2018

Report to the

Farmland Advisory Committee prepared for the

Utah Tax Commission

by

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Executive Summary

Summary of Study Recommendations:

Changes in land values are recommended to Utah State Tax Commission for the 2018 year because of the study for farmland production values. The data represents the 2017 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 have a greater impact on the average county land values. The average price of alfalfa received by producers decreased along with stable production and an increase in the cost of the inputs, caused a decrease in alfalfa production land values. In addition to the decreases in the alfalfa land value, all other crops except onions had a decrease in value. Box Elder, Cache, Daggett, Davis, Duchesne, Emery, Garfield, Kane, Iron, Kane, Millard, Morgan, Piute, Rich, San Juan, Summit, Toole, Uintah, Utah, Wasatch, Washington, and Wayne County all had a decrease of greater than ten percent. The greatest proposed decrease in value is for Millard County, with a 79 dollar value decrease.

Orchard Cropland- The price and production of orchard land was calculated this year using tart cherries and peaches. Therefore, proposed orchard land values should be decreased by 5.4 percent, based on the production of tart cherries and peaches, with a decrease in the both average yields and an increase in the average price of tart cherries being the main reason for the increase. Moving forward we will see what information the new ag-census contains.

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 crop prices decreased across the state and yields remained relatively constant, with the one exception of wheat which had a slight increase in average **yields**.

Grazing Land**-** Grazing land values should also decrease.

Non-Production Land**-** No change in value for nonproduction land is recommended.

A summary of all 2018 proposed Utah agricultural production land values are contained in **Table 1**, a more complete evaluation of the proposed land values follows.

Table 1. Summary of all 2018 proposed Utah land values.

	Irrigated Land Values					Grazing Land Values			Dry Land Values		Meadow	Non	Orchard
County	I	II	III	IV	I	II	III	IV	III	IV	Land	Prod.	Land
Beaver	0	0	514	424	65	20	15	5	47	14	218	5	586
Box Elder	677	595	514	387	63	20	14	5	79	50	216	5	634
Cache	582	497	376	292	60	19	12	5	100	70	223	5	586
Carbon	451	359	239	153	45	13	11	5	42	13	113	5	586
Daggett	0	0	0	162	45	12	10	5	0	0	134	5	0
Davis	719	633	509	425	52	16	11	5	44	13	226	5	639
Duchesne	0	417	292	205	59	16	12	5	47	16	143	5	586
Emery	427	344	216	134	61	18	12	5	0	0	118	5	586
Garfield	0	0	181	97	66	20	13	5	41	13	89	5	586
Grand	0	332	210	127	67	19	13	5	42	13	115	5	586
Iron	683	599	475	389	64	19	13	5	42	13	225	5	586
Juab	0	380	256	170	56	16	12	5	44	13	130	5	586
Kane	357	275	152	68	65	21	13	5	41	13	93	5	586
Millard	674	592	468	380	65	21	13	5	40	12	166	5	586
Morgan	0	0	328	243	57	18	13	5	55	23	168	5	586
Piute	0	0	285	199	77	22	15	5	0	0	163	5	586
Rich	0	0	152	70	56	17	11	5	41	13	90	5	0
Salt Lake	616	529	403	312	61	18	13	5	47	15	198	5	586
San Juan	0	0	146	66	63	21	14	5	45	17	0	5	586
Sanpete	0	460	338	254	54	15	12	5	47	16	167	5	586
Sevier	0	484	360	276	56	15	12	5	0	0	172	5	586
Summit	0	393	269	185	62	17	12	5	41	13	173	5	586
Tooele	0	381	255	174	61	17	12	5	45	13	158	5	586
Uintah	0	0	316	234	69	24	16	5	47	16	177	5	586
Utah	641	554	425	341	56	20	12	5	43	13	214	5	644
Wasatch	0	416	289	206	45	14	11	5	41	13	179	5	586
Washington	557	475	349	263	56	18	11	5	41	12	195	5	693
Wayne	0	0	281	198	75	24	15	5	0	0	147	5	586
Weber	694	608	483	395	60	17	12	5	68	38	259	5	639

Introduction

This report represents the fifteenth annual 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, 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 2017 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 years old and will require updating through the process described below for those crop budgets which are not current.

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[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.

***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.

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.

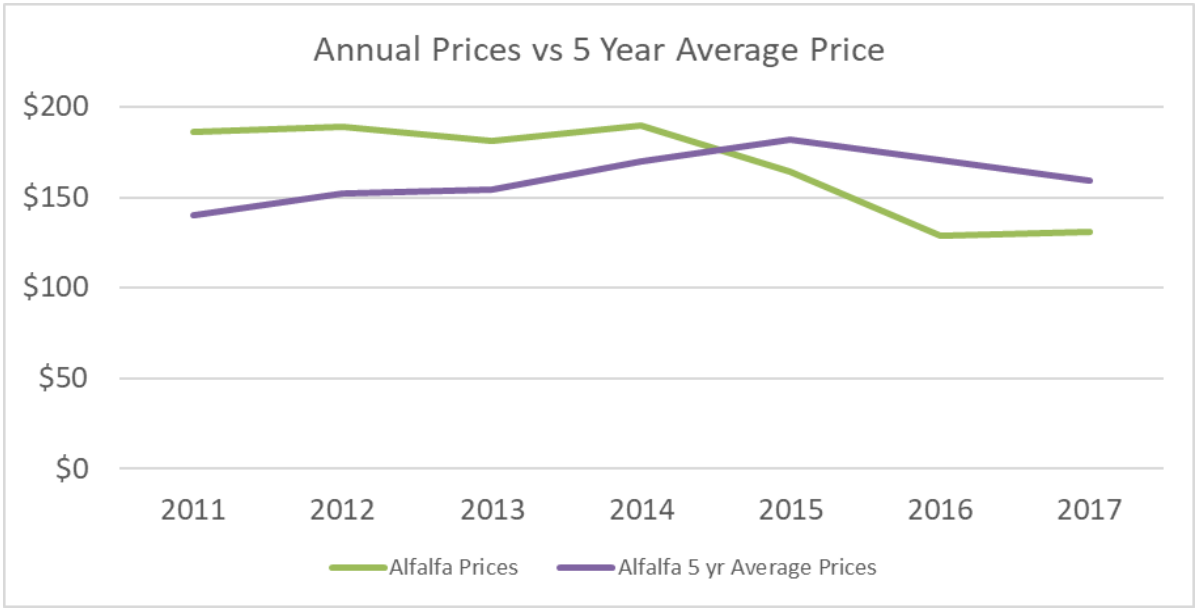
For example, if hay prices have averaged $75, $85, $95, $105, and $115 per ton over the past five years, the price that would be used in the crop budget would be ($75 + $85 + $95 + $105 + $115)/5 = $95/ton (which is considerably *lower* than the two most recent years). On the other hand, if the prices over the past 5 years had averaged $115, $105, $95, $85, and $75, then the average price would still be $95/ton, however, please 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.

A graphical example of this can be seen in **Figure 1** below using the annual alfalfa prices and the 5 year average prices.

Figure 1. The annual and average price of alfalfa in Utah.



(1) 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 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 2**.

Table 2.	**National cost of Inputs**
Fertilizer	**up 5.5 %**
Chemicals	**up 1.4 %**
Fuel	**up 20 %**
Machinery	**up 1.4 %**
Feed	**up .02 %**
Seed	**up .02 %**
Consumer Price Index	**up 2.1 %**

Based on USDA information, the national average cost for all production inputs for Utah's typical crops showed an increase of (4%) from the previous year.

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

Consumer Price Index (CPI) changes are also shown for comparative purposes. The CPI index (2.1%) rose along with production costs.

(2) ***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 yields for Utah's crops and the average yield changes are shown in **Table 2.**

Table 2.	Production Yield for Utah's major crops, (average percentage change)					
	Ave Yield Change	2017	2016	2015	2014	2013
Alfalfa	-1.74%	3.69	3.71	3.67	3.52	3.77
Barley	-1.45%	75	82	84	83	79
Corn(grain)	0.12%	175	175	175	160	170
Corn(silage)	4.10%	25	24	23	22	23
Wheat	-0.08%	52	60	48.5	50.3	44.5
Safflower	5.63%	1000	810	910	990	570
Onions	8.93%	532	541	690	482	523

(3) ***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 was to be conducted in 2017 and the information from that will be us in future publications when it becomes available.

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.

(4) ***Dated Prices and Costs*** – *2017 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 *2018*) are for the *2017* crop year. Hence, the actual net return in 2018 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 2019, 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 2018 reporting year: prices, costs, crop mix, and productivity or yields.

Crop prices. Prices received by producers for most of the field crops for the 2018 report were down using the average price, the price received for wheat increased 2.9 percent and onions had a .2 percent increase in the price received. The price received by farmers for the major Utah crops for 2016 and 2017 with the average percentage changes and the annual price percentage change are contained in **Table 3**. The average percentage change can be higher than the annual because the price that drops out of the average is much higher than the price being added. The average still takes out the greater swings in price that may occur.

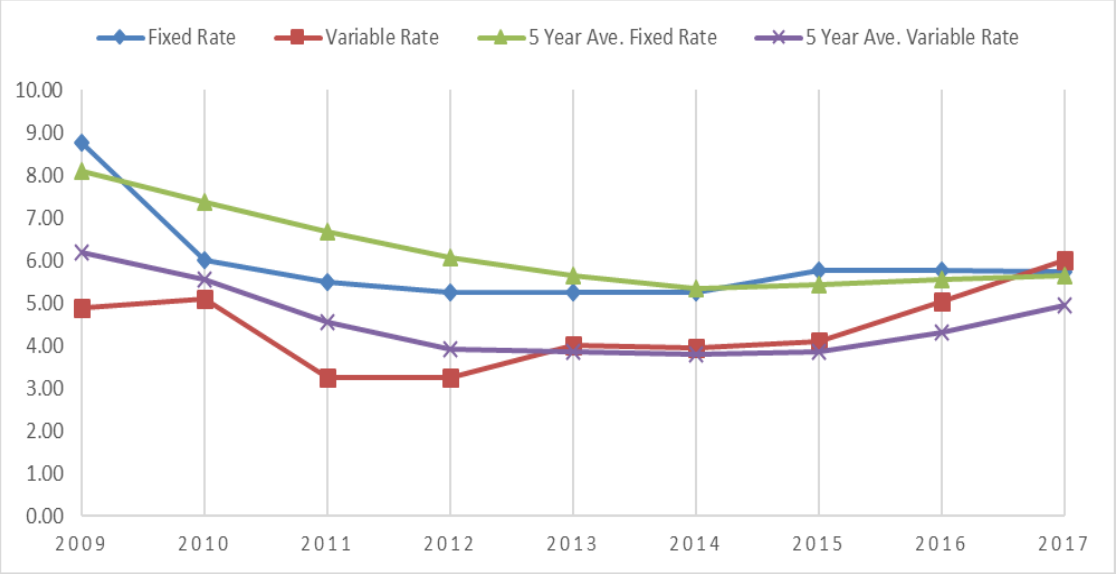
Table 3.		Prices recieved for Utah's major crops		
		2016-2017 average percentage change		
	Ave. Price	Annual Price	2017	2016
	Change	Change		
Alfalfa	-6.5%	1.6%	$131.00	$129.00
Barley	-10.2%	29.8%	$3.05	$2.35
Corn(grain)	-12.6%	-3.9%	$3.65	$3.80
Corn(silage)	-6.1%	1.6%	$36.75	$36.17
Safflower	-10.0%	-13.5%	$17.90	$20.70
Wheat(all)	2.9%	23.7%	$4.70	$3.80
Onions	0.2%	-3.6%	$13.50	$14.00

Average prices were down for tart cherries, and up for peaches between 2016 and 2017. The percentage change between the annual price, and the average percentage change are shown in **Table 4**. With the discontinuing of data collection for apples, sweet cherries, and apricots, tart cherries are the primary fruit crop in the state of Utah. Therefore, the change in tart cherries has a greater effect on the orchard land value than peaches.

Table 4.	Prices received for Utah's fruit crop			
	2017-2016 average percentage change			
	Ave. Price change	Annual Price change	2017	2016
Tart Cherries	-9.7%	-13.1%	$ 0.30	$ 0.35
Peaches	6.4%	-10.1%	$ 1,460.00	$ 1,640.00

Cost Changes. Input costs were all up in 2017 with fuel costs being the input that increased the greatest. The total change in the price of the inputs had a net effect of a (4) four percent increase in the cost of production. (**Table 2**). Interest rates were one of the production costs that remained relatively constant in 2017 as shown in **Figure 2**.

Figure 2. The historical moving average cost of capital, 2009-2017[3].



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] Based on information provided by Western Ag Credit.

***Crop Yields*.** Average crop yield changes from 2016 to 2017 were mixed with some decreasing, alfalfa, barley, and wheat. While corn safflower, and onions increased. (**Table 5**). None of the average increases or decreases were very large with the greatest change being onions at 8.93 percent. Again, the average took out much of the larger swings.

Table 5.	**2017-2016 Utah's Average Crop Yields**			
	(average percentage change)			
	Ave. Yield	**Annual yield**		
Crop	**change**	**change**	**2017**	**2016**
Alfalfa	-1.74%	-0.50%	3.69 ton per acre	3.71 ton per acre
Barley	-1.45%	-8.50%	75 bu.per acre	82 bu. per acre
Corn(grain)	0.12%	0.5%	176 bu. per acre	175 bu. per acre
Corn(silage)	4.10%	4.10%	25 ton per acre	24 ton per acre
Wheat	-0.08%	-13.30%	52 bu. per acre	60 per acre
Safflower	5.63%	23.40%	1000 lbs. per acre	810 lbs per acre
Onions	8.93%	-22.80%	532 cwt per acre	690 cwt. per acre

The five year average cherry production yields increased, and the five year average production of peaches decreased in 2017. The total 2017 and 2016 production, the annual percentage change and the five year average are shown in **Table 6**.

Table 6.	**Utah Fruit Production**			
	2017-2016 (average percentage change)			
	Average Yield	**Annual Yield**		
	Change	**Change**	**2017**	**2016**
Tart Cherries (lbs)	-9.7%	-47.58%	26,000,000	49,600,000
Peaches (tons)	6.4%	-28.42%	3400	4750

***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 smaller urban 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 we need to consider. There was a new census taken in 2017, we have not received that census information but, 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

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 alfalfa, barley, and wheat. Corn silage, grain corn, safflower, and onions had an increase in average yield. The average price received by producers in the state decreased in 2017 for most crops. Safflower and onions had an increase in the average price. The cost of production increased nationally by four percent. These factors resulted in proposed decreases in the land values across the State.

Orchard Land

The average yields for fruit production in the State were down in 2017. The costs of production increased nationally and prices received by producers increased for peaches but decreased for tart cherries. Thereby causing a decrease in orchard land values across the State.

Me*adow 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 decrease.

Dry Land

Decreases in the land values for dry land are recommended for the same reasons as the other land types, increasing input costs, stable yields, lower average prices cause the decreases in land values.

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 3.)** 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.

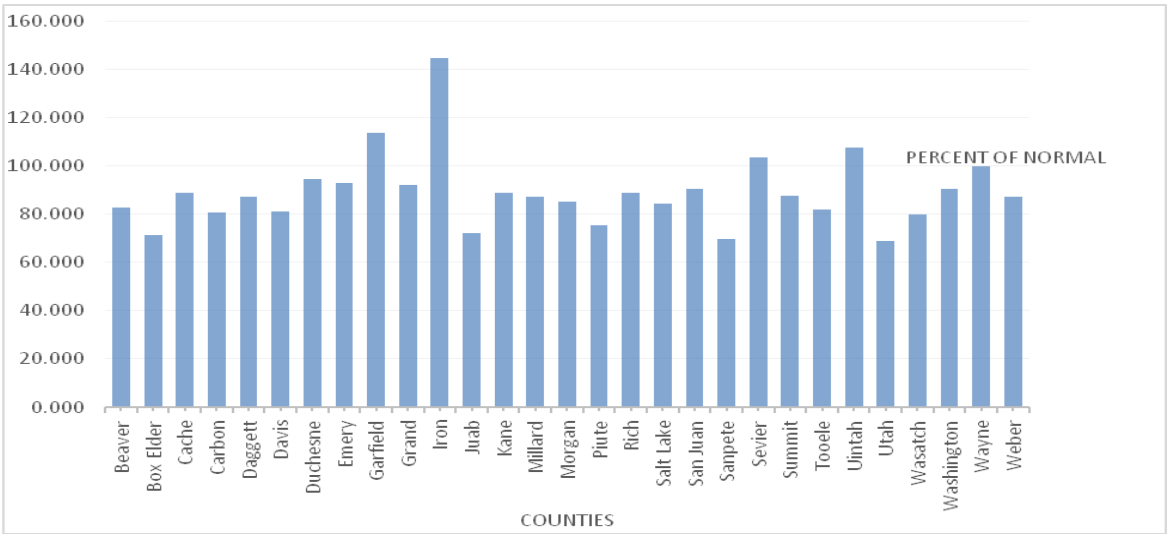


Figure 3. County Five-year Precipitation Average, 2012-2017[4].

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.

[4] Data collected from USU Climate Center.

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 2018 proposed irrigated land values is included in **Table 1**. More detailed information in terms of the actual proposed land values and changes for all land classes and types for 2018 recommendations are provided in **Appendix A**.

Appendix A: Values of Land in Alternative Uses

Irrigated Farm Land: Irrigated farmland values were decreased in the counties throughout the state in 2018 along with the 2017 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.

	2017	2018	2017	2018	2017	2018	2017	2018
County	I	I	II	II	III	III	IV	IV
Beaver	0	0	0	0	532	514	438	424
Box Elder	758	677	666	595	524	468	433	387
Cache	654	582	558	497	423	376	328	292
Carbon	501	451	399	359	265	239	170	153
Daggett	0	0	0	0	0	0	180	162
Davis	804	719	708	633	569	509	475	425
Duchesne	0	0	465	417	326	292	229	205
Emery	476	427	383	344	241	216	149	134
Garfield	0	0	0	0	201	181	108	97
Grand	0	0	367	332	232	210	140	127
Iron	759	683	665	599	528	475	432	389
Juab	0	0	424	380	285	256	189	170
Kane	398	357	306	275	169	152	76	68
Millard	753	674	661	592	523	468	425	380
Morgan	0	0	0	0	366	328	271	243
Piute	0	0	0	0	317	285	222	199
Rich	0	0	0	0	169	152	78	70
Salt Lake	680	616	584	529	445	403	344	312
San Juan	0	0	0	0	163	146	74	66
Sanpete	0	0	511	460	375	338	282	254
Sevier	0	0	538	484	400	360	307	276
Summit	0	0	438	393	299	269	206	185
Tooele	0	0	426	381	285	255	194	174
Uintah	0	0	0	0	353	316	261	234
Utah	715	641	618	554	474	425	381	341
Wasatch	0	0	463	416	322	289	229	206
Washington	620	557	528	475	388	349	292	263
Wayne	0	0	0	0	313	281	220	198
Weber	769	694	674	608	536	483	438	395

Irrigated Farmland Changes

The largest decrease of any land type was a decrease in Davis County class I land of $85 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	-18	-14
Box Elder	-81	-71	-56	-46
Cache	-72	-61	-47	-36
Carbon	-50	-40	-26	-17
Daggett	0	0	0	-18
Davis	-85	-75	-60	-50
Duchesne	0	-48	-34	-24
Emery	-49	-39	-25	-15
Garfield	0	0	-20	-11
Grand	0	-35	-22	-13
Iron	-76	-66	-53	-43
Juab	0	-44	-29	-19
Kane	-41	-31	-17	-8
Millard	-79	-69	-55	-45
Morgan	0	0	-38	-28
Piute	0	0	-32	-23
Rich	0	0	-17	-8
Salt Lake	-64	-55	-42	-32
San Juan	0	0	-17	-8
Sanpete	0	-51	-37	-28
Sevier	0	-54	-40	-31
Summit	0	-45	-30	-21
Tooele	0	-45	-30	-20
Uintah	0	0	-37	-27
Utah	-74	-64	-49	-40
Wasatch	0	-47	-33	-23
Washington	-63	-53	-39	-29
Wayne	0	0	-32	-22
Weber	-75	-66	-53	-43

Orchard Land Values

Land values for orchard lands decreased in all counties for the 2018 report. The 2017 average production for tart cherries and peaches both decreased. Average prices for tart cherries decrease greater than the average price for peaches increased. Thereby causing land values to decrease state wide by as much as $37 shown in **Table A3**.

Table A3. Suggested Changes in 2018 Orchard Land Values.

County	2017 Value	2018 Value	Value Change
Beaver	620	586	-34
Box Elder	671	634	-37
Cache	620	586	-34
Carbon	620	586	-34
Daggett	0	0	0
Davis	676	639	-37
Duchesne	620	586	-34
Emery	620	586	-34
Garfield	620	586	-34
Grand	620	586	-34
Iron	620	586	-34
Juab	620	586	-34
Kane	620	586	-34
Millard	620	586	-34
Morgan	620	586	-34
Piute	620	586	-34
Rich	0	0	0
Salt Lake	620	586	-34
San Juan	620	586	-34
Sanpete	620	586	-34
Sevier	620	586	-34
Summit	620	586	-34
Tooele	620	586	-34
Uintah	620	586	-34
Utah	681	644	-37
Wasatch	620	586	-34
Washington	733	693	-40
Wayne	620	586	-34
Weber	676	639	-37

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

Meadow Land

Proposed meadow land values decreased across the state, the largest decrease being $28 per acre in Cache, and Weber County are shown in **Table A4**.

Table A4. Suggested Values and change in Meadow Land, 2017-2018.

	2017	2018	Value
County	Value	Value	Change
Beaver	225	218	-7
Box Elder	242	216	-26
Cache	251	223	-28
Carbon	125	113	-12
Daggett	149	134	-15
Davis	253	226	-27
Duchesne	159	143	-16
Emery	132	118	-14
Garfield	99	89	-10
Grand	127	115	-12
Iron	250	225	-25
Juab	145	130	-15
Kane	104	93	-11
Millard	185	166	-19
Morgan	187	168	-19
Piute	181	163	-18
Rich	100	90	-10
Salt Lake	218	198	-20
San Juan	0	0	0
Sanpete	185	167	-18
Sevier	191	172	-19
Summit	193	173	-20
Tooele	177	158	-19
Uintah	198	177	-21
Utah	239	214	-25
Wasatch	199	179	-20
Washington	217	195	-22
Wayne	164	147	-17
Weber	287	259	-28

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

Dry Farm Land Values

A decrease in dry farm land values is proposed in all counties for 2018 as shown in **Table A5**.

Table A5. Suggested Values for Dry Farm Land, 2017-2018.

	2017	2018	2017	2018
County	III	III	IV	IV
Beaver	49	47	14	14
Box Elder	88	79	56	50
Cache	112	100	79	70
Carbon	47	42	14	13
Daggett	0	0	0	0
Davis	49	44	15	13
Duchesne	52	47	18	16
Emery	0	0	0	0
Garfield	46	41	14	13
Grand	47	42	14	13
Iron	47	42	14	13
Juab	49	44	15	13
Kane	46	41	14	13
Millard	45	40	13	12
Morgan	61	55	26	23
Piute	0	0	0	0
Rich	46	41	14	13
Salt Lake	52	47	15	15
San Juan	50	45	16	17
Sanpete	52	47	18	16
Sevier	0	0	0	0
Summit	46	41	14	13
Tooele	50	45	14	13
Uintah	52	47	18	16
Utah	48	43	15	13
Wasatch	46	41	14	13
Washington	46	41	13	12
Wayne	0	0	0	0
Weber	75	68	42	38

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

Dry Farm Land Change

The largest proposed decrease in dry land values was $12 per acre in Cache County as can be seen in **Table A6**.

Table A6. Specific 2018 Proposed Changes in Dry Land Values.

County	III	IV
Beaver	-2	0
Box Elder	-9	-6
Cache	-12	-9
Carbon	-5	-1
Daggett	0	0
Davis	-5	-2
Duchesne	-5	-2
Emery	0	0
Garfield	-5	-1
Grand	-5	-1
Iron	-5	-1
Juab	-5	-2
Kane	-5	-1
Millard	-5	-1
Morgan	-6	-3
Piute	0	0
Rich	-5	-1
Salt Lake	-5	0
San Juan	-5	1
Sanpete	-5	-2
Sevier	0	0
Summit	-5	-1
Tooele	-5	-1
Uintah	-5	-2
Utah	-5	-2
Wasatch	-5	-1
Washington	-5	-1
Wayne	0	0
Weber	-7	-4

Grazing Land Values

In general, grazing lands are similar to other land in production agriculture, average production yields decreased, average prices received by famers also went down. The effect is a proposed decrease in grazing land value as shown in **Table A7**.

Table A7. Suggested 2017-2018 Grazing Land Values.

	2017	2018	2017	2018	2017	2018	2017	2018
County	I	I	II	II	III	III	IV	IV
Beaver	67	65	21	20	15	15	5	5
Box Elder	71	63	22	20	16	14	5	5
Cache	67	60	21	19	14	12	5	5
Carbon	50	45	14	13	12	11	5	5
Daggett	50	45	13	12	11	10	5	5
Davis	58	52	18	16	12	11	5	5
Duchesne	66	59	18	16	13	12	5	5
Emery	68	61	20	18	13	12	5	5
Garfield	73	66	22	20	15	13	5	5
Grand	74	67	21	19	14	13	5	5
Iron	71	64	21	19	14	13	5	5
Juab	62	56	18	16	13	12	5	5
Kane	72	65	23	21	14	13	5	5
Millard	73	65	23	21	15	13	5	5
Morgan	64	57	20	18	12	11	5	5
Piute	86	77	25	22	17	15	5	5
Rich	62	56	19	17	12	11	5	5
Salt Lake	67	61	20	18	14	13	5	5
San Juan	71	63	23	21	16	14	5	5
Sanpete	60	54	17	15	13	12	5	5
Sevier	62	56	17	15	13	12	5	5
Summit	69	62	19	17	13	12	5	5
Tooele	68	61	19	17	13	12	5	5
Uintah	77	69	27	24	18	16	5	5
Utah	63	56	22	20	13	12	5	5
Wasatch	50	45	16	14	12	11	5	5
Washington	62	56	20	18	12	11	5	5
Wayne	84	75	27	24	17	15	5	5
Weber	67	60	19	17	13	12	5	5

Grazing Land Change

A decrease of $9 in class one land value in several counties is the largest proposed decrease as can be seen in **Table A8.**

Table A8. Specific Proposed 2018 Changes in Grazing Land Value.

County	I	II	III	IV
Beaver	-2	-1	0	0
Box Elder	-8	-2	-2	0
Cache	-7	-2	-2	0
Carbon	-5	-1	-1	0
Daggett	-5	-1	-1	0
Davis	-6	-2	-1	0
Duchesne	-7	-2	-1	0
Emery	-7	-2	-1	0
Garfield	-7	-2	-2	0
Grand	-7	-2	-1	0
Iron	-7	-2	-1	0
Juab	-6	-2	-1	0
Kane	-7	-2	-1	0
Millard	-8	-2	-2	0
Morgan	-7	-2	-1	0
Piute	-9	-3	-2	0
Rich	-6	-2	-1	0
Salt Lake	-6	-2	-1	0
San Juan	-8	-2	-2	0
Sanpete	-6	-2	-1	0
Sevier	-6	-2	-1	0
Summit	-7	-2	-1	0
Tooele	-7	-2	-1	0
Uintah	-8	-3	-2	0
Utah	-7	-2	-1	0
Wasatch	-5	-2	-1	0
Washington	-6	-2	-1	0
Wayne	-9	-3	-2	0
Weber	-7	-2	-1	0

Non-Production Land

No changes are proposed for non-production land for the 2018 report year as shown in **Table A9**.

Table A9. Suggested Value and Changes in Non-Production Land, 2017-2018.

			Value
County	2017	2018	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