2017

Report to the

Farmland Advisory Committee
prepared for the

Utah Tax Commission

by

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 2017 year as a result of the study for farmland production values. The data represents the 2016 production year. The changes are summarized according to land use as follows: ***Irrigated Cropland***- Irrigated Crop land values should be decreased across the state. Due to the large amount of alfalfa acreage in most counties in the state, any change in hay returns has a greater impact on the average county land values. The average alfalfa price decreases along with stable production caused a decrease in value of production that could not be offset by a decrease in cost of the inputs. In addition to the decreases in alfalfa value, the counties where wheat is the primary crop showed an even great decrease due to the drop in the five year average price received by producers. The largest proposed decreases are in Davis and San Juan County, with a decrease in irrigated land value of 5.7 percent. Box Elder County has the next greatest decrease in value, with a proposed 5.1 percent decrease. The higher 4 rates in these counties can be attributed to the higher percent of the production of wheat. The remaining rates are between 4.8 percent and a low of 4.2 percent. These rates result in irrigated land values decreasing from a high of 41 dollars in Box Elder County to 4 dollars in Kane and Rich County. ***Orchard Cropland***- The price and production of fruit was more difficult to calculate this year because NASS has discontinued the collection of data on apple, sweet cherries and apricots. Therefore, orchard land values increased by less than one percent, based on only the production of tart cherries and peaches, with an increase in the average yield and an increase in the average price of tart cherries being the main reason for the increase. Moving forward we will need to evaluate the method that we use to calculate the value of orchard land. ***Meadow Cropland***- Meadow land values should also be decreased across the state. ***Dry Cropland***-Decreases in land values are also recommended for dry land acreage. Average wheat and barley prices decreased by more than ten percent and yields remained relatively constant. ***Grazing Land*****-** Grazing land values should also decrease. ***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 twentieth 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 2016 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 2015 to 2016.

Table 1.		Prices received for Utah's major crops (average percentage change)					
		Price	2016	2015	2014	2013	2012
		Change					
Alfalfa		-6.5%	$ 129.00	$ 164.00	$190.00	$ 181.00	$ 189.00
Barley		-11.2%	$ 2.35	$ 2.80	$3.13	$ 4.20	$ 5.90
Corn(grain)		-3.6%	$ 3.80	$ 4.70	$4.20	$ 5.35	$ 7.70
Corn(silage)		-1.2%	$ 36.00	$ 46.00	$52.75	$ 42.00	$ 54.81
Safflower		0.0%	$ 20.70	$ 21.00	$25.20	$ 25.50	$ 28.50
Wheat(all)		-14.5%	$ 3.80	$ 5.40	$7.05	$ 8.10	$ 8.50

Table 2 Includes the prices received and the change prices received for tart cherries and peaches using the five year average numbers.

Table 2.		Prices received for Utah's fruit crop (average percentage change)					
		Price	2016	2015	2014	2013	2012
		change					
Tart Cherries		3%	$ 0.34	$ 0.34	$ 0.43	$ 0.48	$ 0.51
Peaches		12%	$ 1,080.00	$ 1,080.00	$ 981.00	$ 1,080.00	$ 1,080.00

(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 7.8**
Chemicals		**down 4.1**
Fuel		**down 8.8**
Machinery		**down 18**
Feed		**down 4.9**
Seed		**down 2.3**
Consumer Price Index		**up 2.2**

The national average cost for all production inputs for Utah's typical crops showed a decrease of (4.1%) from the previous year.

Consumer Price Index (CPI) changes are also shown for comparative purposes in blue font. The CPI index (2.2%) 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 five year average yield changes are shown in **Table 4.**

Table 4.		Production Yield for Utah crop's, (average percentage change)					
		Ave Yield	2016	2015	2014	2013	2012
		Change					
Alfalfa		-2.10%	3.71	3.67	3.52	3.77	3.62
Barley		0.00%	82	84	83	79.00	80
Corn(grain)		-1.30%	175	173	160	170.00	167
Corn(silage)		-0.80%	24	23	22	23.00	22
Wheat		4.45%	60	48.5	50.3	44.50	45.4
Safflower		-1.80%	810	910	990	570.00	400

(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. A new Ag-census will be conducted in 2017 and the information from that will be us in future publications.

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*** – *2016 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 *2017*) are for the *2016* crop year. Hence, the actual net return in 2017 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 2018, 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 2017 reporting year: prices, costs, crop mix, and productivity or yields.

Crop prices. Prices for the field crops for the 2017 report were all down using the five year average price. The price received by farmers for the major Utah crops for 2015 and 2016 with the average percentage changes and the annual price percentage change are contained in **Table 5**. As you can see using the average price decreases the dramatic swings.

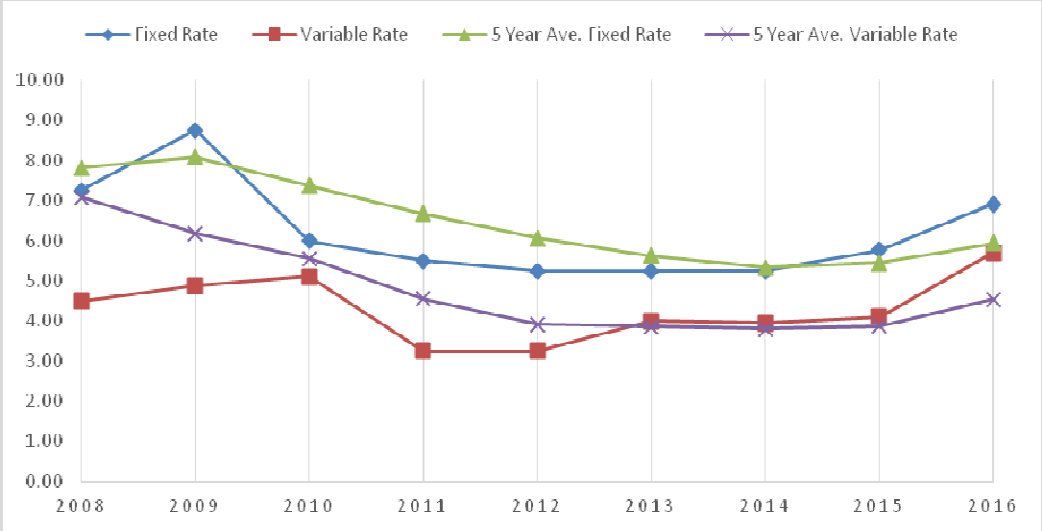
Table 5.		**Prices recieved for major Utah crops**		
		2015-2016 average percentage change		
	Ave. Price	**Annual Price**	**2016**	**2015**
	Change	**Change**		
Alfalfa	-4.5%	21%	$129.00	$164.00
Barley	-11.2%	16%	$2.35	$2.80
Corn(grain)	-9.0%	19%	$3.80	$4.70
Corn(silage)	-4.4%	21%	$36.20	$46.00
Safflower	-2.2%	1%	$20.70	$21.00
Wheat(all)	-14.7%	30%	$3.80	$5.40

Average prices were up for tart cherries, and peaches between 2015 and 2016. The change between the annual price, and using a five (5) year average price are shown in **Table 6**. With the discontinuing of apples, sweet cherries, and apricots, tart cherries is the primary fruit crop in the state of Utah, the change in tart cherries has the greatest effect on the orchard land value.

Table 6.		**Prices received for Utah's fruit crop**		
		2015-2016 average percentage change		
	Ave. Price	**Annual Price**	**2016**	**2015**
	change	**change**		
Tart Cherries	3%	5%	$ 0.35	$ 0.34
Peaches	12%	51%	$ 1,640.00	$ 1,080.00

Cost Changes. Input costs were all down in 2016 with machinery prices being the input that increased the greatest. The total change in the price of the inputs had a net effect of a (4.1) four and one tenth percent decrease in the cost of production. (**Table 3**). Interest rates were one of the production costs that remained relatively constant in 2016 as shown in **Figure 1**.

Figure 1. The historical moving average cost of capital, 2008-2016.



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.

***Crop Yields*.** Average crop yield changes from 2015 to 2016 were mixed with some decreasing, barley, corn silage, and safflower. While grain corn, and wheat increased, with alfalfa remaining the same. (**Table 7**). None of the yield increases or decreases were very large, with wheat being the largest at a little over four percent.

Table 7.		**2015-2016 Utah Average Crop Yields**		
		(average percentage change)		
		Ave. Yield		
Crop		**change**	**2016**	**2015**
Alfalfa		0.0%	3.7 ton per acre	3.7 ton per acre
Barley		-0.2%	81.8 bu.per acre	81.8 bu.per acre
Corn(grain)		1.3%	175 bu. per acre	166.8 bu. per acre
Corn(silage)		-1.0%	24.0 ton per acre	23.0 ton per acre
Wheat		4.4%	60 bu. per acre	47.6 bu. per acre
Safflower		-1.8%	810 lbs. per acre	750 lbs. per acre

Average cherry and peach production yields increased in 2016. The total production and the five year average are shown in (**Table 8**)

Table 8		**Utah Fruit Production**		
		2015-2016 (average percentage change)		
		Average		
		change	**2016**	**2015**
Tart Cherries (lbs)		8%	49600000	38360000
Peaches (tons)		0.6%	4750	4964.2

***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. There is a new census being taken this year and that information will be used in future production analysis, along with how to move forward without apple production being included.

Summary. 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. Average yield decreased slightly for most crops in the state, with the exception of wheat and corn used fro grain which increased. The average price received by producers in the state decreased in 2016 for all crops. The cost of production decreased nationally, enabling producers to have lower input costs, but the decrease cost weren't enough to overcome the price and production decreases. These factors caused decreases in land values across the State.

Orchard Land

The yields for fruit production in the State were up in 2016. The cost of production decreased nationally and prices received by producers were also increased. Thereby causing a increase in orchard land values across the State.

M*eadow Land*

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

Dry Land

Decreases in the land values for dry land are recommended for the same reasons as the other land types, reduced input costs could not overcome the decreases in average prices received.

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.

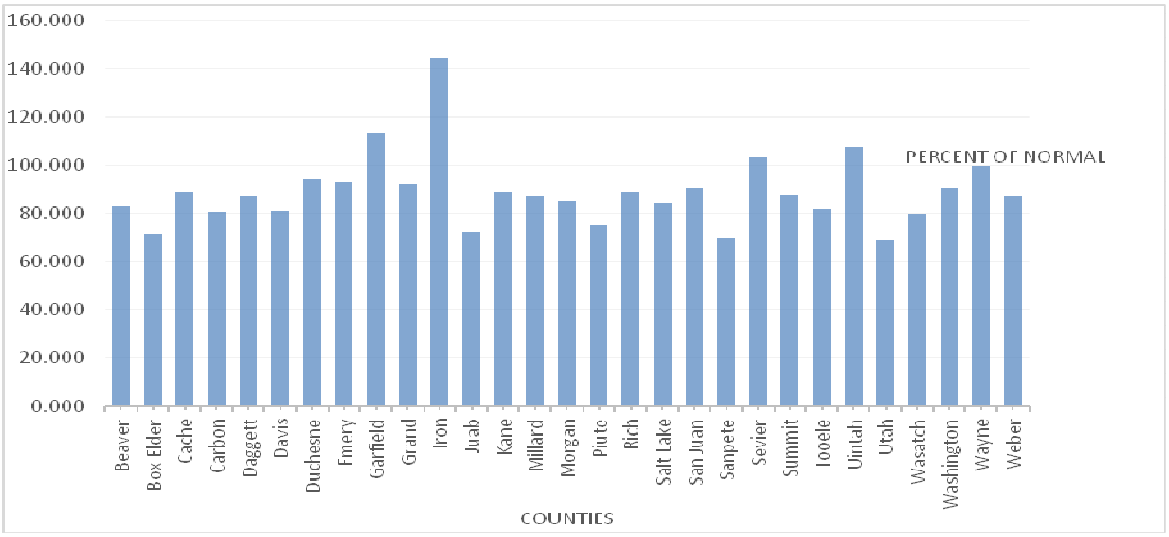


Figure 2. County Five-year Precipitation Average, 2011-2016.

Most of the counties in the state received less than average precipitation when considering a five-year running average. However, over the last few years the numbers have been getting closer to an average normal. Juab, Sanpete, and Utah counties received the lowest average precipitation over the last 5 years.

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 2017 proposed irrigated land values is included in **Table 9**. More detailed information in terms of the actual proposed land values and changes for all land classes and types for 2017 recommendations are provided in **Appendix A**.

Table 9. 2017 Proposed Farmland Assessment Values.*

		Irrigated	Land		Dry	Land	Orchard	Meadow
County	I	II	III	IV	III	IV		
Beaver	0	0	532	438	49	14	620	225
Box Elder	758	666	524	433	88	56	671	242
Cache	654	558	423	328	112	79	620	251
Carbon	501	399	265	170	47	14	620	125
Daggett	0	0	0	180	0	0	0	149
Davis	804	708	569	475	49	15	676	253
Duchesne	0	465	326	229	52	18	620	159
Emery	476	383	241	149	0	0	620	132
Garfield	0	0	201	108	46	14	620	99
Grand	0	367	232	140	47	14	620	127
Iron	759	665	528	432	47	14	620	250
Juab	0	424	285	189	49	15	620	145
Kane	398	306	169	76	46	14	620	104
Millard	753	661	523	425	45	13	620	185
Morgan	0	0	366	271	61	26	620	187
Piute	0	0	317	222	0	0	620	181
Rich	0	0	169	78	46	14	0	100
Salt Lake	680	584	445	344	52	15	620	218
San Juan	0	0	163	74	50	16	620	0
Sanpete	0	511	375	282	52	18	620	185
Sevier	0	538	400	307	0	0	620	191
Summit	0	438	299	206	46	14	620	193
Tooele	0	426	285	194	50	14	620	177
Uintah	0	0	353	261	52	18	620	198
Utah	715	618	474	381	48	15	681	239
Wasatch	0	463	322	229	46	14	620	199
Washington	620	528	388	292	46	13	733	217
Wayne	0	0	313	220	0	0	620	164
Weber	769	674	536	438	75	42	676	287

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

Appendix A: Values of Land in Alternative Uses

Irrigated Farm Land: Irrigated farmland values were decreased in the counties throughout the state in 2017 along with the 2016 value 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.

	2016	2017	2016	2017	2016	2017	2016	2017
County	I	I	II	II	III	III	IV	IV
Beaver	0	0	0	0	557	532	458	438
Box Elder	799	758	702	666	552	524	456	433
Cache	688	654	587	558	445	423	345	328
Carbon	525	501	418	399	277	265	178	170
Daggett	0	0	0	0	0	0	188	180
Davis	853	804	751	708	603	569	504	475
Duchesne	0	0	486	465	341	326	239	229
Emery	498	476	401	383	252	241	156	149
Garfield	0	0	0	0	210	201	113	108
Grand	0	0	383	367	242	232	146	140
Iron	793	759	695	665	552	528	451	432
Juab	0	0	444	424	299	285	198	189
Kane	417	398	320	306	177	169	80	76
Millard	788	753	691	661	547	523	445	425
Morgan	0	0	0	0	384	366	285	271
Piute	0	0	0	0	332	317	232	222
Rich	0	0	0	0	177	169	82	78
Salt Lake	711	680	611	584	465	445	360	344
San Juan	0	0	0	0	173	163	79	74
Sanpete	0	0	535	511	392	375	295	282
Sevier	0	0	562	538	418	400	320	307
Summit	0	0	459	438	313	299	216	206
Tooele	0	0	447	426	299	285	204	194
Uintah	0	0	0	0	370	353	273	261
Utah	749	715	648	618	497	474	399	381
Wasatch	0	0	485	463	337	322	240	229
Washington	649	620	553	528	406	388	306	292
Wayne	0	0	0	0	328	313	231	220
Weber	803	769	704	674	560	536	457	438

The largest decrease of any land type was a decrease in Davis County class I land of a $49 per acre decrease. All irrigated land value changes are shown in table A2.

Table A2. Specific Changes in Irrigated Farmland Values.

County	I	II	III	IV
Beaver	0	0	-25	-20
Box Elder	-41	-36	-28	-23
Cache	-34	-29	-22	-17
Carbon	-24	-19	-12	-8
Daggett	0	0	0	-8
Davis	-49	-43	-34	-29
Duchesne	0	-21	-15	-10
Emery	-22	-18	-11	-7
Garfield	0	0	-9	-5
Grand	0	-16	-10	-6
Iron	-34	-30	-24	-19
Juab	0	-20	-14	-9
Kane	-19	-14	-8	-4
Millard	-35	-30	-24	-20
Morgan	0	0	-18	-14
Piute	0	0	-15	-10
Rich	0	0	-8	-4
Salt Lake	-31	-27	-20	-16
San Juan	0	0	-10	-5
Sanpete	0	-24	-17	-13
Sevier	0	-24	-18	-13
Summit	0	-21	-14	-10
Tooele	0	-21	-14	-10
Uintah	0	0	-17	-12
Utah	-34	-30	-23	-18
Wasatch	0	-22	-15	-11
Washington	-29	-25	-18	-14
Wayne	0	0	-15	-11
Weber	-34	-30	-24	-19

Orchard Land

Land values for orchard lands increased in all counties. Production and price of tart cherries and peaches both increased. Thereby causing land values to increase slightly as shown in **Table A3**.

Table A3. Suggested Changes in 2017 Orchard Land Values..

	2016	2017
County	Value	Value
Beaver	614	620
Box Elder	665	671
Cache	614	620
Carbon	614	620
Daggett	0	0
Davis	670	676
Duchesne	614	620
Emery	614	620
Garfield	614	620
Grand	614	620
Iron	614	620
Juab	614	620
Kane	614	620
Millard	614	620
Morgan	614	620
Piute	614	620
Rich	0	0
Salt Lake	614	620
San Juan	614	620
Sanpete	614	620
Sevier	614	620
Summit	614	620
Tooele	614	620
Uintah	614	620
Utah	675	681
Wasatch	614	620
Washington	726	733
Wayne	614	620
Weber	670	676

*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 $7 per acre in value as noted in Table A4.

Table A4. Specific Proposed Changes in 2017 Orchard Land Values.

	Value
County	Change
Beaver	6
Box Elder	6
Cache	6
Carbon	6
Daggett	0
Davis	6
Duchesne	6
Emery	6
Garfield	6
Grand	6
Iron	6
Juab	6
Kane	6
Millard	6
Morgan	6
Piute	6
Rich	0
Salt Lake	6
San Juan	6
Sanpete	6
Sevier	6
Summit	6
Tooele	6
Uintah	6
Utah	6
Wasatch	6
Washington	7
Wayne	6
Weber	6

Meadow Land

Meadow land values decreased and are shown for the 2017 report year in **Table A5**.

Table A5. Suggested Values in Meadow Land, 2016-2017.

County	**2016**	**2017**
Beaver	235	225
Box Elder	255	242
Cache	264	251
Carbon	131	125
Daggett	156	149
Davis	268	253
Duchesne	166	159
Emery	138	132
Garfield	104	99
Grand	133	127
Iron	261	250
Juab	152	145
Kane	109	104
Millard	193	185
Morgan	196	187
Piute	190	181
Rich	105	100
Salt Lake	228	218
San Juan	0	0
Sanpete	193	185
Sevier	199	191
Summit	202	193
Tooele	186	177
Uintah	207	198
Utah	251	239
Wasatch	208	199
Washington	227	217
Wayne	172	164
Weber	300	287

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

The largest decrease in 2017 meadow land value was $13 per acre in Box Elder, Cache, and Weber County as shown in **Table A6**.

Table A6. Specific 2017 Proposed Changes in Meadow Land Values.

County	
Beaver	-10
Box Elder	-13
Cache	-13
Carbon	-6
Daggett	-7
Davis	-15
Duchesne	-7
Emery	-6
Garfield	-5
Grand	-6
Iron	-11
Juab	-7
Kane	-5
Millard	-8
Morgan	-9
Piute	-9
Rich	-5
Salt Lake	-10
San Juan	0
Sanpete	-8
Sevier	-8
Summit	-9
Tooele	-9
Uintah	-9
Utah	-12
Wasatch	-9
Washington	-10
Wayne	-8
Weber	-13

Dry Farm Land

A decrease in dry farm land values is proposed in most counties as shown in **Table A7**.

Table A7. Suggested Values for Dry Farm Land, 2016-2017.

	2016	2017	2016	2017
County	III	III	IV	IV
Beaver	51	49	15	14
Box Elder	93	88	59	56
Cache	118	112	83	79
Carbon	49	47	15	14
Daggett	0	0	0	0
Davis	52	49	16	15
Duchesne	54	52	19	18
Emery	0	0	0	0
Garfield	48	46	15	14
Grand	49	47	15	14
Iron	49	47	15	14
Juab	51	49	16	15
Kane	48	46	15	14
Millard	47	45	14	13
Morgan	64	61	28	26
Piute	0	0	0	0
Rich	48	46	15	14
Salt Lake	54	52	15	15
San Juan	53	50	17	16
Sanpete	54	52	19	18
Sevier	0	0	0	0
Summit	48	46	15	14
Tooele	52	50	14	14
Uintah	54	52	19	18
Utah	50	48	16	15
Wasatch	48	46	15	14
Washington	48	46	14	13
Wayne	0	0	0	0
Weber	78	75	45	42

*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 $6 per acre in Cache County as can be seen in **Table A8**.

Table A8. Specific 2017 Proposed Changes in Dry Land Values.

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

Grazing Land

In general, grazing lands are similar to other land in production agriculture, average production yields decreased, prices received by famers also went down on average. The effect is a decrease in grazing land value as shown in **Table A9**.

Table A9. Suggested 2016-2017 Grazing Land Values.

	2016	2017	2016	2017	2016	2017	2016	2017
County	I	I	II	II	III	III	IV	IV
Beaver	70	67	22	21	16	15	6	5
Box Elder	75	71	23	22	17	16	5	5
Cache	70	67	23	21	15	14	5	5
Carbon	52	50	15	14	13	12	5	5
Daggett	52	50	14	13	11	11	5	5
Davis	61	58	19	18	13	12	5	5
Duchesne	69	66	19	18	13	13	5	5
Emery	72	68	21	20	14	13	6	5
Garfield	76	73	23	22	16	15	5	5
Grand	78	74	22	21	15	14	6	5
Iron	74	71	22	21	15	14	6	5
Juab	65	62	19	18	13	13	5	5
Kane	75	72	24	23	15	14	5	5
Millard	76	73	24	23	16	15	5	5
Morgan	67	64	21	20	13	12	6	5
Piute	91	86	26	25	18	17	6	5
Rich	65	62	20	19	13	12	5	5
Salt Lake	70	67	21	20	15	14	5	5
San Juan	75	71	24	23	17	16	5	5
Sanpete	63	60	18	17	13	13	5	5
Sevier	64	62	18	17	13	13	5	5
Summit	72	69	20	19	14	13	5	5
Tooele	71	68	20	19	13	13	5	5
Uintah	80	77	29	27	19	18	6	5
Utah	66	63	23	22	14	13	5	5
Wasatch	53	50	17	16	12	12	5	5
Washington	65	62	21	20	13	12	5	5
Wayne	89	84	29	27	18	17	5	5
Weber	70	67	20	19	14	13	6	5

A decrease of $4 in class one land value in several counties is the largest proposed decrease as can be seen in **Table A10**

Table A10. Specific Proposed 2017 Changes in Grazing Land Value.

County	I	II	III	IV
Beaver	-3	-1	-1	-1
Box Elder	-4	-1	-1	0
Cache	-3	-2	-1	0
Carbon	-2	-1	-1	0
Daggett	-2	-1	0	0
Davis	-3	-1	-1	0
Duchesne	-3	-4	0	0
Emery	-4	-1	-1	-1
Garfield	-3	-1	-1	0
Grand	-4	-1	-1	-1
Iron	-3	-1	-1	-1
Juab	-3	-1	0	0
Kane	-3	-1	-1	0
Millard	-3	-1	-1	0
Morgan	-3	-1	-1	-1
Piute	-5	-1	-1	-1
Rich	-3	-1	-1	0
Salt Lake	-3	-2	-1	0
San Juan	-4	-1	-1	0
Sanpete	-3	-1	0	0
Sevier	-2	-1	0	0
Summit	-3	-1	-1	0
Tooele	-3	-1	0	0
Uintah	-3	-2	-1	-1
Utah	-3	-1	-1	0
Wasatch	-3	-1	0	0
Washington	-3	-1	-1	0
Wayne	-5	-2	-1	0
Weber	-3	-1	-1	-1

Non-Production Land

No changes are proposed for non-production land for the 2017 report year as shown in **Table A11**.

Table A11. Suggested Value and Changes in Non-Production Land, 2016-2017.

				Value
County	2016	2017		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