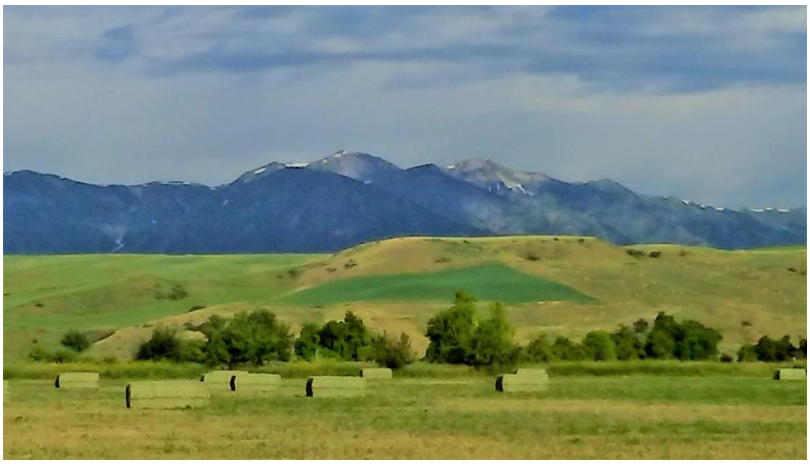
2019

Report to the

Farmland Advisory Committee prepared for the

Utah Tax Commission



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September, 20 2019

Executive Summary

Summary of Study Recommendations:

Changes in land values are recommended to Utah State Tax Commission for the 2019 year because of the study for farmland production values. The data represents the 2018 production year values and the 2017 ag-census data. The changes are summarized according to land use as follows:

Irrigated Cropland- Irrigated Crop land values should be decreased across most of 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 increased in the state. But a decrease in production and an increase in the cost of the inputs, caused a decrease in alfalfa production land values. The only increase in land values are in Box Elder and Salt Lake county. The increase is caused by an increase in the value of wheat production. These two counties have a larger number of acres in wheat production. The greatest increase is in Salt Lake county, with a value of seven dollars. The greatest proposed decrease in value is for Iron and Washington county with a 15-dollar value decrease.

Orchard Cropland- The price and production of orchard land was calculated this year using tart cherries, apples and peaches. Proposed orchard land values should be decreased by 15.8 percent, based on the production of tart cherries, apples, and peaches, with a decrease in the average yield for tart cherries and a decrease in the average price of apples, tart cherries, and peaches being the main reason for the decrease.

Meadow Cropland- Meadow land values should also be decreased across the state.

Dry Cropland-Decreases in land values are also recommended for most of the dry land acreage. Most average crop prices decreased across the state and yields remained relatively constant. An increase in the cost of production caused the decrease as well.

***Grazing Land*-** Grazing land values should also decrease in most counties as well.

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

Table 1. Summary of all 2019 proposed Utah land values.

	Irrigated Land Values				Grazing Land Values				Dry Land Values				
County	I	II	III	IV	I	II	III	IV	III	IV	Meadow Land	Non Prod.	Orchard Land
Beaver	0	0	512	423	65	20	15	5	47	14	217	5	493
Box Elder	682	599	471	390	63	20	14	4	80	50	218	5	534
Cache	576	492	372	289	59	19	12	4	99	69	221	5	493
Carbon	439	484	233	149	44	13	11	5	41	13	110	5	493
Daggett	0	0	0	158	44	12	10	4	0	0	130	5	0
Davis	715	629	506	422	52	16	11	4	44	13	225	5	538
Duchesne	0	407	285	200	58	16	12	4	46	16	140	5	493
Emery	416	335	210	131	59	18	12	4	0	0	115	5	493
Garfield	0	0	176	94	64	19	13	4	40	13	87	5	493
Grand	0	323	205	124	65	19	13	5	41	13	112	5	493
Iron	668	586	465	380	63	19	13	5	41	13	220	5	493
Juab	0	376	253	168	55	16	12	4	42	13	13	5	493
Kane	347	268	148	66	63	20	13	4	40	13	90	5	493
Millard	663	583	461	374	64	21	13	4	39	12	163	5	493
Morgan	0	0	320	237	56	18	11	4	54	22	164	5	493
Piute	0	0	278	194	75	21	15	4	0	0	159	5	493
Rich	0	0	148	68	54	17	11	4	40	13	88	5	0
Salt Lake	623	535	408	316	62	18	13	5	48	15	200	5	493
San Juan	0	0	151	68	65	22	14	4	46	17	0	5	493
Sanpete	0	450	331	248	53	15	12	5	46	16	163	5	493
Sevier	0	476	354	271	55	15	12	5	0	0	169	5	493
Summit	0	382	262	180	60	17	12	4	40	13	168	5	493
Tooele	0	372	249	170	60	17	12	4	44	13	154	5	493
Uintah	0	0	308	228	67	23	16	4	46	16	173	5	493
Utah	639	552	424	340	56	20	12	4	43	13	213	5	542
Wasatch	0	405	281	200	44	14	11	4	40	13	174	5	493
Washington	542	514	340	256	54	18	11	4	40	12	190	5	583
Wayne	0	0	273	193	73	23	15	4	0	0	143	5	493
Weber	684	599	476	389	59	17	12	5	67	37	255	5	583

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 2018 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.

[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: http://extension.usu.edu/agribusiness/Resources/budgets .

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.

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 2** shows the past five years of state-wide price data for Utah's major crops, and the average percentage change for each crop from 2017 to 2018.

Table 2	**Prices received for Utah's major crops (average percentage change)**					
	Price Change	**2018**	**2017**	**2016**	**2015**	**2014**
Alfalfa	0.254%	$ 170.00	$ 131.00	$ 129.00	$ 164.00	$ 190.00
Barley	-2.493%	$ 3.35	$ 3.05	$ 2.35	$ 2.80	$ 3.13
Corn(grain)	-1.880%	$ 4.50	$ 3.65	$ 3.80	$ 4.70	$ 4.20
Corn(silage)	4.548%	$ 46.67	$ 36.75	$ 36.17	$ 46.00	$ 52.75
Safflower	-8.460%	$ 16.20	$ 17.90	$ 20.70	$ 21.00	$ 25.20
Wheat(all)	-1.010%	$ 6.45	$ 4.70	$ 3.80	$ 5.40	$ 7.05
Onions	0.149%	$ 11.50	$ 13.50	$ 14.00	$ 13.10	$ 10.50

Table 3 Includes the prices received by producers and the average percentage change in the price for tart cherries, apples and peaches[2] using 2017 to 2018 numbers.

Table 3	Prices received for Utah's fruit crop (average percentage change)					
	Ave. Price change	2018	2017	2016	2015	2014
Tart Cherries (per LB)	-13.7%	$ 0.22	$ 0.30	$ 0.35	$ 0.34	$ 0.43
Apples (per LB)	-9.9%	$ 0.31	$ 0.32	$ 0.32	$ 0.33	$ 0.32
Peaches (per Ton)	-6.5%	$ 801.00	$ 864.00	$ 803.00	$ 732.00	$ 750.00

(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 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.[3] Because of the rapid changes in input prices (i.e., fertilizer, fuel, pesticides, etc.), we consider 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

[2] National level peach prices are being used in this report. USDA did not report 2018 peach prices for Utah. 2017-1995 Utah and national peach prices were strongly correlated. For that reason, we switched to national level prices for this report.

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

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 4**.

Table 4.	**National cost of Inputs**
Fertilizer	**up 8.9%**
Chemicals	**down 3.6%**
Fuel	**down 10.5%**
Machinery	**up 3.4%**
Feed	**up 3.4%**
Seed	**up .02%**
Consumer Price Index	**up 1.6 %**

Based on USDA information, the national average cost for all production inputs for Utah's typical crops showed an increase of (0.8%) from the previous year. Consumer Price Index (CPI) changes are also shown for comparative purposes. The CPI index (1.6%) 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 5.**

Table 5.	**Ave Yield Change**	**2018**	**2017**	**2016**	**2015**	**2014**	**2013**
Alfalfa	-2.12%	3.38	3.69	3.71	3.67	3.52	3.77
Barley	1.74%	86	75	82	84	83	79
Corn(grain)	1.40%	182	175	175	175	160	170
Corn(silage)	0.00%	23	25	24	23	22	23
Wheat	2.93%	52	52	60	48.5	50.3	44.5
Safflower	6.30%	840	1000	810	910	990	570
Onions	-0.61%	506	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 2017 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 increase production 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.

(4) ***Dated Prices and Costs*** – *2019 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 *2019*) are for the *2018* crop year. Hence, the actual net return in 2019 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 2020, 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 2019 reporting year: prices, costs, crop mix, and productivity or yields.

Crop prices. Prices received by producers for most of the field crops for the 2019 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 2017 and 2018 with the average percentage changes and the annual price percentage change are contained in **Table 6**. 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.

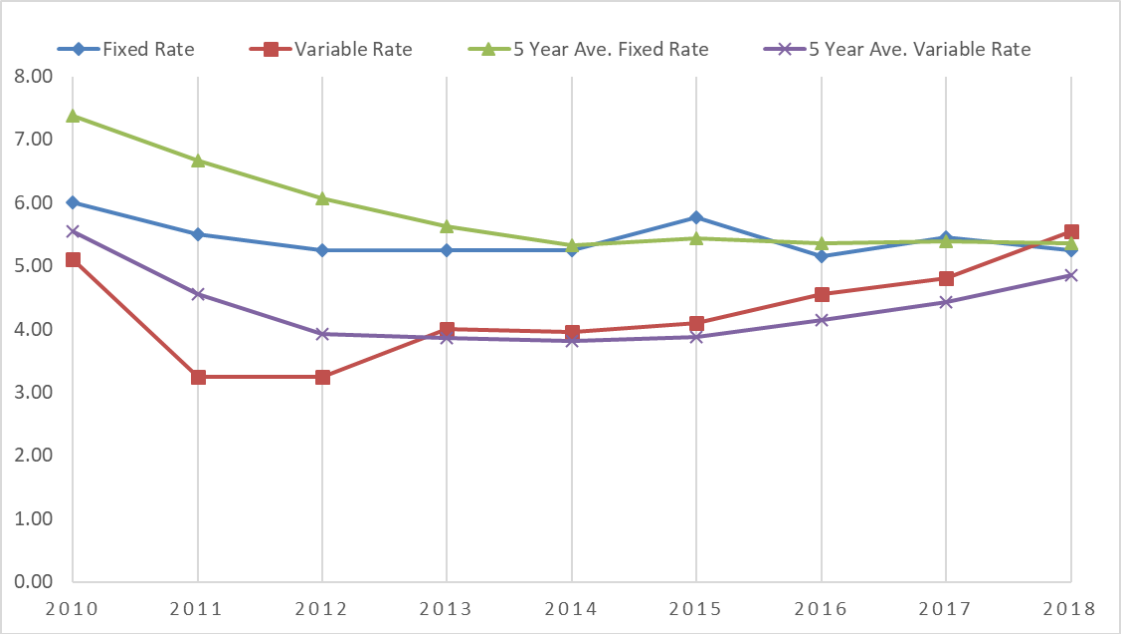
Table 6	Prices received for Utah's major crops			
	2017-2018 average price change			
	Ave. Price Change	Annual Price Change	2018	2017
Alfalfa	0.25%	29.77%	$ 170.00	$ 131.00
Barley	-2.49%	9.84%	$ 3.35	$ 3.05
Corn(grain)	-1.88%	23.29%	$ 4.50	$ 3.65
Corn(silage)	4.55%	26.99%	$ 46.67	$ 36.75
Safflower	-8.46%	-9.50%	$ 16.20	$ 17.90
Wheat(all)	-1.01%	37.23%	$ 6.45	$ 4.70
Onions	0.15%	-14.81%	$ 11.50	$ 13.50

Average prices were down for tart cherries, apples and f or peaches between 2017 and 2018. The percentage change between the annual price, and the average percentage change are shown in **Table 7**. With the discontinuing of state data for apples, and peaches. National data was used for price and production for those commodities. The 2017 state census information was used for all orchard crop production lands. Tart cherries are still 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 apples or peaches.

Table 7	Prices received for Utah's fruit crop			
	2018-2017 average percentage change			
	Ave. Price change	Annual Price change	2018	2017
Tart Cherries	-13.70%	-26.67%	$ 0.22	$ 0.30
Apples	-9.90%	-3.13%	$ 0.31	$ 0.32
Peaches	-6.50%	-7.29%	$ 801.00	$ 864.00

Cost Changes. Input costs were mostly increasing in 2018 with the exception of fuel and chemical costs being the input that decreased. The total change in the price of the inputs had a net effect of a (0.8) point eight percent increase in the cost of production. (**Table 4**). Interest rates were one of the production costs, 20-year fixed interest rates that remained relatively constant in 2018 while short term variable rates for operating loans increased as shown in **Figure 1**.

Figure 1. The historical moving average cost of capital, 2010-2018[4].



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 2017 to 2018 were mixed with some decreasing, alfalfa, corn silage, and onions. While corn, barley, grain corn, safflower, and wheat increased. (**Table 8**). None of the average increases or decreases were very large with the greatest change being safflower at 6.30 percent increase. Again, the average took out much of the larger swings.

[4] Based on information provided by Western Ag Credit.

Table 8	Yield per acre for Major Utah Crops			
	2018-2017 Average and Annual change			
Crop	Ave. yield change	Annual Yield change	2018	2017
Alfalfa	-2.12%	-8.40%	3.38 ton	3.69 ton
Barley	1.74%	14.67%	86 bu.	75 bu.
Corn(grain)	1.40%	3.41%	182 bu.	176 bu.
Corn(silage)	0.00%	-8.00%	23 ton	25 ton
Wheat	2.93%	0.00%	52 bu.	52 bu.
Safflower	6.30%	-16.00%	840 bu.	1000 lbs.
Onions	-0.61%	-4.89%	506 cwt.	532 cwt.

The five-year average cherry production yields decreased, and the five-year average production of peaches, and apples increased in 2018. The total 2017 and 2018 production, the annual percentage change and the five-year average are shown in (**Table 9**).

Table 9	Utah Fruit Production			
	2018-2017 (average percentage change)			
	Ave. Yield Change	Annual Yield Change	2018	2017
Tart Cherries (lbs)	-8.6%	73.08%	45,000,000	26,000,000
Apples	7.00%	-0.88%	11,452,200	11,553,700
Peaches (tons)	3.9%	-11.00%	651,500	732,050

***Crop Mix*.** The mix of crops on a county-by-county basis is based on the 2017 census data (2017, NASS). The 2017 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.

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, and onions. Corn silage, grain corn, safflower, and barley had an increase in average yield. The average price received by producers in the state decreased in 2018 for most crops. Alfalfa and onions had an increase in the average price. The cost of production increased nationally by almost one percent. These factors resulted in proposed decreases in the land values across the State.

Orchard Land

The average yields for tart cherry production in the State were down in 2018, with peaches and apples increasing national. The costs of production increased nationally and prices received by producers increased for apples but decreased for peaches and 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, 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 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.

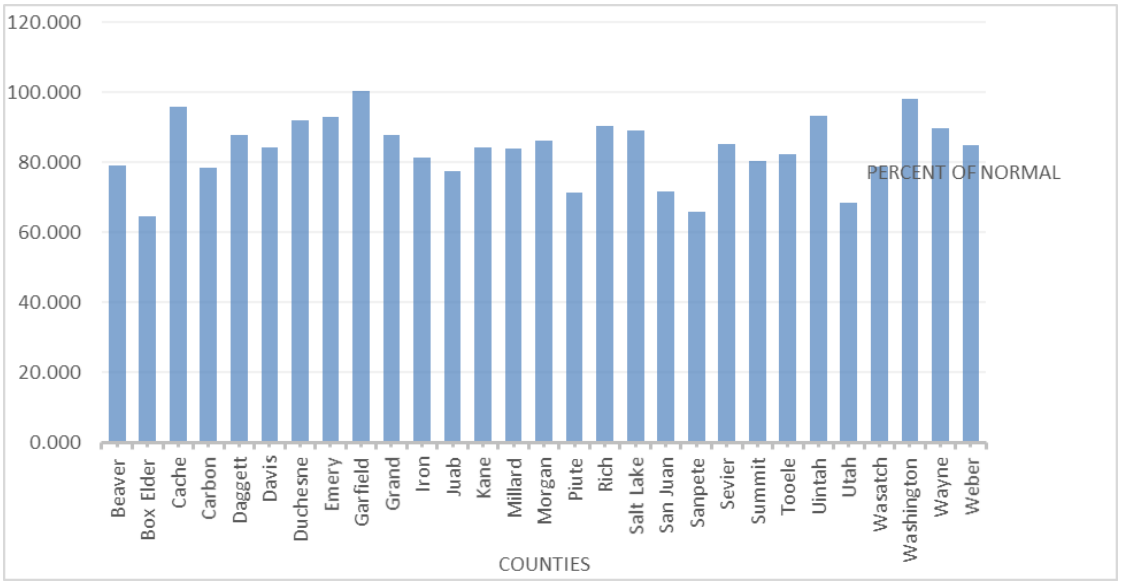


Figure 2. County Five-year Precipitation Average, 2013-2018[5].

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.

[5] Data collected from USU Climate Center.

One area of concern is the lack of prices reported at the state level. Due to a retirement in the beginning of January, state level commodity prices are not being reported to USDA. This is an area that could cause data issues in the future.

A consolidation of the 2019 proposed irrigated land values is included in **Table 10**. More detailed information in terms of the actual proposed land values and changes for all land classes and types for 2019 recommendations are provided in **Appendix A**.

Table 10	Irrigated Land Values			
County	**I**	**II**	**III**	**IV**
Beaver	0	0	512	423
Box Elder	682	599	471	390
Cache	576	492	372	289
Carbon	439	484	233	149
Daggett	0	0	0	158
Davis	715	629	506	422
Duchesne	0	407	285	200
Emery	416	335	210	131
Garfield	0	0	176	94
Grand	0	323	205	124
Iron	668	586	465	380
Juab	0	376	253	168
Kane	347	268	148	66
Millard	663	583	461	374
Morgan	0	0	320	237
Piute	0	0	278	194
Rich	0	0	148	68
Salt Lake	623	535	408	316
San Juan	0	0	151	68
Sanpete	0	450	331	248
Sevier	0	476	354	271
Summit	0	382	262	180
Tooele	0	372	249	170
Uintah	0	0	308	228
Utah	639	552	424	340
Wasatch	0	405	281	200
Washington	542	514	340	256
Wayne	0	0	273	193
Weber	684	599	476	389

Appendix A: Values of Land in Alternative Uses

Irrigated Farm Land: Irrigated farmland values were decreased in most of the counties throughout the state in 2019. Box Elder and Salt Lake County have a slight increase. 2019 land value along with the 2018 value as shown in **Table A1**. For those counties without any land in a class, a value of zero is given consistent with previous reports.

Table A1. Irrigated Farmland, Classes I through IV.

	2018	2019	2018	2019	2018	2019	2018	2019
County	I	I	II	II	III	III	IV	IV
Beaver	0	0	0	0	514	512	424	423
Box Elder	677	682	595	599	468	471	387	390
Cache	582	576	497	492	376	372	292	289
Carbon	451	439	497	484	239	233	153	149
Daggett	0	0	0	0	0	0	162	158
Davis	719	715	633	629	509	506	425	422
Duchesne	0	0	417	407	292	285	205	200
Emery	427	416	344	335	216	210	134	131
Garfield	0	0	0	0	181	176	97	94
Grand	0	0	332	323	210	205	127	124
Iron	683	668	599	586	475	465	389	380
Juab	0	0	380	376	256	253	170	168
Kane	357	347	275	268	152	148	68	66
Millard	674	663	592	583	468	461	380	374
Morgan	0	0	0	0	328	320	243	237
Piute	0	0	0	0	285	278	199	194
Rich	0	0	0	0	152	148	70	68
Salt Lake	616	623	529	535	403	408	312	316
San Juan	0	0	0	0	146	151	66	68
Sanpete	0	0	460	450	338	331	254	248
Sevier	0	0	484	476	360	354	276	271
Summit	0	0	393	382	269	262	185	180
Tooele	0	0	381	372	255	249	174	170
Uintah	0	0	0	0	316	308	234	228
Utah	641	639	554	552	425	424	341	340
Wasatch	0	0	416	405	289	281	206	200
Washington	557	542	528	514	349	340	263	256
Wayne	0	0	0	0	281	273	198	193
Weber	694	684	608	599	483	476	395	389

The largest decrease of any land type was a decrease in Iron and Washington Counties class I land of $15 per acre decrease. All irrigated land value changes are shown in table A2 below.

Table A2. Specific Changes in Irrigated Farmland Values.

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

Orchard Land

Land values for orchard lands decreased in all counties for the 2019 report. The 2018 average production for tart cherries decreased, with peache and apple production increasing by a small amount. Average prices for tart cherries, apple, and peaches decreased. Thereby causing orchard land values to decrease state wide by as much as $110 as shown in **Table A3**.

Table A3. Suggested Changes in 2019 Orchard Land Values.

	2018	2019
County	Value	Value
Beaver	586	493
Box Elder	634	534
Cache	586	493
Carbon	586	493
Daggett	0	0
Davis	639	538
Duchesne	586	493
Emery	586	493
Garfield	586	493
Grand	586	493
Iron	586	493
Juab	586	493
Kane	586	493
Millard	586	493
Morgan	586	493
Piute	586	493
Rich	0	0
Salt Lake	586	493
San Juan	586	493
Sanpete	586	493
Sevier	586	493
Summit	586	493
Tooele	586	493
Uintah	586	493
Utah	644	542
Wasatch	586	493
Washington	693	583
Wayne	586	493
Weber	639	538

	Value
County	Change
Beaver	-93
Box Elder	-100
Cache	-93
Carbon	-93
Daggett	0
Davis	-101
Duchesne	-93
Emery	-93
Garfield	-93
Grand	-93
Iron	-93
Juab	-93
Kane	-93
Millard	-93
Morgan	-93
Piute	-93
Rich	0
Salt Lake	-93
San Juan	-93
Sanpete	-93
Sevier	-93
Summit	-93
Tooele	-93
Uintah	-93
Utah	-102
Wasatch	-93
Washington	-110
Wayne	-93
Weber	-101

*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 $5 per acre in Iron, Wasatch and Washington County are shown in **Table A4**.

Table A4. Suggested Values and change in Meadow Land, 2018-2019.

County	2018	2019	County	
Beaver	218	217	Beaver	-1
Box Elder	216	215	Box Elder	-1
Cache	223	221	Cache	-2
Carbon	113	110	Carbon	-3
Daggett	134	130	Daggett	-4
Davis	226	225	Davis	-1
Duchesne	143	140	Duchesne	-3
Emery	118	115	Emery	-3
Garfield	89	87	Garfield	-2
Grand	115	112	Grand	-3
Iron	225	220	Iron	-5
Juab	13	13	Juab	0
Kane	93	90	Kane	-3
Millard	166	163	Millard	-3
Morgan	168	164	Morgan	-4
Piute	163	159	Piute	-4
Rich	90	88	Rich	-2
Salt Lake	198	197	Salt Lake	-1
San Juan	0	0	San Juan	0
Sanpete	167	163	Sanpete	-4
Sevier	172	169	Sevier	-3
Summit	173	168	Summit	-5
Tooele	158	154	Tooele	-4
Uintah	177	173	Uintah	-4
Utah	214	213	Utah	-1
Wasatch	179	174	Wasatch	-5
Washington	195	190	Washington	-5
Wayne	147	143	Wayne	-4
Weber	259	255	Weber	-4

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

Dry Farm Land

A decrease in dry farm land values is proposed in all counties for 2019 as shown in **Table A5**.

Table A5. Suggested Values for Dry Farm Land, 2018-2019.

	2018	2019	2018	2019
County	III	III	IV	IV
Beaver	47	47	14	14
Box Elder	79	80	50	50
Cache	100	99	70	69
Carbon	42	41	13	13
Daggett	0	0	0	0
Davis	44	44	13	13
Duchesne	47	46	16	16
Emery	0	0	0	0
Garfield	41	40	13	13
Grand	42	41	13	13
Iron	42	41	13	13
Juab	42	42	13	13
Kane	41	40	13	13
Millard	40	39	12	12
Morgan	55	54	23	22
Piute	0	0	0	0
Rich	41	40	13	13
Salt Lake	47	48	15	15
San Juan	45	46	17	17
Sanpete	47	46	16	16
Sevier	0	0	0	0
Summit	41	40	13	13
Tooele	45	44	13	13
Uintah	47	46	16	16
Utah	43	43	13	13
Wasatch	41	40	13	13
Washington	41	40	12	12
Wayne	0	0	0	0
Weber	68	67	38	37

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

The largest proposed decrease in dry land values was $1 per acre in several Counties as can be seen in **Table A6**.

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

County	III	IV
Beaver	0	0
Box Elder	1	0
Cache	-1	-1
Carbon	-1	0
Daggett	0	0
Davis	0	0
Duchesne	-1	0
Emery	0	0
Garfield	-1	0
Grand	-1	0
Iron	-1	0
Juab	0	0
Kane	-1	0
Millard	-1	0
Morgan	-1	-1
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	0	0
Wasatch	-1	0
Washington	-1	0
Wayne	0	0
Weber	-1	-1

Grazing Land

In general, grazing lands are similar to other land in production agriculture, production costs increased and 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 2018-2019 Grazing Land Values.

	2018	2019	2018	2019	2018	2019	2018	2019
County	I	I	II	II	III	III	IV	IV
Beaver	65	65	20	20	15	15	5	5
Box Elder	63	63	20	20	14	14	4	4
Cache	60	59	19	19	12	12	4	4
Carbon	45	44	13	13	11	11	5	5
Daggett	45	44	12	12	10	10	4	4
Davis	52	52	16	16	11	11	4	4
Duchesne	59	58	16	16	12	12	4	4
Emery	61	59	18	18	12	12	4	4
Garfield	66	64	20	19	13	13	4	4
Grand	67	65	19	19	13	13	5	5
Iron	64	63	19	19	13	13	5	5
Juab	56	55	16	16	12	12	4	4
Kane	65	63	21	20	13	13	4	4
Millard	65	64	21	21	13	13	4	4
Morgan	57	56	18	18	11	11	4	4
Piute	77	75	22	21	15	15	4	4
Rich	56	54	17	17	11	11	4	4
Salt Lake	61	62	18	18	13	13	5	5
San Juan	63	65	21	22	14	14	4	4
Sanpete	54	53	15	15	12	12	5	5
Sevier	56	55	15	15	12	12	5	5
Summit	62	60	17	17	12	12	4	4
Tooele	61	60	17	17	12	12	4	4
Uintah	69	67	24	23	16	16	4	4
Utah	56	56	20	20	12	12	4	4
Wasatch	45	44	14	14	11	11	4	4
Washington	56	54	18	18	11	11	4	4
Wayne	75	73	24	23	15	15	4	4
Weber	60	59	17	17	12	12	5	5

A decrease of $2 in class one land value in several Counties is the largest proposed decrease as can be seen in **Table A8.**

Table A8. Specific Proposed 2019 Changes in Grazing Land Value.

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

Non-Production Land

No changes are proposed for non-production land for the 2019 report year as shown in **Table A9**.

Table A9. Suggested Value and Changes in Non-Production Land, 2018-2019.

	2018	2019		Value
County				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