

A team of graduate student researchers from Colorado State University compiled most of the research data for the food assessment. This team was supervised by Dr. Dawn Thilmany McFaddin and Martha Sullins. Additional research on land use data was compiled by the three participating counties using information from the county's assessors, planning, and parks and open lands departments.

The data collected is organized according to the four elements of the study:

- Agricultural Inputs
- Agricultural Production
- Processing, Distribution, and Marketing, and
- Consumer Behavior, Nutrition and Food Security.

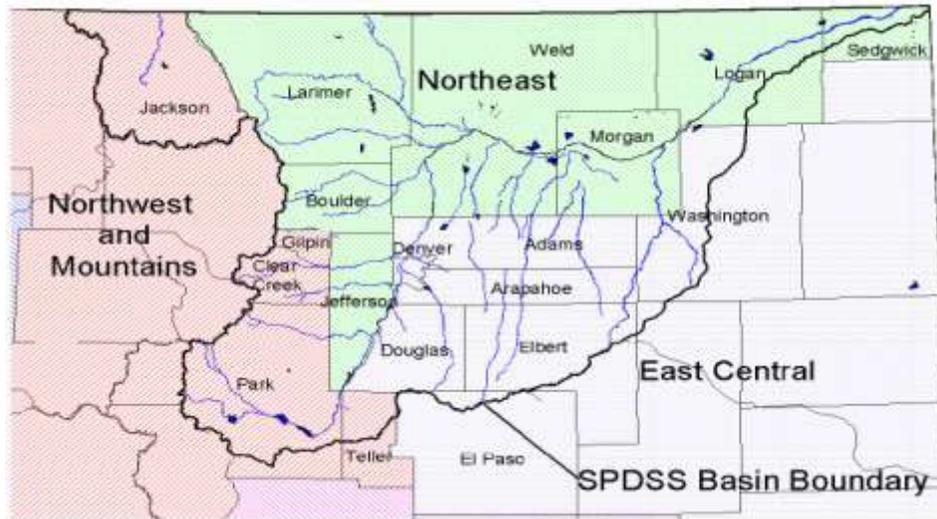
The data collected regarding agricultural inputs is divided into two subcategories: natural resources (land and water) and commercial inputs (materials, equipment, labor and credit).

Agricultural Inputs – Natural Resources

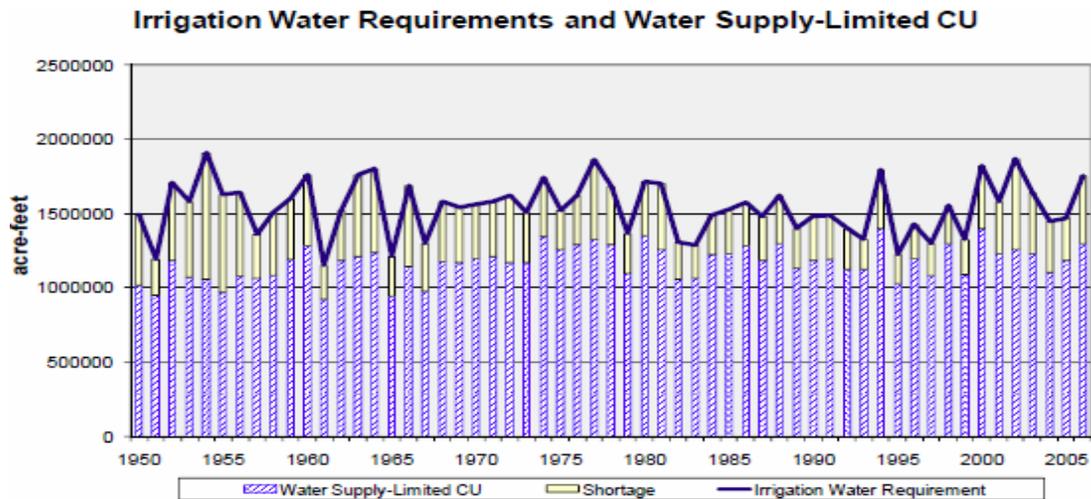
The two main categories with respect to natural resource inputs in Northern Colorado's food system are land use and water. We find that land use for agriculture is marginally decreasing over time in Larimer County and many areas of good farm land (based on soil components) are near urban boundaries. Water use for agriculture in Northern Colorado has become increasingly dependent on groundwater to make up water shortages in both Weld and Larimer counties. While groundwater-use efficiency has increased over time, surface water-use efficiency has remained relatively constant despite increasing transition from flood irrigation to sprinkler irrigation over time.

Agricultural Water

The South Platte Basin, as defined by the South Platte Colorado Decision Support System (SPDSS) is shown in the map below. Although the region encompasses a much larger area than the three counties in question, most trends that are present in the basin remain true for Larimer, Weld and Boulder counties in terms of water supply and efficiency.



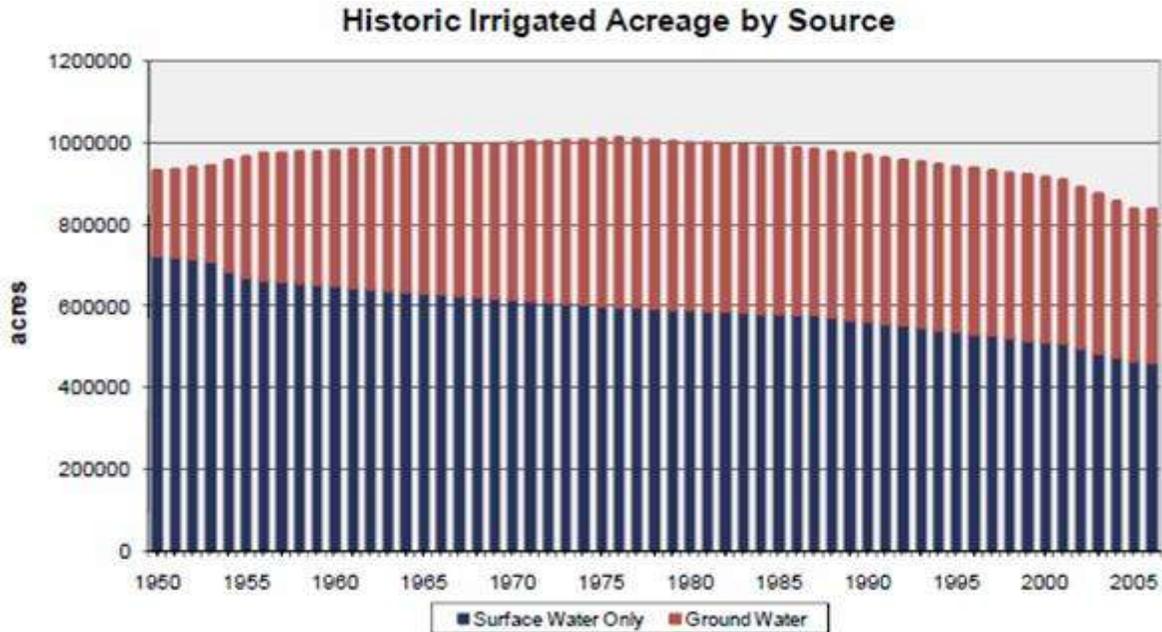
Due to weather and other natural causes, surface water sources often do not provide the suggested water requirements for crops and they do not provide water at the time it is needed. The following figure illustrates the gap between the acre-feet consumptively used and the water required according to the Colorado Decision Support Systems Water Budget model for the South Platte Basin. Much of the variation is due to drought. Often, the shortages in water supplied during a year are covered by ground water extraction, which is not included in these figures.



CU stands for consumptive use

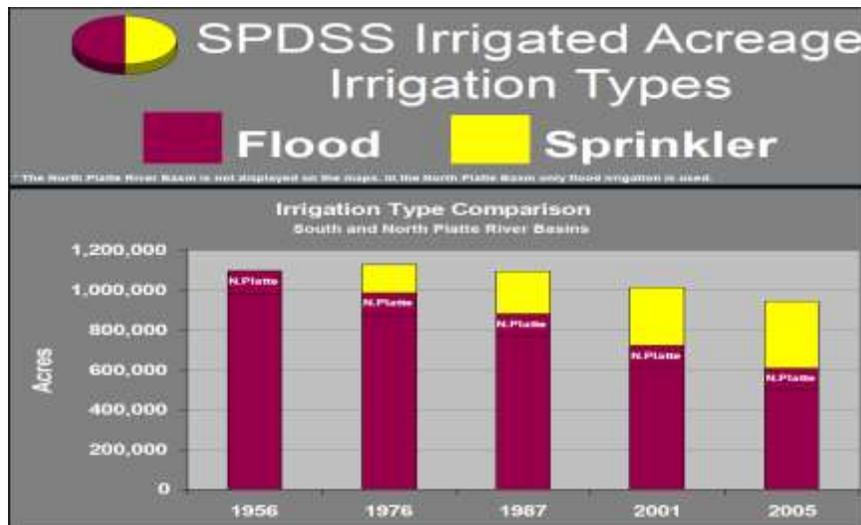
From the Colorado Decision Support System (CDSS): <http://cdss.state.co.us/DNN/SouthPlatte/tabid/58/Default.aspx>

The next figure illustrates how much acreage in the South Platte Basin is served by surface water as well as by ground water. Due to increased pump technology as well as less access to surface water, ground water is applied to an increasing portion of total irrigated acreage over time. This trend holds true for both Larimer and Weld counties; Boulder County has not had a significant increase in ground water use to replace surface water deficits.



From the Colorado Decision Support System (CDSS): <http://cdss.state.co.us/DNN/SouthPlatte/tabid/58/Default.aspx>

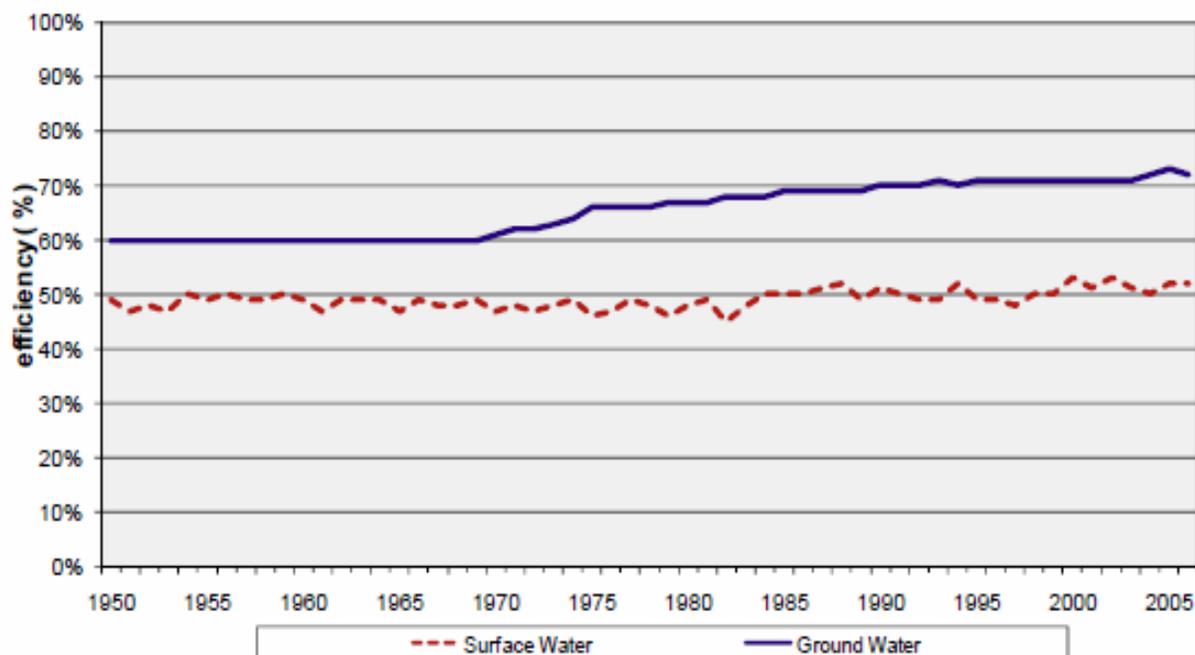
Irrigation sprinklers have increased as a method of crop irrigation over time. This leads to more efficient water-delivery to the plant and less on-farm water loss through runoff and evaporation when compared to flood irrigation. Refer to the figure below.



From the Colorado Decision Support System (CDSS): <http://cdss.state.co.us/DNN/SouthPlatte/tabid/58/Default.aspx>

The following graph illustrates the efficiency of surface and ground water usage in irrigation. The percentage efficiency represents the amount of water that reaches the plant as a share of all the water originally transported from the water source. Ditch technologies and conditions, irrigation type and weather conditions all contribute to overall efficiency levels. Over time, ground water pumping has become increasingly more efficient while surface water efficiency has remained relatively static. The slight increase in efficiency starting in the early 1980s for surface water is mainly due to an increase in sprinkler irrigation and most agree that new efficiency gains will be negligible.

On-Farm Efficiency



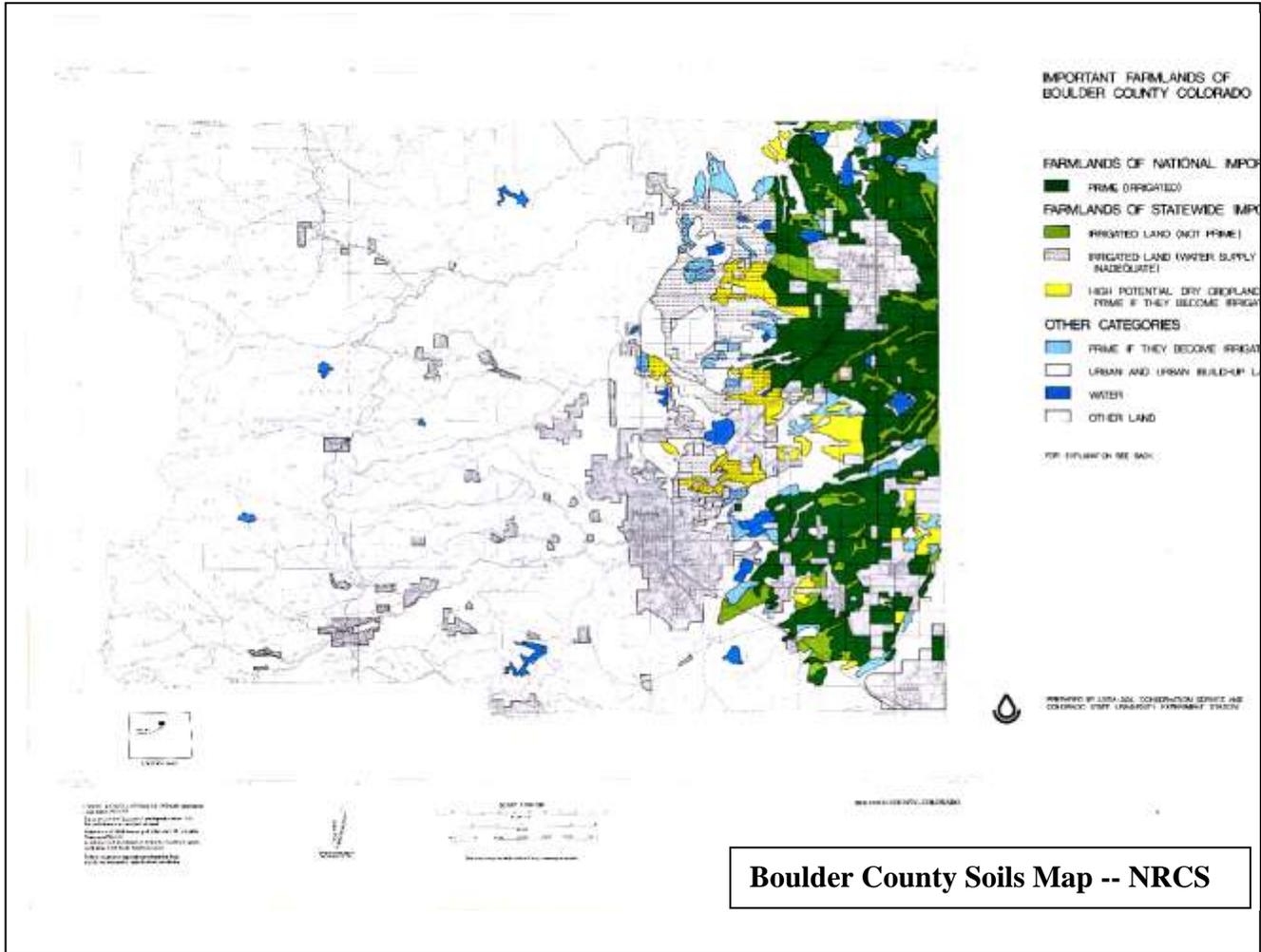
From the Colorado Decision Support System (CDSS): <http://cdss.state.co.us/DNN/SouthPlatte/tabid/58/Default.aspx>

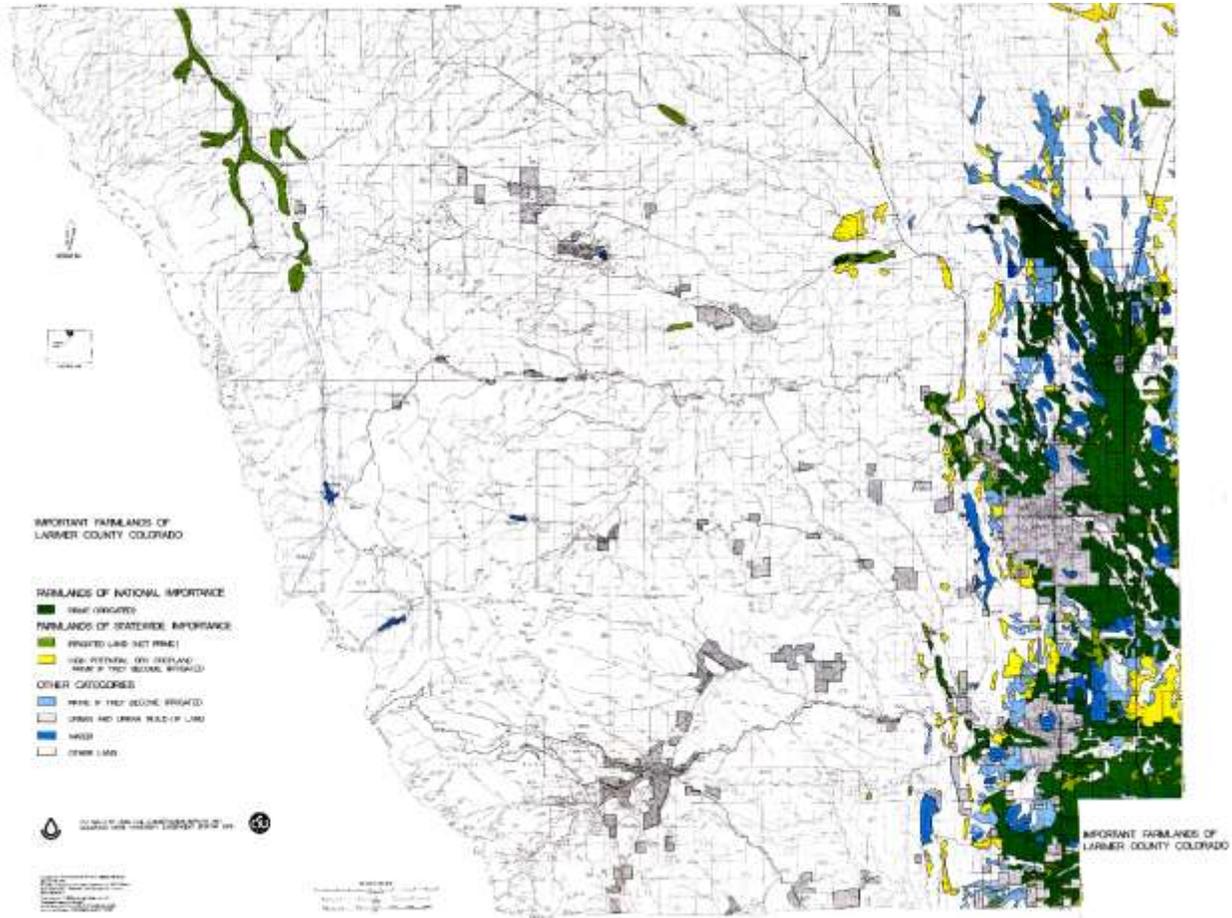
Using information from the USDA Farm Census, the loss of irrigated farm land in the three counties was quantified. The dramatic decrease in total irrigated acreage and in irrigated cropland between 1997 and 2002 was followed by a slight recovery between 2002 and 2007. We theorize that this apparent recovery is the result two factors. First, drought conditions in 2002 reduced the amount of acreage actively farmed and receiving irrigation water in that reporting year. In 2007, increased water supplies allowed more acreage to be actively farmed and reported in the census. Secondly, USDA changed in the definition of what constituted a farm between the same years, causing more acreage to be reported as a farm in 2007 than met the definition in 2002. The ten year trend between 1997 and 2007 shows decreases in both total land and in irrigated farm land across the region.

County	All land 1997	All land 2002	All land 2007	% Change 1997-2007	Cropland 1997	Cropland 2002	Cropland 2007	% Change 1997-2007
Boulder	37,713	31,403	33,871	-10.2%	31,086	25,636	27,135	-12.7%
Larimer	77,611	58,837	63,405	-18.8%	67,331	49,635	56,285	-16.4%
Weld	397,752	326,494	327,836	-17.6%	369,847	300,959	303,373	-18.0%

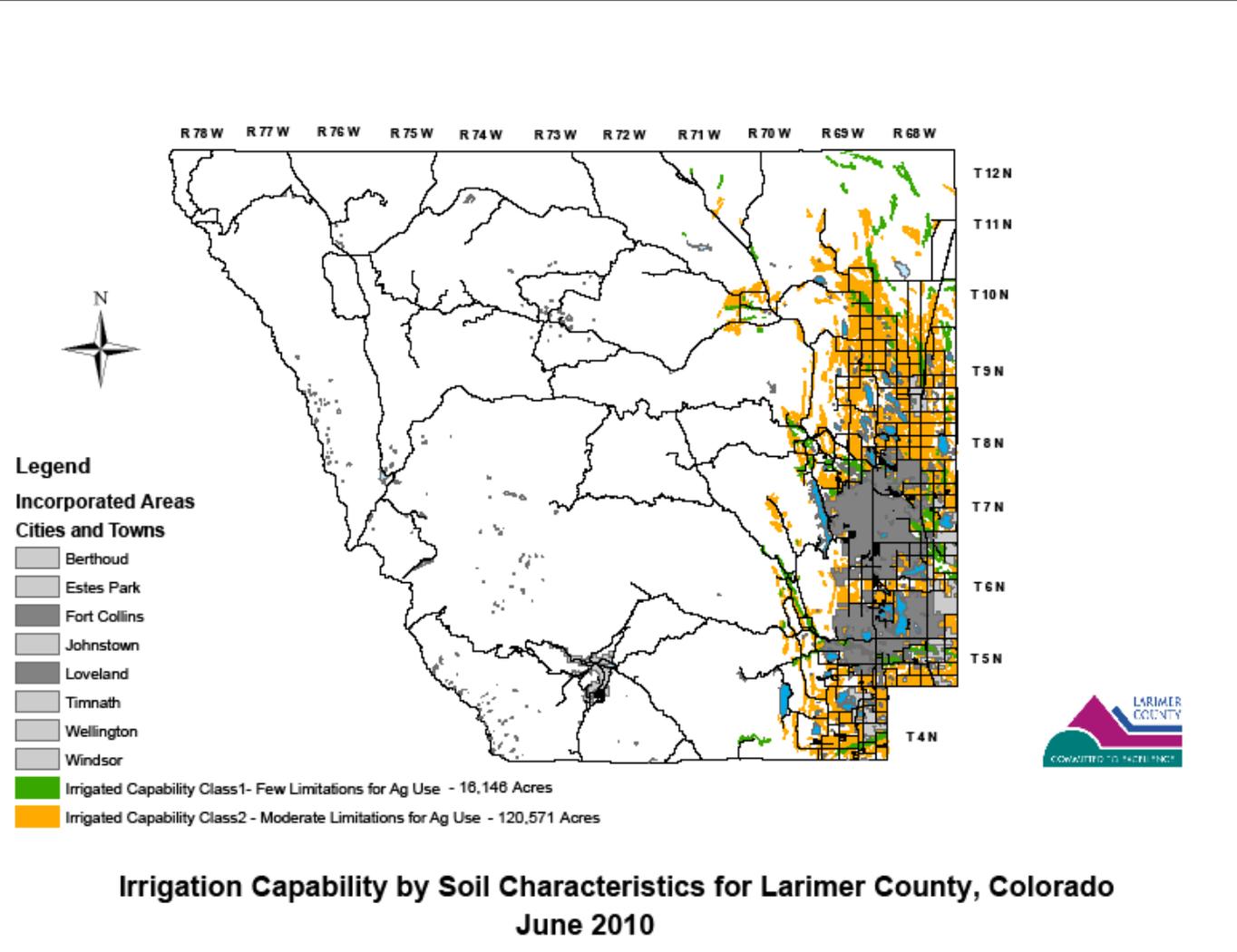
Agricultural Land

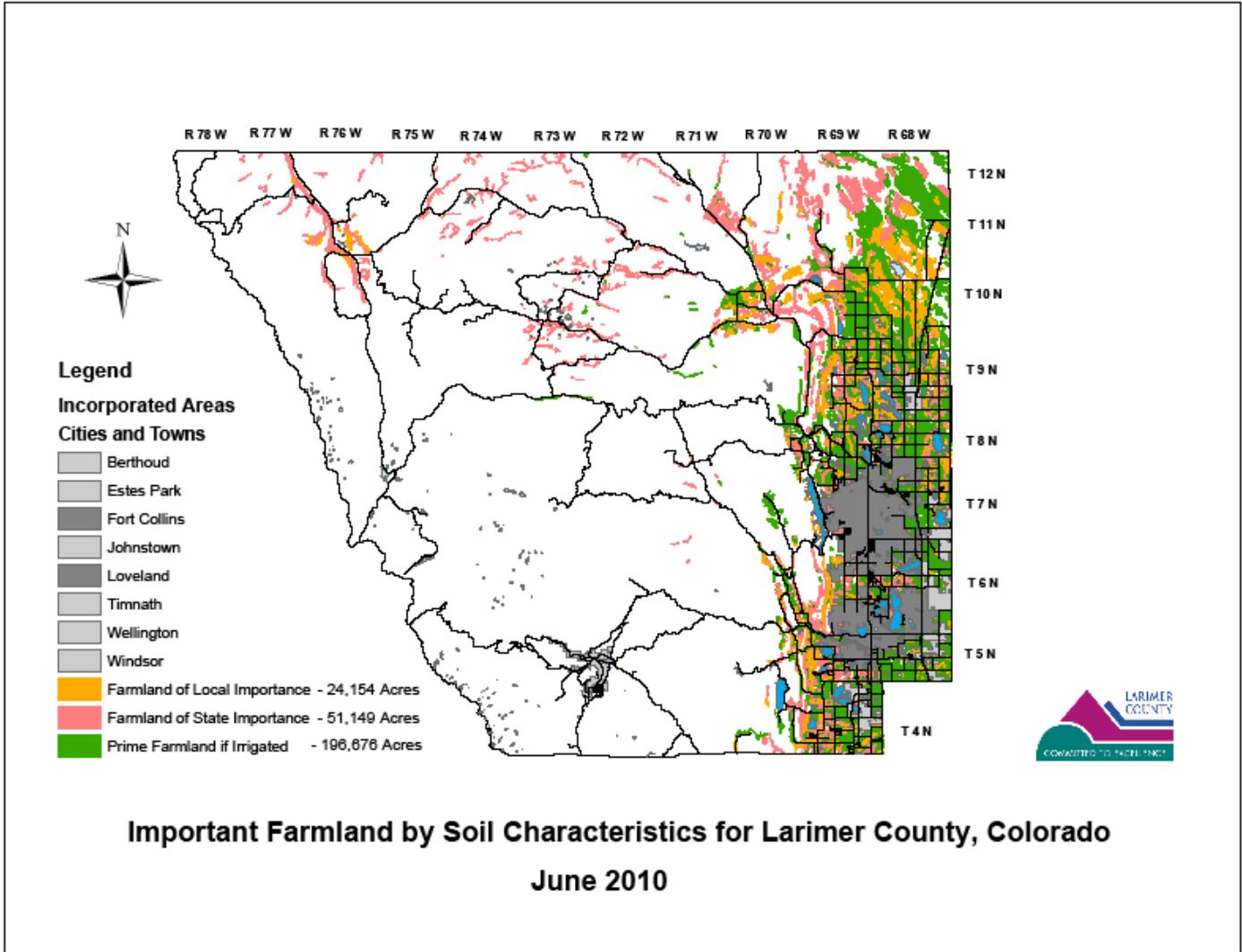
Information regarding agricultural land was assembled to depict two key issues. Soil types from Natural Resource Conservation Service mapping are shown to quantify the availability of agriculturally suited soils in the study area. These maps follow.



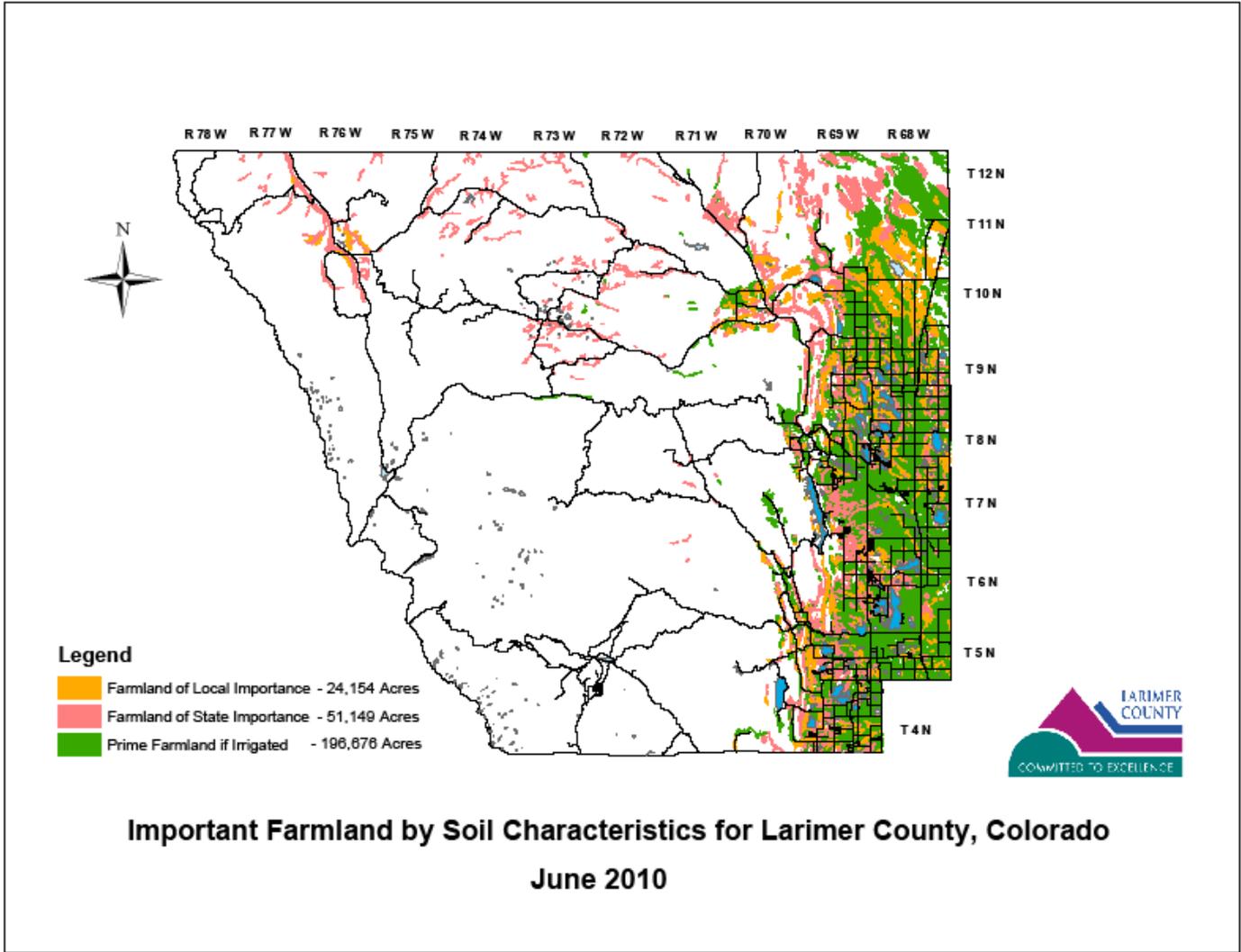


Larimer County Soils Map -- NRCS





For illustration purposes, to show the impact of developed areas on the availability of prime agricultural soils, the map below shows soils without the overlay of incorporated towns and cities.



In addition to collecting information about soil types, which indicates the capability of land for supporting agriculture, information was also gathered about actual use of lands. This data was gathered from the three counties using data from the Assessors' offices in all three counties. Boulder County supplemented this information using data from the Boulder County Parks and Open Space Department and from the State of Colorado. In Colorado, property taxes are related to land use, so land use information was readily available from this source. Land use mapping for the three counties follow.

Boulder County Agricultural Use 2010

Public and Private Agricultural Land

Agricultural Use Definitions

Irrigated
Irrigated lands used for raising crops, herbs, and food products, including orchards, are assigned to this subfarm. These lands are cultivated, and the crops are maintained through use of surface water irrigation systems.

Dryland
Cultivated lands used for growing crops that are not irrigated and rely on rainfall for all crop production are assigned to this subfarm.

Rangeland
Lands more suitable for grazing than cultivation on a continuing basis are assigned to this subfarm. Land with a carrying capacity of no more than 100 acres per animal unit is included.

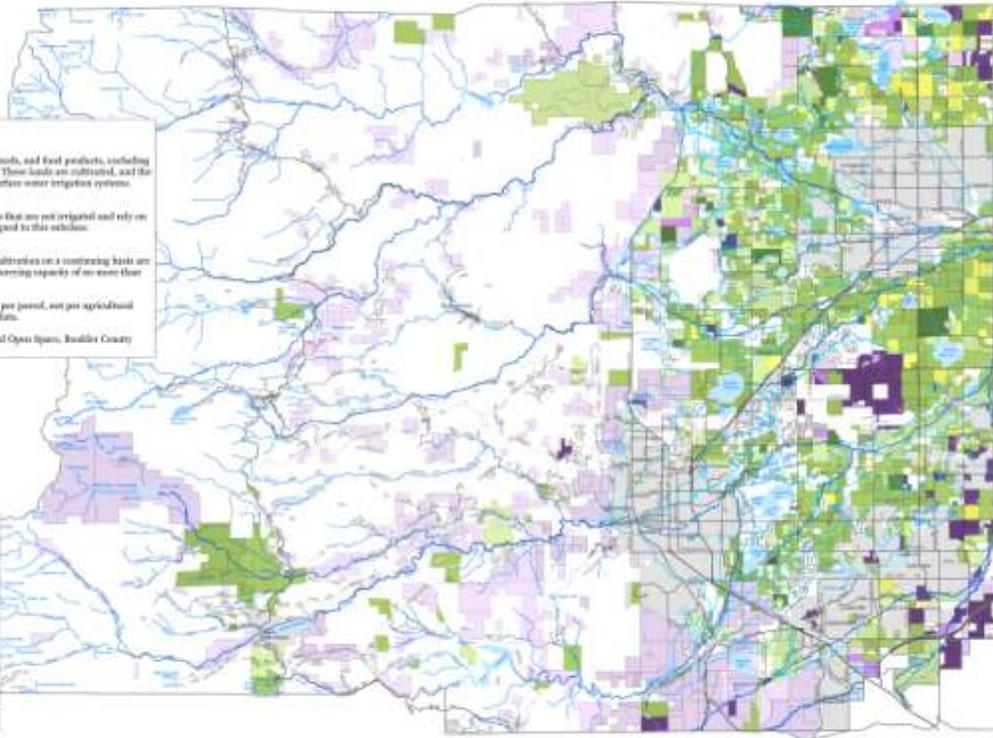
Note: The mixed agricultural uses are per parcel, not per agricultural field. This is due to limitations on the data.

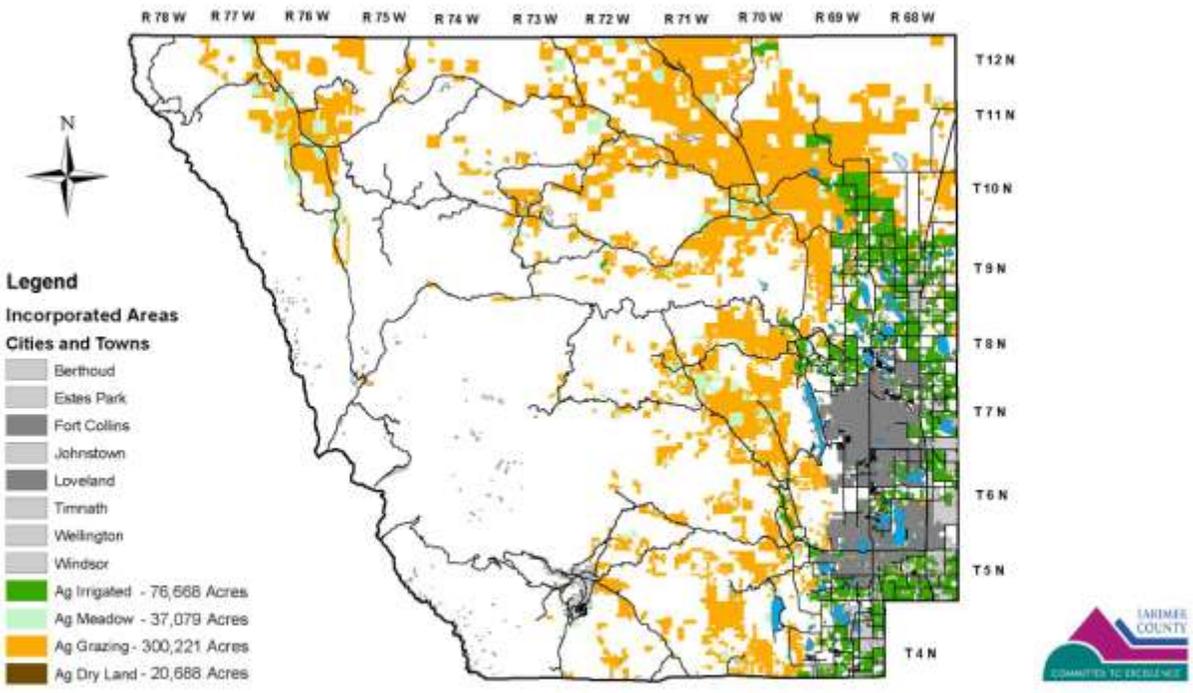
Data Sources: Boulder County Parks and Open Spaces, Boulder County Assessor's Office, State of Colorado.

Public Lands

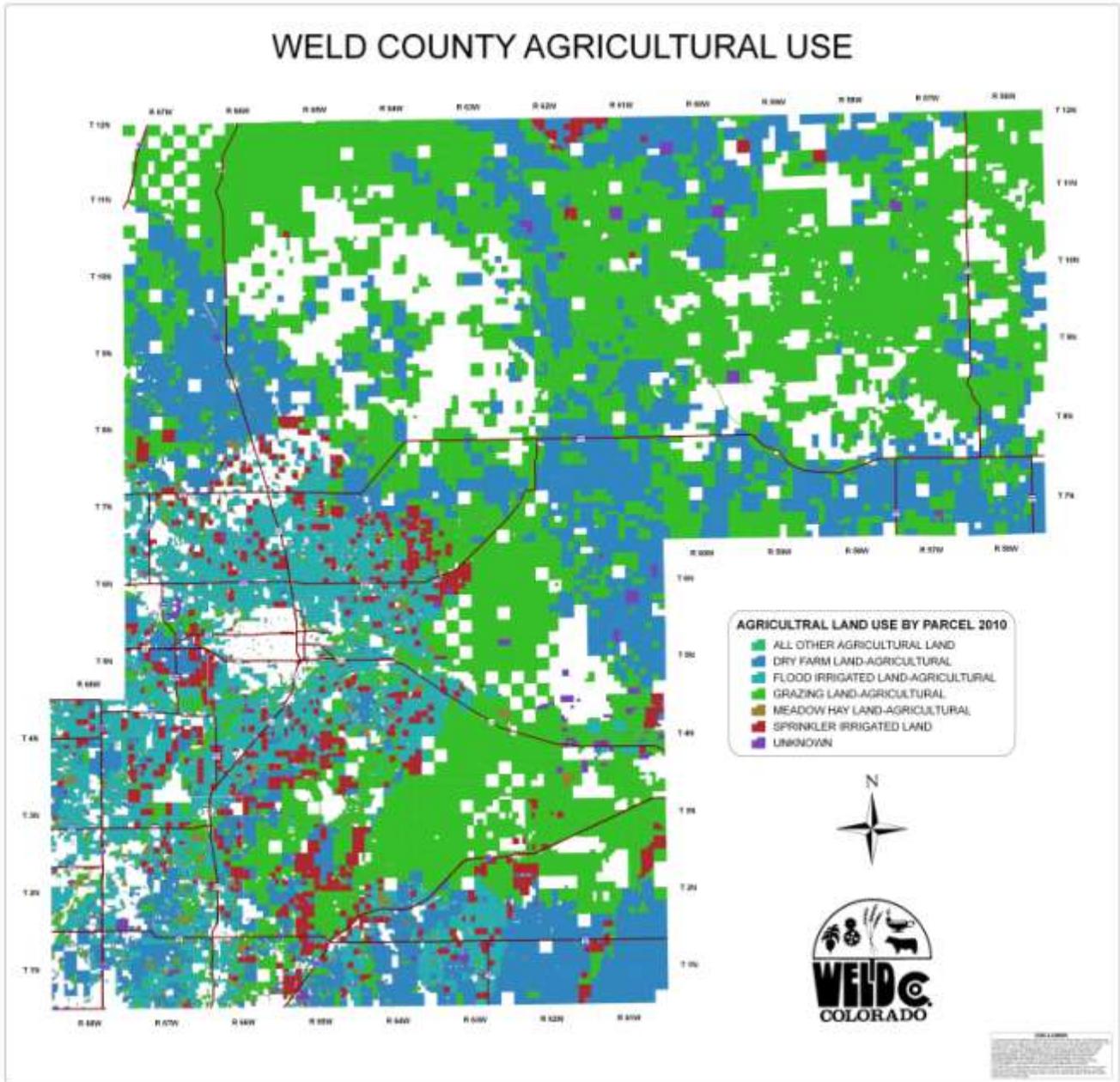
Agricultural (non-By parcel)

- Irrigated & Dryland & Rangeland
- Irrigated
- Irrigated & Rangeland
- Irrigated & Dryland
- Rangeland
- Dryland & Rangeland
- Dryland

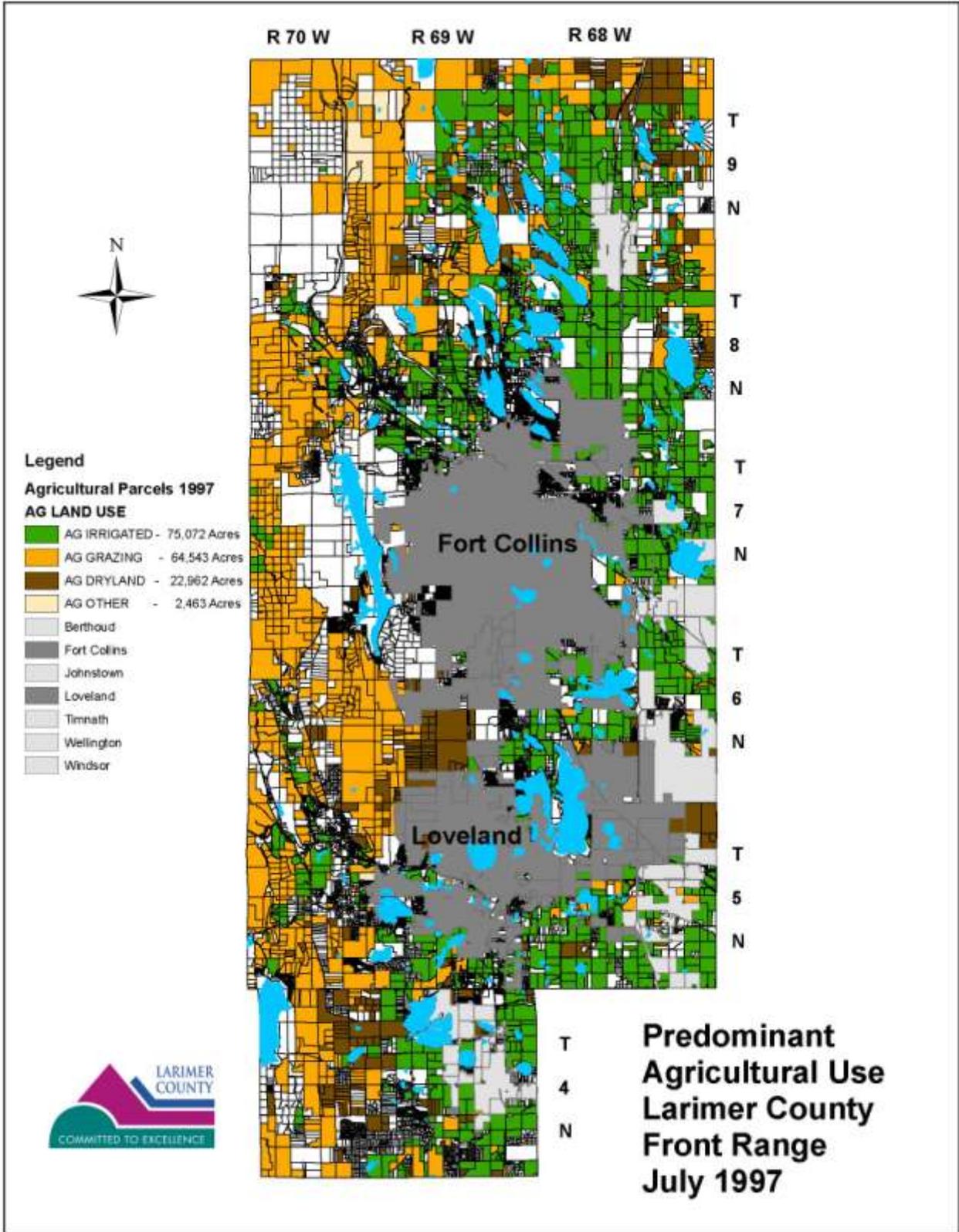


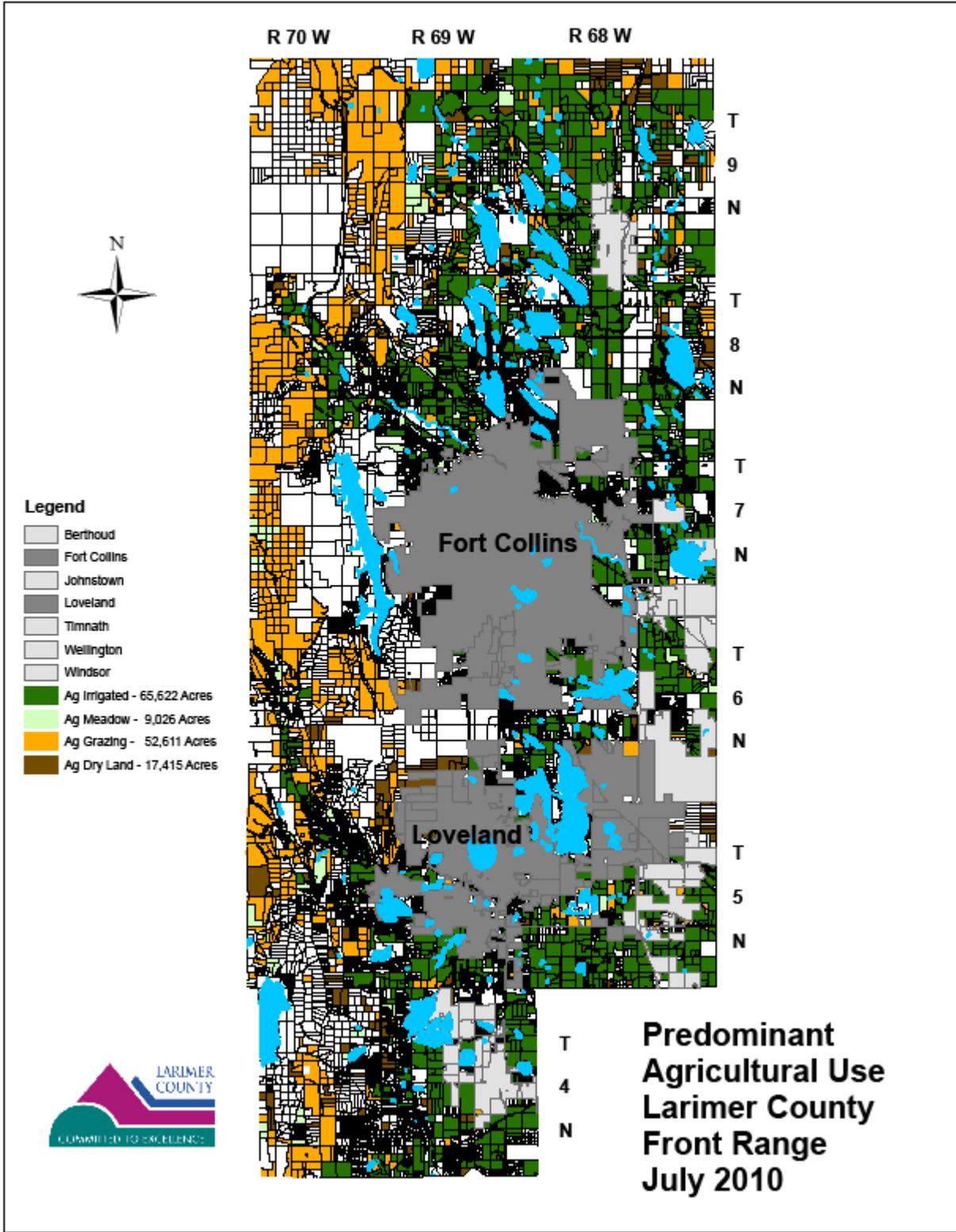


**Predominant Agriculture Classification by Parcel for Larimer County, Colorado
June 2010**



When Larimer County updated its Master Plan in 1997 detailed mapping was prepared to depict agricultural land use. As part of the Food System Assessment, the same methodology was used to illustrate current agricultural land use. The city limits from 1997 could not be retrieved, so the city limits from 2010 are shown for both years. Since the concentration of soils best suited for agriculture are in the eastern, non-mountainous portion of the County, maps showing only this area were also prepared. Those follow.





The following table summarizes the 2007 land use in the three Northern Colorado counties. This data is taken from the USDA Farm Census:

	<u>Boulder</u>	<u>Larimer</u>	<u>Weld</u>
<u>Total County Land Area*</u>	473,907	1,684,320	2,568,855
<u>Land in Farms and Ranches*</u>	137,668	489,819	2,088,715
<u>-Cropland*</u>	54,452	119,984	987,892
<u>-Pasture and Range Land*</u>	72,375	313,416	1,018,667
<u>-Irrigated Land*</u>	33,871	63,405	327,836
<u>Percentage County Land in Agriculture</u>	29%	29%	81%

**in acres*

Agricultural land use has diminished throughout the region on a ten year trend between 1997 and 2007 according to the USDA Agriculture Census. (Between 2002 to 2007 in both Boulder and Weld counties farm acreages appear to have recovered slightly which is believed to be the result of census reporting changes caused by limited rainfall/irrigation water in 2002 and by a revision to the definition of a “farm” by USDA in 2007). Many prime agriculture areas, as categorized by soil mapping are near urban or suburban borders. Given projections for 2% annual population growth in the Northern Colorado region, this indicates that key agricultural areas may be in areas targeted for urban expansion.

Sources for Information on Agricultural Inputs – Natural Resources

Colorado Water Conservation Board (South Platte Basin) -

<http://cwcbweblink.state.co.us/weblink/docview.aspx?id=119002&searchhandle=12637&dbid=0>

Colorado Decision Support System -

<http://cdss.state.co.us/DNN/SouthPlatte/tabid/58/Default.aspx>

Natural Resources Conservation Service Soils - <http://soils.usda.gov>

Northern Colorado Water Conservancy District - <http://www.ncwcd.org>

Agricultural Inputs – Commercial

In addition to natural resource inputs, many goods and services provided through commercial ventures are required for agricultural production. The food system assessment gathered information on some of these. This element of the food system focuses on the economic impacts of agriculture production. When a farm purchases inputs from suppliers within a designated region, the regional economy is stimulated (those dollars remain within the region.) When farmers make purchases outside their region, this results in economic activity “leaking” out. A number of factors can lead to such “leakages”, including limited capacity of regional suppliers and competition from suppliers outside the region.

Every five years the United States Department of Agriculture conducts a Census of Agriculture. Farmers self report information about their operations and this information is aggregated at the county level. Production expense estimates reflect the number of dollars spent in each category by farmers in their respective counties for the 2007 calendar year, regardless of where the purchases are made. Some of these supplies, services, and costs provided income to local businesses generating economic activity for the region.

2007 Census of Agriculture Production Expense Estimates

	Boulder	Larimer	Weld	Regional Change from 2002 to 2007
Supplies Purchased				
Fertilizer, lime, soil conditioners	\$ 1,699,000	\$ 2,880,000	\$ 22,573,000	25.87%
Chemicals	\$ 545,000	\$ 1,416,000	\$ 12,382,000	20.53%
Seeds, plants, vines, trees	\$ 4,933,000	\$ 7,217,000	\$ 36,869,000	41.05%
Livestock and poultry purchased or leased (all)	\$ 2,432,000	\$ 4,884,000	\$ 512,984,000	-8.37%
-- <i>Breeding livestock purchased or leased</i>	\$ 627,000	\$ 1,672,000	\$ 20,419,000	
-- <i>Other livestock and poultry purchased or leased</i>	\$ 1,806,000	\$ 3,212,000	\$ 492,565,000	
Feed	\$ 2,988,000	\$ 29,690,000	\$ 445,458,000	46.64%
Gasoline, fuels, oils	\$ 2,394,000	\$ 6,957,000	\$ 36,428,000	48.43%
Utilities	\$ 1,370,000	\$ 4,074,000	\$ 23,808,000	6.98%
Supplies, repairs, maintenance	\$ 3,181,000	\$ 8,509,000	\$ 50,900,000	6.47%
Services				
Farm hired labor	\$ 8,530,000	\$ 19,377,000	\$ 93,158,000	-8.86%
Contract supplied labor	\$ 556,000	\$ 1,419,000	\$ 4,342,000	-34.85%
Custom work and custom hauling	\$ 494,000	\$ 2,319,000	\$ 12,491,000	14.19%
Rent				
Land, buildings, and grazing fees (cash)	\$ 1,129,000	\$ 3,107,000	\$ 18,433,000	2.65%
Machinery, equipment, farm share of vehicles	\$ 45,000	\$ 692,000	\$ 5,260,000	-16.70%
Interest				
All	\$ 2,072,000	\$ 7,563,000	\$ 34,544,000	1.35%
-- <i>Secured by real estate</i>	\$ 1,627,000	\$ 5,116,000	\$ 21,620,000	11.20%
-- <i>Not secured by real estate</i>	\$ 445,000	\$ 2,446,000	\$ 12,924,000	-12.55%
Other Financial Expenses				
Property taxes	\$ 1,416,000	\$ 3,757,000	\$ 10,472,000	-4.87%
Depreciation	\$ 3,981,000	\$ 13,494,000	\$ 56,520,000	-0.61%
Other				
Other (animal health, storage, marketing, etc.)	\$ 5,599,000	\$9,737,000	\$ 57,689,000	-11.90%
Total	\$ 39,382,000	\$ 113,596,000	\$ 1,377,792,000	8.78%

Note: *Italitized text* indicates data is a sub-set of reported category also shown in the table.

Each expenditure category represents the total market for that farm input by county. The term “custom work” refers to an arrangement where another business provides a service including labor and equipment to the farm for a fee. Fees are generally structured on either a per acre or per unit basis (i.e. bushel or bale), or both.

Farms in Weld County spent the largest proportion on livestock not for breeding purposes, as well as on livestock feed. Farms in Boulder County spend the largest proportion on fertilizer, lime, and soil conditioners as well as chemicals and seeds, plants, vines and trees. Farms in Larimer County spent the smallest proportion on livestock of all types, but farms in Boulder County spent the smallest proportion on livestock feed. Also, farms in Weld County spent the smallest proportion on interest, taxes, and depreciation. In aggregate, farms in the region spent the greatest proportion on livestock that was not for breeding purposes, which is not surprising considering that Weld County represents 90% of the regional expenditures.

The USDA Census of Agriculture also tracks information on hired farm labor. The term “workers” refers to individuals paid by the farm who are not considered to be operators.

HIRED FARM LABOR- NUMBER OF WORKERS

	Boulder	Larimer	Weld
2007	983	2,278	6,915
2002	820	2,458	7,698
1997	1,073	2,252	8,238
1992	1,098	1,600	8,336
% change from 1992 to 2007	-10%	42%	-17%

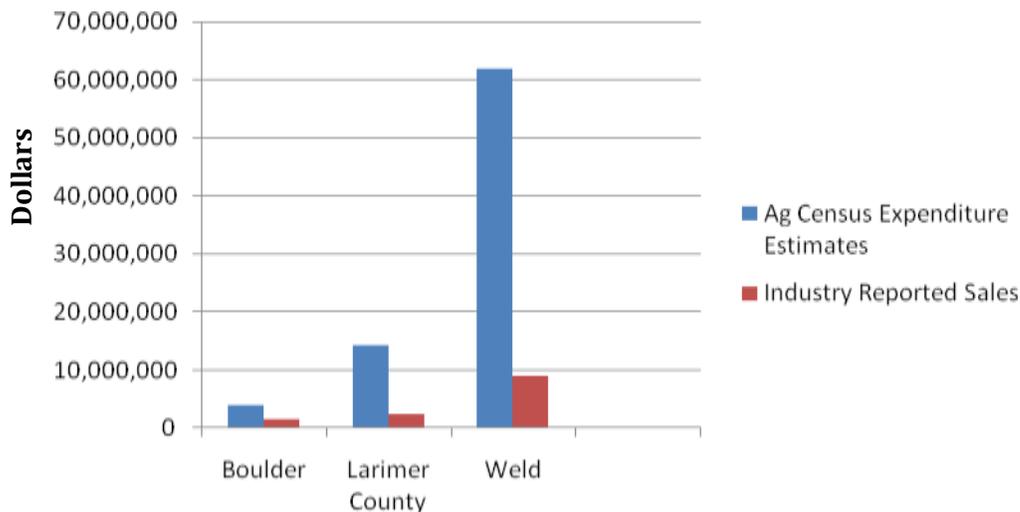
HIRED FARM LABOR- EXPENDITURES, ADJUSTED FOR INFLATION (2007 DOLLARS)

	US Total	Colorado Total	Boulder	Larimer	Weld
2007	\$ 21,877,661,000	\$ 390,625,000	\$ 8,530,000	\$ 19,377,000	\$ 93,158,000
2002	\$ 21,400,882,323	\$ 423,000,731	\$ 8,085,070	\$ 22,655,485	\$ 102,391,680
1997	\$ 19,172,399,287	\$ 340,535,659	\$ 11,096,996	\$ 16,928,409	\$ 80,409,940
1992	\$ 19,155,325,403	\$ 309,867,668	\$ 10,726,217	\$ 10,918,337	\$ 82,590,984
% Change from 1992 to 2007	14%	26%	-20%	77%	13%

These data show that hired farm labor has changed over time. The data suggests that expenditures per laborer have increased over time. Also, the farm labor markets show variation even over as small a region as three counties. Over time the economic impact of farm employment is changing.

In an attempt to understand the potential “leakage” of economic opportunity leaving the region related to farm purchases, data from the USDA farm census on purchases was compared with industry reported sales data gathered for the study. Ag Census expenditure estimates reflect the amount of money that farmers spent on machinery and equipment, from any source. Industry reported sales reflect the dollar amounts of new equipment sold by dealers. It is important to note that the agricultural census data is from 2007 and the industry reported sales data is generally from fiscal year 2009-10.

The graphic below illustrates the dependence of regional agriculture on inputs obtained from other parts of the state and country.



Sources of Data for Agricultural Inputs – Commercial

USDA ERS 2007 Census of Agriculture; accessible at <http://www.agcensus.usda.gov/Publications/2007/>

USDA ERS 2002 Census of Agriculture; accessible at <http://www.agcensus.usda.gov/Publications/2002/>

USDA ERS 1997 Census of Agriculture; accessible at <http://www.agcensus.usda.gov/Publications/1997/>

USDA ERS 1992 Census of Agriculture; accessible at <http://www.agcensus.usda.gov/Publications/1992/>

U.S. Department of Labor CPI Inflation Calculator: accessible at http://www.bls.gov/data/inflation_calculator.htm

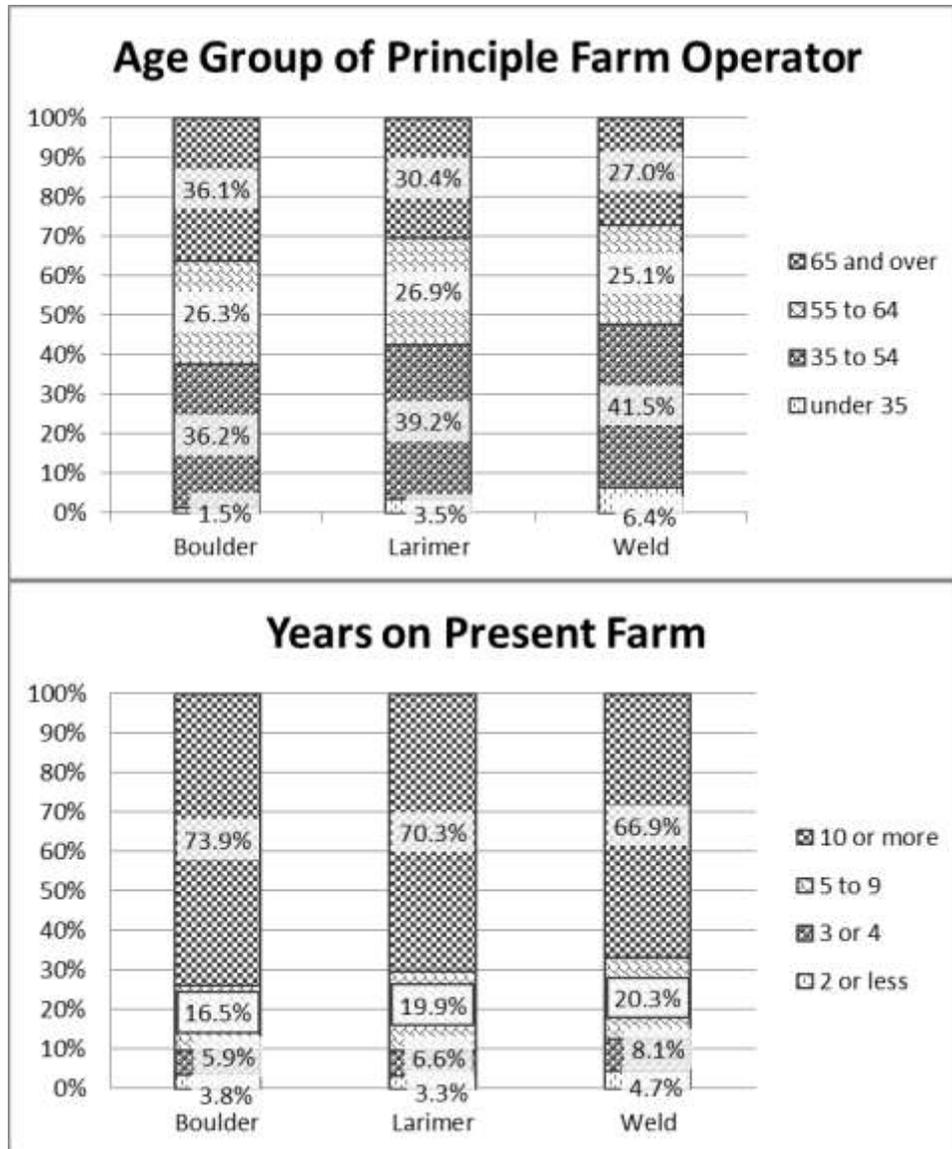
Agricultural Production

In looking at the agricultural production element of the food system, the assessment studied both the farmers and the farm products. With regard to farmers, three characteristics were studied:

1. Producer age and time in farming as an indicator of the entry and succession issues that agriculture faces
2. The land base, economic scale and lifestyle orientation of farmers to illustrate the diversity of engagement in agriculture across farms.
3. The market orientation of producers to show how the region is reacting to greater interest in local food systems.

Demographics and Years on Farm (as Principal Operator)

One way to describe agricultural producers is by their age and years on farm, which helps categorize the experience levels, lifestage and planning horizon of the operator.



- Boulder County farm operators have the highest average age, and Weld County farm operators have the lowest.
- Similarly, Weld County has a larger percentage of operators that are new to farming, but the majority of farmers and ranchers have been on the same operation for more than 10 years in all counties

These demographics lead to a continued interest in helping young and beginning farmers establish operations and gain access to production resources.

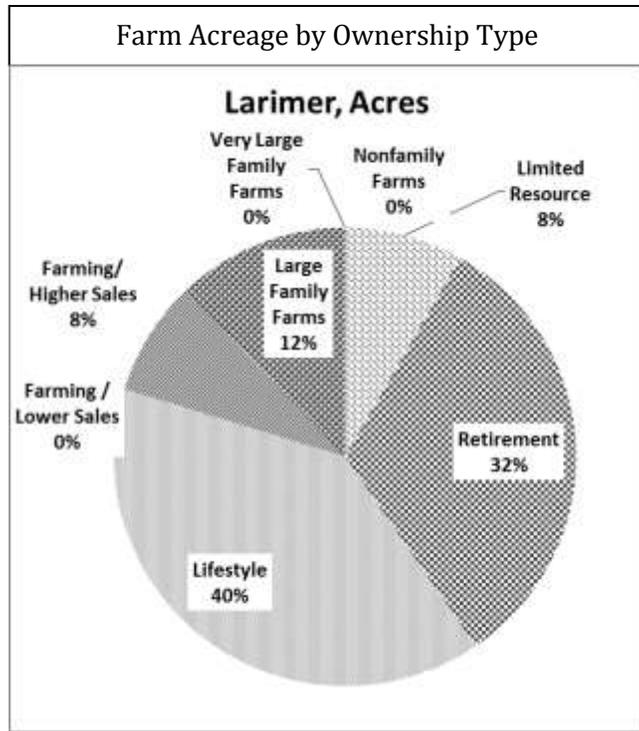
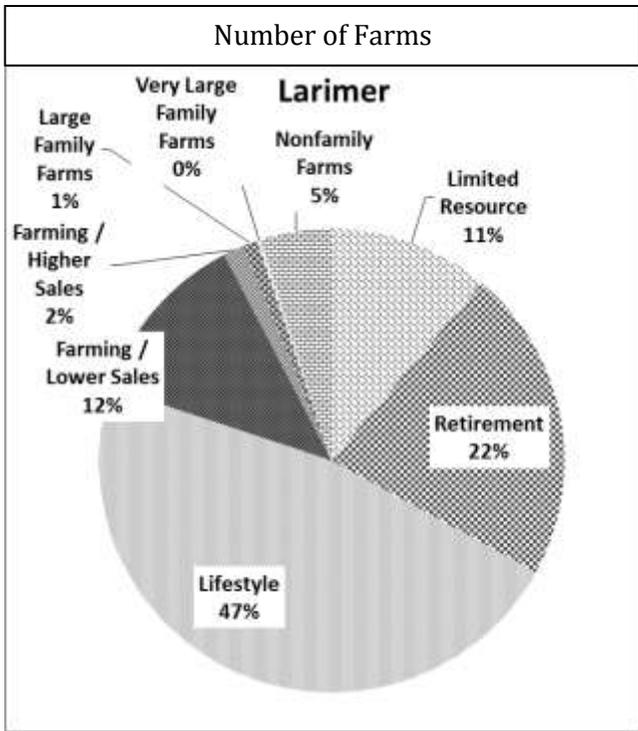
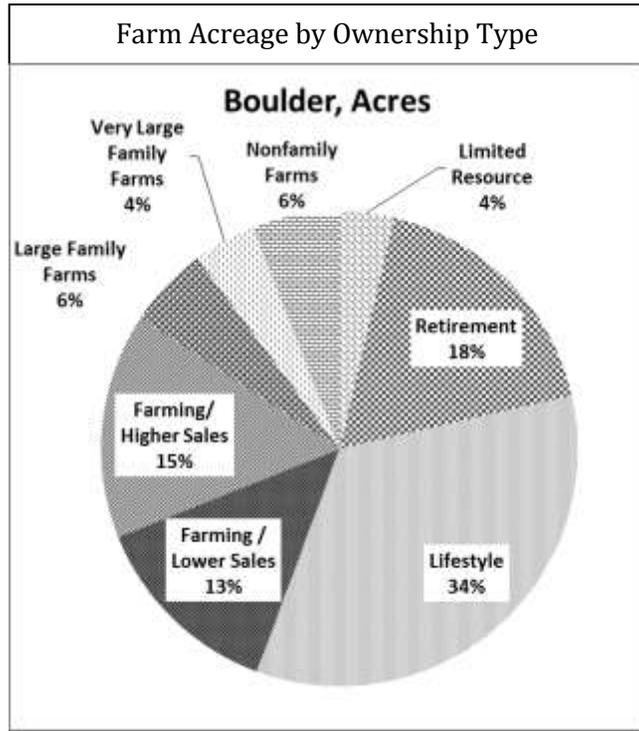
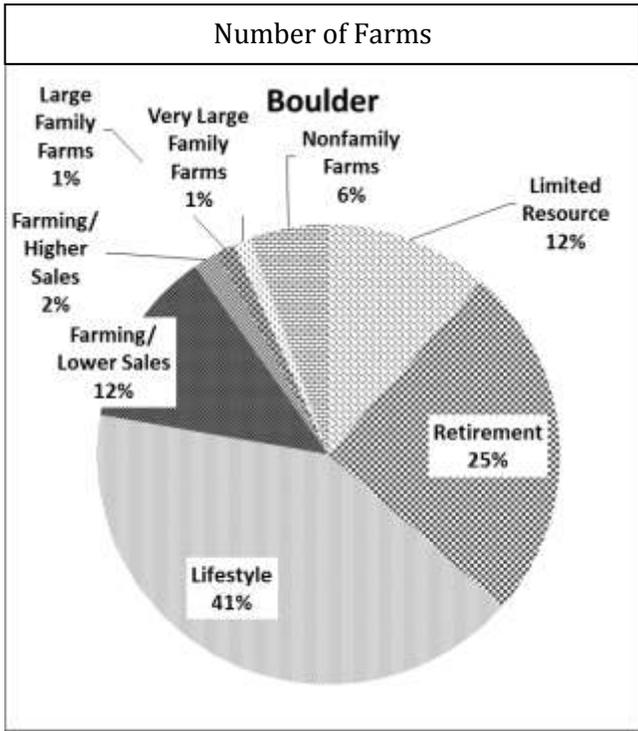
Share of Farms Categorized by Sales and Level of Engagement

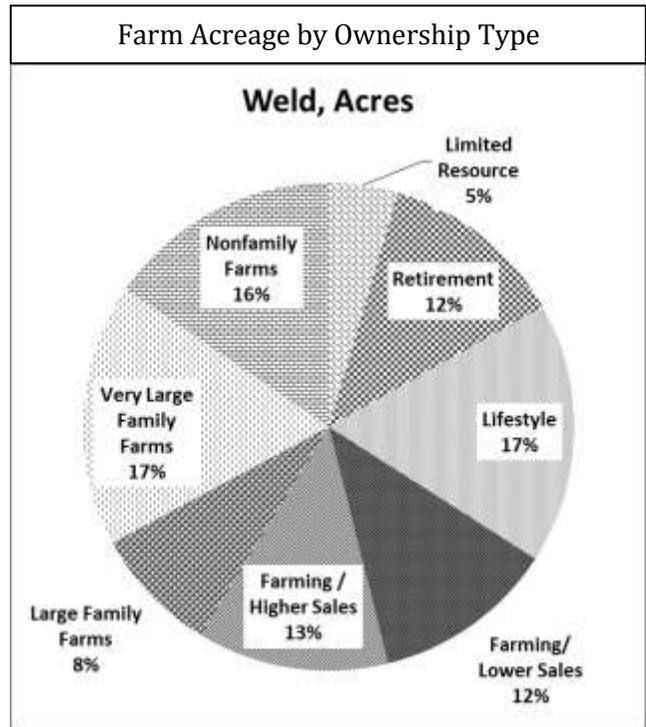
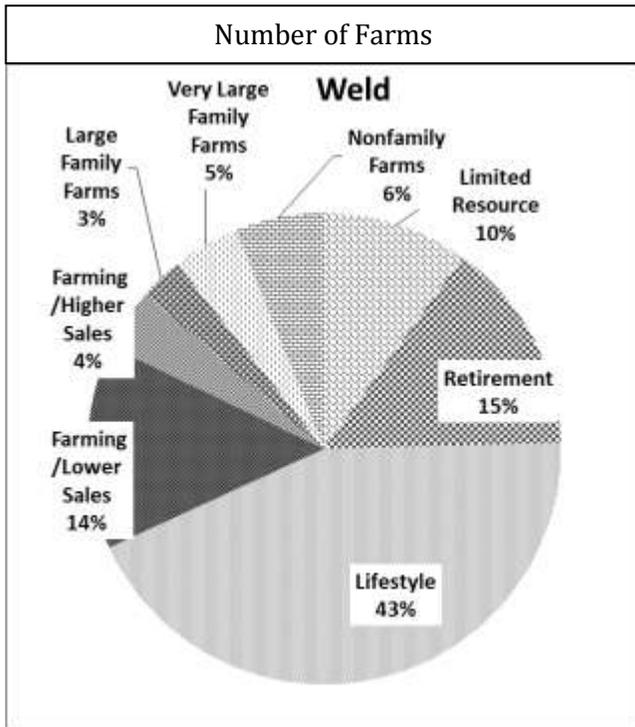
Because of the changing nature of farms and producers, the USDA recently developed a new system of categorizing farms, which was used to describe the region using 2007 Ag Census data. The following table defines each of these categories. Note that most are classified as family farms, but the size of operations among family farms is quite varied.

USDA Defined Farm Types	
Small family farms (gross sales less than \$250,000) ¹	Large-scale family farms (gross sales of \$250,000 or more)
<p>Rural-residence family farms:</p> <p>Retirement farms. Small farms whose operators report they are retired.</p> <p>Residential/lifestyle farms. Small farms whose operators report a major occupation other than farming.</p> <p>Intermediate family farms:</p> <p>Farming-occupation farms. Small family farms whose operators report farming as their major occupation.</p> <p>•Low-sales farms. Gross sales less than \$100,000.</p> <p>•High-sales farms. Gross sales between \$100,000 and \$249,999.</p>	<p>Commercial family farms:</p> <p>Large family farms. Gross sales between \$250,000 and \$499,999.</p> <p>Very large family farms. Gross sales of \$500,000 or more</p> <p>Nonfamily farms</p> <p>Any farm not classified as a family farm, that is, any farm for which the majority of the farm business is not owned by individuals related by blood, marriage, or adoption.</p>
<p>¹The National Commission on Small Farms selected \$250,000 in gross sales as the cutoff between small and large-scale farms.</p>	

- In Weld County intermediate and large scale farms control a larger portion of the agricultural acreage than is seen in Boulder and Larimer Counties.
- Lifestyle and retirement are significant in terms of farm numbers and acres in production, especially in Larimer and Boulder counties.
- Family farms are still dominant players throughout the region.

The pie charts below show the number of farms in each type of ownership and the acreage of farms in each ownership by County. Notice the differences between the number of farms and the acreage controlled by each type of ownership.





Market Orientation of Farm Producers

Given economic struggles by some sizes and types of farm enterprises, there is renewed interest in diversifying the types of marketing strategies that farms use to suit their potential sales volume, quality and reputation. So, it is useful to consider farms being divided by their size and potential to add value with customers as shown below.

Those seeking to direct market have seen increased activity in Colorado in recent years. These producers typically exhibit small sales volumes and attempts to increase the freshness and quality of their offerings. Other producers are maintaining high volumes of sales, but adding value to create a greater profit margin for their farms and ranches (sometimes called a value food chain).



- There are 37,000 farms in Colorado with \$6 billion in sales
 - 2777 direct sell about \$22.5 million directly
 - As of 2007, over 10% of farms are direct selling and 5% are adding value to their farm products.
 - 1709 farms add value to their products in Colorado, 36 in Boulder, 131 in Larimer and 179 in Weld. (about 5% of all farms)
- The share of direct sales in our three counties is only 0.1 to 2% of all sales, but the number of farms direct marketing grew by over 20% in all 3 counties
 - Boulder has 746 farms with \$34 million in sales
 - 105 sell \$715,000 directly
 - Larimer has 1757 farms with \$128 million in sales
 - 199 sell \$838,000 directly
 - Weld has 3921 farms (10% of the state's total farm numbers) with \$1.5 billion in sales (25% of the state's total sales)
 - 303 farms in Weld sell \$2.2 million directly
- There are 214 Colorado farms with CSAs as of 2007 Census; 10 in Boulder, 21 in Larimer, and 15 in Weld. Little data is available, but we thought it was interesting to develop estimates.

- 97 are listed on Local Harvest, and looking through the listings, they sell 30-100 shares at each CSA, with a couple of very large CSAs reporting a significantly higher number of shares for sale (4000 for Grant Family Farms, 250 for some in Boulder). For this exercise, we assume 60 shares are sold, on average, except for those big operations.
- Share prices range from \$500-800 per share, so let's assume an average of \$600.
- If you believe there are 214 operating, and 200 are "medium sized", that is $\$600 * 200 * 60 = \$7,200,000$ in revenues for the whole state.
- If we assume Grant Family Farms sells 3,000 of their available shares at \$600 per share, that is \$1,800,000 for that one CSA in our region.
- Given the number of CSAs in our region (46), and assuming Grant Family Farms is one with \$1.8 million in CSA revenues, and there are 5 other larger CSAs (200 shares at \$600 per piece), we have $\$600,000 + \1.8 million , or \$2.4 million in sales from larger CSAs.
- If the other 40 CSAs are more average, that is \$36,000 per CSA or \$1,440,000 more in sales.
- So, a realistic estimate for the region's CSAs is \$3.8 million in sales.
- For Colorado as a whole, we would estimate about \$10 million in CSA sales activity, or about half of the reported direct sales in 2007.

References for Information on Farm Producers

Colorado Ag Census, http://www.nass.usda.gov/Statistics_by_State/Colorado/index.asp
Ag of the Middle Research Group, <http://www.agofthemiddle.org/>

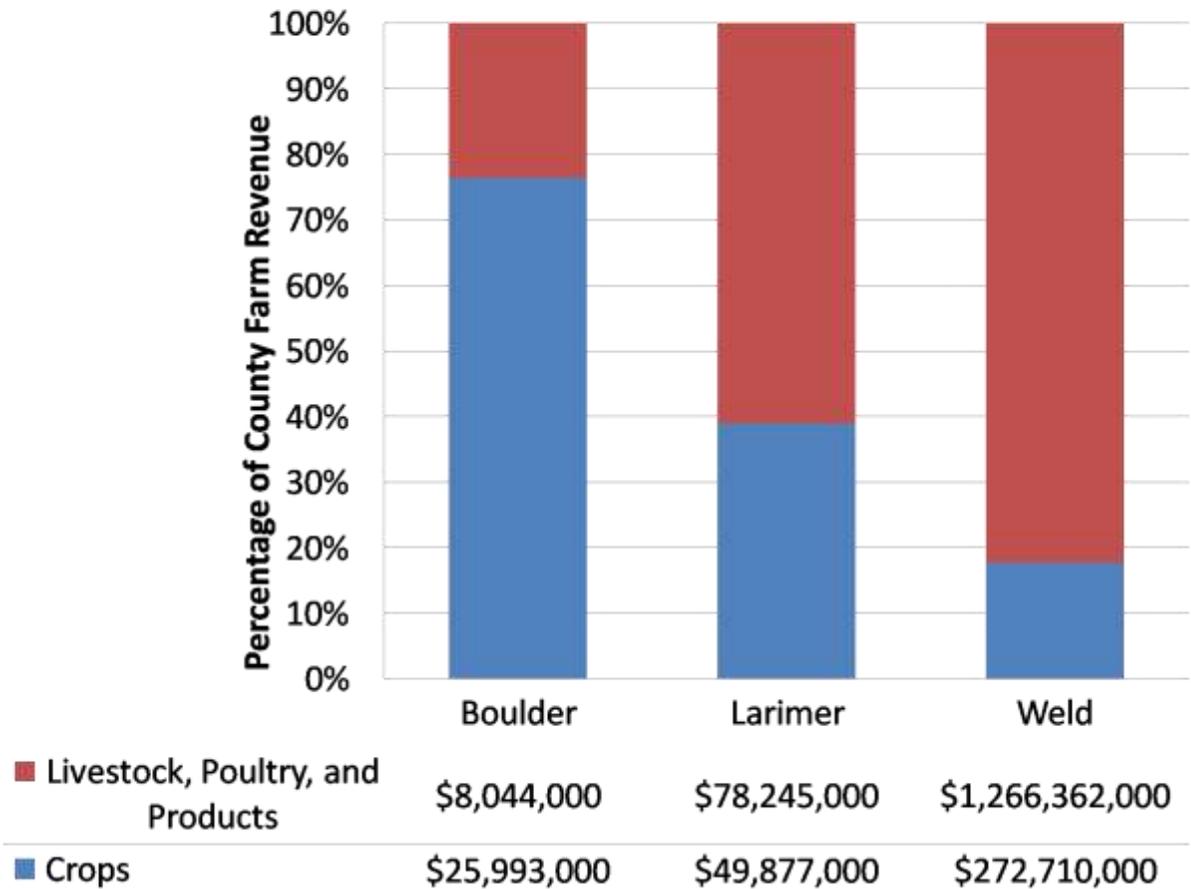
Information on Farm Production

As part of the assessment process, considerable information was gathered on farm production in the three subject counties. This agricultural production data is critical to an understanding of the local food system.

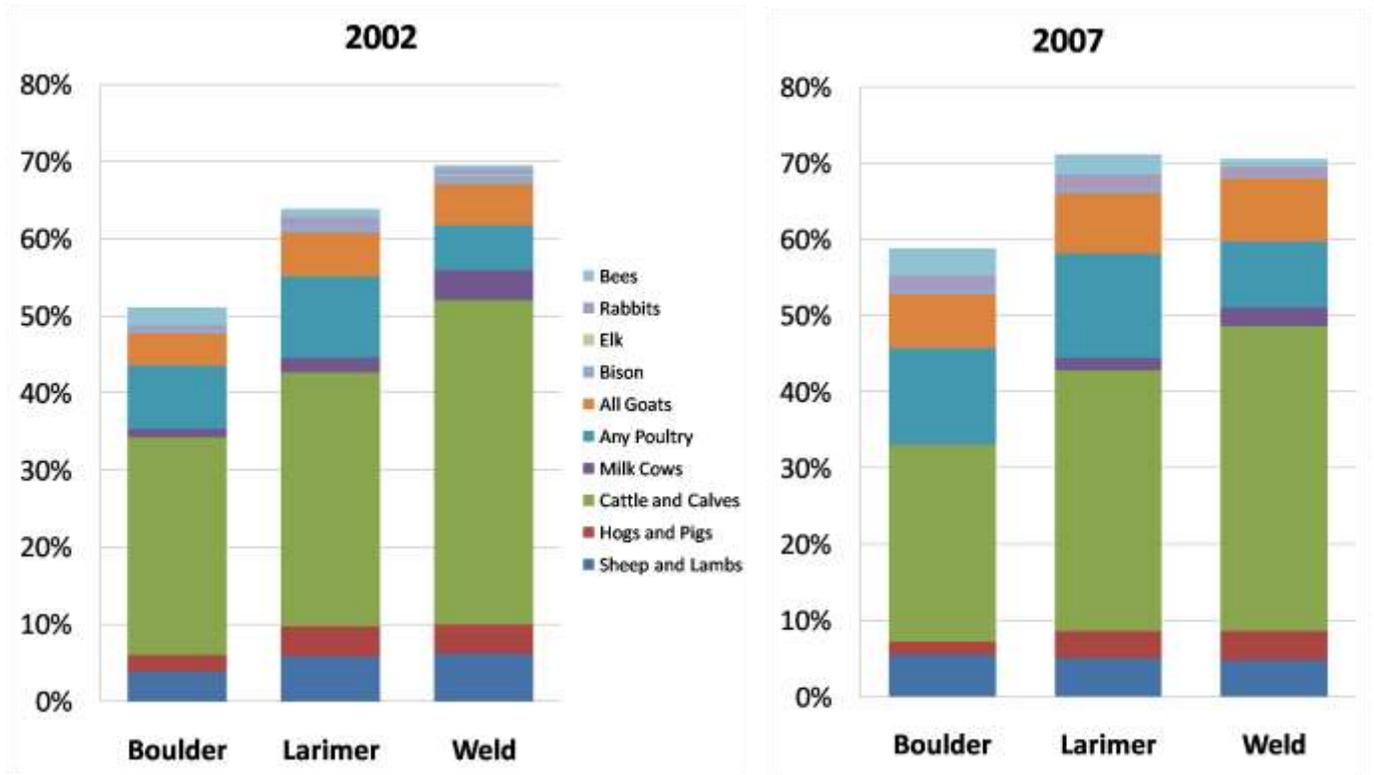
County profiles from the 2007 USDA Farm Census for each of the three counties in the study area are attached at the end of this chapter. The profiles include some comparative data between 2007 and 2002.

The chart below shows the market value of farm products sold in the three counties. Given the magnitude of production in Weld County, the bulk of farm revenue in the region (approximately 75%) is generated by animal products although the percentages of total market value of all products varies between the counties.

Market Value of Products Sold



In all three counties, between 2002 and 2007, there was an increase in the diversity of livestock kept on farms. The largest increases occurred in the presence of bees and goats. Dairy cattle disappeared from Boulder County during that same time frame. Refer to the chart below; the data is presented in terms of the percentage of farms that include the various types of livestock. Notice the dominance of cattle and calves in all three counties among the types of livestock.



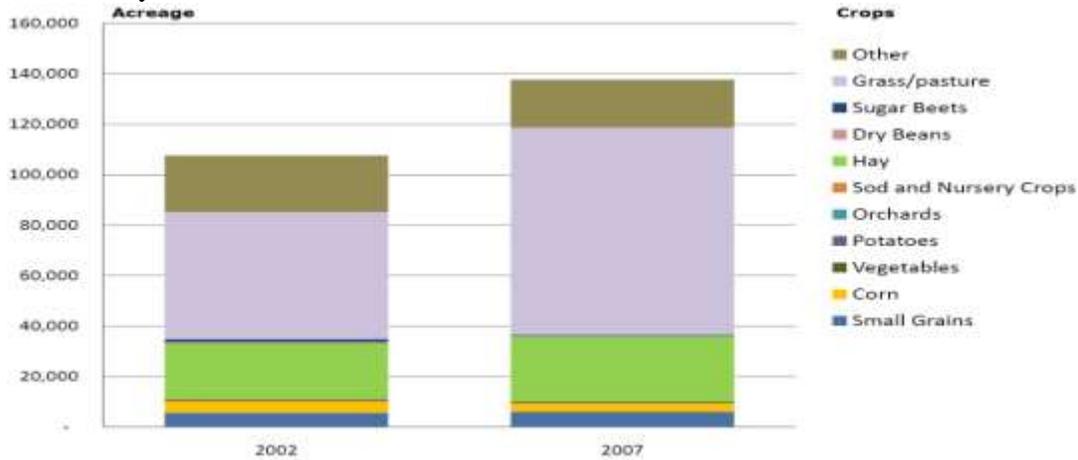
Regarding crop production, both the types of crops grown and the revenue per acre generated by those crops vary by county. The following charts present this information.

Revenue Per Acre by Crop Type and County

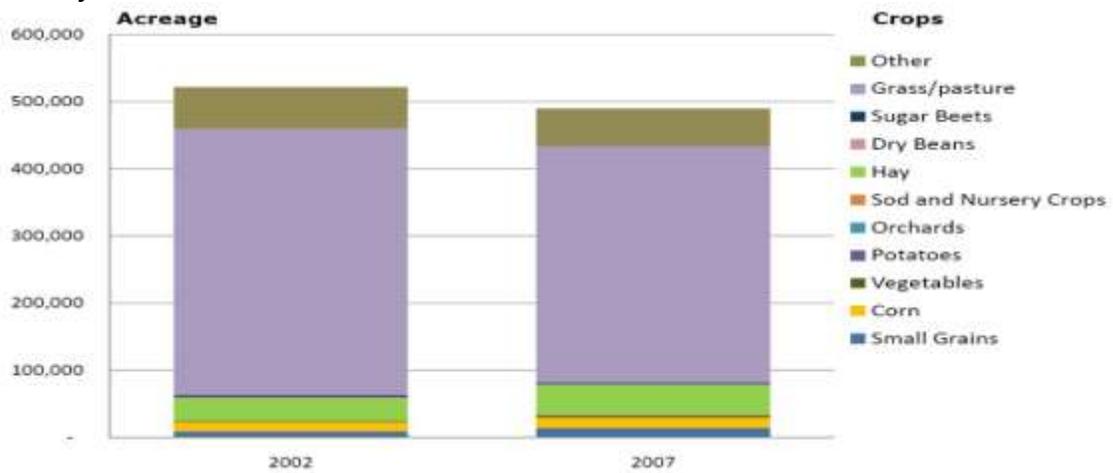
	Boulder	Larimer	Weld
small grains	\$ 173.29	\$ 202.59	\$ 177.28
corn	\$ 353.89	\$ 367.46	\$ 454.41
vegetables	\$ 3,798.08	\$ 2,510.70	\$ 3,867.86
orchards	\$ 6,037.04	\$ 2,931.82	\$ 5,200.00
sod farms		\$ 5,804.98	\$ 4,195.48
alfalfa	\$ 248.92	\$ 156.59	\$ 275.70
dry beans	\$ 716.01	\$ 716.77	\$ 714.44
sugar beets	\$ 1,051.20	\$ 890.61	\$ 1,018.09

The following graphics display total acreages for specific crops over time in the three counties. Grass and pasture is the most common crop throughout the region. Cropping patterns in the region are influenced by the regional need for feed for livestock.

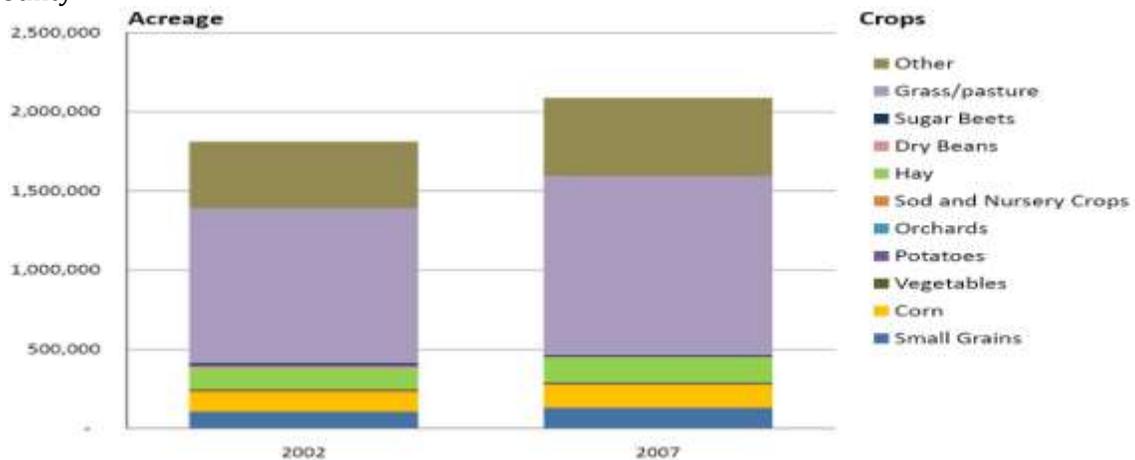
Boulder County



Larimer County



Weld County



Processing, Distribution, and Marketing

To understand the element of the food system between production and consumption, the food assessment studied the buying patterns of regional consumers, and the distribution of revenue from food purchases.

Consumers in the Northern Colorado region use a variety of markets and venues to meet their food needs. Colorado eats away from home more than the national average, and there is evidence that a higher share of food purchased for home consumption is bought at farmers markets or in other ways direct from producers. The continued development of local food system links, directly with consumers and through partnerships with chefs and institutional food service providers (schools, health institutions, caterers) may be one way to strengthen the food sector of the regional economy. An overview of the new Colorado Market Maker online database shows one example of a project that is meant to facilitate connections between consumers and food producers in the region.

Food remains one of the basic spending categories for consumers, but an increasing share of food dollars are being spent away from home. For food at home, a significant share of consumers value and purchase local food, and it is becoming more common for those purchases to be directly from producers (at farmers markets or through other options). Among food buyer values, there is high concern about the importance of protecting local farmland and supporting the local economy. Moreover, the growing number of shoppers who utilize farmers markets suggests a growing opportunity for producers to sell their products directly, and educate consumers on their production and processing practices (some of which are officially certified). Within local food systems, these certifications appear to be growing in importance as a quality signal to food buyers.

Tracking our Food Dollars: Where do we Shop and Eat?

Food markets in the Northern Colorado region have continued to evolve in response to the changing buying and eating patterns of its citizens. A food retail industry that had become dominated by larger, national chain stores is becoming more diverse again, as some shoppers trade convenience and price for natural foods, gourmet food choices and buying relationships with the producers of their food. Beyond food markets, the region has seen a significant increase in the share of dollars spent on food away from home (following the national average, but outpacing the US in share of dollars spent at restaurants, schools, health institutions and other food service enterprises).

Colorado's food expenditures are slightly higher than the national average, primarily because of higher disposable income. These food demand data are important as they show the total potential food industry dollars that could be a base economic driver for the region—for producers, stores, markets and restaurants.

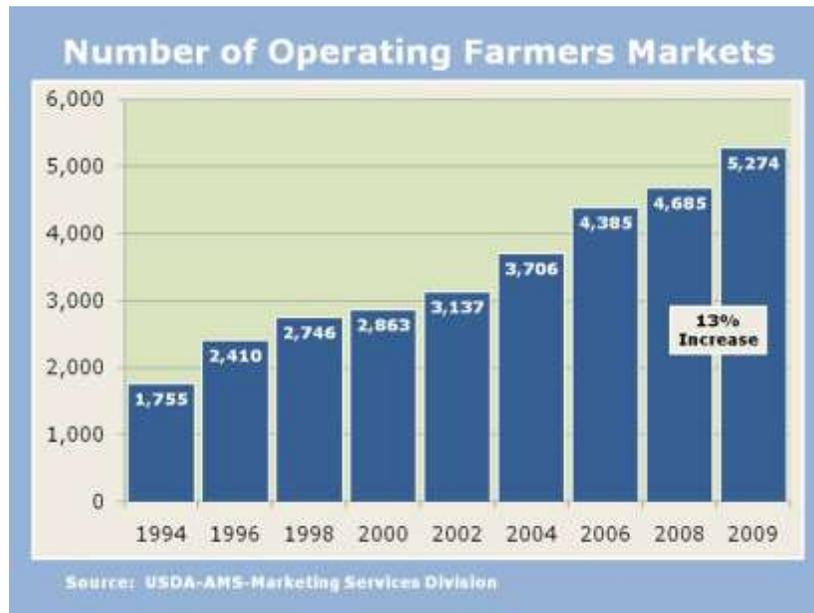
Demand Characteristics

US Consumers

Disposable personal income percentage:

Statistic	National	Colorado	Boulder	Larimer	Weld
Population	304,059,724	4,939,456	293,161	292,825	249,775
Personal Income per Capita	\$34,471	\$39,491	\$49,628	\$35,397	\$26,002
Disposable Personal Income per Capita	\$30,675	\$33,211	\$40,695	\$29,026	\$21,322
Expenditure on Food - At home basis					
		as a share of disposable personal income per capita for all food			
\$ per capita with food away from home	\$3,896	\$4,218	\$5,168	\$3,686	\$2,708
\$ per capita (less \$ spent away from home)	\$2,389	\$2,434	\$3,266	\$2,065	\$1,578
\$ by population	\$726,372,068,280	\$12,024,776,698	\$957,368,246	\$604,827,276	\$394,095,335
Percentage higher than national population		2%	37%	-14%	-34%

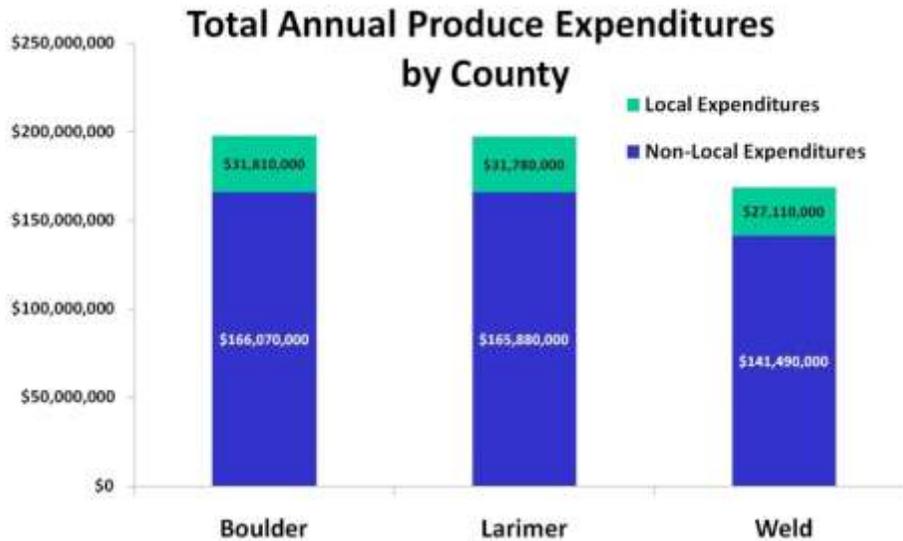
The United States Department of Agriculture reported that, since 1994, the number of farmers markets nationwide has grown nearly threefold (Figure 1). USDA estimates that, as of August 2010, the total number of farmers markets in the nation had reached 6,132, a 40 percent increase from August 2006 (http://www.usda.gov/img/content/Numbers_of_Farmers_Markets_1994-2010.jpg). Direct marketing via roadside stands and community supported agriculture (CSA) is also on the rise. As of 2006, a National Center for Appropriate Technology publication reported 1,080 CSAs in the USDA database. (<http://attra.ncat.org/attra-pub/csa.html#trends>).



Source: United States Department of Agriculture-Agricultural Marketing Services, 2010

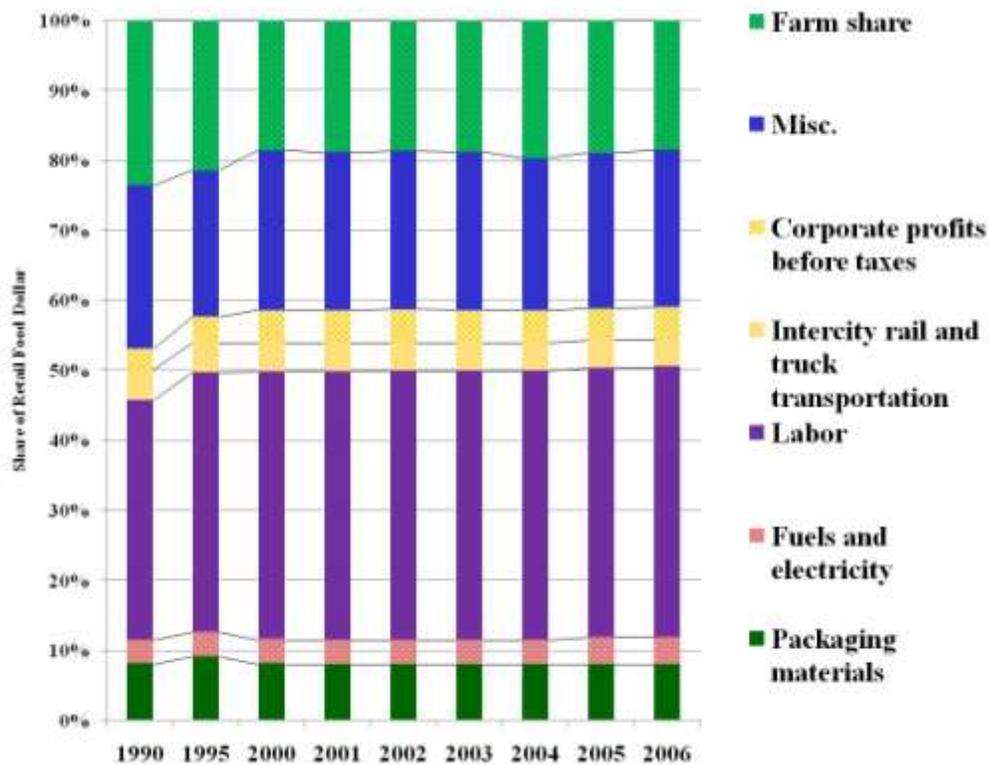
As the analysis of Northern Colorado consumers shows, there is a growing use of farmers markets and other direct markets in this region, and that may signal an opportunity for producers who are seeking to balance traditional commodity marketing strategies with direct marketing that allows them to capture any values consumers may place on local foods and their local economy.

Based on estimates of expenditures made by shoppers at different direct marketing outlets, CSU estimated the share of fresh produce dollars spent directly with producers in the Northern Colorado region.



This estimate illustrates that part of our local food system may be a “closed loop” with local producers sourcing to their neighbors and nearby urban customers (which reduces economic leakages outside the Northern Colorado region), but there are still limitations with respect to products that cannot be grown in the region, the seasonal nature of Colorado production, and the efficiencies that may come from larger scale production in other regions.

Over the past couple of years, the share of food dollars that go to the farm has stabilized, but there was concern about the declining share going to farms in the past. For local food systems to be profitable for producers and beneficial to consumers (and communities), the local markets must find a way to lessen producers’ marketing costs (through lower transportation or packaging), use farm labor more fully, or secure premiums from buyers. There is evidence producers can do all of these, and there are projects emerging in the region to facilitate such activities. For communities, it is also important if more of the food dollar is kept in the region, so helping keep profits on local farms/markets (rather than national stores and industries) and labor payments in the hands of our region’s households may be beneficial to development.



Direct Marketing by Producers

Data on direct marketing from the 2007 Ag Census shows some interesting trends in the US and Colorado. For the US, the value of agricultural products directly sold by producers increased from \$812,204,000 to \$1,211,270,000 between 1997 and 2002, an increase of 49% compared to a less than 4% increase in total revenues sold through all channels. Sales growth is still over 30% even controlling for inflation between 2002 and 2007. The number of U.S. farms engaged in direct marketing also increased from 116,733 to 136,817 and the average direct sales per farm increased from \$6,958 to \$8,853 (or \$7,614 in 2002 dollars).

Colorado has seen a dramatic increase in farms that are marketing directly to consumers (where the consumer may be a client such as a restaurant or other institutional buyer). Between 2002 and 2007, 434 farms began direct marketing (2,777 up from 2,343) so that 7.5% of all farms now do some direct marketing (compared to 6.2% for the U.S. as a whole). This increase in activity resulted in revenue from direct sales increasing from \$17,406,000 in 2002 to \$22,584,000 in 2007 (which is equivalent to 19,422,000 in 2002 dollars). Average sales per farm increased from \$7,429 to \$8,133. These revenues include channels outside of farmers markets (roadside stands, CSAs and pick-your-own) but still illustrate the significant shift in marketing strategies by Colorado producers.

For the Northern Colorado region, the direct sales figures for 2007 were:

- ❖ Boulder - \$715,000
- ❖ Larimer - \$838,000
- ❖ Weld - \$2,203,000

And other significant Colorado counties, who commonly sell in our region include:

- ❖ Delta - \$1,529,000
- ❖ Morgan - \$1,509,000

Wholesale and Institutional Buyers

As discussed in the Northern Colorado region handout on Types of Farms, there are those producers seeking to direct market, but there are others who are maintaining high volumes of sales, but adding value to create a greater profit margin for their farms and ranches (sometimes called a value food chain) through sales to coops, specialty food retailers, chefs and institutions. This is important because, as shown in the table below, the majority of food dollars are spent by regional consumers away from home.

Food Away From Home	Colorado	Boulder	Larimer	Weld
722 Food services and drinking places				
Number of businesses	10,513	742	675	348
Sales, shipments, receipts, or revenue (\$1, 000)	\$ 8,045,050	\$ 557,764	\$ 474,597	\$ 204,066
Share Full Service	48%	53%	47%	43%
Share Limited Service	40%	38%	44%	52%
Special Food Services	7%	5%	5%	0%
Annual payroll (\$1,000)	\$ 2,484,791	\$ 181,208	\$ 149,518	\$ 61,087

The chefs who help make buying decisions for the away from home business activity summarized above, likely spend 35-40% of their retail sales on food inputs, which together with payrolls to employees, represents a significant driver to the economy.

For producers, these markets are also important because chefs are often part of the food education and grow public awareness about local farms, products and seasonal offerings. The figures above represent the market potential to be tapped by producers, so that even a small share of those food dollars going to local food system enterprises might make a significant impact on producers and the local economy.

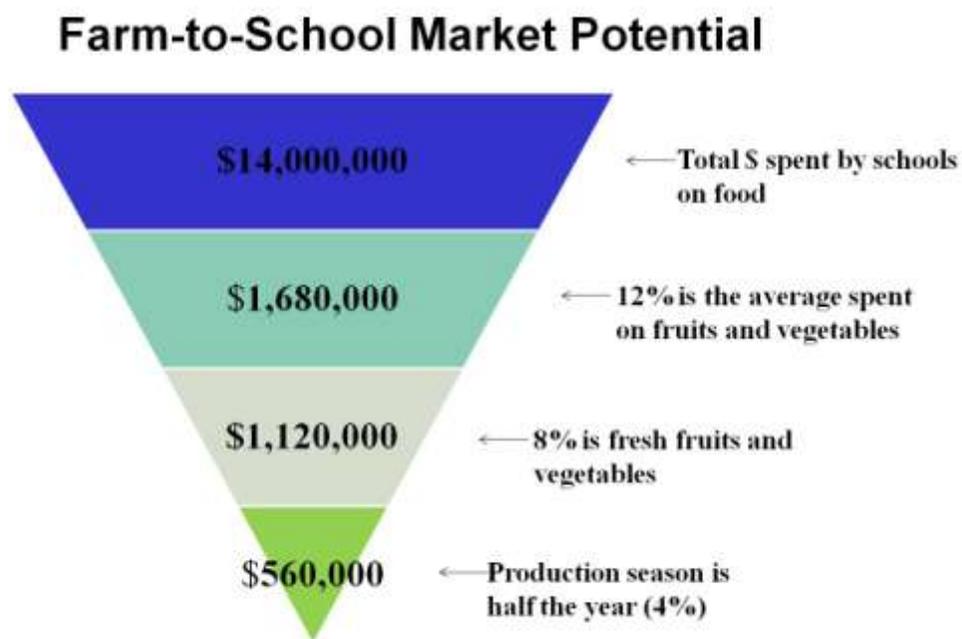
Farm to School is another area of growing interest in the region. The Senate’s recent passage of the Healthy, Hunger-Free Kids Act of 2010 to reduce childhood hunger, promote health through improved nutritional quality, reduce childhood obesity and improve program efficiency may be an important policy development.

The Healthy, Hunger-Free Kids Act of 2010 is intended to:

- Expand afterschool meals for at-risk children
- Connect more eligible low-income children with school meals
- Help schools improve the nutritional quality of school meals

- Allow establishment of science-based national nutritional standards for all food sold in schools
- Strengthen local school wellness policies
- Help schools protect their food service budgets
- Improve accuracy of school meal eligibility certifications
- Improve food safety requirements for school meals programs

Many believe that local sourcing, networking between producers and school lunch program staff, and integration of collaborative producer marketing and distribution efforts are an important element to address the above issues. In the graphic below, we estimate the potential fresh produce sales that could happen in our region, based on expenditure data from the 4 largest school districts and our assumptions about produce availability.



Some regional farm to school projects are moving toward that sales goal but, as discussed before, it is challenging to show that local distribution can compete with lower-cost national or regional food distribution industries by minimizing transportation and packaging costs. Furthermore, there are greater labor costs for school kitchen staff when they incorporate more raw, fresh foods in school meal programs.

Resources for Marketing Colorado Food Products

Colorado MarketMaker is a new online database and market mapping tool for producers and food buyers to connect. It is a partnership between Colorado Department of Agriculture and Colorado State University, as part of an 18 state network of similar agriculture and University partners in the US.

Colorado Market Maker has over 200,000 visits each month, and 536 ag producers included in Colorado’s listings. The poster shows some examples of the searches that can be made to find markets and processors. This site is a free and easy method to have an online presence for food producers,

comprehensive directory of the Colorado food system for consumers and an interesting way to research and explore the food enterprises in our region.

For those who may want to help producers create a user account, simply go to the National MarketMaker website at <http://national.marketmaker.uiuc.edu> and click on Colorado. Once there, click on “Log In” then “Request Account Access”. Complete the form and submit. The producer contact will receive an email with your user account information.

Sources for Data on Processing, Distribution and Marketing

Colorado Department of Agriculture-Markets Division. Farm Fresh Directory.

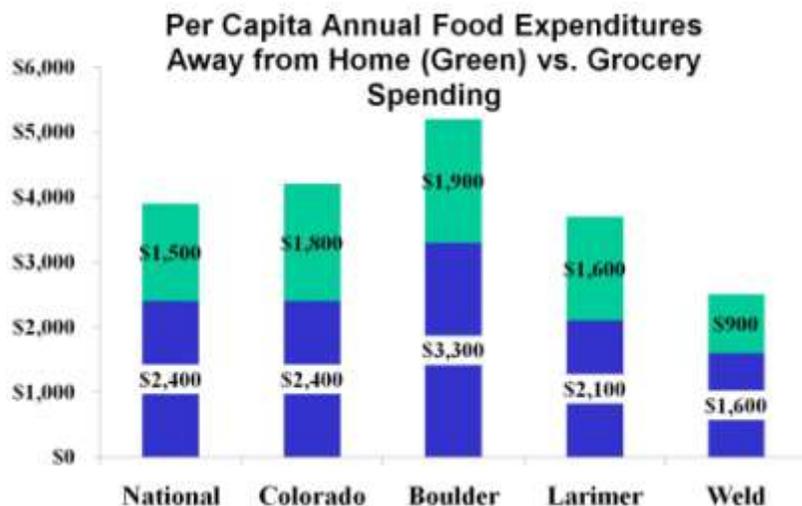
(<http://www.ag.state.co.us/mkt/farmfresh/farmersmarkets.html> accessed August 2004)

USDA Agricultural Marketing Service. Farmers Market Directory.

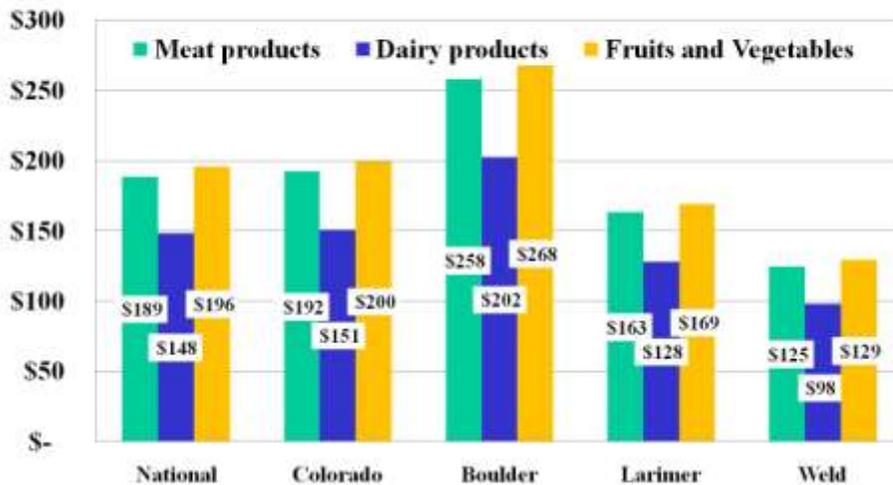
<http://www.ams.usda.gov/farmersmarkets/map.htm> (Accessed August 2010)

Tracking our Food Dollars: Consumer Buying Patterns and Expenditure

Consumers have many options when it comes to purchasing foods and fresh produce. Moreover, the pace and activity levels of Americans have resulted in an increasing share of food being eaten away from home. Although Coloradoans have similar grocery expenditures compared to the country as a whole, they do spend a higher share of their food dollars away from home. Since there are no county data available, we assume similar trends exist in each county (altered somewhat by the disposable income of each county). Of the money spent for food eaten at home, a similar proportion is spent on meats and fruits/vegetables, with milk representing the other major group of foods that are purchased in a fairly raw/lightly processed form.

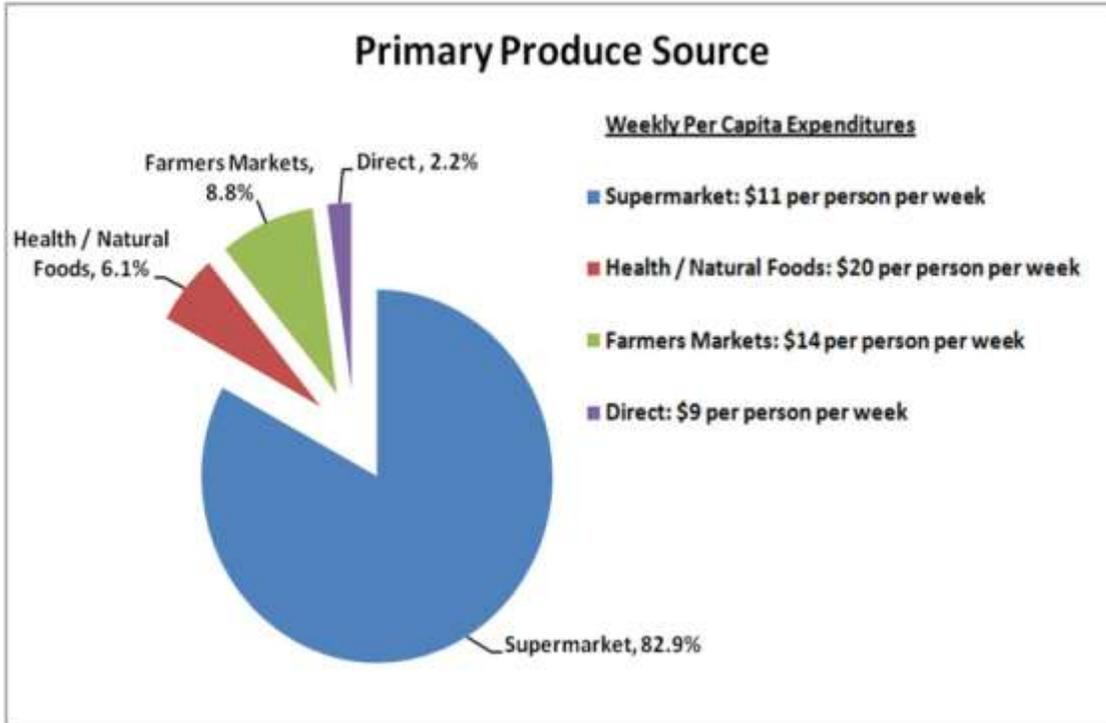


Per Capita Annual Spending Food Products at Home

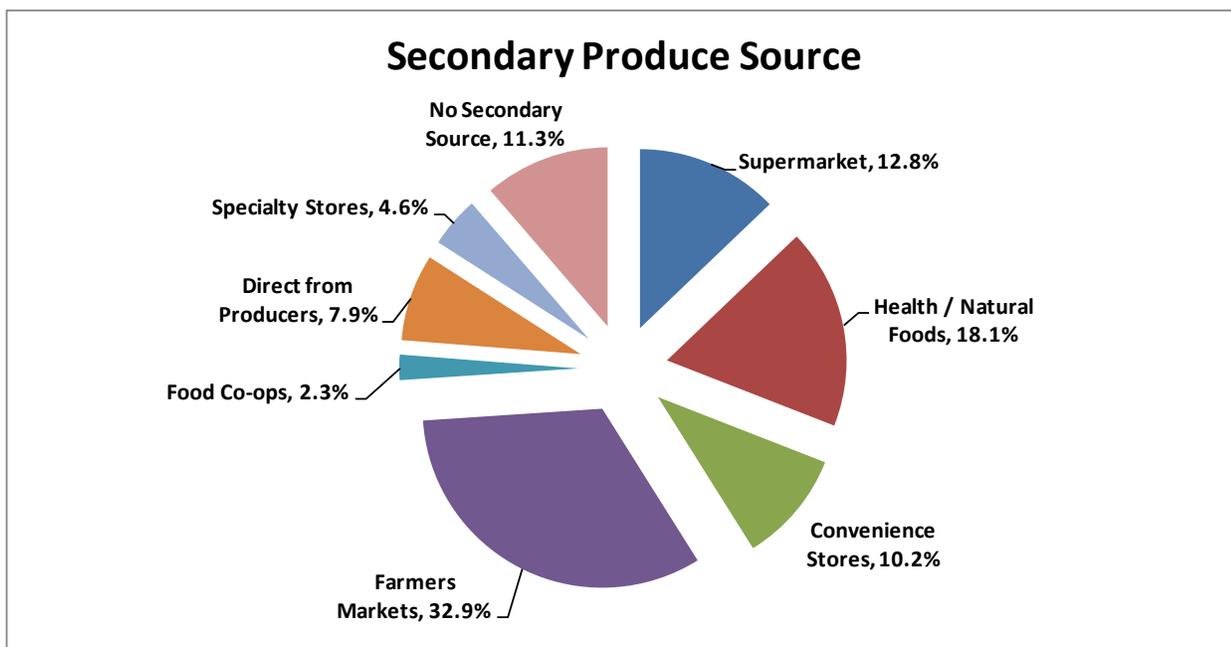


USDA estimates that, as of August 2010, the total number of farmers markets in the nation had reached 6,132, a 40 percent increase from August 2006. On the supply side of local food systems, the number of farms turning to direct sales within a broad context of options is growing at a similar rate. According to the 2007 Census of Agriculture, 136,817 farms (6 percent of all farms) sold a little over \$1.2 billion in agricultural products direct to consumers. (Although this is only about 0.5 percent of total sales, it is a 50 percent increase in sales from just five years earlier (2002)). This growth translates into about 20,000 more farms engaged in direct marketing, with each farm selling about \$2,000 more per farm annually. The importance of direct markets for small farms (under \$50,000 of annual sales) appears to be significant; almost two-thirds of sales come from farms of this size, and these farms represent three-quarters of the growth in sales.

The following figures show the breakdown of produce purchases by primary and secondary sources, respectively, based on a 2008 national survey conducted by CSU. A large majority of respondents (82.6 percent) prefer supermarkets and supercenters as their primary fresh produce source (consistent with national statistics), but a growing share (8.8 percent) prefer farmers markets as their primary fresh produce source and 4.0 percent of respondents prefer natural and health foods stores (when compared to a similar 2006 survey).



The distribution of preferences for secondary fresh produce sources (defined as locations where 25 percent or more of the consumer’s produce purchases were made) is more evenly spread among the categories. 32.9 percent preferred farmers markets as their secondary source of fresh produce, followed by natural and health foods stores (18.1 percent), supermarkets (12.8 percent), convenience stores (10.2 percent), direct from producer options (7.9 percent), specialty stores (4.6 percent), and food cooperatives (2.3 percent). Not surprisingly, consumers may be more willing to go beyond their “normal” stores to get special items, and that willingness is reflected in the diversity of alternative venues.



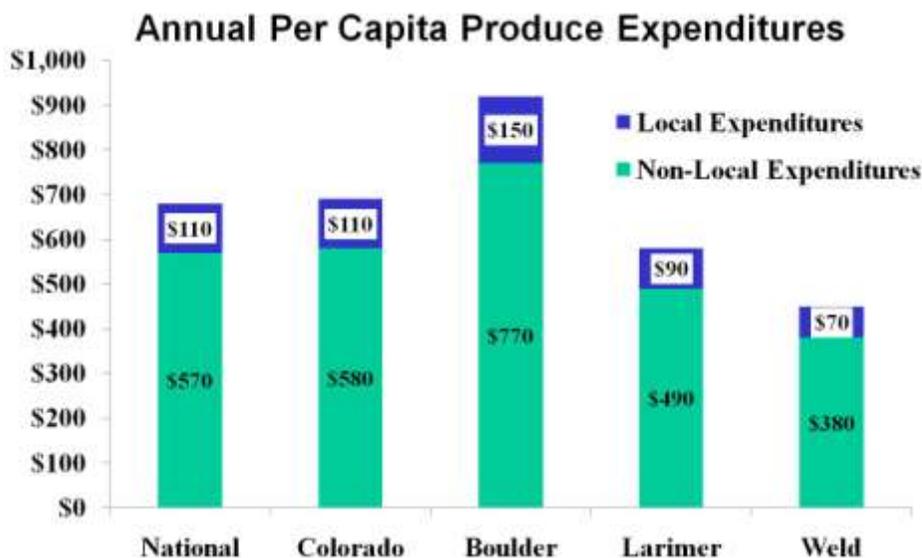
Many believe there are significant differences in fresh produce expenditures made by consumers, depending on where they shop. Specifically, one might expect that those who shop at health, natural, specialty or direct markets may spend relatively more for a variety of reasons. The table below shows that the largest share of people spend \$0-20 each week on fresh produce, no matter where they shop.

Primary Produce Source by Fresh Produce Expenditure

	Supermarket	Health/Natural Food Stores	Farmers Markets	Direct from Producer	Overall
\$0 - \$20	67%	42%	63%	74%	65%
\$21 - \$40	23%	27%	24%	17%	23%
\$41 - \$60	7%	15%	5%	9%	7%
\$61 - \$80	3%	8%	3%	0%	3%
\$81 - \$100	0%	2%	0%	0%	0%
> \$100	1%	6%	4%	0%	1%

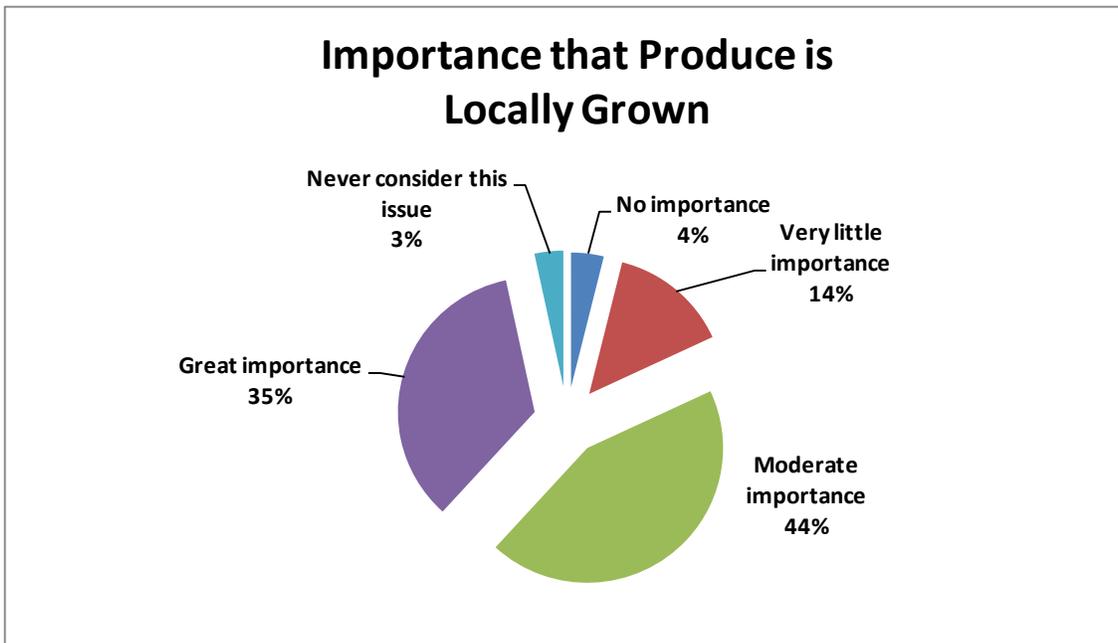
Overall, 65 percent of those sampled spend a maximum of \$20 on fresh produce; an increase to \$40 per week would capture 90 percent of the sample. As expected, those who spend relatively more are shopping at health/natural or direct outlets. These expenditures are likely a reflection of the share of all food purchases that are fresh produce among these shoppers, and perceived quality demands of these consumers that may raise the overall price points of their purchases. In contrast, direct purchasers reported relatively low expenditures, suggesting direct options (community supported agriculture (CSAs and roadside stands) are used by those who seek to spend less on fresh produce.

Given information on preferences for various food markets, we can estimate how much consumers are spending locally across food categories. For example, we see that a small share of dollars are spent locally on produce, but this is one industry sector that can grow without additional processing infrastructure, especially given the growing number of direct sales outlets and opportunities, such as CSAs and farmers markets.



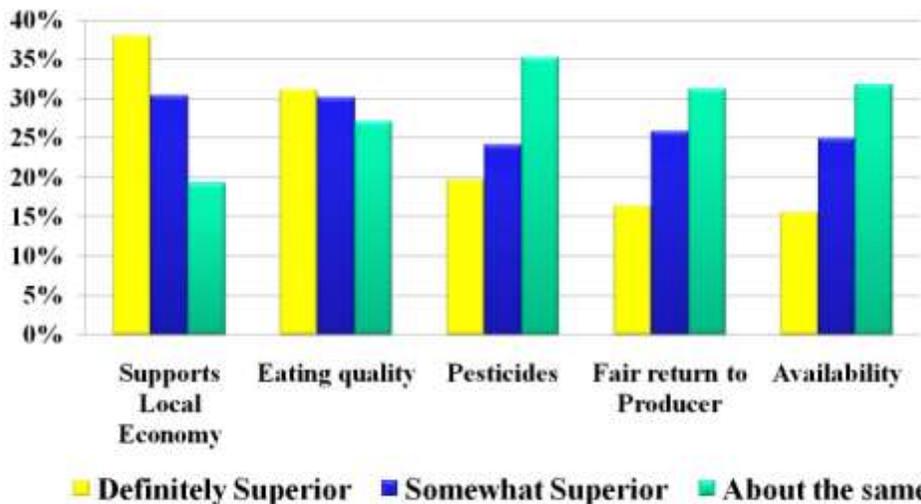
The Role of Consumer Values and Perceptions in the Marketplace

Consumers' preferences for locally produced products have been growing in recent years (when comparing 2006 and 2008 CSU surveys). The figure below shows that a total of 7 percent of all respondents replied that they do not consider or place any importance on whether the produce they buy is locally grown, while 35 percent indicated that it was of great importance and 44 percent said it was of moderate importance in their decision process.

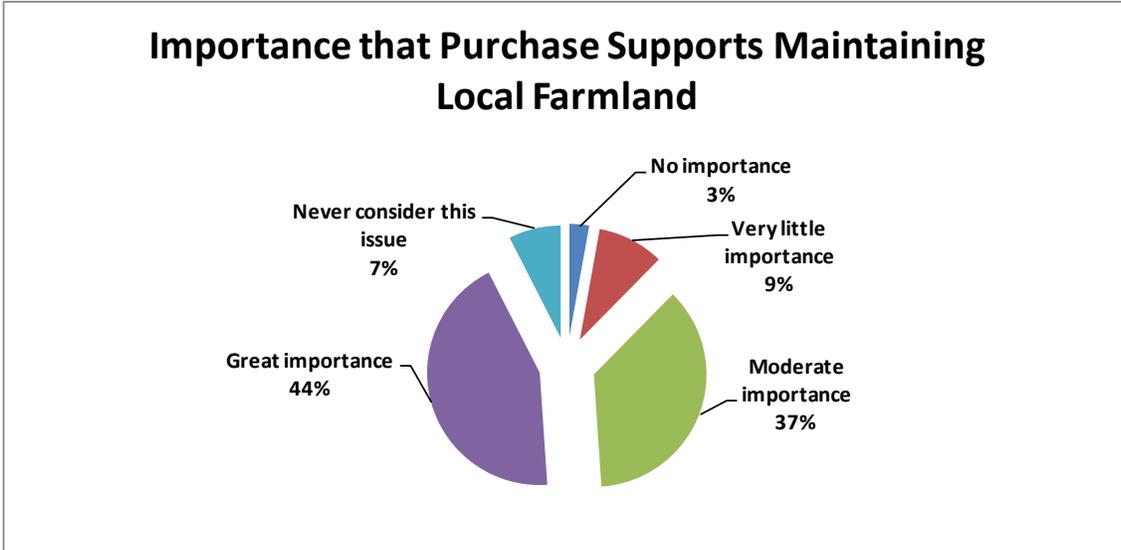


To better understand why consumers value local produce, shoppers were asked how local produce “stacked up” against produce from other sources. Local produce compared favorably on quality and support for the local economy, but consumers identified the availability of local produce as a weakness.

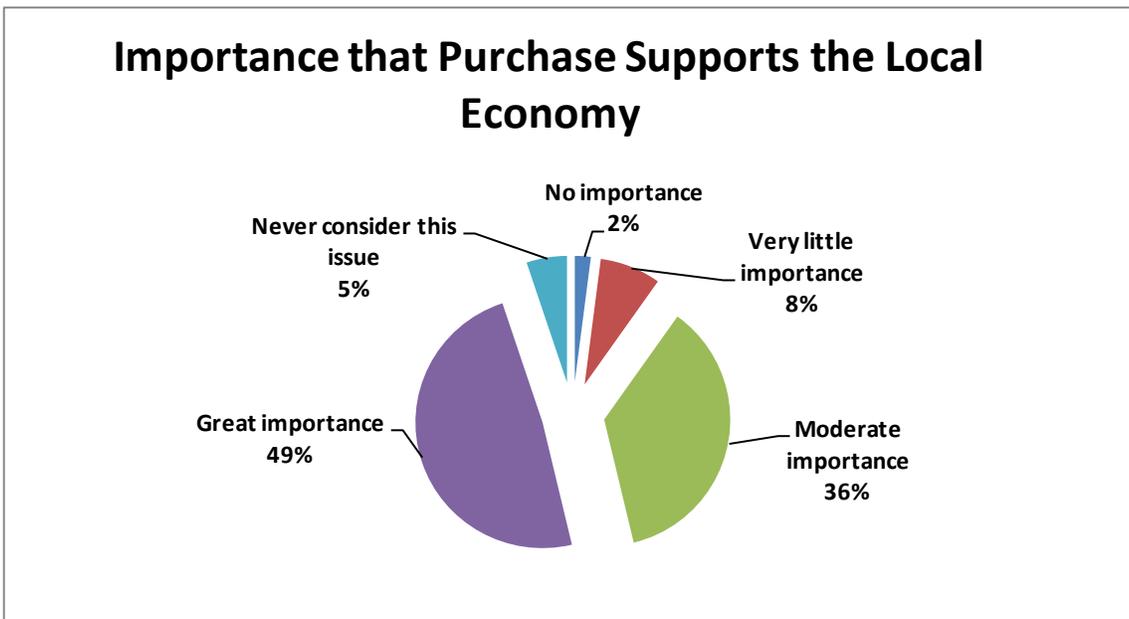
Consumer Perceptions about Local Produce (relative to domestic supplies)



The majority of survey respondents also identified maintaining local farmland as an influencer to their fresh produce purchase decision. Forty-three percent considered maintaining local farmland to be of great importance, while 36 percent thought it was of moderate importance in their fresh produce decisions.



An even larger proportion of consumers considered supporting the local economy to be of great importance (49 percent), while 36 percent thought it was of moderate importance (for a total of 85% of all consumers surveyed); a clear message to producers and economic development professionals about the importance of defining and supporting local markets for agricultural products.



These responses signal that there are high expectations about the role local food systems may play in environmental (land preservation) and economic development outcomes for the region. However, some consumers still look to official certifications for assurances about product origin, safety, environmental footprint and other issues of current concern.

Certifications Help Producers Convey their Product Values to Consumers

A rapidly growing share of US shoppers look beyond the price tag of the items they buy to consider the social and environmental attributes of their purchases. These consumers want to know that their purchases support their values. They want to know whether production is environmentally sustainable, whether employees are being paid a fair wage, whether animals are treated humanely, and whether local communities and cultures are being supported (Seyfang 2006; Vermeir and Verbeke 2006). Recent surveys find that over 70 percent of Americans believe that they can make a positive difference by buying from socially and environmentally responsible companies and most are willing to pay a premium for goods and services that address their values (Hartmann Group 2009).

A recent study by the Center for Fair and Alternative Trade (CFAT) confirms this trend: the majority of people in Colorado agree that consumers should take ethics into consideration in their purchasing and roughly 50 percent are convinced that values-based shopping can have significant positive impacts on society and the environment (Long 2009).

Despite significant variation in their missions, food certification programs primarily seek to define and support food quality, social and environmental attributes that are seen as undervalued in the food system (see the table below). While some programs are quite narrow in the types of enterprises, products, and regions that can be involved, a number are global in scope and encompass broad segments of the economy. Certification initiatives are the most plentiful and appear to be growing the most rapidly in the food and beverage sector because of the salience of this sector to consumers and because environmental and social concerns intersect so clearly here. However, as the table below shows, there are a growing number of certification programs for crop and livestock products which offer opportunities for producers to better communicate their values and improve market access which, in this case, would mean access to the growing markets for local food products.

Comparison Table for Certification Programs

	Organic Production	Animal Welfare	Locally Grown	Ecologically Sustainable	Labor Issues	Family/ Co-op Owned	Products
American Grassfed		✓					Livestock
American Humane Certified		✓					Livestock
Animal Welfare Approved		✓				✓	Livestock
Certified Humane		✓					Livestock
Certified Naturally Grown	✓		✓	✓			Crops & Livestock
Demeter Biodynamic	✓			✓			Crops & Livestock
Domestic Fair Trade				✓	✓	✓	Crops & Livestock
Family Farmed		✓	✓	✓		✓	Crops & Livestock
Food Alliance		✓		✓	✓		Crops & Livestock
Predator Friendly		✓		✓			Livestock
Protected Harvest				✓			Crops
Buy Fresh, Buy Local			✓				Crops & Livestock
USDA Organic	✓						Crops & Livestock

Sources for Information on Consumer Preferences and Behavior

Blisard, N., and H. Stewart. (2007). Food Spending by American Households 2003-2004. U.S. Department of Agriculture-Economic Research Service *ERS Report Summary*.

Hartmann Group. 2009. Sustainability: The Rise of Consumer Responsibility. www.hartmann-goup.com.

Long, M. 2009. The Potential for Consumption Based Social Movements: The Case of Ethical Consumerism. Ph.D. Dissertation: Colorado State University.

Seyfang, G. 2006. "Ecological Citizenship and Sustainable Consumption: Examining Local Organic Networks." *Journal of Rural Studies* 22: 383-395.

Vermeir, I., and W. Verbeke. 2006. "Sustainable Food Consumption: Exploring the Consumer's Attitude-Behavior Intention' Gap." *Journal of Agriculture and Environmental Ethics* 19(2):169-194.

Consumer Behavior, Nutrition and Food Security

Colorado has had the lowest adult obesity rate in the U.S., but is worsening from its status a decade ago. Because of the perceived link between food access, behavior and consumption, exploring connections between the food system and health/nutrition is warranted. The region has shown only slight improvement in two indicators of improved health behaviors— consuming enough fruits and vegetables and adequate physical activity—and all improvements made were in Weld County. Given some limited improvement in health outcomes, and evidence that targeted community programming was effective in Weld County, there may be reason to consider food system issues in future public health discussions.

Linking Behavior to Health Outcomes

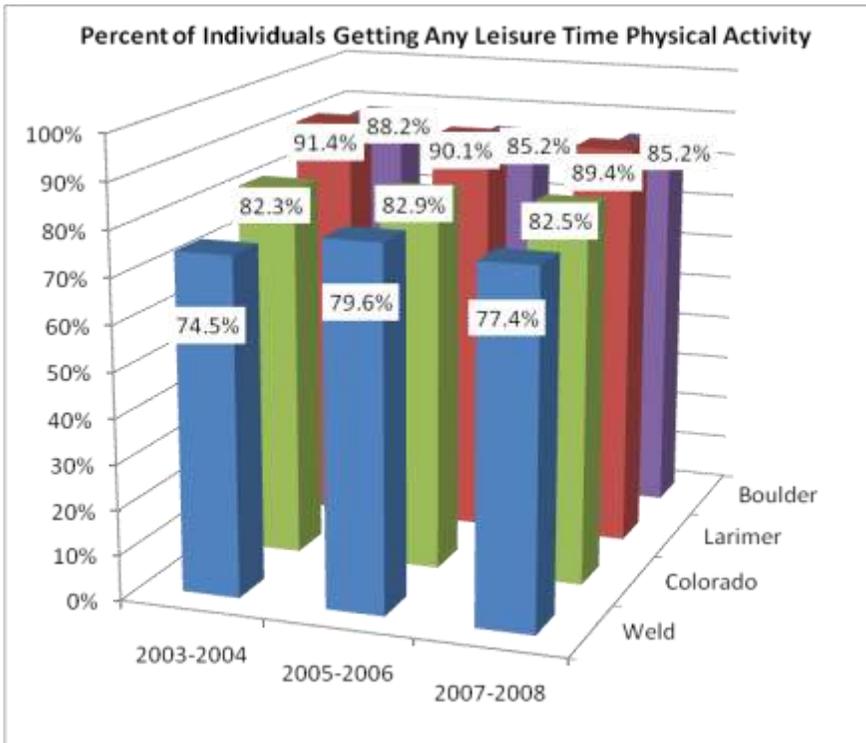
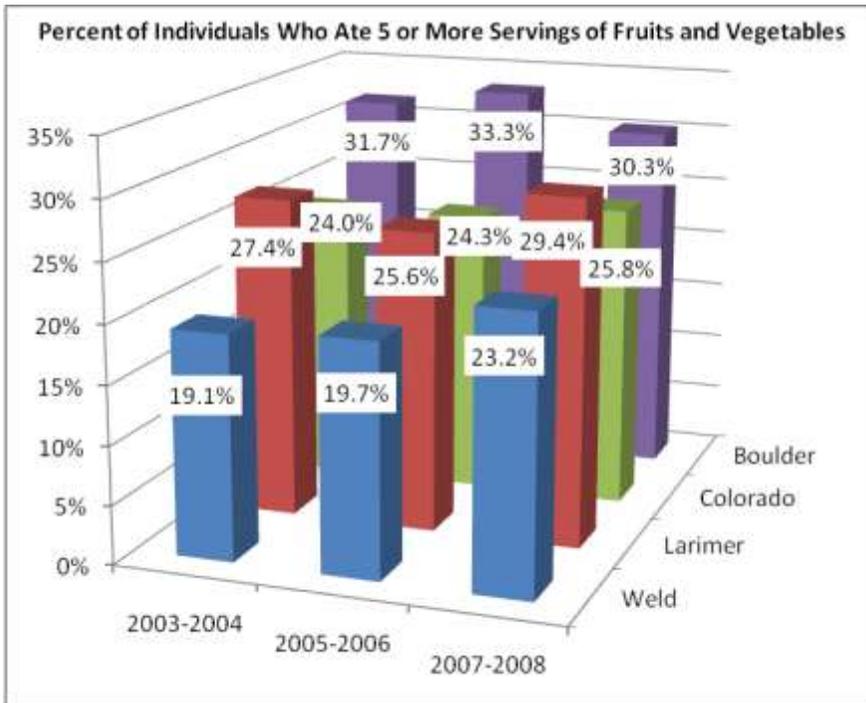
According to the report, “The Weight of the State: 2009 Report on Overweight and Obesity in Colorado”, physical activity and overweight/obesity are two of the 10 leading health indicators that represent the most significant preventable threats to health in the U.S. Although there are many causes of overweight conditions and obesity, the bottom line for many people is excess calorie consumption and/or inadequate physical activity. To date, Colorado has had the lowest adult obesity rate in the U.S. (19.1% according to the Trust for America's Health and the Robert Wood Johnson Foundation, 2010); however, this represents a substantial increase from approximately 7% in 1990, and 14.2% in 2000.

There are general behavioral trends in the U.S. that impact rates of overweight status and obesity in the U.S. and in Colorado. These include individuals’ shift in diet toward energy-dense foods high in fat and sugars but low in vitamins and micronutrients (junk, snack and fast food), and a trend toward lower levels of physical activity due, in part, to changes in workplace behaviors and types of transportation used (Colorado Department of Public Health and Environment, 2010). The link to the food system and diet is clear, but some would argue that physical activity and transportation systems are related to food access as well (which is discussed more in the Food Security and Access section of this report).

Reported Behavior Changes in Northern Colorado

The following two charts show trends in individuals’ reported eating and exercise behavior in Boulder, Larimer and Weld counties, and for the state of Colorado as a whole. In terms of improvements in reported behavior, Weld County shows a sustained increase in those who have improved their healthy eating habits, with a 4.1% increase from the period 2003/2004 to 2007/2008, and a 2.9% increase for those getting any leisure time physical activity. Although these levels are below the state average, they represent notable improvements for Weld County residents.

In terms of the overall share of individuals with positive health-related behaviors, Boulder County ranks above the state level, and above Larimer and Weld. However, over time, Boulder County residents report an overall decrease in healthy eating and in physical activity from the period 2003/2004 to 2007/2008. In Larimer County, residents report an increase in healthy eating and a slight decrease in leisure time physical activity. The source for this information is the Colorado Department of Public Health and Environment, Survey Research Unit, which conducts the Colorado Behavioral Risk Factor Surveillance System (BRFSS) survey and selects respondents using a random digit dialing sampling technique.



Human Health Costs

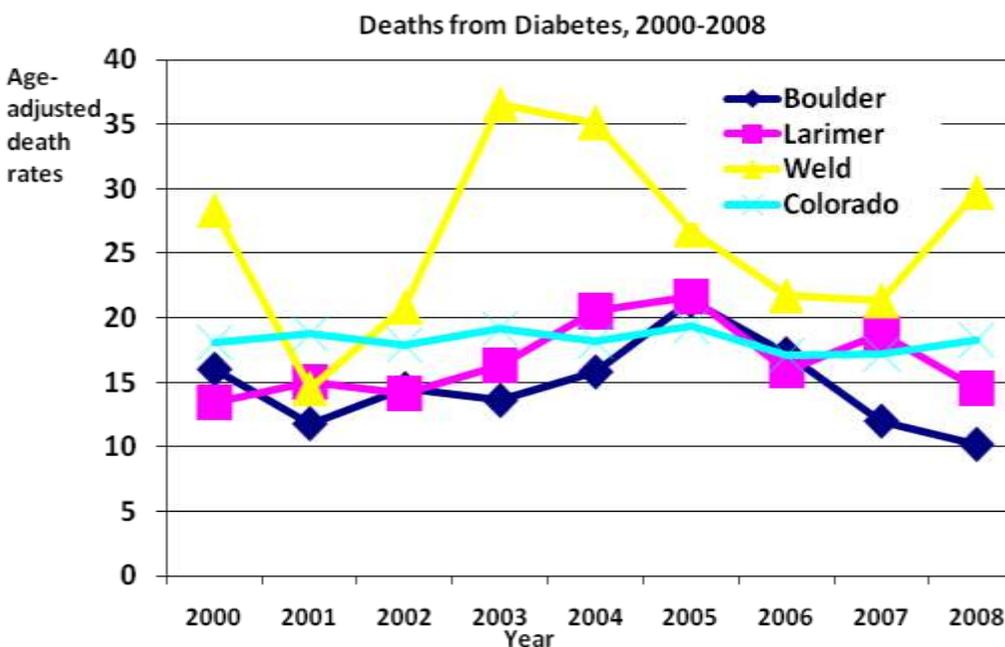
The implications of these trend data are that positive modifications in health-related behaviors are observable in Weld County, but not in Larimer and Boulder counties. The following table examines some health outcomes across the three counties.

	Diagnosed with Diabetes		Overweight, BMI* 25.0 to 29.9		Obese, BMI* > 30	
	2007-2008	Change from 2003-2004 to 2007-2008	2007-2008	Change from 2003-2004 to 2007-2008	2007-2008	Change from 2003-2004 to 2007-2008
Boulder	3.0%	-0.7%	35.1%	7.3%	14.4%	3.4%
Colorado	5.3%	0.8%	36.3%	0.2%	19.4%	2.8%
Larimer	4.6%	1.3%	35.2%	-0.5%	17.1%	5.0%
Weld	5.5%	1.3%	36.5%	-5.2%	24.0%	-0.3%

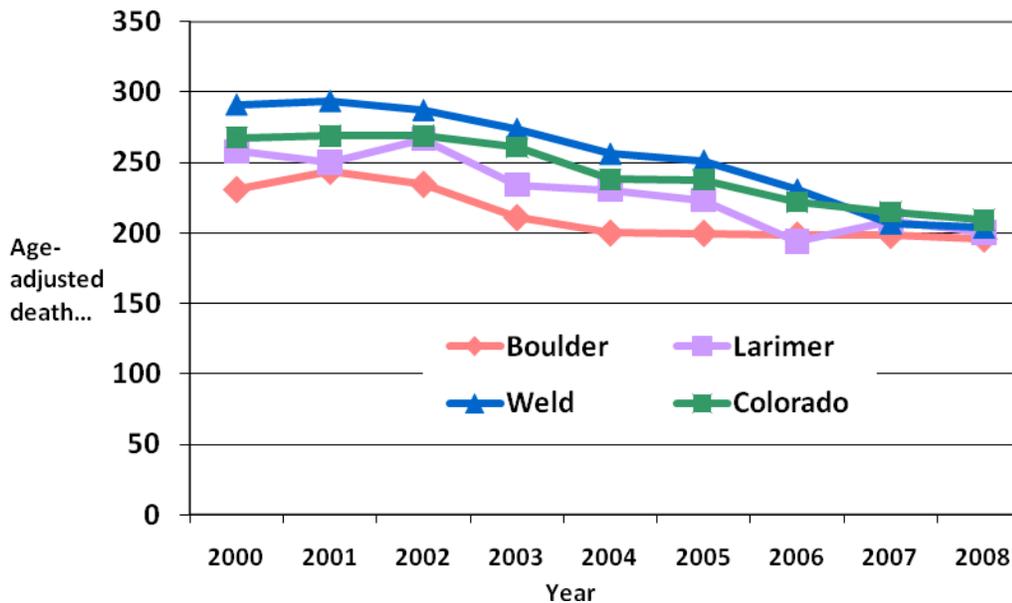
#Note: Body Mass Index (BMI) is defined as weight in kilograms divided by height in meters squared (w/h**2).

Although the table above is not inclusive of all possible health outcomes attributable to reported behaviors, it does provide an indication of health trends in each county. One of the most striking results is that Boulder County fared best with a slight decrease in individuals diagnosed with diabetes. Boulder, however, showed the greatest increase in those considered overweight (with a Body Mass Index between 25.0-29.9)—a 7.3% increase in Boulder versus less than 1% in Colorado, and compared to decreases in the incidence of overweight in Larimer and Weld counties.

Other trend data are shown in the charts below. For example, although diagnoses of diabetes have risen 1.3% in Weld County, from 2003 to 2008, the deaths rate fell by 19%, implying that people with diabetes are living longer (entailing other direct and indirect costs for federal, state and local service agencies). Age-adjusted death rates from cardiovascular diseases have plateaued in all three counties but, interestingly, are lower in each county of the Northern Colorado region than for the state overall. The impacts from increases in overweight and obesity may be lagged, with individuals living longer with chronic health conditions. Therefore, the death rate does not necessarily reflect recent increases in negative health behaviors.



Age-Adjusted Death Rates from Cardiovascular Diseases



Economic Costs

Adverse changes in the health behavior of Americans come at a high cost to everyone. According to a 2010 report released by the CDPHE, the rise in obesity rates in the U.S. has resulted in a 20—30% increase in health care spending since 1979. In fact, the direct and indirect economic costs related to obesity exceed \$100 billion annually; a number which has almost certainly increased since that era (given Colorado-only estimates at similar levels below). The report further estimates that, in relative terms, obesity accounts for 6-10% of U.S. health care spending, compared to 2.0-3.5% in other Western countries. They note that the public health care system bears most of these costs. For example, CDPHE (2010) states that in Colorado, “medical spending attributable to obesity was estimated at \$874 million dollars in 2003, with \$139 million in Medicare costs (15.9% of the total) and \$158 million in Medicaid costs (18.1% of the total).”

Prevention and Support for Healthy Living

Fortunately, states and local agencies are taking action to support and educate individuals about their choices for healthy living. TFAH and RWJF (2010) report the following:

- Twenty states and D.C. set nutritional standards for school lunches, breakfasts and snacks that are stricter than current United States Department of Agriculture requirements. In 2005, only four states had legislation requiring stricter standards.
- Twenty-eight states and D.C. have nutritional standards for competitive foods sold in schools on à la carte lines, in vending machines, in school stores, or through school bake sales. In 2005, only six states had nutritional standards for competitive foods.
- Every state has some form of physical education requirement for schools, but these requirements are often limited, not enforced or do not meet adequate standards in the opinion of health science experts.

-
- Twenty states have passed requirements for body mass index screenings of children and adolescents or have passed legislation requiring other forms of weight and/or fitness related assessments in schools. In 2005, only four states had passed screening requirements.

Furthermore, the Colorado Physical Activity and Nutrition State Plan 2010 lists several programs and strategies for promoting healthy living, including breastfeeding promotion; physical activity and nutrition in early childhood, at school sites, at colleges and at worksites; programs for older adults, and programs to encourage active community environments. The document also provides information on resource kits and other links for Colorado that can guide communities and agencies.

Lastly, the Colorado Department of Public Health and Environment is partnering with LiveWell Colorado, a nonprofit organization committed to reducing obesity in Colorado by promoting healthy eating and active living. In addition to educating and inspiring people to make healthy choices, LiveWell Colorado focuses on policy, environmental and lifestyle changes that remove barriers and increase access to healthy behaviors. Through one of their strategic initiatives, they have targeted Weld County and several regional communities to grow the community and educational programs that target food-related health issues. The targeting of Weld County several years ago may be one reason that the data show improvement (from a relatively low baseline) in that area's health behaviors.

Sources for Data Related to Consumer Behavior and Nutrition

Centers for Disease Control. 2010. Behavioral Risk Factor Surveillance System. Data downloaded at <http://apps.nccd.cdc.gov/brfss/display.asp?cat=OB&yr=2000&qkey=4409&state=CO>, July 2010.

Colorado Department of Public Health and Environment. 2004. "Colorado Physical Activity and Nutrition State Plan 2010."

Colorado Department of Public Health and Environment. 2010. "The Weight of the State: 2009 Report on Overweight and Obesity in Colorado." Online at: <http://www.cdphe.state.co.us/pp/COPAN/ObesityReport.pdf>.

Colorado Department of Public Health and Environment, Colorado Health Information Dataset. 2010. Online at <http://www.cdphe.state.co.us/cohid/brfss.html>.

Trust for America's Health (TFAH) and the Robert Wood Johnson Foundation (RWJF). 2010. "F as in Fat: How Obesity Threatens America's Future 2010". Online at <http://healthyamericans.org/reports/obesity2010/Obesity2010Report.pdf>.

Trust for America's Health (TFAH) and the Robert Wood Johnson Foundation (RWJF). 2009. "F as in Fat: How Obesity Threatens America's Future 2009". Online at <http://healthyamericans.org/reports/obesity2009/Obesity2009Report.pdf>.

Food Security and Access in Northern Colorado

Food security is a complex issue: limited resource households, distance to food markets and other barriers to securing adequate, safe and nutritious foods all combine to create a food landscape that may not be conducive to good health in our communities. Recent data from the Northern Colorado region

suggest there is increasing need for food assistance from government, community and school programs. Data on food assistance, food stamps outlays, and reduced/free school lunch eligibility are consistent in illustrating increased need for programs to mitigate food insecurity during this economic downturn. Community gardens and efforts to “map” food assets are explored as new approaches to improve access to raw foods and appropriate food market outlets for those who might otherwise have their dietary choices constrained by what is readily available.

Food security and access have been of concern to those who work on agriculture, food and health policy for many years, but only recently have food security issues become part of the broader public health debate. Specifically, in an economically challenging era, with increased food prices, there is some concern that diet-related poverty and support programs will be insufficient to meet community needs. USDA defines food insecurity as “a household-level economic and social condition of limited or uncertain access to adequate food.” One of the long-term community strategies to address food security is food assistance through various governmental, non-profit and faith-based programs.

There are many measures of food insecurity and responses to perceived needs; within the scope of this fact sheet we will present some overview data on emergency food assistance, cash benefits to those in need, and school meal programs. Further study is necessary to understand the geographic location of the food insecure within the northern Colorado counties (see the LiveWell Longmont study as an example), and the demographic profiles of those in need. The tables below present recent emergency food assistance data for the region.

Changes in Emergency Food Assistance from 2007 to 2010

Food Bank for Larimer County

	2007	2010	% Change
Population of area served	251,494	292,825	16%
Population at poverty line or below	22,600	33,125	47%
Annual # of clients served	21,384	29,900	40%
Total # of clients served, per capita	9%	10%	20%
Total # of agencies served	68	132	94%
Pounds of food distributed	4,739,805	7,350,818	55%
Fresh produce received	889,341	527,383	-41%
Total # of local food donors	250	311	24%

Weld Food Bank

	2007	2010	% Change
Population of area served	180,936	249,775	38%
Population at poverty line or below	22,019	29,374	33%
Annual # of clients served	20,500	22,500	10%
Total # of clients served, per capita	11%	9%	-20%
Total # of agencies served	115	116	1%
Pounds of food distributed	5,524,639	8,059,910	46%
Fresh produce received	697,751	1,179,405	69%
Total # of local food donors	219	147	-33%

Community Food Share [Boulder]

	2007	2010	% Change
Population of area served	329,465	348,019	6%
Population at poverty line or below	28,406	31,977	13%
Annual # of clients served	19,300	33,000	71%
Total # of clients served, per capita	6%	9%	62%
Total # of agencies served	86	60	-30%
Pounds of food distributed	3,704,757	6,456,642	74%
Fresh produce received	681,951	181,768	-73%
Total # of local food donors	90	89	-1%

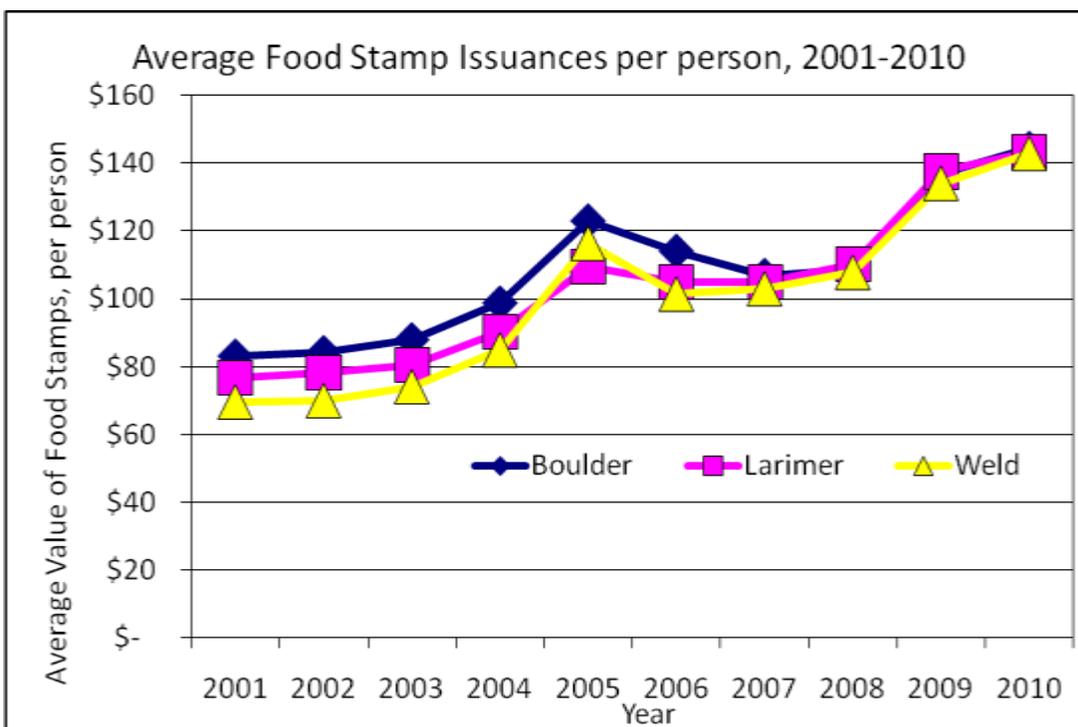
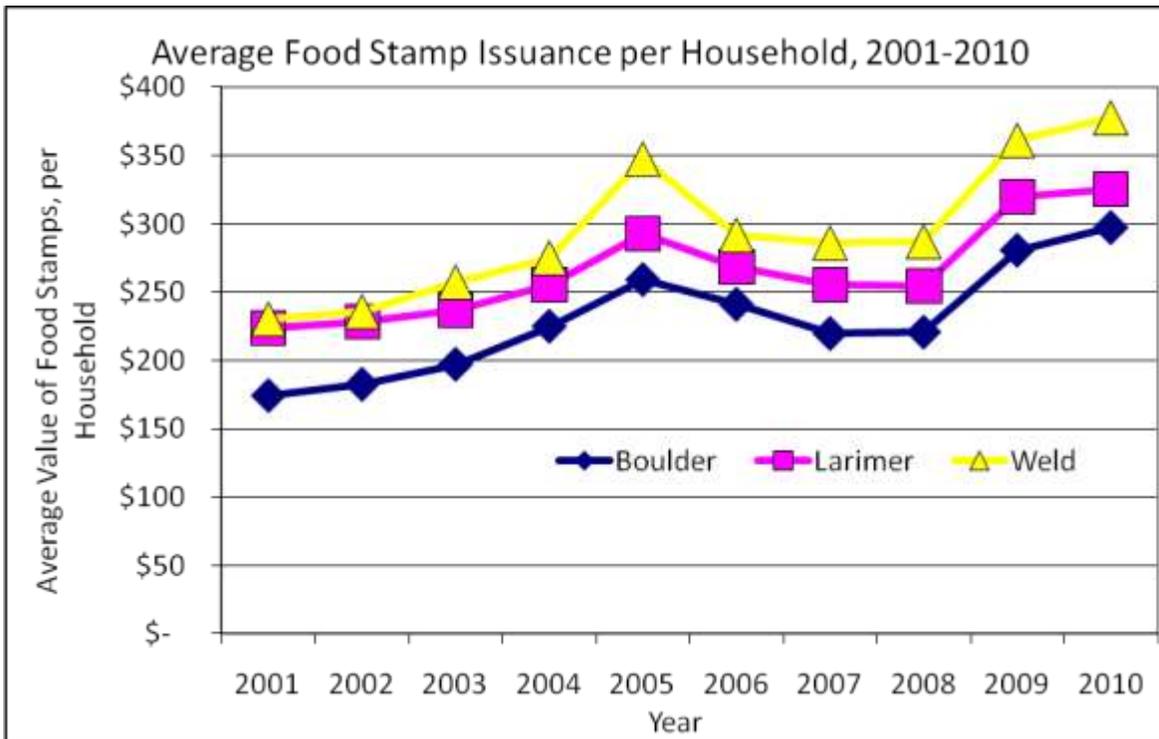
Findings

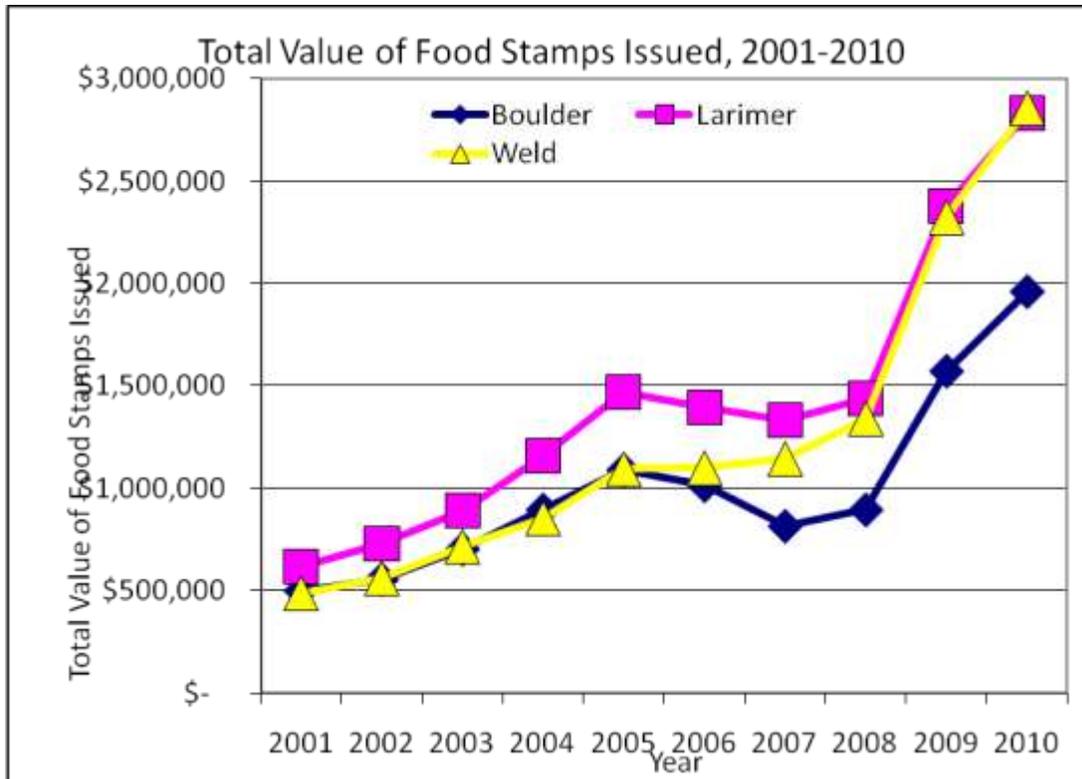
- Although population growth could explain some of the growth in clients served, the number of clients served has increased faster than the population, except in Weld County.
- Larimer County saw the greatest increase in population at or below the federal poverty level (47% increase over 4 years), compared to 33% in Weld and 13% in Boulder.
- The number of agencies served by the Food Bank for Larimer County has nearly doubled, meaning it is playing an even greater role in distributing food to clients in need.
- Growth in pounds of food distributed is still faster than growth in clients served, but only Weld has seen an increase in fresh produce it receives.
- Community garden access may be another source for fresh produce donations, and will be discussed later in this section.

Food Stamp Usage and Trends

The policy response to food insecurity has historically been focused on food stamp programs, school meal programs, WIC and the Child and Adult Care Food Programs. As of October 2008, the new federal food stamp program was renamed SNAP (Supplemental Nutrition Assistance Program). Similar to the food assistance trends above, the demand for, and usage of, food stamp assistance has grown significantly over the past few years in the region.

Changes in Food Stamp Issuance from 2001 to 2010





Findings

- 2010 food stamp outlays in the region have almost doubled since their previous high in 2005, and almost tripled from their lows in 2007
- Average food stamp benefits have doubled from \$77 per person in 2001 to \$143 per person in 2010, and have increased by 39% since 2007
- Weld County had the lowest average number of clients in the region until 2009, when the number reached nearly 20,000 in December 2009 (at this time Boulder had 13,000 and Larimer had 19,000)
- From 2007-2010, the number of clients receiving food stamps increased as follows:

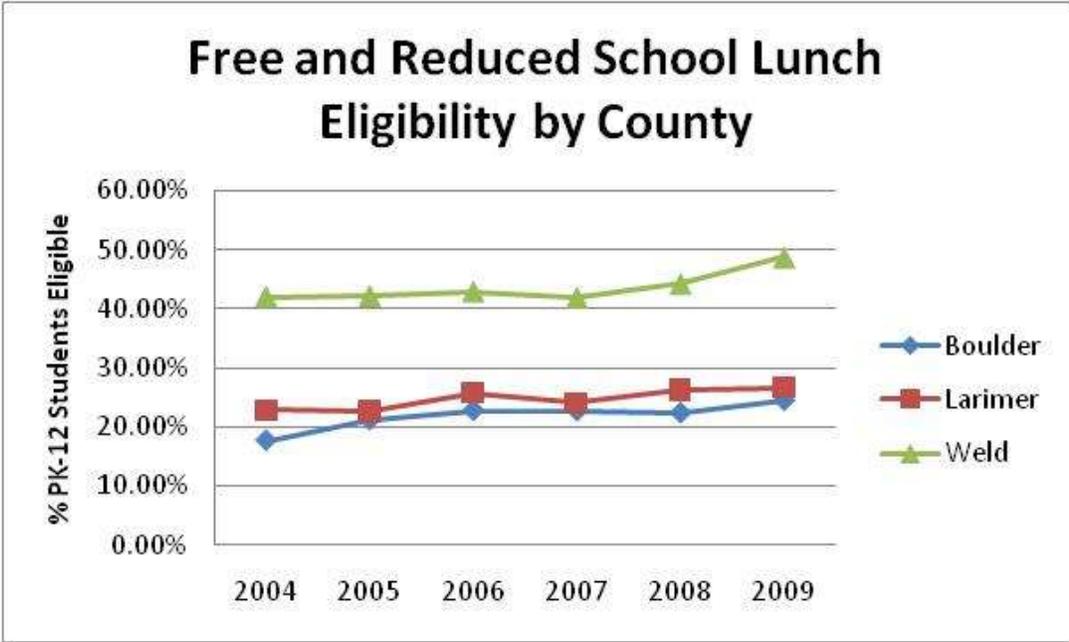
• Larimer – 63%	Boulder – 78%	Weld – 89%
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Resources for Food Access: School Meal Programs

The National School Lunch Program (NSLP) is a federally assisted meal program operating in public and nonprofit private schools and residential child care institutions. It provides nutritionally balanced, low-cost or free lunches to children each school day. The program was established under the National School Lunch Act, signed by President Harry Truman in 1946. Usage of the program is yet another indicator of potential food security challenges, particularly in the context of youth and their dietary outcomes. The data from our region show:

- The total percentage of students eligible for free or reduced price (F&R) school lunches has grown much more rapidly than growth in the total student population. For example, across Boulder County school districts, the number of students increased by 11% while those eligible for F&R lunches grew by 54% (from 2004 to 2009).

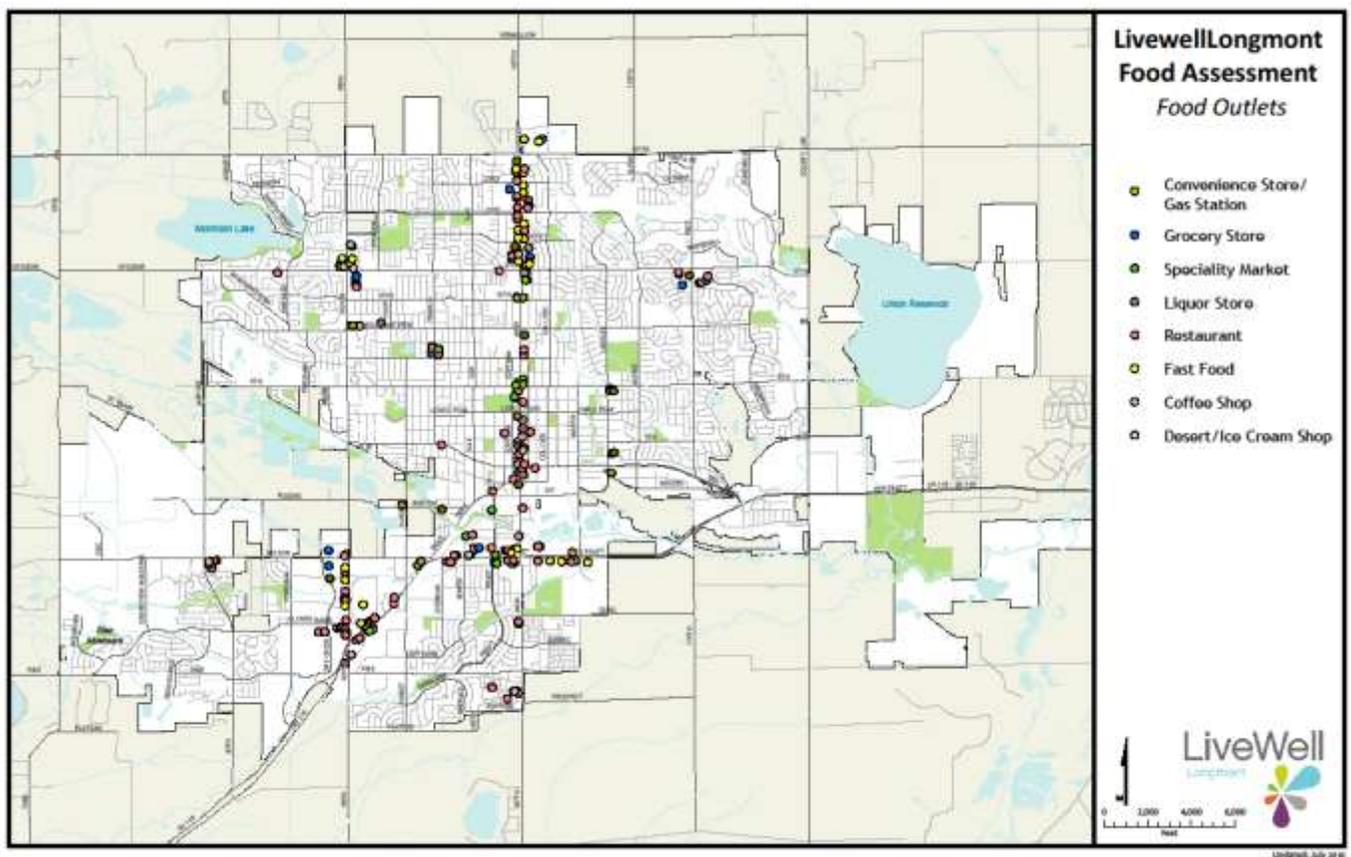
- Although Weld County had the smallest 2009 student population at 36,754, it had the largest number eligible for F&R lunches at 17,909 (nearly 49% of the pre-K through high school student population).
- Although Boulder and Weld both saw increases of 12% in the number of F&R eligible students from 2008-2009; Larimer County saw an increase of only 3%.



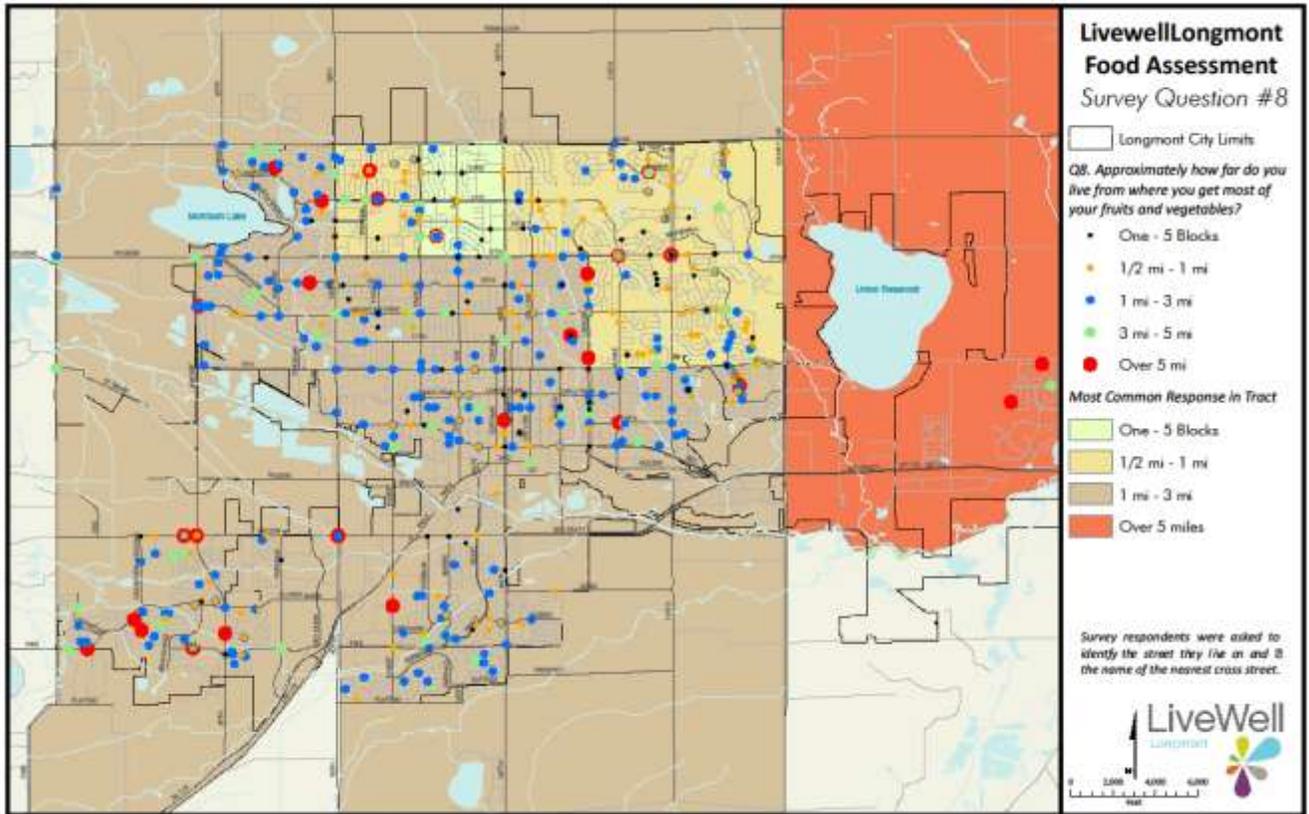
Access to Food: A Closer Look at Longmont

LiveWell Colorado's community investment strategy funds community coalitions works on healthy eating and active living strategies at the local level. In 2010, LiveWell Colorado awarded \$3.7 million in funding to 22 communities across the state. LiveWell Longmont started in Fall 2008 to address the city's food security issues.

One of the first steps the community took was to assess how distance and transportation barriers may affect purchases and consumptions of fresh produce. In their analysis, they both mapped food system "assets", delineating between types of food and beverage outlets (below) and, then, because there were clearly dense and sparse areas of their community, used a survey to determine if distance was a barrier to residents' food choices.

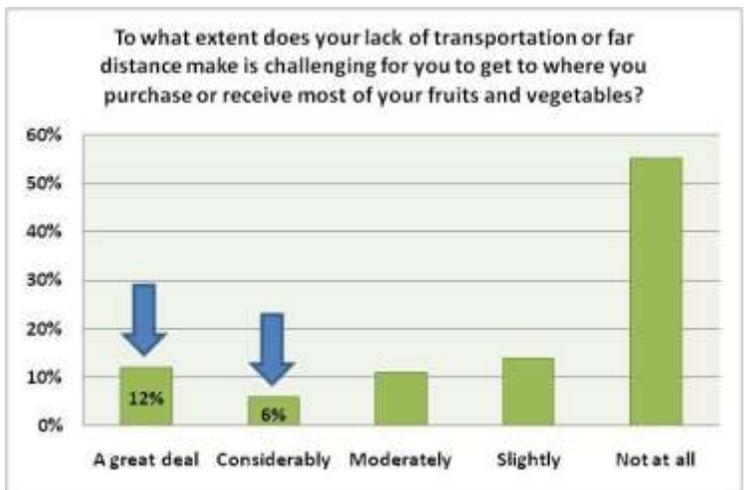
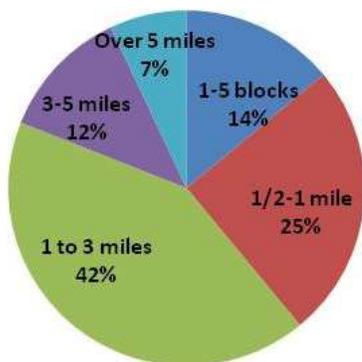


As the next figure shows, residents of several areas of the Longmont community have significant distances to travel to access the foods they shop for. However, this is not a challenge if sufficient transportation (private or public) is available to get to those markets. Therefore, respondents to the 2010 community survey were also asked about their perceptions of distance, and any transportation barriers in their food shopping.



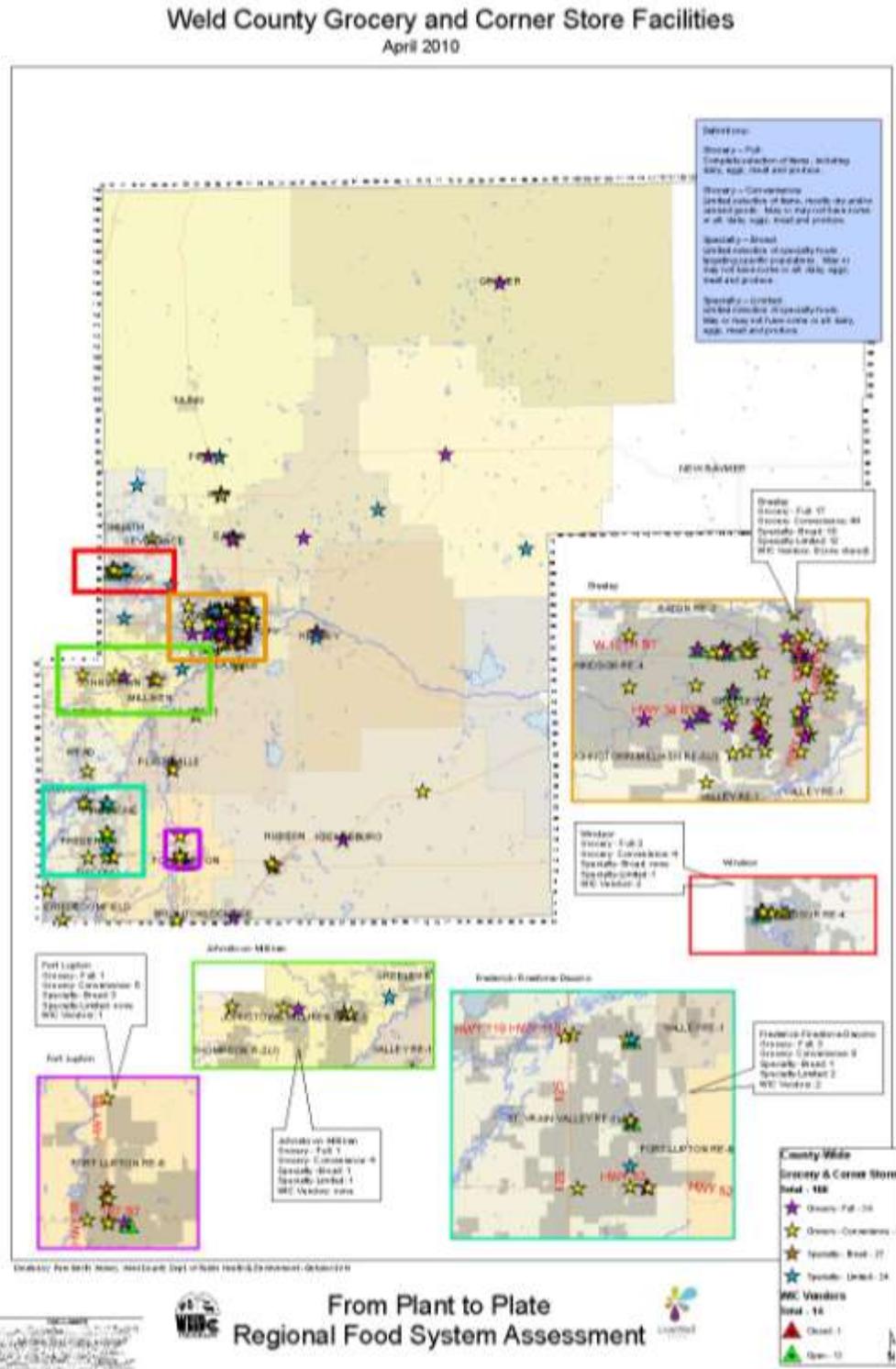
These findings suggest that there are a significant number of households (almost 20%) that see distance as a challenge to their attainment of food security, especially for the fresh produce commonly recommended as a dietary change for at-risk households. In further analyses LiveWell intends to explore how distances traveled, demographics and shopping preferences interact with these perceived barriers.

How far do you live from where you get most of your fruits and vegetables?



Access to Food: Weld County

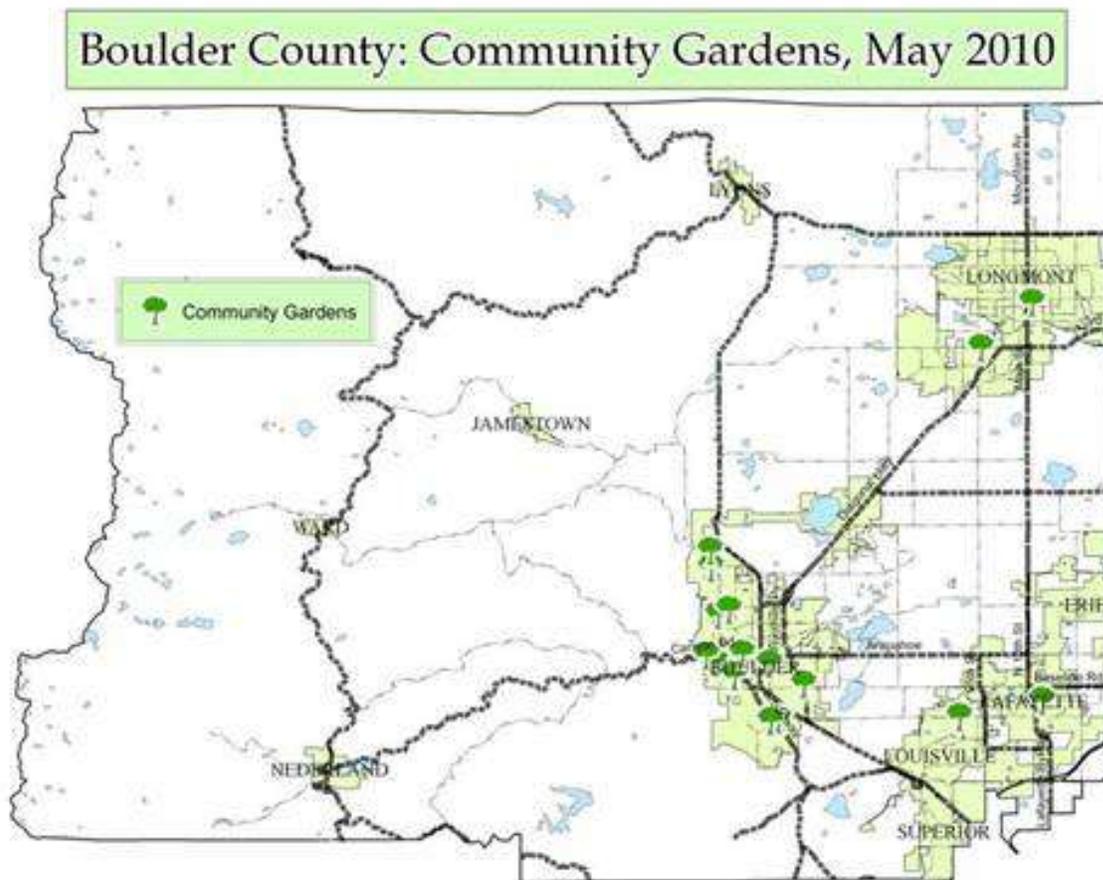
Weld County Department of Public Health and Environment mapped retail grocery and convenience stores. That map is shown below.



Community Gardens and Local Food Initiatives

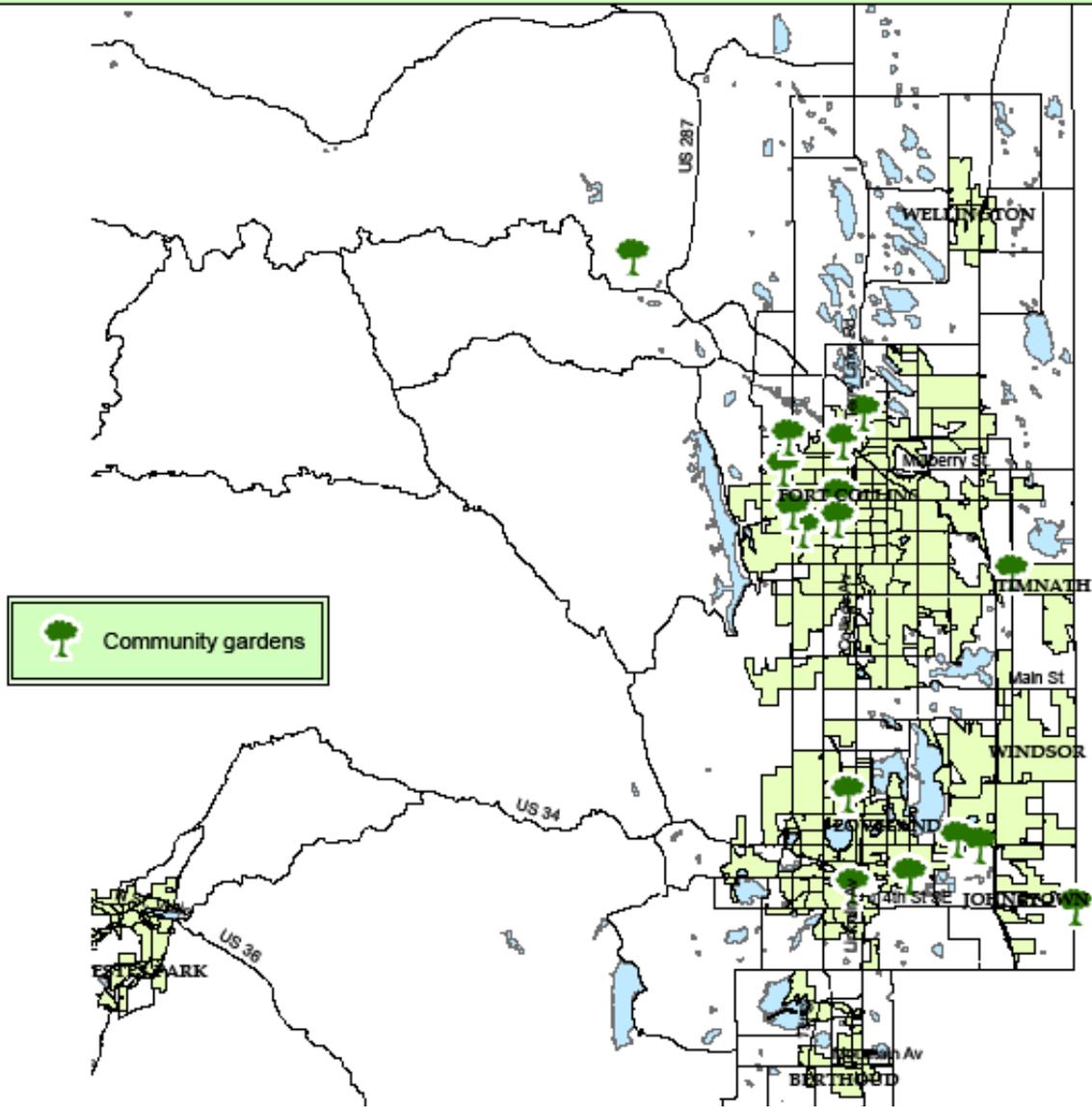
As mentioned earlier, community gardens have been one community response to address food security and access, and may complement other food assistance programs. Gardens are developed and operated by a variety of organizations in Northern Colorado, including LiveWell Colorado, the Boys and Girls Club, City of Greeley, churches, City of Fort Collins, housing developments, CSU Extension, and other nonprofits.

Many of these gardens serve two purposes: to provide food for the growers and to donate a portion to the local food bank. Note that nearly all community gardens are clustered along urban corridors, such that people with limited financial access to food may also be limited by distance to these gardens. Although no data trends are available, there is consensus in the local food community that community gardens are more prevalent, visible, diverse and important linkages in communities in recent years.

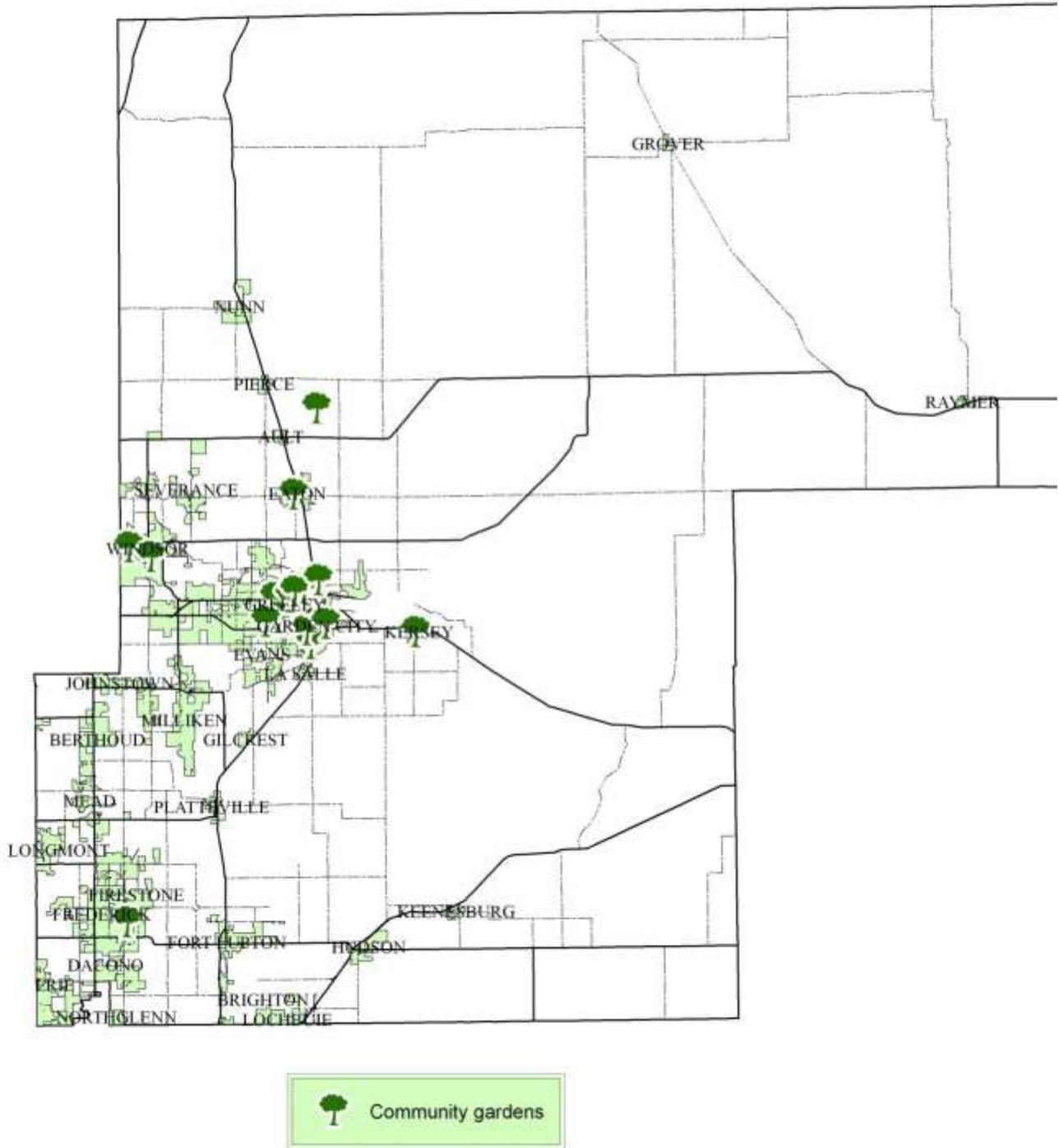


Source: Growing Gardens and Longmont Parks and Recreation, May 2010.

Larimer County: Community Gardens, May 2010



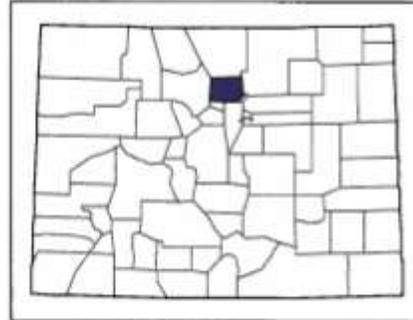
Weld County: Community Gardens, June 2010



County Profile Data

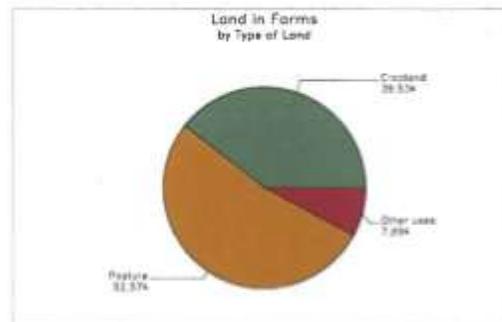
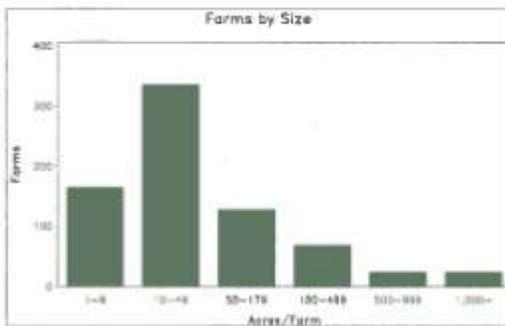
2007 CENSUS OF AGRICULTURE

County Profile



Boulder County Colorado

	2007	2002	% change
Number of Farms	746	736	+ 1
Land in Farms	137,668 acres	107,629 acres	+ 28
Average Size of Farm	185 acres	146 acres	+ 27
<hr/>			
Market Value of Products Sold	\$34,037,000	\$32,838,000	+ 4
Crop Sales \$25,993,000 (76 percent)			
Livestock Sales \$8,044,000 (24 percent)			
Average Per Farm	\$45,625	\$44,616	+ 2
<hr/>			
Government Payments	\$376,000	\$262,000	+ 44
Average Per Farm Receiving Payments	\$4,525	\$3,400	+ 33



Boulder County Ag Profile

Total land area (Square Miles)	740	2007 farms by value group	
Total land area (Acres)	473,907	\$1 to \$49,999	159
		\$50,000 to \$99,999	53
2007 Census of Agriculture		\$100,000 to \$199,999	46
Number of farms and ranches	746	\$200,000 to \$499,999	162
Land in farms and ranches (Acres)	137,668	\$500,000 to \$999,999	222
Total cropland (Acres)	54,425	\$1,000,000 to \$1,999,999	72
Total woodland (Acres)	6,106	\$2,000,000 to \$4,999,999	24
Total pasture and rangeland (Acres)	72,375	\$5,000,000 to \$9,999,999	6
Total land in conservation programs (Acres)	3,022	\$10,000,000 or more	2
Irrigated land (Acres)	33,871	Organic Production	
Percent of county land in farms	29%	Acres organic crops harvested	608
Average size of farms/ranch (Acres)	185	Acres organic pastureland	216
Median size farm/ranch (Acres)	30	Acres being converted	188
Average value of land and buildings	\$ 588,686	Percent of total farm acres organic	0.6%
		Percent of farms with organic product sales	4.0%
Market value of ag products sold (\$1,000)	34,037	Farm Ownership	Farms
All crops sold (\$1,000)	25,993	Family or Individual	75.34%
All livestock sold (\$1,000)	8,044	Partnership	12.47%
Total farm production expenses (\$1,000)	39,382	Family Held Corporation	9.65%
Net cash return from ag sales (\$1,000)	-713	Corporation, Other than Family Held	0.27%
		Other (cooperative, institutional, estate or trust, etc.)	2.28%
Average age of farm operator (Years)	59.4	Farm Typology Classification	Farms Acres
% of farms by age of primary operator		Limited Resource	11.5% 3.7%
Under 25 Years	0.0%	Retirement	24.9% 17.7%
25 to 34 Years	1.5%	Residential/Lifestyle	41.3% 34.2%
35 to 44 Years	8.4%	Farming occupation/Lower Sales	12.5% 13.3%
45 to 54 Years	27.7%	Farming occupation/Higher Sales	1.7% 15.3%
55 to 59 Years	11.8%	Large Family Farms	1.3% 5.6%
60 to 64 Years	14.5%	Very Large Family Farms	1.2% 4.3%
65 to 69 Years	12.9%	Nonfamily Farms	5.5% 5.9%
70 Years and Older	23.2%		
% of farms by sex of primary operator		Direct Sales	
Male	76%	Farms	105
Female	24%	Sales (\$1,000)	715
% of Acreage in farms by sex of primary operator		As a % of total ag products sold	2.10%
Male	90%	Farms marketing through CSA	10
Female	10%		
		Agrotourism	
		Farms	10
		Value	\$260,000

Boulder County Ag Profile

Field Crops	2007	2007	% Change in		
	Acreage	Production		Production from 2002	
Barley	1,337	131,406 bu		13.9% *	* Change in production from 2002 to 2007 greater than change in land by more than 30%
Corn for Grain	2,499	336,241 bu		6.5%	
Dry beans	(D)	(D) cwt	(D)		
Oats Grain	(D)	(D) bu	(D)		
Proso Millet	(D)	(D) bu	(D)		
Sorghum, grain	(D)	(D) bu	(D)		
Sugarbeets	(D)	(D) tons	(D)		
Sunflowers, all	(D)	328,998 lbs	(D)		
Triticale	-	- bu	(D)		
Wheat, all	4,620	116,607 bu		53.9%	
Wheat, Winter	(D)	(D) bu	(D)		(Z) Less than half of the unit shown
Wheat, Spring	(D)	(D) bu	(D)		
Forage Crops	26,451	77,697 tons		79.2% *	
Hay, All	25,769	75,394 tons		74.6% *	
Hay, Alfalfa	11,913	42,076 tons		35.0% *	
Hay, Small Grain	696	2,114 tons		227.8% *	
Hay, Other Tame	11,095	28,500 tons		178.8% *	
Hay, Wild	2,065	2,704 tons		137.0% *	
Haylage, All	1,170	4,660 tons		1107.3% *	
Corn Silage	971	21,580 tons		-10.1% *	
Sorghum Silage	-	- tons	(D)		

Orchard Crops	Acres	% Change from 2002	
		Acres	% Change from 2002
Apples	36		63.6%
Sweet Cherries	19		46.2%
Grapes	1 (D)		
Peaches	4		300.0%
Peaches	2 (D)		
Pears	1 (D)		
Plums	1 (D)		
Berries	1		0.0%
Vegetable Crops	520		-18.2%
Beans, Snap	44		-13.7%
Beets	3 (D)		
Broccoli	(D)	(D)	
Cabbage, Head	(D)	(D)	
Cantaloupes	3		-66.7%
Carrots	6		500.0%
Eggplant	2 (D)		
Garlic	1 (D)		

Vegetable Crops, Continued	Acres	% Change from 2002	
		Acres	% Change from 2002
Herbs, Fresh Cut	2		0.0%
Kale	1 -		
Lettuce, All	3		-40.0%
Onions, Dry	53 (D)		
Peas, Green	6 (D)		
Peppers, Bell	(D)	(D)	
Peppers, Other	(D)	(D)	
Potatoes	7 (D)		
Pumpkins	142		0.7%
Spinach	(D)	(D)	
Squash, All	53		-5.4%
Squash, Summer	19 -		
Squash, Winter	34 -		
Sweet Corn	92 (D)		
Tomatoes	31		138.5%
Turnips	(D)	(D)	
Watermelons	(D)	(D)	
Other Vegetables	(D)	(D)	

Boulder County Ag Profile

Sheep

Number of farms with sheep and lambs	41	46.4%
Farms selling sheep and lambs	27	107.7%
Sheep and lambs sold	1,414	48.4%
Ewes over one year	1,025	150.0%
Wool Production, lbs	10,145	-11.7%

Bison

Number of farms with bison	5	0.0%
Number farms selling bison	2	-50.0%
Bison sold	(D)	(D)

Rabbits

Number farms selling rabbits	0	0.0%
Rabbits sold	0	0.0%

Hogs

Number of farms with hogs and pigs	13	-18.8%
Farms selling hogs and pigs	19	-20.8%
Hogs and pigs sold	258	-69.2%
Value of hogs and pigs sold	28,000	-64.6%
Hogs and pigs for breeding	68	-20.0%

Bees

Number of farms with bees	27	58.8%
Bee colonies	214	8.6%
Farms collecting honey	18	50.0%
Honey collected, lbs	7,831	150.4%

Cattle

Number farms with cattle and calves	193	-7.2%
Farms selling cattle and calves	164	6.5%
Cattle and calves sold	5,586	-34.6%
Value of cattle and calves sold	4,343,000 (D)	
Farms with beef cows	147	-16.0%
Beef Cows	4,498 (D)	
Farms with milk cows	0	-100.0%
Milk Cows	0 (D)	
Value of dairy products sold	0 (D)	
Farms with other cattle	144	-4.0%
Other Cattle	6,273	9.5%
Farms with cattle on feed	11	-42.1%
Cattle on feed	1,320	12.2%
Farms selling cattle on feed	31	-16.2%
Cattle on feed sold	1,301	-49.1%

Poultry

Number of farms with any poultry	94	56.7%
Laying hens	(D)	(D)
Farms selling any poultry	69	283.3%
Meat-type chickens sold	(D)	(D)
Turkeys sold	60 (D)	
Ducks sold	(D)	(D)
Geese sold	0	0.0%
Pheasants sold	(D)	(D)

Meat Processing

Federally inspected slaughter plants	
Unspecified Meat	0
Lamb	0
Poultry	0
Custom slaughter plants (State inspected)	
Domestic livestock	1
Wild game	2
Also federally inspected	0

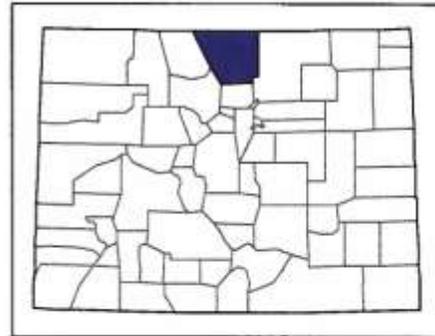
Goats

Number of farms with goats	53	71.0%
Angora goats	57	307.1%
Mohair produced, lbs	228 (D)	
Milk goats	93	-51.6%
Meat goats and other goats	441	54.2%

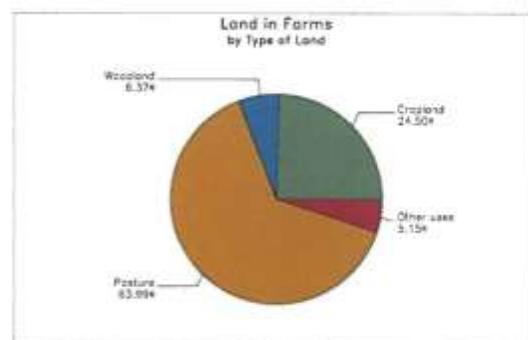
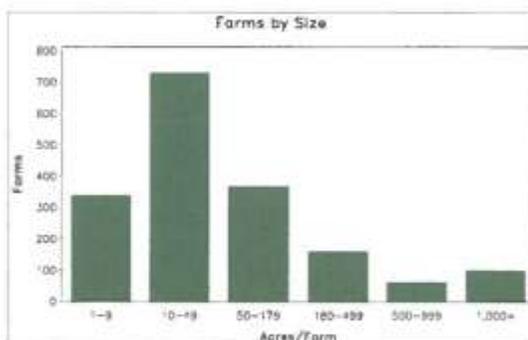
2007 CENSUS OF AGRICULTURE

County Profile

Larimer County Colorado



	2007	2002	% change
Number of Farms	1,757	1,564	+ 12
Land in Farms	489,819 acres	521,599 acres	- 6
Average Size of Farm	279 acres	334 acres	- 16
Market Value of Products Sold			
	\$128,123,000	\$101,096,000	+ 27
Crop Sales \$49,877,000 (39 percent)			
Livestock Sales \$78,245,000 (61 percent)			
Average Per Farm	\$72,921	\$64,640	+ 13
Government Payments			
	\$803,000	\$766,000	+ 5
Average Per Farm Receiving Payments	\$5,050	\$4,029	+ 25



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Larimer County Ag Profile

Total land area (Square Miles)	2,632	2007 farms by value group	
Total land area (Acres)	1,684,320	\$1 to \$49,999	239
		\$50,000 to \$99,999	101
2007 Census of Agriculture		\$100,000 to \$199,999	122
Number of farms and ranches	1,757	\$200,000 to \$499,999	571
Land in farms and ranches (Acres)	489,819	\$500,000 to \$999,999	456
Total cropland (Acres)	119,984	\$1,000,000 to \$1,999,999	175
Total woodland (Acres)	31,210	\$2,000,000 to \$4,999,999	72
Total pasture and rangeland (Acre)	313,416	\$5,000,000 to \$9,999,999	16
Total land in conservation programs (Acres)	5,292	\$10,000,000 or more	5
Irrigated land (Acres)	63,405	Organic Production	
Percent of county land in farms	29%	Acres organic crops harvested	7273
Average size of farms/ranch (Acre)	279	Acres organic pastureland	514
Median size farm/ranch (Acres)	37	Acres being converted	115
Average value of land and building	\$ 695,145	Percent of total farm acres organic	1.6%
		Percent of farms with organic product sales	1.0%
Market value of ag products sold (\$1,000)	128,123	Farm Ownership	Farms
All crops sold (\$1,000)	49,877	Family or Individual	76.83%
All livestock sold (\$1,000)	78,245	Partnership	7.92%
Total farm production expenses (\$1,000)	113,596	Family Held Corporation	10.53%
Net cash return from ag sales (\$1,000)	21,219	Corporation, Other than Family Held	1.01%
		Other (cooperative, institutional, estate or trust, etc.)	3.71%
Average age of farm operator (Years)	56.0	Farm Typology Classification	Farms Acres
% of farms by age of primary operator		Limited Resource	11.2% 8.3%
Under 25 Years	0.3%	Retirement	21.8% 32.1%
25 to 34 Years	3.3%	Residential/Lifestyle	47.1% 39.3%
35 to 44 Years	7.2%	Farming occupation/Lower Sales	12.3% 0.0%
45 to 54 Years	32.1%	Farming occupation/Higher Sales	1.4% 8.2%
55 to 59 Years	14.6%	Large Family Farms	1.0% 12.1%
60 to 64 Years	12.3%	Very Large Family Farms	0.3% 0.0%
65 to 69 Years	9.9%	Nonfamily Farms	4.9% 0.0%
70 Years and Older	20.5%	Direct Sales	
% of farms by sex of primary operator		Farms	199
Male	77%	Sales (\$1,000)	838
Female	23%	As a % of total ag products sold	0.65%
% of Acreage in farms by sex of primary operator		Farms marketing through CSA	21
Male	87%	Agrotourism	
Female	13%	Farms	36
		Value	\$1,120,000

Larimer County Ag Profile

Field Crops	2007	2007	% Change in		
	Acreage	Production	Production	from 2002	
Barley	2,425	218,508 bu		-6.5%	*
Corn for Grain	9,247	1,256,685 bu		26.9%	<i>Change in production from 2002 to 2007 greater than change in land by more than 30%</i>
Dry beans	389	9,186 cwt		-68.8%	
Oats Grain	123	6,150 bu	(D)		
Proso Millet	(D)	(D) bu	(D)		
Sorghum, grain	-	- bu	(D)		
Sugarbeets	2,045	52,919 tons		10.2% *	(D) <i>Withheld to avoid disclosing data for individual farms</i>
Sunflowers, all	260	406,167 lbs		-	
Triticale	(D)	(D) bu	(D)		
Wheat, all	11,557	379,173 bu		145.6% *	
Wheat, Winter	10,925	352,391 bu		165.9% *	(Z) <i>Less than half of the unit shown</i>
Wheat, Spring	632	26,782 bu		22.7%	
Forage Crops	45,784	89,485 tons		39.7%	
Hay, All	44,584	82,056 tons		31.9%	
Hay, Alfalfa	20,052	56,935 tons		25.4%	
Hay, Small Grain	1,410	2,090 tons		54.9%	
Hay, Other Tame	16,653	17,951 tons		30.2%	
Hay, Wild	6,469	5,080 tons		205.8%	
Haylage, All	2,049	15,030 tons		303.3% *	
Corn Silage	6,047	135,114 tons		22.5%	
Sorghum Silage	-	- tons		-	

	Acres	% Change from 2002
Orchard Crops	44	25.7%
Apples	23	130.0%
Sweet Cherries	(Z)	
Grapes	6	-60.0%
Peaches	1	-50.0%
Pears	1	0.0%
Plums	(D)	(D)
Berries	4	33.3%

	Acres	% Change from 2002
Vegetable Crops	3,317 (D)	
Beans, Snap	44	21.0%
Beets	3 (D)	
Broccoli	(D)	(D)
Cabbage, Head	(D)	(D)
Cantaloupes	-	(D)
Carrots	6	500.0%
Eggplant	(D)	(D)
Garlic	1	-50.0%

	Acres	% Change from 2002
Vegetable Crops, Continued		
Herbs, Fresh Cut	451 (D)	
Kale	(D)	(D)
Lettuce, All	603 (D)	
Onions, Dry	718 (D)	
Peas, Green	2 (D)	
Peppers, Bell	1 (D)	
Peppers, Other	(D)	(D)
Potatoes	2 (D)	
Pumpkins	69	-20.7%
Spinach	(D)	(D)
Squash, All	(D)	(D)
Squash, Summer	(D)	-
Squash, Winter	2	-
Sweet Corn	269	886.7%
Tomatoes	7	250.0%
Turnips	-	-
Watermelons	-	-100.0%
Other Vegetables	8 (D)	

Larimer County Ag Profile

Sheep

Number of farms with sheep and lambs	88	-2.2%
Farms selling sheep and lambs	62	-8.8%
Sheep and lambs sold	11,768	324.5%
Ewes over one year	11,997	577.8%
Wool Production, lbs	96,377	293.1%

Bison

Number of farms with bison	10	-33.3%
Number farms selling bison	7	-12.5%
Bison sold	1,151 (D)	

Rabbits

Number farms selling rabbits	3	50.0%
Rabbits sold	60 (D)	

Hogs

Number of farms with hogs and pigs	64	3.2%
Farms selling hogs and pigs	69	16.9%
Hogs and pigs sold	704	-69.2%
Value of hogs and pigs sold	88,000	-56.7%
Hogs and pigs for breeding	79	-73.2%

Bees

Number of farms with bees	47	161.1%
Bee colonies	895	185.0%
Farms collecting honey	33	135.7%
Honey collected, lbs	39,870	536.1%

Cattle

Number farms with cattle and calves	600	16.5%
Farms selling cattle and calves	496	15.9%
Cattle and calves sold	31,051	-23.4%
Value of cattle and calves sold	27,060,000	12.7%
Farms with beef cows	421	17.9%
Beef Cows	11,660	-9.4%
Farms with milk cows	29	-3.3%
Milk Cows	11,847	-19.9%
Value of dairy products sold	42,494,000	14.1%
Farms with other cattle	463	11.3%
Other Cattle	27,419	11.0%
Farms with cattle on feed	32	-50.0%
Cattle on feed	256	-96.9%
Farms selling cattle on feed	74	-28.8%
Cattle on feed sold	870	-92.5%

Poultry

Number of farms with any poultry	241	46.1%
Laying hens	4,279	-39.4%
Farms selling any poultry	185	153.4%
Meat-type chickens sold	894 (D)	
Turkeys sold	104 (D)	
Ducks sold	(D)	(D)
Geese sold	29 (D)	
Pheasants sold	0	0.0%

Meat Processing

Federally inspected slaughter plants	
Unspecified Meat	0
Lamb	0
Poultry	0
Custom slaughter plants (State inspected)	
Domestic livestock	2
Wild game	3
Also federally inspected	0

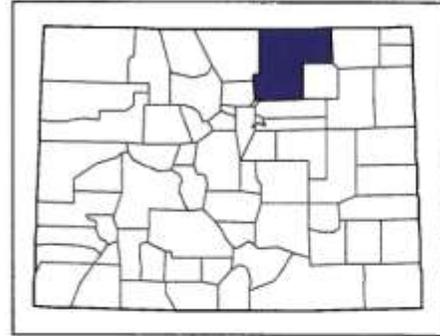
Goats

Number of farms with goats	139	56.2%
Angora goats	88	31.3%
Mohair produced, lbs	1,309	343.7%
Milk goats	258	-12.8%
Meat goats and other goats	1,465	89.5%

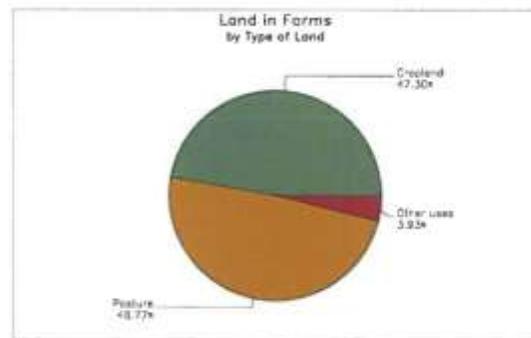
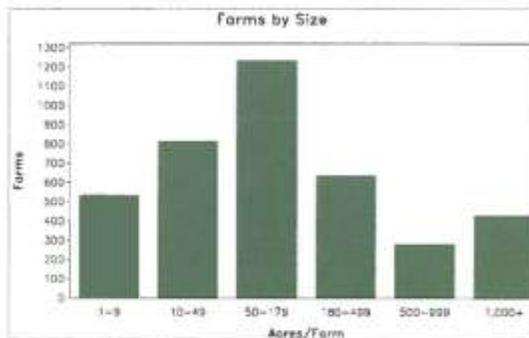
2007 CENSUS OF AGRICULTURE

County Profile

Weld County Colorado



	2007	2002	% change
Number of Farms	3,921	3,121	+ 26
Land in Farms	2,088,715 acres	1,812,167 acres	+ 15
Average Size of Farm	533 acres	581 acres	- 8
Market Value of Products Sold	\$1,539,072,000	\$1,127,854,000	+ 36
Crop Sales \$272,710,000 (18 percent)			
Livestock Sales \$1,266,362,000 (82 percent)			
Average Per Farm	\$392,520	\$361,376	+ 9
Government Payments	\$15,403,000	\$13,111,000	+ 17
Average Per Farm Receiving Payments	\$9,963	\$11,168	- 11



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Weld County Ag Profile

	2007	2007		% Change in	
Field Crops	Acreage	Production		Production	
				from 2002	
Barley	7,519	654,817 bu		-34.9%	*
Corn for Grain	94,040	14,024,090 bu		26.3%	<i>Change in production from 2002 to 2007 greater than change in land by more than 30%</i>
Dry beans	6,077	143,037 cwt		-63.4%	
Oats Grain	693	21,865 bu		548.2% *	
Proso Millet	11,091	237,967 bu		668.9% *	
Sorghum, grain	3,883	113,273 bu		457.3% *	
Sugarbeets	11,575	315,352 tons		-6.9%	(D) <i>Withheld to avoid disclosing data for individual farms</i>
Sunflowers, all	7,743	7,531,347 lbs		22.6%	
Triticale	677	13,299 bu			
Wheat, all	122,978	3,970,577 bu		83.0% *	
Wheat, Winter	121,430	3,901,047 bu		81.9% *	(Z) <i>Less than half of the unit shown</i>
Wheat, Spring	1,548	69,530 bu		180.0% *	
Forage Crops	161,688	553,484 tons		44.6%	
Hay, All	154,428	500,428 tons		35.9%	
Hay, Alfalfa	109,575	416,924 tons		24.8%	
Hay, Small Grain	11,255	17,646 tons		269.9% *	
Hay, Other Tame	25,957	58,177 tons		105.9% *	
Hay, Wild	7,641	7,681 tons		461.1% *	
Haylage, All	16,463	107,335 tons		268.0% *	
Corn Silage	51,794	1,140,423 tons		12.5%	
Sorghum Silage	1,510	12,445 tons		-45.4%	

	Acres	% Change from 2002		Acres	% Change from 2002
Orchard Crops	59	1866.7%	Vegetable Crops, Continued		
Apples	39 (D)		Herbs, Fresh Cut (D)	(D)	
Sweet Cherries	1 -		Kale (D)	(D)	
Grapes	12 -		Lettuce, All (D)	(D)	
Peaches	1 (D)		Onions, Dry	3,933 (D)	
Pears (D)	-		Peas, Green (D)		-31.2%
Plums	3 (D)		Peppers, Bell	40 (D)	
Berries (D)	(D)		Peppers, Other	27	122.2%
			Potatoes (D)	(D)	
			Pumpkins	1,435 (D)	
Vegetable Crops	13,085	7.1%	Spinach (D)		127.1%
Beans, Snap	356	263.3%	Squash, All	166 (D)	
Beets (D)	(D)		Squash, Summer	110	-1.8%
Broccoli (D)	(D)		Squash, Winter	56 -	
Cabbage, Head	1,615	41.4%	Sweet Corn	2,533 -	
Cantaloupes	30	-3.2%	Tomatoes	8	15.5%
Carrots (D)	(D)		Turnips (D)		-52.9%
Eggplant (D)	(D)		Watermelons	35 (D)	
Garlic -	(D)		Other Vegetables (Z)		9.4%

Weld County Ag Profile

Sheep

Number of farms with sheep and lambs	189	-1.6%
Farms selling sheep and lambs	141	-12.4%
Sheep and lambs sold	568,930	-22.7%
Ewes over one year	38,939	494.0%
Wool Production, lbs	1,396,933	36.5%

Hogs

Number of farms with hogs and pigs	151	29.1%
Farms selling hogs and pigs	151	-1.3%
Hogs and pigs sold	15,537	16.8%
Value of hogs and pigs sold	1,712,000	51.4%
Hogs and pigs for breeding	771	-35.2%

Cattle

Number farms with cattle and calves	1,566	19.1%
Farms selling cattle and calves	1,302	10.8%
Cattle and calves sold	746,454	-9.8%
Value of cattle and calves sold	793,205,000	22.4%
Farms with beef cows	1,081	15.1%
Beef Cows	48,512	-10.6%
Farms with milk cows	97	-19.2%
Milk Cows	69,783	38.8%
Value of dairy products sold	269,586,000	112.4%
Farms with other cattle	1,254	11.8%
Other Cattle	447,032	0.8%
Farms with cattle on feed	126	-22.2%
Cattle on feed	302,612	-3.2%
Farms selling cattle on feed	184	-34.8%
Cattle on feed sold	605,270	-11.2%

Goats

Number of farms with goats	327	93.5%
Angora goats	70	-30.0%
Mohair produced, lbs	765	49.1%
Milk goats	764	12.4%
Meat goats and other goats	4,289	117.6%

Bison

Number of farms with bison	17	-50.0%
Number farms selling bison	12	-20.0%
Bison sold	(D)	(D)

Rabbits

Number farms selling rabbits	15	150.0%
Rabbits sold	499	59.4%

Bees

Number of farms with bees	40	150.0%
Bee colonies	5,867	(D)
Farms collecting honey	27	145.5%
Honey collected, lbs	393,297	(D)

Poultry

Number of farms with any poultry	338	86.7%
Laying hens	2,791,770	-4.8%
Farms selling any poultry	235	186.6%
Meat-type chickens sold	(D)	(D)
Turkeys sold	(D)	(D)
Ducks sold	190	123.5%
Geese sold	40	-42.9%
Pheasants sold	11,597	-27.8%

Meat Processing

Federally inspected slaughter plants	
Unspecified Meat	5
Lamb	1
Poultry	1
Custom slaughter plants (State inspected)	
Domestic livestock	8
Wild game	8
Also federally inspected	4