Broker	Part time Importer	Part time Broker	Part time Importer and Broker	
	Percent						
Newspapers	25.0	0.0	50.0	0.0	0.0	0.0	17.6
Circulars	37.5	0.0	50.0	0.0	0.0	0.0	23.5
Beekeeping journals	0.0	0.0	0.0	33.3	0.0	0.0	5.9
Magazines	12.5	0.0	50.0	0.0	0.0	0.0	11.8
Bulletin boards	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Direct mail	12.5	25.0	0.0	0.0	0.0	0.0	11.8
Road signs	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Word of mouth	37.5	0.0	0.0	0.0	0.0	0.0	17.6
Other	12.5	0.0	0.0	0.0	0.0	0.0	5.9
Didn't advertise	37.5	0.0	50.0	66.7	0.0	0.0	35.3

Sample Size = 17

Importers' and brokers' advertising and promotional activities of honey with other nutritive sweeteners, 1988

Advertisement	Type firm						Total
	Full time Importer	Full time Broker	Full time Importer and Broker	Part time Importer	Part time Broker	Part time Importer and Broker	
	Number						
Newspapers	1	0	0	0	0	0	1
Circulars	0	0	0	0	0	0	0
Beekeeping journals	0	0	0	0	0	0	0
Magazines	1	0	0	0	0	0	1
Bulletin boards	0	0	0	0	0	0	0
Direct mail	0	0	0	0	0	0	0
Road signs	0	0	0	0	0	0	0
Word of mouth	1	0	0	0	0	0	1
Other	0	0	0	0	0	0	0
Didn't advertise	7	4	2	3	0	0	16

Sample Size = 17

Importers' and brokers' advertising and promotional activities of honey with other nutritive sweeteners, 1988

Advertisement	Type firm						Total
	Full time Importer	Full time Broker	Full time Importer and Broker	Part time Importer	Part time Broker	Part time Importer and Broker	
	Percent						
Newspapers	12.5	0.0	0.0	0.0	0.0	0.0	5.9
Circulars	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beekeeping journals	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Magazines	12.5	0.0	0.0	0.0	0.0	0.0	5.9
Bulletin boards	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Direct mail	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Road signs	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Word of mouth	12.5	0.0	0.0	0.0	0.0	0.0	5.9
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Didn't advertise	87.5	100.0	100.0	100.0	0.0	0.0	94.1

Sample Size = 17

Importers' and brokers' advertising and promotional activities of brokerage and importer services, 1988

Advertisement	Type firm						Total
	Full time Importer	Full time Broker	Full time Importer and Broker	Part time Importer	Part time Broker	Part time Importer and Broker	
	Number						
Newspapers	0	0	0	0	0	0	0
Circulars	0	0	0	0	0	0	0
Beekeeping journals	0	0	0	0	0	0	0
Magazines	0	0	0	0	0	0	0
Bulletin boards	0	0	0	0	0	0	0
Direct mail	0	0	0	0	0	0	0
Road signs	0	0	0	0	0	0	0
Word of mouth	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Didn't advertise	8	4	2	3	0	0	17

Sample Size = 17

Importers' and brokers' advertising and promotional activities of brokerage and importer services, 1988

Advertisement	Type firm						Total
	Full time Importer	Full time Broker	Full time Importer and Broker	Part time Importer	Part time Broker	Part time Importer and Broker	
	Percent						
Newspapers	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Circulars	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beekeeping journals	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Magazines	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bulletin boards	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Direct mail	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Road signs	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Word of mouth	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Didn't advertise	100.0	100.0	100.0	100.0	0.0	0.0	100.0

Sample Size = 17

Importers' and brokers' advertising and promotional activities of other products and services, 1988

Advertisement	Type firm						Total
	Full time Importer	Full time Broker	Full time Importer and Broker	Part time Importer	Part time Broker	Part time Importer and Broker	
	Number						
Newspapers	1	0	0	0	0	0	1
Circulars	1	0	0	0	0	0	1
Beekeeping journals	0	0	0	0	0	0	0
Magazines	2	0	0	1	0	0	3
Bulletin boards	0	0	0	0	0	0	0
Direct mail	1	0	0	0	0	0	1
Road signs	0	0	0	0	0	0	0
Word of mouth	2	0	0	0	0	0	2
Other	1	0	0	0	0	0	1
Didn't advertise	5	4	2	2	0	0	13

Sample Size = 17

Importers' and brokers' advertising and promotional activities of other products and services, 1988

Advertisement	Type firm						Total
	Full time Importer	Full time Broker	Full time Importer and Broker	Part time Importer	Part time Broker	Part time Importer and Broker	
	Percent						
Newspapers	12.5	0.0	0.0	0.0	0.0	0.0	5.9
Circulars	12.5	0.0	0.0	0.0	0.0	0.0	5.9
Beekeeping journals	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Magazines	25.0	0.0	0.0	33.3	0.0	0.0	17.6
Bulletin boards	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Direct mail	12.5	0.0	0.0	0.0	0.0	0.0	5.9
Road signs	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Word of mouth	25.0	0.0	0.0	0.0	0.0	0.0	11.8
Other	12.5	0.0	0.0	0.0	0.0	0.0	5.9
Didn't advertise	62.5	100.0	100.0	66.7	0.0	0.0	76.5

Sample Size = 17

IMPORTERS AND BROKERS - FINANCIAL

Importers' and brokers' household gross income, by firm type - 1988**

Firm type	Household gross income										Total
	\$9,999 or less	\$1,000 to \$19,999	\$20,000 to \$39,999	\$40,000 to \$69,999	\$70,000 to \$99,999	\$100,000 to \$149,999	\$150,000 to \$199,999	\$200,000 to \$499,999	\$500,000 to \$1,000,000	Over \$1,000,000	
	Number										
Full time importer											7
Full time broker											4
Full time importer and broker											2
Part time importer											2
Part time broker											0
Part time importer and broker											0
Total	0	0	2	2	4	4	1	1	0	1	15

**Detailed Data not reported due to small sample size.

Sample Size = 15

Importers' and brokers' gross income, by firm type - 1988**

Firm type	Gross income											Total	
	\$2,999 or less	\$2,500 to \$4,999	\$5,000 to \$9,999	\$10,000 to \$19,999	\$20,000 to \$39,999	\$40,000 to \$49,999	\$50,000 to \$99,999	\$100,000 to \$149,999	\$150,000 to \$199,999	\$200,000 to \$499,999	\$500,000 to \$999,999		\$1,000,000 or more
	Number												
Full time importer													7
Full time broker													1
Full time importer and broker													2
Part time importer													2
Part time broker													0
Part time importer and broker													0
Total	0	0	0	1	0	0	0	0	0	0	2	8	12

**Detailed Data not reported due to small sample size.

Sample Size = 12

Importers' and brokers' net income, by firm type - 1988**

Firm type	Net income									Total
	Costs exceeded income	Broke even	\$2,499 or less	\$2,500 to \$4,999	\$5,000 to \$9,999	\$10,000 to \$19,999	\$20,000 to \$49,999	\$50,000 to \$99,999	\$100,000 or more	
	Number									
Full time importer										6
Full time broker										1
Full time importer and broker										2
Part time importer										2
Part time broker										0
Part time importer and broker										0
Total	2	0	0	0	0	0	2	1	6	11

**Detailed Data not reported due to small sample size.
Sample Size = 11

Importers' and broker's (with value of assets, by firm type - 1988)*

Firm type	Total value of assets											Total			
	\$2,499 or less	\$2,500 to \$4,999	\$5,000 to \$9,999	\$10,000 to \$19,999	\$20,000 to \$29,999	\$30,000 to \$39,999	\$40,000 to \$49,999	\$50,000 to \$99,999	\$100,000 to \$149,999	\$150,000 to \$199,999	\$200,000 to \$499,999		\$500,000 to \$999,999	\$1,000,000 to \$1,499,999	\$1,500,000 to \$1,999,999
Full time importer															
Part time broker															
Full time importer and broker															
Part time importer															
Part time broker															
Part time importer and broker															
Total	0	0	0	1	0	0	0	1	0	2	0	1	0	0	6

*Detailed Data not reported due to small sample size.

Sample Size = 11

Imparters and lenders total debt, by firm type - 1964**

Firm type	No. debt	\$2,500		\$5,000		\$10,000		\$20,000		\$40,000		\$50,000		\$100,000		\$150,000		\$200,000		\$300,000		\$1,000,000		\$1,500,000		\$2,000,000		Total
		or less	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	
Full time importer																												
Full time broker																												
Part time importer and broker																												
Part time importer																												
Part time broker																												
Part time importer and broker																												
Total	1	0	1	0	0	1	1	1	1	0	0	0	0	1	0	0	0	0	0	1	0	0	1	1	1	3	10	

**Detailed Data not reported due to small sample size. Sample Size = 10

Average gross expenses of importers and brokers, by type firm, 1988**

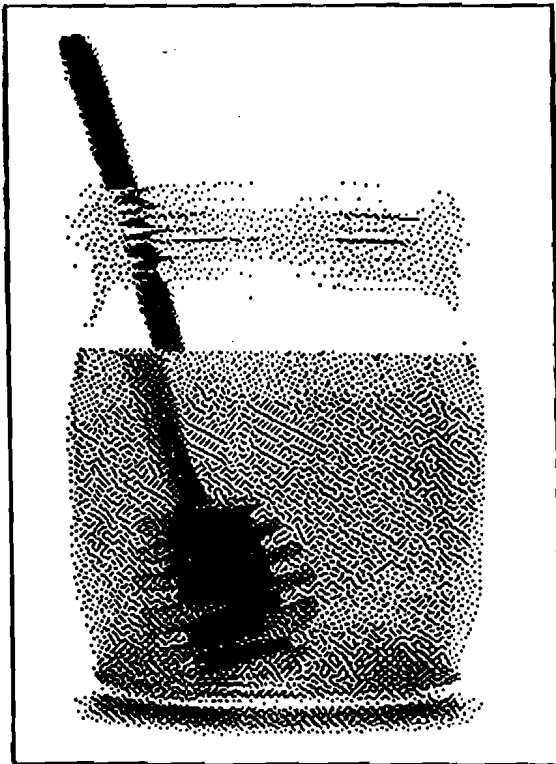
Cost item	Type firm						Total
	Full time Importer	Full time Broker	Full time Importer and Broker	Part time Importer	Part time Broker	Part time Importer and Broker	
	Dollars/pound						
Labor							
Hired labor							0.088
Benefits							0.002
Other							0.093
Bees							
Bee food							
Queens and nucs							
Package bees							
Supplies							
General							
Containers etc.							
Equipment							
Repair and Maint							0.002
Gas and oil							0.002
Buildings							
Repair and Maint							
Mortgage							
Overhead							
Utilities							0.002
Insurance							0.003
Taxes							
Rent							0.005
Interest on OC							
Office expenses							0.011
Marketing							
Advertising							0.006
Subscriptions							
Promotion							0.017
Fees							0.078
Other							
Total	0.607	0.000	0.092	0.942			0.308

**Detailed Data not reported due to small sample size.

Sample Size = 4

APPENDIX:
NATIONAL SURVEY INSTRUMENT

HONEY INDUSTRY SURVEY



The purpose of this survey is to collect information to identify the needs and current economic status of the honey industry. Information from this study will be provided by the Economic Research Service of the U.S. Department of Agriculture to members of the U.S. Congress to assist them in establishing a pricing policy that reflects the needs of the industry. This information will aid the National Honey Board's development of research, advertising and promotion programs which will best serve the industry.

Conducted by
The Department of Agricultural Economics
New York State College of Agriculture and Life Sciences
Cornell University, Ithaca, New York 14853-7801

Appendix: National Survey Instrument (continued)

Form Approved
O.M.B. No. 0536-0035
Expiration Date 6/30/91

HONEY PRODUCERS, PACKERS, IMPORTERS AND BROKERS SURVEY

INTRODUCTION:

The Cornell Institute for Social and Economic Research (CISER) is collecting information relative to honey production, pollination and the structure of your beekeeping operation. This study of the beekeeping industry is mandated by Congress in the 1987 Appropriations Bill. The information will be used by analysts at Cornell University, the National Honey Board, and the United States Department of Agriculture.

Your response is confidential and will be used only for statistical purposes and economic analysis. Although your participation is voluntary, your cooperation is essential to help us determine the economic health of the beekeeping industry. We encourage you to make the information as accurate as possible. The survey is also supported by the American Beekeeping Federation, the American Honey Producers Association and the National Honey Packers & Dealers Association.

Public reporting burden for this collection of information is estimated to average one hour (60 minutes) per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collected information. Send comments regarding this burden estimate or any other aspect of collection of information, including suggestions for reducing this burden to:

Department of Agriculture, Clearance Officer
O.I.R.M Room 404-W
Washington D.C. 20250

and to the: Office of Management and Budget
Paperwork Reduction Project (O.M.B. No. 0536-0035)
Washington D.C. 20502

Cover photo courtesy of National Honey Board

ANSWER THIS QUESTION FIRST

How would you classify yourself in the honey industry? (Please circle ALL that apply.)

a. PRODUCER
 b. PACKER
 c. IMPORTER
 d. BROKER

→ If not a producer ALSO, Skip to Section B, page 13

SECTION A. PRODUCERS

I. FIRM CHARACTERISTICS

- 1) Is beekeeping your: (Please circle ONE response.)
 - a. Full time profession
 - b. Part time profession
 - c. Hobby

- 2) What state do you consider the primary headquarters for your beekeeping operation?

- 3) Is your actual residence in the same state as your primary beekeeping headquarters?
 - a. No → If no: In what state is your actual residence? _____
 - b. Yes

- 4) Which of the following years did you NOT have a beekeeping operation?
 (Circle ALL that apply.)

a. 1981	d. 1984	g. 1987
b. 1982	e. 1985	h. 1988
c. 1983	f. 1986	

- 5) We would like to know your operation's peak production history during each of the last four years and the number of working colonies you had during that time.
 (Please fill in the information for the years when you had a beekeeping operation in the spaces provided. Write "0" if none.)

	1985	1986	1987	1988
a. Number of colonies on October 1	_____	_____	_____	_____
b. # of working colonies at peak production	_____	_____	_____	_____
c. Month(s) of the year your operation experienced peak production	_____ _____	_____ _____	_____ _____	_____ _____

Appendix: National Survey Instrument (continued)

II. PRODUCTS AND SERVICES

Receipts and Production:

- 1) What were your total gross receipts from products sold, services provided and/or program participation from 1985 to 1988?

Please write: NA - if you DID NOT produce or provide specific products or services or participate in programs for that year.
 0 - if you DID NOT receive any money for specific products, services or programs your operation had for that year.

Products, Services, and Programs	TOTAL GROSS RECEIPTS FOR CALENDAR YEAR			
	1985	1986	1987	1988
Honey (not forfeited to CCC)	\$ _____	\$ _____	\$ _____	\$ _____
Pollination Services	\$ _____	\$ _____	\$ _____	\$ _____
Beeswax	\$ _____	\$ _____	\$ _____	\$ _____
Package Bees	\$ _____	\$ _____	\$ _____	\$ _____
Queens and Nucs	\$ _____	\$ _____	\$ _____	\$ _____
Royal Jelly, Propolis, Pollen	\$ _____	\$ _____	\$ _____	\$ _____
Other	\$ _____	\$ _____	\$ _____	\$ _____
Gov't. payments (net receipts)				
CCC forfeitures	\$ _____	\$ _____	\$ _____	\$ _____
Marketing loan benefit*	\$ _____	\$ _____	\$ _____	\$ _____

* Difference between loan rate and repayment rate.

- 2) How much of the following did your beekeeping operation produce or provide from 1985 to 1988?

Products/Services	CALENDAR YEAR			
	1985	1986	1987	1988
Honey	_____ lbs	_____ lbs	_____ lbs	_____ lbs
Beeswax	_____ lbs	_____ lbs	_____ lbs	_____ lbs
Royal jelly, Propolis and Pollen	_____ lbs	_____ lbs	_____ lbs	_____ lbs
Package Bees	_____ lbs	_____ lbs	_____ lbs	_____ lbs
Nucs	_____ #	_____ #	_____ #	_____ #
Queens Sold Separately	_____ #	_____ #	_____ #	_____ #
Pollination Services				
# of Colonies	_____ #	_____ #	_____ #	_____ #
# of Rentals	_____ #	_____ #	_____ #	_____ #

- 3) Of the products and services provided by your beekeeping operation referred to in Question 2, which three do you consider most important to your operation? (Please write down the items in the spaces provided in the order of their importance to your operation.)

_____ Most Important
 _____ Second Most Important
 _____ Third Most Important

- 4) Did your beekeeping operation suffer a reduction in production for any of the following reasons from 1985 to 1988? (CHECK where appropriate.)

Reason	CALENDAR YEAR			
	1985	1986	1987	1988
Drought	_____	_____	_____	_____
Disease	_____	_____	_____	_____
Mites	_____	_____	_____	_____
Other (Specify)	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Honey Marketing:

- 5) During the period of 1985 to 1988 what percent of the honey you marketed was white, extra light amber, light amber or amber?

Honey Marketed	PERCENT OF TOTAL HONEY MARKETED FOR CALENDAR YEAR			
	1985	1986	1987	1988
White	_____ %	_____ %	_____ %	_____ %
Extra Light Amber	_____ %	_____ %	_____ %	_____ %
Light Amber	_____ %	_____ %	_____ %	_____ %
Amber	_____ %	_____ %	_____ %	_____ %

Appendix: National Survey Instrument (continued)

- 6) During the period of 1985 to 1988, which of the following markets did you use to dispose of your honey crop and what was the amount of honey sold in each market? (Each honey crop year's total should agree with the honey production you reported in Question 2.)

Please write NA - if you DID NOT use that specific outlet in a given year.

Markets Used	POUNDS SOLD FOR CALENDAR YEAR			
	1985	1986	1987	1988
Roadside Market	_____ lbs	_____ lbs	_____ lbs	_____ lbs
Retail Stores	_____ lbs	_____ lbs	_____ lbs	_____ lbs
Institutions	_____ lbs	_____ lbs	_____ lbs	_____ lbs
Broker or Dealer	_____ lbs	_____ lbs	_____ lbs	_____ lbs
Packers/Bottlers Independent	_____ lbs	_____ lbs	_____ lbs	_____ lbs
Cooperative	_____ lbs	_____ lbs	_____ lbs	_____ lbs
Direct Export	_____ lbs	_____ lbs	_____ lbs	_____ lbs
Industrial User or Food Manufacturer	_____ lbs	_____ lbs	_____ lbs	_____ lbs
Forfeited to CCC	_____ lbs	_____ lbs	_____ lbs	_____ lbs
Other Outlet (Specify)	_____ lbs	_____ lbs	_____ lbs	_____ lbs
_____	_____ lbs	_____ lbs	_____ lbs	_____ lbs
Not Sold or In Storage	_____ lbs	_____ lbs	_____ lbs	_____ lbs
TOTAL	_____ lbs	_____ lbs	_____ lbs	_____ lbs

Government Honey Price Support Program:

- 7) Since the 1981 crop year, have you participated in the government honey price support program?
- a. No → Skip to Question 9, page 6.
- b. Yes

Appendix: National Survey Instrument (continued)

8) Please fill in the information for honey your operation placed under loan with the government honey price support program from 1981 to 1988.

Please write: NA - if you DID NOT participate in the program that year.
 0 - if you participated in the program but DID NOT FORFEIT ANY HONEY to the CCC or receive net receipts.

Honey Crop Year	Quantity Placed Under Loan	Quantity Forfeited to CCC	Net Receipts from Gov't Payments	
			Loan Forfeitures	Marketing Loan Benefit*
1981	_____ lbs	_____ lbs	\$ _____	
1982	_____ lbs	_____ lbs	\$ _____	
1983	_____ lbs	_____ lbs	\$ _____	
1984	_____ lbs	_____ lbs	\$ _____	
1985	_____ lbs	_____ lbs	\$ _____	
1986	_____ lbs	_____ lbs	\$ _____	\$ _____
1987	_____ lbs	_____ lbs	\$ _____	\$ _____
1988	_____ lbs	_____ lbs	\$ _____	\$ _____

* Difference between loan rate and repayment rate.

9) For the years that you did not participate in the government honey price support program and had a beekeeping operation:

Which of the following best describes why you did not participate? (Circle ALL that apply.)

- a. I received a higher price through local markets.
- b. I did not produce enough honey to use the program.
- c. I was not familiar with how the program worked.
- d. It took too much time to complete the paper work.
- e. Cooperative placed honey under loan for me.
- f. Other (Specify)

10) In your opinion, how would your operation be affected if the federal honey support program were eliminated? (Please circle ALL that apply.)

- a. **COULD NOT CONTINUE** being a beekeeper.
- b. Would **MAINTAIN** the size of my operation.
- c. Would **DECREASE** the size of my operation.
- d. Would **EXPAND** the size of my operation.
- e. Would **DIVERSIFY** into other areas of beekeeping.

If e.: Would diversify into: _____

f. Other changes (Please specify.) _____

Bee Colony Transport:

11) a. Did you transport any of your bee colonies to other states in 1985, 1986, 1987 or 1988? (Circle ONE letter for each year.)

1985	1986	1987	1988
a. Yes	a. Yes	a. Yes	a. Yes

___ b. No, I did not transport bee colonies to other states in 1985, 1986, 1987 or 1988 → Skip to Question 11c, below.

b. If you transported any of your bee colonies to other states, what was the main purpose? (Please check where appropriate)

Main Purpose for Transporting Bees	1985	1986	1987	1988
a. Provide paid pollination services	___	___	___	___
b. Seek floral source for honey prod'n	___	___	___	___
c. Wintering	___	___	___	___
d. Other (Specify) _____	___	___	___	___

c. What is your best estimate of the total mileage for transporting your bee colonies in each year for any reason? Total mileage includes all transporting activities to and from home location within state as well as between states for all vehicles.

- a. 1985 _____ miles
- b. 1986 _____ miles
- c. 1987 _____ miles
- d. 1988 _____ miles

Pollination Services:

12) Did your operation transport bee colonies to one or more locations during 1985, 1986, 1987 or 1988 to provide paid pollination services?

- a. No ➡ Skip to Section III, page 10.
- b. Yes

13) Please answer the following questions based on your most recent experience.

a. For which year are you providing information on pollination services?

19_____

b. How many of your colonies were used at the start of the pollination season?

_____ # of COLONIES

c. How many of your colonies were being used at the end of the pollination season?

_____ # of COLONIES

d. How many times were your colonies relocated during the year to provide paid or unpaid pollination services?

_____ # of TIMES RELOCATED

e. How many total miles were your colonies transported during a year to provide pollination services? (Please approximate if unsure. Total miles includes all transporting activities to and from home location within state as well as between states.)

_____ TOTAL MILES

Appendix: National Survey Instrument (continued)

f. In the table below, please indicate the state(s) where your colonies provide paid pollination services, the main crops pollinated, colonies used, and applicable pollination fees received. Begin with the first crops pollinated in the year and proceed throughout the year. If more than one crop is pollinated in a state, report additional crops in the second column.

State(s) Where Service is Provided (state)	Major Crops Pollinated (crop)	Total Colonies Used (number)	Colonies Used Per Acre (number)	Average Fee Rec'd per Colony (dollars)	Time When Service Begins (month, day)	Length of Time Crop is Pollinated (days)
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

14) Please identify where your colonies that are used to provide paid pollination services are over-wintered.

Location (State)	Number of Colonies
_____	_____
_____	_____
_____	_____
_____	_____

Appendix: National Survey Instrument (continued)

III. 1988 PESTICIDE AND WINTER LOSSES

1) Did your beekeeping operation incur losses from pesticides during 1988?

- a. No → Skip to Question 6, below.
- b. Yes

2) What percent of your colonies were affected by pesticides in 1988?

_____ % COLONIES AFFECTED

3) What percent of your affected colonies suffered 50% or more loss of honey bees from pesticides?

_____ % COLONIES WITH 50% LOSS

4) Where did most of your losses occur? (Circle ONE answer.)

- a. Colony
- b. Field
- c. Both

5) Are you normally reimbursed for your honey bee losses from pesticides?

- a. No
- b. Yes

6) Does your beekeeping operation normally incur winter losses?

- a. No → Skip to Section IV, page 11.
- b. Yes

7) What percent of your colonies are affected by winter loss each year?

_____ % COLONIES AFFECTED

8) What percent of your affected colonies suffered 50% or more winter loss of honey bees?

_____ % COLONIES WITH 50% LOSS

- 9) What method do you use to replace winter losses? (Circle ALL that apply.)
- a. Package bees
 - b. Divisions with purchased queens
 - c. Divisions with queens raised by the beekeeper using a natural queen cell
 - d. Divisions with queens raised by the beekeeper using a grafted queen cell

IV. LABOR USE

- 1) What is the average number of hours per week each of the following have spent on your entire operation in 1988? (Please fill in the blanks provided.)

Please write: NA - if you DID NOT USE a specific labor source during a given time.

	Jan-Mar <small>(hours/week)</small>	Apr-Jun <small>(hours/week)</small>	Jul-Sep <small>(hours/week)</small>	Oct-Dec <small>(hours/week)</small>
Yourself	_____	_____	_____	_____
Other Family Members	_____	_____	_____	_____
Hired Labor				
Full Time	_____	_____	_____	_____
Part Time	_____	_____	_____	_____

- 2) What is the average wage rate paid by your operation for each of the following?
- a. Full time hired labor? _____ dollars/hour.
 - b. Part time hired labor? _____ dollars/hour.

Appendix: National Survey Instrument (continued)

V. ADVERTISING AND PROMOTIONAL ACTIVITIES

1) Where did you advertise your products and services in 1988? Exclude contributions for advertising and promotion done by marketing cooperatives and the National Honey Board. (Please put a CHECK on the appropriate spaces.)

	Honey	Honey with other Products	Beeswax	Pollination Services	Package Bees and Queens
Local Newspapers	_____	_____	_____	_____	_____
Circulars	_____	_____	_____	_____	_____
Beekeeping Journals	_____	_____	_____	_____	_____
Magazines	_____	_____	_____	_____	_____
Community Bulletin Boards	_____	_____	_____	_____	_____
Direct Mail	_____	_____	_____	_____	_____
Road Signs	_____	_____	_____	_____	_____
Word of Mouth	_____	_____	_____	_____	_____
Other (Please List)	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____
Didn't Advertise	_____	_____	_____	_____	_____

2) Which of the following beekeeping promotional activities did you participate in during 1988? (Circle ALL that apply.)

- a. Distributing recipes using honey
- b. Giving demonstrations/Setting up Displays (e.g. county fairs, flea markets, grocery stores, bazaars etc.)
- c. Distributing honey information
- d. Distributing free samples
- e. Publishing newspaper articles
- f. Maintaining observation hive
- g. Contributing to the National Honey Board
- h. Other (Please Specify) _____

i. Did not participate during 1988

SECTION B

If you are:

- a PRODUCER only → Skip to Section D, Page 21
- a PACKER → Continue with Section B, Page 14
- All Others → Skip to Section C, Page 17

SECTION B. PACKERS

I. FIRM CHARACTERISTICS

- 1) Are you a: (Please circle ONE response.)
- a. Full time Packer
 - b. Part time Packer;
Other time spent on beekeeping activities
 - c. Part time Packer;
Other time spent on non-beekeeping activities
- 2) In what state do you have your packing facilities?
- _____

II. PRODUCTS AND SERVICES

- 1) Did your operation do any subcontracted packing services for other businesses in 1988?
- a. No → Skip to question 3, page 15.
 - b. Yes
- 2) **FOR SUBCONTRACTED HONEY ONLY:**
Please fill in the following information about honey you packed for other businesses from 1985 to 1988.

Please write: NA - if you DID NOT accept any subcontracts that year.

Calendar Year	Honey Source	Volume Packed	Total Cost of Purchased Honey	Revenue Received From Services
1985	Domestic	_____ lbs	\$ _____	\$ _____
	Foreign	_____ lbs	\$ _____	\$ _____
1986	Domestic	_____ lbs	\$ _____	\$ _____
	Foreign	_____ lbs	\$ _____	\$ _____
1987	Domestic	_____ lbs	\$ _____	\$ _____
	Foreign	_____ lbs	\$ _____	\$ _____
1988	Domestic	_____ lbs	\$ _____	\$ _____
	Foreign	_____ lbs	\$ _____	\$ _____

Appendix: National Survey Instrument (continued)

- 3) **For All Packing Services Excluding Subcontracted Services:**
Please fill in the following information about honey you packed from 1985 to 1988.

Calendar Year	Honey Source	Volume Packed	Total Cost of Purchased Honey	Revenue Received From Packed Honey
1985	Own Honey	_____ lbs		\$ _____
	Purchased Domestic	_____ lbs	\$ _____	\$ _____
	Purchased Foreign	_____ lbs	\$ _____	\$ _____
1986	Own Honey	_____ lbs		\$ _____
	Purchased Domestic	_____ lbs	\$ _____	\$ _____
	Purchased Foreign	_____ lbs	\$ _____	\$ _____
1987	Own Honey	_____ lbs		\$ _____
	Purchased Domestic	_____ lbs	\$ _____	\$ _____
	Purchased Foreign	_____ lbs	\$ _____	\$ _____
1988	Own Honey	_____ lbs		\$ _____
	Purchased Domestic	_____ lbs	\$ _____	\$ _____
	Purchased Foreign	_____ lbs	\$ _____	\$ _____

- 4) How much honey did your operation sell through the following market outlets from 1985 to 1988?

Please write NA - if you DID NOT use that specific outlet in a given year.

Markets Used	POUNDS SOLD FOR CALENDAR YEAR			
	1985	1986	1987	1988
Roadside Market	_____ lbs	_____ lbs	_____ lbs	_____ lbs
Retail Stores	_____ lbs	_____ lbs	_____ lbs	_____ lbs
Institutions	_____ lbs	_____ lbs	_____ lbs	_____ lbs
Broker or Dealer	_____ lbs	_____ lbs	_____ lbs	_____ lbs
Direct Export	_____ lbs	_____ lbs	_____ lbs	_____ lbs
Industrial User or Food Manufacturer	_____ lbs	_____ lbs	_____ lbs	_____ lbs
Other Outlet (Specify)	_____ lbs	_____ lbs	_____ lbs	_____ lbs
_____	_____ lbs	_____ lbs	_____ lbs	_____ lbs
Not Sold or In Storage	_____ lbs	_____ lbs	_____ lbs	_____ lbs
TOTAL	_____ lbs	_____ lbs	_____ lbs	_____ lbs

Appendix: National Survey Instrument (continued)

III. ADVERTISING AND PROMOTIONAL ACTIVITIES

1) Where did you advertise your products and services in 1988? (Please put a CHECK on the appropriate spaces.)

	Honey	Honey with other Products	Packing Services	Other Products or Services
Local Newspapers	_____	_____	_____	_____
Circulars	_____	_____	_____	_____
Beekeeping Journals	_____	_____	_____	_____
Magazines	_____	_____	_____	_____
Community Bulletin Boards	_____	_____	_____	_____
Direct Mail	_____	_____	_____	_____
Road Signs	_____	_____	_____	_____
Word of Mouth	_____	_____	_____	_____
Other (Please List)	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
Didn't Advertise	_____	_____	_____	_____

SECTION C

If you are:

- NOT an Importer or Broker → Skip to Section D, Page 21
- an Importer or Broker → Please continue with Section C, Page 18

Appendix: National Survey Instrument (continued)

SECTION C. IMPORTERS AND BROKERS

I. FIRM CHARACTERISTICS

1) Which of the following best describes your operation? (Please circle ONE response.)

- a. Full time Importer
- b. Full time Broker
- c. Full time Importer and Broker
- d. Part time Importer
- e. Part time Broker
- f. Part time Importer and Broker

2) In what state do you have your primary headquarters?

II. PRODUCTS AND SERVICES

1) What products do you negotiate? (Circle ALL that apply.)

- a. Honey
- b. Other Nutritive Sweeteners (e.g. corn syrup, sugar, etc.)
- c. Other Agricultural Products
- d. Non-Agricultural Products

2) During the period of 1985 to 1988, please indicate the quantity of honey negotiated by your operation, its source, the cost, and the revenue received.

Calendar Year	Honey Source	Volume	Total Cost	Total Revenue
1985	Domestic	_____ lbs	\$ _____	\$ _____
	Foreign	_____ lbs	\$ _____	\$ _____
1986	Domestic	_____ lbs	\$ _____	\$ _____
	Foreign	_____ lbs	\$ _____	\$ _____
1987	Domestic	_____ lbs	\$ _____	\$ _____
	Foreign	_____ lbs	\$ _____	\$ _____
1988	Domestic	_____ lbs	\$ _____	\$ _____
	Foreign	_____ lbs	\$ _____	\$ _____

Appendix: National Survey Instrument (continued)

3) How much of your negotiated honey did your operation sell through the following market outlets from 1985 to 1988?

Please write NA - if you DID NOT use that specific outlet in a given year.

Markets Used	POUNDS SOLD FOR CALENDAR YEAR			
	1985	1986	1987	1988
Roadside Market	_____ lbs	_____ lbs	_____ lbs	_____ lbs
Retail Stores	_____ lbs	_____ lbs	_____ lbs	_____ lbs
Institutions	_____ lbs	_____ lbs	_____ lbs	_____ lbs
Packers/Bottlers				
Independent	_____ lbs	_____ lbs	_____ lbs	_____ lbs
Cooperative	_____ lbs	_____ lbs	_____ lbs	_____ lbs
Direct Export	_____ lbs	_____ lbs	_____ lbs	_____ lbs
Industrial User or Food Manufacturer	_____ lbs	_____ lbs	_____ lbs	_____ lbs
Other Outlet (Specify)				
_____	_____ lbs	_____ lbs	_____ lbs	_____ lbs
_____	_____ lbs	_____ lbs	_____ lbs	_____ lbs
Not Sold or In Storage	_____ lbs	_____ lbs	_____ lbs	_____ lbs
TOTAL	_____ lbs	_____ lbs	_____ lbs	_____ lbs

Appendix: National Survey Instrument (continued)

III. ADVERTISING AND PROMOTIONAL ACTIVITIES

1) Where did you advertise your products and services in 1988? (Please put a CHECK on the appropriate spaces.)

	Honey	Honey with other Nutritive Sweeteners	Brokerage and Importer Services	Other Products or Services
Local Newspapers	_____	_____	_____	_____
Circulars	_____	_____	_____	_____
Beekeeping Journals	_____	_____	_____	_____
Magazines	_____	_____	_____	_____
Community Bulletin Boards	_____	_____	_____	_____
Direct Mail	_____	_____	_____	_____
Road Signs	_____	_____	_____	_____
Word of Mouth	_____	_____	_____	_____
Other (Please List)				
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
Didn't Advertise	_____	_____	_____	_____

Please continue with Section D, Page 21.

SECTION D. FINANCES

Total Gross Expenses: - Please answer the following questions with regard to your entire beekeeping and/or marketing operation.

- 1) Please estimate the cost of the following items to your entire operation in 1988. (Please fill in the blanks for ALL that apply.)

Please write: NA - for items that DO NOT apply to your operation.
0 - if you DID NOT incur any expenses for that item in 1988.

<u>COST</u>	<u>ITEM</u>
	Labor
\$ _____	Hired labor
\$ _____	Hired labor benefits (e.g. housing allowance, insurance, etc.)
\$ _____	Salaries of corporate officers, management, office labor, etc.
	Bees
\$ _____	Bee food
\$ _____	Queens and Nucs
\$ _____	Package Bees
	Supplies
\$ _____	General (e.g. smokers, veils, drugs, supers)
\$ _____	Containers and Packaging Materials
	Equipment
\$ _____	Repair and Maintenance
\$ _____	Gas and oil
	Buildings
\$ _____	Repair and Maintenance
\$ _____	Mortgage (including interest paid)
	Overhead Expenses
\$ _____	Utilities
\$ _____	Business Insurance
\$ _____	Taxes
\$ _____	Location Rent
\$ _____	Interest on Operating Capital
\$ _____	Office Expenses (excluding salaries)
	Marketing Activities
\$ _____	Advertising
\$ _____	Publication Subscriptions
\$ _____	Promotion (excluding NHB Assessments)
\$ _____	Marketing Fees (e.g. brokerage fees)
\$ _____	Other (Specify.) _____

Appendix: National Survey Instrument (continued)

Financial Situation: -Please answer the following questions with regard to your entire beekeeping and/or marketing operation.

2) In 1988, what was your operation's approximate gross income? (Gross income is the total income before subtracting expenses. Circle the LETTER which applies to your operation.)

- | | |
|-------------------------|---------------------------|
| a. \$2,499 or less | g. \$50,000 to \$99,999 |
| b. \$2,500 to \$4,999 | h. \$100,000 to \$149,999 |
| c. \$5,000 to \$9,999 | i. \$150,000 to \$199,999 |
| d. \$10,000 to \$19,999 | j. \$200,000 to \$499,999 |
| e. \$20,000 to \$39,999 | k. \$500,000 to \$999,999 |
| f. \$40,000 to \$49,999 | l. \$1,000,000 or more |

3) In 1988, what was your operation's net income? (Net income is gross income minus expenses. Circle the LETTER which applies.)

- | | |
|--------------------------|-------------------------|
| a. Costs exceeded income | e. \$5,000 to \$9,999 |
| b. Broke even | f. \$10,000 to \$19,999 |
| c. \$1 to \$2,499 | g. \$20,000 to \$49,999 |
| d. \$2,500 to \$4,999 | h. \$50,000 to \$99,999 |
| | i. \$100,000 or more |

4) What would you estimate to be the total value of all the assets of your operation at the end of 1988? (Assets include land, buildings, machinery, hives, honey, beeswax and other property. Circle the LETTER which applies.)

- | | |
|-------------------------|-------------------------------|
| a. \$2,499 or less | h. \$100,000 to \$149,999 |
| b. \$2,500 to \$4,999 | i. \$150,000 to \$199,999 |
| c. \$5,000 to \$9,999 | j. \$200,000 to \$499,999 |
| d. \$10,000 to \$19,999 | k. \$500,000 to \$999,999 |
| e. \$20,000 to \$39,999 | l. \$1,000,000 to \$1,499,999 |
| f. \$40,000 to \$49,999 | m. \$1,500,000 to \$1,999,999 |
| g. \$50,000 to \$99,999 | n. \$2,000,000 or more |

5) What was the approximate total amount of debt on the assets of your operation at the end of 1988? (Circle the LETTER which applies.)

- | | |
|-------------------------|-------------------------------|
| a. No debt | i. \$100,000 to \$149,999 |
| b. \$2,499 or less | j. \$150,000 to \$199,999 |
| c. \$2,500 to \$4,999 | k. \$200,000 to \$499,999 |
| d. \$5,000 to \$9,999 | l. \$500,000 to \$999,999 |
| e. \$10,000 to \$19,999 | m. \$1,000,000 to \$1,499,999 |
| f. \$20,000 to \$39,999 | n. \$1,500,000 to \$1,999,999 |
| g. \$40,000 to \$49,999 | o. \$2,000,000 or more |
| h. \$50,000 to \$99,999 | |

Appendix: National Survey Instrument (continued)

SECTION E. PERSONAL INFORMATION

- 1) Which of the following best describes the location of your primary residence? (Please circle the LETTER where you live most of the year.)
- a. Farm
 - b. Rural but not farm
 - c. Community under 2,500
 - d. Community 2,500 or more but less than 25,000
 - e. Community 25,000 or more but less than 50,000
 - f. Community 50,000 or more but less than 100,000
 - g. Community 100,000 or more
- 2) How many people, including yourself, live at your present address? (Please fill in the blanks. Put "0" where applicable.)
- a. Under 6 years old _____
 - b. 6 to 12 years old _____
 - c. 13 to 18 years old _____
 - d. 19 or older _____
- 3) What is your current marital status? (Please circle ONE response.)
- a. Married
 - b. Single
 - c. Widowed/Divorced/Separated
- 4) How many years of school did you complete? (Please circle ONE response.)
- a. 1 to 8 years (Elementary school only)
 - b. 9 to 11 years (Attended some high school)
 - c. 12 years (Graduated high school)
 - d. 13 to 15 years (Attended college)
 - e. 16 or more years (Graduated college)
- 5) What do you consider your major occupation? (Circle the LETTER which best describes your occupation.)
- a. Clerical
 - b. Professional (teacher, lawyer, etc)
 - c. Managerial
 - d. Technician
 - e. Labor (construction, factory, etc.)
 - f. Own my own business (excluding farming)
 - g. Sales
 - h. Beekeeper and/or bee producer
 - i. Farmer (crop, livestock, aquaculture, poultry etc.)
 - j. Retired
 - k. Other _____

Appendix: National Survey Instrument (continued)

6) Is this occupation the major source of your household's income?

- a. No
- b. Yes

7) How long have you been a producer, packer, importer, or broker in the beekeeping industry?

_____ years

8) Which income category best describes the annual gross income for all wage earners in your immediate family living with you last year? (Please circle ONE response.)

- | | |
|-------------------------|-----------------------------|
| a. Less than \$9,999 | f. \$100,000 to \$149,999 |
| b. \$10,000 to \$19,999 | g. \$150,000 to \$199,999 |
| c. \$20,000 to \$39,999 | h. \$200,000 to \$499,999 |
| d. \$40,000 to \$69,999 | i. \$500,000 to \$1,000,000 |
| e. \$70,000 to \$99,999 | j. Over \$1,000,000 |

9) How old were you on your last birthday?

_____ years old

10) Are you:

- a. Female
- b. Male

11) How long did it take you to complete this questionnaire?

_____ minutes

Appendix: National Survey Instrument (continued)

SECTION F. YOUR COMMENTS

Is there anything else that you would like to tell us about your operation? If you do, please use the space below for that purpose.

Do you have any comments about this survey in general, as well as any of its specific sections or questions? We would appreciate your comments to help us learn more about issues important in identifying the needs and current economic status of the honey industry.

Appendix: National Survey Instrument (continued)

If you have any questions regarding this study or this questionnaire, please contact:

Lois Schertz Willett
Assistant Professor of Agricultural Economics
Department of Agricultural Economics
40 Warren Hall
Cornell University
Ithaca, NY 14853
(607) 255-4489

THANK YOU FOR YOUR COOPERATION. PLEASE MAIL THIS
QUESTIONNAIRE TO US IN THE ENCLOSED POSTAGE PAID ENVELOPE.

OTHER AGRICULTURAL ECONOMICS STAFF PAPERS

No. 92-03	Milk Quality Incentives for Dairy Farm Employees: A Motivational Approach	Thomas R. Maloney
No. 92-04	An Integrated Approach to Modeling Price Volatility in the Live Cattle Futures Market	Kevin J. Evans Deborah H. Streeter Michael A. Hudson
No. 92-05	Studies of Land and Agricultural Problems in Taiwan: An Annotated Bibliography	Tze-Wei Chen
No. 92-06	Environment, NAFTA, and New York Testimony, New York State Senate Hearing	Duane Chapman
No. 92-07	Organizational Structure: Does it Hinder or Promote Management Decisions	Robert A. Milligan Guy K. Hutt
No. 92-08	Knowing the Numbers is the Key	Eddy L. LaDue
No. 92-09	From Ecology to Economics: The Case Against CO2 Fertilization	Jon D. Erickson
No. 92-10	Rates and Patterns of Change in New York Dairy Farm Numbers and Productivity	Stuart F. Smith
No. 92-11	An Economic Analysis of the U.S. Honey Industry: Survey Sample and Mailing	Lois Schertz Willett
No. 92-12	An Economic Analysis of the U.S. Honey Industry: Data Documentation	Lois Schertz Willett