STATE OF NEW JERSEY

FIFTY-THIRD

REPORT OF

THE STATE FARMLAND EVALUATION

COMMITTEE

PRODUCTIVITY VALUES

FOR

2018 TAX YEAR

FARMLAND ASSESSMENT ACT OF 1964

CHAPTER 48, LAWS OF 1964

TRENTON, NEW JERSEY   **OCTOBER, 2017**

ACKNOWLEDGMENTS

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REPORT OF THE STATE FARMLAND EVALUATION COMMITTEE

The Farmland Assessment Act of 1964 (Chapter 48, Laws of 1964) created a State Farmland Evaluation Advisory Committee. Under the Act, the Director of the Division of Taxation, the Dean of School of Environmental and Biological Sciences, and the Secretary of Agriculture, are designated as members. The Laws of 2013 Chapter 43 changed the name of the Committee to the State Farmland Evaluation Committee and expanded membership to include a municipal tax assessor, county assessor or county tax administrator, and a farmer who is a current or former member of the State Board of Agriculture. The Act prescribed the functions and responsibilities of the Committee as follows:

"... The committee shall meet from time to time on the call of the Secretary of Agriculture or the Director of the Division of Taxation and annually determine and publish a range of values for each of the several classifications of land in agricultural and horticultural use in the various areas of the State. The committee shall determine the ranges in fair value of such land based upon its productive capabilities when devoted to agricultural or horticultural uses. In making these annual determinations of value, the committee shall consider available evidence of agricultural or horticultural capability derived from the soil survey at Rutgers, The State University; the National Co-operative Soil Survey; and such other evidence of value of land devoted exclusively to agricultural or horticultural uses as it may in its judgment deem pertinent. On or before October 1 of each year, the committee shall make these ranges of fair value available to the assessing authority in each of the taxing districts in which land in agricultural and horticultural use is located."

The original methodology of capitalizing net farm income per acre in determining the ranges in fair value of the several classifications of qualified land has been continued in this report.

Sources of primary data used in determining fair values are the U.S. Census of Agriculture (1964 through 2012), annual publications of the Economics Research Service and the National Agricultural Statistics Service of the United States Department of Agriculture, the New Jersey Department of Agriculture, the Annual FA-l Data Report, and research publications developed at Rutgers – The State University.

The Committee submits this 2017 report for use in Tax Year 2018.

Douglas H. Fisher, Secretary of Agriculture   Kathleen Hill, Assessor
Department of Agriculture   Gloucester County

Dr. Robert M. Goodman, Executive Dean   Ann Dorsett, Former Member
School of Environmental and Biological Sciences   State Board of Agriculture
Rutgers, The State University of New Jersey

Patricia Wright, Deputy Director
Division of Taxation

LAND USE AND PRODUCTIVITY VALUE

The Farmland Assessment Act emphasizes the importance of land use and productivity as primary measures of value when land is devoted to agricultural production and authorizes the Committee to determine a range of fair values for the several classifications of land qualified by assessors.

Historically, farm operators have used their land in the following ways:
1. To produce crops and animal products for sale or feed for animals on the farm;
2. To remain fallow or in cover crops as part of a planned rotational program;
3. To remain unplowed for grazing or conservation purposes;
4. To remain in woods, streams, and meadows, which enhances the productivity of all the land cultivated.

LAND USE CLASSES

The historical uses of farmland described above are the basis for the land use classes listed and defined below:

1. **Cropland Harvested** – This land is the heart of a farming enterprise and represents the highest use of land in agriculture. All land from which a crop was harvested in the current year falls into this category.
2. **Cropland Pastured** – This land can be and often is used to produce crops, but its maximum income may not be realized in a particular year. Land that is fallow or in cover crops as part of a rotational program falls into this classification.
3. **Permanent Pasture** – This land is not cultivated because its maximum economic potential is realized from grazing or as part of erosion control programs. Animals may or may not be part of the farm operation for land to be qualified in this category.
4. **Non-Appurtenant Woodland** – Woodland which can only qualify for farmland assessment on the basis of being in compliance with a woodland management plan filed with the Department of Environmental Protection. It is actively devoted to the production for sale of tree and forest products.
5. **Appurtenant Woodland** – Woodland that is part of a qualified farm. Usually this land is restricted to woodlots because of slope, drainage capability, soil type, or topography. Such land has limited productive use but it provides a windbreak or watershed, or buffers or controls soil erosion.

SOIL GROUPS

Assuming average weather and management, the long-run productive capability of farmland in any of the land-use classes described previously is related primarily to the innate productivity of the soils found in those land-use classes.

To keep the valuation process within reasonable limits, the 215 soil types found in New Jersey were rated and categorized into five clearly defined soil groups by the Soils Department at Rutgers.[1]

Those soil groups are described below:

Group A – **<u>Very productive farmland</u> –** The most desirable soil in the area because of high yields and ease of cultivation;

Group B – **<u>Good farmland</u> –** Desirable soil because yields are generally high and the land can be cultivated on a permanent basis;

Group C – **<u>Fair farmland</u> –** Yields are lower than those in soil Group B because of shallowness, propensity for drought, or excessive moisture. This land can be cultivated on a permanent basis;

Group D – **<u>Poor farmland</u> –** This soil is usually too wet, stony, prone to drought, or otherwise unsuitable for permanent cultivation. Yields are low when cultivated;

Group E – **<u>Very poor farmland</u> –** This land is often found in pasture or woodlands. Yields are very low because of excessive water, shallowness, stoniness, or frequent drought.

The boarding, rehabilitating or training of livestock is a qualified agricultural land use and deemed to be actively devoted to agriculture when that area is contiguous to land which otherwise qualifies for farmland assessment. One of the means to qualify a boarding, rehabilitating, or training facility is to use income imputed to land for grazing. This report includes imputed grazing values by soil group and county and may be found in column 6 of <u>Tables 1</u> and <u>2</u>.

<u>RANGES IN FAIR VALUES OF FARMLAND</u>

When land use and estimate of soil productivity are combined, a range in fair value of farmland can be determined. These ranges in value are shown in <u>Tables 1</u> and <u>2</u> for each county in New Jersey. The values shown in <u>Table 1</u> are the ranges in good value between the land use classes. The values in <u>Table 1</u> are then modified by the soil ratings shown in <u>Table 2</u>. The values in <u>Table 2</u> are the Committee's estimates of the value of farmland based upon its productive capabilities when devoted to agricultural or horticultural use. These are the ranges in value which the Committee is making available to the assessing authority in each of the taxing districts in accordance with the provisions of Section 20 of the Farmland Assessment Act of 1964.

The general method of calculation of farmland values for the 2018 tax year is shown in the Appendix.

APPENDIX

(a)   The U.S. Department of Agriculture publishes annual estimates of state farm income and expenses. The U.S. Census estimates state and county farm income every five years. These estimates as well as current data available in the Department of Agricultural, Food and Resource Economics, School of Environmental and Biological Sciences, were used in determining net farm income for New Jersey agriculture for 2017.

Estimated New Jersey Net Farm Income – 2017

	Million Dollars
Cash Receipts	$802.1 [2]
Government Payments	7.1
Value of Home Consumption	6.0
Change in Inventory	-15.2
Farm Income	$800.0 [3]
Farm Expenses	-763. 3 [4]
NET FARM INCOME TO LAND	$36.7 [5]

(b)   In order to allocate State net farm income to each county, an estimate of farm income was determined for each county from data in the Census of Agriculture 1964-2012.

Example of Projected County Income as a Percent of State Income

	2014	2015	2016	2017
County	2.8%	2.8%	2.8%	2.8%
State	100%	100%	100%	100%

(c)   Ratios as determined in (b) above were used to allocate State net farm income to each county.

Example of Determination of County Net Farm Income

	Net Farm Income (Mil. $)	Percent
County	1.028	2.8
State	36.7	100.0

(d)   Net income for each county was then capitalized according to a return of 10% to estimate the total value of farmland in that county.[6]

Example of Determination of Total Value of Land in Farms for a County

	Net Income (Mil. $)	Capitalized Value (Mil. $)
County	1.028	102.8

(e) When the total capitalized value of farmland in the county is determined, a value per acre can be estimated for each land use classification by multiplying acreages in the class (cropland harvested, cropland pastured, etc.) by a weighted estimate of income potential when farmland is devoted to that land use. The number of acres used in the formula for each land use class was determined by the amount of land qualified by assessors as shown in the annual FA-1 report. Further, it is necessary to consider any anticipated changes in each of the land use classifications for the projected tax year (see e.1 below). The potential income weights were determined by agricultural economists at Rutgers, The State University of New Jersey (see e.2 below). Examples of these procedures are portrayed in e.1, e.2, f.1, and f.2. The data contained in e.1 represents a cross section of the 20 counties reporting qualified acreage under the Farmland Assessment Act of 1964.

(e.1)   **Example of Projected Acreages for County Land Use Classes for 2017**

	2014	2015	2016	2017
Cropland Harvested	8,439	8,460	8,600	8,500
Cropland Pastured	1,795	900	800	800
Permanent Pasture	2,720	2,790	2,800	2,800
Non-Appurtenant Woodland	12,028	11,998	11,300	12,300
Appurtenant Woodland	3,467	3,500	3,800	3,800
Total Qualified	28,449	27,648	27,300	28,200

(e.2) **Income Weights Used in the Formula to Determine Value of Land Use Classes**[7]

Land Use Class	Income Weights
Cropland Harvested	20
Cropland Pastured	10
Permanent Pasture	4
Non-Appurtenant Woodland	3.5
Appurtenant Woodland	1

(f) When acreage in land use classes is combined with income weights for that class, a weighted estimate of acreage based upon income potential is determined for each land use class in the county (see f.1 below).

(f.1)   **Example of Computing Value for Land Use Classes for a County for 2017**

Land Use Class	Acres	x	Income Weights	=	Weighted Acreage
Cropland Harvested	8,500		20		170,000
Cropland Pastured	800		10		8,000
Permanent Pasture	2,800		4		11,200
Non-Appurtenant Woodland	12,300		3.5		43,050
Appurtenant Woodland	3,800		1		3,800
Total Weighted Acreage					236,050

(f.2)   Dividing total county capitalized value by total weighted acreage calculated in (f.1) determines the value of "X" shown below:

$$X = \frac{\text{Total County Capitalized Value}}{\text{Weighted Acreage}} = \frac{102.8 \text{ Million}}{236,050} = \$44 \text{ per acre}$$

The "X" value is the value of woodland in the county for 2017.

(f.3)   Values of all land classes are calculated below:

Average Land Use Value of Classes Where X = 39

Cropland Harvested	20	x 44	=	880
Cropland Pastured	10	x 44	=	440
Permanent Pasture	4	x 44	=	176
Non-Appurtenant Woodland	3.5	x 44	=	154
Appurtenant Woodland	1	x 44	=	44

(g)   The values calculated in (f.3) above are the ranges in value of the several classifications of land specified in the first paragraph of Section 20 of the Farmland Assessment Act which the Committee has determined for land devoted to agricultural use. These values are shown in Table 1.

(h)   When the values in Table 1 are adjusted for the productivity ratings of the soil as required in the second and third sentences of Section 20, a land value based upon land classification and soil productivity is determined.[8] The values that reflect soil productivity are the values recommended by the Committee for assessing purposes for Tax Year 2018. Assessors should note that an A value is provided which is 20% above the 100% value for cropland and 10% above the 100% values for woodland and permanent pasture. This value is calculated for farmland of exceptional quality in the district. It also provides a margin of error for data used in the estimation process in this report.

(i)   Additional information on valuing land as cropland harvested.[9]

TABLE 1

2018 COUNTY VALUES PER ACRE BY LAND CLASSES

(COLUMN 6 SHOWS THE IMPUTED GRAZING VALUES PER N.J.S.A. 54:4-23.5
AND IS USED IN DETERMINING QUALIFYING INCOME, NOT VALUATION)[10]

| COUNTY | CROPLAND HARVESTED | | CROPLAND PASTURED | | PERMANENT PASTURE | | NON-APPURTENANT WOODLAND | | APPURTENANT WOODLAND | | IMPUTED GRAZING VALUES |
| | COL. 1 | | COL. 2 | | COL. 3 | | COL. 4 | | COL. 5 | | COL. 6 |
	SOIL RATING	VALUE PER ACRE	SOIL RATING	VALUE PER ACRE	SOIL RATING	VALUE PER ACRE	SOIL RATING	VALUE PER ACRE	SOIL RATING	VALUE PER ACRE	VALUE PER ACRE
ATLANTIC	100	940	100	470	100	188	100	165	100	47	$157
BERGEN	100	900	100	450	100	180	100	158	100	45	$156
BURLINGTON	100	760	100	380	100	152	100	133	100	38	$153
CAMDEN	100	880	100	440	100	176	100	154	100	44	$156
CAPE MAY	100	800	100	400	100	160	100	140	100	40	$154
CUMBERLAND	100	820	100	410	100	164	100	144	100	41	$154
ESSEX	100	900	100	450	100	180	100	158	100	45	$156
GLOUCESTER	100	780	100	390	100	156	100	137	100	39	$154
HUNTERDON	100	780	100	390	100	156	100	137	100	39	$154
MERCER	100	780	100	390	100	156	100	137	100	39	$154
MIDDLESEX	100	860	100	430	100	172	100	151	100	43	$155
MONMOUTH	100	880	100	440	100	176	100	154	100	44	$156
MORRIS	100	860	100	430	100	172	100	151	100	43	$155
OCEAN	100	780	100	390	100	156	100	137	100	39	$154
PASSAIC	100	900	100	450	100	180	100	158	100	45	$156
SALEM	100	640	100	320	100	128	100	112	100	32	$151
SOMERSET	100	800	100	400	100	160	100	140	100	40	$154
SUSSEX	100	660	100	330	100	132	100	116	100	33	$151
UNION	100	900	100	450	100	180	100	158	100	45	$156
WARREN	100	680	100	340	100	136	100	119	100	34	$152

TABLE 2

2018 COUNTY ESTIMATES OF RANGES IN VALUE OF FARMLAND BASED UPON LAND CLASSIFICATION

AND PRODUCTIVE CAPABILITIES WHEN DEVOTED TO AGRICULTURAL OR HORICULTURAL USE

(COLUMN 6 SHOWS THE IMPUTED GRAZING VALUES PER N.J.S.A. 54:4-23.5)
AND IS USED IN DETERMINING QUALIFYING INCOME, NOT VALUATION)

| COUNTY | SOIL GROUP | CROPLAND HARVESTED COL. 1 | | CROPLAND PASTURED COL. 2 | | PERMANENT PASTURE COL. 3 | | NON-APPURTENANT WOODLAND COL. 4 | | APPURTENANT WOODLAND COL. 5 | | IMPUTED GRAZING VALUES COL. 6 |
		SOIL RATING	VALUE PER ACRE	SOIL RATING	VALUE PER ACRE	SOIL RATING	VALUE PER ACRE	SOIL RATING	VALUE PER ACRE	SOIL RATING	VALUE PER ACRE	VALUE PER ACRE
ATLANTIC	A	120	1,128	120	564	110	207	110	182	110	52	159
	B	100	940	100	470	100	188	100	165	100	47	157
	C	70	658	70	329	80	150	90	149	90	42	153
	D	40	376	40	188	70	132	80	132	80	38	151
	E	10	94	10	47	60	113	70	116	70	33	149
BERGEN	A	120	1,080	120	540	110	198	110	174	110	49	158
	B	100	900	100	450	100	180	100	158	100	45	156
	C	70	630	70	315	80	144	90	142	90	41	152
	D	40	360	40	180	70	126	80	126	80	36	151
	E	10	90	10	45	60	108	70	110	70	32	149
BURLINGTON	A	120	912	120	456	110	167	110	146	110	42	155
	B	100	760	100	380	100	152	100	133	100	38	153
	C	70	532	70	266	80	122	90	120	90	34	150
	D	40	304	40	152	70	106	80	106	80	30	149
	E	10	76	10	38	60	91	70	93	70	27	147
CAMDEN	A	120	1,056	120	528	110	194	110	169	110	48	157
	B	100	880	100	440	100	176	100	154	100	44	156
	C	70	616	70	308	80	141	90	139	90	40	152
	D	40	352	40	176	70	123	80	123	80	35	150
	E	10	88	10	44	60	106	70	108	70	31	149
CAPE MAY	A	120	960	120	480	110	176	110	154	110	44	156
	B	100	800	100	400	100	160	100	140	100	40	154
	C	70	560	70	280	80	128	90	126	90	36	151
	D	40	320	40	160	70	112	80	112	80	32	149
	E	10	80	10	40	60	96	70	98	70	28	148
CUMBERLAND	A	120	984	120	492	110	180	110	158	110	45	156
	B	100	820	100	410	100	164	100	144	100	41	154
	C	70	574	70	287	80	131	90	130	90	37	151
	D	40	328	40	164	70	115	80	115	80	33	149
	E	10	82	10	41	60	98	70	101	70	29	148

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TABLE 2 – CONTINUED

COUNTY	SOIL GROUP	CROPLAND HARVESTED COL. 1		CROPLAND PASTURED COL. 2		PERMANENT PASTURE COL. 3		NON-APPURTENANT WOODLAND COL. 4		APPURTENANT WOODLAND COL. 5		IMPUTED GRAZING VALUES COL. 6
		SOIL RATING	VALUE PER ACRE	SOIL RATING	VALUE PER ACRE	SOIL RATING	VALUE PER ACRE	SOIL RATING	VALUE PER ACRE	SOIL RATING	VALUE PER ACRE	VALUE PER ACRE
ESSEX	A	120	1,080	120	540	110	198	110	174	110	50	158
	B	100	900	100	450	100	180	100	158	100	45	156
	C	70	630	70	315	80	144	90	142	90	41	152
	D	40	360	40	180	70	126	80	126	80	36	151
	E	10	90	10	45	60	108	70	111	70	32	149
GLOUCESTER	A	120	936	120	468	110	172	110	151	110	43	155
	B	100	780	100	390	100	156	100	137	100	39	154
	C	70	546	70	273	80	125	90	123	90	35	150
	D	40	312	40	156	70	109	80	110	80	31	149
	E	10	78	10	39	60	94	70	96	70	27	147
HUNTERDON	A	120	936	120	468	110	172	110	151	110	43	155
	B	100	780	100	390	100	156	100	137	100	39	154
	C	70	546	70	273	80	125	90	123	90	35	150
	D	40	312	40	156	70	109	80	110	80	31	149
	E	10	78	10	39	60	94	70	96	70	27	147
MERCER	A	120	936	120	468	110	172	110	151	110	43	155
	B	100	780	100	390	100	156	100	137	100	39	154
	C	70	546	70	273	80	125	90	123	90	35	150
	D	40	312	40	156	70	109	80	110	93	31	149
	E	10	78	10	39	60	94	70	96	70	27	147
MIDDLESEX	A	120	1,032	120	516	110	189	110	166	110	47	157
	B	100	860	100	430	100	172	100	151	100	43	155
	C	70	602	70	301	80	138	90	136	90	39	152
	D	40	344	40	172	70	120	80	121	80	34	150
	E	10	86	10	43	60	103	70	106	70	30	148
MONMOUTH	A	120	1,056	120	528	110	194	110	169	110	48	157
	B	100	880	100	440	100	176	100	154	100	44	156
	C	70	616	70	308	80	141	90	139	90	40	152
	D	40	352	40	176	70	123	80	123	80	35	150
	E	10	88	10	44	60	106	70	108	70	31	149
MORRIS	A	120	1,032	120	516	110	189	110	166	110	47	157
	B	100	860	100	430	100	172	100	151	100	43	155
	C	70	602	70	301	80	138	90	136	90	39	152
	D	40	344	40	172	70	120	80	121	80	34	150
	E	10	86	10	43	60	103	70	106	70	30	148

TABLE 2 – CONTINUED

COUNTY	SOIL GROUP	CROPLAND HARVESTED		CROPLAND PASTURED		PERMANENT PASTURE		NON-APPURTENANT WOODLAND		APPURTENANT WOODLAND		IMPUTED GRAZING VALUES
		COL. 1		COL. 2		COL. 3		COL. 4		COL. 5		COL. 6
		SOIL RATING	VALUE PER ACRE	SOIL RATING	VALUE PER ACRE	SOIL RATING	VALUE PER ACRE	SOIL RATING	VALUE PER ACRE	SOIL RATING	VALUE PER ACRE	VALUE PER ACRE
OCEAN	A	120	936	120	468	110	172	110	151	110	43	155
	B	100	780	100	390	100	156	100	137	100	39	154
	C	70	546	70	273	80	125	90	123	90	35	150
	D	40	312	40	156	70	109	80	110	80	31	149
	E	10	78	10	39	60	94	70	96	70	27	147
PASSAIC	A	120	1,080	120	540	110	198	110	174	110	50	158
	B	100	900	100	450	100	180	100	158	100	45	156
	C	70	630	70	315	80	144	90	142	90	41	152
	D	40	360	40	180	70	126	80	126	80	36	151
	E	10	90	10	45	60	108	70	111	70	32	149
SALEM	A	120	768	120	384	110	141	110	123	110	35	152
	B	100	640	100	320	100	128	100	112	100	32	151
	C	70	448	70	224	80	102	90	101	90	29	148
	D	40	256	40	128	70	90	80	90	80	26	147
	E	10	64	10	32	60	77	70	78	70	22	146
SOMERSET	A	120	960	120	480	110	176	110	154	110	44	156
	B	100	800	100	400	100	160	100	140	100	40	154
	C	70	560	70	280	80	128	90	126	90	36	151
	D	40	320	40	160	70	112	80	112	80	32	149
	E	10	80	10	40	60	96	70	98	70	28	148
SUSSEX	A	120	792	120	396	110	145	110	128	110	36	153
	B	100	660	100	330	100	132	100	116	100	33	151
	C	70	462	70	231	80	106	90	104	90	30	149
	D	40	264	40	132	70	92	80	93	80	26	147
	E	10	66	10	33	60	79	70	81	70	23	146
UNION	A	120	1,080	120	540	110	198	110	174	110	50	158
	B	100	900	100	450	100	180	100	158	100	45	156
	C	70	630	70	315	80	144	90	142	90	41	152
	D	40	360	40	180	70	126	80	126	80	36	151
	E	10	90	10	45	60	108	70	111	70	32	149
WARREN	A	120	816	120	408	110	150	110	131	110	37	153
	B	100	680	100	340	100	136	100	119	100	34	152
	C	70	476	70	238	80	109	90	107	90	31	149
	D	40	272	40	136	70	95	80	95	80	27	148
	E	10	68	10	34	60	82	70	83	70	24	146

FOOTNOTES

1.   Soil types were rated and categorized by Dr. John Tedrow, Late Professor of Soils at Cook College, Rutgers. A description of New Jersey soil ratings is contained in "Productive Capability of New Jersey Soils and Crops," Rutgers – The State University. A soils guide for use in connection with the valuation assessment, and taxation of land under the Farmland Assessment Act of 1964, Chapter 48, Laws of 1964 (N.J.S.A. 54:4-23.1 et seq.).

2.   Cash receipts are adjusted for income from floricultural crops grown under glass and poultry income, which doesn't result from the land.

3.   Non-money income, which is an imputed value for the rental value of the farm dwelling, is excluded from farm income because the farm dwelling is excluded from assessment under the Farmland Assessment Act. Other income not earned from farming also is excluded.

4.   Expenses for the farm dwelling, floricultural crops grown under glass, and poultry are excluded from farm expenses.

5.   Net farm income does not include wages of management or a payment for family labor.

6.   The capitalization rate of 10% considers a 7 1/2% rate of return equaling a farm mortgage rate of interest of 7 1/2% and 2 1/2% return for wages of management and unpaid family labor.

7.   The weighting system allocates 79% of net farm income to cropland harvested and cropland pastured based upon estimates of the Soils and Crops Department and the Department of Agricultural Economics and Marketing, School of Environmental and Biological Sciences, Rutgers – The State University.

8.   See Subchapter 14, State Farmland Evaluation Committee, N.J.A.C. 18:15-14.1.

9.   Land under farm buildings, including boarding, training and rehabilitating facilities that are being used for farm activity is valued as cropland harvested.

10.   Imputed grazing values – These values include the maintenance cost for permanent pasture (mowing/clipping, lime, fertilizer, over seeding and herbicide application). A land cost for permanent pasture also is included. These costs are updated periodically based on changes in labor, equipment and materials. Permanent pasture by definition is a marginal land use (low productivity and low income), which limits the return on labor and material inputs.