

## Executive Summary

**Purpose:** Funded by a National Research Initiative grant from USDA's Cooperative State Research, Education, and Extension Service, our study sought to identify conditions under which farming may remain viable in agriculturally important areas that are subject to substantial development pressures.

Given this principal objective, we selected to study 15 such metro-area counties: three on the Pacific Coast (King County, WA, which includes Seattle; Sonoma, CA, north of the San Francisco Bay Area; and Ventura, northwest of Los Angeles), five Corn Belt counties (Lancaster home to Nebraska's state capital, Lincoln); Dakota County, just south of the Twin Cities in Minnesota; Dane, home of Wisconsin's capital, Madison; DeKalb, IL, west of the Chicago; and Madison, west of Columbus, Ohio ); four Mid-Atlantic counties (Carroll, MD, northwest of Baltimore; Berks, PA, northwest of Philadelphia; Burlington, NJ, east of Philadelphia; and Orange, NY, northwest of New York City); and three unusually scenic counties (Larimer, CO, on the Front Range north of Denver; Fayette, KY, in that state's Blue Grass region; and Palm Beach County, FL, along that state's Atlantic Coast). For each studied county, we aimed to determine:

- what kinds of agricultural products were being successfully raised there (discussed in Chapter 2);
- the adequacy of marketing outlets for crops and livestock products (also Chapter 2);
- the supply and affordability of land for farming and ranching (Chapter 3);
- the adequacy of other major inputs of production: field labor, new farmers, veterinarians, credit, and agri-service businesses that supply equipment, repair services, chemicals, water, etc. (Chapter 4), and
- the future outlook for agriculture in those counties, including agland owners' plans for converting any of their land to non-farm uses, current operators' expectations about continuing to farm there, both surveyed agland owners' and interviewed local experts' prediction about the status of agriculture in their counties in 2016 and also in 2026, and whether the experts would encourage young people with agricultural backgrounds to farm or ranch there (Chapter 5).

**Timing:** The majority of our research efforts took place in 2005 through mid-2007, when development pressures were high or just beginning to decline. During most of that period, also, market prices were mediocre for grains, milk, and certain other types of major products raised in the studied counties. Therefore, since we studied the viability of urban-edge farming under

difficult conditions, many of the successes we found are models of achievement against considerable odds. If they worked in 2005 to 2007, they may be feasible in less challenging situations. At the least, the positive and negative outcomes we identified in those years may serve as bases of comparison for viability evaluations conducted in the same or similar counties in future years.

**Sources for the Study:** We used three major kinds of sources. The first was the Federal Government’s every five-year Census of Agriculture. From the four most recent census years (1987, 1992, 1997, and 2002), we obtained data on groups of farmers, their agricultural products, and other county-wide measures. Second, since published data from the ag census consist of information only at the county level (e.g., there were 345 farms producing grains in 2002) rather than about individual farmers or agland owners, we developed a mailed questionnaire for each of the 15 counties. During 2006, from public lists of owners, we developed random samples and then received usable survey returns from 100 to 174 respondents per county. Of the total of 1,922 owners who participated across the 15 counties, 64% were also the operators of farms or ranches on the land they owned. We focused on owners, including owner-operators, because we sought to learn about a number of their attitudes that would likely shape the future viability of agriculture in their counties—including whether they expected to develop any of their agland in the next ten years or to make any investments in its productivity for agricultural use over the following five years.

Our third source consisted of interviews with knowledgeable observers and participants in the ag sectors of the 15 studied counties. From late 2004 to February 2008 there were phone or in-person interviews with 15 to 36 such persons per county, totaling to 357 across all counties. The interviewees fell into four broad categories:

(1) a group that we classified as “*generalists*” because their jobs gave them broad knowledge of their counties’ agricultural sectors—such as by being a senior Cooperative Extension adviser, the County Executive Director of USDA’s Farm Service Agency, the District Conservationist of USDA’s Natural Resources Conservation Service, Manager of the Soil and Water Conservation District, Executive Director or Manager of the county Farm Bureau, the county planning director or the senior planner, farmer members of the county legislature, and the county Agricultural Commissioner, among others;

(2) *private-sector professionals with more specialized assignments*, such as bankers who handled agricultural loans, managers of farm equipment dealerships and other ag input services, and realtors and attorneys specializing in rural land;

(3) *staff members of public and non-for-profit agencies who led programs designed to assist farmers and ranchers*, such as Extension educators working with livestock or vegetable farmers, administrators of farmland preservation programs or of agricultural protection zoning, managers of farmers’ markets, leaders of programs for young or new farmers, and officers of environmental groups that supported local agriculture;

(4) *farmers or ranchers producing specialty products* such as vegetables for direct marketing, flowers, wine grapes, and agri-tourism, among other kinds of products about which our survey and census sources did not provide sufficient information.

**Findings—Markets:** Chapter 2 presents our findings about the nature and adequacy of markets for agricultural goods raised in the 15 counties. Among the owner-operators whom we surveyed and who reported on their marketing outlets, the average percentages of total sales sold wholesale ranged from 24.1% (in Fayette County) to 85.7% (Madison County), with a median across the 15 counties of 58.2%. The corresponding range of county averages for direct marketing was lower—from 8.7% (in Dane and Palm Beach counties) to 47.2% in Larimer, with a median of 17.1%.

Among the owner-operators in our 2006 survey who answered questions about satisfaction with market outlets, from 38% of the respondents in King County to 84% in Madison County were “very” or at least “moderately satisfied” with their outlets’ accessibility. The median value was 63%. The corresponding percentages regarding “profitability” were lower—from 14% for King to 51% among the Dane County respondents; and the median was 33%. Interviews with experts yielded these causal factors, among others: geographic proximity to crop and livestock buyers and/or processing facilities varied (e.g., very good in Fayette County for horses, but problematic for hog farmers such as in Dane and DeKalb), good local consumer support of direct marketing in some counties (e.g., King, Orange, and Fayette), but insufficient in others (like Carroll), and profitable markets for some niche products (e.g., organic milk and cheeses, specialty vegetables, and wine grapes).

Among the operators who answered questions about the kinds of marketing assistance programs that should be available in their counties, from 31% (in Ventura County) to 70% (in both Berks and Fayette) endorsed programs for helping farmers with marketing directly to consumers; the median was 47%. The highest levels of support were for assistance for “diversifying or adding new products.” In 13 of the 15 county samples, at least 40% of the respondents chose the “yes” answer for that kind of program, and the overall median was 49%.

**Farmland Protection:** Chapter 3 discusses land-use policies applied in the 15 counties that shaped the supply of farmland and profitability of farming. Our interview data indicated that *agricultural protection zoning* worked effectively in seven of the counties. A dramatic example was Sonoma County. Its required minimum lot sizes helped grape-growing to compete with residential uses. 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 in Sonoma, but not in a zoning district with a 20- or 60-acre minimum lot size and land capable of growing grapes. By the per-acre prices just cited, the estate buyer would need at least \$1.2 million to \$2 million total to compete with

someone wanting 20 acres to farm the parcel for grapes. Fayette County, Kentucky, was similar in four important respects: good money could be earned from farming (i.e., thoroughbred horses), a large minimum lot size (40 acres) discouraged buyers not interested in farming, an urban growth boundary limited the expansion of city services into agricultural areas, and very attractive rural scenery helped convince many farmer and non-farmer residents to be politically active to protect their life styles in Fayette, rather than make money from selling their land and moving elsewhere. Combinations of large minimum lot sizes and urban services boundaries helped also in King, Ventura, Dakota, and DeKalb counties, as well as in Sonoma. Three other counties—Lancaster, Larimer, and Palm Beach--used cluster zoning to restrict housing densities in rural areas. Applications for relatively small-lot subdivisions were approved if the developer agreed to protect (with development-restricting easements) most of the total land for agriculture or other open-space purposes. 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.

Ten of our studied counties had programs of purchase of development rights (PDR). Under them, landowners voluntarily agreed to easements that limited non-agricultural uses on their land, usually in perpetuity, in exchange for monetary compensation for the development rights thus surrendered. By the end of 2007 or mid-2008 the programs in two of the counties—Berks and Carroll—had used this tool to protect more than 50,000 acres each. Another five had preserved about 13,000 to 28,000 acres (King, Sonoma, Burlington, Larimer, and Fayette counties). The totals in the remaining three ranged from around 2,200 to 5,400 acres.

Very helpful to the agricultural success of preservation efforts was the extent to which the protected lands formed sizable contiguous areas for farming, rather than being isolated parcels with non-farm neighbors living on one or more sides and complaining about farm-derived dust, odors, and other byproducts of normal agricultural operations. In fact, four of the largest PDR programs achieved considerable success in clustering protected parcels. In Carroll, Berks, and Fayette counties, 91% to 96% of the parcels under PDR easements had at least one other preserved farm adjacent to them. In Burlington County's program the corresponding measure was 69%.

Also important was the extent to which new homes could be built on land subject to easements. In two counties (King and Fayette) the easement land could be cut up into buildable parcels as small as the zoning ordinances permitted (i.e., 35 and 40 acres) and therefore risk being less viable for commercial farming. In two other cases, any new parcels with homes had to be at least 52 acres (Berks County) or 100 acres on average (Burlington). Also of concern was the placement of new residences built on farms subject to easement agreements. Some of the studied PDR programs succeeded in requiring locations that should have reduced the disruption of farming, such as along public roads or in wooded areas, rather than in the middle of fields.

***Agricultural Use-value Assessment for Property-Tax Purposes:*** All the state governments for the studied counties authorized property-tax assessments based on the land's *agricultural* use rather than on its usually much higher *market* value in those metro-area counties. The owners whom we surveyed in 2006 tended to believe that these state laws “worked” in the sense of keeping “property taxes on agland in . . . County at acceptable levels.” And statistical analysis showed that respondents with positive evaluations of these assessment policies were *more* likely to be optimistic about agriculture's future in the county. However, several of the states had lenient definitions as to what constituted bona fide agricultural uses. They allowed low minimum numbers of acres (e.g., five acres) and/or levels of annual sales that could encourage non-farmers to buy up agland for estate living and meet those requirements with minimal levels of farming.

***Right-to-farm Protections:*** A potentially serious problem for farmers in urbanizing areas has been the tendency of nonfarmer neighbors to lodge formal and informal complaints of the types mentioned two paragraphs above. Encountering or anticipating such complaints, farm operators may feel compelled to make decisions that reduce profitability (such as by choosing not to expand the size of a livestock enterprise or not to engage in on-farm direct sales). All the sites in our study had “right-to- farm” laws that promised protection for commonly used farming practices. In the 2006 survey we asked the participants, “How helpful has the law been in protecting farmers [or ranchers] against unfair nuisance complaints?” Their evaluations were not as positive as those for use-value assessment. But those opinions helped to shape two other important attitudes. In six counties, the owners who believed local government was sympathetic or “even-handed” towards them in conflicts with non-farmer neighbor were *more* likely to be optimistic about agriculture's future in their county. And in four counties, owners with positive assessments of their local authorities' record in such conflicts were *less* likely to expect any of their land to be developed in the next 10 years (other predictor conditions held constant).

***Adequacy of the Supply of Hand Labor and Other Human Inputs of Production:***

Virtually none of our interviewed local experts complained about the supply of *family labor*, and our survey data also suggested adequate inputs of that type. However, the findings for *non-family labor* (including seasonal workers) indicated problems. Interviewees reported difficulty meeting the needs of dairy, vegetable farming, and other sectors requiring considerable hand labor. They frequently or mostly used immigrant workers. Local residents, as well as some migrants, tended to shun agricultural labor because they could earn more money in construction or suburban jobs.

Interviewed farmers in counties from both coasts testified to lenient or selective enforcement of federal immigration laws through at least 2006 or 2007. Local interviewees criticized the federal government's legal guest worker program, “H-2A,” for what they regarded as its burdensome paper work, excessive pay levels, high worker transportation and housing costs, and uncertainty as to whether workers would arrive at the farms when needed.

In none of our 15 counties, except perhaps for Larimer, did interview sources report a serious scarcity of *replacement farmers*. However, almost all the successors being mentioned were children or other relatives of the retiring farmers. Potential newcomers faced the usually formidable obstacle of farmland being too expensive to buy. The modest numbers of operators who established new farm businesses typically leased parcels; or they bought small ones, doing either hobby farming or raising high-value crop or livestock products on their few acres

Both our survey respondents and local interviewees found the supplies of *large animal veterinarians* to be adequate. However, in some counties we found Vets' traditional customers--cattle and dairy farmers—facing competition from horse operations, hobby farms, and/or pet owners. However, where the traditional patrons were declining in numbers, the newer types of customers could help to keep up the supply of Vets by compensating for the loss of the previously dominant clients.

***Bank Credit and Manufactured or Processed Inputs (ag chemicals, implements, and seeds):***

Many of our surveyed owner-operators did not use bank credit. The percent of users ranged from 27% in King County to 76% in Dakota County; the median value across all 15 counties was 45%. Interviewed local experts explained that the non-users tended to finance their operations from current or saved income from farm and off-farm work. Among the users, the adequacy-of-supply ratings were rather high.

Compared to bank credit, proportionally many more surveyed farmers reported using three types of processed inputs of production. The median percentages were: 85% for farm chemicals, 82% for goods and services from implement dealers, and 82% also for goods and services from seed dealers. Opinions about the adequacy of supplies for these kinds of inputs were generally positive. However, satisfactory levels often depended on adaptations made by both dealers and their farmer customers. When dealers closed local retail outlets for insufficiency of local customers or other reasons, operators found at least three alternative channels for obtaining needed inputs: (1) driving the extra distance to dealers still functioning in near-by counties that typically had experienced less urbanization, (2) placing orders by mail, phone, or the Internet; and (3) benefitting from dealer trucks stopping at individual farms or using regional “drop-boxes” from which equipment to repair was picked up and goods were delivered.

***Outlook for the Future:*** Across the 15 counties, the percentage of surveyed agland owners who expected at least some of their land to be developed in the next ten years ranged from 21% in Fayette County to 52% in Larimer. Statistical analysis suggested that development was *more* likely (in five counties) if owners had to use seasonal labor or if (in four counties) they believed that local government sided with non-farmers in conflicts with farmers. It was *less* likely (in six counties) if they believed local zoning helped to maintain an adequate supply of land for agriculture or if (in four county samples) respondents approved of the purchase-of-development-rights programs functioning in their counties or proposed for there.

A question directed exclusively to owner-operators asked if they expected to be farming in the county ten years from the time of the survey. Among the respondents who were less than 55 years old, the percentage of “yeses” varied from only 35% in Larimer County to a high of 85% in Sonoma. In more than half the counties, respondents who had sons, daughters, or grandchildren lined up to succeed them as farm operators were *more* likely to keep on farming. Also, such successors increased the likelihood (in six counties’ samples) of investments being made on the land (e.g., buildings, fences, irrigation, or conservation facilities) over the following five years.

All surveyed owners were asked: “Thinking ahead 20 years, what kind of future do you see for agriculture in .... County”? We found a lot of pessimism. The combined percentages of “bright” and “modest” future responses (rather than “dim” or “none at all”) reached a majority in only three of the 15 counties. Who were the optimists? They were *more* likely to be positive about the future: if they regarded local government as sympathetic or at least even-handed in resolving conflicts between farmers and non-farmers (a finding from statistical analysis in six counties), if they were satisfied with the profitability of markets for ag goods raised on their land (four counties), if they believed that agricultural use-value assessment was effective in keeping property taxes “at acceptable levels” (six counties), and if they found local government zoning to be helpful in protecting the supply of agricultural land (also six counties).

The local experts we interviewed were asked: “Would you recommend that a smart, hard-working young person with an agricultural background be a farm operator in . . . County?” In all except one county majorities of respondents—67% to 100%--gave conditional answers, amounting to “yes, if they do this” or “no, unless they have this trait.” In each county the causal condition most frequently mentioned was the lack of affordable land. Besides arguing that farmland tended to be too expensive, they recommended that the young persons belong to a local farm family. Their reasons included: Family membership could qualify the young persons for gifts of land or discounted prices for purchase or leasing, and they could share the “insider” or “pecking order” status of their relatives. We were told that frequently land did not go on the open market, but the successor owner or tenant had been pre-determined.

The report’s final chapter closed with seven policy recommendations derived from our research findings for promoting viable farming in metro areas:

1. Local governments should aim to prevent conflicts between farmers and non-farmer neighbors and to resolve those that arise in ways sympathetic to farmers’ interests.
2. Local governments should apply zoning policies (e.g., large minimum-lot requirements, cluster zoning, urban growth boundaries) that help to preserve an adequate land base for agriculture.

3. State governments should enable, and local authorities operate, effective programs for purchasing development rights to farmland, thereby either adding to the land base that agricultural protection zoning supports or achieving what zoning fails to realize.
4. Public and private agencies should encourage farm families to plan for the transfer of ownership and management to their children or other relatives. We found that with family successors lined up, the future of individual farms could look much brighter (e.g., current owners more likely to invest in their land and operators less likely to quit farming in the county prematurely).
5. The same agencies should encourage the launching and sustaining of farm enterprises likely to be profitable on the urban edge. Given the pervasive land constraint, consideration should be given to relatively smaller acreage operations, such as those raising high-value products including specialty crops and livestock. Direct marketing can also add revenue, and assistance programs for it were the second most popular type of help requested by our surveyed farmers—second after the purpose of “diversifying or adding new products.”
6. In geographic areas lacking sufficient farmers to sustain agri-service businesses, policy makers may need to encourage adaptations by both farm operators and suppliers, such as Internet purchasing and “drop-off boxes” for equipment repair.
7. Policy makers should consider ways to provide for adequate numbers of farm workers. One tool urged by interviewed farm operators was to reform the federal government’s guest worker program for migrant labor.