

Defining Prime Agricultural Land and Methods of Protection

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<http://www.agry.purdue.edu/agronomy/landuse/prime.htm>

Statement of the Problem

A significant and critical part of the U.S. agricultural system faces an uncertain future resulting from land use controversy in the urban fringe (rural agricultural land experiencing pressure from suburban development). Urbanization is rapidly moving beyond the suburbs. As a result, competition has developed for incompatible uses of agricultural land. Land allocated to farming provides a flow of both market and nonmarket benefits to society (e.g., crop production and open space). These same lands, on the other hand, are sought by developers for profitable building sites.

Farming is central to the economy of Indiana and its counties. Though the importance of farmland and farmland protection is recognized by federal law, local planning and zoning continues to neglect the issue of prime agricultural land and the conflicts that arise between expanding development and successful farming. The prime farmland issue is of particular importance to extension educators who are often members of local planning commissions and zoning boards.

Estimates of the agricultural land converted annually to non-agricultural uses vary between 800,000 acres to more than 3 million nationwide. More important than the exact rate of conversion is the location of rapidly changing land use. Much of

the land being lost is prime or unique farmland, disproportionately located near cities. According to Ralph E. Grossi of the American Farmland Trust, 58 percent of the total U.S. agricultural production comes from counties that the Census Bureau classifies as metropolitan and their adjoining counties. The considerable agricultural land endowments of Indiana have also provided a supply of "vacant" land for development. Ralph Gann of the Indiana Agricultural Statistics Service, estimates 20.2 million acres were under the control of Indiana farmers in 1950. That number has dropped to near 15.6 million acres. Part, but not all, of the decrease is due to development.

Effects of Non-Farm Development

The term "sprawl" can be characterized as the lack of continuity in urban expansion. A sprawling development pattern implies that the urban or suburban area is larger than it otherwise would be because undeveloped tracts remain interspersed among developed parcels and subdivisions. The effects of expanding development in rural and urban-fringe areas can be divided into two primary categories. First, development involves the direct conversion of farmland. Such conversion satisfies the demand for residential, commercial, and industrial land uses. Second, development indi-

rectly reduces the agricultural potential of the remaining farms.

Converting a tract of agricultural land to a non-farm use results in long-term consequences. First, development immediately exhausts the agricultural productivity of the reallocated tract. Unfortunately, development often causes the preferential conversion of highly productive land. Characteristics of quality farmland, (e.g., flat or well drained soils) are often sought for development. Second, loss in terms of the opportunity foregone from the agricultural, open space, and related amenity benefits would be experienced indefinitely. Though a decision to restore the agricultural viability of a residential subdivision may be technically possible, it would not be feasible due to enormous expense.

Development indirectly reduces the productive potential of surrounding agricultural land by limiting its current or future use. In fact, impacts on the converted tract itself may be small in comparison to the current and future consequences impacting adjacent farmland. As an example, restrictions may be imposed on farming activities that affect the health, safety, and welfare of the growing non-farming population. The application of pesticides or manure near residential areas are two such activities for which society may demand new regulation. Much like current laws restricting the location of confined feeding operations, new regulations could require minimum separation distances between these activities and residential areas.

Scattered residential development also increases the potential for nuisance conflicts. Odor, noise, and dust are potential problems associated with agricultural production. These problems can often only be avoided by locating operations (especially confined feeding operations) away from people. Furthermore, even if an area's proportion of agricultural land area remains high, but available only in smaller scattered parcels, farmers may be prevented from employing newer technologies that require more land to achieve full economies of scale. Such restrictions reduce efficiency and increase production costs, perhaps even leading to premature idling of land.

A New Definition of Prime Agricultural Land

The United States Department of Agriculture (USDA) defines prime farmland as the land best suited to food, feed, forage, fiber, and oilseed crops. Prime farmland produces the highest yields with minimal inputs of energy and economic resources, and farming it results in the least damage to the environment. County Soil Surveys also follow this productivity-based approach to identifying prime agricultural land. In fact, a county Soil Survey not only contains yield data for crops and pasture, but often specifically identifies soils considered prime farmland. Consequently, the county Soil Survey provides a preliminary definition of prime agricultural land. However, problems created by direct and indirect effects of development indicate that, within the context of land use planning and zoning, the definition of prime agricultural land must be based on more than the traditional measures of soil productivity and crop yields. Instead, prime or select farmland should be defined by a combination of productivity and location. In the rural and urban fringe areas of today, the distance to residential development is becoming an increasingly important spatial characteristic affecting production.

Location can be incorporated in the definition of prime or select agriculture in the following ways. First, soils of moderate or even low productivity should share the prime agriculture designation if such soils are surrounded by large expanses of undeveloped, highly productive soils. Second, productivity should become secondary to location characteristics if the area in question supports confined feeding operations. Not only does separation by distance reduce the nuisance element associated with this important aspect of agriculture, but separation distance also provides surrounding farmland capable of supporting economical waste assimilation through land application of manure. Third, the designation of prime agriculture should be extended to include unique farmland located within expanding metropolitan areas. The current definition of prime farmland employed by the

USDA and the Natural Resources Conservation Service (NRCS) specifically excludes highly productive soils from the “prime” status if they occur in urban or “built-up” areas (see 7 U.S.C. §4201(c)(1)(A)). This exclusion ignores the fact that farmland located within a highly developed area provides market and nonmarket benefits to society. While small “in-town” farming operations often provide higher-valued crops (such as fruits and vegetables) to consumers, they also provide open space, scenic values, and related amenity benefits. Such benefits are important in a planning and zoning context since they are public goods and can contribute to a community’s “quality of life.”

Retaining Land in Agriculture:

The Zoning Example

Ruled constitutional by the U.S. Supreme Court in 1926 (see *Euclid v. Amber Realty Co.*, 272 U.S. 365), zoning is justified under the police powers of the state to prevent land uses that threaten the safety, health, morals, and general welfare of the public. Zoning ordinances influence urban land use primarily through the physical isolation of uses. While zoning is the primary method used to influence urban land use, relatively little zoning is practiced in rural and urban-fringe areas.

Current planning and zoning practices provide only a weak device for retaining land in agricultural. For example, in some Indiana counties, areas of prime agricultural land are given the AA (Select Agriculture) designation in the zoning ordinance. While such a land use designation may identify areas of agricultural importance, it does little to retain land in agriculture when the ordinances are subject to variances, zoning amendments, and special exceptions. Similarly, minimum lot size is the primary conventional zoning method used to insure low residential density in rural areas. Unfortunately, two, five, or even 10 acre residential parcel size restrictions do little more than scatter development and consume or cripple prime farmland. Even if the minimum lot size is 40 acres or more, an ordinance does nothing directly to pro-

hibit nonagricultural uses of the tract. Furthermore, minimum lot size restrictions in Indiana primarily address the public health concerns of on-site waste disposal systems, not farmland preservation.

Fortunately, unconventional zoning methods do exist to preserve prime agricultural land. Open space zoning and exclusive agricultural zoning are two of the most promising. The conventional approach to development results in an entire development parcel being covered with houselots and subdivision streets. Open space zoning, on the other hand, relies on the principal of cluster development, whereby new homes are clustered onto part of the development parcel. Clustering allows the remainder to be preserved as productive farmland or unbuilt open space. Since only the density and not the number of houses is changed, open space zoning can permanently protect a substantial portion of every development tract’s agricultural productivity without decreasing the development potential for both landowner and developer.

Exclusive agricultural zoning is less frequently used than nonexclusive zoning such as open space zoning, because it prohibits nonagricultural use of the land within the district. The main advantage is that it ensures there will be no conflict between residential and agricultural uses. However, the ordinances are more difficult to adopt because the farmland owners must forego (often reluctantly) the opportunity to sell their land to residential developers.

A more landowner friendly form of exclusive agricultural zoning is the voluntary creation of agricultural districts. The benefits which farmers obtain by voluntarily joining an agricultural district may include differential assessment, protection against nuisance ordinances, and limits on public investments for nonfarm improvements. Basic standards for reviewing district petitions should be outlined in the County Zoning Ordinance, if not at the state level. Like any zoning ordinance, however, its effectiveness can be undermined by a zoning authority’s lax supervision of rezoning and variance requests.

The Property Rights Example

In addition to zoning, a county or local government can utilize transferable property rights to provide a more lasting means of preserving prime or select agricultural land. A program for transfer of development rights (TDR) allows landowners to sell their development rights to a developer. In turn, the developer may use them to develop qualified lands at higher densities than allowed under existing zoning laws. A TDR program allows local governments to steer development to desirable areas (such as those with sufficient infrastructure) while assuming little financial burden.

Under a similar program for purchase of development rights (PDR), landowners can sell conservation easements to governmental agencies or nonprofit organizations. PDR involves the purchase of a deed restriction on qualified farmland that restricts the future use of the land to agricultural or open space uses, either permanently or for a specified period of time. While the farmer retains the right to sell or transfer the land, it remains subject to the deed restriction precluding any future development or activities that may negatively impact its agricultural viability. An owner of agricultural land may also donate a conservation easement to a governmental agency or charitable organization and receive a charitable deduction (see 26 U.S.C. § 170 (h)(4)(A)).

Acquiring the financial resources needed to purchase development rights is the greatest hurdle for implementing a PDR program. Importantly, a planning commission/ordinance committee must carefully establish criteria from which to determine a farm's eligibility for participation in the

program. Criteria should specifically target key parcels that would preserve the county's agricultural potential and open space amenities.

Summary

Prime agricultural land differs from other agricultural land designations in that it generally consists of highly productive soils. However, moderate and low productivity soils should be designated prime if such soils lie within, or are surrounded by contiguous areas identified as prime farmland. The inclusion of these soils may act to discourage development on the less productive or sloping soils of an otherwise prime agricultural area. Should such development occur, remaining prime agricultural land may no longer satisfy the requirements of a prime designation. Productivity is also a secondary factor when considering prime land designations in a rural area with confined feeding operations. Furthermore, "unique" farmland within metropolitan areas can be considered prime if it provides a community with demanded farm produce, open space, or related amenity benefits.

A variety of private and public land protection methods can be employed to protect agricultural operations from the impacts of non-farm development. However, their success ultimately relies on public and political support. Without that support, justification for prime farmland conservation is difficult. Often, environmental, social, and aesthetic effects of prime farmland loss are not readily quantifiable and most protection programs require administrative and financial resources beyond that required for current zoning policies.

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