

The Economics of Ag- Residential Land Use

Communications and Marketing Panel: Lenses on the Rural-Urban Interface

Joshua M. Duke
University of Delaware

Basic Economic Intuition on Land Use at Rural-Urban Interface

- Nonag land uses can outbid ag land uses
 - Not a “fair” competition: Positive and negative externalities
 - Suboptimal because incompatible land uses lead to conflict
- A policy environment exists to lessen this conflict
 - Ag zoning
 - RTFL (nuisance immunity) and ag-nuisance law
 - Current use property tax
 - Market-based solutions
 - Impact fees on nonag
 - PACE (or PDR) for ag in perpetuity
 - Public efforts to promote new ag markets
 - Agritourism
 - Direct-marketing
 - Labeling

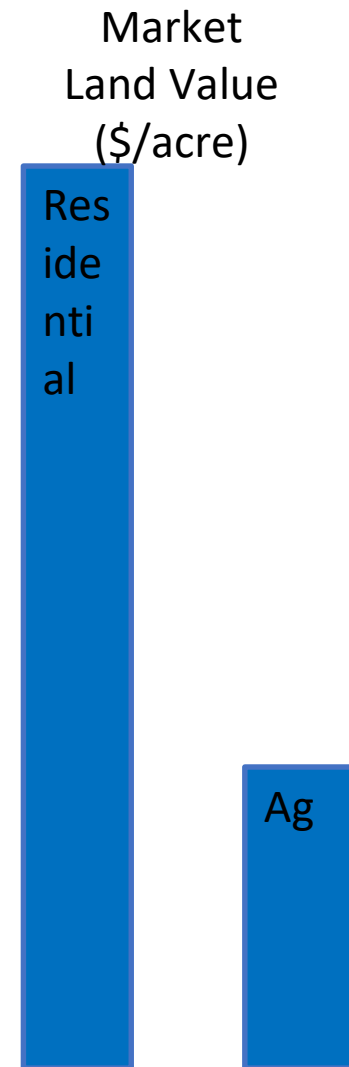


Table 1. Farmland Preservation by State in the Northeast/ Mid-Atlantic

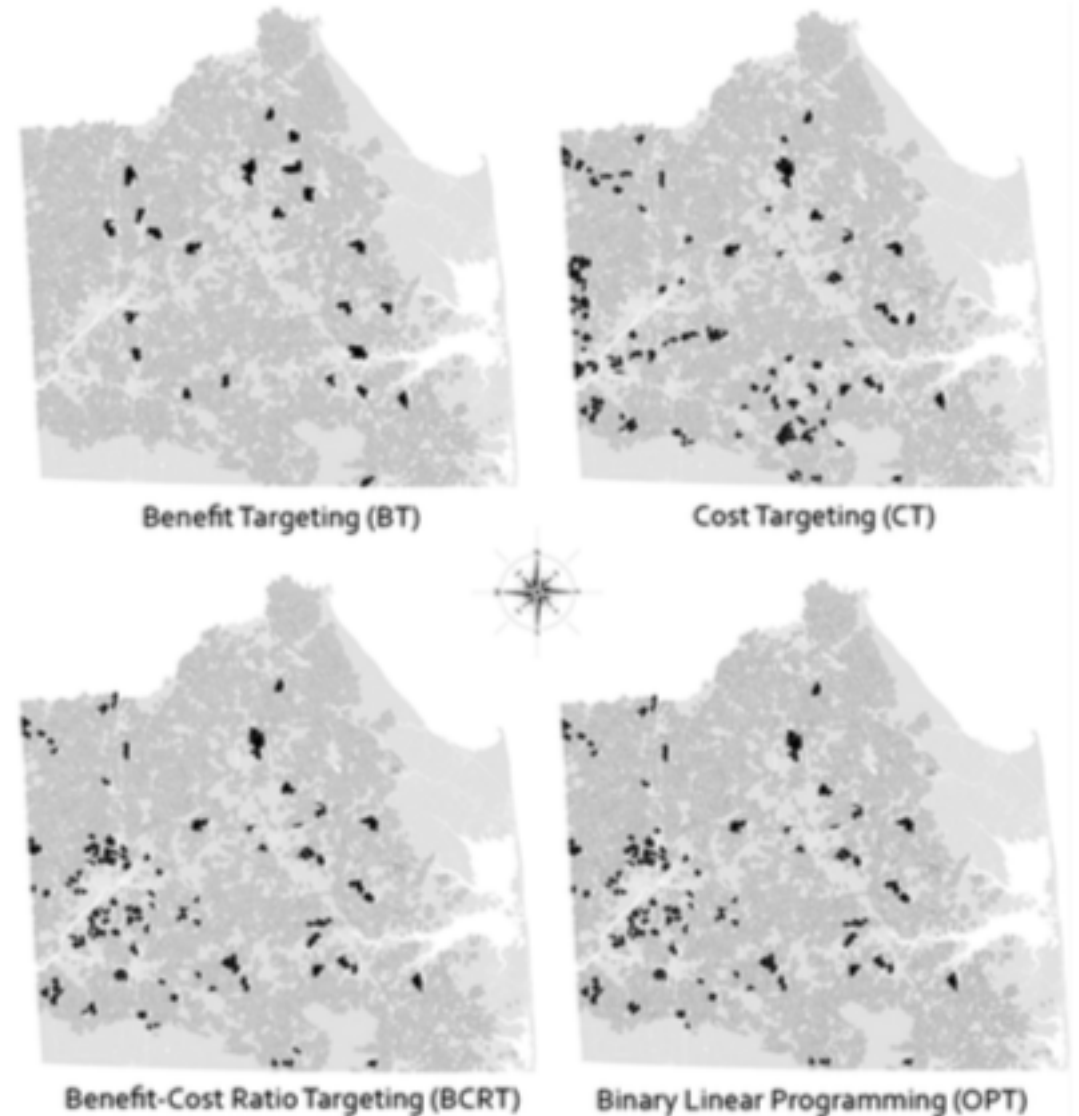
State	Acres Protected	Land in Farms (acres)	% of Farmland that is Protected
New Jersey	219,379	715,057	30.7%
Delaware	118,344	508,652	23.3%
Maryland	384,987	2,030,745	19.0%
Massachusetts	71,268	523,517	13.6%
Vermont	153,034	1,251,713	12.2%
Rhode Island	7,061	69,589	10.1%
Connecticut	40,518	436,539	9.3%
Pennsylvania	516,415	7,704,444	6.7%
New Hampshire	17,259	474,065	3.6%
New York	59,510	7,183,576	0.8%
Maine	9,716	1,454,104	0.7%
Virginia	17,314	8,302,444	0.2%

Source: AFT 2016b for “Acres Protected,” and this source also reports data for acres of “Land in Farms” from 2012 Census of Agriculture by the United States Department of Agriculture’s National Agricultural Statistics Service.

“Prioritizing payment for environmental services:
Using nonmarket benefits and costs for optimal
selection” by Duke, et al. *Ecological Economics* 105
(2014) 319–329

Table 3
Comparison of selection results with budget of \$30 million.

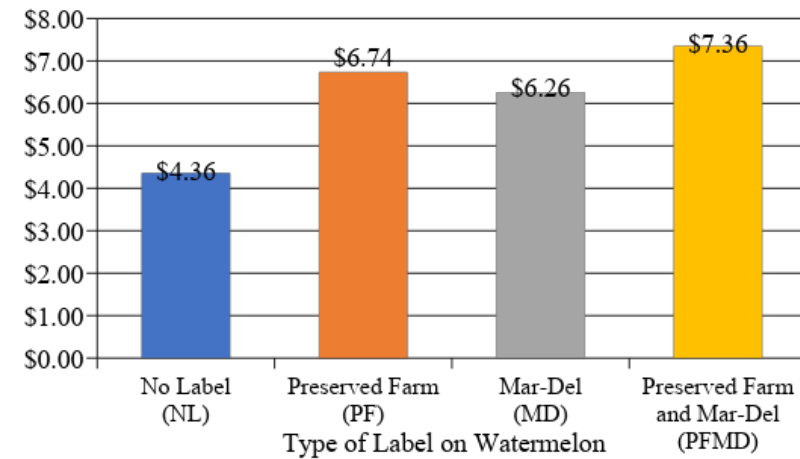
	Benefit targeting (BT)	Cost targeting (CT)	Benefit-cost ratio targeting (BCRT)
Parcels preserved	24	131	119
Acres preserved	8729	19,012	16,746
Total benefits	\$406,680,194	\$606,286,677	\$842,121,826
Total cost	\$29,952,871	\$29,936,518	\$29,990,921
Total net benefits (NB) ^a	\$376,727,323	\$576,350,159	\$812,130,905
% of possible NB	46.388%	70.968%	99.991%



“A Summary of Research on Whether Consumers Will Pay More for Watermelons Grown on Preserved Farmland” by Duke, et al. 2017 ER17-01



Original Label Used in Experiment for a Watermelon that was Grown on Preserved Farmland in Delaware
Design: Madison Spadafino; Property of University of Delaware



Consumers' average willingness to pay for watermelons with various labels