STATE OF NEW JERSEY

FIFTY SECOND

REPORT OF

THE STATE FARMLAND EVALUATION ADVISORY COMMITTEE

PRODUCTIVITY VALUES

FOR

2016 TAX YEAR

FARMLAND ASSESSMENT ACT OF 1964

CHAPTER 48, LAWS OF 1964

TRENTON, NEW JERSEY **OCTOBER, 2015**

ACKNOWLEDGMENTS

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Also acknowledged with the thanks of the Committee are the services rendered by Richard Belcher, Division of Agriculture and Natural Resources, New Jersey Department of Agriculture; Patricia Wright, Deputy Director and Marilyn Gaines, Secretarial Assistant 1 from the Division of Taxation.

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REPORT OF THE STATE FARMLAND EVALUATION ADVISORY COMMITTEE

The Farmland Assessment Act of 1964 (Chapter 48, Laws of 1964) created a State Farmland Evaluation Advisory Committee and designated as the members thereof the Director of the Division of Taxation, the Dean of School of Environmental and Biological Sciences and the Secretary of Agriculture. The Laws of 2013 Chapter 43 expanded the Committee 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-1 Data Report and research publications developed at Rutgers - The State University.

The Committee submits this 2015 report for use in the tax year 2016.

Douglas H. Fisher, Secretary of Agriculture
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Patricia Wright, Deputy Director
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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 in 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, watershed, 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*

*=Footnotes

Those soil groups are described below:

Group A - **Very productive farmland** - The most desirable soil in the area because of high yields and ease of cultivation.

Group B - **Good farmland** - Desirable soil because yields are generally high and the land can be cultivated on a permanent basis.

Group C - **Fair farmland** - Yields are lower than those in soil Group B because of shallowness, droughtiness, or excessive moisture. This land can be cultivated on a permanent basis.

Group D - **Poor farmland** - This soil is usually too wet, stony, droughty, or otherwise unsuitable for permanent cultivation. Yields are low when cultivated.

Group E - **Very poor farmland** - This land is often found in pasture or woodlands. Yields are very low because of excessive water, shallowness, stoniness, or droughtiness.

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 Tables 1 and 2.

RANGES IN FAIR VALUES OF FARMLAND

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 Tables 1 and 2 for each county in New Jersey. The values shown in Table 1 are the ranges in good value between the land use classes. The values in Table 1 are then modified by the soil ratings shown in Table 2. The values in Table 2 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 2016 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 2015.

Estimated New Jersey Net Farm Income – 2015

	Million Dollars	
Cash Receipts	$792.2	2*
Government Payments	7.1	
Value of Home Consumption	3.1	
Change in Inventory	+10.5	
Farm Income	$812.9	3*
Farm Expenses	-778.3	4*
NET FARM INCOME TO LAND	$34.6	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" and published estimates of net income in previous evaluation reports.

Example of Projected County Income as a Percent of State Income

	2012		2013		2014		2015	
	Mil.$	%	Mil.$	%	Mil.$	%	Mil.$	%
County	3.25	9.0	3.57	9.0	3.43	9.0	3.114	9.0
State	35.7	100	39.7	100	38.7	100	34.6	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	3.114	9.0
State	34.6	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	3.114	311.4

*=Footnotes

(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 economist at Rutgers, The State University of New Jersey (see e.2 below). An example illustration 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 2015**

	2012	2013	2014	2015
Cropland Harvested	39,166	38,856	35,636	36,900
Cropland Pastured	1,134	1,080	1,034	665
Permanent Pasture	3,195	2,910	2,624	2,500
Non-Appurtenant Woodland	9,700	9,800	9,900	11,100
Appurtenant Woodland	9,250	9, 300	9,374	8,000
Total Qualified	62,445	61,946	58,568	59,165

(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 are 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 2015**

Land Use Class	Acres	x	Income Weights	=	Weighted Acreage
Cropland Harvested	36,900		20		738,000
Cropland Pastured	665		10		6,650
Permanent Pasture	2,500		4		10,000
Non-Appurtenant Woodland	11,100		3.5		38,850
Appurtenant Woodland	8,000		1		8,000
Total Weighted Acreage					801,500

*=Footnotes

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

$$X = \frac{\text{Total County Capitalized Value}}{\text{Weighted Acreage}} = \frac{311.4 \text{ Million}}{801{,}500} = \$39 \text{ per acre}$$

The "X" value is the value of woodland in the county for 2015.

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

Average Land Use Value of Classes Where X = 39

Cropland Harvested	20	x	39	=	780
Cropland Pastured	10	x	39	=	390
Permanent Pasture	4	x	39	=	156
Non-Appurtenant Woodland	3.5	x	39	=	137
Appurtenant Woodland	1	x	39	=	39

(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 the tax year 2016. 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.

*=Footnotes

TABLE 1

2016 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)

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	182	100	165	100	47	$147
BERGEN	100	900	100	450	100	180	100	158	100	45	$147
BURLINGTON	100	780	100	390	100	156	100	137	100	39	$145
CAMDEN	100	880	100	440	100	176	100	154	100	44	$147
CAPE MAY	100	780	100	390	100	156	100	137	100	39	$145
CUMBERLAND	100	820	100	410	100	164	100	144	100	41	$145
ESSEX	100	900	100	450	100	180	100	158	100	45	$147
GLOUCESTER	100	780	100	390	100	156	100	137	100	39	$145
HUNTERDON	100	780	100	390	100	156	100	137	100	39	$145
MERCER	100	760	100	380	100	152	100	133	100	38	$144
MIDDLESEX	100	860	100	430	100	172	100	151	100	43	$146
MONMOUTH	100	880	100	440	100	176	100	154	100	44	$147
MORRIS	100	860	100	430	100	172	100	151	100	43	$146
OCEAN	100	760	100	380	100	152	100	133	100	38	$144
PASSAIC	100	900	100	450	100	180	100	158	100	45	$147
SALEM	100	640	100	320	100	128	100	112	100	32	$142
SOMERSET	100	780	100	390	100	156	100	137	100	39	$145
SUSSEX	100	660	100	330	100	132	100	116	100	33	$142
UNION	100	900	100	450	100	180	100	158	100	45	$147
WARREN	100	680	100	340	100	136	100	119	100	34	$143

TABLE 2

2016 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)

		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
COUNTY	SOIL GROUP	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	200	110	182	110	52	150
	B	100	940	100	470	100	182	100	165	100	47	147
	C	70	658	70	329	80	146	90	149	90	42	144
	D	40	376	40	188	70	127	80	132	80	38	142
	E	10	94	10	47	60	109	70	116	70	33	139
BERGEN	A	120	1,080	120	540	110	198	110	174	110	49	149
	B	100	900	100	450	100	180	100	158	100	45	147
	C	70	630	70	315	80	144	90	142	90	41	143
	D	40	360	40	180	70	126	80	126	80	36	142
	E	10	90	10	45	60	108	70	110	70	32	140
BURLINGTON	A	120	936	120	468	110	172	110	151	110	43	146
	B	100	780	100	390	100	156	100	137	100	39	145
	C	70	546	70	273	80	125	90	123	90	35	142
	D	40	312	40	156	70	109	80	110	80	31	140
	E	10	78	10	39	60	94	70	96	70	27	138
CAMDEN	A	120	1,056	120	528	110	194	110	169	110	48	149
	B	100	880	100	440	100	176	100	154	100	44	147
	C	70	616	70	308	80	141	90	139	90	40	143
	D	40	352	40	176	70	123	80	123	80	35	141
	E	10	88	10	44	60	106	70	108	70	31	140
CAPE MAY	A	120	936	120	468	110	172	110	151	110	43	146
	B	100	780	100	390	100	156	100	137	100	39	145
	C	70	546	70	273	80	125	90	123	90	35	142
	D	40	312	40	156	70	109	80	110	80	31	140
	E	10	78	10	39	60	94	70	96	70	27	138
CUMBERLAND	A	120	984	120	492	110	180	110	158	110	45	147
	B	100	820	100	410	100	164	100	144	100	41	145
	C	70	574	70	287	80	131	90	130	90	37	143
	D	40	328	40	164	70	115	80	115	80	33	141
	E	10	82	10	41	60	98	70	100	70	29	139

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
ESSEX	A	120	1,080	120	540	110	198	110	174	110	50	149
	B	100	900	100	450	100	180	100	158	100	45	147
	C	70	630	70	315	80	144	90	142	90	41	143
	D	40	360	40	180	70	126	80	126	80	36	142
	E	10	90	10	45	60	108	70	111	70	32	140
GLOUCESTER	A	120	936	120	468	110	172	110	151	110	43	146
	B	100	780	100	390	100	156	100	137	100	39	145
	C	70	546	70	273	80	125	90	123	90	35	142
	D	40	312	40	156	70	109	80	110	80	31	140
	E	10	78	10	39	60	94	70	96	70	27	138
HUNTERDON	A	120	936	120	468	110	172	110	151	110	43	146
	B	100	780	100	390	100	156	100	137	100	39	145
	C	70	546	70	273	80	125	90	123	90	35	142
	D	40	312	40	156	70	109	80	110	80	31	140
	E	10	78	10	39	60	94	70	96	70	27	138
MERCER	A	120	912	120	456	110	167	110	146	110	42	146
	B	100	760	100	380	100	152	100	133	100	38	144
	C	70	532	70	266	80	122	90	120	90	34	141
	D	40	304	40	152	70	106	80	106	93	30	140
	E	10	76	10	38	60	91	70	93	70	27	138
MIDDLESEX	A	120	1,032	120	516	110	189	110	166	110	47	148
	B	100	860	100	430	100	172	100	151	100	43	146
	C	70	602	70	301	80	138	90	136	90	39	143
	D	40	344	40	172	70	120	80	121	80	34	141
	E	10	86	10	43	60	103	70	106	70	30	139
MONMOUTH	A	120	1,056	120	528	110	194	110	169	110	48	148
	B	100	880	100	440	100	176	100	154	100	44	147
	C	70	616	70	308	80	141	90	139	90	40	143
	D	40	352	40	176	70	123	80	123	80	35	141
	E	10	88	10	44	60	106	70	108	70	31	140
MORRIS	A	120	1,032	120	516	110	189	110	166	110	47	148
	B	100	860	100	430	100	172	100	151	100	43	146
	C	70	602	70	301	80	138	90	136	90	39	143
	D	40	344	40	172	70	120	80	121	80	34	141
	E	10	86	10	43	60	103	70	106	70	30	139

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	912	120	456	110	167	110	146	110	42	146
	B	100	760	100	380	100	152	100	133	100	38	144
	C	70	532	70	266	80	122	90	120	90	34	141
	D	40	304	40	152	70	106	80	106	80	30	140
	E	10	76	10	38	60	91	70	93	70	27	138
PASSAIC	A	120	1,080	120	540	110	198	110	174	110	50	149
	B	100	900	100	450	100	180	100	158	100	45	147
	C	70	630	70	315	80	144	90	142	90	41	143
	D	40	360	40	180	70	126	80	126	80	36	142
	E	10	90	10	45	60	108	70	111	70	32	140
SALEM	A	120	768	120	384	110	141	110	123	110	35	143
	B	100	640	100	320	100	128	100	112	100	32	142
	C	70	448	70	224	80	102	90	101	90	29	139
	D	40	256	40	128	70	90	80	90	80	26	138
	E	10	64	10	32	60	77	70	78	70	22	137
SOMERSET	A	120	936	120	468	110	172	110	151	110	43	146
	B	100	780	100	390	100	156	100	137	100	39	145
	C	70	546	70	273	80	125	90	123	90	35	142
	D	40	312	40	156	70	109	80	110	80	31	140
	E	10	78	10	39	60	94	70	96	70	27	138
SUSSEX	A	120	792	120	396	110	145	110	128	110	36	144
	B	100	660	100	330	100	132	100	116	100	33	142
	C	70	462	70	231	80	106	90	104	90	30	140
	D	40	264	40	132	70	92	80	93	80	26	138
	E	10	66	10	33	60	79	70	81	70	23	137
UNION	A	120	1,080	120	540	110	198	110	174	110	50	149
	B	100	900	100	450	100	180	100	158	100	45	147
	C	70	630	70	315	80	144	90	142	90	41	143
	D	40	360	40	180	70	126	80	126	80	36	142
	E	10	90	10	45	60	108	70	111	70	32	140
WARREN	A	120	816	120	408	110	150	110	131	110	37	144
	B	100	680	100	340	100	136	100	119	100	34	143
	C	70	476	70	238	80	109	90	107	90	31	140
	D	40	272	40	136	70	95	80	95	80	27	138
	E	10	68	10	34	60	82	70	83	70	24	137

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 are 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.), p. 2.

2. Cash receipts are adjusted for income from floricultural crops grown under glass and poultry income which doesn't result from the land, p. 4.

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 is also excluded, p. 4.

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

5. Net farm income does not include wages of management or a payment for family labor, p. 4.

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, p. 4.

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, p. 5.

8. See Subchapter 14 State Farmland Evaluation Committee, N.J.A.C. 18:15-14.1, p.6.

9. 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 is also 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.