

*Sustaining Agriculture in Urbanizing Counties: Insights from 15 Coordinated Case Studies* (a study funded through a grant from the National Research Initiative of USDA's Cooperative State Research, Education, and Extension Service: Grant #2004-35401-14944)

## **Chapter 3: Inputs of Agricultural Production—Land<sup>1</sup>**

### **1. Introduction**

In urbanizing but still agriculturally important areas, farmers and ranchers face obstacles to their use of land that tend to be more frequent or intense than in areas under less development pressure.<sup>2</sup> This chapter is arranged around four such threats and public policies to minimize the four:

1. A reduction in the physical supply of farmable land due to conversion to residential and other developed uses.
2. Very high purchase prices for much to almost all remaining farmable land—driven up by speculators, buyers of farmettes or estates intending to farm as a hobby, and commercial farmers moving their operations from more urbanized counties and using the proceeds from the sale of that more expensive land to outbid local farmers where they relocate.
3. With the land's rising market value, there is the potential for higher property-tax bills that threaten farm profitability.
4. Constraints on managerial freedom to farm imposed by local government ordinances or by private complainants who seek to prevent perceived agricultural nuisances like livestock smells, dust, farm machinery noises, and customer traffic to and from farm stands.

The policy tools that have been applied to these problems in two or more of our 15 counties include:

- for the first and second threats, agricultural protection zoning, urban growth boundaries, purchase of development rights, and transfer of development rights;
- for the third threat, agricultural use-value assessment for property-tax purposes; and
- for the fourth threat, state and local “right-to-farm” laws that instruct the courts (and potential complainants) as to what should and should not be considered an agricultural nuisance.

### **2. Conversion of Land Out of Agriculture**

The population growth figures for the 15 counties (Table 1.1 in Chapter 1) suggest considerable land conversion, and our interviews with agricultural leaders indicated significant losses in farmable land. However, they could theoretically be offset by market prices and/or input-cost conditions that promote planting or pasturing additional ground. The data from Table 3.1 on land use as recorded by the Censuses of Agriculture illustrate both types of changes—losses and gains

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<sup>1</sup> The principal authors of this chapter are: Dick Esseks, Mark Lapping, and Anita Zurbrugg.

<sup>2</sup> As explained in Chapter 1, besides employing data from the every-five-year federal Census of Agriculture, we surveyed by mail random samples of 100 to 174 agricultural landowners in each county, and we interviewed by phone or in person 15 to 36 local ag leaders. Given the sampling biases that may result from those modest numbers per county of the second and third type of source, the following discussion emphasizes points of agreement between the agland owners and leaders.

in cropland and pastureland. However, before discussing them in detail, we must explain an element of complexity in this table. There are separate entries for the 1997-to-2002 comparisons and those for 1987 to 1997. After the National Agricultural Statistics Service took over responsibility for the Census of Agriculture in 1997, sampling procedures changed so that more farm operations were included than possible under previous procedures. However, the estimates initially published for 1997 were consistent with the earlier, smaller sampling frames. Consequently, for measuring possible losses or gains in farmland, we chose to search for changes between (1) the 1987 census entries and the initial 1997 figures and (2) the later-published, adjusted 1997 entries compared to the 2002 figures.

When applied to our 15 counties, these comparisons across time include cases of:

- countywide reductions in overall land in farms, as well as decreases in harvested cropland and pastureland, in both time periods—1987 to 1997 and 1997 to 2002 (as found in King, Dane, Berks, and Larimer counties—see Table 3.1);
- countywide reductions in total acres in farms in both period, but increases during one or more periods in either cropland or pastureland (DeKalb, Madison, Carroll, Fayette, and Palm Beach counties);
- decreases in overall acres in farms in one period but not the other, with growth in either cropland or pastureland in at least one time period (Ventura, Lancaster, and Orange counties); and
- increases in total acres for both periods (Sonoma, Dakota, and Burlington counties).

In summary, according to Table 3.1, there were nontrivial losses in recorded land in farms in 12 of the 15 studied counties. Some of the reductions were impressive in size—like Ventura County’s 45,344-acre drop between the 1997 and 2002 censuses, the 44,001-acre decrease for Dane County during the same period, and the 73,581-acre reduction estimated for Palm Beach County. Except for three counties, we lacked information on how much these changes were due to development rather than to such factors as converting farmland to hunting and other recreational uses. One of the exceptions is Dane County, where a study by the Regional Planning Commission found that “about half of the farmland lost comes from rural growth—including rezoning land in the towns; the other half comes from annexation by cities and villages” (Dane County Executive, 2000, p. 4). The second exception is Dakota County, where the Planning Department estimated, “Agricultural lands are being converted to residential and commercial areas at a rate of 2000–3000 acres per year” (Dakota County Office of Planning, 2002, p. 1). DeKalb County is the third. Its director of planning and zoning told us, “The reduction in total farm acreage is almost entirely the consequence of annexation to municipalities for the purpose of residential and commercial development.” As will be discussed later, DeKalb County’s zoning for unincorporated areas had effectively stopped the creation of rural subdivisions.

It seems likely that some significant parts of the farmland acreage loss in the other counties also derived from urban or suburban development. Data from Table 3.2 on the median price of owner-occupied homes suggest a strong demand for new housing units in the 14 studied counties for which we have price figures for both 2000 and 2006. Between those two years, the estimated increases in countywide medians ranged from 35.5% (Lancaster) to 160.6% (Ventura). For eight of the counties, their growth in market value was greater than the increase for the nation as a whole, 54.9%.

<b>Table 3.1: Changes in Total Acres in Farms, Harvested Cropland, and Land in Pasture Use</b>						
<b>County</b>	<b>Changes in Total Acres (1997 to 2002)* in:</b>			<b>Changes in Total Acres (1987 to 1997)** in:</b>		
	<b>All Land in Farms</b>	<b>Harvested Cropland</b>	<b>Pastureland (All types)</b>	<b>All Land in Farms</b>	<b>Harvested Cropland</b>	<b>Pastureland (All types)</b>
<b>Pacific Coast</b>						
King County, WA	-10,488 <sup>3</sup>	-1,222	-5,318	-12,519	-1,682	-9,031
Sonoma County, CA	20,050	11,560	19,536	21,265	-5,924	-64,643
Ventura County, CA	-45,344	-11,826	-22,312	17,319	4,106	23,300
<b>Corn Belt</b>						
Lancaster County, NE	10,184	19,593	-1,069	-27,197	21,580	-4,544
Dakota County, MN	9,010	6,774	-1,957	1,396	27,324	-2,157
Dane County, WI	-44,001	-7,034	-13,794	-56,966	-16,523	-13,322
DeKalb County, IL	-15,980	-15,738	399	-16,201	58,848	-5,373
Madison County, OH	-23,565	-15,973	-1,327	-4,899	23,052	-8,308
<b>Mid-Atlantic</b>						
Carroll County, MD	-20,619	-4,726	-3,741	-6,565	42	-3,419
Berks County, PA	-24,131	-23,587	-2,805	-21,749	-6,507	-2,585
Burlington County, NJ	7,610	-1,274	-1,331	443	7,476	2,766
Orange County, NY	5,252	372	-8	-20,157	-5,582	-7,048
<b>Highly Scenic and Recreational</b>						
Larimer County, CO	-13,184	-20,656	-8,227	-32,543	-3,751	-24,195
Fayette County, KY	-19,508	-4,505	-15,945	-19,671	1,698	-14,737
Palm Beach County, FL	-73,581	-34,550	3,035	-54,735	-44,020	-38,430

\*Source: U.S. Department of Agriculture, National Agricultural Statistics Service, *Census of Agriculture*, 1997 and 2002.

\*\*Source: U.S. Bureau of the Census, *Census of Agriculture*, 1987 and 1997.

<b>Table 3.2: Changes in Median Price of Owner-Occupied Homes, 2000 to 2006</b>								
<b>County</b>	<b>2000<sup>1</sup> (\$)</b>	<b>2006<sup>2</sup> (\$)</b>	<b>Percentage change</b>	<b>County</b>	<b>2000<sup>1</sup> (\$)</b>	<b>2006<sup>2</sup> (\$)</b>	<b>Percentage change</b>	
<b>Pacific Coast</b>				<b>Mid-Atlantic</b>				
King County, WA	236,900	394,100	66.4%	Carroll County, MD	162,500	363,800	123.9%	
Sonoma County, CA	273,200	618,500	126.4%	Berks County, PA	104,900	149,700	42.7%	
Ventura County, CA	248,700	648,000	160.6%	Burlington County, NJ	137,400	259,300	88.7%	
<b>Corn Belt</b>				Orange County, NY				
Lancaster County, NE	105,900	143,500	35.5%	<b>Highly Scenic and Recreational</b>				
Dakota County, MN	152,400	247,900	62.7%	Larimer County, CO	172,000	244,000	41.9%	
Dane County, WI	146,900	225,700	53.6%	Fayette County, KY	110,800	156,400	41.2%	
DeKalb County, IL	135,900	189,000	39.1%	Palm Beach (FL)	135,200	328,500	143.0%	
Madison County, OH	104,300	Not available	Not available	<b>United States as a whole</b>		119,600	185,200	<b>54.9%</b>

<sup>1</sup>Median value for "Single-family owner-occupied homes."

<sup>2</sup>Median value for "Owner-occupied homes." Since both the definition of who should answer the question ("Answer questions 19–23 ONLY IF you or someone else in this household OWNS or IS BUYING this house, apartment, or mobile home") and the wording of the question about estimating housing value were identical for 2000 and 2006, it seems likely that those two years' median prices are comparable.

Source: U.S. Census Bureau, *American FactFinder* ([http://factfinder.census.gov/home/saff/main.html?\\_lang=en](http://factfinder.census.gov/home/saff/main.html?_lang=en)).

<sup>3</sup> The published 2002 figure for total land in farms, 41,769 acres was, according to a King County land-use expert, very close to her office's "relatively stable" (over time) measure of land designated for Agricultural Production Districts (APDs). As discussed later in this chapter, county policy was to preserve that land or, if any acres were converted, to require compensating acres from properties outside the APDs. The interviewees' data suggest that policy was successful. Land outside the APDs may have been developed, but there was apparently little net loss of agricultural land inside them.

In doing the comparisons for Table 3.1, we noticed that countywide reductions in pastureland were proportionally greater<sup>4</sup> than the decreases in harvested cropland for all but two of the counties in the 1987-to-1997 comparisons and in 10 of the 15 cases for 1997 to 2002. Greene and Stager (2001) offer an explanation generally applicable to counties in the arid West. They found evidence in the 1997 Natural Resources Inventory data that, as cropland is converted to urban uses, farmers compensate by using former rangeland for their crops. This source of reduction would be in addition to any development of pastureland for housing and other urban-type uses.

### **3a. Affordability of Amland to Purchase**

**Survey Findings:** If not directly the beneficiaries of inherited farmland or other kinds of land gifts, new farmers typically seek to purchase land rather than be exclusively tenants and risk that the landlords might not renew leases or charge excessive rents. Established owner-operators often also want to buy additional land such as to achieve needed economies of scale. However, during the 2006 surveys we conducted in the 15 studied counties, most respondents did not find affordable the amland that came onto the market for sale. Across the 15 counties, from 30% (in Berks and Burlington) to 62% (DeKalb) of the respondents who assessed affordability<sup>5</sup> chose the response option “Not at all affordable” (Figure 3.1). And from 55% (Burlington) to 85% (DeKalb) selected either that most negative response or “Not very affordable.” Only from 3% (Carroll) to 14% (Burlington) considered the amland prices to be “On the whole very affordable” or “Affordable.”<sup>6</sup> When we limit the analysis to farm operators, the combined percentages of “very affordable” and “affordable” change only slightly.

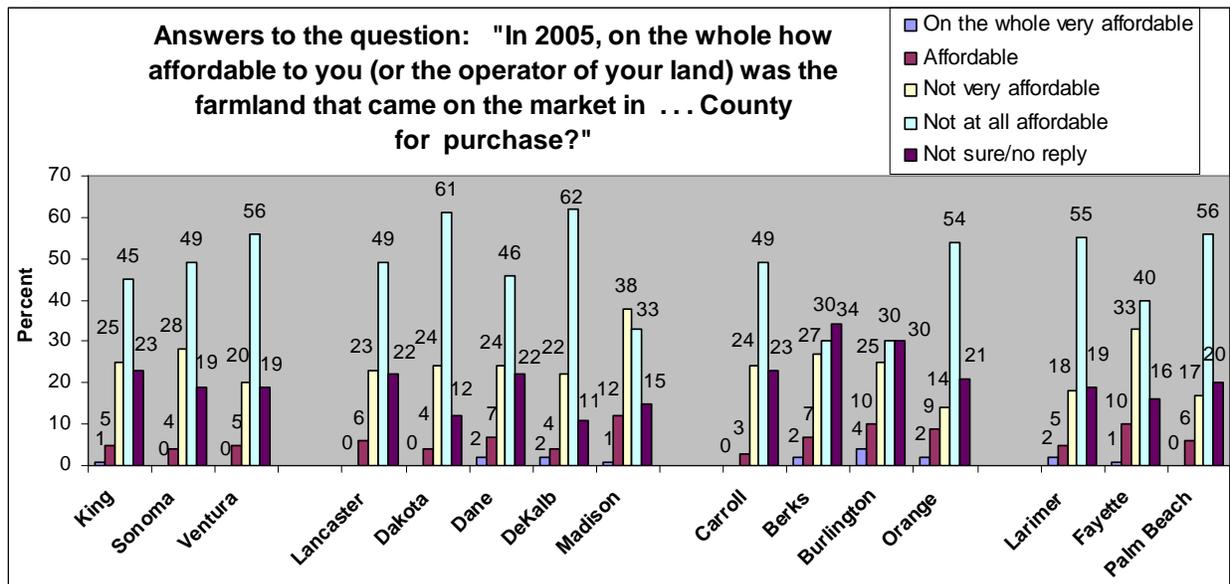
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<sup>4</sup> By “proportionally greater,” we mean, for example, that a county’s recorded decrease in acres in pastureland between 1987 and 1997 comprised a greater percentage of the total acres at the start of the comparison period (1987) than was the reduction in cropland as a percentage of the estimated 1987 total for that type of amland use.

<sup>5</sup> Included in this table are the surveyed amland owners who were either operators of at least some of the land they owned in the subject county or who reported that they had “detailed knowledge about how my farmland there [in the county] is operated.” See Table 1.4 for the numbers per county of operators and these self-classified well-informed non-operators.

<sup>6</sup> A reviewer of an earlier draft of this chapter objected to the finding that as many as 14% of the Burlington County respondents found amland affordable to purchase. “In my . . . years here I have never heard a farmer say anything but that the land is not affordable.” As discussed earlier, since our survey samples were modest in size, the particular percentages that we report here have nontrivial margins of sampling error, as well as suffering from nonresponse error (Table 1.4). Therefore, the survey findings are useful when their general patterns (e.g., relatively few respondents believing agricultural land to be affordable) are supported by the interview findings. Of course, both kinds of data could have the same biases, but the odds of that unhappy coincidence are hopefully small.

**Figure 3.1**



**Interview Findings:** Conducted mostly in 2005 and 2006, our interviews with local experts confirmed the survey respondents’ largely negative assessments of affordability. Here are examples of such opinions (each from a different county):

- “Prices have gone beyond what we can pay; it’s not a viable industry.” (King)
- “None of our farmland sells for its agricultural value because of too much speculation as to what it will be worth.” “I don’t think we sell any land less than \$15,000 to \$20,000 per acre on the low end.” (Burlington)
- “Land values are very high. They are way above its agricultural value. Therefore, when a farm goes on sale, there will not be any farmers that can buy it. It will be sold for recreational purposes—for hunting, horses, and estates.” (Larimer)
- “The climate and soils can sustain production of very high-valued crops, but net agricultural income from the land still falls short of servicing the full land value.” (Ventura)
- “We can’t pay for land from farm profits.” (Lancaster)
- “Because of proximity to urban areas, land sells for three times what it costs in other parts of the state.” (Dakota)
- “Today farmers are competing with developers . . . [who] offer \$20,000 an acre.” (Dane)
- “Because the land price increased to levels that are unprecedented, it’s impossible to buy land and become a farmer—over \$100,000 an acre.” (Palm Beach)

**Exceptions:** Berks County (northwest of Philadelphia) was an exception. Figure 3.1 shows it and nearby Burlington County (east of Philadelphia in New Jersey) having the smallest percentages of surveyed agland owners (30%) regarding farmland that came on the market in 2005 as “Not at all affordable.” The relevant interview responses for Berks County were mixed on this price issue. While some experts were pessimistic, two believed that purchasing land was still feasible. One of them attributed the relatively affordable prices to the county’s large conservation easement program (to be discussed later in this chapter) that protected very substantial amounts

of farmland from development (54,191 acres as of August 2008) and also to the restrictive zoning that several townships practiced.

Geography caused another type of exception in three of the studied counties—land difficult or impossible to develop. The three had considerable acres that were either in the *floodplain* and/or had *soils too wet* for development using current technologies. A University of Nebraska study found that over 30,000 acres of the 100-year floodplain were being farmed in Lancaster County (MacDonald, 2007). If the county commissioners routinely permitted applicants to build on the floodplain, such as after using fill to raise the homes above that floodplain level, land might be almost as expensive there as in upland areas. However, commissioners in office from 2005 to at least mid-2008 have not approved such development, and a local expert estimated for us that floodplain land was going for \$2,750 an acre, while about \$6,000 was then representative of farmland prices outside the plain.

Madison County (west of Columbus, Ohio) has had serious drainage problems. A study by the Ohio Department of Natural Resources found that 40.9% of the county's total acres had "very poorly drained" soils (Madison County Commissioners, 2000, p. 36). In 2000 six communities in the county were "under development permit moratorium because of soil limitations for on-site septic systems" (Madison County Commissioners, 2000, p. 32). As of the 2005 Comprehensive Plan, "Several areas of Madison County . . . [were] under development restrictions because of soil limitation for on-site septic systems" (Madison County Commissioners, 2005, p. 34). Until sewer systems enter the county from the east (i.e., from the Columbus urbanized area), or until one or more of the county's own small cities develop the sewage treatment capacities for substantial expansion, these wet soils may effectively protect much of the county from urban and suburban housing densities.

Orange County (northwest of New York City) is our third studied county with substantial acres of soils considered unsuitable for development. In 2006 it had approximately 8,000 to 9,000 farmed acres of former glacial lakes that were called "muck land" or the "Black Dirt Region" of the county. State regulations protected the land. Moreover, then-current technology did not include economical ways to build houses on it. One local expert told us, "This land doesn't have the properties to support a home foundation unless they drove piles down to the mineral soils." Another specialist observed, "The Black Dirt can't be built on because the soil is too unstable. My dad tried it [many years ago]."

Burlington County had a large quantity of land protected for environmental purposes, but most of it was technically suitable for housing. The southeastern two-thirds of the county belong to the Pinelands National Reserve. A 1978 act of Congress created the reserve where "orderly development" is managed by the public Pinelands Commission "to preserve and protect the significant and unique natural, ecological, agricultural, archeological, historical, scenic, cultural and recreational resources of the Pinelands" (New Jersey Pinelands Commission, 2006). To achieve these purposes, the commission designated "sensitive areas where the amount of development is limited and other areas where growth is encouraged" (New Jersey Department of Banking and Insurance, 2006).

***Factors besides Development Pressures that Inflate Agland Prices:*** Our interviews identified three additional factors that inflated agricultural land prices besides development pressures:

- **Competition from farmers of high-value products:** Wine-grape farmers in Sonoma County, breeders of thoroughbred horses in Fayette County, and growers of avocados, lemons, and strawberries in Ventura County tended to out-compete other farmers for land. On the one hand, many local ag leaders whom we interviewed were pleased that their agricultural sectors included these stellar products. On the other hand, many of their producers had “invaded” from other counties, states, or—in the case of Fayette County’s equine sector—from outside the United States.<sup>7</sup> Established local farmers of less profitable products were therefore put at a disadvantage when bidding on land both to purchase and to rent. For example, in Sonoma County two sources told us that vegetable farmers could not afford to buy any land, so dominant in the market were farmers and investors for wine grapes.
- **Competition from landowners buying land in the studied counties with untaxed proceeds from land they had sold in even higher-priced markets:** Section 1031 of the federal Internal Revenue Code provides, “Generally, if you exchange business or investment property solely for business or investment property of a like-kind, no gain or loss is recognized. . . . Real [estate] properties generally are of like-kind, regardless of whether the properties are improved or unimproved” (U.S. Department of the Treasury, 2008). At least two interviewed experts in each of three counties—Dakota, DeKalb, and Madison—complained about the effects of these Section 1031 exchanges on the local market for agland:
  - “Farmers who sell out near our major urban areas [i.e., Columbus] get as much as \$15,000 to \$30,000 an acre. Many look to avoid paying the 15% capital gains tax by coming out to buy in an area [e.g., Madison County] where \$3,500 an acre of farm ground is [common]. . . . These buyers drive up land prices.”
  - “Currently, 80% to 90% of sales [in DeKalb County] involve 1031 purchasers, so it is rare for a county farmer to purchase.”
  - “The 1031 exchanges are screwing up everything. Land should really sell for what the land can produce, but with the 1031 exchanges, this is not going to happen.” In that county, Dakota, farmers in the northern section near to the Twin Cities were selling their land for as much as three times the price they had to pay when relocating to the southern part of the county.
- **Competition from smaller farms:** In four studied county (Sonoma, Ventura, DeKalb, and Larimer), interviewed experts complained of a market trend toward cutting up agland into smaller-sized parcels that could therefore be priced higher per acre. As one realtor put it, there were “fewer larger parcels and more small but expensive ones.” Another observed, “Prices are higher for smaller acreages, 40 acres and below.” A third expert complained, “It’s become an urbanized market; there is little left to buy larger than 80 acres.” A realtor in the fourth county reported, “It is hard to find a piece of 35 acres or more for sale.”

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<sup>7</sup> In describing the equine sector of Fayette County, one local expert told us, “There are Arab sheiks and influential people from Ireland, France, and other countries that own [horse] farms in Fayette.”

### 3b. Affordability of Rented Land

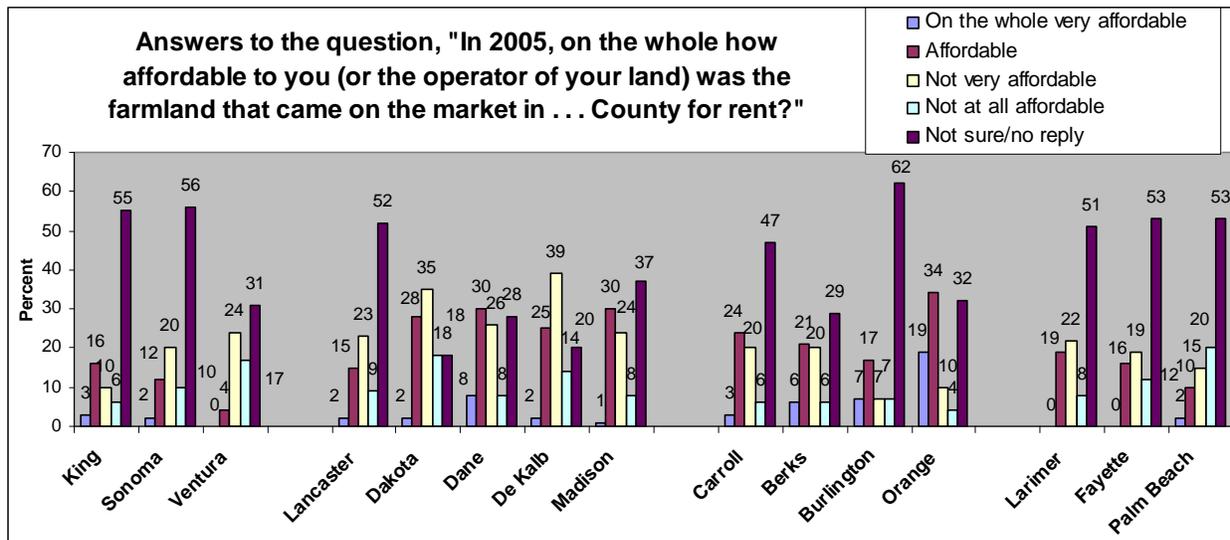
The 2002 Census of Agriculture found that rented farmland comprised important percentages of the 15 counties' total land in farms—from 18% in Sonoma County to 67% in DeKalb County (Table 3.3). The median value was 40%. In nine of the 15 cases, the percentage declined from 1987 levels—by 2 to 19 percentage points. The 2002 values nevertheless beg the question, “If farmland to purchase tends not to be affordable, what about land to rent into an operation?”

County	1987 (%)	2002 (%)	Percentage-point change	County	1987 (%)	2002 (%)	Percentage-point change
<b>Pacific Coast</b>				<b>Mid-Atlantic</b>			
King County, WA	28	19	-9	Carroll County, MD	46	46	0
Sonoma County, CA	37	18	-19	Berks County, PA	44	40	-4
Ventura County, CA	54	43	-9	Burlington County, NJ	37	35	-2
<b>Corn Belt</b>				Orange County, NY	40	48	+8
Lancaster County, NE	59	51	-8	<b>Highly Scenic and Recreational</b>			
Dakota County, MN	39	44	+5	Larimer County, CO	40	31	-9
Dane County, WI	35	37	+2	Fayette County, KY	29	22	-7
DeKalb County, IL	63	67	+4	Palm Beach County, FL	28	26	-2
Madison County, OH	54	60	+6				

Sources: U.S. Bureau of the Census, *Census of Agriculture*, 1987; and USDA, National Agricultural Statistics Service, *Census of Agriculture*, 2002.

**Survey Findings:** The same survey respondents who were asked about the 2005 affordability of agland to purchase were given a parallel question about land to rent into farm operations. Comparisons between Figures 3.1 and 3.2 shows generally higher percentages of “very affordable” and “affordable” responses about rented land. Adding those two percentages together yielded sums ranging from 4% in Ventura County to 53% in Orange County, with a median of 24%. However, for all except four of the studied counties, the most common answer in Figure 3.2 is “not sure/no reply.” Therefore, we ran the numbers again, limiting the analysis to the nine to 49 surveyed owner-operators per county who rented at least some land into their farm operations. The responses were generally more optimistic, with at least a third of the tenants in eight counties considering rents to be affordable, and the median being at 33% (Table 3.4). Orange County stands out with 72% of the tenants falling in this combined category. The only other entry with more than half the respondents being that positive about rents was King County’s 65%.

**Figure 3.2:**



**Table 3.4: Combined Percentages of Surveyed Owners Who Rented Farmland in 2005 and Reported Rents “On the Whole Very Affordable” or at Least “Affordable”**

County	Combined (%)	Number of Renters Surveyed	County	Combined (%)	Number of Renters Surveyed
<b>Pacific Coast</b>			<b>Mid-Atlantic</b>		
King County, WA	65	17	Carroll County, MD	39	23
Sonoma County, CA	33	9	Berks County, PA	23	26
Ventura County, CA	0	12	Burlington County, NJ	38	21
<b>Corn Belt</b>			Orange County, NY	72	47
Lancaster County, NE	21	39	<b>Highly Scenic and Recreational</b>		
Dakota County, MN	31	49	Larimer County, CO	32	19
Dane County, WI	34	32	Fayette County, KY	36	11
DeKalb County, IL	17	46	Palm Beach County, FL	43	14
Madison County, OH	15	20			

**Interview Findings:** Although derived from mostly small numbers of cases per county, the pattern survey responses found in Table 3.4 received some support from the interviews with local experts. The zero percent “very affordable” measure for Ventura makes sense, given what we heard from three interviewees in 2006. One informant estimated yearly rents at \$2,500 to \$3,000 per acre; another put the range at \$900 to \$3,500; and the third reported rents for strawberry-producing land at \$3,100 and lamented that it was difficult to make money with vegetables on leased land.

Two common complaints in the Corn Belt counties were about the strong competition for rented land and the prevalence of short-term leases:

- “When land becomes available to rent, it’s a bidding war.” (Lancaster)
- “It used to be if you rented for 15 years, you’d keep the lease. Not today. If someone offers more, they will rent to them.” (Dakota)
- “Competition is hard. Most land is rented to established livestock farmers, so crop farmers have a more difficult time.” (Dane)

- “In our area, there is almost an unwritten . . . ‘pecking order’ that determines who the next successors are after the current farmer dies or gives up the lease. Farmers who ignore this are often shunned by the other farmers and considered ruthless and cutthroat.” (Burlington)
- “Farms are larger, so when they come up for rent, they will go to the highest cash rent. There is more of a bidding war than in the past, and the larger operators have an advantage.” (DeKalb)
- “Rents are high, crop shares are very uncommon, and this hurts the young or beginning farmer.” (Madison County)
- “No long-term leases, though some have options. Most are annual.” (Madison)

The explanation offered in the interviews regarding Orange County (where 72% of the surveyed renting operators were optimistic) was nonoperator-owners’ need to rent out their land in order to qualify for agricultural-use assessment for property-tax purposes. However, the supply of farmers willing to meet the need was apparently insufficient to sustain commercial rents. As will be discussed in this chapter’s fifth section, New York State requires relatively high gross agricultural sales in order to qualify for such preferential taxation.

- “Everyone who owns farmland wants to receive the agricultural assessment. It’s huge—about a 70% reduction in property taxes on your cropland. . . . Few of our dairy or crop farmers are paying rent. The land taxes are so high that the farmer rents it for free, unless the soils are really excellent.”
- “The owners will charge a nominal fee or charge no fee at all in order to get the tax break.”
- “We pay little or no rent for farms in this area. . . . We save them [the owners of Orange County farmland who are waiting for their land to be developed] a tremendous amount of taxes. The problem with that is we are like gypsies; we don’t know from year to year if we will have it [the lease].”<sup>8</sup>

#### **4. Zoning and Municipal Growth Policies to Prevent or Slow the Rate of Farmland Conversion**

As described in Table 3.5, 11 of our 15 counties had rural zoning policies designed—at least in part—to protect agricultural land from conversion out of farm or ranch use. We found also that eight of the 15 had either urban growth boundaries or urban service areas, one of whose purposes was to guide municipalities’ growth so as to minimize the harm to agriculture. Ideally, both kinds of tools are coordinated in their application, and they not only reduce the gross acres lost to agriculture but also maximize the number of contiguous acres still in farming, thus avoiding the situation of isolated or semi-isolated farm parcels having nonfarm neighbors on one or more sides. As discussed in this chapter’s sixth section, such juxtapositions often limit operators’ freedom to farm because they generate complaints from the neighbors about farm odors, dust, chemicals, noise, and other real or imagined nuisances.

***Summary of Land-Use Controls:*** The summaries in Table 3.5 of the zoning and urban-growth policies operating in the 15 studied counties during 2005–7 derive from our reading of printed

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<sup>8</sup> These comments pertain to upland areas of the county. The highly productive 8,000 or more acres of “muck soils” (discussed above) “had higher rents of about \$100” per acre. Source: e-mail from a local expert (December 11, 2008).

documents and Internet postings of the county and city governments, supplemented by interviews with local government planners and other administrators. The zoning programs of interest to us fall into the category of “agricultural protection zoning,” which the American Farmland Trust has defined as “county and municipal [including township] ordinances that support and protect farming by stabilizing the agricultural land base. APZ designates areas where farming is the desired land use, generally on the basis of soil quality as well as a variety of locational factors. Other land uses are discouraged” (American Farmland Trust, 1998).

<b>Table 3.5: Rural Zoning and Urban Growth Policies as of 2006–2007 to Protect Agricultural Land</b>		
<b>County and Locus of Zoning Authority</b>	<b>Zoning Policies to Limit or Phase Residential Development in Agricultural Areas</b>	<b>Municipalities’ Policies to Limit or Phase Expansion into Agricultural Areas</b>
<b>Pacific Coast</b>		
<p><b>King County, WA</b></p> <p>County has zoning authority over unincorporated areas.</p>	<ul style="list-style-type: none"> <li>• Have Ag Production Districts (APDs) consisting of blocks of contiguous farmland and totaling about 42,000 acres. Land should not be removed from APD unless offset with farmland of equal or greater value: “No net loss of ag land.”<sup>9</sup> In APDs new homes are allowed at density of one dwelling unit (DU) per at least 35 acres.</li> </ul>	<ul style="list-style-type: none"> <li>• State law mandated King County government and the county’s municipalities to cooperate on growth management. In 1992 they agreed on a joint urban growth boundary (UGB) that directed new development to the west side of the line, where most urbanization had already occurred.</li> <li>• “[T]he urban boundary set in 1992 remain[ed] in place (with minor changes) in 2006.”</li> </ul>
<p><b>Sonoma County, CA</b></p> <p>County has zoning authority over unincorporated areas.</p>	<ul style="list-style-type: none"> <li>• County government identified areas “best suited for ag use” and limited new homes to densities of (a) from one per 60 or more acres to one per 320 in areas “capable of relatively low production per acre,” and (b) in areas of high production, the minimum lot size varied from 20 to 60 acres. These were exclusive ag-use districts, that is, except for DUs meeting minimum lot size, most non-ag uses were not allowed without rezoning.</li> <li>• Ag-zoned districts allowed a second dwelling unit per lot that could be occupied by owner’s family members or rented, but not separately sold.</li> </ul>	<ul style="list-style-type: none"> <li>• As of April 2008 eight of nine “larger cities” in county had voted for 20-year UGBs. Since they were voter-authorized, UGBs could not be changed without <i>voter approval</i>. Included in the eight was Petaluma, one of the pioneer U.S. cities in growth management.<sup>10</sup></li> <li>• Through September 2007, no city’s voters had approved changes in their UGB.</li> </ul>
<p><b>Ventura County, CA</b></p> <p>County has zoning authority over unincorporated areas.</p>	<ul style="list-style-type: none"> <li>• Exclusive ag zoning districts, with a 40-acre minimum lot size, “to preserve . . . commercial ag lands as a limited and irreplaceable resource, to preserve and maintain ag as a major industry in Ventura County, and to protect these areas from the encroachment of non-related uses which, by their nature, would have detrimental effects upon the ag industry.”</li> <li>• Under county’s SOAR ordinance (Save Open-Space and Agricultural Resources), authorized in 1998 election, voter approval was needed for rezoning to other use categories of any land designated “Agricultural, Open Space, or Rural” by General Land Use Map of September 1997.</li> </ul>	<ul style="list-style-type: none"> <li>• Eight of the county’s 10 cities adopted SOAR-like restrictions (see information in column to the left). <i>Voter approval</i> was needed for expanding sewer services or otherwise enabling urban densities beyond the city’s existing urban services boundary.</li> <li>• Elections held in 1999–2006 on such expansions had mixed results, with either “no” votes or minor extensions.</li> </ul>
<b>Corn Belt</b>		

<sup>9</sup> In this table the words within quotation marks come either from published program documents or from interviews with program administrators.

<sup>10</sup> In 1972 Petaluma legislated a quota system for new dwellings that was ultimately upheld by an appeals court opinion in *Construction Industry Association v. City of Petaluma*, 522 F. 2d 897 (9th Cir. 1975).

<p><b>Lancaster County, NE</b></p> <p>County had zoning authority over unincorporated areas.</p>	<ul style="list-style-type: none"> <li>• Had an exclusive ag zoning district with 20-acre minimum lot size, but option of clustering homes with same overall density (e.g., five lots per 100 acres) except for bonus lots for clustering to protect farmland or “environmentally sensitive areas.”</li> <li>• Up-zoned to three acres per DU, such as when land was on paved road and had an adequate water supply. Comprehensive Plan called for limiting rural residents to 6% of total county population.</li> </ul>	<ul style="list-style-type: none"> <li>• County’s dominant city (Lincoln) had policy of expanding incrementally and, though enjoying a three-mile extraterritorial zoning jurisdiction, did not extend sewer and water services beyond city limits, that is, no serving of subdivisions in unincorporated areas.</li> <li>• Expansion depended on decisions of elected mayor and seven-member city council. But “annexation wars” were likely in only one direction (northeast). In any other direction, no competing municipality.</li> </ul>
<p><b>Dakota County, MN</b></p> <p>Township governments had zoning authority over unincorporated Areas.</p>	<ul style="list-style-type: none"> <li>• State’s Ag Preserves Program (APP) provided financial incentives for townships to adopt exclusive ag zoning and minimum lot size of at least 40 acres. Landowners would thereby qualify for ag-use value property-tax assessment and a \$1.50 tax credit per acre.</li> <li>• Rezoning to higher densities possible at any time except for land in APP. In 2005 the APP in Dakota County encompassed 61,200 acres. Enrolled land was under a covenant preventing development until eight years after owner gave notice of termination.</li> </ul>	<ul style="list-style-type: none"> <li>• The seven-county Metropolitan Council provided central sewer services in Dakota. The council’s Metro Urban Service Area (MUSA) shaped high-density growth in the county. MUSA’s 2020 map had no sewer service going to Dakota County’s still agriculturally important six southernmost townships except for one city located there.</li> <li>• Developing cities in Dakota had asked for MUSA expansion in their direction. Metro Council advocated efficiently placed services but was not clearly committed to directing new growth to existing municipalities.</li> </ul>
<p><b>Dane County, WI</b></p> <p>Township governments had zoning authority over unincorporated areas.</p>	<ul style="list-style-type: none"> <li>• As in Dakota County, a state tax relief program encouraged exclusive ag zoning. To enable agland owners to qualify for Farmland Preservation Credits (that averaged \$797 per claimant in 2002), 30 of Dane County’s 34 townships adopted such zoning districts and set at least 35 acres as the minimum lot size or average residential density.</li> <li>• Several towns’ land-use plans set standards also for minimizing negative effects of non-ag uses on agriculture.<sup>11</sup></li> </ul>	<ul style="list-style-type: none"> <li>• County’s Farmland Preservation Plan encouraged location of non-agriculturally related development in areas “where the full range of services (sewer, water, fire protection, and police protection) can be economically provided.”</li> <li>• At least one township (Vienna) sought to restrict annexations through boundary agreements with its municipalities.</li> </ul>
<p><b>DeKalb County, IL</b></p> <p>County had zoning authority over unincorporated areas.</p>	<ul style="list-style-type: none"> <li>• Had exclusive ag zoning with a 40-acre minimum lot size. No provision for residential splits on land unsuitable for agriculture. Rather, all land not in floodplain or a conservation district was located in exclusive ag zone so as “to discourage new non-agricultural uses from developing in the unincorporated areas.”<sup>12</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Under the 2003 Unified Comprehensive Plan, all except one of the county’s municipalities agreed not to approve subdivisions outside their demarcated growth zones, which would leave an estimated 80% to 85% of county still rural. Municipalities had 1.5-mile extraterritorial</li> </ul>

<sup>11</sup> “Limit non-farm residences to non-prime farmland, to parcels that are too small for viable agriculture, or too inaccessible for use of machinery needed for production and harvesting.” Limit roadways or driveways that cross agland to reach nonagricultural developments. Do not place residences “in the middle of a productive agricultural field.” The 35-acre standard was often treated as a measure of average size rather than an absolute minimum lot size. A related concern was that the larger parcel (let’s say 38 acres) resulting after carving out—let us say a two-acre home site from a 40-acre original parcel—not be subdivided again and thereby increase overall density to greater than one dwelling unit per 35 acres. Therefore, the plan provided that “splits shall run with the land,” rather than with the owning family. Dane County Planning and Development Division, *Component Town Plans*, <http://www.countyofdane.com/PLANDEV/planning/townComponents.aspx> (accessed May 1, 2008).

<sup>12</sup> In 2005 the 2nd Appellate Court of Illinois upheld a DeKalb County zoning decision (*Nelson v. County of DeKalb*, No. 2-05-0340) to deny a rural landowner’s attempt to develop a largely wooded 30-acre parcel zoned agriculture despite the fact that the land has been determined as unsuitable for crop production (due to a quarry dug on the parcel subsequent to the parcel’s original ag zoning designation). The court stated: “As for the care that DeKalb has taken to plan its development, it is substantial. Defendant has spent a great deal of time and resources developing its comprehensive land-use plan. Indeed, the plan was awarded ‘Best Plan’ by the Illinois Chapter of the

		<p>zoning jurisdiction.</p> <ul style="list-style-type: none"> <li>•</li> </ul>
<p><b>Madison County, OH</b></p> <p>County had zoning authority over unincorporated areas.</p>	<ul style="list-style-type: none"> <li>• Had an exclusive ag district, with conditional use permit for one DU if owner had 20 acres, two if owner had as little more as 20.001 acres, and it was a lot of record as of May 1, 2002.</li> </ul>	<ul style="list-style-type: none"> <li>• 2005 Comprehensive Plan directed new development to areas with sewer service or areas expected to have it within five years. This objective was backed by the reality of Madison County having drainage problems (i.e., slow infiltration rates) on much of its land that made septic systems problematic.</li> </ul>
<b>Mid-Atlantic</b>		
<p><b>Carroll County, MD</b></p> <p>County had zoning authority over unincorporated areas.</p>	<ul style="list-style-type: none"> <li>• Had zoning district in which agriculture was “the preferred use,” but single-family, two-family, and sheltered living dwellings permitted by right. Had a 20-acre minimum lot size, except that it allowed owners to split off up to two additional residential lots, such as for their children. Lots may be created for residential purposes from any tract of land pursuant to the following standard: Where the tract to be subdivided is 6 to 20 acres, one new lot plus the remaining portion may be created; and for tracts over 20 acres, an additional new lot may be created for each 20-acre increment or part thereof. The area of a tract shall be calculated to the nearest .0001 acres.</li> </ul>	<ul style="list-style-type: none"> <li>• State statute required eight municipalities to project their population growth and related land needs as basis for future annexations.</li> </ul>
<p><b>Berks County, PA</b></p> <p>Townships had zoning authority over unincorporated areas.</p>	<ul style="list-style-type: none"> <li>• Had ag zoning in 24 of the 44 townships, covering about 154,000 acres. Not all zones were exclusive ag districts; other uses were allowed by right. Minimum lot sizes varied. Some townships required at least 20 acres for a new home site. In other cases, sliding scales were used, such that the smaller the original farm parcel, the fewer the splits that could be carved from it (e.g., for 15 to 30 acres, three new home sites could be split out, while from 120 to 150 acres, seven were permitted). Also, to conserve land for ag, each new building parcel might be capped in size, such as two acres maximum.</li> </ul>	<ul style="list-style-type: none"> <li>• County had encouraged townships, boroughs, and Berks County’s one city to develop joint comprehensive plans and zoning ordinances. By 2003, 50 of the total of 74 local governments had participated in this program.</li> <li>• Future growth areas had been identified, and the county’s Vision 2020 plan called for “focusing the majority of its Community Block Grant funding, highway project prioritization, and infrastructure expansion and development on Future Growth Areas.”</li> </ul>
<p><b>Burlington County, NJ</b></p> <p>Townships had zoning authority over unincorporated areas.</p>	<ul style="list-style-type: none"> <li>• State laws do not permit exclusive agricultural zoning. Burlington’s 31 townships required densities that average one unit per six acres (Sokolow and Zurbrugg, 2003, p. 104).</li> <li>• Large quantity of ecologically sensitive land in the southeastern two-thirds of county was subject to the Pinelands Reserve’s limits on development.</li> </ul>	<ul style="list-style-type: none"> <li>• County worked with state Department of Environmental Protection (DEP) to keep central sewer and water lines away from “Agricultural Development Areas.”</li> <li>• Agriculture Development Board has determined that farming is “viable over the long term.” The DEP “establishes and implements minimum standards for the approval of the design, construction and operation of treatment works.”</li> </ul>
<p><b>Orange County, NY</b></p> <p>Townships had zoning authority over unincorporated areas.</p>	<ul style="list-style-type: none"> <li>• A consultant’s 2004 study (ACDS, 2004) found no growth boundaries, large-lot zoning districts, or other regulations that appeared to be significantly limiting housing development on agricultural land.</li> <li>• Minimum lot sizes varied from one to four acres.</li> <li>• An exception was the “Black Dirt Region,” consisting of about 12,000 acres of farmed land on former glacial lakes that were protected by state environmental regulations.</li> </ul>	<ul style="list-style-type: none"> <li>• The county’s 2003 Comprehensive Plan encouraged cities and villages to annex within designated “Priority Growth Areas,” located in or near the existing cities, villages, and hamlets.</li> </ul>
<b>Highly Scenic and Recreational</b>		

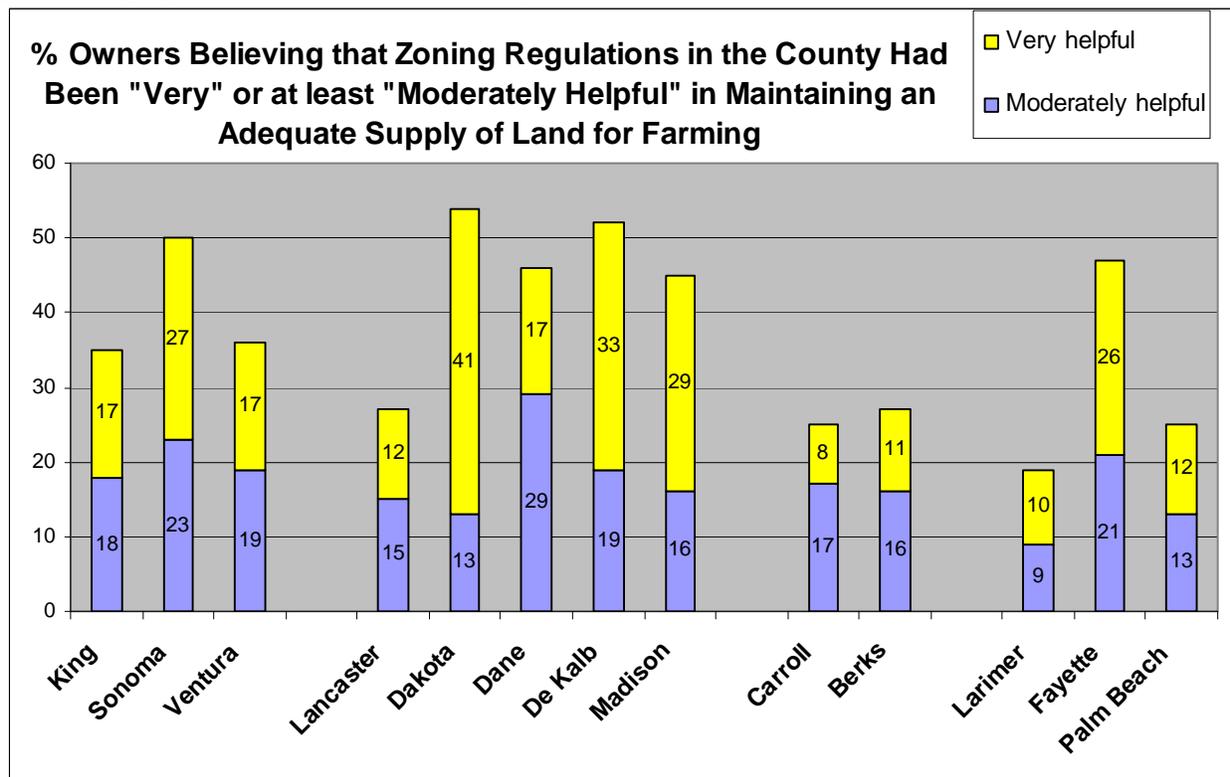
American Planning Association in 2003. Having taken great care to plan its development, the county is entitled to a certain amount of deference, free from judicial second guessing, in the implementation of its growth.”

<p><b>Larimer County, CO</b></p> <p>County had zoning authority over unincorporated areas</p>	<ul style="list-style-type: none"> <li>• The “FA-1 Farming” zoning district permitted ag, ag-related businesses, single-family and group homes, recreational and public service uses, with a minimum parcel size of 2.3 acres (100,000 sq. ft.). Thirty-five acres served function similar to a large minimum lot because owners took advantage of a state law that exempted the creation of parcels of that size from subdivision ordinance review.</li> <li>• “Most of the rural plains portion of Larimer County, where there is a significant amount of ag land, is zoned O-Open. The O-Open zoning district allows both agricultural operations and single family residential development. The minimum lot size is 10 acres.”</li> <li>• In 1996 the county established the Rural Land Use Process as an alternative to the popular 35-acre splits. County staff helped owners save money when subdividing if they protected at least two-thirds of the total land via clustering and 40-year or perpetual conservation easements.</li> </ul>	<ul style="list-style-type: none"> <li>• County planning policy “has been to encourage urban development to locate in cities and towns or adjacent to these areas with the expectation that the developed areas would soon be annexed” (Larimer County Master Plan, 1997). The county worked with Fort Collins and Loveland to achieve agreement on a plan for urban growth between those two cities that included an open-space buffer.</li> </ul>
<p><b>Fayette County, KY</b></p> <p>Consolidated city-county government had zoning authority.</p>	<ul style="list-style-type: none"> <li>• Agriculture, small wineries, and detached single-family DUs were the “principal uses” in the agricultural-rural zoning district.</li> <li>• In 1998 Fayette County switched from a 10-acre to a 40-acre minimum lot size after it was found that large numbers of 10-acre parcels were being created for high-end housing. According to the Rural Service Area Land Management Plan, “From 1990 to 1998, the amount of land subdivided into 10-acre lots was comparable to the total land area utilized inside the Urban Service Area for all residential, commercial, and industrial development.”</li> </ul>	<ul style="list-style-type: none"> <li>• In 1974 Lexington merged with Fayette County to establish a consolidated city-county government. Therefore, rather than annexations threatening ag, policy decisions of concern were whether the city-county government decided to expand its Urban Service Area (USA) at the expense of the Rural Service Area. The dividing line between the two amounted to a UGB, and was the first of its kind in the nation when inaugurated in 1958. Initially covering about 69 square miles, the USA grew to 85 square miles by 1999.</li> <li>• In the deliberations leading up to completion of the 2007 Comprehensive Plan, the authorities rejected any expansion, turning down a proposal to designate as an “Urban Reserve” within the USA two areas (totaling 12 square miles) “that appeared to best adhere to the adopted ‘Urban Service Boundary Criteria.’”</li> </ul>
<p><b>Palm Beach County, FL</b></p> <p>County had zoning authority over unincorporated areas.</p>	<ul style="list-style-type: none"> <li>• “The AP [Agricultural Production] district is to conserve and protect areas for exclusive, bona fide agricultural and farming related operations particularly where soil and water conditions favor continued agricultural production.”</li> <li>• Minimum lot size of 10 acres.</li> <li>• Residential development only if related to ag uses: <ul style="list-style-type: none"> <li>“a) Farm labor quarters and camps;</li> <li>b) Caretaker’s quarters, such as for pump houses;</li> <li>c) Dwelling quarters and farm residences for bona fide farm operations.”</li> </ul> </li> <li>• In Agricultural Reserve Tier, about 20,000 acres next to the Urban Service Area, the county encouraged clustering of homes with, per development project, 60% of total acres in ag use or open space.</li> </ul>	<ul style="list-style-type: none"> <li>• “The only density allowed in the AP zoning district is for properties in the LR-1 FLU [Future Land Use] category located north of Pahokee, on the east side of US 441, for the unincorporated community of Canal Point, in the Glades Tier only.” Large areas in unincorporated parts of the county were set aside for conservation.</li> <li>• Urban Service Area (USA) encompassed about the eastern quarter of the county from its northern boundary to the next county to the south.</li> </ul>

*Effectiveness of Zoning Controls in Preserving Land for Agricultural Use*

Besides preventing or delaying the conversion of farmland, zoning that agland owners perceive to be effective also seemed—according to our 2006 surveys—to influence the owners’ plans for the future. Specifically, in six<sup>13</sup> of the 15 studied counties, agland owners who believed that local government zoning had been “moderately helpful” or “very helpful” (rather than “not helpful” or “somewhat helpful”) in “maintaining an adequate supply of land for agriculture in the county” were *less likely* to expect any of their owned land in the county to be developed “10 years from now.” Also in six counties, operators who gave the “moderately helpful” or “very helpful” assessment about local zoning were *more likely* to expect the future of agriculture in the county 20 years ahead to be “bright” or at least “modest” (rather than “dim” or “none at all”).<sup>14</sup> Owners who perceive agricultural zoning in their county or township to be effective may see it as a barrier to any development plans they, themselves, might have. Then, when thinking about the health of agriculture 20 years into the future, they may conclude that zoning helps to keep farming or ranching viable by saving sufficient agland.

**Figure 3.3: In the 13 studied counties with significant local government zoning policies for protecting agricultural land, the surveyed landowners’ assessments of its effectiveness**



**Survey Findings:** The entries in Table 3.5 show that 13 of the 15 counties have local government zoning policies designed, at least in part, to preserve agricultural land from conversion. The exceptions were Burlington and Orange counties, where the minimum lot sizes seemed too small (no greater than four or an average of six acres per dwelling unit) to discourage much development. Orange County was a partial exception in that state law protected from conversion

<sup>13</sup> Dakota, Dane, King, Larimer, Madison, and Orange counties.

<sup>14</sup> Berks, DeKalb, Fayette, King, Palm Beach, and Ventura counties.

about 12,000 acres of farmland with “muck soils.” Figure 3.3 focuses on local government policies and indicates that, among the 13 counties, the combined percentages of surveyed owners who rated their local zoning policies as either “very helpful” or “moderately helpful” in “maintaining an adequate supply of land for agriculture in the county” ranged from 19% in Larimer County to 54% in Dakota County. DeKalb and Sonoma counties were close behind, with 52% and 50%, respectively. Fourth highest was Fayette County, with 47%, while Dane County had 46% and Madison County had 45% in those two response categories.

### ***Interview Findings***

*Sonoma County, California:* The local leaders we interviewed gave high marks to Sonoma County’s large-lot agricultural zoning, as well as to its urban growth boundaries. They were seen to be strictly enforced and hence effective in saving agricultural land. This county’s rural zoning helped one agricultural use out-compete residential uses in property values. In the time period of our study, buyers were willing to pay \$60,000 to \$100,000 per acre for land suitable for vineyards. There were many prospective buyers from the San Francisco Bay Area able to buy rural home sites, but not in a Sonoma zoning district with a 20- or 60-acre minimum lot size and land capable of growing grapes. By these per-acre prices, if all 20 acres were so endowed, the estate buyer would need **at least** \$1.2 million to \$2 million for the land to out-compete someone wanting to farm the parcel for grapes. Of course, the Bay Area buyer might aim to have both a country home and to raise grapes or hire a viticulturalist to do it for him or her. In contrast, if the minimum lot size were just four or six acres, more nonfarm buyers could compete.

However, in Sonoma and other studied counties, “grandfathered” small lots can cause problems. Created in the past but not yet developed, they retain their status as legal building lots even though being incompatible with the current comprehensive plan and zoning parcel-size minima. California state law provides for assigning “certificates of compliance” to these lots, “some of which [in Sonoma] are quite small (e.g., 1–5 acres) and not viable for farming. They undermine our zoning efforts and drive up the cost of PDR [purchase of development rights] programs.”<sup>15</sup> The more buildable lots on land offered to an easement program, the more expensive the land’s development value is likely to be.

*Fayette County, Kentucky:* Called the “Horse Capital of the World,” Fayette County land could earn high income from agriculture—particularly from raising horses. And, as discussed in Chapter 2, the marketing facilities for livestock were strong. Moreover, as in Sonoma County, Fayette County’s farmed landscape tended to be visually attractive. Many people living there wanted to preserve it and organized effectively to revise the minimum rural lot size from 10 acres to 40 in 1999. Then, when a new comprehensive plan was being discussed, and the city-county planning department proposed in 2006 to provisionally transfer about 12 additional square miles from the Rural Serviced Area to the Urban Services Area, representatives of at least eight different organizations<sup>16</sup> testified against the proposal, contributing to a “no” vote in February 2007.

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<sup>15</sup> E-mail communication from a Sonoma County land-use expert, September 30, 2008. To earn a certificate, usually the owner of a currently nonconforming lot must have proof that the lot was legally created under prior laws or before the county’s or municipality’s adoption of an ordinance for subdividing property.

<sup>16</sup> According to the minutes of the January 22, 2007, meeting of the Lexington-Fayette Urban County Planning Commission’s public hearing, there was opposition testimony (or in one case, a letter) from officers or members of

*Dakota County, Minnesota, and DeKalb County, Illinois:* Regarding zoning of agricultural land, these two counties were similar in three important respects during 2005–7. First of all, they both used 40-acre minimum lot sizes—Dakota County in most of the 13 rural townships and DeKalb County, countywide in the unincorporated areas. Second, they did not have extraordinarily beautiful landscapes that attracted new residents and provided a rationale for preservation. Third, they had not been producing high-value crops that constituted yet another justification for strict zoning. Nevertheless, majorities of local experts whom we consulted agreed that in both counties the large-lot zoning approach had been successful, at least up to times of the interviews.

From Dakota County, we received such evaluations as:

- “The one in 40 [acres] has stuck amazingly well since 1980. Traditionally farmers have supported it.”
- “So far it has been very good. It actually surprises me that townships have kept to their guns.”
- “The Agricultural Preserves Program [see Table 3.5] and zoning have been very effective at preserving the agricultural sector.”
- “Townships are holding the line with the agricultural zoning. There is less conflict in the southern area [away from the Twin Cities]. Those near the line of growth don’t see as much agricultural preservation.”

Assessments from DeKalb County included:

- “It is very difficult to get through a variance to the 40-acre rule. One is before the county board now, and it is not apt to go through.”
- “New development has to be adjacent to existing old. The county board has been firm in supporting it. . . . It has been effective in part because it has been so consistently applied from the very beginning.”
- “When developers hear that this county has not approved a stand-alone subdivision in 12 years, they tend to say ‘goodbye’ and go to another county.”
- “Farmers generally do support it [the 40-acre rule].<sup>17</sup> They are concerned about nuisance conflicts [from putting subdivisions next to farms] and about sprawl. It is costly for the counties and other local governments to provide services . . . away from municipalities.”

Another reason for Dakota County and DeKalb County farmers’ support of restrictive zoning was the belief that eventually development would extend toward their land—southward from the Twin Cities or westward from the suburban counties closer to Chicago. Then they or their heirs would be able to sell the land at high market prices.

- One farmer leader told us, “[We must] keep our zoning in place and make sure that the growth of population comes in a structured manner, adjacent to the urban centers. . . . It has been a good model the last 20 years.”

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the Greenspace Commission, Old Richmond Road Neighborhood Association, the Neighborhood Coalition, Fayette County Neighborhood Council, Fayette County Rural Land Management Board, Boone Creek Neighborhood Association, the Fayette Alliance, and the United States Equestrian Federation.

<sup>17</sup> An officer of the DeKalb County Farm Bureau told us that, in March of 2006, the Bureau surveyed its members about the county’s growth model and found that 80% of the respondents supported it.

- “Traditionally, farmers have supported it. Growth is going into the townships. It’s just a question of when, not whether, the pressure will happen.”

In contrast to the seller patience suggested by these two experts’ statements, we heard from an agricultural leader in Orange County (with minimum lot sizes of 1 to 4 acres), “We can’t tell the fellow who owns a 200-acre farm out here that you must wait until development reaches you.” Unlike Dakota and DeKalb counties, Orange County had not been practicing large-lot zoning for more than 20 years, and its property values were much higher (Table 3.2).

In both Dakota and DeKalb counties, observers had seen an intermediate development phenomenon, that is, 40-acre splits in which the buyers of the newly created parcels were not farmers:

- “So now people are buying 40-acre estates, which may not be good for agriculture here. . . They are putting five acres into horses and rent out the rest.”
- “Some have five to ten acres for the residential foot print, and horses are on the balance.”
- “We see 40-acre parcels popping up everywhere.”

This kind of new resident may provide political support for farmland preservation, as they did in Fayette County through lobbying via neighborhood associations and individuals (see the earlier discussion in this section).

*Dane County, Wisconsin:* By our count, 30 of Dane’s 34 township governments had exclusive agricultural zones with large minimum lot sizes—at least 35 acres. Although 46% of our survey sample found those policies to be “very helpful” or at least “moderately helpful” in maintaining the farmland base, the interview data are limited and mixed. While one expert observed that the townships without such zoning had seen agriculture “decimated,” another told us, “Each township is different. Some do this really well and others are not effective at all.” A third discussed the same problem we noted in Dakota and DeKalb counties. The high prices of lots in the cities and villages encouraged buyers to look in the agriculturally zoned areas where many could find 35-acre lots whose costs were not substantially different from urban lots, despite the great difference in sizes.

*Madison County, Ohio:* In contrast, while the combined percentage of “very helpful” and “moderately helpful” responses for Madison County was just one point below Dane County’s, the interviewees’ evaluations were uniformly positive about Madison’s zoning policies:

- “We have areas for agricultural use and those for rural residential. If the parcel is not in rural residential, it should be turned down [for rezoning]. It is turned down. If they disregard the comprehensive plan, it is indefensible in court.”
- “County government zoning . . . is most important for keeping the county’s agriculture intact.”
- “Zoning is severely restrictive. It damn near stopped development. Zoning is very effective.”
- In counties [like Madison] around Columbus, “The courts have allowed these ordinances [with high minimum lot sizes]. Controlled growth near the urban areas leaves the rural area free to continue in agricultural production.”

Making agricultural protection zoning (APZ) more politically acceptable in Madison County were the drainage problems on as much as 40% of the land. A local official told us, “We have very flat land, so that drainage is a restriction. If they want to build housing, there are a lot of hoops to go through with the health department to have a functioning septic system.”

*Ventura County, California:* In the Ventura County case, we found a similar conflict between survey and interview data. While 36% of our sample of agland owners evaluated zoning policies as “moderately helpful” or “very helpful,” the interviewed local experts agreed on the ag protection zoning being strictly enforced:

- “You can’t rezone farmland for the next 20 years” [because of the SOAR ordinances—see Table 3.5].
- “You can’t rezone—because of SOAR.”
- “It’s not very easy to change.”
- “We have strict agricultural zoning.”
- “Urban sprawl has stopped.”

The explanation may be that many of the surveyed landowners found these land-use controls to be too constraining.

*Carroll County:* While Ventura’s APZ may be too strict, Carroll’s supposed 1 dwelling per 20-acre zoning district may be too easily circumvented. Because so-called “off conveyances” are permitted on parcels of record as of a certain date, densities in excess of 1 per 20 can be achieved: “In 1978, when the county was still very rural, they . . . [began to allow] properties to have two off-conveyances [additional lots created without going through the subdivision process] which allowed a farmer to provide housing for his family. . . . If you have 100 acres you have seven lots with the 1:20 [100 divided by 20 acres equals 5, plus the additional two lots].”

*King County, Washington:* King County is a special case in that, by 2002, relatively very little land—41,769 acres, or about 65 square miles—was left in agricultural use. All the other 14 counties recorded more than twice as many acres in farms or ranches. In response to the limited supply of agland, almost all the remaining agland was placed in “Agricultural Production Districts” (APD), consisting of blocks of contiguous farmland. These districts were zoned with a minimum lot size of 35 acres. An added regulatory provision was that land could be removed from an APD only if the applicant replaced it with “agricultural land abutting the same APD of equal acreage and of equal or greater agricultural value” (King County, 2006). This policy was rather dramatically phrased as “no net loss of farmland.” According to both published figures and interviewee statements, the policy was working pretty well, at least through 2005–6.

- Data on land in farmland gathered by the county showed virtually no loss between 2002 and 2005 (just 22 acres) (King County, Department of Natural Resources and Parks, 2006).
- One expert characterized the implementation of the “no net loss” policy as “strict” and like “drawing a line in the sand” that cannot be crossed.
- Another observer said, “Once in a district [APD] you stay in the district. The land base has stayed that way. . . . The 2004 zoning coded is very restrictive.”

### ***Cluster Zoning in Lancaster, Palm Beach, and Larimer Counties***

*Lancaster County, Nebraska:* Large-minimum lot sizes may cut up land into uneconomic parcels for farming, as well as waste space such as in the forms of long separate driveways and overly ambitious lawns. Critics of Lancaster County's 20-acre minimum persuaded the county commissioners to adopt cluster zoning provisions with a density bonuses as an incentive. Developers submitted draft "community unit plans" that showed how through clustering of lots "cultivated land and pasture is preserved and no new county roads are created." Then they may receive a 20% bonus. For example, if the parcel consisted of 100 acres, it would be entitled to one bonus dwelling unit in addition to the five allowed under the 20-acre minimum. Thirty-six percent of the total building permits issued for rural Lancaster County in 2003 were for cluster lots (DeKalb and Hartzell, 2006). Although no minimum percentage of the parcel was required for preservation, zoning authorities expected applicants to plan for one- or three-acre home sites. Relatively small lots marketed better and also left more of the farmland undeveloped.

*Palm Beach County, Florida:* Palm Beach County required 60% to be preserved but permitted a much higher overall density. In 1980 the board of county commissioners designated an "Agricultural Reserve" of 20,900 acres in the southern part of the county, serving as a "buffer between the suburbs and the Loxahatchee National Wildlife Refuge" (Palm Beach County, 2008). The reserve's normal zoning was one dwelling unit per five acres. However, in response to high demand for developable land, beginning in 1995 the board permitted developers with at least 250 acres to build one home per acre on 40% of the land, providing the other 60% was preserved. These provisions translated into one dwelling unit per 2.5 acres, compared to Lancaster County's one dwelling unit per 16.7 acres. Moreover, the 60% component could be located in other parts of the reserve, not adjacent to the built-up area of the proposed development, as required by Lancaster County's and Larimer County's clustering regulations.<sup>18</sup> A journalist reported, "The 722-acre GL Homes development spread its preservation area in four sites west of U.S. 441, in the northwestern patch of the Ag Reserve. A total of 423 acres will be kept undeveloped, but the 554 homes now will go into a smaller area."<sup>19</sup>

*Larimer County, Colorado:* In 1996 Larimer County adopted a new set of growth-management policies, termed the "Rural Land Use Process," to compete with the popular practice of carving 35-acre parcels out of agricultural land, which state law permitted without county review for new parcels of at least that size. This process promoted clustering lots and required that at least two-thirds of the total land per project be preserved. The county encouraged farm and ranch owners to retain control of, and continue to operate, the undeveloped land, with county staff helping them through the subdivision process and designing the clusters to maximize the remaining land's farmability, among other types of assistance.<sup>20</sup> By December 2007 the approved cluster

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<sup>18</sup> In 2007 one developer proposed complying with the 60% rule by buying development rights to *public land* in the Ag Reserve and using that no-longer-developable land to meet the standard. The costs of the development rights should have been cheaper than purchasing all rights to the land. However, county planning staff countered by arguing that "development rights on publicly own lands can only be transferred outside the ag-reserve and not used to increase density of the ag-reserve" (Palm Beach County Land Use Advisory Board, 2007).

<sup>19</sup> Maria Herrera, "Palm Beach spends last of \$100 million to protect farmland," *South Florida Sun-Sentinel*, October 30, 2006.

<sup>20</sup>For example, the county agency administering the program, the Rural Land Use Center, states on its website that one of the advantages of subdividing via this process is "The development review process is faster and less restrictive than other county development processes and offers property owners a more predictable outcome." Larimer County, [http://www.co.larimer.co.us/rloc/rural\\_land\\_use\\_process.htm](http://www.co.larimer.co.us/rloc/rural_land_use_process.htm) [accessed June 21, 2008].

projects were 70 in number, encompassing 11,901 acres with about 674 home sites. Of that total acreage, 5,773 acres were preserved in perpetuity; and 2,547 acres were preserved for 40 years. Therefore, 70% of the 11,901 acres were being protected. Politically, cluster zoning proved more acceptable than agricultural protection zoning because it was voluntary.

### **5. Programs for Purchasing and Transferring Development Rights**

Among the 15 counties that we studied, 10 had purchase of development rights (PDR) programs and three had transfer of development rights (TDR), through which compensation was provided to owners. Tom Daniels (2008, p. 31), among other authorities on growth management policies affecting agricultural land, has been skeptical of the long-range effectiveness of agricultural protection zoning by itself: “Zoning is notorious for its susceptibility to changes through variances, special exceptions, conditional use permits, and re-zonings.” He advocates development-restricting easements that agland owners voluntarily impose on their land in exchange for monetary compensation for the rights to develop that are surrendered through agreeing to the easement. However, he sees zoning as a useful, if not necessary, precondition for a successful PDR program. The development rights for land zoned with reasonably strict (though perhaps not long-term) ag zoning should be less expensive. Daniels (2008) cited a Pennsylvania case in which preservation cost “almost \$54,000 an acre” (p. 23) because the “land [was] zoned for development.” In addition, the more that restrictive zoning can prevent the building of nonfarm residences near farms protected through PDR or TDR, the less likely that ag operations on that land will be limited by the occurrence or threat of neighbor complaints about farm odors, noise, dust, and so on.

Usually in perpetuity,<sup>21</sup> these easements are sold and attached to the property’s deed and stipulate one or more restrictions on the use of the land, such as limiting the number and even the size of houses built on the property; prohibiting industrial, mining, and commercial activities (other than those related to agriculture); and requiring that the land be periodically mowed or otherwise kept available for farming (rather than allowing shrubs and trees to grow up that prevent cropping or grazing) (American Farmland Trust, 2006). In other words, the purchaser of development rights normally cannot compel land to be actively farmed or ranched.

In PDR programs the buyers are usually governmental entities or private land trusts, whereas under TDR the cost of development rights (e.g., \$2,500 per acre) is normally borne by a developer who seeks to transfer the development rights (let us say to build 20 new homes) from “a sending area”—land that local government wants to save for agriculture or other open-space uses—to a “receiving area—land selected for its capacities (sewer, water, roads) to sustain denser growth (American Farmland Trust, 2001).

As with our discussion of zoning and urban growth controls, we begin with a table (Table 3.6), which presents the main features of the programs. Our information for these summaries derives from printed documents and Internet postings of the county and city governments, supplemented by interviews with program administrators.

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<sup>21</sup> Maryland law provided that “conservation easements in existence for at least 25 years that have been purchased in whole or in part with state funds may be terminated through repurchase by the landowner” if the latter could convince local government and state authorities that it was impossible to farm it profitably (Zurbrugg, 2003, p. 6).

**Table 3.6: Development Rights Easement Programs (Both PDR and TDR) as of 2005–2007**

County and Type of Program	Acres under Easements Since Start of Program	Funding Sources	Other Key Program Features
<b>Pacific Coast</b>			
<p><b>King County, WA</b></p> <p>Purchase of development rights</p>	<ul style="list-style-type: none"> <li>From its inception in 1979 through February 2008, this county government program acquired easements on approximately 13,200 acres.</li> </ul>	<ul style="list-style-type: none"> <li>The county was initially authorized to issue general obligation bonds up to \$50 million, with interest and principal paid from property-tax receipts. Another \$3 million was authorized in 1995. Supplemented by government and private grants.</li> </ul>	<ul style="list-style-type: none"> <li><i>Residences on easement land:</i> Preserved properties could be divided into parcels that meet the minimum 35-acre lot size for building a home in the rural ag zoning district or that average no more than one dwelling unit per 35. If land were divided, “95% of the property [was to] be kept open and available for cultivation”<sup>22</sup> (including that drainage ditches be maintained).</li> <li><i>Open space uses defined:</i> Permissible uses were limited to agriculture and “open space” (but not uses that would hinder agriculture, such as golf courses, campgrounds, or athletic fields).</li> </ul>
<p><b>Sonoma County, CA</b></p> <p>Purchase of development rights</p>	<ul style="list-style-type: none"> <li>Established by county voters in 1990, the Sonoma County Agricultural Preservation and Open Space District had by December 2006 protected through PDR or purchase in fee simple at least 52 properties totaling more than 26,900 acres<sup>23</sup> of land with farming or ranching on them.</li> </ul>	<ul style="list-style-type: none"> <li>A quarter-cent sales tax voted for initially in 1990 and renewed in 2006 for another 20 years. Proceeds from the tax—“about \$15 to \$18 million dollars a year”—were shared between the agricultural preservation and recreational/scenic objectives of the district. Supplementary funding came from government and private grants.</li> </ul>	<ul style="list-style-type: none"> <li><i>Residences on easement land:</i> Seller was usually allowed a second residence (such as for next generation) on the protected property. The Open Space District worked to keep a new residence in same building envelop as any existing dwelling unit, rather than placed separately and thereby more likely to interfere with farming. Also, not being a separate lot, it was less likely to be sold to someone outside family.</li> <li><i>Limits on home sizes:</i> In negotiations for easements, district staff aimed to insert provisions that limited size of houses built on protected farmland to 3,500 sq. ft. Purpose was to avoid homes so expensive that farmers couldn’t afford the land plus the house.</li> <li><i>Contiguity:</i> By our count, 50% of the protected properties with agricultural activity on them were adjacent to farms, ranches, or “natural areas” protected by the district or other entities.<sup>24</sup></li> <li><i>Competition for available funds between the farmland protection and “natural area” preservation goals:</i> The district sought to “[p]rotect . . . forever the working farms and ranches, scenic hillsides and natural areas that make our county a unique place to live.”</li> </ul>
<b>Corn Belt</b>			
<p><b>Dakota County, MN</b></p>	<ul style="list-style-type: none"> <li>A county program, the Farmland and Natural Area</li> </ul>	<ul style="list-style-type: none"> <li>County commissioners authorized \$20 million in</li> </ul>	<ul style="list-style-type: none"> <li><i>Locational eligibility criterion:</i> “Protects highly productive soils outside of [the year] 2040</li> </ul>

<sup>22</sup> In this table the words within quotation marks come either from published program documents or from interviews with program administrators.

<sup>23</sup> One large property under an easement, totaling over 19,000 acres, was partially being used for livestock grazing, but it was not possible for us to learn how many acres were in agricultural use. Therefore, we must leave the statement at “more than 26,900 acres.” Given the overall size of the property, it could be many more acres.

<sup>24</sup> We did the analysis from maps of farms under easement that were published on the county’s farmland preservation website.

<p>Purchase of development rights</p>	<p>Program (FNAP), began in 2003. As of June 2007, the county had approved 13 permanent agricultural conservation easements totaling 1,348 acres, with 11 of the parcels being “along” or “near” a river or creek. By June 2008 the number had grown to 20 with 2,224 acres total. As of 2007 the estimated cost per acre of all farmland approved or pending was \$4,098, of which the county’s share was 56.3%.</p>	<p>bonds that voters approved in 2002, \$10 million of which were allocated to the farmland preservation program. Supplemented by “federal, state, and local government money, landowner donation, and foundations.”</p> <ul style="list-style-type: none"> <li>• FNAP shared funding between agricultural preservation and protection of natural areas.</li> </ul>	<p>MUSA [Metropolitan Urban Service Area] in 1/40 zoning districts, enrolled in an Ag Preserve” (see Table 3.5).</p> <ul style="list-style-type: none"> <li>• <i>Competition for available funds between the farmland protection and “natural area” preservation goals:</i> Enrolled land must be adjacent to already protected property or within a half mile of a designated river or lake, allowing “Flexible use in future as either farmland or open space (future generations have options).”</li> </ul>
<p><b>Dane County, WI</b></p> <p>Purchase of development rights.</p>	<ul style="list-style-type: none"> <li>• A county program for which we found sources indicating at least 449 acres protected at a cost of approximately \$1.799 million, or \$4,007 per acre on average.</li> <li>• A separate program by Dunn Township which, by March 2008m protected 23 farms with a total of 2,822 acres.</li> <li>• A program also in Windsor Township, which as of February 2008 was working with the National Heritage Land Trust to obtain an appraisal and submit an application for FRPP funding.</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Sources:</i> A \$5 million state grant for “planning and preservation” in order “to ameliorate the sprawl impacts of US H[ighway] 12 project” (heading northwest from the city of Madison).</li> <li>• Supplemented with grants from the federal Farm and Ranch Lands Protection Program (FRPP).</li> <li>• Referendum in 1996 authorized contribution from property tax of 50 cents per \$1,000 of equalized valuation. In 2000 Dunn Township voters approved a \$2.4 million bond, payable from that new property tax.</li> <li>• Supplemented by federal, state, and county grants.</li> </ul>	<ul style="list-style-type: none"> <li>• Purposes of Dunn Township program: “protecting viable farm operations and farmland to maintain the rural character of the Town of Dunn, permanently preserving scenic vistas and environmentally significant areas . . . protecting the Town of Dunn from encroachment of neighboring cities and villages,” especially—it seems-- from the City of Madison. The first farm protected was “threatened with annexation by Madison.” The second was “just 15 minutes from the State Capitol.”</li> </ul>
<p><b>Mid-Atlantic</b></p>			
<p><b>Carroll County, MD</b></p> <p>Purchase of development rights</p>	<ul style="list-style-type: none"> <li>• County government partnered with the state’s largest farmland preservation program, the Maryland Agricultural Land Preservation Foundation (MALPF). As of the end of FY 2007, MALPF had bought the development rights to 263 Carroll County farms totaling 32,227 acres. County must approve applications to MALPF.</li> <li>• County preserved an additional 8,194 acres via MALPF, but using its own (county) funding. Then there was a separate</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Sources:</i> Carroll’s agricultural easement purchases were funded through a combination of county general funds, the county’s share (75%) of the Agricultural Transfer Tax (imposed at the time of sale of land that “receives the agricultural use assessment”), general obligation bonds, and state funds.</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Locational eligibility criterion:</i> To be eligible for MALPF funding, land had to be in an Agricultural Preservation District (i.e., at least 75 contiguous acres in Carroll County), which status required a five-year commitment to keep land in ag use.</li> <li>• <i>Residences on easement land:</i> The original owner at time of PDR sale could exclude from the agreement one lot for self and separate building lots for other family members if they met minimum lot size requirements (e.g., 20 acres for the first lot, more acres for the second, etc.). Program managers tried to place new residential building lots along roads or in woods to minimize hindrances to farming adjacent land.</li> <li>• <i>Contiguity:</i> By our count, about 91% of 452 farm parcels protected through the six programs described in the first column (from</li> </ul>

	<p>county government easement program (began in 2002) that protected another 5,077 acres.</p> <ul style="list-style-type: none"> <li>Two nonprofit land trusts and a state program (Rural Legacy) preserved 5,798 additional acres, for a grand total of 51,296 across all six programs. The average cost per acre was \$2,525.</li> </ul>		<p>the left) were adjacent to at least one other preserved farm. Many had such farms on two or more sides.<sup>33</sup></p>
<p><b>Berks County, PA</b></p> <p>Purchase of development rights</p>	<ul style="list-style-type: none"> <li>Established by the county in 1989, the Berks County Agricultural Preservation Board had by October 22, 2008, acquired easements to a total of 530 farms encompassing 56,000 acres. The average cost per acre was \$2,162.</li> <li>Centre Township in Berks County had its own PDR program, as did the Berks County Conservancy.</li> </ul>	<ul style="list-style-type: none"> <li><i>Sources:</i> As of October 2008, state grants of about \$62.7 million, federal grants of \$1.9 million, and county contribution of approximately \$56.4 million (that derived in part from a \$30 million bond from 1999). In 2005 county commissioners authorized another \$24 million line of credit.</li> <li>In January 2006 the board increased its per acre maximum payment to \$2,500. For previous 10 years it had been fixed at \$2,000 per acre.</li> </ul>	<ul style="list-style-type: none"> <li><i>Locational eligibility criterion:</i> To be eligible, the land must have been already enrolled in a state-authorized and county-approved Agricultural Security Area (ASA) of at least 500 acres. An ASA provided protection against nuisance complaints and government condemnation of land for public purposes, as well as making the land eligible for the preservation program.</li> <li><i>Residences on easement land:</i> In addition to any existing homes on the eased land, there could be one residential structure for owner, his/her family, or persons employed in farming the land, on a tract of two acres or less.</li> <li><i>Subdivision of easement land:</i> All new separate parcels had to be at least 52 acres in size, consist of 50% or more good soils, and have other site characteristics (slopes, location of roads, etc.) that permitted reasonably effective agricultural use of the land.</li> <li><i>Contiguity:</i> By our count, about 96% of the 490 properties protected through March 2008 were adjacent to at least one other preserved farm. Many had such farms on two or more sides.<sup>33</sup></li> </ul>
<p><b>Burlington County, NJ</b></p> <p>Purchase of development rights</p> <p>Transfer of Development Rights</p>	<ul style="list-style-type: none"> <li>The county created its Farmland and Open Space Preservation Programs in 1985. As of December 2007, agreements had been finalized on preserving 21,603 acres of farmland.</li> <li>The cost per acre had increased from \$3,500 in 1998 to \$10,500 in 2006.</li> <li>Chesterfield and Lumberton townships had TDR programs, as did the Pinelands National Reserve. The latter had protected at least 20,000 acres in Burlington County by mid-2007. Through 2006 Chesterfield had preserved “over 2,200” acres, and Lumberton, 850 acres by mid-2007.</li> </ul>	<ul style="list-style-type: none"> <li><i>Sources:</i> Farmland and open-space acquisitions were funded in part from a voter-approved property-tax levy of 4 cents per \$100 of assessed valuation. It was extended in the November 2006 election until 2036.</li> <li>Funding also from State of New Jersey and federal government’s FRPP.</li> <li>Developers with land in designated “receiving areas” buy development credits via auction or other market means, resulting in transfer of rights to build dwelling units from cooperating agland owners in officially designated “sending areas” at higher densities than otherwise permitted.</li> </ul>	<ul style="list-style-type: none"> <li><i>Residences on easement land:</i> State law required that, if building additional dwellings, the “overall gross density shall not exceed one residential unit per 100 acres” and “the [County Agricultural Development Board must] determine . . . that the construction and use of the residential unit is for agricultural purposes and that the location of the residual dwelling site minimizes any adverse impact on the agricultural operation.”</li> <li><i>Contiguity:</i> By our count, 69% of the 279 separate PDR parcels preserved through April 2007 were adjacent to other PDR parcels that did <i>not</i> have the same owners. Many had such farms on two or more sides.<sup>33</sup></li> <li><i>Keep land available for farming:</i> The county’s program could not force owners to have the land farmed, “but owner can’t take the land out of agricultural use permanently, such as if didn’t mow and let trees grow; or if neglected drainage facilities and the land reverted to wetland status. . . . We can step in, mow the land and recoup the cost through a lien on the property.”</li> </ul>



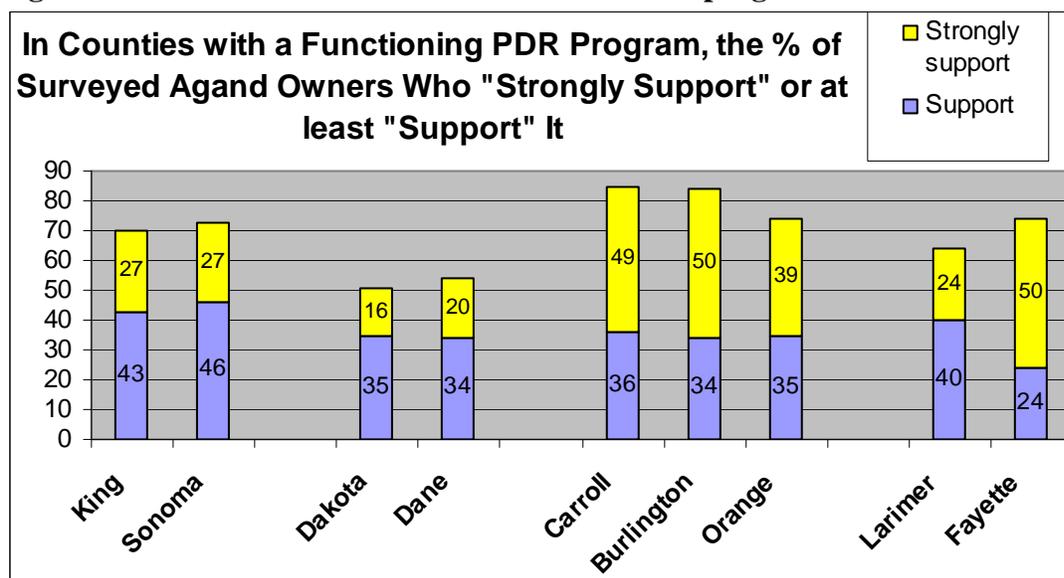
	<p>total includes 33 farms with donated conservation easements on 1,610 acres.”</p> <ul style="list-style-type: none"> <li>• Among program’s goals were: “Protect the agricultural, equine and tourism economies of Fayette County by conserving large areas of farm land. “ and to compensate the County’s farmers for loss of their 10-acre development rights” that they enjoyed before the 1998 switch to a 40-acre minimum (see Table 3.5).<sup>25</sup></li> </ul>	<p>Rights Bond Fund that received appropriations from general funds.</p>	<p>subdivide the parcel and build residences on those parcels.”</p> <ul style="list-style-type: none"> <li>• <i>Contiguity</i>: A map of protected land as of May 8, 2008, showed a total of 195 parcels in the county program. Only eight or 4.1% were not adjacent to one or more parcels preserved by the county or another agency.</li> <li>• <i>Equine operations</i>: “[T]he breeding, raising, training and general care of livestock for uses other than food, such as sport or show purposes” were explicitly permitted in the city-county program.</li> <li>• <i>Competition for available funds between the farmland protection and “natural area” preservation goals</i>: “Conserve and protect the natural, scenic, open space, historic and agricultural resources of rural Fayette County.” Prohibited uses included soil mining or another mining-type extraction and any “confined facility exceeding two thousand five hundred (2500) square feet for raising hogs or poultry for commercial resale.”</li> </ul>
<p><b>Palm Beach County, FL</b></p> <p>Transfer of development rights</p>	<ul style="list-style-type: none"> <li>• County ordinance allowed “development rights [DRs] to be severed from environmentally sensitive lands and lands designated as AGR and transferred to sites where additional development can be accommodated.”</li> </ul>	<ul style="list-style-type: none"> <li>• Landowners who sold development rights were “compensated by making landowners in more intensively developed areas pay for the right to develop beyond the existing density, by purchasing development rights.”</li> </ul>	<ul style="list-style-type: none"> <li>• “The easement shall restrict the use of the sending area in perpetuity. In particular, a conservation easement shall require that the sending area be maintained in its natural state while an agricultural conservation easement shall restrict the use of the sending area to bona fide agriculture, fallow land, or uses permitted in the Conservation Water Resources Area (WRA) future land use category.” Density bonuses possible through transfer of DRs limited to “up to” three to five additional dwelling units per acre.</li> </ul>

*Survey Findings:* Each participating landowner in the 10 counties with one or more established PDR programs for protecting agricultural land was asked an evaluative question about them. Figure 3.4 presents the results for nine of the 10 counties.

For all nine counties presented in Figure 3.4, the combined percentages of “support strongly” and “support” exceed 50%. The standout cases are Carroll, Burlington, and Fayette counties, where half or nearly half of the respondents (49% to 52%) were “strongly” supportive, and the combined percentages surpass 70%. The entries for King and Sonoma counties were also at or close to the 70% mark, but their “strongly support” values were both just 27%. The combined “strongly support” and “support” values for Dakota and Dane counties were just over 50%, perhaps because those two programs had been able to protect relatively small amounts of land. However, Orange County’s achievements were also limited, but its combined percentage was 74%. Age of the program does not seem to be a dominant factor in these ratings, since Orange County’s programs date from early in this decade, while Dakota County’s began in 2003 and Dane County’s program began about the same time (although Dunn Township in Dane County purchased development rights as early as 1997).

<sup>25</sup> “The adoption of 40-acre minimum included a sunset provision which provided that if “the PDR Program was not adequately funded by December 2000, the minimum acreage required would revert back to 10 acres” (Lexington-Fayette Urban County Government, 200)8.

**Figure 3.4: Owners’ assessment of established PDR programs<sup>27</sup>**



A tenth program, operated by Berks County, might have attracted as much support from surveyed agland owners as did the programs in Burlington and Carroll counties because it had done so much—with 56,000 acres now protected in Berks County. However, we employed a different question. After defining PDR and stating that it was being used in Berks County, we asked, “How helpful has this program been in maintaining an adequate supply of land for farming in the County?” Possible answers were “Never heard of it”; “It’s not helpful”; “Somewhat helpful”; “Moderately helpful”; “Very helpful”; and “Not sure.” The surveyed agland owners choosing the “very helpful” responses comprised 23% of the whole group, while those selecting “moderately helpful” were 27%.<sup>28</sup>

**Interview Findings:** The interview data we gathered on easement programs, plus some of their own website information, allow us to discuss what we consider to be important issues about the effectiveness of the PDR approach to sustaining farm viability in the studied counties:

- Competition between the farmland preservation and “natural areas” preservation goals of programs;

<sup>27</sup> Except for the questionnaire used in Berks County, the wording of the question on PDR included a definition of that kind of preservation program, a statement that a program was functioning in that county, and then the query about whether the owner supported the use of public revenues for protecting agland in that way. The Berks County question was different only in the final component: “How helpful has this program been in maintaining an adequate supply of land for farming in the county?” “Never heard of it”; “It’s not helpful”; “Somewhat helpful”; “Moderately helpful”; “Very helpful”; “Not sure.” Therefore, its results are presented separately.

<sup>28</sup> Among our reasons for wording the Berks County question differently was to see if this well-known, high-achieving program was regarded more highly than the agricultural projection zoning practiced in many of Berks County’s townships. It did. Only 11% of the Berks County sample rated the zoning approach to “maintaining an adequate supply of land for farming in the county” as “very helpful”; 16% rated it “moderately helpful.” The percentage-point difference in each of these pairs of percentages (23% versus 11% and 27% versus 16%) is statistically significant at better than the .05 level in a one-tailed *t* test for difference of proportions from the same sample.

- Contiguity of protected parcels and preventing right-to-farm conflicts;
- Residential uses permitted by easement program’s rules;
- Zoning’s role as a helper to, or competitor with, PDR;
- Adequacy of the protected land to secure agriculture’s future in the county; and
- Affordability of easement land to farmers when it is on the market.

*Competition between the farmland preservation and “natural areas” preservation goals of programs:* Interviewed experts drew to our attention that the main programs for purchasing development rights in at least four counties—Sonoma, Dakota, Larimer, and Fayette counties—had both farmland preservation and natural area protection goals that competed for the available money.

- “The urban people who wanted the money to go to the program want it to go to natural areas that they can then use. It is really more of a natural areas protection program than a farmland protection program.”
- The land acquisitions program director [for one of the four counties] “is all for protecting farmland, but . . . has a board that told him to put the money into [scenic/recreational properties].”
- “The open space district serves two purposes. But it’s mostly recreation and views, and agricultural interests say that it is not for agricultural preservation.”
- “It’s more for scenic value. [But] if we didn’t have the program, farmers would be able to survive, yes.”
- “The approach that Dakota County took was one half [of the money] for farmland and one half for natural resource lands, to sell the program to the public.”

By our reading of the property-use descriptions available on the Sonoma County program’s website in June 2008, as much as a third of the total acres with conservation easements or acquired through fee-simple purchase were not being used for agricultural production.<sup>29</sup> A similar analysis for the Larimer program found that as of mid-2008, properties not belonging to the program’s “Ag Inventory” accounted also for approximately a third of all protected acres.<sup>30</sup> In Dakota County the competition between protecting agricultural land and “natural areas” was built into the funding formula, with half designated for the latter type of land. Moreover, through 2007 most of the protected ag parcels (11 of 13) were selected in part because of their scenic location and/or role in preserving a riparian corridor. They were “along” or “near” a river or creek (Table 3.6).

Of course, communities need open space for recreational purposes—hiking, biking, picnicking, bird-watching, etc.—that typically are not permitted on privately owned land used to raise crops or livestock. Also, land that is attractive for recreation because of its hills, rocks, forests, or wetlands may cost the programs a lot less per acre than farmland that is cleared, drained, and otherwise easier to develop. Related to this point is an observation made by an expert observer in Sonoma County: “The Sonoma County Agricultural Preservation and Open Space District acquires easements and lands from *willing* sellers.” Therefore, if in a given fiscal year, the

<sup>29</sup> About 56% of the total properties (Sonoma County Agricultural Preservation and Open Space District, 2008a).

<sup>30</sup> Larimer County Open Lands Program, 2008. See also the Larimer County Parks and Open Lands, *Annual Report, 2006*, p. 15. Supplemented by an interview.

district faced mostly or entirely agricultural landowners unwilling to sell at affordable prices, but “open space” owners agreeable to reasonable terms, the district understandably dealt with the latter.

A third mitigating point is that the same properties might achieve both agricultural and scenic-preservation goals. Examples would be the horse farms in Fayette County, with their bluegrass, neat fences, and other scenic attractions. One hundred of the 194 farms preserved by Fayette’s program through October 2, 2008, were classified as “equine” (Lexington-Fayette Urban County Government, Division of Purchase of Development Rights, 2008).

Finally, as suggested in the quotation above about the Dakota County program, the prospect of saving natural areas may be necessary to achieve sufficient public support for an agricultural land preservation component. That county’s leadership required the protected farmland be located either next to already preserved parcels or within a half mile of a designated river or lake, allowing “[f]lexible use in future as either farmland or open space (future generations have options)” (see Table 3.6). Rather than risking a scattering of relatively few farms that might end up isolated amid unfriendly nonfarm neighbors or simply unviable for lack of sufficient farm-support businesses, the Dakota County program explicitly provides for this alternative use of the land.

*Contiguity of protected parcels and preventing right-to-farm conflicts:* All the programs that we studied understood the risks of complaining neighbors, and the larger programs achieved considerable contiguity when acquiring easement land and fee-simple purchases. Fifty percent of the agricultural-use properties that we identified for Sonoma County’s Agricultural Preservation and Open Space District were adjacent either to district-protected parcels or to “other public or protected land” (Table 3.6). The corresponding percentages for Carroll County’s program was 91%; for Berks County, 96%; and for Burlington County, 69%.<sup>31</sup>

*Residential uses permitted by easement program’s rules:* A related potential threat to the agricultural success of these PDR programs is proliferation of residences on or adjacent to the protected land as a result of rules governing the easement program. Besides the farmstead dwellings existing at the time the development rights are purchased, easement agreements may allow additional building rights and subdivision of the land. As the summaries in Table 3.6 indicate, we found a range of options—from reasonably strict to seemingly permissive.

- *Fayette County’s* PDR program enabled owners to “retain the right” to divide the protected farms into 40-acre parcels (the minimum lot size allowed by county zoning) and build single-family residences on them (see Table 3.6).
- *King County’s* minimum for subdivision—also determined by the zoning ordinance—was 35 acres, supplemented by the requirement that “95% of the property be kept open and available for cultivation.”
- *Sonoma County’s* program allowed a second residence (“in the vast majority of our easements”), ostensibly for the next generation of farmers or a retired farmer (or widow) from the previous generation. However, district policy was to place it on the same building lot as an existing dwelling and thereby avoid separately salable parcels.

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<sup>31</sup> We could not find a sufficiently detailed map to do this analysis for the Larimer County Open Lands program.

- *Berks County's* program also allowed a second residence for family members or employees, and owners were allowed to subdivide the protected land into separate legal parcels of at least 52 acres, providing each one had other traits (soils, slopes, etc.) promising viable agricultural use of the land (see Table 3.6).
- The *Burlington County* program permitted splitting easement land into separate lots but was limited by state law to a comparatively low overall gross density—not more than “one residential unit per 100 acres.” Additionally, the responsible county authority had to rule whether the resulting new dwellings’ locations threatened any “adverse impact on the agricultural operation.”
- The programs in *Orange County* faced a similar state-imposed constraint when negotiating with the easement sellers about land subdivision (Table 3.6).
- *Carroll County* had the most liberal provisions. At the time of negotiating the easement, the owner could exclude from the agreement one lot for him- or herself and separate building lots for other family members if the parcels met minimum size requirements (e.g., based on a sliding scale with at least 20 acres required for the first lot). The opportunities for these “residual” lots apparently derived in part from the liberality of the zoning ordinance (see Table 3.5) and the understandable concern that, if prospective participants in the program believed that they would lose building rights already enjoyed, they would either refuse to sign up for the program or demand much higher payments for the easement. On the other hand, standards were higher for land subdivided after the development rights were sold and protected through the main funding source (the Maryland Agricultural Land Preservation Foundation). All resulting parcels had to be at least 50 acres, unless a smaller parcel was “conveyed to an adjoining easement property and the remaining parcel consists of at least 50.0 acres.”

One knowledgeable observer of the Carroll County program was unhappy with its liberality: “You have the owner’s lots, children’s lots, and they try to cut out a tenant lot. The next thing you know you have a small city.” Another observer applauded the generous supply of additional building lots because—he believed—they might be needed to raise additional capital for the farm or family, even after the easement had been sold. Much or most of that kind of sale could go to paying off land mortgages or the heirs who chose not to participate in the farm operation.

Faced with these new residences being built on or next to easement land, at least five of our county programs in 2007–2008 were restricting, or considering limitations on, *the size and/or placement of the houses*.

- The oldest of the programs, King County’s, gave clear examples of problematic building sites. Farms were split into 35-acre parcels, and large new homes were built on open land so as to offer good views of Mount Rainier. Besides sacrificing significant numbers of farmable acres to those big building pads, the expensive homes risked making the property too expensive for farmers to afford when the original builders moved or died.
- An administrator for the Sonoma County program told us that they aimed to limit new homes to 3,500 square feet but had cases where the land was important enough to the program that they accepted something larger (like 5,000 square feet). However, their preference was for less palatial buildings. “We want to keep the property for agriculture. We can’t have the situation of the house being worth \$5 million and the land \$1 million.”

- His/her counterpart in the King County program made essentially the same point, and during the spring of 2008 the King County Agriculture Commission was working on a new draft of the restrictive covenants so as “to help ensure that the economic viability of farming is maintained.” (King County Agricultural Commission, 2008).
- As of at least 2007 Carroll County’s easement language did provide that, if state money was used, the county had to approve the placement of any new residences. A program staff person told us, “We put it along the road, even if it does reduce scenic benefits, or in the woods so it will not impede farming.”
- Burlington County’s program had the same powers: “On some properties we are limited as to where you can put septic fields. If we could put it [the house] in the woods rather than in the middle of the cropland or pasture, I would recommend in the woods.”
- The policy in Berks County was that a new home site should not use more than two acres of eased land and that the easement seller was encouraged to place it and its driveway “so it will not harm the economic viability of the restricted land for agricultural production.”

*Zoning’s role in making PDR a success:* As we saw in the King and Carroll County cases, the housing density (1:35, 1:20) provided by the agricultural zoning district may permit excessive numbers of relatively small-acreage splits of protected land. Fayette County’s 40-acre standard was of course not much better.

Larimer County’s Rural Land Use Process (RLUC), discussed above in the section on zoning, provided an alternative to both small-acreage subdivisions and the 35-acre splits. However, the process apparently may not have helped the PDR program. Instead, it was presented by the RLUC administrator as an alternative (Reidhead, 2006). He argued that more land could be saved more cheaply through the RLUC requirement that the clustered development leave as open space at least two-thirds of the total property. The cost to the county consisted mostly of the salaries of the staff who worked with farmers and ranchers on developing their subdivision plats and then in processing them through the approval process. According to the program director, an acre saved through the RLUC process between 1996 and 2005 cost the county on average \$204 compared to \$650 per acre for the Larimer County Open Land projects (easements and fee-simple purchases).<sup>32</sup> However, a Larimer official reminded us that land “preserved” through the RLUC is not open to public use and that land which is preserved for only 40 years could potentially be developed in the future.”

In the DeKalb County case, the success of agricultural protection zoning discouraged the consideration of PDR. We attended a public meeting in that county during February 2008 at which two of the most prominent experts on agricultural land in DeKalb County made these arguments:

- “I don’t see PDR being a strong possibility in the near future, because I just don’t see the dollars being available. And given that the comprehensive plan [about directing new growth to the existing municipalities, not approving rural subdivisions, and limiting new homes in unincorporated areas to parcels of at least 40 acres] being consistently administered and the [cooperative] relationship between the county board, farmers, and

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<sup>32</sup>The \$650 average resulted after deducting the value of both grants (e.g., from the state and federal governments) that contributed to the payments made to landowners and any share of the development rights’ appraised value that represented donations from the owners. Included in this analysis were nonagricultural properties.

the urban people, we may not need a PDR program to the same degree that Kane County [closer to Chicago] needs [one].”

- “We would be hard pressed to justify higher taxes [for a PDR program] in a county that has a 40-acre rule that has been so effective.

*Enough land protected through PDR or TDR so that the future of farming in the county is secure?*

The question is practical probably only for the three studied counties where the total amount of land already protected was substantial—at least 50,000 acres: Burlington, Berks, and Carroll counties.

By the end of 2007 Burlington County’s PDR program had protected more than 25,000 acres; it was still growing with a fresh infusion of funds voted in 2006. Two townships’ TDR programs had preserved over 3,000 acres, and the Pinelands National Reserve had preserved at least 20,000 acres through TDR. The latter federal/state program limited urban-density development to relatively small designated growth areas, and used TDR to compensate owners of land in the areas set aside for preservation. Those owners could sell development credits (at mutually agreed-upon prices) to builders seeking density bonuses in the growth zones (see the Burlington County case study for this project—Esseks and Schilling, 2008). Five of six experts whom we consulted in Burlington County about the land adequacy issue were optimistic, and they credited the land preservation programs for much or most of their positive assessments. None of the following quotations came from a land-preservation program administrator or elected official.

- “The preservation people there have done an excellent job. They’ll continue to be active in that area. Agriculture will remain there, with fairly large chunks of agricultural land.”
- “I think that they have preserved enough farms now, so that unless there is some drastic change there will still be enough of a land base to maintain the industry.”
- “The ones who got into it [the PDR program] will stay. And their sons or daughters are coming up to help the business continue.”
- “[Thanks to the PDR program] many people who are involved in agriculture have figured out that it’s no longer a transitional use. . . . With more and more preserved land being available, the owner may not be a farmer, but my view is that land tenure will get better [because] someone who owns a piece of preserved land can’t decide to develop it.”
- “Farmland preservation is going to be the key to the survival of agriculture in Burlington County.”
- A sixth expert was pessimistic but did credit the preservation program as being a possible solution: “Agriculture’s future in the county is dim because the development pressures will be too strong, unless they make additional money available for preservation purposes.” The property tax used to fund the program was reauthorized in the November 2006 election.

By October 2008 the Berks County PDR program had protected 56,000 acres. However, compared to Burlington County, the experts were less optimistic when we asked them about the adequacy of land for agriculture 10 years into the future.

- “Land in farms will not be adequate.”
- “Not be adequate; [just] pockets of preserved land.”
- “Land for farming is already not adequate, as seen by great increase in rents.”

- “Land for farming will diminish. Maybe there will be enough land for the remaining farms.”
- “It will be adequate if the land preservation program continues. If it doesn’t, the land will go to developers.”
- “There is enough land for farming because of both conservation and preservation programs.”
- “They have preserved a lot of land. People who love farming will stay, and rich people from New York will buy the preserved land and lease it out.”

The comparable total acres preserved for Carroll County were 51,000 acres by the end of 2007. As with Berks County, opinions about the adequacy of land in the future were mixed, though on the whole more positive:

- “In 10 years there will be fewer farms and a slight decrease in acreage, but not too much because we have preserved so much land.”
- “There will be enough land because of the preservation program. We are at 45,000 acres [at the time of the interview in 2005]. It should be adequate given the conditions we’ll have in 10 years.”
- “The ag preservation program has us at 45,000 acres. I am concerned that some have been in the program for 25 years and might be allowed out of the easement if agriculture is no longer viable.”
- “Total supply of land in farming will be fairly stable. We’ll lose some but not at a fast rate.”
- “In 10 years there will be a noticeable decrease in land for farming.”

*Affordability of easement land to farmers when it is on the market:* Eventually, much or most of the protected land will be sold in arms-length transactions (rather than at discounts to family members). Among other purposes, old age, death, the lack of heirs wanting the land, or perhaps a need to raise capital for a farming operation that transcends the property at issue motivates these sales. In 2005 the University of Nebraska surveyed a sample of owners of agricultural land whose development rights had been purchased in part with money from the federal Farm and Ranch Lands Protection Program (Esseks, Nelson, and Stroe, 2006). At the time of the survey, in the program’s ninth year, 8% of the surveyed persons were such “second generation” owners.

In five of the current study’s 10 counties with PDR programs, their administrators and/or knowledgeable observers voiced concern about the affordability of the protected properties to second and later generations of owners. The main problem was nonfarmers and wealthy part-time farmers bidding up the market prices for this kind of real estate product—largish rural properties very suitable for estate living. Able to compete with them, at least sometimes, were farmers with “1031 exchange” money and those raising high-value products like wine grapes, landscaping products, and niche-market food. Our findings were similar to those of Al Sokolow (2006), when he and colleagues surveyed program managers of 25 programs. Here are interview quotations we gathered in the five counties that illustrate the affordability problem:

- “Even with the strict development limits, land prices rose so sharply in some areas that the open land was more valuable as sites for multi-million dollar mansions.” “You pay a

lot for a view of Mount Rainier, \$10,000 to \$15,000 per acre [multiplied by at least 35 acres]. But mansion buyers put land out of reach for farmers” (King County).<sup>33</sup>

- “The problem is that when the property sells, it still goes for \$750,000 to a million dollars on a 100 acres because we have so many wealthy people in the region that are buying second homes.” “Preservation doesn’t affect the sale price” (or the “after value,” after the development rights have been removed). Said another expert, “Farmers are not able to buy easement land with their higher after values. It’s getting to be a problem” (Carroll County).
- “Wealthy people are buying our preserved land. We risk missing the economic benefits of land being in agricultural production including jobs in the processing of agricultural goods produced in the county.” “Look, we have preserved land, but it still sells for so much money.” “The land is still expensive, but less expensive because they are not bidding against developers. Even those who buy it not to farm may rent it out to another farmer” (Berks County).
- Staff of the Burlington County program cited a report from the State Agricultural Development Committee (2004) that warned about rising values of easement land that “can price farmers out of the market for preserved land.”
- “It looks as though the after-easement sale values of the land continue to increase. Recently a 100-acre farm with the right to build only one home was about to sell for more than one million.” “People are buying it [preserved land] for horses. Even with the restrictions, it will grow in value” (Orange County).

Despite these concerns, some or many farmer buyers may be able to purchase protected land. Wine grape growers in Sonoma County had the revenues to cover high mortgage payments. A source from Berks County described how farmers moving from a county closer to Philadelphia sold out at about \$30,000 per acre and bought easement land in Berks County at \$5,000 to \$10,000. The “1031 exchange” provision of the federal tax code allowed them to avoid capital gains taxes.<sup>34</sup> In February 2006 the Burlington County PDR program held an auction for seven parcels of land with easements that the program owned. Two farming couples from Burlington County successfully bid on one parcel each, while the other five were bought by out-of-county farmers of high-value ag products: fruit, ethnic vegetables, and landscape products. The purchase price per acre ranged from \$4,394 to \$10,478.

## **6. One Solution to the Affordability Problem: Public Agencies Purchase Amland and Lease It to Farmers**

In two of our counties—Sonoma and Palm Beach—public agencies have a specific program of leasing out agricultural land that they had bought. The Sonoma County Agricultural Preservation and Open Space District started in 2000 a “Small Farms Program” that emphasized local vegetable production.<sup>35</sup> Using proceeds from a one-quarter-percent sales tax dedicated to both its

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<sup>33</sup> For smaller parcels that were created before the 35-acre minimum became binding, the cost per acre could be much higher. One King County expert cited two 2006 appraisals: \$20,000 per acre for a 10-acre parcel and \$14,000 per acre for a 20-acre property.

<sup>34</sup> See the earlier discussion about these exchanges in Section 3a above.

<sup>35</sup> “The Small Farms Program . . . was developed by District staff and agricultural experts who were concerned about agricultural diversity, and specifically the future of local vegetable farms. Land values for Sonoma’s quality winegrapes are so high that vegetable farmers are unable to compete. The Small Farms Initiative recognizes that vegetable farms provide a valuable benefit to the community, and contribute to the local economy.”

fee-simple purchases of land and its acquisition of easements, the district had two farms under lease as of July 2007: one comprising 18 acres and the other, 48 acres. A participating leasing farmer told us, “You can’t buy land in Sonoma County. Small parcels are more expensive, even five, 10, or 20 acres.” His current lease was for five years.

Palm Beach County’s program is larger. Using proceeds from a \$100 million bond that voters approved in 1999, the county purchased over 2,300 acres by early 2007, of which reportedly 1,782 were then being leased to farmers,<sup>36</sup> including operators who had previously owned the farmland. The high market value of land prevailing in those years greatly limited the total number of acres that could be bought. Among the tenants was a nursery products operation that relocated from an area of the county under strong development pressures to 38 acres owned by the county. The lease was for 25 years. One of the nursery’s owners said—in words to the effect—that, without the program, his family business would have been compelled to move out of the county in search of cheaper land.<sup>37</sup>

There was another lease-back option in Palm Beach. Parts of that county’s share of the Everglades were under state or federal ownership and awaiting restoration, such as to reestablish wetlands where land had been drained for agricultural purposes. By one 2006 estimate,<sup>38</sup> as many as 40,000 acres of that land were leased to farmers.

The 2007–8 increases in farm commodity prices may enable many more farmers to purchase easement land. However, if—as indicated by our 2005–7 interviews—much of the PDR-preserved land will end up owned by nonfarmers or wealthy part-time farmers, what can public policy makers do to encourage those owners to have their lands farmed at commercial intensities? One tool we have not discussed so far is agricultural use-value assessment that can both (1) keep the property-tax costs of owning farmed land bearable and (2) encourage nonfarmers to lease to commercial operators because more than trivial levels of farming are required in order to qualify for preferential assessments.

## **7. Agricultural Use-value Assessment for Property-Tax Purposes**

State laws defined the general rules guiding agricultural-use assessment for farm and ranchland. Table 3.7 summarizes the eligibility rules published on departmental websites and other official sources as of the spring of 2008 (or as otherwise dated).

In urbanizing areas the differences in tax assessment can be very substantial. Rodney Clouser (2005) reported that in a rural southern Florida county, “citrus land is assessed in the \$3500 range, sod-producing land is assessed just under \$1500, and unimproved pasture is assessed at less than \$100” (p. 3). In contrast, the market value of agland awaiting development in Palm Beach County might have been \$100,000 or more per acre before the decline in property values

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“With the Small Farms Initiative, the District will lease land to farmers who grow vegetables, flowers, herbs, and berries. The leases will preserve some lands zoned for agriculture in production and allow access for experienced farmers who may not otherwise be able to find land. This initiative aims to ensure and enhance the continued viability of agricultural lands in Sonoma County by keeping land in agriculture” ( Sonoma County Agricultural Preservation and Open Space District, 2008b).

<sup>36</sup> *Palm Beach Post*, February 23, 2007.

<sup>37</sup> *South Florida Sun-Sentinel*, June 12, 2005.

<sup>38</sup> Interview with a Cooperative Extension adviser.

that began in 2007. A state-level study in California found that agricultural-use assessment saved owners “from 20 percent to 75 percent in property-tax liability each year” (California Department of Conservation, 2008).

Figure 3.5 suggests that most of the surveyed agland owners in the two California counties agreed. All the participating owners there and in the other 13 counties were asked, “How helpful has this law [about use-value assessment] been in keeping property taxes on agland in [the owner’s] county at acceptable levels?” In Sonoma and Ventura counties, combinations of 51% and 55% of the respondents, respectively, chose the response options of “Very helpful” or “Moderately helpful” (rather than “Never heard of it,” “It’s not helpful,” “Somewhat helpful,” or “Not sure”). The corresponding percentage for the Berks County sample was identical to Ventura County’s. But in 11 of the other studied counties, the approval rates were all at the 60% level or higher. In nine of those 11, the percentages for “very helpful” alone ranged from 53% in Orange County to 79% in Burlington County.

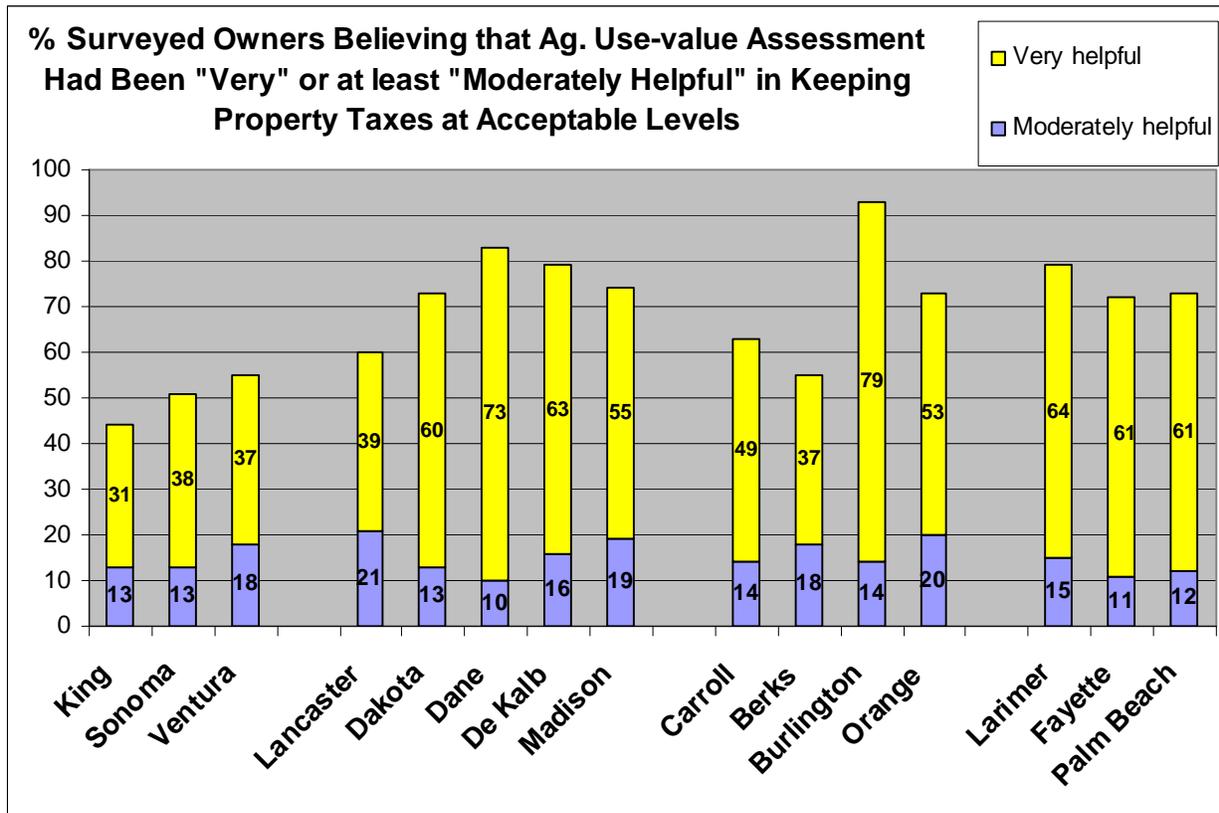
<b>Table 3.7: Eligibility Requirements and Basis for Agricultural-Use Assessment for Property Taxes</b>	
<b>County</b>	<b>Major Requirements and Basis of Assessment as of Mid-2008</b>
<b>Pacific Coast</b>	
<b>King County, WA</b>	To qualify for “Current Use Property-Tax Assessment,” land must be “devoted primarily to the production of livestock or agricultural commodities for commercial purposes.” <ul style="list-style-type: none"> <li>• If less than five acres, an annual gross income from ag products of \$1,500 is required.</li> <li>• If 5 to 20 acres, \$200 per acre.</li> <li>• If 20 or more acres, no specific amount is required, but there must be “sufficient income to ascertain the property is a commercial-scale farm.”<sup>39</sup></li> </ul>
<b>Sonoma County, CA</b>	<ul style="list-style-type: none"> <li>• The Williamson Act authorizes 10-year contract between the landowner and the county whereby agricultural land and any “growing improvements” (trees and vines) are valued for property-tax purposes at their capacity for earning income. For the length of the contract only agricultural and ag-compatible uses are permitted. State partially compensates county for the property taxes lost due to this program. Contracts are automatically renewed unless owner decides to give notice of nonrenewal, in which case the contract and its land-use restrictions end after another 10 years. Tax benefits gradually diminish during that period.</li> <li>• County sets eligibility requirements: Sonoma County required farmland that was highly productive or had a carrying capacity of at least one animal unit per acre per year or met other measures of significant agricultural production.</li> </ul>
<b>Ventura County, CA</b>	<ul style="list-style-type: none"> <li>• “To be eligible for a [Williamson Act] contract, a parcel must be a legal lot of at least 10 acres, . . . considered prime land as defined by the Land Conservation Act [i.e., the Williamson Act], and must demonstrate an agricultural income of \$500/acre from the property in the past three years.</li> <li>• “If the land is to be contracted for grazing, the minimum parcel size is 80 acres, and the landowner must demonstrate that it can sustain a certain number of ‘animal units.’”</li> </ul>
<b>Corn Belt</b>	
<b>Lancaster County, NE</b>	Land must be outside corporate boundaries of a city, village, or Sanitary Improvement District, and land must be used for agricultural or horticultural purposes. Taxable value is based on 75% of the actual value for agricultural or horticultural use, which in turn may be based on cash rents for each county.
<b>Dakota County, MN</b>	Green Acres Program required at least 10 acres used agriculturally, gross revenues from agriculture of at least \$300 annually, plus \$10 per tillable acre. A less widely used option was the Agricultural Preserves Program, which required being in an exclusive agricultural- use zoning district with minimum density of one dwelling unit per 40 acres and an eight-year covenant to leave the land in ag use. Annual property taxes are based on “ag market value only,” and owner received a \$1.50 per acre tax credit in addition.

<sup>39</sup> In this table the passages within quotation marks come either from published program documents or from interviews with program administrators.

<b>Dane County, WI</b>	"Land devoted primarily to agricultural use" was eligible for assessment "based on the [net] income that could be generated from its rental for agricultural use."
<b>DeKalb County, IL</b>	"Farmed portion [must be] larger than the residential portion of parcel. . . . Farmed portion is not less than 5 acres in area." "Farm acreage is assessed based on its ability to produce income, which is called its agricultural economic value [which in turn] is based on statewide studies of land use under average level management, soil productivity, and of the net income of farms in Illinois."
<b>Madison County, OH</b>	If had at least 10 acres "devoted exclusively to commercial animal or poultry husbandry," commercial field crops, landscaping products, etc., it can be assessed on the basis of its agricultural use value rather than a "highest and best use" valuation.
<b>Mid-Atlantic</b>	
<b>Carroll County, MD</b>	<ul style="list-style-type: none"> <li>• "A parcel of land is eligible for agricultural use valuation if it is determined to have 5 acres or more 'Actually Devoted' [to agricultural use]"—with the definition of the latter varying by type of product, such as at least one animal per acre for horses or cattle and five for "sheep, goats, or swine."</li> <li>• "For parcels which are at least 3 acres in size but less than 5 acres, the average gross income must be no less than \$2,500 per year."</li> <li>• "For parcels under 3 acres in size, the average gross income must be no less than 51% of the owner's total gross income."</li> </ul>
<b>Berks County, PA</b>	<ul style="list-style-type: none"> <li>• Land is taxed "according to its use rather than the prevailing market value" if in the preceding three years there were at least 10 contiguous acres in agricultural use.</li> <li>• "Parcels of less than 10 acres and capable of producing \$2,000 annually from the sale of agricultural products are eligible for the agricultural use designation."</li> </ul>
<b>Burlington County, NJ</b>	To be eligible, owner must have at least five acres that are farmed (exclusive of the farm house). "Gross sales of products from the land must total \$500 per year for the first 5 acres, plus \$5 per acre for each acre over 5, except in the case of woodland or wetland where the income requirement is \$.50 per acre for any acreage over 5."
<b>Orange County, NY</b>	<ul style="list-style-type: none"> <li>• "Land generally must consist of <i>seven or more acres</i> that were used for the preceding two years for the production for sale of crops, livestock, or livestock products."</li> <li>• "The annual <i>gross sales</i> of agricultural products generally <i>must average \$10,000</i> or more for the preceding two years. If an agricultural enterprise is <i>less than seven acres</i>, it may qualify if <i>average annual gross sales equal \$50,000 or more</i>."</li> <li>• "Land that supports a commercial horse-boarding operation may qualify for an agricultural assessment if the following eligibility requirements are met: at least seven acres of land supports the commercial horse-boarding operation; the operation boards at least 10 horses regardless of ownership; and the operation receives \$10,000 or more in gross receipts annually in the preceding two years from fees generated through the boarding of horses and/or through the production for sale of crops, livestock, and livestock products."</li> <li>• "Land that supports operations whose primary on-site function is horse racing is not eligible."</li> <li>• "A startup operation may qualify based on its annual gross sales of agricultural products in the operation's first or second year. Such annual sales must amount to at least \$10,000 if the startup operation has seven or more acres, or to at least \$50,000 if the startup operation has less than seven acres in agricultural production."</li> <li>• "A startup commercial horse-boarding operation may also qualify based on annual boarding fees of \$10,000 or more in its first or second year."</li> <li>• "Land rented for agricultural purposes may receive an agricultural assessment. If the rented land satisfies the basic eligibility requirements described above, it is eligible for agricultural assessment. In addition, if the rented land does not satisfy the average gross sales value requirement, but does satisfy the other requirements, it may still be eligible if it is farmed, under a written rental agreement of at least five years, with other farmland that satisfies all eligibility requirements. The applicant must substantiate the existence and the term of the rental agreement by providing the assessor with either a copy of the lease or an affidavit confirming that such an agreement exists. A startup farm operation may include rented land."</li> </ul>
<b>Highly Scenic and Recreational</b>	
<b>Larimer County, CO</b>	<p>A farm or ranch parcel of land used for "the primary purpose of obtaining a monetary profit," though no monetary minimum was required.</p> <ul style="list-style-type: none"> <li>• Land was "used the previous two years and presently is used as a farm or ranch . . . or that is in the process of being restored through conservation practices."</li> <li>• Could be located in incorporated areas.</li> </ul>

<b>Fayette County, KY</b>	Land used for agricultural or horticultural purposes was eligible: <ul style="list-style-type: none"> <li>• “‘Agricultural land’ means any tract at least 10 acres in area, exclusive of land used in conjunction with the farmhouse, that is used for agricultural purposes or for the growing of merchantable timber.”</li> <li>• “‘Horticultural land’ means any land of at least five acres in area commercially used for the cultivation of a garden, orchard, or the raising of fruits, vegetables, flowers, or ornamental plants.”</li> </ul>
<b>Palm Beach County, FL</b>	Eligible for agricultural use-value assessment if land is used “for bona fide agricultural purposes.” <ul style="list-style-type: none"> <li>• Rather than stipulating acreage or income standards, the state statute called on local assessors to decide on the presence or absence of such purposes by considering a number of listed factors, including: <ul style="list-style-type: none"> <li>• “The length of time the land has been so utilized; . . . .</li> <li>• “Size, as it relates to specific agricultural use;</li> <li>• “Whether an indicated effort has been made to care sufficiently and adequately for the land in accordance with accepted commercial agricultural practices, including, without limitation, fertilizing, liming, tilling, mowing, reforestation, and other accepted agricultural practices; [and]</li> <li>• “Whether such land is under lease and, if so, the effective length, terms, and conditions of the lease.”</li> </ul> </li> </ul>

**Figure 3.5**



Also, among the respondents in six counties, favorable evaluations of their ag use-value assessment were associated with being positive about the future of agriculture there. In Dakota, Dane, Lancaster, Madison, Orange, and Palm Beach counties, agland owners who found their county’s use-value assessment policies to be “very helpful” or at least “moderately helpful” were

more likely to think that agriculture 20 years into the future had a “bright future” or at least “modest future” (rather than “dim,” “none at all,” or “not sure”).<sup>40</sup>

However, many or most of the use-value assessment eligibility requirements shown in Table 3.7 may need some tightening. Where minimum acre or sales standards were set, they seem to exclude only the rather small farm operations:

- Those with at least five acres in DeKalb, Burlington, and Fayette counties (for horticulture) were eligible. Gross sales qualifications were triggered for parcels from three acres to less than five in Carroll County and at least seven acres in Orange County.
- Madison County’s eligibility standard was 10 or more acres. Ten was the floor also in Ventura (for crops) plus \$500 in gross revenues per acre. For Dakota County it was 10 acres plus \$300 in annual receipts and \$10 per tillable acre.
- King County had a 20-acre minimum, but allowed from five to fewer than 20 acres if the operation grossed at least \$200 per acre, and total revenue of \$1,500 if the farm had even fewer than five acres.
- Below 10 acres was permitted in Berks County if the gross was at least \$2,000.
- The regulations governing Orange County allowed as few as seven acres plus at least \$10,000 in gross revenues, and fewer than seven if the revenues totaled \$50,000 or more, except that commercial horse-boarding operations could get by with at least \$10,000.

For the purpose of encouraging viable farming sectors, the small acreage and revenue minima make sense if they qualify genuine farmers like producers of high-value products, rather than permitting nonfarmers to arrange minimal production efforts that meet lenient standards. The Orange County income requirements (set by the state) of \$10,000 or \$50,000 seem to stimulate commercial farming. (See the discussion in Section 3b about landowners in Orange County being so eager to have genuine farmers rent their land that they accepted low or zero rents.)

Acreage limits (five or 10 acres) without meaningful income standards may not do as well. A knowledgeable observer in Berks County complained, “The income eligibility threshold of \$2,000 has not been adjusted since 1974. The increase in the price level since 1975 is about 318%. The eligibility threshold could be adjusted to at least \$6,000 to be equivalent in purchasing power to \$2,000 in 1974.” The New Jersey standards were also set years ago, in 1964. In November 2006 the Palm Beach County Board called for reform of its state’s assessment guidelines for agland:

- “In Palm Beach County, there have been instances of property being purchased at a premium based on its future development potential, but receiving an agricultural classification and reduced tax bill because the new owner permits a minimal level of agricultural activity on the property. For example, a 7.9-acre parcel in a residential area in eastern Palm Beach County has been assessed at \$2,755 since 1998. The property owner has been able to keep an agricultural exemption by allowing a few cows to graze on the property. For 2006, the property owner will pay \$51 in taxes.
- “Guidelines for making a determination of whether property qualifies for the agricultural classification are currently provided in Florida Statutes (F.S. 193.461). We believe that

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<sup>40</sup> These likelihood estimates were found when other predicting variables in the logistic regression equations were held constant, i.e., “other things being equal.”

the statute should be strengthened so that only legitimate agricultural operations are able to receive the benefit of an assessment reduction for agricultural use.” (Palm Beach County Commissioners, 2006).

An obstacle to the suggested reform is likely to be opposition from the many rural landowners who purchased their mini-estates on the assumption that they could work the farmland assessment system to their advantage.

Besides equity issues like nonfarmers enjoying low taxes at the expense of owners of non-rural land who pay on the basis of full market assessment, there is the problem discussed earlier of seemingly more and more PDR-protected farms being purchased by nonfarmers or not-so-serious producers. As the Palm Beach County Board recommended, reasonably high standards of eligibility for preferential tax assessment may avoid the situation of “a few cows” grazing on the property by compelling owners either to farm seriously themselves or to persuade genuine farmers to rent from them. New York State’s use-value law encourages the latter with its eligibility provision of the parcel consisting of at least seven acres and being “farmed, under a written rental agreement of at least five years, with other farmland that satisfies all eligibility requirements” (Table 3.7).

### 8. Right-to-Farm Legislation and Conditions Shaping Their Effectiveness

A long-noted, potentially serious problem for farmers in urbanizing areas has been the tendency of nonfarmer neighbors to lodge formal and informal complaints about real or imagined nuisances resulting from the farming operations: livestock odors, dust from field work, noise from late-night or early morning operations of farm machinery, slow-moving farm equipment on public roads, and pesticides seeming to or actually polluting air and water (Lisansky and Clark, 1987; Handel, 1999). State and local government have gone to the aid of farmers and ranchers with “right-to-farm” legislation. Table 3.8 summarizes the provisions of those statutes and ordinances, as well as other relevant political traits that condition the success of the legislation.

<b>County</b>	<b>Main Features of State or Local Government Legislation</b>	<b>Related Policy and/or Political Traits (Including Culture of the Community)</b>
<b>Pacific Coast</b>		
<b>King County, WA</b>	No nuisance action should be brought if ag activities are “consistent with good agricultural and forest practices and established prior to surrounding non-ag and forestry activities, are presumed to be reasonable and shall not be found to constitute a nuisance unless . . . [it] has a substantial adverse effect on public health.” Specifies that the ag operation “shall not be restricted as to the hours of the day or days of the week.” <sup>41</sup>	In pursuit of the goal of protecting “unique, fragile and valuable elements of the environment,” the county’s “Critical Areas Ordinance” has, among other activities, regulated maintenance of agricultural ditches, mandated fencing setbacks, and overseen management of livestock operations, such as by limiting the number of livestock allowed, “access of animals to streams and wetlands, fencing, and manure management.”
<b>Sonoma County, CA</b>	County: “No agricultural operation conducted or maintained on agricultural land in a manner consistent with property and accepted customs and standards, as established and followed by similar agricultural operations in the county, shall be or become a nuisance for purposes of this code or county regulations if it was not a nuisance when it began,	State: “Buyers of property in agricultural areas must be given statement of rights of farmers and sign the statement.” County: “The treasurer/tax collector shall cause the following notice to be mailed to all owners of real property within the county with the annual tax bill:

<sup>41</sup> In this table the passages within quotation marks come either from published program documents or from interviews with program administrators.

	provided that such operation complies with the requirements of all applicable federal, state, and county statutes, ordinances, rules, regulations, approvals and permits. The provisions of this section shall not apply where a nuisance results from the negligent or improper management or operation of an agricultural operation."	'Residents or users of property located near an agricultural operation on agricultural land may at times be subject to inconvenience or discomfort arising from that operation, including, without limitation, noise, odors, fumes, dust, smoke, insects, operation of machinery during any time of day or night, storage and disposal of manure, and ground or aerial application of fertilizers, soil amendments, seeds, and pesticides. . . . The County of Sonoma has determined in the Sonoma County Right to Farm Ordinance that inconvenience or discomfort arising from a properly conducted agricultural operation on agricultural land will not be considered a nuisance for purposes of the Sonoma County Code or County regulations.'
<b>Ventura County, CA</b>	Ag operation shall not become a private or public nuisance if conducted "in a manner consistent with proper and accepted customs and standards as established and followed by similar operations in the same locality . . . due to any changed condition in or about the locality after it has been in operation for more than one year."	Mandated disclosure to new buyers like statement used in Sonoma County (see above).
<b>Corn Belt</b>		
<b>Lancaster County, NE</b>	On parcels of 10 or more acres "devoted to the commercial production of farm products," farm operations or public grain warehouses shall not be a public or private nuisance if they existed before "a change in the land use or occupancy of land in and about [their] locality and if it would not have been a nuisance before such change." A pig farmer defendant lost the case because plaintiff's use of land preceded his pig facility.	Cooperative Extension helped to resolve conflicts and worked proactively to educate rural nonfarm residents about agriculture and what to expect from farming nearby.
<b>Dakota County, MN</b>	Not a public or private nuisance after two years from its establishment, if farming operation is located in an agriculturally zoned area, complies with applicable laws, and "operates according to generally accepted practices." However, if "the agricultural operation is subsequently expanded or significantly altered, the established date of operation for each expansion or alteration is deemed to be the date of commencement of the expanded or altered operation."	Both a state Farm Bureau staff person and an administrator with the Minnesota Department of Agriculture were assigned to help farmers with these conflicts.
<b>Dane County, WI</b>	<ul style="list-style-type: none"> <li>• "Wisconsin right-to-farm law enacted to protect farm operations using good management practices from nuisance suits—lawsuits challenging acceptable farming practices."</li> <li>• "A farm may even expand the size of its buildings and herd size under the right-to-farm protection, but these changes may require local zoning or permits."</li> </ul>	Wisconsin State Department of Agriculture promoted "positive" neighbor relations between farmers and nonfarmers, including by recommending ways for farmers to avoid problems: "provide a welcome gift basket to new neighbors, . . . contact prior to spreading manure near homes, and keep farm machinery off roads during commutes and school drive times."
<b>DeKalb County, IL</b>	"No farm or any of its appurtenances shall be or become a private or public nuisance because of any changed conditions in the surrounding area occurring after the farm has been in operation for more than one year, when such farm was not a nuisance at the time it began operation, provided that the provisions of this Section shall not apply whenever a nuisance results from the negligent or improper operation of any farm or its appurtenances."	Additional protection if farm is enrolled in a state-authorized Agricultural Area, which must be approved by local government and consist of at least 350 contiguous acres. "[Ag] areas help protect landowners from <i>local ordinances</i> [emphasis added] that might otherwise interfere with normal farming practices. However, ag areas do not exempt farmers from nuisance suits or from following approved best management practices."

<b>Madison County, OH</b>	Protection against nuisance complaints if the ag activity in question was “conducted within an agricultural district”; the activity was “established within the district prior to the plaintiffs activities or interest on which the action is based”; “The plaintiff is not involved in agricultural production”; “The activities were not in conflict with any federal, state, and local laws and rules.”	The state-authorized Agricultural Districts must be approved by local government, continue at least five years, and consist of parcels totaling at least 10 acres in size or that had generated in previous three years income that averaged at least \$2,500.
<b>Mid-Atlantic</b>		
<b>Carroll County, MD</b>	<p>“If an agricultural operation has been:</p> <ul style="list-style-type: none"> <li>• underway for a period of one year or more, and</li> <li>• is in compliance with applicable federal, State, and local health, environmental, zoning and permit requirements, and is not conducted in a negligent manner.</li> </ul> <p>Then: the operation, including any noise, dust, or insects from the operation, may not be deemed to be a private or public nuisance, and a private action may not be sustained on the grounds that the operation interferes with the use or enjoyment of other property, whether public or private.”</p>	County subdivision ordinance required this statement on final plat creating residential building lots in the agricultural district: "Agriculture is the preferred use in the agricultural district. All agricultural operations shall be permitted at any time, including the operation of farm machinery and no agricultural use shall be subject to restriction because it interferes with other uses permitted in the district."
<b>Berks County, PA</b>	“No nuisance action shall be brought against an agricultural operation which has lawfully been in operation for one year or more prior to the date of bringing such action, where the conditions or circumstances complained of . . . have existed substantially unchanged since the established date of operation and are normal agricultural operations, or if the physical facilities of such agricultural operations are substantially expanded or substantially altered and the expanded or substantially altered facility has been in operation for one year or more prior to the date of bringing such action.”	Extra protection if enroll land in a state-authorized and local government approved Agricultural Security Area (ASA), which consisted of at least 250 contiguous acres: “The local government unit may not impose ordinances that unreasonably restrict farm structures or practices within the ASA, nor may normal farming operations and practices be deemed nuisances in a nuisance ordinance.”
<b>Burlington County, NJ</b>	<p>The state’s Right-to-Farm Act “affords responsible farmers protections against public and private nuisance actions and against municipal regulations that constrain farming. . . . [To be eligible for these protections], commercial farms:</p> <ul style="list-style-type: none"> <li>• must be operated in conformance with federal and state laws, agricultural management practices recommended by the SADC [State Agriculture Development Committee] or site-specific agricultural management practices [those approved by the County Agricultural Development Board],</li> <li>• must not be a threat to public health and safety, and</li> <li>• must be located in an area where agriculture was a permitted use under municipal zoning ordinances.”</li> </ul>	Complaints were supposed to be referred to the County Agricultural Development Board (CADB). In practice most seemed to be handled initially by either Cooperative Extension or administrators of the county’s PDR program. If not resolved, they could go to the CADB. If need be, a voluntary mediation program operated by the State Agricultural Development Committee could be used.
<b>Orange County, NY</b>	<p>The state’s commissioner of agriculture was authorized to judge the validity of nuisance complaints, that is, whether the farm management practices in question were “sound.” The opinions of his/her office were final unless appealed to the state court system, except if farm is in an Agricultural District (approved by local government, certified by the state, and consisting of at least 500 acres).</p> <p>For agland located within a district, staff of the state Department of Agriculture and Marketing “review both existing and proposed laws to determine if they were compatible with farm operations,” and the department’s judgment was final.</p>	<ul style="list-style-type: none"> <li>• Buyers of rural land in Orange County were supposed to be notified at closing about the right to farm law.</li> <li>• State’s Department of Agriculture and Marketing developed and disseminated at least 11 publications that laid out what local government should and should not do when regulating agricultural operations (e.g., farm worker housing, nutrient management, and direct marketing activities).</li> </ul>
<b>Highly Scenic and Recreational</b>		

<b>Larimer County, CO</b>	“An agricultural operation that employs methods or practices that are commonly or reasonably associated with agricultural production shall not be found to be a public or private nuisance as a result of any of the following activities or conditions,” including “change in ownership, employment of new technology, or change in type of agricultural product produced.”	The county's right-to-farm ordinance had an explicit public educational purpose: “The [County] Board, with the primary assistance of the Colorado State University Cooperative Extension Larimer County Office and through the use of County Staff as needed, shall support efforts to educate and inform the public of the Right to Farm and Ranch Policy.” A copy of this policy was supposed to be distributed at time building permits were issued.
<b>Fayette County, KY</b>	No restrictions by local ordinance or nuisance findings when an operation “utilize[s] normal and accepted practices, . . . [because of] any changed conditions in or about the locality thereof after the same has been in operation for more than one (1) year, when the operation was not a nuisance at the time the operation began.”	The “culture” of the rural area was reported farmer-friendly during our field work in 2005–6, in part because of the respect for, or admiration of, equine operations.
<b>Palm Beach County, FL</b>	“The act generally provides that a farm that has been in operation for at least one year and that was not a nuisance at the time of its established date of operation shall not be a public or private nuisance if the farm operation conforms to generally accepted agricultural and management practices. . . . However, an existing farm operation may not expand to a more excessive operation with regard to noise, odor, dust, or fumes, if it is adjacent to an established homestead or business.”	

The state right-to-farm statutes focused on two general sources of constraints on farming: nuisance complaints filed by neighbors and local government ordinances designed to limit farms’ hours of operation, use of pesticides, building of greenhouses, and other practices. An explicit or implicit qualification for the protections offered by the statutes was that no farmer could expect help if he/she managed negligently or improperly. As indicated in Table 3.8, the legislation used such language as the farming must be “in a manner consistent with proper and accepted customs and standards as established and followed by similar operations in the same locality,” be using “methods or practices that are commonly or reasonably associated with agricultural production,” or be conforming to “generally accepted agricultural and management practices.”

For eight of our 14 states, the protections kicked in only if the allegedly harmful agricultural operation had been in existence one year or more before the complaint was lodged and was not a nuisance at the start of that time period. For farms or ranches in Ventura, DeKalb, Carroll, Berks, Fayette, and Palm Beach counties, the interval was just a year. For Dakota County, the qualifying time was two years, and for Sonoma it was three years (Table 3.8). Ohio’s statute had no specific time period, but it required that the farming activities in question preceded the plaintiff moving into the area or otherwise having an interest that could be affected by those activities. The Illinois statute suggests the rationale for a time requirement of one year or longer :

“No farm or any of its appurtenances shall be or become a private or public nuisance because of any changed conditions in the surrounding area occurring [like building a new home or whole subdivision] after the farm has been in operation for more than one year, when such farm was not a nuisance at the time it began operation.”

The implication is that justice calls for the property owners who caused the change—that is, nonfarmers moving into the farmed area—to bear any inconveniences. With the opposite time sequence—the farm operation (like a hog confinement facility) being established *after* the neighbors had moved in—the statute’s protections would not apply. A farm or ranch operating at least one year (or two or three) without being formally found to be a nuisance is “presumed not to be a nuisance”<sup>42</sup> just because new or old neighbors start to complain.

In the statutes of five states, farmers were promised additional (or any) protections, particularly from *restrictive local government ordinances*, if their land was enrolled in special geographic units for agriculture: an agricultural zoning district (Dakota County), an Agricultural Area (DeKalb County), Agricultural District (Madison and Orange counties), and Agricultural Security Area (Berks County) (see Table 3.8). The implied rationale was that local authorities should leave farmers and ranchers in these geographic areas largely free to farm since they, the authorities, had approved the areas for agricultural use.

What if the farming operation expanded or otherwise changed after the complainer moved to the area? We found three states’ statutes that addressed this question. Colorado allowed changes like “employment of new technology, or change in type of agricultural product produced” as long as the practices were commonly used and accepted. The Wisconsin legislation was somewhat less generous, stipulating that the “farm may even expand the size of its buildings and herd size under the right-to-farm protection, but these changes may require local zoning or permits.” The Florida statute was restrictive rather than protective: An “existing farm operation may not expand to a more excessive operation with regard to noise, odor, dust, or fumes, if it is adjacent to an established homestead or business.”

**Survey Finding:** Figure 3.6 presents our 2006 survey’s findings of what agland owners thought of the effectiveness of the right-to-farm legislation for their county. Specifically, they were asked: “How helpful has the law been in protecting farmers [or ranchers] against unfair nuisance complaints?” “Never heard of it”; “It’s not helpful”; “Somewhat helpful”; “Moderately helpful”; “Very helpful”; “Not sure.” In only six of the 15 studied counties (Sonoma, Lancaster, Carroll, Burlington, Orange, and Larimer) did 50% or more of the respondents select either “Moderately helpful” or “Very helpful.” The highest combined percentage was Orange County’s 58%. The lowest was 23% in King County, followed by 27% in Ventura County.

To find explanations for these differences across counties, we looked at the survey findings for three related questions: about owners’ experiences with neighbor complaints in the previous five years, the respondents’ evaluations of how their local governments handled controversies between farmers and nonfarmers, and also whether changes had been made in farming their land “because nonfarmers lived nearby” (see Figures 3.7 to 3.10).

To identify possible causal relationships, we used a statistical technique (logistic regression) that allowed the answers to all three related questions to be predictors, competing against one another and the farmers’ reported gross sales and total number of acres owned. In the samples

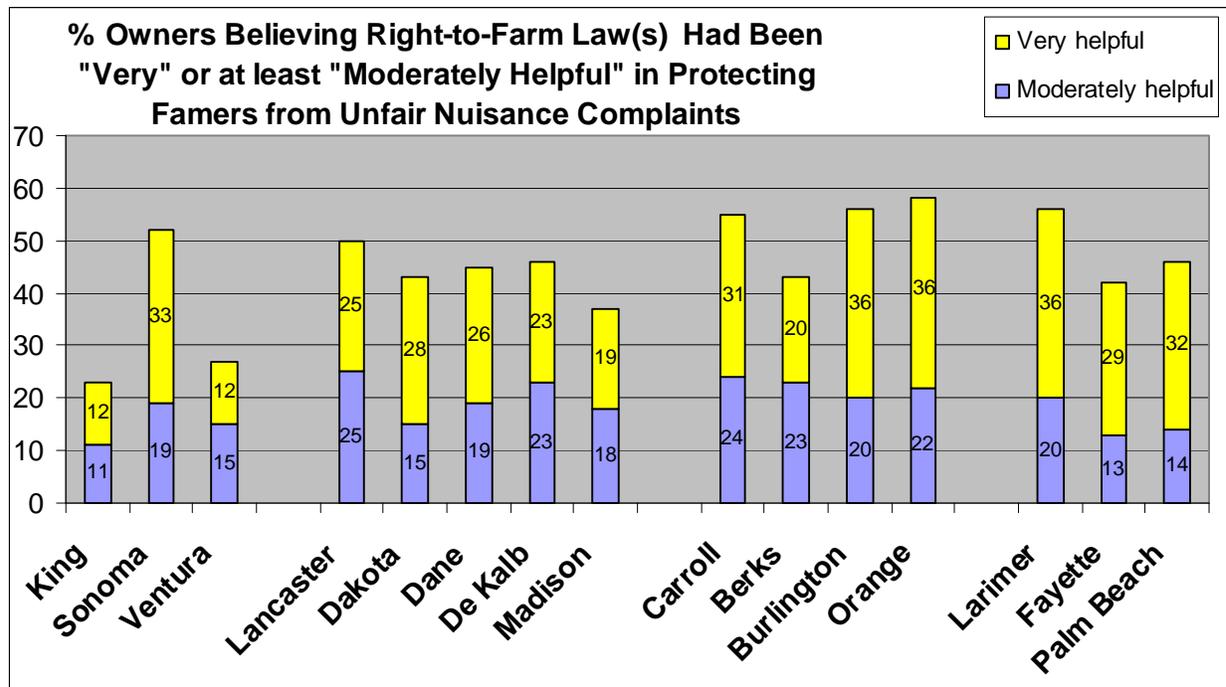
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<sup>42</sup> “Rural Neighbors and the Right to Farm,” 2008, *Nolo*, <http://www.nolo.com/article.cfm/objectId/799F432A-9343-4EA0-AD43973349FFDCFF/catID/D0B308BB-D553-438E-94E8D66498A911D7/213/243/267/ART/> (accessed October 31, 2008).

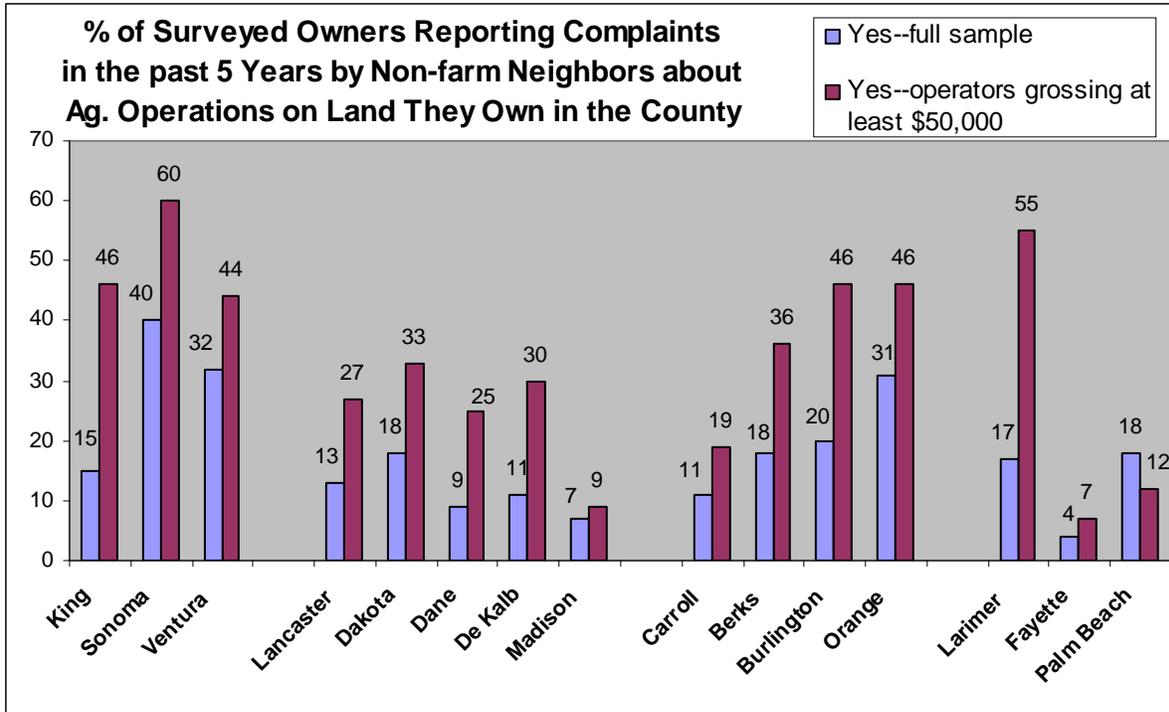
for seven counties (King, Sonoma, Lancaster, Dakota, Dane, Carroll, and Orange), owners who believed that local government was “even-handed” in farmer/nonfarmer conflicts were more likely to evaluate the right-to-farm (RTF) legislation as effective. In only two counties (Dakota and Burlington) did receiving a complaint in the past five years increase the likelihood of a negative evaluation of the RTF statute. Also in just two cases (DeKalb and Carroll) did changes for the worse due to nonfarmer neighbors correlate with a negative opinion. Not surprisingly, it looks as though the perceived attitude toward local government behavior was the most important predictor.

As will be discussed in Chapter 5 (“Outlook for the Future”), answers to this same question about local government behavior correlated with agland owners’ attitudes toward the future of agriculture in 2025. Among the owners surveyed in six counties (Dakota, Dane, Berks, Carroll Fayette, and Palm Beach), the more positive they were about how their local authorities handled controversies, the more likely they were to be optimistic about the future. In four samples (those for Sonoma, DeKalb, Madison, and Larimer), the better the assessment of the local government’s record in such conflicts, the *less* likely owners expected any of their land to be developed in the next 10 years (other predictor conditions held constant).

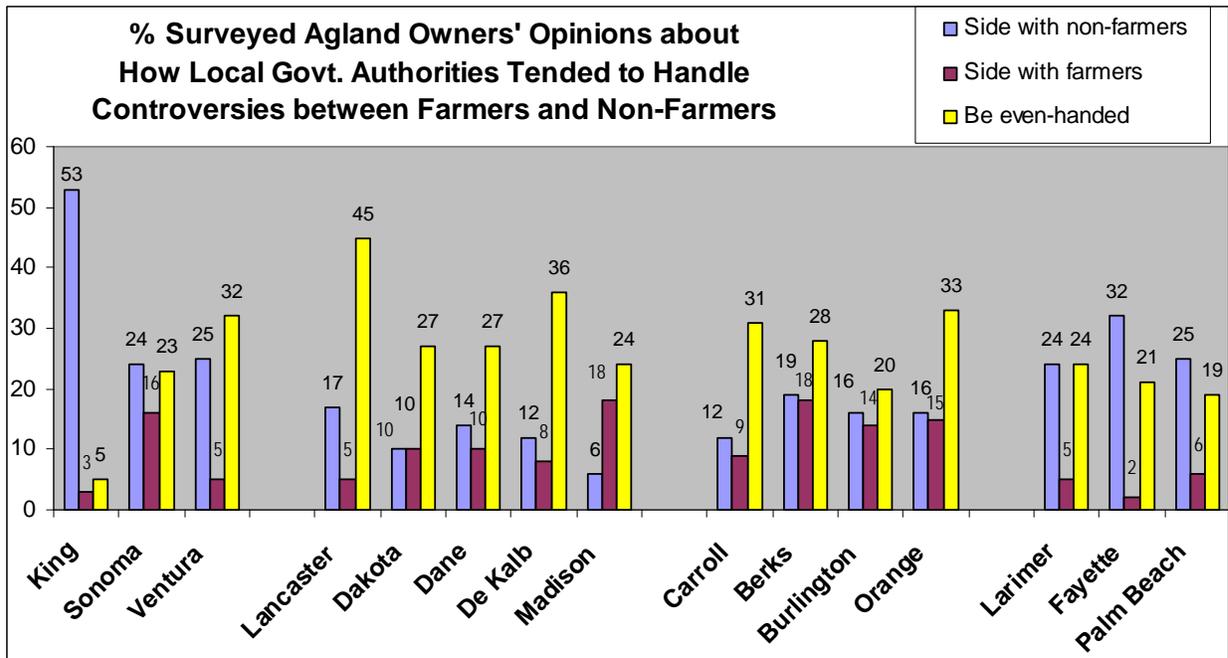
**Figure 3.6**



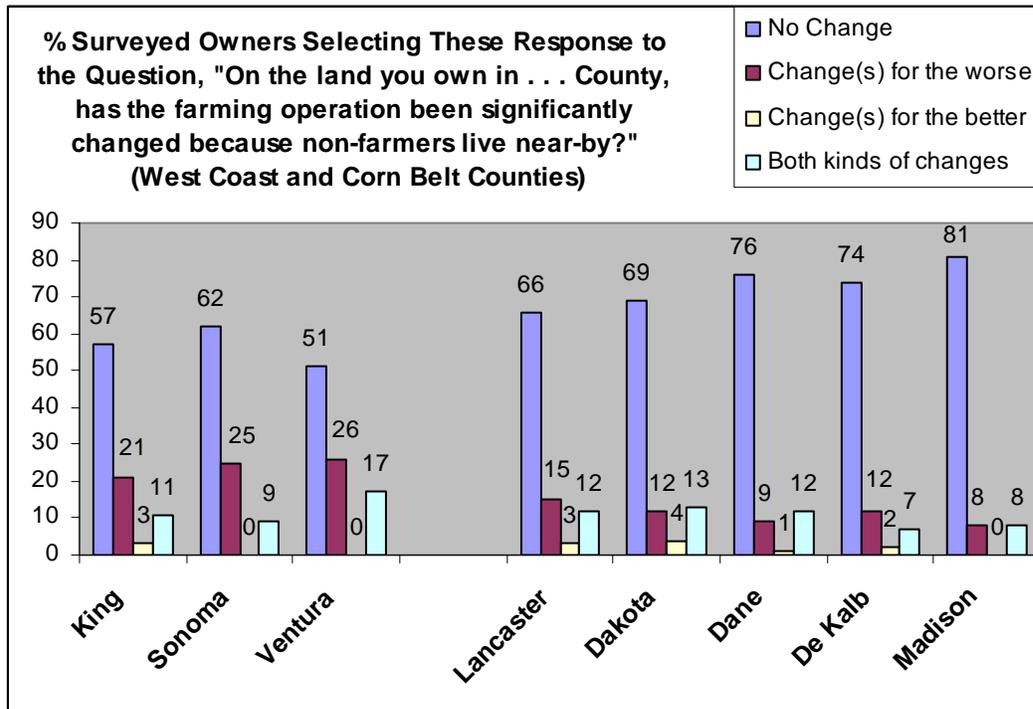
**Figure 3.7**



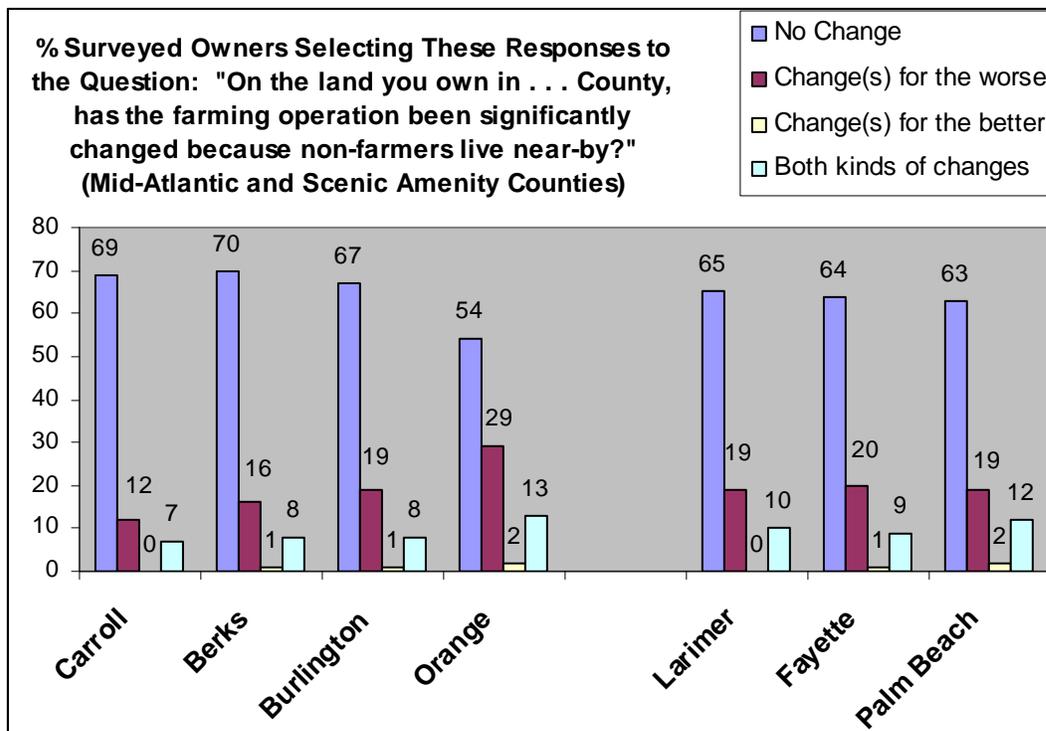
**Figure 3.8**



**Figure 3.9**



**Figure 3.10**



**Interview Findings:** In Figure 3.7 Fayette County had the smallest percentage of surveyed owners who reported complaints about farming operations on their land—just 4% of the full sample and 7% of those with operations grossing at least \$50,000. Three interviewed experts from that county explained the low incidence as due to the popularity of equine operations:

- “There is a great respect for farming, in particular horse farming.”
- “People understand the importance of the horse farms in this county [revenue generated, scenery enjoyed], and people do not complain much.”
- “There is not much trouble here. People do not complain. People seem to welcome the horse farms.”

By contrast, Sonoma County recorded the highest percentages of surveyed owners reporting complaints in the previous five years—40% of the full sample and 60% among operators with at least \$50,000 in sales (Figure 3.7). The interviews gave or suggested four reasons for these conflicts: (1) substantial numbers of residents living amid farms who have no agricultural background and therefore did not anticipate the consequences of normal farm operations like farm smells, dust, and chemicals; (2) a lot of land in crops that had to be sprayed; (3) growers’ failure to communicate with their nonfarmer neighbors; and (4) some farmers’ unwillingness to modify their operations to avoid conflicts:

- “The reality is that when people move out from the city . . . they want to live next to farmland because they basically consider it a park, an open space, someplace where they can go hiking and ride their horse. You would be amazed at how many people do not ask permission from the landowner.”
- “In Sebastopol [a town in Sonoma] a lot of orchards have been turned into vineyards, but there is also a lot of housing amongst that. We have had our times with neighbors. It’s a constant battle. If you have 100 people in Sonoma County maybe only two or one is a farmer. [Our] philosophy is get along with our neighbors. The way you do that is through communication. If we are going to spray, we try to give our neighbors at least two days’ notice. With e-mail, we can tell them tonight we’ll be spraying so tonight close your windows. We also try to give them wine or something once a year.”
- “You run into a people now with money and influence and egos. We have a lady in a house above us [up the hill who] has \$13 million invested in a house, just the house, 10,000 square feet, 15-foot doors throughout, seven bathrooms. . . . They do a lot of entertaining; that’s who you’re up against. They don’t like to drive by things that smell” [i.e., when he spreads livestock manure on his fields].
- “Some people who are anti-wine don’t like spray, even if it consists of natural or organic sulfur, which is 86% of what is sprayed in the county as a pesticide to combat molds. . . . If you’re out spraying water, you can get complaints; the people don’t know what you are doing.”
- “Some farmers modify their operations to avoid conflicts with neighbors, and some don’t. We [in local government] struggle with that.”

## **9. Needed—A Package of Land-Use Policy Tools?**

Table 3.9 presents the percentages of surveyed agland owners’ who were positive about each of four land-use tools used in their counties or proposed to be adopted: agricultural protection zoning, purchase of development rights, agricultural use-value assessment for property taxes, and right-to-farm laws.

If, in search of a package of effective tools, we use the standard of at least 50% of the surveyed owners being positive, we find that all four tools qualified in just two studied counties: Sonoma and Burlington (Table 3.9). The three tools of PDR, use-value assessment, and right-to-farm laws met the 50% approval standard in Carroll, Orange, and Larimer, as well as Sonoma and Burlington counties. Another three-part package—zoning, PDR, and ag-value assessment—shows up in Dakota and DeKalb, plus Sonoma and Burlington counties. Then there is the two-tool combination of PDR and use-value in Dane, Madison, and Fayette, as well as Sonoma and Burlington counties. Another two-tool group—use-value and right-to-farm legislation—is found in Lancaster County. Ag-use assessment has the distinction of attracting 50% or greater support in 14 of the 15 counties, having the highest average of 68.5% of the respondents expressing support, and being a partner in *each* of the 12 combinations (Table 3.9). PDR ranks second, with 63.7% approval on average and belonging to 10 combinations. As suggested by these percentages, ag-use assessment and PDR are the most frequent partners—appearing together in Table 3.9 in bold type for 10 counties. The corresponding number for ag protection zoning is four counties, and for right-to-farm laws, six.

**Table 3.9: Percentages of Surveyed Agland Owners Who Were Positive<sup>43</sup> About Each of Four Land-Use Tools**

County	Ag Protection Zoning (%)	Purchase of Development Rights (%)	Ag Use-Value Assessment (%)	Right-to-Farm Laws (%)
<b>Pacific Coast</b>				
King County, WA ( <i>n</i> = 103)	35	<b>70</b>	44	22
Sonoma County, CA ( <i>n</i> = 108)	<b>50</b>	<b>73</b>	<b>51</b>	<b>52</b>
Ventura County, CA ( <i>n</i> = 105)	36	49 (no program but support its adoption)	<b>55</b>	28
<b>Corn Belt</b>				
Lancaster County, NE	27	47 (no program but support its adoption)	<b>60</b>	<b>50</b>
Dakota County, MN ( <i>n</i> = 136)	<b>54</b>	<b>52</b>	<b>74</b>	43
Dane County, WI ( <i>n</i> = 174)	46	<b>53</b>	<b>83</b>	45
DeKalb County, IL ( <i>n</i> = 171)	<b>52</b>	<b>60</b> (no program but support its adoption)	<b>79</b>	46
Madison County, OH ( <i>n</i> = 107)	45	<b>56</b> (no program but support its adoption)	<b>74</b>	36
<b>Mid-Atlantic</b>				
Carroll County, MD ( <i>n</i> = 140)	25	<b>85</b>	<b>63</b>	<b>54</b>
Berks County, PA ( <i>n</i> = 123)	28	49	<b>55</b>	43
Burlington County, NJ ( <i>n</i> = 140)	<b>50</b>	<b>84</b>	<b>93</b>	<b>56</b>
Orange County, NY ( <i>n</i> = 133)	38	<b>74</b>	<b>72</b>	<b>58</b>
<b>Highly Scenic and Recreational</b>				
Larimer County, CO ( <i>n</i> = 117)	19	<b>64</b>	<b>80</b>	<b>56</b>
Fayette County, KY ( <i>n</i> = 100)	47	<b>76</b>	<b>72</b>	42
Palm Beach County, FL	25	No program and no question about PDR	<b>73</b>	45
<b>Average</b>	36.8	<b>63.7</b>	<b>68.5</b>	45.1

<sup>43</sup> Definitions of positive evaluations: Ag protection zoning—“very helpful” or at least “moderately helpful” in “maintaining an adequate supply of land for farming”; PDR—“very strongly” or at least “strongly support” use of local revenues to purchase development rights to farmland in the county; ag use-value assessment—“very helpful” or at least “moderately helpful” in keeping property taxes on farmland “at acceptable levels”; and right-to-farm laws—“very helpful” or at least “moderately helpful” “in protecting farmers against unfair nuisance complaints.”

The high regard for use-value assessment among agland owners makes sense in that, if it is administered well, they should benefit from it without incurring much if any sacrifice. In 14 of our 15 counties, majorities of 51% to 93% reported that it was “helpful” or “very helpful in keeping property taxes on farmland at acceptable levels” (Figure 3.5). PDR has rather strong appeal also, except that local sales, property, or other taxes may need to be increased to help pay for it. Majorities of 51% to 85% “supported its use in 11 of the counties” (Figure 3.4).

Agricultural protection zoning (APZ) is more problematic. It earned 50% or better support only in Sonoma, Dakota, and DeKalb counties (Figure 3.3). But as discussed earlier, they were among the counties with the strictest APZ. That policy tool may require agland owners to miss or defer selling their land at high prices. However, our interviews with local experts suggest that zoning can work well in certain contexts, including a county like Sonoma where a high-value crop (wine grapes) made agriculturally zoned land competitive with residential uses, and also where 50% of the sample evaluated it positively. Nearly a majority (47%) supported 40-acre ag zoning in Fayette County, where equine operations can be highly profitable, as well as offering beautiful home sites for owner-operators. Then interviews in Dakota and DeKalb counties suggested that many farmers trusted that development would eventually move toward them and that they were therefore content to farm (or have their heirs farm) until that time. In the meantime, they could take advantage of the counties’ good soils and operate in areas with few nonfarm neighbors to complain about their dust, smells, harvesting noise, etc.