2022 New Jersey Tree Fruit Orchard Production Report and Expansion of the RMA Crop Insurance Program

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New Jersey continues to be a major producer of tree fruit crops as measured in acres of production and dollar value. Table 1.

Table 1: NJ Tree Fruit Crop Acreage- Source 2017 USDA Ag Census Tables 32, 37 and Personal Observation- Megan Muehlbauer, Win Cowgill.

Crop	Acres	Value in $US
Apples	2,336 Acres	96.8 Million
Peaches	3,918Acres	36.6 Million (peach and nectarine)
Pears	251 Acres	4.7 Million (European and Asian)
Cherries -sweet	525 Acres	14.7 Million
Cherries- Tart	65 Acres	1.4 Million
Apricots	45 Acres	0.8 Million
Plums	535 Acres	7.5 Million
	7,971 Acres	**162.5 Million US dollars**

Purpose of this report

The Risk Management Agency (RMA)of the USDA is responsible for implementing agricultural crop insurance programs for all farmers in the US. Fruit Growers depend on their programs and insurance to mitigate risk. Kurt Alstead, Grower in Chester, NJ as a fruit grower himself, noticed there were some major deficiences in the progarm for NJ Fruit Growers, specifically what crops are covered with policies in each county. Kurt prompted us to gather additional data to add a number of fruit crops to RMA county policies and programs. In 2022 we reviewed extensive data and did extensive research to compile the following report.

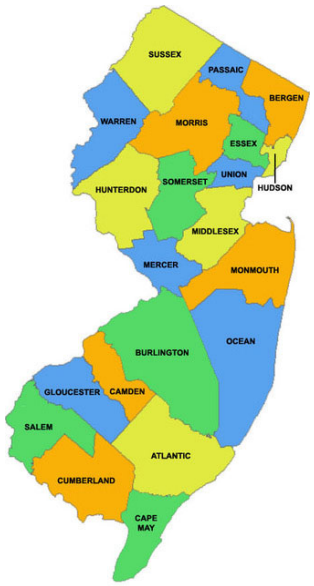
Background of Tree Fruit Production in NJ and its Strides Forward

New Jersey is the Garden State. It has a diverse climate and soils which are well suited to tree fruit production. Tree and small fruit crops are grown commercially in all but a few counties, Figure 1.

Our USDA NC140 research project has been instrumental in moving the NJ tree fruit industry to increase high density production, significantly improving yields per acre and enhancing fruit quality. This is measured by the continued increase in acres of apples and significant increases in yield per acre and dollar value

The NC140 program, with 37 years of multistate research has enabled the development and adoption of more efficient rootstocks for tree fruit crops. http://nc140.org/

Figure 1. NJ Map



NJ Tree-fruit growers have adopted embraced these high density orchard management strategies to remain competitive, to meet consumer demand for high quality fruit and to enhance production efficiency. The root system, or rootstock, is a key orchard component to address these issues. This is what has driven the adoption and planting of high density apples, pears and cherries in New Jersey. High density peach orchards are on the horizon.
https://www.nimss.org/projects/view/mrp/outline/18323

Apples- apple acreage continues to expand in Northern New Jersey. In the 2012 census there were 1961 bearing and non-bearing acres which grew to 2,326 acres as reported in the 2017 census.

Since 1992 over 99% of the new apple trees planted in NJ have been on size controlling (dwarfing) rootstocks (according to the NJ fruit tree surveys conducted by USDA-NASS, surveys of apple nurseries and personal observation by Win Cowgill.

For the past 20 years apple growers have moved to high density apple production at 1200 trees per acre trained to our tall spindle apple production system. In the past 7 years at least 7 new growers have established 100 new acres of apples in Northern NJ bringing the total over 2430 acres.

Note that apple yields are significantly higher at 1000 -1500 bushels per acre with this system. For out data we used 1000 bu/acre to calculate the value of the apple crop. The old NJ average with traditional plantings was 340 BU/A.

Data- The best data we could locate, in addition to our our personal observations, was the 2012 and 2017 Census of Agriculture from NASS. We used the county data but also compared this data to TABLE 31 Specified Fruits and Nuts by acres from 2017 census.

The majority of North Jersey orchards market fruit at retail as the numbers reflect in our tables. We would guestimate this percentage at 90-95 of total fruit produced. The direct market trend began forty years ago in North Jersey. In addition, most of our north Jersey orchardists have diversified their direct market retail sales. That is, they own and operate multiple roadside markets, one or two PYO locations, also retail at 3-6 farmers markets. For this reason we used retail data calculations for North Jersey crop value numbers.

For our data we used wholesale numbers to calculate the value of the crops for south Jersey counties and retail numbers for northern New Jersey counties.

We calculated 20% loss due to PYO waste and grade outs. This is reasonable for north jersey and other PYO/retail operations, it may only be 10% for pure wholesale operations. We used 20% across the board to calculate value.

See tables 2-5 for detailed numbers.

We submitted the report to RMA for their consideration of increasing NJ fruit crop insurance acreage.

Conclusions

NJ Tree Fruit Production is Increasing, more farms, new acreage, higher yields and significantly higher value of the crops to our orchardists.

As a result of the new and updated data**, RMA approved** several program expansion requests for New Jersey farmers for the 2023 crop year.

2023 crop year program expansions:

- **Apple crop insurance** has been expanded to **Morris, Ocean, Somerset and Sussex** counties.
- **Grape crop insurance** has been expanded to **Ocean, Salem, Sussex and Warren** counties.
- **Peach crop insurance** has been expanded to **Mercer, Monmouth, Ocean and Sussex** counties.

Table 2. NJ Tree Fruit Orchard Report April 2022 (apple).

	A	B	C	D	E	F	G
1	**Data sourced from 2017 Census of Agriculture from NASS, county data, tables 32, 37, and personal observation**						
2	**and knowledge by Win Cowgill and Megan Muehlbauer**						
3	**County**	**Number of Farms**	**Total Acreage**	**Total Yield (Bu)**	**Value of Crop ($)**	**Value of Crop ($)**	
4		**Tall Spindle production System**			**Retail Value North Jerse**	**minus 20% loss***	
5				**Avg yield =**	**$2 per pound**		
6	**APPLES**	**in North Jersey**	**In North Jersey**	**1000 bu/A**	1 bu= 42 lb (Retail)		
7	Bergen	3	30	3000	252000	201600	
8	Essex	1	No Data				
9	Mercer	21	25	25000	2100000	1680000	
10	Middlesex	12	42	42000	3528000	2822400	
11	Morris	37	261	261000	21924000	17539200	
12	Passaic	4	No Data				
13	Somerset	36	33	33000	2772000	2217600	
14	Sussex	73	265	265000	22260000	17808000	
15	Warren	57	251	251000	21084000	16867200	
16	Hunterdon	104	325	325000	27300000	21840000	
17							
18	**North Counties**	**348**	**1232**	**1205000**	**101220000**	**80976000**	
19							
20		**Older wider tree spacing in South Jers**		**Average yield 400 BU,**	**$30 -40 bushel (wholesale)**		
21	Atlantic	20	53	21200	848000	678400	
22	Burlington	20	109	43600	1744000	1395200	
23	Camden	3	No Data				
24	Cape May	5	No Data				
25	Cumberland	8	352	140800	5632000	4505600	
26	Gloucester	34	271	108400	4336000	3468800	
27	Ocean	10	18	7200	288000	230400	
28	Salem	13	81	32400	1296000	1036800	
29	Monmouth	35	210	84000	3360000	2688000	
31	**South Counties**	**148**	**1094**	**437600**	**17504000**	**14003200**	
32	**APPLES TOTAL**	**496**	**2326**	**1642600**	**118724000**	**94979200**	

Table 3. NJ Tree Fruit Orchard Report April 2022 (peach).

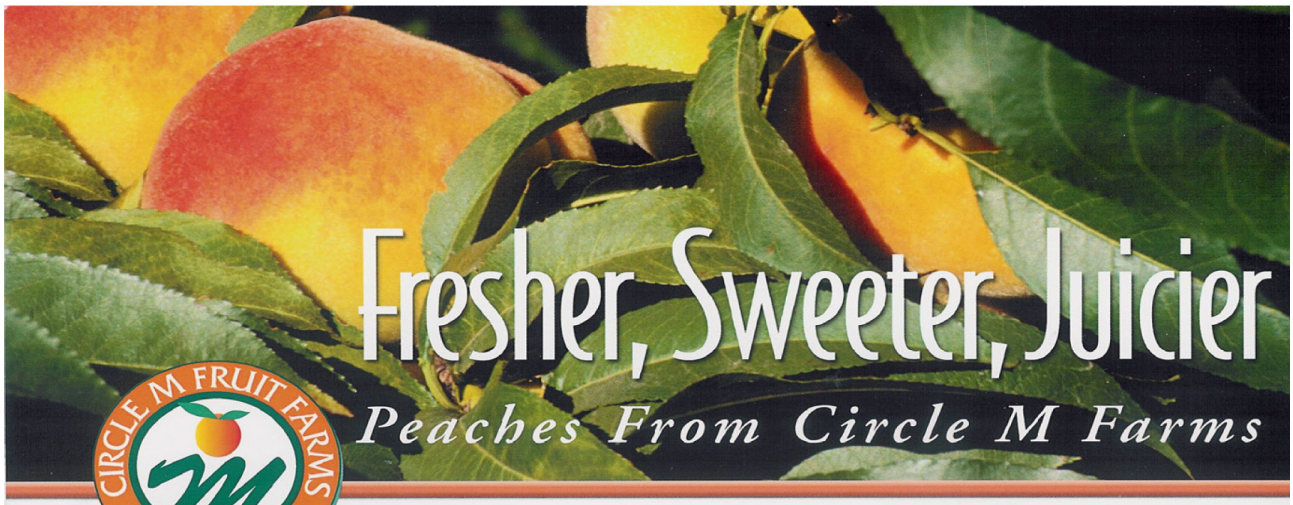
	A	B	C	D	E	F	G
33	**PEACHES & NECTARINES** (see note below)**						
34	County	Number of Farms	Total Acreage of t		Value of Crop ($)	Value of Crop ($)	
35				4 Tons per acre = 800(	$2.00 lb retail	minus 20% loss*	
36				25-lb loose-fill lugs (1/2 bu)			
37							
38	Bergen	9	18	2880	288000	230400	
39	Essex	3	No Data				
40	Mercer	24	43	6880	688000	550400	
41	Middlesex	19	30	4800	480000	384000	
42	Morris	39	122	19520	1952000	1561600	
43	Passaic	12	2	320	32000	25600	
44	Somerset	42	29	4640	464000	371200	
45	Sussex	70	85	13600	1360000	1088000	
46	Warren	102	147	23520	2352000	1881600	
47	Hunterdon	46	175	28000	2800000	2240000	
48	**North Counties**	**366**	**651**	**104160**	**10416000**	**8332800**	
49				4 Tons per acre-8000 l	$1/pound wholesale		
50				25-lb loose-fill lugs (1	or $25/box		
51							
52	Atlantic	8	D				
53	Burlington	17	54	8640	432000	345600	
54	Camden	5	D				
55	Cape May	4	D				
56	Cumberland	12	1104	176640	8832000	7065600	
57	Gloucester	25	1011	161760	8088000	6470400	
58	Ocean	9	15	2400	120000	96000	
59	Salem	16	953	152480	7624000	6099200	
60	Monmouth	19	130	20800	1040000	832000	
62	**South Counties**	**115**	**3267**	**522720**	**26136000**	**20908800**	
63							
64	**PEACH/ NEC *' Totals**	**481**	**3,918**		36.552 million		

Table 4. NJ Tree Fruit Orchard Report April 2022 (pear).

	A	B	C	D	E	F	G
65	PEARS***						
66	County	Number of Farms	Total Acreage of t	Total Yield (lbs)	Value of Crop ($)	Value of Crop ($)	
67		Asain pears are packed in individual so		5 Tons/A= 10,000 lbs	$2.00/pound retail	minus 20% loss*	
68		European pears in tray packs or bulk =		packed in 25 lb 2 layer carton			
69	Bergen	0	0				
70	Essex	1	No Data				
71	Mercer	9	120	1200000	2400000	1920000	
72	Middlesex	3	D				
73	Morris	12	7	70000	140000	112000	
74	Passaic	6	D				
75	Somerset	24	6	60000	120000	96000	
76	Sussex	22	15	150000	300000	240000	
77	Warren	24	16	160000	320000	256000	
78	Hunterdon	45	56	560000	1120000	896000	
79	**North Counties**	**146**	**220**	**2200000**	**4400000**	**3520000**	
80				5 Tons/A= 10,000 lbs	$1.00/pound wholesale		
81				packed in 25 lb 2 layer carton			
82	Atlantic	16	D				
83	Burlington	9	1	10000	10000	8000	
84	Camden	0	0				
85	Cape May	4	1	10000	10000	8000	
86	Cumberland	1	D				
87	Gloucester	4	21	210000	210000	168000	
88	Ocean	8	2	20000	20000	16000	
89	Salem	6	4	40000	40000	32000	
90	Monmouth	11	2	20000	20000	16000	
91							
92	**South Counties**	**59**	**31**	**310000**	**310000**	**248000**	
93							
94	**PEARS TOTAL**	**205**	**251**	**2510000**	**4710000**	**3768000**	
95							
96							

Table 5. NJ Tree Fruit Orchard Report April 2022 - FOOTNOTES.

	A	B	C	D	E	F	G
97	**Footnotes**						
98	*The 20% reduction accounts for crop waste, and grade outs.						
99	**Nectarines, clingstone and non-clingstone peach						
100	***Bartlett. Other european and Asian pears combined						
101	North Jersey Counties used Retail Price Data to calculate crop value						
102	South Jersey Counties used wholesale Price Data to calculate crop values						
103							
104	**Additional NJ Tree Fruit Crop Data-**						
105	No county data was available so we started with state acreage data, detemined average yields and then used retail pricing						
106		to determine crop value of these speciality crops					
107	Sweet Cherries 4000 lbs/A x 525 Acres x $7= 14,700,000						
108	Tart Cherries 3176 lbs /Acre x 65 A= $7.00=1,445,080						
109	Apricots x 45 acres x 9,200 lbs= 414,000 lbs x $4.00 lb=1.66 million crop only 2.5 years out of 5- avg 0.8 mill						
110	Apricots x 45 acres x 9,200 lbs= 414,000 lbs x $4.00 lb=1.66 million crop only 2.5 years out of 5- avg 0.8 mill						
111	Plums = 3500 lbs/Acre x 535 acres = 1872500 x 4.00= 7.5 Mil						
112							
113	**Summary Table of total NJ Tree Fruit Acres andCrop Value**						
114	**Crop**	**Acres**	**Value in $US**				
115	Apples	2,336	96.8 Million				
116	Peaches	3981	36.6 Million (peach and nectarine)				
117	Pears	251	4.7 Million (European and Asian)				
118	Cherries -	525	14.7 Million				
119	Cherries-	65	1.4 Million				
120	Apricots	45	0.8 Million				
121	Plums	535	7.5 Million				
122	**Totals**	**7,738**	**162.5 Million US dollars**				



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