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**RISK MANAGEMENT PRACTICES FOR SPECIALTY CROP
PRODUCERS IN FLORIDA**

By

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INTERNATIONAL AGRICULTURAL TRADE AND POLICY CENTER

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- Facilitate dissemination of agricultural trade related research results and publications
- Encourage interaction between researchers, business and industry groups, state and federal agencies, and policymakers in the examination and discussion of agricultural trade policy questions
- Provide support to initiatives that enable a better understanding of trade and policy issues that impact the competitiveness of Florida and southeastern agriculture specialty crops and livestock in the U.S. and international markets

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Introduction

The International Agricultural Trade and Policy Center, in cooperation with the Federal Crop Insurance Corporation (Risk Management Agency), surveyed Florida specialty crop producers to examine the unique needs of these producers for the purpose of providing data for developing new risk management tools and instruments, particularly crop insurance. Florida Agricultural Statistics Service mailed out 16,889 surveys (Appendix) to Florida specialty crop producers. There were 9,256 surveys returned of which 3,409 or 20.2 percent were useable.

Seventy-one different crops were represented in the responses to the survey. Of these 3409 surveys, 1283 (or 37.6%) were orange producers (Table 1). Nurseries with 921 or 27% were the second largest individual specialty crop represented. Even though there were about 70 crops represented in the responses to the survey, 14 made up 90% of the survey responses and 23 made up 95%. At the other extreme there were 17 crops that were represented by a single producer (such as sweet potatoes, macadamia nuts, pears, okra, mustard greens, ducks and guava). There were 39 different crops that were represented with five or less farms.

The predominant specialty crop group represented in the responses was citrus (oranges, grapefruit, limes, tangerines and tangelos) with 1417 or 41.6% of the producers (Table 2). Just over 37%, or 1273, were producers of sod and ornamentals (including nurseries, Christmas trees, foliage, ferns and flowers). Other fruit (such as avocados, mangoes, tropical fruit, grapes, and persimmons), melons and berries (watermelon, blackberries, blueberries, strawberries, and cantaloupes) and nuts (predominately pecans) all have less than 7% of the respondents. There are 141 vegetable farmers, or 4.1%, with over 20 different vegetables (See appendix 1 for specific crops that comprise each group).

The vast majority of the production takes place in Central (54.1%) and South Florida (37.3%). Only 8.7% of the farmers are in North Florida and the Panhandle (Table 3). The county with the largest representation is Dade County in south Florida. Dade had 385 producers that responded, or 11.3% of the survey respondents (Table 4). Polk

and Hillsborough follow Dade with 9.7% and 9.2% respectively, thus these three counties have over 30% of the farms that responded to the survey. Four counties (Lake, Orange, Volusia and Hardee) represented at least 5.0% to 6.5% of the survey responses, meaning that the largest seven counties have over one-half of the farms in the survey. There are 67 counties in the state of Florida, and 66 are represented in the survey. The average years in farming was 22.2 years (Table 5), while the average farm size was 300.9 acres (Table 6).

Table 1: Primary Specialty Crop – IC* 048.

	N**	Percent	Cumulative %
Oranges	1283	37.6	37.6
Nursery	921	27.0	64.7
Foliage	167	4.9	69.6
Avocados	122	3.6	73.1
Ferns	118	3.5	76.6
Aquaculture	90	2.6	79.2
Blueberries	74	2.2	81.4
Grapefruit	69	2.0	83.4
Pecans	58	1.7	85.1
Tangerines	45	1.3	86.4
Watermelons	39	1.1	87.6
Nuts, Other	32	.9	88.5
Grapes	31	.9	89.4
Sod Farm	29	.9	90.3
Mangoes	27	.8	91.1
Christmas Trees	26	.8	91.8
Strawberries	23	.7	92.5
Vegetables, All	20	.6	93.1
Fruit, Tropical	17	.5	93.6
Tangelos	15	.4	94.0
Squash	14	.4	94.5
Tomatoes	14	.4	94.9
Persimmons	12	.4	95.2
Beans, Snap	12	.4	95.6
Herbs	12	.4	95.9
Corn, Sweet	11	.3	96.2

* IC number corresponds to the item code in the survey.

**N is the number of survey respondents to a particular question

Table 2: Specialty Crop Groups.

	N	Percent
Citrus	1417	41.6
Sod & Ornamentals	1273	37.3
Other Fruit	226	6.6
Melons & Berries	142	4.2
Vegetables	141	4.1
Misc.	118	3.5
Nuts	92	2.7
Total	3409	100.0

Table 3: Region of State of Florida.

	N	Percent
Central	1844	54.1
South	1270	37.3
Panhandle	159	4.7
North	136	4.0
Total	3409	100.0

Table 4: County of Operation –IC 002.

	N	Percent	Cumulative %
Dade	385	11.3	11.3
Polk	329	9.7	20.9
Hillsborough	314	9.2	30.2
Lake	220	6.5	36.6
Orange	210	6.2	42.8
Volusia	177	5.2	48.0
Hardee	169	5.0	52.9
Palm Beach	127	3.7	56.6
Pasco	109	3.2	59.8
DeSoto	102	3.0	62.8
Brevard	90	2.6	65.5
Alachua	77	2.3	67.7
Highlands	71	2.1	69.8
Indian River	71	2.1	71.9
Marion	68	2.0	73.9
St. Lucie	57	1.7	75.6
Osceola	51	1.5	77.1
Martin	47	1.4	78.4
Seminole	47	1.4	79.8
Putnam	45	1.3	81.1

Table 5: Years in Farming – IC 004.

	N	Min	Max	Average
Vegetables	134	3	60	22.5
Citrus	1343	1	100	26.8
Melons & Berries	130	3	74	21.7
Sod & Ornamentals	1228	1	86	18.4
Other Fruit	218	1	84	20.8
Nuts	87	3	60	20.9
Misc.	117	2	71	14.3
ALL	3257	1	100	22.2

Table 6: Acres in Operation – IC 001.

	N	Min	Max	Average
Vegetables	139	1	4000	208.0
Citrus	1414	1	50900	446.6
Melons & Berries	142	1	1500	120.5
Sod & Ornamentals	1271	1	96000	109.6
Other Fruit	226	1	390	16.5
Nuts	92	1	803	53.6
Misc.	118	1	189600	1679.7
ALL	3402	1	189600	300.9

Marketing of Specialty Crops in Florida

The majority of producers, 2433, indicated that they marketed product using the fresh market. Of these a total of 2205 producers said 100 percent of their specialty crop production was used for fresh market with virtually all (1257) of the sod and ornamentals sold in the fresh market. Citrus was the only crop group for which the fresh market was not the primary outlet. Consequently, of the 954 that said that 100 percent of their crop production was used for processing, 924 were citrus producers. Only 228 producers, or 6.7% of those that responded to this question, used both the fresh and processed market outlets to sell their crop (Table 7).

Table 7: Processing versus Fresh Market; Total Number, Number with 100%, and Average – IC 049 & 050.

	Processed			Fresh Market		
	N	100% Processed (N)	Average	N	100% to Fresh Market (N)	Average
Veggies	9	6	79.2	134	131	99.2
Citrus	1127	924	92.0	482	279	76.1
Melons & Berries	4	0	27.5	142	138	99.2
Sod & Ornamentals	10	5	74.3	1262	1257	99.8
Other Fruit	9	5	81.1	220	216	99.0
Nuts	10	6	76.0	83	79	98.1
Misc.	13	8	83.2	110	105	97.5
Total	1182	954	91.2	2433	2205	94.9

Selling to a processor at a predetermined price was the predominant processing outlet (Table 8). A total of 479 sold their entire crop using this method while 523 producers sold some part of their crop in this manner. This compared to 306 that sold their entire crop for processing on the spot market, and 337 that used the spot market

marketing to some extent. The third most popular outlet for processed marketing was to a processor without a predetermined price. As would be expected, the citrus producers dominate these total numbers.

The predominant primary fresh market outlet was selling to a commercial buyer (wholesaler, retailer or restaurant). 953 sold some part of their crop in this manner (Table 9) while 790 sold their entire crop using this method. The sod and ornamental group dominated this method. This compares to 523 that sold all or some of their crop directly to consumers using farmers markets, roadside stands or by U-pick. For vegetables, melon and berries, and other fruit selling direct had the largest number of responses, while 449 producers used direct markets entirely. Another popular outlet for marketing to the fresh market was to use a broker, with citrus and other fruit giving this as the most popular method, and in total, 479 producers sold all of their fresh market crop using a broker, with 568 selling some portion by this method.

Table 8: Outlets for Processed – IC 051to 056.

	Coop		Contract with Price		Contract No Price		Spot Market		Participation Plan		Other	
	N	Avg.	N	Avg.	N	Avg.	N	Avg.	N	Avg.	N	Avg.
Veggies	0	0	5	94.0	1	20.0	5	82.0	0	0	2	50.5
Citrus	126	92.1	507	96.5	162	94.8	312	94.7	50	86.1	39	79.5
Melons & Berries	3	100	0	0	0	0	1	100.0	0	0	0	0
Sod & Ornamentals	0	0	3	100	1	100	4	100	0	0	3	100
Other Fruit	2	100	2	97.5	3	100	4	56.3	0	0	2	90.0
Nuts	0	0	3	73.3	3	100	5	96.0	0	0	1	100
Total	134	92.5	523	96.47	172	94.6	337	94.2	50	86.1	48	79.1

Table 9: Outlets for Fresh Market – IC 059 to 063.

	Direct		Cooperative		Broker		Commercial Buyer		Other	
	N	Avg.	N	Avg.	N	Avg.	N	Avg.	N	Avg.
Veggies	57	95.2	4	68.8	31	97.9	27	93.1	7	92.9
Citrus	127	85.0	93	95.0	214	95.5	69	88.0	23	89.7
Melons & Berries	64	79.1	12	90.1	62	93.2	14	67.8	2	55.0
Sod & Ornamentals	258	83.2	5	82.0	126	84.6	714	92.3	59	79.3
Other Fruit	72	85.8	15	94.7	89	95.5	51	82.7	7	84.3
Nuts	29	78.2	1	100	26	95.8	35	92.5	5	81.0
Misc.	13	77.7	6	99.2	20	94.3	43	95.5	3	68.3
Total	620	84.2	136	93.5	568	92.7	953	91.3	106	82.1

Annual Yield Fluctuation

Respondents to the survey were asked to indicate their largest yield fluctuations over the last five years. Over all commodities, 44.3 percent indicated that yield fluctuated less than 10 percent from the 5 year average with the number experiencing yield variability declining for each increasing yield fluctuation (Table 10). An index for yield variability was constructed by ranking the yield variability from 1 (less than 10 percent) to 5 (yield declines of 75 to 100 percent) and then measuring the weighted average yield variability for each commodity group and for all growers. The results indicate that the index value for yield variability across all growers of all crops was 2.01, indicating that the average yield variability was on the low end of the 10 – 25 percent range. The commodity group with the lowest yield variability was the sod and ornamentals crop group, followed by citrus, other fruit and then vegetables. The commodity group with the largest yield variability was nuts followed by melons and berries and then miscellaneous crops.

Table 10: The Largest Yield Fluctuation Over the Last Five Years – IC 079 to 083.

		Yield <10%	Yield 10- 24%	Yield 25%-49%	Yield 50- 74%	Yield 75- 100%	Total	Index Value
Vegetables	N	60	28	23	14	9	134	2.13
	%	44.8%	20.9%	17.2%	10.4%	6.7%	100%	
Citrus	N	468	442	234	90	59	1293	2.10
	%	36.2%	34.2%	18.1%	7.0%	4.6%	100%	
Melons & Berries	N	40	36	22	15	16	129	2.47
	%	31.0%	27.9%	17.1%	11.6%	12.4%	100%	
Sod & Ornamentals	N	680	296	133	50	41	1200	1.73
	%	56.7%	24.7%	11.1%	4.2%	3.4%	100%	
Other Fruit	N	92	53	32	28	10	215	2.12
	%	42.8%	24.7%	14.9%	13.0%	4.7%	100%	
Nuts	N	18	13	16	16	21	84	3.11
	%	21.4%	15.5%	19.0%	19.0%	25.0%	100%	
Misc.	N	28	13	16	14	3	74	2.34
	%	37.8%	17.6%	21.6%	18.9%	4.1%	100%	
Total	N	1386	881	476	227	159	3129	2.01
	%	44.3%	28.2%	15.2%	7.3%	5.1%	100%	

Annual Average Price Fluctuation

A second source of risk to growers lies in price variability. Respondents were asked to indicate their largest price fluctuation from average price for the last 5 years. The results are similar to yield fluctuation in terms of the price fluctuation range of less than 10 percent was the range with the highest response across all growers with 50.3 percent indicating less than a 10 percent fluctuation in price, with declining numbers for each higher fluctuation range (Table 11). Again, an index value was constructed for price variability by ranking the price variability from 1 (less than 10 percent) to 5 (yield declines of 75 to 100 percent) and then measuring the weighted average yield variability for each commodity group and for all growers. The results indicate that the index value for price variability across all growers of all crops was 1.89, indicating that the average yield variability was less than 10 percent. The commodity group with the lowest price variability was the sod and ornamentals crop group followed by other fruit and then vegetables. The commodity group with the highest price variability was nuts followed by citrus, miscellaneous crops and then melons and berries.

Table 11: The Largest Price Fluctuation Over Last Five Years – IC 084 to 088.

		Price <10%	Price 10- 24%	Price 25- 49%	Price 50- 74%	Price 75- 100%	Total	Index Value
Vegetables	N	69	21	24	12	2	128	1.88
	%	53.9%	16.4%	18.8%	9.4%	1.6%	100%	
Citrus	N	368	398	313	127	57	1263	2.29
	%	29.1%	31.5%	24.8%	10.1%	4.5%	100%	
Melons & Berries	N	64	34	17	4	4	123	1.78
	%	52.0%	27.6%	13.8%	3.3%	3.3%	100%	
Sod & Ornamentals	N	870	208	64	32	24	1198	1.44
	%	72.6%	17.4%	5.3%	2.7%	2.0%	100%	
Other Fruit	N	122	53	15	14	6	210	1.71
	%	58.1%	25.2%	7.1%	6.7%	2.9%	100%	
Nuts	N	27	12	17	18	8	82	2.61
	%	32.9%	14.6%	20.7%	22.0%	9.8%	100%	
Misc.	N	26	18	11	9	3	67	2.18
	%	38.8%	26.9%	16.4%	13.4%	4.5%	100%	
Total	N	1546	744	461	216	104	3071	1.89
	%	50.3%	24.2%	15.0%	7.0%	3.4%	100%	

Profit Fluctuation

The combination of yield and price risk should translate into profit risk which can be measured by profitability variability. Producers were asked to indicate their largest fluctuation in profit over the last 5 years. Over all producers responding to the survey, 40.5 percent indicated profit variability of less than 10 percent with declining frequencies for higher profit variabilities (Table 12). Index values constructed for profit variability indicate that the average value for profit variability across all commodity groups was in the low end of the 10 to 25 percent variability range. The commodity group sod and ornamentals had the least profit variability followed by other fruit and then vegetables. The commodity group nuts had the highest profit variability followed by citrus, miscellaneous crops, and then melons and berries.

Table 12: The Largest Profit Fluctuation Over Last Five Years – IC 089 to 093.

		Profit <10%	Profit 10-24%	Profit 25-49%	Profit 50-74%	Profit 75-100%	Total	Index Value
Vegetables	N	69	25	15	14	6	129	1.94
	%	53.5%	19.4%	11.6%	10.9%	4.7%	100%	
Citrus	N	333	319	250	159	177	1238	2.62
	%	26.9%	25.8%	20.2%	12.8%	14.3%	100%	
Melons & Berries	N	46	38	20	11	9	124	2.19
	%	37.1%	30.6%	16.1%	8.9%	7.3%	100%	
Sod & Ornamentals	N	621	344	128	51	43	1187	1.78
	%	52.3%	29.0%	10.8%	4.3%	3.6%	100%	
Other Fruit	N	108	52	22	16	12	210	1.91
	%	51.4%	24.8%	10.5%	7.6%	5.7%	100%	
Nuts	N	28	9	12	10	19	78	2.78
	%	35.9%	11.5%	15.4%	12.8%	24.4%	100%	
Misc.	N	24	15	15	8	4	66	2.29
	%	36.4%	22.7%	22.7%	12.1%	6.1%	100%	
TOTAL	N	1229	802	462	269	270	3032	2.19
	%	40.5%	26.5%	15.2%	8.9%	8.9%	100%	

Main Cause of Low Profits

The survey respondents were asked to give the main cause of their lowest profits over the last five years. A total of 802 (24.8% of those that responded) said that poor yield was the main cause of low profits (Table 13). Low market prices due to high production (24.0%) and due to high levels of imports (20.7%) were all recognized as primary drivers of low profits. Higher costs (11.4%) and other reasons (14.2%) ranked behind the primary causes, but were identified by significant numbers of growers. Low yields was identified as the largest cause of low profits for vegetables, melons and berries, other fruit, nuts and miscellaneous crops. Imports were identified as the main reason for low profits for citrus while over production was identified as the main reason for low profits for sod and ornamentals.

Table 13: Main Cause of Low Profits Over Last Five Years – IC 094 to 100.

		Poor Yield	Poor Quality	High Costs	High Production	High Imports	Quarantine	Other	Total
Vegetables	N	72	4	3	18	21	1	12	131
	%	55.0%	3.1%	2.3%	13.7%	16.0%	0.8%	9.2%	100%
Citrus	N	284	26	85	330	518	9	118	1370
	%	20.7%	1.9%	6.2%	24.1%	37.8%	0.7%	8.6%	100%
Melons & Berries	N	74	1	20	17	10	0	13	135
	%	54.8%	0.7%	14.8%	12.6%	7.4%	0.0%	9.6%	100%
Sod & Ornamentals	N	181	97	228	366	55	4	258	1189
	%	15.2%	8.2%	19.2%	30.8%	4.6%	0.3%	21.7%	100%
Other Fruit	N	103	4	13	19	44	5	30	218
	%	47.2%	1.8%	6.0%	8.7%	20.2%	2.3%	13.8%	100%
Nuts	N	50	0	6	14	10	0	8	88
	%	56.8%	0.0%	6.8%	15.9%	11.4%	0.0%	9.1%	100%
Misc.	N	38	1	13	11	11	3	21	98
	%	38.8%	1.0%	13.3%	11.2%	11.2%	3.1%	21.4%	100%
Total	N	802	133	368	775	669	22	460	3229
	%	24.8%	4.1%	11.4%	24.0%	20.7%	0.7%	14.2%	100%

Ranking Sources of Risk

The survey respondents were asked to rank ten sources of risk in terms of their effect on net farm income. The ten sources were; adverse temperature, floods, drought, disease, irrigation water supply problems, input price fluctuation, output price fluctuation, pest, quarantine, and hail. The ranking scale was: 1=most effect, 2=next in degree of effect, etc. Table 14 provides the frequency of rankings for the ten sources of risk as well as the average ranking for all producers and each crop group.

A total of 1009 producers ranked adverse temperature as having the most effect on net farm income while output price fluctuations (761) and drought (676) were second and third respectively in number of "1" rankings. The average rankings for these three of 2.12, 2.46 and 2.61 were also in the same relative order. Disease followed these three in terms of frequency of number "1" rankings (357) and average (2.89).

Other, quarantine and floods had 179, 152, and 118 with rankings of ten (i.e., least effect on net farm income). These three also had the highest average rankings and standard deviations. Pests, water supply problems, floods, other reasons and quarantines ranked lower. Rankings across all commodity groups were consistent with a few exceptions. Drought was the number one source of risk for vegetable growers and nut growers. Output price change was the number one source of risk for citrus growers.

Table 14: Rank* Sources of Risk – IC 101 to 22.

	All Respondents			Vegetables	Citrus	Melons & Berries	Sod & Ornamentals	Other Fruit	Nuts	Misc.
	N	Rank #1	Average	Average						
Temperature	2176	1009	2.12	2.25	2.31	1.66	1.93	1.83	2.86	2.23
Output Price Changes	1777	761	2.46	2.92	2.00	2.86	2.92	2.79	3.04	3.32
Drought	1955	676	2.61	2.00	2.63	2.32	2.66	2.32	2.12	3.66
Disease	1544	357	2.89	3.07	2.89	3.11	2.70	2.83	2.83	4.29
Input Price Changes	1408	231	3.54	3.51	3.59	3.72	3.31	3.26	4.37	4.61
Pests	1169	143	3.81	3.80	4.39	3.26	3.37	3.10	4.00	4.39
Water Supply Problems	925	113	4.27	4.27	4.61	4.21	3.70	4.21	5.12	5.10
Floods	946	182	4.55	3.26	6.47	4.19	3.84	2.54	3.97	3.26
Others	734	82	6.29	5.25	7.31	5.88	5.70	3.81	5.59	8.21
Quarantine	577	38	7.22	7.40	7.12	8.29	7.34	6.32	9.20	6.69

*Ranking according to: 1= most effect, 2=next most effect, etc.

Risk Management Tools

Growers have numerous tools they can use to manage risk in their operations. These include crop insurance, producing crops in different regions, producing multiple products (crop diversification), using government programs for adverse outcomes, hedging with futures and options, using forward contracts to insure market access and eliminate price risk, and diversified marketing through multiple outlets. The survey respondents were asked to rank these specific risk management tools (and give an ‘other’ if desired) in terms of their preference for use. The ranking scale was: 1=most preferred to 8=least preferred. Table 15 provides the rankings for the risk management tools.

Crop insurance was clearly the most preferred with 793 respondents ranking it as the most preferred. Crop insurance had the lowest average, 2.36 of the eight specifically listed tools (as a group ‘other’ had the lowest average of 2.03). Crop insurance was the highest-ranking tool for all groups of growers with the exception of nut growers and other fruit crop growers who ranked diversified marketing as their preferred alternative. Other tools ranking high included crop diversification (for vegetables, melons and berries, sod and ornamentals, other fruit and nuts) and government programs (for vegetables, melons and berries, and other fruit). Producing multiple products was most preferred by 343 producers while diversifying markets was most preferred by 318, with averages of 2.83 and 2.64 respectively. Forward contracting and government programs had averages of 3.04 and 3.66 respectively. Multiple production regions and hedging had the highest averages of 4.50 and 5.35, respectively and the largest number of least important rankings.

Table 15. Ranking of Risk Management Tools – IC 111, 114, 117, 120, 123, 126, 129, & 132.

	All Respondents			Vegetables	Citrus	Melons & Berries	Sod & Ornmtls	Other Fruit	Nuts	Misc.
	N	Rank #1	Average	Average						
Rank Crop Insurance	1407	793	2.36	2.14	2.57	2.21	2.20	2.46	2.37	1.74
Rank Different Production Regions	492	64	4.50	4.30	4.55	5.04	4.60	3.72	4.30	4.14
Rank Multiple Products	929	343	2.83	2.50	3.59	2.95	2.29	2.41	2.00	4.23
Rank Gov. Programs	781	157	3.66	2.59	4.00	3.18	3.83	2.50	3.45	3.40
Rank Hedging	446	24	5.35	4.42	5.04	5.24	5.85	5.59	5.60	5.72
Rank Forward Contracts	718	219	3.40	3.43	2.92	4.62	3.79	4.04	3.54	4.70
Rank Diversified Mktng.	967	318	2.64	2.74	2.85	2.62	2.42	2.11	1.97	3.92
Rank-Others	572	447	2.03	2.29	2.28	1.96	1.69	1.45	1.19	3.94

In terms of availability and use of specific risk management tools by far the most available tool was crop insurance with 1149 growers indicating its availability (Table 16). Likewise, 685 of the respondents indicated they used crop insurance. The availability and use by specific crop groups was similar for virtually all groups with all but nut producers indicating that over 50 percent of those that indicated its availability also indicated they used crop insurance. Over 300 respondents indicated producing multiple products and using diversified markets were options for risk management with 265 and 194 indicating usage, respectively. Sod and ornamentals producers were the predominant users of multiple products, while citrus producers were the predominant users of forward contracts. Other popular tools available and used were government program and forward contracts. For the other specific tools, hedging was reported to be the least available and used, with 129, of which 100 were citrus producers, saying hedging was available but only used by 30 producers of which 23 were citrus producers.

Table 16: Availability and Use of Risk Management Tool – IC 112, 113, 115, 116, 118, 119 121, 122, 124, 125, 127, 128, 130, 131, 133, 134.

	Vegetables		Citrus		Melons & Berries		Sod & Ornamental		Other Fruit		Nuts		Misc.		Total	
	Avail.	Used	Avail.	Used	Avail.	Used	Avail.	Used	Avail.	Used	Avail.	Used	Avail.	Used	Avail.	Used
Crop Insurance	41	24	541	311	46	26	407	251	68	44	10	1	36	28	1149	685
Produce Diff. Regions	7	7	73	38	7	5	54	23	6	4	0	0	9	8	156	85
Produce Multiple Products	16	13	99	54	13	7	213	162	21	15	10	6	10	8	382	265
Gov. Program	18	10	122	62	15	9	78	38	27	25	6	5	20	18	286	167
Hedging	2	0	100	23	2	0	19	2	1	1	1	1	4	3	129	30
Forward Contracts	7	4	155	107	6	4	77	53	12	9	2	2	3	3	262	182
Diversified Markets	9	5	133	71	13	9	125	88	20	10	9	6	8	5	317	194
Others	2	2	30	20	6	4	23	22	1	1	1	1	3	2	66	52

Government Disaster Payments

Of the respondents, 737 (22.7%) reported that they had received government disaster payments, while 320 (9.9%) indicated ‘no’ they had not received government disaster payments (with no indication of why they had not received payments). On the other hand, 1216 (37.4%) said they were not qualified to receive government payments and another 976 (30%) were not aware of such programs (Table 17).

Of the 737 that had indicated that they had received disaster payments, 477, or about two thirds (64.7%) were citrus or sod and ornamental producers. However, these two specialty crop groups make up over 80 percent of the producers that indicated that they had not received payments (82%), or were not qualified (83%). Thus it would

appear that these two larger specialty crop groups were underrepresented in terms of having received payments relative to their representation in the survey (78.9%).

Table 17: Disaster Payments or Loans –IC 150, 151, &152.

	Received Government Disaster Payments		Not Qualified for Disaster Payments	Not Aware of Disaster Payments
	Yes	NO		
Vegetables	52	13	41	27
Citrus	257	134	562	387
Melons and Berries	44	13	45	31
Sod & Ornamentals	220	129	445	421
Other Fruit	96	18	62	47
Nuts	28	8	30	25
Misc.	40	5	31	38
Total - 3249	737	320	1216	976
% Of Total	22.7%	9.8%	37.4%	30.0%

Crop Insurance

The majority of respondents, 2218 (65.6%), indicated that they had not purchased crop insurance during the last five years (Table 18), while 1162 indicated they had purchased crop insurance. Vegetable and citrus producers purchased crop insurance in a manner similar to the average for all producers. Melon and berries and other fruit were somewhat below the average for purchasing crop insurance and nut producers were significantly below the average. Thirty-seven percent of the sod and ornamental producers reported purchasing crop insurance, which was somewhat above the average. Of those that had purchased insurance, 648, or well over 50 percent had purchased insurance every year during the last five year years, and 482 had purchased insurance in some but not all of the five years (Table 19).

As for private insurance, 719 respondents had not purchased any (Table 20). However, 253 said they had purchased private insurance protection from frost or freezing temperatures, while 191 said they had purchased private crop insurance for hail. Citrus producers were more likely to purchase private insurance for freeze and hail while the purchases of private crop insurance for the sod and ornamental producers were relatively uniformly distributed across that various sources of hazards.

Table 18: Purchased Crop Insurance
Last Five Years – IC 153.

		N	%
Vegetables	Yes	47	34.3%
	No	90	65.7%
Citrus	Yes	493	35.1%
	No	913	64.9%
Melons & Berries	Yes	40	28.4%
	No	101	71.6%
Sod & Ornamentals	Yes	467	37.0%
	No	796	63.0%
Other Fruit	Yes	64	28.3%
	No	162	71.7%
Nuts	Yes	5	5.4%
	No	87	94.6%
Misc.	Yes	46	40.0%
	No	69	60.0%
Total	Yes	1162	34.4%
	No	2218	65.6%

Table 19: Number of Years Crop Insurance

Purchased Over Last 5 years.

		Frequency	Percent
Valid	1	104	9.2%
	2	137	12.1%
	3	167	14.8%
	4	74	6.5%
	5	648	57.3%
	Total	1130	100.0%

Table 20: Purchased Private Crop Insurance for Hazard – IC 155 to 160.

	Fire	Freeze	Rain	Hail	Other	None
Vegetables	3	10	11	9	2	26
Citrus	27	168	64	119	71	250
Melons and Berries	1	7	5	7	2	29
Sod & Ornamentals	32	49	34	40	45	323
Other Fruit	4	11	13	12	15	48
Nuts	0	1	1	1	1	17
Misc.	3	7	8	3	6	26
Total - 1511	70	253	136	191	142	719
% Of Total	4.6%	16.7%	9.0%	12.6%	9.4%	47.6%

The survey respondents that purchased insurance were asked to rank five specific reasons that crop insurance was purchased (and give an ‘other’ if desired). The five reasons were; risk of crop loss high, expected water supply to be cut back, required to qualify for USDA program, expected lower crop prices, and bank or lender required. The ranking scale was: 1=most important, 2=next most important, etc. Table 21 provides the number that ranked each reason, the number that ranked that reason as most important (#1) and the average for all producers and the crop groups.

The most prevalent reason was the risk of crop loss with 648 indicating that this was indeed the most important reason. By comparison this exceeds the sum of the number “1” rankings for all the other reasons. The next closest specific reason (outside ‘other’) was that crop insurance was required for USDA programs as 133 stated this as the most important reason. The average for these two reasons, the risk of crop loss high and required for USDA program, were 1.18 and 2.16 respectively. With average rankings of 3.31, 3.22 and 3.41, the other three reasons, expected water supply cut, expected lower price and lender requirement, tended to not be as important.

Vegetable, citrus, sod and ornamentals, and misc. all ranked risk of crop loss as most important on average while melon and berries, other fruit and nuts ranked required for government programs as most important on average (excluding other). Expected low price was, on average, the least important for vegetables, melons and berries and sod and ornamentals. Lender requirement was least important for citrus and the misc. producers.

Table 21: Rank Reasons Crop Insurance Purchased – IC 161 to 166.

	All Respondents			Vegetables	Citrus	Melons & Berries	Sod & Ornamentals	Other Fruit	Nuts	Misc.
	N	Rank #1	Average	-----Average-----						
Risk of Crop Loss High	755	648	1.18	1.19	1.17	1.32	1.17	1.18	1.50	1.24
Water Supplies to be Cut	171	14	3.31	2.38	3.61	3.15	3.04	3.00	1.00	3.33
Required for USDA Programs	326	133	2.16	1.68	2.51	1.89	2.10	1.30	1.00	2.06
Expected Low Prices	169	18	3.22	2.57	3.04	3.56	3.85	2.00	-	3.30
Lender Required	181	34	3.41	2.20	3.86	3.55	3.13	1.40	-	3.42
Other	299	228	1.46	1.33	1.65	1.50	1.34	1.00	1.00	1.58

The survey respondents that did not purchase insurance were asked to rank seven specific reasons that crop insurance was indeed not purchased. The seven reasons were; not available for crop, source of risk not insurable, too much paperwork, never had lost enough to file claim, premium too costly, no knowledgeable agent, and do not understand insurance program. The ranking scale was: 1=most important, 2=next most important,

etc. Table 22 provides the number that ranked each reason, the number that ranked that reason as most important (#1) and the average for all producers and crop groups.

Table 22: Rank Reasons Crop Insurance NOT Purchased – IC 167 to 175.

	All Respondents			Vegetables	Citrus	Melons & Berries	Sod & Ornamentals	Other Fruit	Nuts	Misc.
	N	Rank #1	Average	Average						
Not Available	625	454	1.88	1.21	2.86	1.30	1.87	1.50	1.15	1.33
Source of Risk	318	102	2.77	2.57	2.79	2.18	2.92	2.22	3.14	2.67
Too much Paperwork	498	109	2.63	1.64	2.69	2.30	2.69	1.97	2.67	3.37
Never lost enough to file	711	411	1.85	1.50	1.80	1.96	1.92	1.73	1.89	2.04
Premiums too high	1032	590	1.81	1.62	1.74	2.17	1.83	1.75	2.11	2.69
No knowledgeable agents	231	33	3.84	3.00	3.92	3.56	4.04	3.21	3.00	3.57
Do not understand	714	356	2.16	1.64	2.07	2.00	2.31	2.03	1.92	2.92
Other	732	599	1.42	1.19	1.45	1.17	1.42	1.29	1.45	2.33

For the specifically stated reasons, 590 said that the number one reason crop insurance was not purchased was that premium cost is too high (599 ranked other as number one). The second and third most important reasons were that the insurance was not available for the crop and never lost enough to file respectively. For these two reasons 454 and 411 indicated that they were the most important. The averages for these three reasons were likewise very similar, 1.81, 1.88 and 1.85. Did not understand, too much paperwork and source of risk not insured with averages of 2.16, 2.63, and 2.77 were somewhat important reasons for not purchasing crop insurance. The least important reason seemed to be lack of a knowledgeable agent since this had the highest average ranking and numerous rankings in the less to least important range.

The lack of a knowledgeable agent had a 3.0 average or higher for all the individual specialty crop groups, consistent with the 3.84 average for all producers. Insurance not available for crop had the lowest average ranking for vegetables, melons and berries, other fruits and nuts. Premiums too high and not enough time to file had low average rankings (more important) for the citrus producers, while for sod and ornamental producers, premiums too high and not available had low average rankings.

The survey respondents were asked to rank seven specific ways that crop insurance might be improved (and give an 'other' if desired). The seven ways were; compensate or cover a higher level of production loss (more than 75%), cover loss of gross sales, cover loss of profit, guarantee cash production costs, guarantee cost of grove or vineyard establishment costs, guarantee crop inventory, and guarantee a higher coverage level. The ranking scale was: 1=most important, 2=next most important, etc. Table 23 provides the number that ranked each reason, the number that ranked that reason as most important (#1) and the average for all producers and crop groups.

Table 23: Rank Crop Insurance Needs – IC 176 to 183.

	All Respondents			Vegetables	Citrus	Melons and Berries	Sod & Ornamentals	Other Fruit	Nuts	Misc.
	N	Rank #1	Average	-----Average-----						
				-						
Cover Higher Loss	909	472	2.00	1.83	2.06	1.74	1.96	1.79	2.61	2.25
Cover Sales Loss	625	226	2.30	2.00	2.33	2.28	2.25	2.35	2.27	2.57
Cover Profit Loss	633	212	2.42	2.00	2.35	2.36	2.67	2.20	2.63	2.29
Guarantee Production Exp.	481	124	3.09	2.84	2.84	3.45	3.37	3.27	3.08	3.58
Guarantee Grove Establish	502	121	3.58	4.83	3.31	3.81	4.19	2.76	3.19	5.31
Guarantee Crop Inventory	902	471	2.27	2.33	2.50	2.46	1.96	2.46	2.19	2.49
Guarantee Higher Coverage	566	178	3.26	3.00	3.44	3.17	3.05	3.13	4.00	3.42
Other	993	888	1.31	1.56	1.35	1.32	1.28	1.10	1.08	1.60

Virtually an identical number felt that the most important way to improve crop insurance was either compensate for higher production loss (472) or guarantee crop inventory (471). Needs to cover higher production losses, with a larger number of respondents ranking it next in importance (2 and 3), had the lowest average, 2.00. In terms of average ranking needs to cover crop inventory, gross sales, and profit were similar, with 2.27, 2.30 and 2.42, respectively. The other three specific reasons, needs to guarantee cash production costs, needs to guarantee a higher production level, and needs to guarantee grove/vineyard establishment costs, had average rankings on the 3.09 to 3.58 range.

The rankings for individual crop groups were similar to the rankings for all producers (excluding other). For all, except nuts, the lowest average ranking was to cover higher production loss with averages ranging from 1.74 for melon and berries producers to 2.06 for citrus and 2.25 for misc. compared to the 2.00 for all producers. As would be expected those producers that do not tend to produce with an orchard, grove or vineyard ranked guarantee of establishment costs of an orchard, grove or vineyard as least important. Citrus producers and nut producers ranked guarantee a higher coverage level as least important.

Importance of Risk Management

The survey asked if risk management has become more important to their business in the last five years. Those that responded were split with 1583 (49.8%) saying that yes, risk management has become more important, and 1593 (50.1%) saying no, it was not more important (Table 24). For individual crop groups the vegetable (55.2%), melons and berries (59.2%), and sod and ornamentals (51.6%) tended to feel that risk management was more important. The misc. producers with 70.2% had the highest percentage that felt that risk management was more important. On the other hand, for

citrus, other fruit, and nuts, the majority of respondents indicate that risk management was not more important then it was five years ago.

Table 24: Importance of Risk Management – IC 184 & 185.

	More Important	Not More Important	More Important	Not More Important
	N	N	%	%
Vegetables	69	56	55.2	44.8
Citrus	630	692	47.7	52.3
Melons and Berries	77	53	59.2	40.8
Sod & Ornamentals	617	579	51.6	48.4
Other Fruit	83	131	38.8	61.2
Nuts	34	51	40.0	60.0
Misc.	73	31	70.2	29.8
Total	1583	1593	49.8%	50.2

Familiarity with Crop Insurance

The survey also asked producers if they were now more familiar with crop insurance than they had been five years ago. Of those that responded well over half, 1810 or 56.3 percent, indicated that no, they were not more familiar with crop insurance (Table 25). About 44 percent (1407) indicated that they were more familiar with crop insurance. The vegetable, citrus, melons and berries, and sod and ornamentals, with a range from 51.8 to 58.8 percent that were not more familiar with crop insurance, were slightly more than 50 percent. Other fruit and nuts had 68.5 percent and 74.7 percent not more familiar with crop insurance. Only the misc. group had more that 50 percent indicate that they were more familiar.

Table 25: Familiarity with Crop Insurance – IC 186 & 187.

	More Familiar	Not More Familiar	More Familiar	Not More Familiar
	N	N	%	%
Vegetables	58	71	45.0	55.0
Citrus	550	785	41.2	58.8
Melons and Berries	64	72	47.1	52.9
Sod & Ornamentals	586	629	48.2	51.8
Other Fruit	67	146	31.5	68.5
Nuts	21	62	25.3	74.7
Misc.	61	45	57.5	42.5
Total	1407	1810	43.7	56.3

Financial Characteristics of Specialty Crop Producers.

The respondents were asked to give the percentage of household total income that came from non-farm activities in 2001. Of the 3091 that responded, 804 (26%) reported that 0 to 10 percent of household income was from non-farm activities. Of these 804 there were 638 (20%) that reported 0 or 1% of their income was from non-farm activities. Over 1000 (1042) reported that 91-100% of their household income came from non-farm activities. This represented 33.7 percent of those that responded. Of these one-third, 756 (24.5%) indicated that 99-100% of their household income was from non-farm activities. The average value for the percentage of household total income that came from non-farm activities in 2001 was 59.4 percent (Table 26). The sod and ornamental and misc. producers had average percentages of total income from nonfarm activities of 42.5 percent and 44.5 percent, respectively. Vegetable producers and melon and berries had average percentages of total income from nonfarm activities of 52.3 percent and 62.8 percent, respectively. Citrus, other fruit and nuts all had average percentages of total income from nonfarm activities in excess of 72%.

The survey also asked the respondents to give their gross sales in 2001 and the current value of their operation's assets and debts, in dollars. The average values for those that responded were \$537,578 in gross sales, \$819,584 in total assets and \$142,554 in debts (Table 26). The maximum gross sales and asset values were both \$100,000,000, while the maximum reported debt level was \$12,000,000. Citrus producers with an average of \$803,692 had the greatest average gross sales, while vegetables and sod and ornamentals had average gross sales of \$447,401 and \$465,839, respectively. Other fruit and nuts had the smallest average gross sales of \$39,305 and \$8,664, respectively.

Of the 2651 that responded to the gross sales question there were 313 (11.8%) that indicated that they had gross sales of \$500,000 or more, and of these 180 (6.8%) respondents had gross sales of \$1,000,000 or more. There were 173 (6.5%) that had sales in the \$250,000 to \$499,999 range meaning that 486 (18.3%) had sales of \$250,000 or more. At the other extreme 958 (36.2%) had gross sales of less than \$10,000. Of these 283 had gross sales in the \$0 to \$999 range (124 reported having no sales in 2001). Separating the two extremes were 1207 respondents (46.6%) that reported gross sales ranging from \$10,000 to \$249,999.

Table 26: Financial Descriptors – IC 188 to 192.

		N	Maximum	Average	Std. Deviation
Vegetables	% Income Off Farm	124	100	52.3	40
	Gross Sales	101	6200000	447400.8	1186868
	Value of Assets	56	23000000	1217536.0	3295592
	Amount of Debt	49	3557267	323289.9	833677
Citrus	% Income Off Farm	1276	100	72.3	35
	Gross Sales	1048	100000000	803692.0	8200132
	Value of Assets	538	100000000	1008472.5	4971658
	Amount of Debt	561	12000000	140708.3	795668
Melons and Berries	% Income Off Farm	134	100	62.8	36
	Gross Sales	115	2078332	137189.6	349336
	Value of Assets	65	3000000	332648.3	544106
	Amount of Debt	63	800000	67622.8	148093
Sod & Ornamentals	% Income Off Farm	1162	100	42.5	41
	Gross Sales	1045	22000000	465838.7	1281322
	Value of Assets	548	28000000	757984.2	2045309
	Amount of Debt	526	10000000	156000.2	636895
Other Fruit	% Income Off Farm	203	100	74.4	33
	Gross Sales	169	1000000	39305.5	123546
	Value of Assets	90	50000000	805640.6	5253698
	Amount of Debt	92	280000	22074.5	58992
Nuts	% Income Off Farm	87	100	82.0	32
	Gross Sales	71	80000	8664.1	17038
	Value of Assets	42	1000000	194438.1	222081
	Amount of Debt	40	500000	41530.0	94252
Misc.	% Income Off Farm	105	100	44.5	41
	Gross Sales	102	5200000	272821.8	883071
	Value of Assets	77	8230000	417124.8	1083404
	Amount of Debt	73	8230000	210392.3	986385
ALL	% Income Off Farm	3091	100	59.4	40
	Gross Sales	2651	100000000	537578.4	5231275
	Value of Assets	1416	100000000	819583.6	3645026
	Amount of Debt	1404	12000000	142553.8	694677

The distribution of asset values was similar to that of gross sales. Of the 1416 that responded to the asset value question there were 238 (16.8%) that indicated that the approximate current value of farms assets was \$1,000,000 or more, and about 25% of those that responded had asset values in excess of \$500,000. At the other extreme 428 (35.5%) had asset values of below \$100,000. Of these, 278 reported asset values in the \$0 to \$49,999 range, with 72 reporting asset values of \$5,000 or less. The average value of assets for all producers was \$819,584. Vegetable and citrus producers with average asset values of \$1,217,000 and 1,008,000 respectively were above the average for all producers. Sod and ornamentals and other fruit with average assets values of \$758,000 and \$806,000 were just below the average. Nut producers had the smallest average asset values.

There were 1404 respondents that reported their level of debt. A total of 1024 (72.9%) had debt levels below \$50,000, 849 (60.4%) had debt levels of \$4,999 or less, and 58.4 percent or 820 indicated that there was no debt. Misc. producers with an average debt level of \$210,000, sod and ornamental producers with average debt of \$156,000 and vegetable producers with an average debt level of \$323,000 exceeded the \$143,000 of all producers.

Summary and Implications

The International Agricultural Trade and Policy Center, in cooperation with the Federal Crop Insurance Corporation (Risk Management Agency), surveyed Florida specialty crop producers to examine the unique needs of these producers for the purpose of providing data for developing new risk management tools and instruments, particularly crop insurance. Florida Agricultural Statistics Service mailed out 16,889 surveys to Florida specialty crop producers. There were 9,256 surveys returned of which 3,409 or 20.2 percent were useable. Fifty-four percent of those responding to the survey operate in Central Florida, with Hillsborough, Polk and Lake counties having combined 25 percent of those responding. Thirty-seven percent are in south Florida where Dade County with 11 percent had the most for an individual county. Citrus producers represent over 41 percent of those responding.

The results from the survey support the fact that the specialty crop industry is an extremely diverse industry in several ways. There were seventy-one different crops represented in the survey. The two predominant producers were orange producers, 37.6%, and nurseries with 27%. Thus, these two specialty crop types made up about two-thirds of the respondents. At the other extreme there were 39 different crops that were represented with five or less farms. Specialty crop producers are also diverse from a size perspective with numerous operations (253) being an acre in size while the largest operation was 189,000 acres (and over 1000 respondents indicated production acreage of five acres or less). The average size of operation was 300 acres. The importance of farming income as a component of household income was also very wide-ranging. Of the respondents, 804 reported that 0 to 10 percent of household income was from non-farm activities, 1042 reported that 91 to 100 percent of their household income came

from non-farm activities, and 756 indicated that 99 to 100 percent of their household income was from non-farm activities.

The implications of this diversity from a crop insurance and risk management perspective are two-fold. First, such diversity naturally means that there will be parallel diverse crop insurance needs but also potential problems with risk pooling. Secondly, the relative importance of off-farm income suggests that for many producers the primary risk management tool is indeed off-farm employment, which may result in little motivation for the use of other risk management tools.

Respondents to the survey were asked to indicate their largest yield, price and profit fluctuations over the last five years (Tables 10, 11 and 12). An index for variability was constructed for each by ranking the variability from 1 (fluctuations less than 10 percent) to 5 (declines of 75 to 100 percent) and then measuring the weighted average yield variability for each commodity group and for all growers (Table 27). The results indicate that the index value for yield variability across all growers of all crops was 2.01, for price variability was 1.89 and for profit variability was 2.19. This indicates that the average variability was on the low end of the 10 – 25 percent range for all producers. The commodity group with the lowest variability was the sod and ornamentals crop group with all index values below 1.79. Nuts had the highest levels on variability with values above 2.60 for the three items of fluctuation. Citrus was the only specialty crop group that had yield variability as its lowest fluctuation while at the same time having profit as the largest fluctuation. This is consistent with the citrus producers indicating low prices due to high imports as the predominant cause of low profit.

The implications being that a revenue insurance product may better address the needs of citrus producers while yield based insurance would address the needs of other specialty crop producers.

Table 27: Index Values For The
Largest Yield, Price and Profit
Fluctuation Over Last Five Years

	Yield	Price	Profit
	Index Value		
Vegetables	2.13	1.88	1.94
Citrus	2.10	2.29	2.62
Melons & Berries	2.47	1.78	2.19
Sod & Ornamentals	1.73	1.44	1.78
Other Fruit	2.12	1.71	1.91
Nuts	3.11	2.61	2.78
Misc.	2.34	2.18	2.29
Total	2.01	1.89	2.19

The majority of respondents, 2218 (65.6%), indicated that they had not purchased crop insurance during the last five years, while 1162 indicated they had purchased crop

insurance over the last five years. In another question 1407 producers ranked crop insurance highest in terms of importance as a risk management tool; of this 1407 producers 1149 said crop insurance was available, but only 685 indicated its use. Though a significant majority (2 out of very 3) of both citrus and sod and ornamental producers said they had not purchased insurance over the last five years the sod and ornamental producers were somewhat more prone to purchase crop insurance compared to citrus producers. Even though crop insurance premiums are highly subsidized, high premium costs was ranked as the most important reason producers were not insured. Not available and did not understand were third and fourth, behind never lost enough.

There are two implications that could be drawn from this information. First, for some types of specialty crops premium costs may indeed represent a significant enough additional cost to production to warrant not being purchased, particularly for an operation that is not profitable because of low product prices relative to cost of production. The second important implication would be the need to provide more information and education to producers on the value of crop insurance as a key risk management tool.

Appendix 1

Code	Crop Name	Code	Crop Name	Code	Crop Name
Vegetables (n=117)		Sod & Ornamentals (n=1133)		Citrus (n=1134)	
294	Pepper, Sweet	933	Grass Seed	480	Grapefruit
296	Vegetables, Cuban	938	Sod Farm	484	Oranges
335	Peas, Iron Clay	939	Nurseries	485	Oranges, Naval
360	Potatoes	942	Christmas trees	486	Oranges, Valencia
380	Sweet potatoes	964	Foliage	493	Limes
500	Vegetables, All	965	Flowers, Cut	494	Tangerines
518	Beans, Snap	968	Ferns	496	Citrus, Other
521	Cabbage			497	Tangelos
528	Collards	Other Fruit (n=210)		Melons & Berries (n=115)	
532	Greens	400	Fruits and Nuts	426	Blackberries
534	Eggplant	405	Fruit, Commercial	427	Blueberries
539	Cucumbers	423	Avocados	465	Strawberries
542	Lettuce	440	Grapes	524	Cantaloupes
547	Okra	450	Peaches	566	Watermelons
551	Peas, Green	454	Persimmons		
552	Onions, Green	455	Pears	Misc. (n=108)	
554	Peppers, Green	479	Mangoes	150	Aquaculture
558	Squash	945	Bananas	291	Mushrooms
559	Peas, Field	951	Guava	376	Sugarcane
560	Corn, Sweet	952	Passion Fruit	660	Bees, Honey
563	Tomatoes	953	Kumquats	957	Herbs
570	Mustard Greens	955	Papayas	958	Watercress
581	Peppers, Hot			690	Livestock, Exotic
940	Greenhouse	Nuts (n=81)		698	Ducks
599	Zucchini	162	Nuts, Other		
516	Snap Beans, Fresh	416	Pecans		
		436	Chestnuts		
		415	Macadamia Nuts		