



What are Farmland Amenities Worth?

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Americans have expressed increasing levels of support for protecting farmland in recent years. One billion dollars was allocated for funding agricultural easement programs in the 2000 elections at state and local levels. More recently, the US Congress authorized another \$1 billion in new funding for the federal Farmland and Rangeland Protection Program under the 2002 Farm Security and Rural Investment Act.

For many of the 99% of Americans not living on farms, the notion of “preserving farmland” implies a variety of benefits, some of which are unrelated to farmland *per se*. Reasons for farmland preservation range from broad benefits (such as preserving open space, maintaining a rural lifestyle, and preventing urban sprawl) to more specific agricultural benefits (such as long-term food security and supporting local farmers).

Some evidence suggests that the public’s largest perceived benefits of farmland are not tied to farming at all. For example, a study of Rhode Island residents found that environmental outcomes (such as protecting groundwater and wildlife habitat and preserving natural lands) were the primary reasons for farmland preservation programs (Kline & Wilchens, 1996). Other research suggests that farmland is most valued for precluding development. Sorting out the specific attributes of farmland that the public most values matters greatly for land use and farmland preservation policies.

What are Farmland Amenities?

Farmland amenities are attributes of farmland that are uniquely provided by actively farmed land. Examples include the scenic beauty of rolling pasture and the cultural value of farming as a way of life. Farmland also produces nonfarm amenities, such as open space, wildlife habitats, groundwater recharge, and an absence of development. These



“rural” amenities may be provided by other types of rural lands.

Farmland can thus be viewed as an input for producing different types of outputs. Some outputs, such as corn, beans, and other agricultural commodities, are bought and sold in the marketplace. Other outputs, including most amenity-based services, do not have a market price associated with them and their full value cannot be captured by the landowner. These “public goods” are nonexcludable—it is difficult to exclude anyone who wants to consume the good from doing so. They are also nonrival—meaning that one person’s consumption of the good does not diminish its availability to another consumer.

Some farmland amenities, such as recreational activities, may be marketed as private goods. For example, a farmer can control hunting access to his land by selling the right to hunt and withholding that service from nonpayers. Other private market goods associated with farmland amenities include “agri-tainment” activities, such as the opportunity to pick your own apples or corn. However, most farmland amenities provide nonexcludable benefits that extend beyond the borders of the farm parcel. Because the values of “public good” farmland amenities are not reflected in the farmland’s market

price, they will not be provided in sufficient quantity by private markets. Governments, trusts, and nonprofit organizations have implemented farmland preservation programs to address this market failure.

Valuing Farmland Amenities

The relative value of farmland amenities varies from region to region and depends on several factors. The total amount of farmland, both preserved and unpreserved, will determine the relative scarcity of farmland amenities in a region. As unpreserved farmland is converted to other uses, the amenity values of remaining farmland increase. In addition, other rural land offering similar amenities (such as scenic views of woodland and wetlands) could reduce the value of some farmland amenities (scenic farm views).

Demand for farmland will be influenced by the population within a region. As a region's population increases, demand for a broader array of farmland amenities will also increase, especially in suburban and urban-rural fringe settings versus rural settings (Kline & Wilchens, 1994; Nickerson & Hellerstein, 2003). The characteristics of people living in the region will influence demand for farmland as well. Higher household incomes and education levels increase the demand for farmland preservation, suggesting that farmland amenities are "luxury" goods, much like many environmental goods.

The geographic pattern of farmland matters. For example, the scenic benefits of farmland depend on both the amount of farmland and on its pattern—whether it provides more uninterrupted views of rolling pastures, cropland, and farmsteads or is fragmented by urban uses. The geographic distribution of population also matters. On one hand, too many houses in a farm landscape could diminish its visual benefits, but on the other, the more people living within close proximity to the farmland, the more valued the scenic amenities may be.

Willingness to Pay

Most surveys of people's willingness to pay for protecting farmland do not distinguish between generic rural amenities and farmland-specific amenities. Two studies in South Carolina and New York suggest residents were willing to pay for the

protection of both farm-specific and more generic rural amenities (Bergstrom, Dillman, & Stoll, 1985; Johnston et al., 2001), although the payment levels for farmland amenities ranged from about 7% to more than 300% of the values for protecting generic rural lands.

In contrast, results of a survey in Illinois imply that the values people have for farmland amenities were similar to values for other types of open space, though for different reasons (Krieger, 1999). A Maryland study suggests residents are willing to pay several thousand dollars more to live near privately-owned pasture land that is permanently protected versus open space that is publicly-owned and protected (Irwin, 2002). These studies suggest that farmland-specific amenity values are positive and are in addition to the "rural amenity" value of farmland.

Implications for Farmland Preservation Policies

The relative importance of rural versus farmland amenities is important for policy reasons: if rural amenity values dominate, farmland protection programs should target the most scenic, rather than the most productive, lands. The most efficient approach may be to target marginal, cheaper farmland that generates substantial rural amenities. If farmland amenities dominate, then agricultural productivity, scale, and specific farm attributes should be targeted. The high cost of farmland protection, whether through purchasing development rights or through property tax subsidies, increases the importance of proper targeting. Protecting farmland and rural amenities is an important discussion point in international trade negotiations, including the World Trade Organization.

Variations in amenity values across locales can influence how preservation programs are implemented. Significant variation in values across local regions suggests that programs may be most efficiently implemented if done so locally rather than with a "one size fits all" approach at the national level. However, local farmland preservation programs will prevent development of farmland with targeted amenities only within a local jurisdiction. As the local supply of developable land with those amenities declines, demand for development of similar lands in neighboring areas may increase.

Thus, the preservation actions of one jurisdiction may adversely affect those in neighboring jurisdictions. Whether local implementation is better depends on its relative costs and benefits.

Identifying the optimal amount, mix, and geographic arrangement of farmland amenities is a complex task for several reasons. First, farmland amenity values are likely to vary over time—thus studies at one point in time reveal little about changes in these values. Second, amenities provided by changes in other rural lands may substitute for farmland amenities, making the optimal amount and pattern of farmland amenities dependent on changes in the pattern of other rural land uses. Finally, competing effects make identifying the optimal spatial pattern of farmland difficult. Working farmland may exhibit economies, making preservation most efficient when done in large, contiguous blocks. Preserving large blocks of farmland also enhances certain rural amenities, such as wildlife habitat. However, this geographic concentration could reduce the accessibility of farmland amenities to more people. Visual farmland amenities might be enhanced by preserving smaller tracts of more widely distributed farmland or by concentrating preserved farmland in more densely populated areas.

Until we know the amenity values that matter the most, how to provide farmland amenities most efficiently remains an open question.

For More Information

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