

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

Win Cowgill

*Professor Emeritus Rutgers University*

*Win Enterprises International, LLC*

Megan Muehlbauer

*New Jersey Agricultural Experiment Station, Rutgers University*

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

## 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.

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

| <u>Crop</u>     | <u>Acres</u>       | <u>Value in \$US</u>               |
|-----------------|--------------------|------------------------------------|
| Apples          | 2,336 Acres        | 96.8 Million                       |
| Peaches         | 3,918 Acres        | 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                        |
|                 | <b>7,971 Acres</b> | <b>162.5 Million US dollars</b>    |

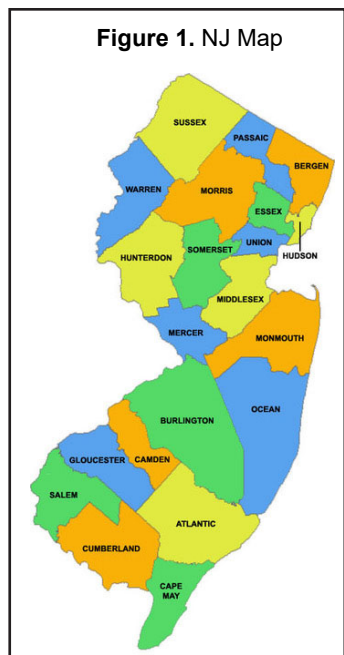
Our USDA [NC140 research project](#) has been instrumental in moving the NJ tree fruit industry to increase high density production, significantly improving yields per acre and enhancing

## 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 deficiencies in the program 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.

ing 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/>



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/out-line/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 our 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 guesstimate 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  | <b>Data sourced from 2017 Census of Agriculture from NASS, county data, tables 32, 37, and personal observation</b> |   |                        |                         |                                  |                           |   |  |
| 2  | <b>and knowledge by Win Cowgill and Megan Muchlbauer</b>  |   |                        |                         |                                  |                           |   |  |
| 3  | <b>County</b>   | <b>Number of Farms</b>  | <b>Total Acreage</b>   | <b>Total Yield (Bu)</b> | <b>Value of Crop (\$)</b>        | <b>Value of Crop (\$)</b> |   |  |
| 4  |   | <b>Tall Spindle production System</b>   |                        |                         | <b>Retail Value North Jersey</b> | <b>minus 20% loss*</b>    |   |  |
| 5  |   |   |                        | <b>Avg yield =</b>      | <b>\$2 per pound</b>             |                           |   |  |
| 6  | <b>APPLES</b>   | <b>in North Jersey</b>  | <b>In North Jersey</b> | <b>1000 bu/A</b>        | <b>1 bu= 42 lb (Retail)</b>      |                           |   |  |
| 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 | <b>North Counties:</b>  | <b>348</b>  | <b>1232</b>            | <b>1205000</b>          | <b>101220000</b>                 | <b>80976000</b>           |   |  |
| 19 |   |   |                        |                         |                                  |                           |   |  |
| 20 |   | <b>Older wider tree spacing in South Jers Average yield 400 BU, \$30 -40 bushel (wholesale)</b> |                        |                         |                                  |                           |   |  |
| 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                   |   |  |
| 30 |   |   |                        |                         |                                  |                           |   |  |
| 31 | <b>South Counties:</b>  | <b>148</b>  | <b>1094</b>            | <b>437600</b>           | <b>17504000</b>                  | <b>14003200</b>           |   |  |
| 32 | <b>APPLES TOTAL</b>   | <b>496</b>  | <b>2326</b>            | <b>1642600</b>          | <b>118724000</b>                 | <b>94979200</b>           |   |  |

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

|    | A  | B                      | C                         | D                                    | E                   | F                         | G |
|----|--|------------------------|---------------------------|--------------------------------------|---------------------|---------------------------|---|
| 33 | <b>PEACHES &amp; NECTARINES** (see note below)</b> |                        |                           |                                      |                     |                           |   |
| 34 | <b>County</b>                                      | <b>Number of Farms</b> | <b>Total Acreage of t</b> | <b>Value of Crop (\$)</b>            |                     | <b>Value of Crop (\$)</b> |   |
| 35 |  |                        |                           | 4 Tons per acre = 8000               | \$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 | <b>North Counties:</b>                             | <b>366</b>             | <b>651</b>                | <b>104160</b>                        | <b>10416000</b>     | <b>8332800</b>            |   |
| 49 |  |                        |                           | 4 Tons per acre-8000                 | \$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                    |   |
| 61 |  |                        |                           |                                      |                     |                           |   |
| 62 | <b>South Counties:</b>                             | <b>115</b>             | <b>3267</b>               | <b>522720</b>                        | <b>26136000</b>     | <b>20908800</b>           |   |
| 63 |  |                        |                           |                                      |                     |                           |   |
| 64 | <b>PEACH/ NEC * Totals</b>                         | <b>481</b>             | <b>3,918</b>              | <b>36.552 million</b>                |                     |                           |   |



**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 sd |                    | 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 | <b>North Counties:</b> | <b>146</b>                              | <b>220</b>         | <b>2200000</b>                 | <b>4400000</b>         | <b>3520000</b>     |   |
| 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 | <b>South Counties:</b> | <b>59</b>                               | <b>31</b>          | <b>310000</b>                  | <b>310000</b>          | <b>248000</b>      |   |
| 93 |                        |   |                    |                                |                        |                    |   |
| 94 | <b>PEARS TOTAL</b>     | <b>205</b>                              | <b>251</b>         | <b>2510000</b>                 | <b>4710000</b>         | <b>3768000</b>     |   |
| 95 |                        |   |                    |                                |                        |                    |   |
| 96 |                        |   |                    |                                |                        |                    |   |

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

|     | A   | B            | C                                  | D | E | F | G |
|-----|---|--------------|------------------------------------|---|---|---|---|
| 97  | <b>Footnotes</b>  |              |                                    |   |   |   |   |
| 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 | <b>Additional NJ Tree Fruit Crop Data-</b>  |              |                                    |   |   |   |   |
| 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 | <b>Summary Table of total NJ Tree Fruit Acres andCrop Value</b>   |              |                                    |   |   |   |   |
| 114 | <b>Crop</b>   | <b>Acres</b> | <b>Value in \$US</b>               |   |   |   |   |
| 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 | <b>Totals</b>   | <b>7,738</b> | <b>162.5 Million US dollars</b>    |   |   |   |   |



# Fresher, Sweeter, Juicier

## *Peaches From Circle M Farms*



*Exceptional quality and flavor at attractive prices  
Brought to you from the 4th generation family  
farm of Santo John Maccherone*



- PLU Stickers Available Upon Request
- Low in Calories
- Nutritious and Delicious
- Exceptional Flavor



### SANTO SAYS...

"Peaches from Circle M Farms just plain taste better. Their size and color are what your customers want, and their flavor is the icing on the cake.

That's because our orchards are tended with care and attention, and their fruit is left on the tree to ripen naturally until they reach their optimum sweetness. Then they are picked by hand, taste-tested by me to ensure quality, and packed gently into

25 lb. volume boxes for shipping. Single layer cartons are available upon request.

Circle M's 30 varieties of peaches and nectarines are known for their sweetness and their luscious color. They look as good as they taste.

Discriminating customers appreciate our white flesh peaches because of their lower acid levels and supremely sweet taste.

Add it all up: Peaches from Circle M Farms are fresher and sweeter, picked by hand when their time has come, and packed with care for a longer shelf life.

Yellow, white and donut peaches and yellow and white nectarines are available early July to late September."



**Call us at 856 856 207-4542 or  
609 381-6465. Fax your order to  
856 878-0404**



Available in 16 oz. and 64 oz. sizes

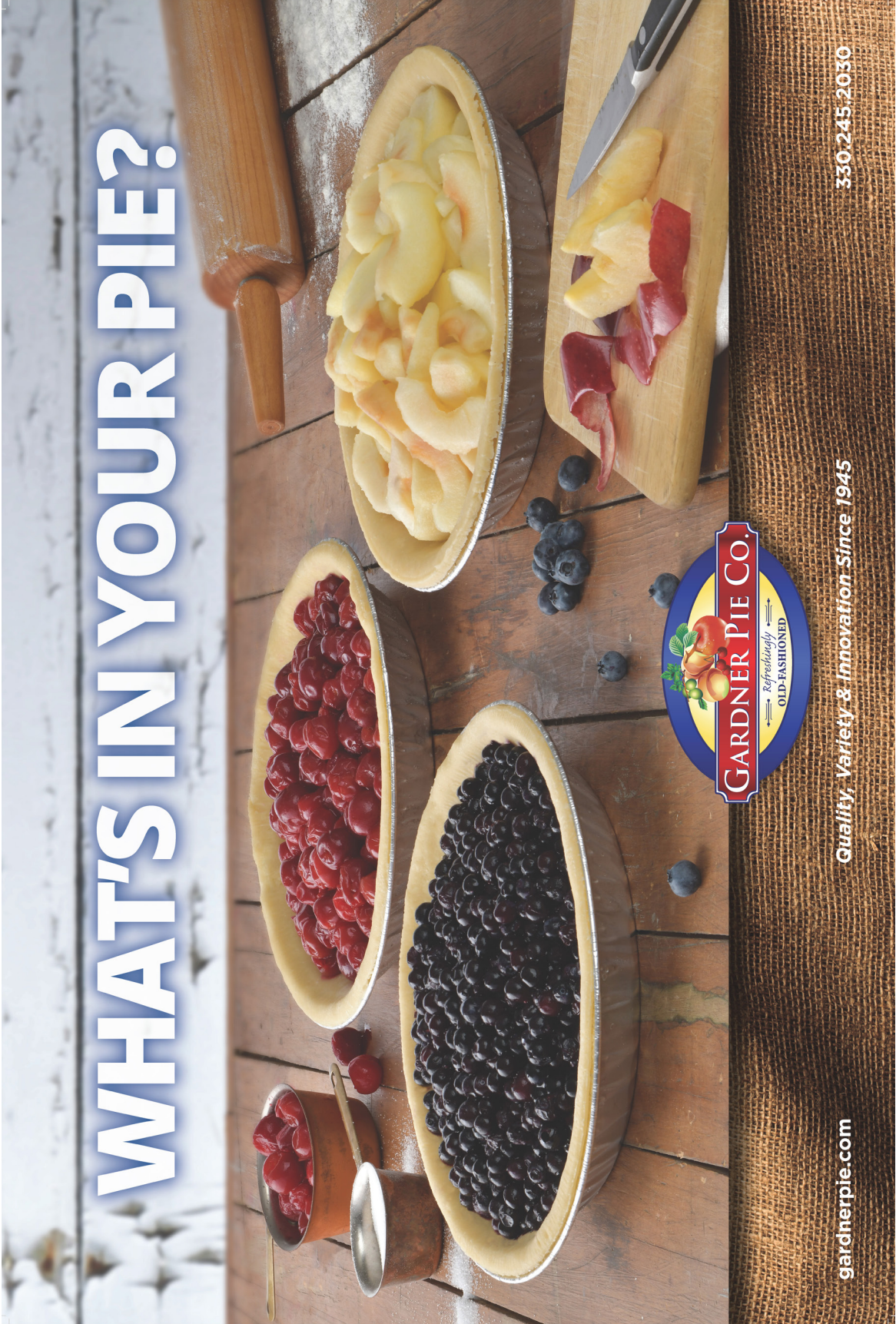
**Made from fresh New Jersey Peaches  
"Peach Cider Drink, Peach Salsa, Peach  
Preserves"**

**Santo John Maccherone  
[circlemfarmsllc@gmail.com](mailto:circlemfarmsllc@gmail.com)**

**Circle M Farms  
88 Sandy Ridge Road  
Salem, N.J. 08079**



# WHAT'S IN YOUR PIE?



Quality, Variety & Innovation Since 1945

330.245.2030

[gardnerpie.com](http://gardnerpie.com)