

4 Agricultural Lands

This chapter discusses the agricultural resources within Humboldt County. Agriculture is an important element of Humboldt's economy and identity. The success of agricultural preservation depends on the successful production and marketing of competitive agricultural products. The first two sections describe agricultural resources and the agricultural economy, while the third section addresses existing General Plan policies, issues and policy options. Worksheets for policy evaluation are in the Appendices. Planning Division Staff will be supplementing this report with more detailed information on agricultural lands in Humboldt County prior to conducting a policy discussion workshop on Agricultural Lands. The information contained in this report was used primarily for the constraints mapping in Chapter 14.

4.1 AGRICULTURAL LAND

Ample precipitation, fertile soils, and the mild coastal climate make for productive farming in Humboldt County. Agriculture is an important component of both the local economy and character. Yet, conversion of farmland to other uses has been the trend in recent decades. According to the County Framework Plan (1984), nearly 100,000 acres of farmland over several decades were converted due to subdivision activity. Rangeland has been converted to both timber production and rural subdivision. Productive farmland near population centers is often being replaced with poorer farmland that requires more energy and costs for transportation, fertilization, and irrigation. Additionally, farmers are moving away from small farms and into conglomerate farms.

According to the 1997 Census of Agriculture, between 1992 and 1997, Humboldt lost 13,228 acres or two percent of farmland and 82 farms. The average farm size increased in those five years from 684 acres to 738 acres. The number of full time farmers also decreased 13 percent from 482 to 417. Currently, there are about 50,000 acres of farmland and 295,000 acres of grazing land. These agricultural uses are shown in Figure 4-1 and tabulated by watershed in Table 4-1.

AGRICULTURAL SOILS

The highly productive soils of the Mad River, Redwood Creek, Eel River Deltas, Humboldt Bay, as well as other areas provide the basis for Humboldt's significant agricultural resources. The soils in these areas can be generalized as alluvial or upland. Alluvial soils occur in the river flood plains and deltas and are used for pasture and crop lands. These soils are replenished by seasonal flooding. Upland soils sustain both forests and open rangelands. Although these categories are broad and simplistic, extensive mapping of soil types has not been completed for Humboldt County. Therefore, Humboldt County is not included in the California Department of Conservation's Farmland Mapping and Monitoring Program (FMMP).

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The County’s agricultural soils were mapped in 1965 in a cooperative project between the Department of Soils and Plant Nutrition, University of California, Davis, and the County of Humboldt. Soils were rated for quality along a 100 percent scale, on each of four factors: character of soil profile and depth, texture, slope, and a composite of other factors (nutrient level, pH, erosion). These four factors were then multiplied together to produce the composite index rating, thus a poor rating in any one factor may greatly affect the overall grade. The rating of soils according to this method, the Storie Index Grade, expresses the relative suitability of the soil for general intensive agriculture.¹

Storie Index Grade 1 soils (those with a composite index rating from 80 to 100) are well suited to general intensive agriculture. They are easily worked, very productive, and irrigation is simple and efficient. The Lower Eel watershed has the greatest amount of land in agricultural production and by far the most Grade 1 soils. Figure 4-2 illustrates prime (Grade 1) agricultural soils and potential agricultural soils in the County; Table 4-1 includes the County’s Grade 1 soils by watershed.

Grade 2 soils (index rating 60-80) are moderately well suited for agriculture and Grade 3 (index rating 40-60) indicates only fair suitability. Grades 4, 5, and 6 (index rating below 40) indicate poor suitability for agriculture.

Table 4-1: Agricultural Lands in Unincorporated Humboldt County by Watershed

<i>Watershed</i>	<i>Agriculture</i>	<i>Grazing & Timber</i>	<i>Total Acres</i>	<i>Grade 1 Acres</i>	<i>Potential Ag Land</i>	<i>Williamson Act Lands</i>
Eureka Plain	11,436	1,403	12,840	2,884	80	1,886
Lower Eel	32,651	33,014	65,666	17,600	259	29,083
Lower Klamath	0	746	746	0	2,597	474
Lower Trinity	0	0	0	912	219	0
Mad River	2,359	19,022	21,381	4,043	1,218	14,788
Mattole	18	73,796	73,814	1,576	855	70,096
Middle Main Eel	0	68,964	68,964	664	723	64,537
Redwood Creek	901	6,360	7,262	1,053	1,672	6,372
South Fork Eel	0	39,957	39,957	242	2,714	35,949
South Fork Trinity	0	0	0	1	409	0
Trinidad	752	0	752	715	5,903	0
Van Duzen	2,012	51,846	53,858	3,471	1,206	49,880
Total	50,130	295,108	345,238	33,160	17,855	273,064

Source: Humboldt County GIS, 2002.

¹ McLaughlin, James and Frank Harradine, UC Davis. *Soils of Western Humboldt County*, Nov 1965.

Figure 4-1: Existing Agricultural Use

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Additionally, more than 17,000 acres have been identified as potential agricultural lands based on soil surveys and existing land uses. This is particularly significant in the coastal portion of the Trinidad watershed where nearly 6,000 acres of potential farmland in the mild and productive coastal climate have been identified. Humboldt County has the opportunity to expand its agricultural lands.

AGRICULTURAL PRESERVES (WILLIAMSON ACT LANDS)

The Williamson Act of 1965 created a procedure for counties to protect viable agricultural land by offering a tax incentive to property owners for keeping their land in agricultural production. The voluntary contract between the county and property owners is the Land Conservation Contract. Property owners wishing to receive a tax break through the Williamson Act submit an application to the County Planning Department. The contracts are automatically renewed every ten years, unless the property owner seeks to break the contract.

With a total of about 273,000 acres under agricultural preserve contract in the county, the Williamson Act secures nearly 80 percent of the total agricultural land in Humboldt. These preserves are generally located in the southern portion of the Coastal Zone and the southeastern portion of the county (see Figure 4-3).

AGRICULTURE EFFECTS ON WATER QUALITY

Farming contributes significantly to water quality issues in Humboldt County. About 700,000 tons of animal waste, mostly cattle, were released in 1997. The Lower Eel Watershed has the greatest acreage of farmland in the county and some of the most polluted water as well. Silt in run-off from agricultural lands contributes to the pollution of the Eel River.

4.2 ECONOMICS OF HUMBOLDT AGRICULTURE

Numerous factors contribute to the economic value of agriculture in Humboldt County, including soil quality, climatic conditions, farmland loss, irrigation availability and practices, farming costs, and agricultural policy. Table 4-2 indicates the cash income from various crop types in Humboldt County.

Livestock production, which is scattered throughout the county, has a long history and continues to contribute to the county's agricultural economy. By far, the largest single contributor to the County agriculture income is livestock products, largely dairy. The ample rainfall and mild climate create cost-effective pastureland with little need for heat or air-conditioning for the cows and goats, unlike dairies in the Central Valley. With these cost savings the small local dairies of Humboldt County are able to compete with those dairies located in Central Valley. These small farms create the rural backdrop for Humboldt County. This rural character is the mainstay of the tourist industry. Therefore, dairies offer the opportunity to combine two successful economic niches of Humboldt County.

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Figure 4-2a: Northern Humboldt Prime Agricultural Soils (11"x17")

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Figure 4-2b: Central Humboldt Prime Agricultural Soils (11"x17")

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Figure 4-2c: Southern Humboldt Prime Agricultural Soils (11"x17")

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Figure 4-3: Agricultural Preserve Lands in Humboldt County

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Field crops are primarily grown around Arcata, McKinleyville, and Dows Prairie. Field crop values have risen fairly steadily from 1991 to 2000. Vegetable crops are grown inland around Blue Lake, Eel River, Metropolitan, Holmes, and Willow Creek. Vegetable crops have declined over the ten-year period outlined in the table below. Fruit and nut crops are produced around Willow Creek, Orleans, and Mattole Valley. These crops fluctuated dramatically in value between 1991 and 2000.

Nursery production in Humboldt County is a viable niche industry flourishing in the coastal “fog belt” where temperatures remain moderate year-round. Floral products from Humboldt County have gained national reputations and are able to command top prices, making the industry remarkably profitable. The proximity of the industry to the coast often brings residential development and construction of green houses and noise and lights associated with production into conflict. Table 4-2 shows nursery products to be one of the top sectors of Humboldt’s agricultural economy.

Table 4-2: Humboldt County Agriculture Cash Income

	Field Crops	Vegetable Crop	Fruit and Nut	Nursery Stock	Livestock/ Poultry	Livestock/ Poultry Prod	Total
1991	\$6,642,000	\$1,107,000	\$500,000	\$75,510,000	\$6,773,000	\$27,025,000	\$117,557,000
1992	7,407,000	1,039,000	129,000	20,497,000	15,300,000	28,836,000	\$73,208,000
1993	7,411,000	1,103,000	100,000	20,940,000	15,289,000	27,065,000	\$71,908,000
1994	7,379,000	872,000	32,000	20,274,000	12,278,000	30,681,000	\$71,516,000
1995	7,054,000	836,000	27,000	18,319,000	11,226,000	30,589,000	\$68,051,000
1996	7,039,600	836,000	27,000	18,319,000	10,830,537	34,709,000	\$71,761,137
1997	8,223,780	897,050	78,000	22,576,611	12,443,189	36,067,700	\$80,286,330
1998	8,177,800	676,000	91,000	23,226,500	14,548,760	39,055,200	\$85,775,260
1999	8,200,500	763,208	111,568	25,806,000	19,936,281	38,283,000	\$93,100,557
2000	7,972,300	814,190	430,246	32,859,191	21,020,200	33,636,400	\$96,732,527

Source: Department of Food and Agriculture Resources Directory, 2000.

While individual farms are highly productive, Table 4-3 shows that Humboldt County contributes less than one-third of one percent of the total agricultural cash income in California. Humboldt’s agricultural products serve a more localized market than some of the larger farms in the Central Valley.

Table 4-3: Humboldt’s Agriculture Income as a Percentage of California’s Agriculture Income

	Field Crops	Vegetable Crop	Fruit and Nut	Nursery Stock	Livestock/ Poultry	Livestock/ Poultry Prod	Total
1997	0.25%	0.02%	0.00%	0.91%	0.20%	0.57%	0.25%
1998	0.30%	0.01%	0.00%	0.92%	0.22%	0.60%	0.27%
1999	0.34%	0.01%	0.00%	0.93%	0.30%	0.58%	0.29%

Source: Department of Food and Agriculture Resources Directory, 2000.

4.3 POLICY OPTIONS

This section focuses on agricultural resource issues from a public policy perspective. In evaluating existing and future conditions, the County must consider policy options for the issues identified in Phase I of the General Plan Update, which are summarized in the Critical Choices Report. These key questions help frame the issues for policy options for agricultural resources. As background, the existing policies in the General Plan are presented, followed by a discussion of issues and policy options that respond to them. The policy evaluation worksheets that will be used to guide discussion of these issues are in the Appendix. These worksheets are provided as a tool for members of the public to evaluate policy options and indicate preferences for accepting, modifying or rejecting these options.

EXISTING POLICIES

An extensive set of policies related to agriculture are established in both the County General Plan (Framework Plan) and the California Coastal Act, which is implemented by the County's Local Coastal Program. Many of the policies address conservation of agricultural resources and promotion of agricultural production. The worksheets in Appendix A provide an opportunity for residents to comment and indicate whether the policies should be affirmed, modified or deleted.

General Plan Policies

GOAL

The optimum amount of agricultural land shall be conserved for and maintained in agricultural use to promote and increase Humboldt County's agricultural production.

POLICIES

1. Agricultural lands shall be conserved and conflicts minimized between agricultural and non-agricultural uses through the following:
 - A. By formulation of logical boundaries separating urban and rural areas and when necessary, buffer areas to minimize land use conflicts.
 - B. By focusing future conversions in areas where land use conflicts would not threaten the viability of existing agriculture.
 - C. By promoting in-filling to achieve a more logical urban/agricultural boundary.
 - D. By allowing development of uneconomical or marginally viable agricultural lands, or agricultural lands already severely limited by conflicts with urban uses to limit the market pressures for conversion of more productive lands.
 - E. By assuring that public service facility expansions and non-agricultural development do not inhibit agricultural viability through degraded water

supplies, access systems, air quality, and other relevant considerations, such as increased assessment costs.

- F. By broadening the utility of agricultural preserves and the Williamson Act Program to accommodate and encourage intensively managed farms.
2. The conversion of economically viable agricultural lands shall be monitored and reported annually.
3. In-filling shall be encouraged for all development.
4. Prime agricultural land should be retained in parcel sizes large enough to provide for an economic management base.
5. The County shall support predator control programs to reduce livestock depredation.
6. Vegetation management programs (controlled burning, etc.) shall be supported where they improve the availability and quality of rangeland for livestock and wildlife, reduce the hazard of disastrous wildfires and increase water quality and quantity.
7. Areas with General Plan designations of Agriculture Exclusive should not be annexed to cities or service districts providing sewer service unless it is in the public interest.
8. The County Planning Department and Board of Supervisors will request the Local Agency Formation Commission to utilize the County's General Plan in advising the County on the appropriate level of services to be provided in the County's unincorporated areas.
9. Agricultural production requiring smaller parcels and more intensive management, including aquaculture shall be encouraged wherever feasible consistent with the Remote Rural Development Section 2550 and other policies of this section.
10. The conversion of agricultural land should only be considered where continued agricultural production is not economically feasible and proposed development is consistent with Remote Rural Development Section 2550.
11. Affirm and support the public services provided by County Government which are necessary in maintaining a viable agricultural products industry.

Coastal Zone Policies

The California Coastal Act sets out a series of policies to protect and enhance the California Coastal Zone. Certain policies of the Coastal Act pertain to agricultural lands in the Coastal Zone. The Coastal Zone provides a particularly mild and damp climate suitable for both dairy and greenhouse production, two of Humboldt's niche industries. Many of the Coastal Act policies apply to "prime farmlands." Since extensive soil surveys have not been conducted and prime soils have not been identified, it is difficult to apply these policies.

Public Resources Code § 30241:

The maximum amount of prime agricultural land shall be maintained in agricultural production to assure the protection of the areas agricultural economy, and conflicts shall be minimized between agricultural and urban land uses through all of the following:

- (a) By establishing stable boundaries separating urban and rural areas, including, where necessary, clearly defined buffer areas to minimize conflicts between agricultural and urban land uses.
- (b) By limiting conversions of agricultural lands around the periphery of urban areas to the lands where the viability of existing agricultural use is already severely limited by conflicts with urban uses or where the conversion of the lands would complete a logical and viable neighborhood and contribute to the establishment of a stable limit to urban development.
- (c) By permitting the conversion of agricultural land surrounded by urban uses where the conversion of the land would be consistent with Section 30250.
- (d) By developing available lands not suited for agriculture prior to the conversion of agricultural lands.
- (e) By assuring that public service and facility expansions and nonagricultural development do not impair agricultural viability, either through increased assessment costs or degraded air and water quality.
- (f) By assuring that all divisions of prime agricultural lands, except those conversions approved pursuant to subdivision (b), and all development adjacent to prime agricultural lands shall not diminish the productivity of such prime agricultural lands.

§ 30241.5:

(a) If the viability of existing agricultural uses is an issue pursuant to subdivision (b) of Section 30241 as to any local coastal program or amendment to any certified local coastal program submitted for review and approval under this division, the determination of "viability" shall include, but not be limited to, consideration of an economic feasibility evaluation containing at least both of the following elements:

- (1) An analysis of the gross revenue from the agricultural products grown in the area for the five years immediately preceding the date of the filing of a proposed local coastal program or an amendment to any local coastal program.
- (2) An analysis of the operational expenses, excluding the cost of land, associated with the production of the agricultural products grown in the area for the five years immediately preceding the date of the filing of a proposed local coastal program or an amendment to any local coastal program.

For purposes of this subdivision, "area" means a geographic area of sufficient size to provide an accurate evaluation of the economic feasibility of agricultural uses for those lands included in the local coastal program or in the proposed amendment to a certified local coastal program.

(b) The economic feasibility evaluation required by subdivision (a) shall be submitted to the commission, by the local government, as part of its submittal of a local coastal program or an amendment to any local coastal program. If the local government determines that it does not have the staff with the necessary expertise to conduct the economic feasibility evaluation, the evaluation may be conducted under agreement with the local government by a consultant selected jointly by local government and the executive director of the commission.

§ 30242:

All other lands suitable for agricultural use shall not be converted to nonagricultural uses unless (1) continued or renewed agricultural use is not feasible, or (2) such conversion would preserve prime agricultural land or concentrate development consistent with Section 30250. Any such permitted conversion shall be compatible with continued agricultural use on surrounding lands.

ISSUES AND POLICY OPTIONS

Although there are many factors contributing to the profitability of agriculture and the sustainability of Humboldt's agricultural economy, only a few can be controlled or manipulated. These include regulation of the amount of farmland lost to rural and urban development, insurance that subdivision of farmland will not adversely effect agricultural production, prevention of land use conflict, and utilization of legal tools to maintain and preserve farm acreage. Each key question or issue raised in the Critical Choices Report that relate to agricultural resources is discussed below. Based on County and public input, these policy options will be refined. Some of these options also will shape preparation of "sketch plans" (generalized land use plans for accommodating future development), while others will be implemented through zoning and subdivision regulations or other programs. The policy evaluation worksheets that will be used to guide discussion of these issues are in the Appendix. This worksheet is provided as a tool for members of the public to evaluate policy options and indicate preferences for accepting, modifying or rejecting these options.

ISSUE

- *How are agricultural lands converted to other uses and what are the trends in conversion under the current policies?*

For the period from 1972 to 1981, nearly 243,000 acres were put under agricultural preserve contracts in the county; currently, there are just over 273,000 acres in the program, indicating that participation has not significantly increased over the past 20 years, which may be due in part to the rural subdivisions that took some land out of agricultural production.

Farmland may be converted for one of the following reasons: direct conversion to urban uses, falling idle due to conflicts with nearby urban uses, subdivision, and urban related open space. The conversion process involves the complex interplay of a number of factors, including: farm profitability, urban growth, land value, personal lifecycle considerations, community expectations, and government incentives and regulations. Currently, nearly 80 percent of farmland is actively preserved under the Williamson Act. While Arcata has adopted an Urban Limit Line, McKinleyville and Eureka have not adopted urban boundaries. Creating limits on urban growth can reduce pressures for conversion and conflicting land uses.

Option 4.1 Support creation of a private non-profit land trust to support agricultural conservation programs (coordinated with Option 2.6). Land trusts can acquire or accept as donations conservation easements for agricultural lands, which can offer tax benefits to property owners. The American Farmland Trust has model deeds for “Agricultural Open Space Conservation easements” that can be used by those interested in participating in such a program. Alternatively, as previously suggested, the County could work with established trusts, such as the American Farmland Trust or the North Coast Regional Land Trust, who have specific expertise in this area.

Option 4.2 Support creation of greenbelts and agricultural buffers where agricultural operations may pose land use conflicts. Pesticide and fertilizer use and safety issues posed by farm equipment and operations can pose land use compatibility issues that may be minimized by creation of agricultural buffers.

ISSUE

- *What are the relationships between the economic viability of agricultural land and agricultural land protection? How can viability be enhanced through County programs and policies?*

When land is economically viable as agriculture, then the pressure of conversion to other uses is lower. The key to maintaining a healthy agricultural base in Humboldt County is ensuring the sustainability of the industry. The fields in which Humboldt is most able to compete are dairy, floral and greenhouse production, and specialty agriculture like organic foods. Niche production on Grade 1 soils and on soils identified as potential agricultural lands is the most economically viable choice for Humboldt County Agriculture. Policies and programs aimed at supporting agriculture can increase its economic viability. The marketing of Humboldt agricultural products should be a regional goal. Easing the permitting process for agriculture related structures is another way policies can be supportive. Additionally, industries such as shipping, agricultural equipment and supplies sales, and processing facilities are important to the industry.

Option 4.3 Continue to use a Right-to-Farm Ordinance to enhance and encourage agricultural activities within the County. To minimize liabilities of existing farming, livestock and dairy operations related to nuisance suits, the County has adopted a right-to-farm ordinance. This ordinance puts new rural residents on notice about impacts of farm operations and makes it more difficult for homeowners to claim that their property

values have been affected by adjacent farming activity. This ordinance also provides a mechanism for mediation where disputes arise, as an alternative to litigation.

ISSUE

- *How to increase the supply of small agricultural parcels to enhance the viability of small-scale agriculture without promoting agriculture land conversion through subdivision?*

Recent trends in farm size have been towards larger farms. While small-scale agriculture can be competitive and productive especially in the niche markets, the Williamson Act places a minimum on parcel size. This minimum is usually 10 acres for prime farmland and 40 acres for non-prime farmland, however since the soils in Humboldt have not yet been mapped by the Farmland Mapping and Monitoring Program, prime and non-prime soils have not yet been identified. The first step Humboldt might take would be to complete a thorough mapping of agricultural soils in the County. The second would be to reduce the minimum parcel size for Williamson Act qualification.

Option 4.4 Create zoning provisions that allow for reduced lot size for small-scale, intensive agriculture – either a new AE-15 zone or an AI Agriculture Intensive zone. Such a zone might be appropriate along the rivers, but is not needed for dairies or other large-scale agricultural activities. Participation in an agricultural preserve program or granting agricultural easements may be a condition of approval. This zoning option may be limited to areas where such agricultural development would be economically viable and, possibly as a second condition, be limited to community plan areas.

ISSUE

- *What is an optimum combination of agricultural land protection programs, incentives, and regulatory policies?*

In selecting among policy options for agricultural resources, striking the right balance is very important. A combination of programs that work in one county may not be appropriate for another. The optimum combination is one that stakeholders can support – there is not a right “technical” answer; the ultimate decision is political, following a public review process. The guiding principle should be to provide enough flexibility in implementation to respond to different needs throughout the county without adversely affecting critical resources or ongoing farming, dairy and livestock operations.

The options proposed above are intended to reflect a balance; comments during community workshops will help County staff and the consultant team refine the proposed policies, eliminating those that are not acceptable and adding others that will meet local needs.

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