

Examining Changes in Land Use after the Sale of Development Rights on Farms in Rhode Island

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Purchasable development rights (PDR) programs are generally considered to provide permanent protection of farmland because development rights are separated from the land in perpetuity. However, the programs do not require that farming activities be maintained in the future. Farming may be discontinued on PDR parcels due to changes in economic conditions or if the parcels are converted to non-farm, rural estates. Such changes may reduce the flow of public goods that citizens seek to obtain by implementing PDR programs. We examine changes in land use on PDR parcels to determine if current activities are consistent with program goals. While changes have occurred in the crops and livestock produced on Rhode Island farms, over time, all of the farms on which development rights were purchased during 1985 through 1999 are currently being farmed by the original owners or by new operators who have either purchased or leased the land.

Public programs to preserve farmland, forest land, and open space have been implemented throughout the United States and in several other countries (Coughlin and Keene 1981; Aiken 1989; Buist et al. 1995; Alterman 1997). Many of the programs involve significant public expenditures for the purchase of land, development rights, or conservation easements. Farmland is often preserved by state or local governments by purchasing development rights or limiting the tax assessment value of agricultural land. In general, those programs have been implemented to slow the rate at which farmland is converted to non-farm uses and to maintain agricultural activities in regions where development pressure has increased with rising populations and higher levels of income (Roberts 1982; Klein and Reganold 1997; Daniels 1999). Resi-

dents supporting farmland preservation programs hope to maintain farming as a way of life in their communities and to sustain the flow of public goods generated by farming activities, such as the provision of scenic views, watershed protection, and wildlife habitat (Halstead 1984; Bergstrom et al. 1985; Beasley et al. 1986; Drake 1992; Bowker and Didychuk 1994; Pruckner 1995; Kline and Wichelns 1996; McLeod et al. 1999).

Among the policy tools available for preserving farmland, agricultural zoning and use-value assessment programs are generally viewed as temporary measures that will, at best, slow the rate of conversion of farmland to non-farm uses. The zoning status of farmland parcels can be changed at any time by public officials in response to landowner requests or pressure from developers, and use-value assessment contracts generally are not permanent. Many states attempt to discourage farmers from ending their contracts by imposing taxes retroactively on the difference between full market value and agricultural use value when contracts are terminated prematurely (Keene 1981; Reganold 1986; Tremblay et al. 1987; Daniels and Bowers 1997, pp. 92–96). However, when the potential gains from development exceed the financial penalties for early termination, farmland owners have an incentive to terminate use-value agreements and

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develop their land (Lapping 1980; Nelson 1990). The lack of permanence provided by agricultural zoning and use-value assessment programs motivated public officials to develop more effective measures for preserving farmland, beginning in the 1970s and 1980s (Pfeffer and Lapping 1994; Buist et al. 1995).

Efforts to provide more effective, long-term retention of farmland resulted in the design of purchasable and tradable development rights programs in which the right to develop land is viewed as a separable component of the bundle of property rights pertaining to fee simple ownership (Buckland 1987; Daniels 1991; Wright 1994). Purchasable development rights (PDR) programs enable state and local governments to purchase that component of property rights from willing landowners, while tradable development rights (TDR) programs allow the rights to be traded among individuals wishing to develop land in regions where the total amount of development activity is limited (Johnston and Madison 1997). In theory, TDR programs enable all landowners to share in the value created by development opportunities, regardless of the zoning status of individual parcels.

The Issue of Perpetuity

Public support for the use of PDR programs to preserve farmland has been very positive in many northeastern states, as reflected in the frequent approval of public bond measures required to finance the programs (Freedgood 1991; Strong 1991; Hallberg 1993; Kline and Wichelns 1994). Much of that support is likely due to the perception that PDR programs will be effective in preserving farmland parcels and farming activity in perpetuity. That perception is understandable, given that most PDR programs require participating farmers to sell their development rights to a state or local government in perpetuity. However, that characteristic of the programs, by itself, is not sufficient to guarantee that participating parcels will always be farmed.

The fundamental reason that perpetual farming is not guaranteed by PDR programs is that most programs do not require that farming or any other specific land use activity is conducted on participating parcels. Rather, PDR programs merely remove the development potential from those parcels by separating the development right from fee simple ownership. The landowner retains the right to either farm or not farm the land, subject to a deed restriction that prevents development.

Two additional issues regarding the likelihood that farming will be maintained in perpetuity on

PDR parcels are the following: 1) In some states, there is an escape clause in PDR contracts that allows a landowner to buy back development rights in the future, subject to requirements specified in legislation or in operating procedures (Daniels 1999; p. 224); and 2) In some states, the size of parcels participating in the programs may be sufficiently small that the farmland will be converted through normal market transactions to private residential estates that no longer involve agriculture or to small-scale "hobby farms" that would not be considered commercial farming operations (Dunford 1981; Storrow and Winthrop 1983; Daniels and Nelson 1986; Nelson 1992).

Conversion of farmland parcels participating in PDR programs to non-agricultural estates may not generate a loss in social net benefits if the estates are maintained in a manner consistent with the public's goals in preserving agricultural land. However, if those goals include preservation of agricultural activities, production of fruit and vegetables for local markets, or provision of scenic vistas, there may be a loss in social net benefits if the new owners choose not to farm the property, or they construct fences or plant hedgerows that restrict the view of open space from public roads. Such actions and decisions by private landowners generally are not prevented by deed restrictions placed on land to which development rights have been sold.

The issue regarding perpetuity of farming activities is an important policy question because PDR programs involve large expenditures that the public may have approved with the expectation that farming activities would be maintained in perpetuity on participating farms. If perpetuity is not guaranteed, then the public net benefits generated by PDR programs may be smaller than the net benefits envisioned when the programs were designed and funding was approved. In addition, it is possible that the deed restrictions placed on farmland parcels participating in PDR programs may actually reduce the likelihood that commercial farming activities will be continued on those parcels in perpetuity.

Goals of the Paper

The extent to which farming activities have been maintained on farms participating in PDR programs, over time, is an empirical question that can be answered by examining data describing land use activities on program farms. Any trends observed in farming and other land use activities may provide public officials with useful information regarding the likely success of PDR programs in

maintaining agricultural production and achieving other goals envisioned by residents who support those programs. In addition, empirical information may provide policy makers with insight regarding changes in PDR programs that might enhance the likelihood of achieving program objectives.

The goals of this paper are to examine changes in farming activities that have occurred, over time, on farms participating in PDR programs and to determine if those changes are consistent with program goals. This issue is particularly pertinent in northeastern states, where many of the participating farms are sufficiently small that market forces may encourage their sale to individuals seeking non-agricultural residential estates. To address this issue, we examine the set of farms participating in Rhode Island's PDR program, which was started in 1983. We also compare data regarding land use on Rhode Island farms with similar data from a sample of farms participating in Pennsylvania's conservation easement program. That analysis follows a brief review of the conceptual framework pertaining to the role of PDR programs in preserving farmland and the potential impact of those programs on the farm-level cost of obtaining loans and the development of small rural estates.

Conceptual Framework

The primary goals of most PDR programs are to preserve farmland and farming activities by obtaining and retiring the right to develop selected farmland parcels. Farmers agree voluntarily to sell their development rights in exchange for fair compensation, which is generally determined by subtracting the agricultural value of a farmland parcel from its full market value, which may include development potential. In theory, the remaining market value of a farmland parcel, after its development rights are removed, is simply its value in agricultural production (Esseks and Coughlin 1981; Daniels 1999, p. 221). Hence, PDR programs enable farmers to receive compensation for the development value of their property while retaining ownership, and they may be helpful in maintaining a supply of farmland at prices that reflect agricultural values, rather than development potential (Nelson 1990; Freedgood 1991; Daniels 1997; Daniels and Bowers 1997, p. 148). In addition, farmers wishing to pass farms along to family members may do so without generating large inheritance tax obligations based upon development values (Daniels 1991).

These characteristics of PDR programs seem to be consistent with efforts to support and maintain

agricultural production in regions where developers compete with farmers in the market for agricultural land. However, it is possible that the areal extent of commercial farming may decline after a PDR program is implemented. The sale of development rights to farmland reduces the equity value of the land because it can no longer be developed. Hence, farmers who have sold their development rights may have difficulty obtaining loans to finance annual operating expenses and long-term investments in farming operations. That difficulty may increase the cost of farming, over time, while constraining efforts to maintain and improve agricultural land and equipment.

Farmland that can no longer be developed may also be attractive to individuals seeking a rural estate on which to live and, perhaps, conduct hobby farming activity. Pope (1985) suggests that the desire to buy farmland for the purpose of "touching, feeling, and experiencing" a rural homesite or retreat generates a "consumption value" that is not reflected in the productive value of agricultural land. Consumption value may be particularly pertinent in areas where development pressure has led to implementation of a PDR program, as many urban or suburban residents of those areas may be willing and able to purchase small parcels of farmland for the purpose of creating a rural estate. As a result, the market value of farmland parcels on which development rights have been sold may appreciate, over time, with increasing demand for rural estates.

The market value effect of an increasing demand for rural estates may negate many of the intended benefits of a PDR program in some areas. For example, if the market value of PDR parcels rises substantially in response to the demand for rural estates, farmers may become unable to purchase or rent those parcels to sustain or expand their farming operations (Daniels and Nelson 1986; King 1988; Buist et al. 1995). In addition, many of the public goods provided by protected farmland may not be generated if small parcels are purchased by individuals who choose to discontinue farming or to enhance their privacy by planting trees or installing fences around the property.

The conversion of PDR parcels from commercial farms to rural estates is already occurring in King County, Washington. In 1979, county residents approved a \$50 million bond issue to support farmland preservation and the county has since obtained the development rights on more than 12,000 acres of farmland (Dunford 1981; Spellman 1984; Reganold 1986; Daniels 1991). Several farms in the King County program have been sold and subdivided into rural residential estates in recent years,

Table 1. Changes in Farmland Area and Average Farm Size in Rhode Island 1964 through 1997

Census Year	Farmland Area			Average Farm Size		
	Total Farmland	Cropland	Harvested Cropland	Total Farmland	Cropland	Harvested Cropland
		(Acres)			(Acres per Farm)	
1964	103,801	45,233	28,897	94	48	35
1969	68,720	31,840	21,553	98	53	40
1974	61,068	29,078	21,422	102	54	42
1978	66,233	32,418	23,704	98	52	42
1982	62,466	28,180	21,252	86	43	37
1987	58,685	26,121	18,498	84	44	35
1992	49,601	24,411	18,136	76	41	35
1997	55,256	25,611	19,019	75	39	31

Source: 1997 Census of Agriculture, Rhode Island State and County Data (USDA 1999).

in a manner that is consistent with restrictions included in the agreement signed by participating farmers (Dudley 1998, 1999). In particular, farmers may reserve the right to build up to one home-site per 35 acres, and they may subdivide their property into parcels as small as 10 acres in some areas and 20 acres in others (Herring, 2000; King County, 2000). Dudley (1998) reports that from three to six homes are built each year on the 217 farms participating in the Farmland Preservation Program, and the price of land on some participating farms greatly exceeds the state average price of farmland (Dudley 1999).

In summary, it is possible that the fundamental characteristic that makes the purchase of development rights a viable policy tool for preserving farmland may actually raise the cost of farming on PDR parcels and may stimulate the conversion of some parcels to rural residential estates. Removing the development value from farmland reduces the equity value of that land, causing an increase in the farm-level cost of borrowing funds. In addition, non-farm individuals seeking small rural estates may purchase PDR parcels at lower prices than those that would reflect full development potential. We examine the extent to which farming activities have changed on PDR parcels as a result of these phenomena, or due to general changes in local and regional demands for agricultural products, by examining data from the Rhode Island PDR program.

Empirical Analysis

The PDR Program in Rhode Island

Rhode Island is a small state with a population density of 948 persons per square mile (the second highest in the United States), large areas of woods

and wetlands, and ocean beaches that attract millions of tourists each year. The areal extent and economic importance of agriculture in Rhode Island have declined, over the years, in a pattern similar to that observed in other states. Total farmland area declined from 103,801 acres in 1964 to 55,256 acres in 1997, while the area planted in crops and pasture declined from 45,233 acres in 1964 to 25,611 acres in 1997 (table 1). The area harvested declined from 28,897 acres to just 19,019 acres during that period. The average size of farms has also declined, over time, falling from 102 acres in 1974 to 75 acres in 1997. The average cropland area on Rhode Island farms was 39 acres in 1997, while the average area of cropland harvested was just 31 acres.

The type of farming conducted in Rhode Island has also changed, over time, with changes in local and regional demands for agricultural products. In particular, many dairy farms and much of the state's potato production have been replaced by turfgrass farms and the production of fruit and vegetables for sale at roadside markets. These changes are consistent with the increasing demands for turfgrass at construction sites in northeastern states and for locally grown fruit and vegetables within Rhode Island.

The decline in farmland area observed during the 1960s motivated the state legislature to pass a use-value assessment program in 1968 "to maintain a readily available source of food and farm products close to the metropolitan areas of the state (Aiken 1989)." In 1981, the legislature approved the state's purchasable development rights program with the goals of preserving agricultural soils and maintaining agricultural activity in Rhode Island. Applications to sell development rights were accepted beginning in 1983 and the first purchase was made in 1985. Since that time, the state has

Table 2. Summary Statistics Describing the Rhode Island Purchasable Development Rights Program

Appraised Value of Developmental Rights	Nominal Dollars	1999 Dollars
Average Value (\$/acre)	8,877	11,098
Lowest Value (\$/acre)	1,815	2,556
Highest Value (\$/acre)	26,290	33,512
Total Value (\$)	28,913,089	35,922,217

Prices Paid for Developmental Rights	Nominal Dollars	1999 Dollars
Average Value (\$/acre)	6,327	7,860
Lowest Value (\$/acre)	1,815	2,556
Highest Value (\$/acre)	20,548	28,937
Total Value (\$)	20,479,897	25,442,279

Note: Nominal values are adjusted using the consumer price index for all urban consumers, U.S. Bureau of Labor Statistics.

acquired the development rights to 3,237 acres of land on 42 farms located in 15 of the 39 cities and towns in Rhode Island.

Many of the PDR farms in Rhode Island are located in areas with significant development pressure, as reflected in the appraised values and prices paid for development rights. The appraised values range from \$1,815 to \$26,290 per acre in nominal dollars, with a weighted average value of \$8,877 per acre (table 2). The prices paid range from \$1,815 to \$20,548 per acre, with a weighted average price of \$6,327 per acre. Prices paid are less than appraised values when a landowner donates a portion of the value of development rights to the state. The total cost of obtaining development rights on the 42 farms is \$25.4 million in 1999 dollars (table 2).

The PDR program in Rhode Island provides a useful opportunity to examine the extent to which small farmland parcels have remained in agriculture or have been converted to residential estates after development rights have been sold. Many farms in the state are smaller than typical farms in other states, and there is significant development pressure in many areas. The average farm size in the PDR program is 77 acres, which is nearly the same as the 75-acre average farm size in Rhode Island in 1997 (table 1). Farms in the program range in size from 16 acres to 223 acres. Twenty-six of the farms (62%) are smaller than 75 acres, while 16 of the farms (38%) are smaller than 50 acres. Many of the farms are located near coastal areas that may be attractive to individuals seeking small, rural estates. In addition, Rhode Island is within a reasonable weekend commuting distance from Boston, Hartford, and New York City.

Farming Activities on Participating Farms

We have reviewed the application forms completed by farmland owners when they made their farms available for participation in Rhode Island's PDR program. The applications describe the type of farm operation, the major crops produced, numbers of livestock, the assessed valuation, the age of farmland owners, and their reasons for wishing to sell development rights. We use those data to determine farm type, which we define as the activity in which the farm is primarily engaged, to be consistent with the definition used in the Census of Agriculture (USDA 1999). Twelve of the 42 farms (29%) participating in the Rhode Island program were dairy farms at the time the applications were prepared, while six of the farms (14%) were potato farms (figure 1). Five of the farms (12%) were turfgrass farms, while seven (17%) were fruit or vegetable farms. Other farm types include beef cattle operations, horse farms, field crop farms, and nurseries.

We determined the current farm type for all of the 42 PDR farms by interviewing staff members at the Division of Agriculture, within Rhode Island's Department of Environmental Management, and at the Rhode Island office of the Natural Resource Conservation Service. We also obtained information from members of the state's Agricultural Land Preservation Commission, which implements the PDR program. These sources of information are particularly helpful in a small state with relatively few farms. Staff members at state and federal agencies with an agricultural mission are familiar with most farmers in the state; particularly those who have chosen to participate in the PDR program. This is also true for several members of the Agricultural Land Preservation Commission. Hence, we were able to obtain accurate and reliable information regarding current farm types without conducting a survey of participating farmers.

Six of the 12 dairy farms in the program have been converted to an alternative farm type since the development rights were sold (figure 1). Two of those have been converted to vegetable farms, while one has become a horse riding stable and one has become a replacement heifer operation. Three of the six potato farms in the PDR program have become vegetable farms, while two of the six farms have become field crop farms. One of the potato farms has become a fruit farm, as it was purchased by an adjacent farmer and planted in grapes. Four of the five turf farms in the PDR program remain in that category, while one of the farms has been converted to a vegetable farm. One of the 42 farms, which was originally a field crop

Number of Farms

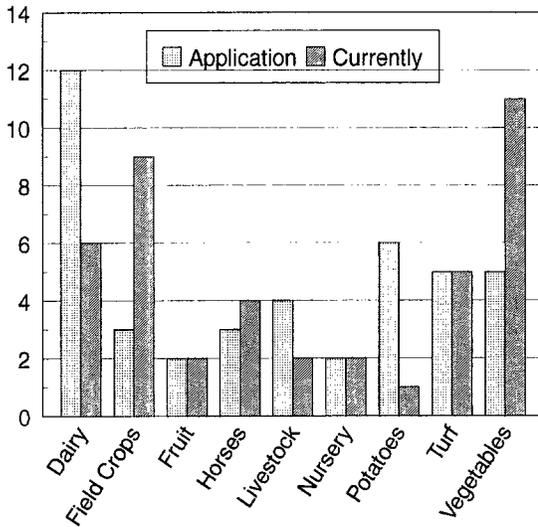


Figure 1. Primary Farm Activities at Time of Application and Currently

farm, was sold to new owners who have purchased several horses and beef cows, and established a pasture to support the livestock. It is not yet clear whether that 56-acre farm will be operated as a commercial livestock farm or a hobby farm, but the owners appear to be interested in maintaining the agricultural operation.

The changes observed on PDR farms since the sale of development rights on those parcels are very similar to changes observed on other farms in Rhode Island. For example, the number of dairy farms in Rhode Island has declined continuously from 359 in 1964 to just 45 in 1997 (table 3). The number of dairy cows has declined from more than 10,000 in 1964 to just 2,239 in 1997. The number of potato farms has declined from 89 in 1964 to 16 in 1997, while the area planted in potatoes has declined from 4,925 acres to just 788 acres during

that period. The number of vegetable farms and the area planted in vegetables have remained relatively constant in Rhode Island from the late 1960s through 1997.

Direct comparisons of proportional changes in farm types on PDR farms and on the larger set of farms described in agricultural census data cannot be made because the census data represent specific points in time, while the entry of farms into the PDR program and changes in farm type have occurred throughout the period 1985 through 1999. However, it appears that the rate at which dairy farms have been converted to another farm type is similar in both the PDR program and the census data. As noted above, 50% of the dairy farms that have entered the PDR program since 1985 had been converted to another farm type by the year 2000 (figure 1). The census data suggest that there were 123 dairy farms in Rhode Island in 1982 and 70 dairy farms in 1987 (table 3). Taking the midpoint of those numbers as an estimate of the number of dairy farms in 1985 (96 farms) suggests that the number of dairy farms in the state declined by 53% between 1985 and 1997.

A similar exercise pertaining to potato and vegetable farms suggests that the rates of change in those farm types has been higher on PDR farms than on farms in the statewide census. For example, 83% of the farms that entered the PDR program as potato farms have been converted to another farm type (figure 1), while the number of potato farms in the state declined by about 26% between 1985 and 1997 (table 3). The number of vegetable farms in the PDR program has doubled, over time (figure 1), while the number of vegetable farms in the statewide census increased by about 15% between 1985 and 1997 (table 3). Further work is required to determine if participation in the PDR program has allowed some potato farmers to convert their farm operation to an alternative activity more quickly than has been possible on other

Table 3. Changes in Farming Activities in Rhode Island 1964 through 1997

Census Year	Dairy Farms		Potato Farms		Vegetable Farms	
	Number of Farms	Number of Cows	Number of Farms	Acres	Number of Farms	Acres
1964	359	10,448	89	4,925	156	1,661
1969	177	6,547	n/a	n/a	126	2,088
1974	145	6,106	44	4,344	123	1,891
1978	135	4,677	35	3,535	135	2,208
1982	123	3,872	21	2,879	120	1,908
1987	70	2,975	22	1,410	99	1,947
1992	55	2,565	19	1,310	126	1,868
1997	45	2,239	16	788	126	1,907

Source: 1997 Census of Agriculture, Rhode Island State and County Data (USDA 1999). Data for potato farms in 1969 are not available.

farms, or if potato farmers wishing to convert their operation joined the PDR program with greater frequency than potato farmers who wished to continue in that endeavor. Similarly, it is possible that participation in the PDR program has enhanced the conversion of potato farms and dairy farms to vegetable farms, but further work is required to investigate such a hypothesis.

In summary, the data describing changes in farm type on PDR farms during 1985 through 1999 are generally consistent with trends observed in Rhode Island agriculture during those years. In addition, it appears that all of the farms on which development rights were sold remain in agriculture in the year 2000. Many of the dairy farms and potato farms have been converted to other farm types, including turf farms and vegetable farms. Some of the PDR farms have been sold to new owners since the sale of development rights, while others have been leased to farmers wishing to expand their operation. At least one of the farms has been leased by a farmer who produces vegetables for retail sale at several locations in Rhode Island. Further analysis of prices actually paid by farmers to purchase or lease land on participating farms is required to determine if the program is achieving its goal of enabling farmers to obtain agricultural land at prices that reflect only agricultural use values.

Comparison with Results from Pennsylvania

Maynard et al. (1998) conducted a survey of farmers who participated in Pennsylvania's agricultural conservation easement program, which was implemented in 1989. The state purchased 205 conservation easements on 24,347 acres of land, at a total cost of \$51 million during the first three years of the program. The average cost of those easements was \$2,090 per acre. By May 1997, the state had purchased 750 easements on 94,283 acres, at a total cost of about \$184 million. The Pennsylvania program is much larger than the Rhode Island program and the average size of participating farms in Pennsylvania (119 acres) is 55% larger than the average size of farms in the Rhode Island program (77 acres). However, several comparisons regarding participation and farm activities are noteworthy within the context of this paper's goals.

The age distribution of the 161 farmers who responded to the survey conducted by Maynard et al. (1998) is very similar to the age distribution of farmers who have sold development rights in Rhode Island. While the Pennsylvania program has attracted some farmers younger than 35, the majority of participants in both states are older than 55 (figure 2). This result is consistent with the

Proportion of Farmers (%)

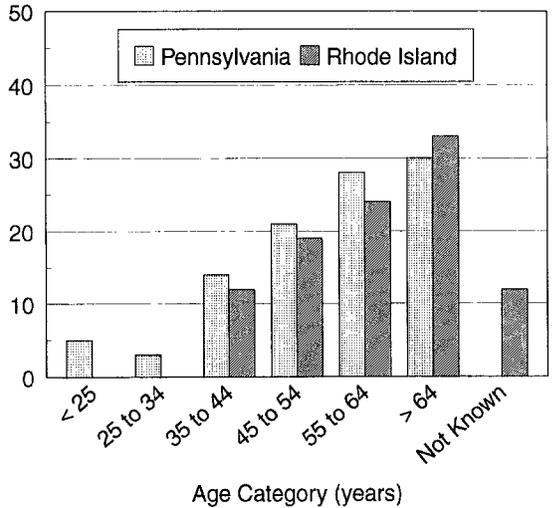


Figure 2. Age Distribution of Farmers Participating in the Pennsylvania and Rhode Island Programs. Note: The data for Pennsylvania appear in the paper by Maynard et al. 1998.

notion that some farmers approaching retirement age will sell development rights to obtain the development value for their property, while retaining ownership of the farm. Older farmers operating dairies or raising beef cattle may view participation in a PDR program as an opportunity to sell their herds and convert their farms into a less demanding agricultural activity or to lease their land to other farmers. Maynard et al. (1998) note that 12 of the 15 respondents to their survey who reported changing their primary farm product after the sale of a conservation easement were more than 65 years old. In addition, 11 of those 12 individuals were dairy farmers who switched to producing grain or field crops after the sale (table 4).

The primary production activity has changed on 17 of the 42 PDR farms in Rhode Island, and six of those farms were dairy farms when the development rights were sold (table 4). The proportion of farmers changing primary activities after selling their development rights is higher in Rhode Island than in Pennsylvania, but that difference can be explained largely by differences in the age of the PDR programs and the years in which the data that appear in table 4 were compiled. The first development rights were purchased in Rhode Island in 1985 and the program has remained in place through 1999. Hence, the data we compiled in the spring of 2000 include farms that have been in the program for 1 to 15 years. The data reported by Maynard et al. (1998) were collected in a spring, 1994 survey of farmers who sold development

Table 4. Changes in Farming Activities Observed on Farms Participating in Purchasable Development Rights Programs in Rhode Island and Pennsylvania

Item	Rhode Island		Pennsylvania	
	Number	Percent	Number	Percent
Total Farms in Sample	42		161	
Changed Primary Activities	17	40	15	9
Dairy Farms to Non-Dairy	6	14	11	7

Notes: Data for Rhode Island include farms that sold development rights from 1985 through 1999. Data for Pennsylvania include farms that sold conservation easements from 1989 through 1992. The survey in which those data were collected was conducted in the spring of 1994 (Maynard et al. 1998).

rights during December, 1989 through December, 1992. Hence, the farms included in that survey had been in the program for only 1.5 to 5 years. It is reasonable to expect that a higher proportion of changes in primary activity will be observed in the Rhode Island data.

Summary and Conclusions

Although purchasable development rights programs cannot guarantee that participating farms will remain in agricultural production in perpetuity, most of the PDR farms in Rhode Island remain viable commercial operations at this time. Half of the dairy farms in the program have been converted to riding stables or field crop farms, but the land remains in agriculture. Similarly, several of the potato farms have been converted to turfgrass farms or to production of fruits and vegetables for sale at roadside markets. These conversions are consistent with trends observed in Rhode Island agriculture in recent years.

The results obtained in this study should not be viewed as conclusive evidence that purchasable development rights programs ensure that viable commercial farming operations will be maintained on program farms in perpetuity. Rather, the results simply suggest that during the 15 years in which Rhode Island has been purchasing development rights to farmland, agricultural production has been maintained on all of the participating farms. Many of the parcels remain with the original owners, while some have been sold or leased to other farmers. At this time, the program appears to be achieving its goals of preserving agricultural soils and helping farmers maintain viability by enabling them to purchase and lease land at prices that can be supported by agricultural activities.

Development pressure remains strong in Rhode Island and residents continue to approve bond measures for preserving farmland and open space. Applications from farmers hoping to sell their development rights are received each month, and the

estimated dollar value of rights that have been offered for sale in approved applications is currently much greater than the sum of funds available in the program. Given the nature of this imbalance between the demand and supply of PDR funds, public officials have the opportunity to consider very carefully the potential long-term impacts of a PDR program on agricultural viability, both on individual farms and throughout the state. Further research in Rhode Island and elsewhere regarding the role of PDR programs on farm-level investment decisions and on the price and availability of farmland for sale or for rent would be helpful to public officials considering those issues.

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