2016

Report to the

Farmland Advisory Committee
prepared for the

Utah Tax Commission

by

Dillon Feuz, Ph.D.

And

Ryan Larsen, Ph.D.

And

Robert Lee, Research Associate

Department of Applied Economics

Utah State University

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Executive Summary

Summary of Study Recommendations:

Changes in land values are recommended to Utah State Tax Commission for the 2016 year as a result of the study for farmland production values. The data represents the 2015 production year. The changes are summarized according to land use as follows: ***Irrigated Cropland***- Irrigated Crop land values be increased across the state. Due to the large amount of alfalfa acreage in most counties in the state, any change in hay returns have a greater impact on the average county land values. Average alfalfa price decreases were offset by a reduction in the cost of inputs to producers, causing an increase in the value of acres planted in alfalfa. Irrigated cropland values increased from a high of 2.8 percent in Carbon County, to a low of .6 percent in Beaver County. The remaining counties in the state had an increase of between 1 percent and 2.7 percent. ***Orchard Cropland***- Orchard land values be increased by 2 percent. The average increase in production and price of tart cherries being the main reason for the slight increase. Apricots saw the highest average price increase and the greatest decrease in average production, but with limited acres in production apricots only had a slight effect on land value. ***Meadow Cropland***- Meadow land values should also be increased slightly across the state. ***Dry Cropland***-Increases in land values are also recommended for dry land acreage. Average wheat and barley prices decreased and yields remained relatively constant, while the cost of inputs decreased by 6.3 percent. The average price of alfalfa decreased less than the reduction in costs causing the remaining land values to go up slightly. ***Grazing Land-*** Grazing land values remained constant, with only small increases across the state. ***Non Production Land-*** No change in value for nonproduction land has been recommended.

Outline of Process Used in Determining Agricultural Land Values:

A general outline of the steps followed in making these recommendations is as follows. The overall approach requires that we find the present value of acreage-weighted net returns for various crops. This allows us to come up with county-specific estimates of the value of land when used only for crop production. This removes the value of development potential, unique land characteristics, location in a county, and many other factors that influence land values.

1. The analysis begins with development or updating of individual crop budgets. It is not possible with the budget allocated for this work to update the individual, county-specific budgets for each of the major crops for each county every year. There are well over 100 budgets that have to be developed and so we are updating the budgets on a 5-6 year cycle. For the updated budgets, we use the cost information directly for the year in question, but for those budgets that have not been updated that year, we use the National Agricultural Statistical Service's (NASS) "producer prices paid" indices to update the costs in the older crop budgets to the current year. To access the existing updated budgets, please go to the following website: https://apecextension.usu.edu/htm/agribusiness.

2. We use a five-year average of commodity prices and a five-year average of yields (both obtained from NASS, USDA, or state sources) to determine the gross return from each crop.

3. Most current cost data are used because time series data on actual costs do not exist. These costs are adjusted for county-to-county differences where possible.

4. These costs (exclusive of any return to land) are subtracted from the total revenue. This represents the net returns per acre for any crop.

5. The crop mix for any county is determined from the most recent U.S. Census of Agriculture, which is taken every 5 years. This is where the proportional acreage devoted to each crop can be determined.

6. The county-level value is developed by taking each crop's net return times the proportion of acreage in each crop. For instance, if the net return from an acre of alfalfa was $200 and 75% of the county's acreage was devoted to alfalfa and the net return per acre of grain (the only other crop grown in this fictitious county) was $75 and it comprised the remaining 25% of the county's agricultural land, the weighted average value of agriculture in this county would be: (.75) x ($200) + (.25) x ($75) ≅ $169/acre.

7. The annual value of $169/acre net of land costs would then be determined by assuming that acre provided the same value over time and discounting this sum of values using an interest rate (longer-term investments) determined by gathering data on long-term borrowing as obtained from public and proprietary records. Using this discount (or interest) rate, the net returns are entered into an Excel spreadsheet and the value is discounted or brought to a present value. This then becomes the average value of the land base in that particular county.

Of course, no county is this simple. In some counties, more than a dozen crops are grown and county-specific budgets must be made for each one of them. But these are the general steps followed in determining per acre land values used solely for agricultural production purposes.

Introduction

This report represents the nineteenth annual *draft* report to the Farmland Advisory Committee recommending "productive values" for lands that qualify for the Farmland Assessment Act (FAA). The methodology used to derive the suggested values is summarized below. The relevant statutes for this work are provided in Appendix A. Instructions relative to make-up of the various land classes can be found at http://propertytax.utah.gov/standards/standard07.pdf (Land classification guidelines for each classification of agricultural land, Property Tax Division's Standards of Practice, Tax Commission Website).

Summary of General Approach Adopted

Agricultural land values are not easily derived because land market *values* reflected in farm sales typically include the potential value for alternative development, existing landownership patterns, location, and even environmental amenities. Even when sold for continued agricultural use, these lands may have intrinsic values associated with farm expansion, location considerations, and unique characteristics that limit the usefulness of such data in assessing actual farm production values. Finally, the actual market involving agricultural land sales is very thin (i.e., few sales occur) and sale values for one area would not necessarily reflect the values of similar farmland in another area due to differences in climate, productive capacity, crop mix, etc.

Lease data might be an alternative method of calculating agricultural land values. However, even in areas where leases occur, the market is thin and comparable are difficult to come by and even some lease conditions are made because of local considerations. Finally, the application of a lease rate in one area of the state would not likely be appropriate for other areas in the state. There is too much variation in conditions to allow an overall comparison.

Unfortunately, this means that it is generally not possible to get an accurate idea of agricultural land values directly from market signals. Thus, an alternative approach that is theoretically consistent with market values is needed.

Partial Budgeting

The theoretically consistent approach selected for this analysis is that of identifying the present value of agricultural-producing lands based strictly on the use of that land in agriculture production. That is, the best estimate of the value of alfalfa-producing land should be based on land whose sole function is producing alfalfa hay. In fact, the present value of the *future flow of returns less costs* should be *representative* of the per acre value of land in agricultural production for a particular county for a specific land type. Returns and costs are brought to the present point in time using a *discounting* process, which reflects the "time value of money."[1] Discounting is widely accepted as the correct approach to evaluate costs and returns that occur at different points in time. This method eliminates the vagaries of location, proximity to other property, unique location characteristics, etc.

Partial budgeting is the tool used in determining the net returns for each crop or land use. This involves a determination of *localized costs* and *localized prices*, at least as much as possible given the information available. Crop mixes vary by county. Some counties have a very limited agricultural complex (Daggett County); while others have a large number of different crops (Box Elder County), so it is very important that these county-by-county differences be taken account of. The smallest sized unit that can be specified is the county level due to existing data limitations. Unfortunately, gathering data even on a county basis is becoming more difficult due to the USDA's disclosure rules which prohibit the release of data wherein individual producers could be identified. This county-wide value approach admittedly precludes consideration of many within-county variations or changes. For example, if the majority of the county still relies on flood irrigation, this means that the land value will be based in part on flood irrigation, even if some producers utilize more costly wheel lines or irrigation circles.

Though desirable, it is a complex and costly process to develop county-level crop budgets annually for the most important crops on a county-by-county basis, so budgets are being developed on an ongoing basis—a few counties every year. We currently have well over 100 different crop budgets that have to be updated. The budgets that are not developed for the current year using producer panels have to be updated using available information on both the price side and the cost side. Using the current updating process,

[1] The *time value of money* is based on our actions wherein we prefer payment today rather than the same payment at a later point in time.

it is possible that the budgets being used for any one county will be five to six years old, depending on how many county budgets can be developed each year. However, all land values are updated to the 2015 production year.

A somewhat unique situation exists for fruit budgets as there is a long time-frame for startup and production—up to 25 years. This requires a different budgeting process using a discounting process. These budgets are more difficult to develop for each county, yet they also need to be updated on a regular basis. Again, some crop budgets could be five to six year old and will require updating through the process described below for those crop budgets which are not current.

Valuing Land in Agricultural Production

In order to accurately reflect the value of land in agricultural production, five areas warrant special attention—prices, costs, yields, crop mix, and data limitations.

(1) *Changing Prices*. The first area that needs to be considered for changes in crop budgets is commodity prices or returns. As prices rise, the net value of the crop in question also rises (assuming costs remain fixed). When prices fall, the net value declines, other factors fixed. Agricultural commodity prices have been quite variable historically and such variability is difficult to deal with, both as producers and as assessors. In order to temper annual price declines and increases, we have determined that a five-year average of prices result in sufficient stability in assessment values and associated taxes.

It is very important to remember that while this approach adds some stability to the value of agricultural land, when prices are *increasing*, a five-year average of past prices will mean that the most current five-year average will be *below* that of the most recent price. When prices are *declining*, the most current five-year average will lie *above* the most recent price.

For example, if hay prices have averaged $75, $85, $95, $105, and $115 per ton over the past five years, the price that would be used in the crop budget would be ($75 + $85 + $95 + $105 + $115)/5 = $95/ton (which is considerably *lower* than the two most recent years). On the other hand, if the prices over the past 5 years had averaged $115, $105, $95, $85, and $75, then the average price would still be $95/ton, but note that it is considerably *higher* than the last two years. This is simply the result of the averaging process utilized.

Furthermore, even if prices have *declined* in the most recent year, the overall price average will depend on the price that was *dropped* from the calculation from six years earlier and the price that is added in the most current year.

For example, if the previous five years of prices (*excluding* the most recent price) were \$3/bu., \$6/bu., \$5/bu., \$5/bu., and \$5/bu., respectively, the average price would be (3 + 6 + 5 + 5 + 5)/5 = \$4.80/bu. If the most recent price is \$4/bu., the latter five-year average price will still be *higher* than in the earlier period due to the deletion of the \$3/bu. and the addition of the \$4/bu., i.e., (6 + 5 + 5 + 5 + 4)/5 = \$5.00/bu. Hence, even though the price declined in the most recent year, the average did not go down since the \$4/bu. price that was added was still higher than the \$3/bu. price that was dropped. This potentially can happen with any crop.

The important point is that by using a five-year average, year-to-year changes in land values are minimized. This effectively stabilizes land values for tax purposes. **Table 1** shows the past five years of state-wide price data for Utah's major crops, and the average percentage change for each crop from 2014 to 2015.

Table 1.		Prices received for Utah's major crops (average percentage change)					
		Price	2015	2014	2013	2012	2011
		Change					
Alfalfa		-2.8%	$ 164.00	$190.00	$ 181.00	$ 189.00	$ 186.00
Barley		-14.9%	$ 2.80	$3.13	$ 4.20	$ 5.90	$ 5.60
Corn(grain)		-6.5%	$ 4.70	$4.20	$ 5.35	$ 7.70	$ 6.75
Corn(silage)		-0.2%	$ 46.00	$52.75	$ 42.00	$ 54.81	$ 50.00
Oats		-4.5%	$ 3.60	$3.80	$ 4.30	$ 4.40	$ 4.35
Safflower		-2.4%	$ 21.00	$25.20	$ 25.50	$ 28.50	$ 24.00
Wheat(all)		-10.7%	$ 5.40	$7.05	$ 8.10	$ 8.50	$ 8.65
Onions		7.8%	$ 13.10	$10.50	$ 12.00	$ 11.60	$ 10.03

Table 2 Includes the average percentage change for each fruit crop from 2014 to 2015, using the five year average numbers. The increase in apricot price and the decrease in sweet cherries did not have a large impact on the values because their production is a small portion of the total fruit production in the state.

Table 2.		Prices received for Utah's fruit crop (average percentage change)					
		Price	2015	2014	2013	2012	2011
		change					
Apricots		11%	$ 994.00	$ 1,510.00	$ 1,010.00	$ 919.00	$ 1,235.00
Sweet Cherries		-11%	$ 854.00	$ 1,680.00	$ 2,490.00	$ 1,450.00	$ 1,428.57
Tart Cherries		3%	$ 0.34	$ 0.43	$ 0.48	$ 0.51	$ 0.29
Apples		5%	$ 0.33	$ 0.32	$ 0.48	$ 0.26	$ 0.22
Peaches		8%	$ 1,080.00	$ 981.00	$ 1,080.00	$ 1,080.00	$ 1,000.00

(2) *Changing Costs.* The second area that needs updating in the crop budgets is that of costs. When input costs increase, the net returns of a particular land use declines (assuming that prices remain constant). While costs usually do not change as

rapidly as prices, they still change and almost always in an upward direction (at least over the past few decades). Therefore, costs associated with various elements of production also need to be adjusted in order to get an accurate estimate of the "current" value of land in agricultural production.

Data for updating costs are available in the "*producer's prices paid*" indices published by ERS, USDA, and NASS, USDA.[2] Because of the rapid changes in input prices (i.e., fertilizer, fuel, pesticides, etc.), we take into account of only the most recent year's cost changes. This means that there is a conservative bias in the approach used to determine prices versus the approach used to determine costs, i.e., we average past prices but use only the most current costs.

The primary justifications for adopting this approach is (a) there are no *time series* data sources readily available that show the type of county-level data needed for such averaging and (b) since production costs are almost always increasing, taking a five-year average of production costs would consistently understate the actual costs of doing business. There is more justification to consider a rolling five-year average for prices, which move both up and down, than there is for costs. A summary of the percentage change in nation-wide costs for inputs used in the major crop categories is shown below in **Table 3**.

Table 3.	**National cost of Inputs**	
Fertilizer		**down 5.5**
Chemicals		**down 3.6**
Fuel		**down 30**
Machinery		**down 2.7**
Feed		**down 11**
Seed		**up 1**
Consumer Price Index		**up 0.7**

The national average cost for all production inputs for Utah's typical crops showed a decrease of (6.3%) six and one third percent from the previous year.

Consumer Price Index (CPI) changes are also shown for comparative purposes in blue font. The CPI index (.7%) actually rose while the production costs decreased.

[2] Economic Research Service (ERS) and National Agricultural Statistical Service (NASS), U.S. Department of Agriculture, Washington, D.C.

(3) Crop Yields. The third area of consideration is that of the yield of each crop as this also helps determine the actual value of land kept in agricultural production. Yield changes directly impact the net returns of various crops, whether grains, forages, or fruit. By necessity, we have had to rely on those crops for which annual yields are reported. Because the small number of acres planted, some crops are not included in the annual crop yields. Yields are quite variable and a five-year average on per acre yields has also been used. This also helps to stabilize farm values over time. Some crops are particularly susceptible to yield fluctuations, e.g., dryland wheat, but the vagaries of weather and precipitation almost always bring about a change in all crop yields from year to year**.** The yield for some of Utah's crops and the average yield changes are shown in **Table 4.**

Table 4.		Production Yield for Utah crop's, (average percentage change)					
		Ave Yield	2015	2014	2013	2012	2011
		Change					
Alfalfa		-1.74%	3.67	3.52	3.77	3.6	4.1
Barley		-1.45%	84	83	79.00	80.0	83
Corn(grain)		0.12%	173	160	170.00	167.0	164
Corn(silage)		0.00%	23	22	23.00	22.0	25
Oats		3.04%	85	69	62.00	76.0	81
Wheat		-0.08%	48.5	50.3	44.50	45.4	49.4
Safflower		5.63%	910	990	570.00	400.0	880
Onions		8.93%	690	482	523	520	

(4) *Crop Mix.* The fourth item that needs to be considered is the change in crop mix on a county-by-county level. Shifts in crop mix are difficult to capture on a year-to-year basis because data on crop mixes are determined through the five-year agricultural census. The 2012 Ag-census numbers were used in the calculation of the land values. Additional crops are being produced within the State of Utah, as more of these crops are produced we will include them in our land value calculations.

To illustrate how the crop mix impacts the suggested values, consider a county where only three crops are produced, all under irrigation: alfalfa hay, wheat, and barley. If the net change in crop values were +3%, +5%, and -1%, respectively, and the crop mix consisted of 75% of the land being planted in alfalfa, 10% in wheat, and 15% in barley, then the suggested land value for that county would change by taking a weighted average of the three net changes: (.75 x 3)+(.10 x 5) + (.15 x -1) = 2.60 (or a net increase in assessed value of 2.6% for that county and acreage configuration). Alfalfa acreage is dominant in virtually all counties and its price continues to dominate that for wheat, barley, and other crops. The only exception is for a small number of counties with relatively large percentages of fruit acreage.

(5) *Dated Prices and Costs – 2015 Crop Year.* Finally, it needs to be remembered that price and cost data remain *dated* in the sense that the only complete data we have available now (in *2016*) are for the *2015* crop year. Hence, the actual net return in 2016 may be different than that found in this report. Further complicating matters is the fact that this year's reported values will not become effective until 2017, leaving us two years behind what the actual crop picture might be. There does not appear to any acceptable way around this problem and the only thing that can be said is that *net* returns typically do not change by large amounts following the approach adopted.

General Trends Affecting Productive Land Values

As implied above, several factors have influenced the suggested FAA land values for the 2016 reporting year: prices, costs, crop mix, and productivity or yields.

(1) *Crop prices.* Prices for the field crops for the 2016 report were all down using the average price. The price received by farmers for the major Utah crops for 2015 and 2014 and the average percentage changes are contained in **Table 5**.

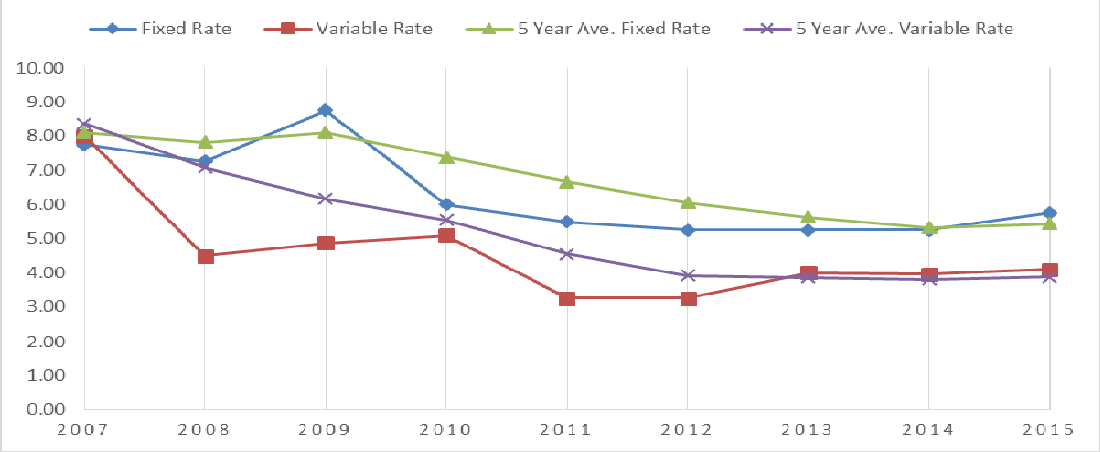
Table 5.		**Prices recieved for major Utah crops**		
		2014-2015 average percentage change		
	Ave. Price	**Annual Price**	**2015**	**2014**
	Change	**Change**		
Alfalfa	-2.8%	-14%	$164.00	$190.00
Barley	-14.9%	-11%	$2.80	$3.13
Corn(grain)	-6.5%	12%	$4.70	$4.20
Corn(silage)	-0.2%	-13%	$46.00	$52.75
Oats	-4.5%	-5%	$3.60	$3.80
Safflower	-2.5%	-17%	$21.00	$25.20
Wheat(all)	-10.7%	-23%	$5.40	$7.05

Average fruit prices were mixed between 2014 and 2015. Apple prices increased by five percent, tart cherries increased three percent, peaches were up by eight percent, and apricots increased by 11 percent. Sweet Cherry prices decreased by eleven percent. The 2014 and 2015 prices producers received and the average percentage change between the two years, using a five (5) year average are shown in **Table 6**. Apples and tart cherries are the primary fruit crops in the state of Utah, causing the changes in those products to have a larger effect on the orchard land value.

Table 6.		Prices received for Utah's fruit crop		
		2014-2015 average percentage change		
	Ave. Price	Annual Price	2015	2014
	change	change		
Apricots	11%	-34%	$ 994.00	$ 1,510.00
Sweet Cherries	-11%	-49%	$ 854.00	$ 1,680.00
Tart Cherries	3%	-22%	$ 0.34	$ 0.43
Apples	5%	2.5%	$ 0.33	$ 0.32
Peaches	8%	10.1%	$ 1,080.00	$ 981.00

(2) *Cost Changes.* Input costs were down in 2015 with seed prices being the only input that increased. Fuel decreased by 30 percent, along with machinery, feed, chemicals, and fertilizer decreasing. The total change in the price of the inputs had a net effect of a (6.3) six and one third percent decrease in the cost of production. (**Table 3**). Interest rates were one of the production costs that remained relatively constant in 2015 as shown in **Figure 1**.

Figure 1. The historical moving average cost of capital, 2005-2015.



You can see the results of using a five year moving average instead of using the actual interest rate in this figure. The longer the time period, the fewer significant fluctuations you see. A five-year average typically allows sufficient fluctuation for year-to-year changes, but does not show the extreme changes that can occur year-to-year. The five-year averages are shown with green and red lines for fixed rates and variable rates, respectively.

(3) *Crop Yields*. Average crop yield changes from 2014 to 2015 were mixed with some decreasing, alfalfa, barley and wheat. While grain corn, safflower, and oats increased a small amount, and silage remained the same. (**Table 7**). None of the yield increases were very large, and the decrease in alfalfa had the greatest effect because of the number of acres in alfalfa production in the state. Safflower was included to a small degree in some counties were production is beginning to increase.

Table 7.		**2014-2015 Utah Average Crop Yields**		
		(average percentage change)		
		Ave. Yield		
Crop		**change**	**2015**	**2014**
Alfalfa		-1.7%	3.7 ton per acre	3.8 ton per acre
Barley		-1.4%	81.8 bu.per acre	83.0 bu. per acre
Corn(grain)		0.1%	166.8 bu. per acre	166.6 bu. per acre
Corn(silage)		0.0%	23.0 ton per acre	23.0 ton per acre
Oats		3.0%	74.6 bu. per acre	72.4 bu. per acre
Wheat		-0.1%	47.6 bu. per acre	47.7 per acre
Safflower		5.6%	750 lbs. per acre	710 lbs per acre

Fruit production yields were mixed as well in 2015, apricots, peaches, and sweet cherries all decreased. Tart cherries, and apples increased in production in 2015. The decrease in sweet cherries and apricots did not affect the land values greatly because of the limited number of acres in those fruits production. The smaller increase in apple production and increase in tart cherries had a greater affect on the land valuation. (**Table 8**)

Table 8		**Utah Fruit Production**		
		2014-2015 average percentage change		
		change	**2015**	**2014**
Apricots (tons)		-25%	161.8	216.4
S. Cherries (tons)		-17%	826	1000
Tart Cherries (lbs)		10%	38360000	34720000
Apples (lbs)		4%	13946000	13346000
Peaches (tons)		-2%	4964.2	5044.2

Apples production accounts for 52 percent of all fruit production in the state, followed by tart cherries at 25 percent, peaches at 18.5, with sweet cherries and apricots accounting for the remaining 4.5 percent. (2012 Ag Census)

Crop Mix. The mix of crops on a county-by-county basis is based on the 2012 census data (2012, NASS). The 2012 census information showed changes in the crop mix in many of the counties in the state. There was not a large shift to a single crop, just subtle movement of one crop to another. One area that is increasing is the vegetable grower. The number of small growers appears to be increasing throughout the state. How to include the small grower in future evaluations is something that needs to be considered.

<u>*Summary*</u>. As an illustration of the process used in calculating changes in net returns, if the average price of a particular crop mix *increased* 8%, yields *increased* by 1%, the crop mix was *unchanged* from year to year, and costs *were up* by 7%, land values would *increase* by approximately 2%.

Suggested Land Values

Irrigated Land

Irrigation methods continue to change in many counties [e.g., Cache and Box Elder counties]. More center pivot and wheel line systems have been put into place and fewer hand lines and less flood irrigation methods are being used. This influences the cost of production and this change is being incorporated in current and future reports as our update of counties continues. Once again, increased pumping depths are not considered. This obviously impacts pumping costs and likely understates the cost associated with irrigation for some counties (e.g., Iron and Millard).

Alfalfa remains the crop with the largest acreage devoted to it throughout Utah. Because of the relatively large proportion of acreage producing alfalfa, changes in alfalfa hay production tend to dominate the overall land values county-by-county. Yield decreased slightly and the average price received by producers in the state decreased in 2015, using the average. The cost of production decreased nationally, enabling producers to have lower input costs, in turn increasing incomes. There is an increases in land values across the state.

Orchard Land

The yields for fruit production in the state of Utah were mixed in 2015. The cost of production decreased nationally and prices received by producers were mixed. Once again, apples and tart cherries are the two major fruit crops and their net returns tend to dominate those of the other fruits.

Meadow Land

Small increases in the land values for meadow land are recommended in the state. Average beef prices increased, average hay prices decreased, causing meadow land values to increase.

Dry Land

Small increases in the land values for dry land are recommended for the same reasons as the other land types, reduced input costs being the greatest reason with the decline in yield and price.

Grazing Lands

The two most significant factors impacting the value of grazing land are the level of precipitation received and the price or value of cattle. The chart below **(Figure 2.)** summarizes five year's county-by-county precipitation levels as a percent (%) of "normal." Note that these data do not provide detail on when the precipitation was received, which can also impact productivity. Furthermore, the level of precipitation even changes within individual counties and these data apply only to certain county rain gauge areas.

Most of the counties in the state received less than average precipitation when considering a five-year running average. The only counties receiving more than an average level over the last 5 years are Garfield, Iron, Sevier, and Wayne County. On average, Juab, Sanpete, Utah, and Wasatch Counties have received the lowest precipitation over the last 5 years.

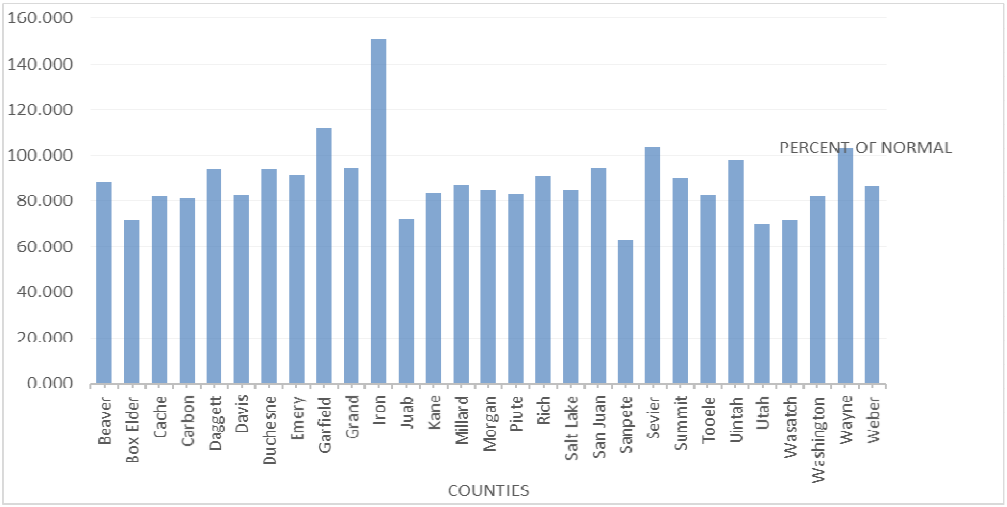


Figure 2. County Five-year Precipitation Average, 2010-2015.

Non-Production Ground

No change is recommended for ground that is non-production.

Suggestions for Additional Work

We will continue, working with the USU Extension agricultural agents, to develop accurate crop budgets for each of the counties in the state. The process adopted at the county level is to bring together a group of representative landholders to work out localized budgets under the direction of the USU Extension county agriculture agents, who in turn work under the supervision of the Applied Economics Department at Utah State University. In addition, we adjust the budgets for any known factors that influence the returns and/or costs of production. This should enhance producer acceptance of the budgeted values. We are using a new budgeting program and it has now been modified to fit Utah's situation. The budgets will be much more similar now that we have this budgeting program in place for Utah's producers.

A consolidation of the 2016 proposed irrigated land values is included in **Table 9**. More detailed information in terms of what the actual increases are proposed for 2016 recommendations is provided in **Appendix A**.

Table 9. 2016 Proposed Irrigated Farmland Assessment Values.*

County	I	II	III	IV
Beaver	0	0	557	458
Box Elder	799	702	552	456
Cache	688	587	445	345
Carbon	525	418	277	178
Daggett	0	0	0	188
Davis	853	751	603	504
Duchesne	0	486	341	239
Emery	498	401	252	156
Garfield	0	0	210	113
Grand	0	383	242	146
Iron	793	695	552	451
Juab	0	444	299	198
Kane	417	320	177	80
Millard	788	691	547	445
Morgan	0	0	384	285
Piute	0	0	332	232
Rich	0	0	177	82
Salt Lake	711	611	465	360
San Juan	0	0	173	79
Sanpete	0	535	392	295
Sevier	0	562	418	320
Summit	0	459	313	216
Tooele	0	447	299	204
Uintah	0	0	370	273
Utah	749	648	497	399
Wasatch	0	485	337	240
Washington	649	553	406	306
Wayne	0	0	328	231
Weber	803	704	560	457

*A zero is shown for any counties not having land of a particular class.

Appendix A
APPENDIX A: Values of Land in Alternative Uses

Irrigated Farm Land

Irrigated farmland values were increased in the counties throughout the state in 2016 as shown in **Table A1**. For those counties without any land in a particular class, a value of zero is given consistent with previous reports.

Table A1. Irrigated Farmland, Classes I through IV.

2015/2016 Irrigated Lands

	2015	2016	2015	2016	2015	2016	2015	2016
County	I	I	II	II	III	III	IV	IV
Beaver	0	0	0	0	554	557	455	458
Box Elder	789	799	693	702	545	552	450	456
Cache	681	688	581	587	441	445	342	345
Carbon	511	525	407	418	269	277	173	178
Daggett	0	0	0	0	0	0	185	188
Davis	839	853	738	751	593	603	496	504
Duchesne	0	0	476	486	334	341	234	239
Emery	487	498	392	401	247	252	153	156
Garfield	0	0	0	0	206	210	111	113
Grand	0	0	375	383	237	242	143	146
Iron	777	793	681	695	541	552	442	451
Juab	0	0	437	444	294	299	195	198
Kane	410	417	315	320	174	177	79	80
Millard	774	788	679	691	537	547	437	445
Morgan	0	0	0	0	379	384	281	285
Piute	0	0	0	0	326	332	228	232
Rich	0	0	0	0	174	177	81	82
Salt Lake	692	711	595	611	453	465	351	360
San Juan	0	0	0	0	171	173	78	79
Sanpete	0	0	526	535	385	392	290	295
Sevier	0	0	549	562	409	418	313	320
Summit	0	0	451	459	307	313	212	216
Tooele	0	0	440	447	295	299	201	204
Uintah	0	0	0	0	363	370	268	273
Utah	734	749	635	648	487	497	391	399
Wasatch	0	0	478	485	332	337	237	240
Washington	636	649	542	553	398	406	300	306
Wayne	0	0	0	0	322	328	227	231
Weber	780	803	684	704	544	560	444	457

The largest increase of any land type was a 2.3 percent increase in class I resulting in a $23 per acre increase for Weber County.

Table A2. Specific Changes in Irrigated Farmland Values.

2016 Irrigated Land Change				
County	I	II	III	IV
Beaver	0	0	3	3
Box Elder	10	9	7	6
Cache	7	6	4	3
Carbon	14	11	8	5
Daggett	0	0	0	3
Davis	14	13	10	8
Duchesne	0	10	7	5
Emery	11	9	5	3
Garfield	0	0	4	2
Grand	0	8	5	3
Iron	16	14	11	9
Juab	0	7	5	3
Kane	7	5	3	1
Millard	14	12	10	8
Morgan	0	0	5	4
Piute	0	0	6	4
Rich	0	0	3	1
Salt Lake	19	16	12	9
San Juan	0	0	2	1
Sanpete	0	9	7	5
Sevier	0	13	9	7
Summit	0	8	6	4
Tooele	0	7	4	3
Uintah	0	0	7	5
Utah	15	13	10	8
Wasatch	0	7	5	3
Washington	13	11	8	6
Wayne	0	0	6	4
Weber	23	20	16	13

*When a county has no acres of a given class of land, a $0 taxable value is listed.

Orchard Land

Land values for orchard lands increased in all counties. Even though production of some fruits decreased, such as apricots and peaches, the increase in tart cherries and apples along with reduced cost causes incomes to increase. Thereby causing land values to increase slightly as shown in **Table A3**.

Table A3. Suggested Changes in Orchard Land Values, 2016 Report.

Orchard Land Values

	2015	2016
County	Value	Value
Beaver	601	614
Box Elder	651	665
Cache	601	614
Carbon	601	614
Daggett	0	0
Davis	656	670
Duchesne	601	614
Emery	601	614
Garfield	601	614
Grand	601	614
Iron	601	614
Juab	601	614
Kane	601	614
Millard	601	614
Morgan	601	614
Piute	601	614
Rich	0	0
Salt Lake	601	614
San Juan	601	614
Sanpete	601	614
Sevier	601	614
Summit	601	614
Tooele	601	614
Uintah	601	614
Utah	661	675
Wasatch	601	614
Washington	711	726
Wayne	601	614
Weber	656	670

*When a county has no acres of a given class of land, a $0 taxable value is listed.

All counties that have orchard land increased by as much as $15 per acre in value as noted in Table A4.

Table A4. Specific Proposed Changes in Orchard Land Values.

Orchard Value Change

County	Value Change
Beaver	13
Box Elder	14
Cache	13
Carbon	13
Daggett	0
Davis	14
Duchesne	13
Emery	13
Garfield	13
Grand	13
Iron	13
Juab	13
Kane	13
Millard	13
Morgan	13
Piute	13
Rich	0
Salt Lake	13
San Juan	13
Sanpete	13
Sevier	13
Summit	13
Tooele	13
Uintah	13
Utah	14
Wasatch	13
Washington	15
Wayne	13
Weber	14

Meadow Land

Meadow land values increased and are shown for the 2016 report year in **Table A5**.

Table A5. Suggested Values in Meadow Land, 2015-2016.

2016 Meadow Land Values

County	2015	2016
Beaver	234	235
Box Elder	252	255
Cache	261	264
Carbon	127	131
Daggett	153	156
Davis	264	268
Duchesne	163	166
Emery	135	138
Garfield	102	104
Grand	130	133
Iron	256	261
Juab	150	152
Kane	107	109
Millard	190	193
Morgan	193	196
Piute	187	190
Rich	103	105
Salt Lake	222	228
San Juan	0	0
Sanpete	190	193
Sevier	195	199
Summit	198	202
Tooele	183	186
Uintah	203	207
Utah	246	251
Wasatch	205	208
Washington	223	227
Wayne	169	172
Weber	292	300

*When a county has no acres of a given class of land, a $0 taxable value is listed.

The largest increase in meadow land value was $8 per acre in Weber County as shown in **Table A6**.

Table A6. Specific 2016 Proposed Changes in Meadow Land Values.

	Meadow Land Change
County	
Beaver	1
Box Elder	3
Cache	3
Carbon	4
Daggett	3
Davis	4
Duchesne	3
Emery	3
Garfield	2
Grand	3
Iron	5
Juab	2
Kane	2
Millard	3
Morgan	3
Piute	3
Rich	2
Salt Lake	6
San Juan	0
Sanpete	3
Sevier	4
Summit	4
Tooele	3
Uintah	4
Utah	5
Wasatch	3
Washington	4
Wayne	3
Weber	8

Dry Farm Land

There were some counties that had no increase and a small increases in other counties as shown in **Table A7**.

Table A7. Suggested Values for Dry Farm Land, 2015-2016.

2016 Dry Farm Land Values

	2015	2016	2015	2016
County	III	III	IV	IV
Beaver	51	51	15	15
Box Elder	92	93	58	59
Cache	117	118	82	83
Carbon	48	49	15	15
Daggett	0	0	0	0
Davis	51	52	16	16
Duchesne	53	54	19	19
Emery	0	0	0	0
Garfield	47	48	15	15
Grand	48	49	15	15
Iron	48	49	15	15
Juab	50	51	16	16
Kane	47	48	15	15
Millard	46	47	14	14
Morgan	63	64	28	28
Piute	0	0	0	0
Rich	47	48	15	15
Salt Lake	53	54	15	15
San Juan	52	53	17	17
Sanpete	53	54	19	19
Sevier	0	0	0	0
Summit	47	48	15	15
Tooele	51	52	14	14
Uintah	53	54	19	19
Utah	49	50	16	16
Wasatch	47	48	15	15
Washington	47	48	14	14
Wayne	0	0	0	0
Weber	76	78	44	45

*When a county has no acres of a given class of land, a $0 taxable value is listed.

The largest change in dry land values was $2 per acre in Weber County as can be seen in **Table A8**.

Table A8. Specific 2016 Proposed Changes in Dry Land Values.

Dry Farm Land Change

County	III	IV
Beaver	0	0
Box Elder	1	1
Cache	1	1
Carbon	1	0
Daggett	0	0
Davis	1	0
Duchesne	1	0
Emery	0	0
Garfield	1	0
Grand	1	0
Iron	1	0
Juab	1	0
Kane	1	0
Millard	1	0
Morgan	1	0
Piute	0	0
Rich	1	0
Salt Lake	1	0
San Juan	1	0
Sanpete	1	0
Sevier	0	0
Summit	1	0
Tooele	1	0
Uintah	1	0
Utah	1	0
Wasatch	1	0
Washington	1	0
Wayne	0	0
Weber	2	1

Grazing Land

In general, grazing lands are similar to other land in production agriculture, the cost of inputs decreased and prices received by famers also went down on average. The effect is as increase in grazing land value as reported in **Table A9**.

Table A9. Suggested 2015-2016 Grazing Land Values.

2016 Grazing Land Values

	2015	2016	2015	2016	2015	2016	2015	2016
County	I	I	II	II	III	III	IV	IV
Beaver	70	70	22	22	16	16	6	6
Box Elder	74	75	23	23	17	17	5	5
Cache	70	70	23	23	15	15	5	5
Carbon	51	52	15	15	12	13	5	5
Daggett	51	52	14	14	11	11	5	5
Davis	60	61	19	19	12	13	5	5
Duchesne	68	69	22	22	13	13	5	5
Emery	70	72	21	21	14	14	6	6
Garfield	75	76	23	23	16	16	5	5
Grand	76	78	22	22	15	15	6	6
Iron	73	74	22	22	15	15	6	6
Juab	64	65	19	19	13	13	5	5
Kane	74	75	24	24	15	15	5	5
Millard	75	76	24	24	16	16	5	5
Morgan	66	67	21	21	13	13	6	6
Piute	89	91	26	26	18	18	6	6
Rich	64	65	20	20	13	13	5	5
Salt Lake	68	70	21	22	14	15	5	5
San Juan	74	75	24	24	16	17	5	5
Sanpete	62	63	18	18	13	13	5	5
Sevier	63	64	18	18	13	13	5	5
Summit	71	72	20	20	14	14	5	5
Tooele	70	71	20	20	13	13	5	5
Uintah	79	80	28	29	19	19	6	6
Utah	65	66	23	23	13	14	5	5
Wasatch	52	53	17	17	12	12	5	5
Washington	64	65	21	21	13	13	5	5
Wayne	87	89	28	29	18	18	5	5
Weber	68	70	20	20	14	14	6	6

Table A10. Specific Proposed 2016 Changes in Grazing Land Value.

Grazing Land Change

County	I	II	III	IV
Beaver	0	0	0	0
Box Elder	1	0	0	0
Cache	0	0	0	0
Carbon	1	0	1	0
Daggett	1	0	0	0
Davis	1	0	1	0
Duchesne	1	0	0	0
Emery	2	0	0	0
Garfield	1	0	0	0
Grand	2	0	0	0
Iron	1	0	0	0
Juab	1	0	0	0
Kane	1	0	0	0
Millard	1	0	0	0
Morgan	1	0	0	0
Piute	2	0	0	0
Rich	1	0	0	0
Salt Lake	2	1	1	0
San Juan	1	0	1	0
Sanpete	1	0	0	0
Sevier	1	0	0	0
Summit	1	0	0	0
Tooele	1	0	0	0
Uintah	1	1	0	0
Utah	1	0	1	0
Wasatch	1	0	0	0
Washington	1	0	0	0
Wayne	2	1	0	0
Weber	2	0	0	0

Non-Production Land

No changes are proposed for non-production land for the 2016 report year as shown in **Table A11**.

Table A11. Suggested Changes in Non-Production Land, 2015-2016.

Non-productive Land Values and Change

				Value
County	2015	2016		Change
Beaver	5	5		0
Box Elder	5	5		0
Cache	5	5		0
Carbon	5	5		0
Daggett	5	5		0
Davis	5	5		0
Duchesne	5	5		0
Emery	5	5		0
Garfield	5	5		0
Grand	5	5		0
Iron	5	5		0
Juab	5	5		0
Kane	5	5		0
Millard	5	5		0
Morgan	5	5		0
Piute	5	5		0
Rich	5	5		0
Salt Lake	5	5		0
San Juan	5	5		0
Sanpete	5	5		0
Sevier	5	5		0
Summit	5	5		0
Tooele	5	5		0
Uintah	5	5		0
Utah	5	5		0
Wasatch	5	5		0
Washington	5	5		0
Wayne	5	5		0
Weber	5	5		0