STATE OF NEW JERSEY

FORTY-SEVENTH

REPORT OF

THE STATE FARMLAND EVALUATION ADVISORY COMMITTEE

PRODUCTIVITY VALUES

FOR

2011 TAX YEAR

FARMLAND ASSESSMENT ACT OF 1964

CHAPTER 48, LAWS OF 1964

TRENTON, NEW JERSEY **OCTOBER, 2010**

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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 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 and annually determine and publish a range of values for each of the several classifications of land in agricultural or horticultural use in the various areas of the State. The primary objective of the Committee shall be the determination of 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 values, the Committee shall consider available evidence of agricultural or horticultural capability derived from the soil survey at Rutgers - The State University, the National Cooperative 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 or 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 2007), 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 2010 report for use in the tax year 2011.

Douglas H. Fisher, Secretary of Agriculture
Department of Agriculture

Dr. Robert M. Goodman, Executive Dean
School of Environmental and Biological Sciences
Rutgers, The State University of New Jersey

PatriciaWright, Assistant Director
Property Administration
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 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 fair value are shown in Tables 1 and 2 for each county in New Jersey. The values shown in Table 1 are the ranges in fair 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 fair 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 2011 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 2010.

Estimated New Jersey Net Farm Income – 2010

	Million Dollars	
Cash Receipts	$759.2	2*
Government Payments	10.2	
Value of Home Consumption	2.0	
Change in Inventory	-3.5	
Farm Income	$767.9	3*
Farm Expenses	-728.3	4*
NET FARM INCOME TO LAND	$39.6	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 1964-2007" and published estimates of net income in previous evaluation reports.

Example of Projected County Income as a Percent of State Income

	2006		2007		2008		2009		2010	
	Mil.$	%	Mil.$	%	Mil.$	%	Mil.$	%	Mil.$	%
County	3.50	8.6	3.44	8.5	3.48	8.4	3.57	8.5	3.52	8.9
State	40.7	100	40.5	100	41.5	100	42.0	100	39.6	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	3.52	8.9
State	39.6	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	3.52	35.20

*=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 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 2009 FA-1 report, projected to the tax year. (See e.1 below). The potential income weights were determined by agricultural economists at Rutgers. (See e.2 below).

(e.1) **Example of Projected Acreages for County Land Use Classes for 2009**

	2006	2007	2008	2009	2010
Cropland Harvested	42,800	41,947	41,146	41,618	41,418
Cropland Pastured	1,500	1,435	1,662	1,660	1,662
Permanent Pasture	3,200	3,146	3,184	3,176	3,184
Non-Appurtenant Woodland	9,290	9,400	9,313	9,358	9,313
Appurtenant Woodland	9,000	9,200	8,623	8,733	8,623
Total Qualified	65,790	65,128	63,928	64,545	64,200

(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 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 2010**

Land Use Class	Acres	x	Income Weights	=	Weighted Acreage
Cropland Harvested	41,418		20		828,360
Cropland Pastured	1,662		10		16,620
Permanent Pasture	3,184		4		12,736
Non-Appurtenant Woodland	9,313		3.5		32,596
Appurtenant Woodland	8,623		1		8,623
Total Weighted Acreage					898,935

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

$$X = \frac{\text{Total County Capitalized Value}}{\text{Weighted Acreage}} = \frac{35.20 \text{ Million}}{898{,}935} = \$39 \text{ per acre}$$

The "X" value is the value of woodland in the county for 2010.

*=Footnotes

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

(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 2011. 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

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 PASTURE		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	900	100	450	100	180	100	158	100	45	$124
BERGEN	100	860	100	430	100	172	100	151	100	43	$123
BURLINGTON	100	800	100	400	100	160	100	140	100	40	$122
CAMDEN	100	840	100	420	100	168	100	147	100	42	$123
CAPE MAY	100	760	100	380	100	152	100	133	100	38	$121
CUMBERLAND	100	780	100	390	100	156	100	137	100	39	$122
ESSEX	100	860	100	430	100	172	100	151	100	43	$123
GLOUCESTER	100	780	100	390	100	156	100	137	100	39	$122
HUNTERDON	100	780	100	390	100	156	100	137	100	39	$122
MERCER	100	760	100	380	100	152	100	133	100	38	$121
MIDDLESEX	100	820	100	410	100	164	100	144	100	41	$122
MONMOUTH	100	860	100	430	100	172	100	151	100	43	$123
MORRIS	100	860	100	430	100	172	100	151	100	43	$123
OCEAN	100	740	100	370	100	148	100	130	100	37	$121
PASSAIC	100	860	100	430	100	172	100	151	100	43	$123
SALEM	100	640	100	320	100	128	100	112	100	32	$119
SOMERSET	100	780	100	390	100	156	100	137	100	39	$122
SUSSEX	100	660	100	330	100	132	100	116	100	33	$119
UNION	100	860	100	430	100	172	100	151	100	43	$123
WARREN	100	660	100	330	100	132	100	116	100	33	$119

TABLE 2

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		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 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	1,080	120	540	110	198	110	174	110	49	126
	B	100	900	100	450	100	180	100	158	100	45	124
	C	70	630	70	315	80	144	90	142	90	41	120
	D	40	360	40	180	70	126	80	126	80	36	119
	E	10	90	10	45	60	108	70	111	70	32	117
BERGEN	A	120	1,032	120	516	110	189	110	165	110	47	125
	B	100	860	100	430	100	172	100	150	100	43	123
	C	70	602	70	301	80	138	90	135	90	39	120
	D	40	344	40	172	70	120	80	120	80	34	118
	E	10	86	10	43	60	103	70	105	70	30	116
BURLINGTON	A	120	960	120	480	110	176	110	154	110	44	124
	B	100	800	100	400	100	160	100	140	100	40	122
	C	70	560	70	280	80	128	90	126	90	36	119
	D	40	320	40	160	70	112	80	112	80	32	117
	E	10	80	10	40	60	96	70	98	70	28	116
CAMDEN	A	120	1,008	120	504	110	185	110	162	110	46	124
	B	100	840	100	420	100	168	100	147	100	42	123
	C	70	588	70	294	80	134	90	132	90	38	119
	D	40	336	40	168	70	118	80	118	80	34	118
	E	10	84	10	42	60	101	70	103	70	29	116
CAPE MAY	A	120	912	120	456	110	167	110	146	110	42	123
	B	100	760	100	380	100	152	100	133	100	38	121
	C	70	532	70	266	80	122	90	120	90	34	118
	D	40	304	40	152	70	106	80	106	80	30	117
	E	10	76	10	38	60	91	70	93	70	27	115
CUMBERLAND	A	120	936	120	468	110	172	110	151	110	43	123
	B	100	780	100	390	100	156	100	137	100	39	122
	C	70	546	70	273	80	125	90	123	90	35	118
	D	40	312	40	156	70	109	80	110	80	31	117
	E	10	78	10	39	60	94	70	96	70	27	115

TABLE 2 - CONTINUED

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 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
ESSEX	A	120	1,032	120	516	110	189	110	165	110	47	125
	B	100	860	100	430	100	172	100	150	100	43	123
	C	70	602	70	301	80	138	90	135	90	39	120
	D	40	344	40	172	70	120	80	120	80	34	118
	E	10	86	10	43	60	103	70	105	70	30	116
GLOUCESTER	A	120	936	120	468	110	172	110	151	110	43	123
	B	100	780	100	390	100	156	100	137	100	39	122
	C	70	546	70	273	80	125	90	123	90	35	118
	D	40	312	40	156	70	109	80	110	80	31	117
	E	10	78	10	39	60	94	70	96	70	27	115
HUNTERDON	A	120	936	120	468	110	172	110	151	110	43	123
	B	100	780	100	390	100	156	100	137	100	39	122
	C	70	546	70	273	80	125	90	123	90	35	118
	D	40	312	40	156	70	109	80	110	80	31	117
	E	10	78	10	39	60	94	70	96	70	27	115
MERCER	A	120	912	120	456	110	167	110	146	110	42	123
	B	100	760	100	380	100	152	100	133	100	38	121
	C	70	532	70	266	80	122	90	120	90	34	118
	D	40	304	40	152	70	106	80	106	80	30	117
	E	10	76	10	38	60	91	70	93	70	27	115
MIDDLESEX	A	120	984	120	492	110	180	110	158	110	45	124
	B	100	820	100	410	100	164	100	144	100	41	122
	C	70	574	70	287	80	131	90	130	90	37	119
	D	40	328	40	164	70	115	80	115	80	33	117
	E	10	82	10	41	60	98	70	101	70	29	116
MONMOUTH	A	120	1,032	120	516	110	189	110	165	110	47	125
	B	100	860	100	430	100	172	100	150	100	43	123
	C	70	602	70	301	80	138	90	135	90	39	120
	D	40	344	40	172	70	120	80	120	80	34	118
	E	10	86	10	43	60	103	70	105	70	30	116
MORRIS	A	120	1,032	120	516	110	189	110	165	110	47	125
	B	100	860	100	430	100	172	100	150	100	43	123
	C	70	602	70	301	80	138	90	135	90	39	120
	D	40	344	40	172	70	120	80	120	80	34	118
	E	10	86	10	43	60	103	70	105	70	30	116

TABLE 2 - CONTINUED

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 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
OCEAN	A	120	888	120	444	110	163	110	143	110	41	122
	B	100	740	100	370	100	148	100	130	100	37	121
	C	70	518	70	259	80	118	90	117	90	33	118
	D	40	296	40	148	70	104	80	104	80	30	116
	E	10	74	10	37	60	89	70	91	70	26	115
PASSAIC	A	120	1.032	120	516	110	189	110	165	110	47	125
	B	100	860	100	430	100	172	100	150	100	43	123
	C	70	602	70	301	80	138	90	135	90	39	120
	D	40	344	40	172	70	120	80	120	80	34	118
	E	10	86	10	43	60	103	70	105	70	30	116
SALEM	A	120	768	120	384	110	141	110	123	110	35	120
	B	100	640	100	320	100	128	100	112	100	32	119
	C	70	448	70	224	80	102	90	101	90	29	116
	D	40	256	40	128	70	90	80	90	80	26	115
	E	10	64	10	32	60	77	70	78	70	22	114
SOMERSET	A	120	936	120	468	110	172	110	151	110	43	123
	B	100	780	100	390	100	156	100	137	100	39	122
	C	70	546	70	273	80	125	90	123	90	35	118
	D	40	312	40	156	70	109	80	110	80	31	117
	E	10	78	10	39	60	94	70	96	70	27	115
SUSSEX	A	120	792	120	396	110	145	110	128	110	36	121
	B	100	660	100	330	100	132	100	116	100	33	119
	C	70	462	70	231	80	106	90	104	90	30	117
	D	40	264	40	132	70	92	80	93	80	26	115
	E	10	66	10	33	60	79	70	81	70	23	114
UNION	A	120	1.032	120	516	110	189	110	165	110	47	125
	B	100	860	100	430	100	172	100	150	100	43	123
	C	70	602	70	301	80	138	90	135	90	39	120
	D	40	344	40	172	70	120	80	120	80	34	118
	E	10	86	10	43	60	103	70	105	70	30	116
WARREN	A	120	792	120	396	110	145	110	128	110	36	121
	B	100	660	100	330	100	132	100	116	100	33	119
	C	70	462	70	231	80	106	90	104	90	30	117
	D	40	264	40	132	70	92	80	93	80	26	115
	E	10	66	10	33	60	79	70	81	70	23	114

FOOTNOTES

1. Soil types were rated and categorized by Dr. John Tedrow, 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 poultryincome which doesn't result from the land, p. 4.

3. Nonmoney 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.