Utah Agriculture Outlook
Stakeholder Webinar
Thursday January 20, 2022
11 am to 1 pm MT

Zoom Registration: https://usu.edu.zoom.us/meeting/register/tZUrfuqqq8vGtcPuq_R1v3Fjh3_VGXatwhd

Agenda

1. 2022 Key Crop Market Factors
   Ryan Larsen, Extension Risk & Farm Management Specialist, Utah State University

2. Winter 2021-2022 Snow and Drought Conditions Report
   Anastasia Thayer, Water Economist, Clemson University

3. Input Supply Shortages and Increased Prices
   Kynda Curtis, Extension Agriculture & Food Marketing Specialist, Utah State University

4. Free Farmers’ Markets at Salt Lake County Senior Centers
   Katie Wagner, Extension Assoc. Professor of Horticulture, Salt Lake County

5. Update on the Upcoming Utah Urban and Small Farms Conference
   Ruby Ward, Extension Ag. Entrepreneurship Specialist; Katie Wagner, Horticulture, SL County.

Description
This two-hour webinar hosted by USU Extension Economics will cover 2022 market conditions for hay and forage products, as well as current and predicted drought conditions that may impact Utah’s producers. Additionally, we will provide an overview of current issues and strategies surrounding input supply shortages and increased pricing. Finally, speakers will discuss the USU Extension senior center farmer’s market program and its impact on seniors in Salk Lake County and provide an update on the upcoming Utah Urban and Small Farms Conference to be held in February 2022.

The agriculture outlook is targeted at agricultural stakeholders in Utah including, but not limited to, state and federal agency representatives, farmer and rancher groups, farm financial institutions, tribal government representatives, and Extension leadership. There will be time after each presentation for questions and discussion.
Utah Agriculture Outlook Stakeholder Webinar

11 am to 1 pm

USU Extension Economics

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Program Evaluation Survey

Please respond to our Ag Outlook evaluation survey.... Thank you!

- [https://usu.co1.qualtrics.com/jfe/form/SV_6yXXHVHVCK4CFBI](https://usu.co1.qualtrics.com/jfe/form/SV_6yXXHVHVCK4CFBI)

- USU Extension Applied Economics website
  - [https://extension.usu.edu/apec/](https://extension.usu.edu/apec/)

Input Supply Shortages and Increased Prices

Kynda Curtis, Extension Ag & Food Marketing Specialist
Applied Economics, USU Extension
Overview

• Overview of price changes – inflation
• Comparison of CPI and PPI
• 2021 price outcomes for producers (farmers/ranchers)
• Direct to consumer sales impacts for 2022
• Input pricing and shortages
• Suggestions

Surging food prices push inflation to 30-year high

By Robert Phelan
Business reporter, USA Today
01 day ago

[Image of a grocery store]
Prices - Inflation

• US consumer price inflation index rose 7% over the past year before seasonal adjustments, the steepest climb in prices since June 1982
• It was also a faster rate of increase than November’s 6.8%, and higher than economists had predicted
• Stripping out food and energy costs, inflation rose to 5.5% between December 2020 and December 2021 -- the biggest annual jump since February 1991
• Separately, the food price index climbed 6.3%, while grocery prices rose even more at 6.5% last year
• The energy cost index rose 29.3% over the past year
• Prices are still nowhere near the historic highs from the 1980s
  • Inflation peaked in the spring of 1980 at 14.8% without seasonal adjustments, 14.6% with adjustments

Historical Inflation Rates

Inflation rate is nowhere near historical peak
While consumers are seeing prices rise faster than they have in nearly 40 years, the inflation rate is not near the peaks in the 1870s and 1980s.

Note: The Consumer Price Index for all urban consumers, all items, seasonally adjusted.
Graphic: Teri Nolen, CSU
Consumer Price Index

• The all-items Consumer Price Index (CPI), up 6.8 percent from November 2020
• The CPI for all food increased as food prices were 6.1 percent higher than in November 2020
• The level of food price inflation varies depending on whether the food was purchased for consumption away from home or at home
  • The food-away-from-home (restaurant purchases) CPI was 5.8 percent higher than November 2020
  • The food-at-home (grocery store or supermarket food purchases) CPI 6.4 percent higher than November 2020

Food Prices – Minutes Worked to Purchase
(median weekly salary)

Courtesy of Jayson Lusk
Consumer Price Index

Changes in Consumer Price Indexes for Food, 2018 through 2022

<table>
<thead>
<tr>
<th>Consumer Price Index Base</th>
<th>January-October 2022 to</th>
<th>November-December 2021 to</th>
<th>Year-over-year change</th>
<th>Percentage change</th>
<th>Percentage change</th>
<th>Percentage change</th>
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<th>Percentage change</th>
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<tr>
<td>All food</td>
<td>100</td>
<td>94.6</td>
<td>9.4</td>
<td>9.4</td>
<td>9.4</td>
<td>9.4</td>
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<td>Food at home</td>
<td>100</td>
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<tr>
<td>Beverages</td>
<td>100</td>
<td>96.1</td>
<td>9.6</td>
<td>9.6</td>
<td>9.6</td>
<td>9.6</td>
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<td>Tobacco</td>
<td>100</td>
<td>97.6</td>
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<td>9.7</td>
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<td>Medical care</td>
<td>100</td>
<td>98.2</td>
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<td>9.8</td>
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<td>9.8</td>
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<td>9.8</td>
<td>9.8</td>
<td>9.8</td>
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<td>Transportation and public utilities</td>
<td>100</td>
<td>99.0</td>
<td>9.9</td>
<td>9.9</td>
<td>9.9</td>
<td>9.9</td>
<td>9.9</td>
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<tr>
<td>Entertainment and communication services</td>
<td>100</td>
<td>99.8</td>
<td>9.9</td>
<td>9.9</td>
<td>9.9</td>
<td>9.9</td>
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</tr>
</tbody>
</table>

Producer Price Index

(Selling Price for Domestic Farmers/Ranchers)

Changes in Producer Price Indexes, 2018 through 2022

<table>
<thead>
<tr>
<th>Producer Price Index Base</th>
<th>January-October 2022 to November 2021</th>
<th>November 2021 to December 2021</th>
<th>Year-over-year change</th>
<th>Percentage change</th>
<th>Percentage change</th>
<th>Percentage change</th>
<th>Percentage change</th>
<th>Percentage change</th>
<th>Percentage change</th>
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</thead>
<tbody>
<tr>
<td>All goods</td>
<td>100</td>
<td>98.8</td>
<td>8.8</td>
<td>8.8</td>
<td>8.8</td>
<td>8.8</td>
<td>8.8</td>
<td>8.8</td>
<td>8.8</td>
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<tr>
<td>Crops and products</td>
<td>100</td>
<td>98.7</td>
<td>8.7</td>
<td>8.7</td>
<td>8.7</td>
<td>8.7</td>
<td>8.7</td>
<td>8.7</td>
<td>8.7</td>
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<tr>
<td>Poultry and eggs</td>
<td>100</td>
<td>99.5</td>
<td>9.5</td>
<td>9.5</td>
<td>9.5</td>
<td>9.5</td>
<td>9.5</td>
<td>9.5</td>
<td>9.5</td>
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<tr>
<td>Meat products</td>
<td>100</td>
<td>99.9</td>
<td>9.9</td>
<td>9.9</td>
<td>9.9</td>
<td>9.9</td>
<td>9.9</td>
<td>9.9</td>
<td>9.9</td>
</tr>
<tr>
<td>Cheese products</td>
<td>100</td>
<td>100.3</td>
<td>10.3</td>
<td>10.3</td>
<td>10.3</td>
<td>10.3</td>
<td>10.3</td>
<td>10.3</td>
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<tr>
<td>Other products</td>
<td>100</td>
<td>98.9</td>
<td>8.9</td>
<td>8.9</td>
<td>8.9</td>
<td>8.9</td>
<td>8.9</td>
<td>8.9</td>
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<tr>
<td>Total index</td>
<td>100</td>
<td>99.8</td>
<td>9.8</td>
<td>9.8</td>
<td>9.8</td>
<td>9.8</td>
<td>9.8</td>
<td>9.8</td>
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</tr>
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</table>

Note: The most recent forecast was published on December 31, 2021. The next forecast will be published on January 29, 2022.
Upside for Producers

• Producer price changes outpacing consumer price increases
  • Except for eggs and milk
• Highest prices increased for beef, poultry, and vegetables
• Wheat pricing also expanded by 50%

Direct to Consumer Sales

• Consumers seeing higher prices at the grocery store......
• Farmer’s market, CSA, etc. price adjustments warranted
  • Fresh vegetables and fruit
  • Grass-fed and local beef
    • More processing facilities coming on in Utah & Idaho
• Impacts of covid-based shortages on the demand for local foods remain
  • Strong demand for local meats and vegetables
  • Farmers’ market attendance and CSA membership number still above 2019 levels
Grass Fed Beef - Direct to Consumer (Retail)

<table>
<thead>
<tr>
<th>Carcass Purchase Size</th>
<th>($)</th>
<th>Avg</th>
</tr>
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<tbody>
<tr>
<td>Whole</td>
<td>5.75 - 8.50</td>
<td>7.51</td>
</tr>
<tr>
<td>Half</td>
<td>5.90 - 11.25</td>
<td>8.15</td>
</tr>
<tr>
<td>Quarter</td>
<td>5.99 - 11.75</td>
<td>9.30</td>
</tr>
</tbody>
</table>

Direct Grass Fed Average Price by Region

Region Breakout: Central: MD, SD, NE, KS, MO, IA, MN, WI, MI, OH, WV, IN, IL; Northeast: ME, MA, NH, VT, NY, PA, MD, DE, NJ, CT, RI; Southern: OK, KY, TN, VA, AR, TX, LA, MS; Al, GA, Fl, NC, SC; Western: WA, OR, CA, NV, AZ, NM, CO, WY, MT, ID, UT, AK, HI

Supply Chain Crunches Are Affecting Every Corner of Agriculture

Emily Baron Cadoff

Producers are over-ordering supplies for 2022, farmers are considering new cash crops, while others are getting out of the business.
Input Pricing and Shortages

• “I waited a year for my jars”
• Why supply chain issues?
  • Immense online ordering
  • Transportation capacity
  • Over ordering
  • Lack of packaging materials
  • Labor shortages
  • Shipping/transportation stress
    • Cost of transportation due to fuel price increases
  • Cost of fertilizers and other inputs
    • Fertilizer up 200-300%, bans on some fertilizer imports
    • For example, corn used in many products, lack of fertilizer is causing reductions in corn production

Some Suggestions

• Secure orders early – pre buying
• Lock in pricing ahead of time
• Local sourcing when available
• Use multiple types of packaging
• Equipment and parts sharing
Resources

• US Wholesale Specialty Crop Prices

• Grass fed beef pricing

Questions
Thank you!

kynda.curtis@usu.edu
Key Market Factors for 2022

Key Market Factors

- General Economy
- Fertilizer Prices
- Dairy
- Cattle/Meat
- Grains
CONSUMER PRICE INDEX – ALL ITEMS
1982-1984 Base, Monthly

Index
285
280
275
270
265
260
255
250
245
240
235

Jan  Feb  Mar  Apr  May  Jun  Jul  Aug  Sep  Oct  Nov  Dec

Data Source: Bureau of Labor Statistics
Livestock Marketing Information Center

CPI – FOOD AND BEVERAGES
1982-1984 Base, Monthly

Index
290
285
280
275
270
265
260
255
250
245

Jan  Feb  Mar  Apr  May  Jun  Jul  Aug  Sep  Oct  Nov  Dec

Data Source: Bureau of Labor Statistics
Livestock Marketing Information Center
CPI – MEATS
1982-1984 Base, Monthly

Index

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

245 255 265 275 285 295 305 315 325

Avg. 2015-19 2020 2021

Data Source: Bureau of Labor Statistics
Livestock Marketing Information Center

DOMESTIC U.S. CONSUMER SENTIMENT
Monthly, Index year 1966 = 100

Index


50 60 70 80 90 100 110 120

Data Source: University of Michigan
Livestock Marketing Information Center
So What?

Cost Per Acre

<table>
<thead>
<tr>
<th>Year</th>
<th>Cost Per Acre</th>
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<tbody>
<tr>
<td>Hay 2021</td>
<td>$1,200.00</td>
</tr>
<tr>
<td>Hay 2022</td>
<td>$1,400.00</td>
</tr>
<tr>
<td>Corn 2021</td>
<td>$1,000.00</td>
</tr>
<tr>
<td>Corn 2022</td>
<td>$1,600.00</td>
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So What?

Hay 2021

Hay 2022

So What?

Corn 2021

Corn 2022
### Building an Economic Model for Utah Alfalfa

<table>
<thead>
<tr>
<th></th>
<th>Equation</th>
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<tbody>
<tr>
<td>7 Western States Hay Stocks</td>
<td>-0.122 \times _ _ =</td>
</tr>
<tr>
<td>Annual Change</td>
<td></td>
</tr>
<tr>
<td>National Corn Price Annual</td>
<td>11.33 \times _ _ =</td>
</tr>
<tr>
<td>Change</td>
<td></td>
</tr>
<tr>
<td>Alfalfa Hay Exports Annual</td>
<td>0.0157 \times _ _ =</td>
</tr>
<tr>
<td>Change</td>
<td></td>
</tr>
<tr>
<td>National Milk Price Annual</td>
<td>1.46 \times _ _ =</td>
</tr>
<tr>
<td>Change</td>
<td></td>
</tr>
<tr>
<td>National Feeder Cattle Price</td>
<td>0.41 \times _ _ =</td>
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<tr>
<td>Annual Change</td>
<td></td>
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<tr>
<td>Estimated Utah Hay Price</td>
<td>=</td>
</tr>
</tbody>
</table>

### PERCENT CHANGE DECEMBER 1 HAY STOCKS (2020-2021)

![Hay Stocks Percentage Change Map](image)

Livestock Marketing Information Center

Data Source: USDA-NASS

1/12/22
PERCENT CHANGE MAY 1 HAY STOCKS
(2020-2021)

Livestock Marketing Information Center
Data Source: USDA-NASS

Building an Economic Model for Utah Alfalfa

7 Western States Hay Stocks
Annual Change

National Corn Price Annual Change

Alfalfa Hay Exports Annual Change

National Milk Price Annual Change

National Feeder Cattle Price Annual Change

Estimated Utah Hay Price

Building an Economic Model for Utah Alfalfa

7 Western States Hay Stocks
Annual Change

National Corn Price Annual Change

Alfalfa Hay Exports Annual Change

National Milk Price Annual Change

National Feeder Cattle Price Annual Change

Estimated Utah Hay Price
Corn Futures

Corn Futures

Corn Futures
Corn Futures

Seasonal Chart
- Corn Jul ’22
- Average Price Chart for 5 Prior Jul Contracts

View by Last Price | View by Price Change

![Chart showing price trends over time]

Building an Economic Model for Utah Alfalfa

| 7 Western States Hay Stocks Annual Change | -0.122 x \(-0.152\) | =\$18.54 |
| National Corn Price Annual Change | 11.33 x \$1.00 | =\$11.33 |
| Alfalfa Hay Exports Annual Change | 0.0157 x ________ | = |
| National Milk Price Annual Change | 1.46 x ________ | = |
| National Feeder Cattle Price Annual Change | 0.41 x ________ | = |
| Estimated Utah Hay Price | = |
Alfalfa Exports

Building an Economic Model for Utah Alfalfa

<p>| | | |</p>
<table>
<thead>
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<td>-152</td>
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<tr>
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<td>100</td>
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<td></td>
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<td>National Milk Price Annual Change</td>
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<tr>
<td>National Feeder Cattle Price Annual</td>
<td>0.41 x</td>
<td>__________</td>
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<tr>
<td>Change</td>
<td></td>
<td>=</td>
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<tr>
<td>Estimated Utah Hay Price</td>
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</tbody>
</table>
### BUTTER PRICES
Grade AA, CME, Monthly

Data Source: USDA-AMS, Dairy Market News, Livestock Marketing Information Center

### CHEDDAR CHEESE PRICES
500 Pound Barrel, CME, Monthly

Data Source: USDA-AMS, Dairy Market News, Livestock Marketing Information Center
CLASS III MILK PRICES
FMMO, Monthly

Data Source: USDA-AMS, Dairy Market News
Livestock Marketing Information Center

CLASS IV MILK PRICES
FMMO, Monthly

Data Source: USDA-AMS, Dairy Market News
Livestock Marketing Information Center
MILK-FEED PRICE RATIO
Milk Price ($ Per Cwt.) to Commercial Prepared Feed ($ Per Cwt.)
U.S., Monthly

Index

1.4 0
1.6 0
1.8 0
2.0 0
2.2 0
2.4 0
2.6 0
2.8 0

Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

Avg. 2015-19
2020
2021

Data Source: USDA-NASS
Livestock Marketing Information Center

ALL MILK PRICE

$ Per Cwt

22.00
21.00
20.00
19.00
18.00
17.00
16.00
15.00
14.00
13.00

Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

Avg. 2015-19
2020
2021

Data Source: USDA-NASS
Livestock Marketing Information Center
WHEY AND NATURAL MILK EXPORTS
Monthly

Data Source: USDA-FAS
Livestock Marketing Information Center

CHEESE AND CURD EXPORTS
Monthly

Data Source: USDA-FAS
Livestock Marketing Information Center
Building an Economic Model for Utah Alfalfa

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<th>Factor</th>
<th>Formula</th>
<th>Result</th>
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<td>$=$1.57$</td>
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<td>$0.41 \times _________$</td>
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<td>$=$</td>
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<tr>
<td>Estimated Utah Hay Price</td>
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<td></td>
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</table>
**JULY 1 TOTAL CATTLE INVENTORY**

U.S., Annual

- 2021 = 100.9 Million Head
- -1.3%

**Data Source:** USDA-NASS; 2013 Was Unreported -- LMIC Made Estimates

Livestock Marketing Information Center

---

**RETAIL ALL FRESH BEEF DEMAND INDEX**

Annual, Using CPI 2000=100

**Data Source:** Bureau of Labor Statistics, USDA-ERS, Compiled & Analysis by LMIC

Livestock Marketing Information Center
Building an Economic Model for Utah Alfalfa

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<tr>
<td>Estimated Utah Hay Price</td>
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<td>=$268.74</td>
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What will 2022 look like for producers?

World Economy

US Economy/Consumer Demand

US Ag Trade/Foreign Relations

Weather/Feed & Input Costs

COVID

Environmental Policy
Questions

Ryan.larsen@usu.edu
Utah Agriculture Outlook Stakeholder Webinar

Winter 2021-2022 Snow and Drought Conditions Report
January 20, 2022

Anastasia Thayer
Clemson University

Upcoming chapters:
• Vibrant Communities (April 2022)
• Productive Agriculture (July 2022)
• Healthy Waters and Watersheds (October 2022)

https://gopb.utah.gov/waterplan/
Highlights

• Conservation remains a big issue to reducing water demand
• Optimization of agricultural irrigation systems was mentioned and supported through governor’s budget recommendations
• Water infrastructure projects as it relates to agriculture could be: irrigation optimization, water metering, telemetry, water measurement, and pipelines and treatment facilities for water conversion from agriculture to M&I use

Planning for future conversion of agricultural water to M&I water use working on assumption that water use will decline as land use shifts from ag to other uses
• Increasing water storage capacity
Current Conditions

• Wet October and December had positive impact on drought conditions across the state
• Drought persists (D0-D3) categories with no areas of Utah completely out of drought

Source: Utah Water Supply Outlook Report (Jan 1, 2022) and Utah Climate and Water Report (Jan 1, 2022)

Current Conditions

• While statewide precipitation and snowpack suggests good runoff for Spring 2022, consistent, above average precipitation will be necessary to remove extreme drought conditions currently present in ~30% of the state.
• Expected streamflow forecasts for April – July are between 110-260% of normal.
  • Based on median instead of average values

Source: Utah Water Supply Outlook Report (Jan 1, 2022) and Utah Climate and Water Report (Jan 1, 2022)
Statewide Precipitation

As of January 1,
• 145% of normal precipitation
• 196% of Normal Precipitation for December

Statewide Snowpack

As of January 1 snow water equivalent,
• 131% of normal
• “Utah needs to receive about 7" additional SWE this winter to reach "normal" peak snowpack conditions, with about 95 days to go”
Statewide Snowpack

Soil Saturation (Valley sites)
Soil Saturation (Mountain sites)

As of January 1 statewide soil moisture at mountain sites
• 56%

Reservoir Storage

As of January 1 statewide reservoir storage
• 50% capacity
Water Supply Indexes

January 1, 2022

Water Availability Index

<table>
<thead>
<tr>
<th>Basin or Region</th>
<th>Dec EOM* Storage KAP*</th>
<th>December Flow KAP*</th>
<th>Storage + Flow KAP*</th>
<th>Percentile</th>
<th>WAI#</th>
<th>Years with similar WAI</th>
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<tbody>
<tr>
<td>Bear River</td>
<td>537</td>
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<td>539</td>
<td>49</td>
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<tr>
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<td>92.1</td>
<td>15</td>
<td>-2.9</td>
<td>02, 91, 13, 19</td>
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<td>Provo River</td>
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<td>11.2</td>
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<td>0.2</td>
<td>16.5</td>
<td>33</td>
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<td>08, 14, 09, 97</td>
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<td>03, 04, 00, 05</td>
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</tbody>
</table>

*EOM: end of month. WAI: water availability index. KAP: thousand acre-feet.

Surface Water Supply Index

January 1, 2022 | Surface Water Supply Index (SWSI)

<table>
<thead>
<tr>
<th>Basin or Region</th>
<th>Reservoir Storage KAP*</th>
<th>Apr-July Forecast KAP*</th>
<th>Forecast + Storage KAP*</th>
<th>Percentile</th>
<th>Similar Years</th>
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<tbody>
<tr>
<td>Bear River</td>
<td>506.8</td>
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<tr>
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<td>47.0</td>
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<td>141.4</td>
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<tr>
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<tr>
<td>Virgin River</td>
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<td>105.4</td>
<td>132.0</td>
<td>-1.00</td>
<td>10, 19, 18, 02</td>
</tr>
</tbody>
</table>

*Reservoir Storage, KAP: thousand acre-feet. SWSI: surface water supply index. Percentile indicates lower 10%. Raw.
Surface Water Supply Index

January 1, 2022 | Surface Water Supply Index (SWSI)

<table>
<thead>
<tr>
<th>Basin or Region</th>
<th>Reservoir Storage (KAF)</th>
<th>Aug-Sept Forecast (KAF)</th>
<th>Forecast + Storage (KAF)</th>
<th>SWSI (%)</th>
<th>Percentile*</th>
<th>Similar Years</th>
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<tbody>
<tr>
<td>Loess 906.3 11.8 908.1</td>
<td>-0.48 44</td>
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<td>Woodruff Narrows 720.9</td>
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<td>2006-2007</td>
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<tr>
<td>Weber 163.5 330.0 493.5</td>
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<tr>
<td>Eastern Uinta 160.0 163.9 276.4</td>
<td>163 1.67 70</td>
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<td>2005-2019</td>
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<tr>
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<td>0.06 62</td>
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<td>1985-1990</td>
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<td>Smokey Fork 90.0 110.0 112.0</td>
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<td></td>
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<td>1985-1990</td>
<td></td>
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<tr>
<td>Price 16 16.0 60.0 66.3</td>
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<td></td>
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<td>1985-1997</td>
<td></td>
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<tr>
<td>Joes Valley 21.2 21.0 61.2</td>
<td>0.53 44</td>
<td></td>
<td></td>
<td></td>
<td>1987-1990</td>
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<tr>
<td>Ferron Creek 3.6 40.0 43.6</td>
<td>0.29 53</td>
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<td></td>
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<td>2001-2008</td>
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<tr>
<td>Moab 0.9 3.5 0.2 1.88 72</td>
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<td>1992-1997</td>
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<tr>
<td>Upper Beaver 53.4 71.0 104.4</td>
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<td>1985-2001</td>
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<tr>
<td>Lower Beaver 41.0 80.0 100.0</td>
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<td>Virgin River 28.6 105.4 134.0</td>
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<td>2017-2019</td>
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</table>

For more information:
30-Year Normals (usda.gov)
Note on Interpreting Forecasts

Map represents change in values from shift to new historic range and use of median versus average.

Result: more optimistic forecasts should be evaluated with care.

Example: The current ‘normal’ for this forecast point is 14.7 kaf (based on median and 1991-2020 data), so the percent normal for this predicted streamflow is 293%. However, if we used average instead of median as our ‘normal’ for the same 30 year window, the percent normal would be 134%.

If we switched to the 1981-2010 comparison window and used average, this same forecast value of 43 kaf would be considered 130% of normal.
Forecasts

U.S. Seasonal Drought Outlook
Drought Tendency During the Valid Period

Valid for January 1 - March 31, 2022
Released December 31, 2021

Consistency adjustment based on Monthly Drought Outlook for January 2022

Author: Adam Kigas
NOAA/NWS/NCEP/Climate Prediction Center

http://go.usa.gov/3eZ73

Seasonal Temperature Outlook

Seasonal Temperature Outlook

Valid: Jan-Feb-Mar 2022
Issued: December 16, 2021

Probability
Above Normal

Leaning Above
33-40%
40-50%
50-60%
60-70%
70-80%
80-90%
90-100%

Likely Above

Above

Equal Chances

Below

EXTENSION.USDA.EDU
Utah State University
La Niña Forecast

La Niña advisory
La Niña conditions are present. La Niña is likely to continue into the Northern Hemisphere spring (67% chance during March-May 2022) and then transition to ENSO-neutral (51% chance during April-June 2022).
Conclusions

• Drought conditions are improving
• Early forecasts for streamflow look favorable for 2022 growing season
• Drought still persists across the state and continued precipitation is needed to restore reservoirs and landscape

Questions?

Contact: Anastasia Thayer
awthaye@clemson.edu
Senior Center Farmers’ Market Program – Katie Wagner, USU Extension, Salt Lake County

- In spring of 2014, Salt Lake County Aging and Adult Services approached me seeking assistance with design and development of a new program they hoped to launch later that year called the Meals Plus program. The program emerged as a partnership between Aging Services (Meals on Wheels) and USU Extension, with the goal to deliver locally grown produce to homebound Meals on Wheels clients weekly. Meals on Wheels (MOW) drivers reported in 2015 that a portion of produce delivered to chronically ill MOW recipients was not being consumed. Salt Lake County Adult and Aging Services had long known that the MOW population experienced difficulties prepping and cooking raw vegetables and at times had diminished appetites due to illness. Meals Plus program organizers felt seniors who visited centers might be better able to prepare and cook certain types of garden produce.

- In 2016, the Meals Plus program was expanded to serve 9 senior centers located throughout Salt Lake County. Markets were held bi-weekly and resembled vendor booths at local farmers’ markets. Participating seniors could “shop” for their favorite seasonal fruits, vegetables, and herbs to take home free of charge. Produce was donated from the Meals Plus Harvest Garden, Wheeler Farm, Green Urban Lunchbox and Bell Organic (local urban farm). The senior center farmers’ market program expansion was a huge success with increasing numbers of seniors taking advantage of free produce with each passing week (average 42 seniors, range 18-80 seniors per event). The program serviced a total of 838 seniors in its pilot year.

- In 2018, the program expanded greatly (over 200% increase in pounds of disseminated fresh produce) to include vegetable production in a 1-acre field located in the heart of Wheeler Farm. Due to increased production, the senior center farmers’ market disseminations swelled to 36 markets in 2018 and serviced just under 2000 seniors. In 2019, the number of markets was reduced to 32 which serviced just over 1,600 seniors. As learned through trial and error, a target of 30 markets per year seems about perfect for the Salt Lake County Master Gardener volunteer base.

Program Impact: Select Program Highlights from 2018 Farmers’ Market Surveys.

- Seniors that benefited from Salt Lake County senior center farmers’ markets (n=77) reported that the free produce helped them save money at the grocery store (96% agreed), increased their consumption of fruits and vegetables (94% agreed) and contributed toward a healthier diet (99% agreed).
- 26% of seniors reported they grew produce at home in 2018 while 74% reported they did not (47%) or did not in 2018 but had in the past (27%).
In 2018, volunteers grew and/or harvested over 12,700 pounds of fresh produce to disseminate to Salt Lake County seniors; the approximate farmers’ market value of the produce exceeded $20,000. Somewhat difficult growing conditions in 2019 contributed to a less productive year. 6,278 pounds of produce was disseminated in 2019 with a market value of $14,467. However, perhaps more important than program totals, the Salt Lake County Master Gardener program developed a close and trusted working relationship with Salt Lake County senior centers and Adult and Aging Services. For example, several senior center coordinators have commented that they experienced increased lunch attendance on farmers’ market days. Rivers’ Bend senior center in North Salt Lake requests a special farmers’ market each year to boost attendance to their annual harvest festival in mid-October.

In spring of 2020, Salt Lake County Government closed indoor access to senior centers in response to Covid-19 and began distributing prepared meals via drive through distributions. Salt Lake County Government saw a critical need to continue senior access to fresh produce, so I was asked to adapt my indoor farmers’ markets to outdoor produce stands. Seniors were able to drive up to our produce stand, tell us what they wanted, and we would package and place the produce into their vehicles without direct contact. The demand for fresh produce skyrocketed in 2020. I almost exclusively devoted my time during the growing season toward planting, harvesting, and distributing as much fresh produce as possible. For example, Kearns Senior Center, our largest farmers’ market in 2020, had as many as 150 seniors pick-up produce in a single market. This was a 200% increase in the number of patrons that picked-up produce at Kearns from previous years. In 2020, the senior center farmers’ market program supplied 2,500 seniors with 9,610 pounds of fresh produce during 40 markets. The market value of donated produce was $22,768. Due to the restrictions associated with the pandemic, my ability was limited to request volunteer help for harvest and produce distribution since seniors were considered one of the most vulnerable populations.

The senior center farmers’ market program adapted again in 2021 to address emerging needs and concerns. Our program quickly found that our strongest asset in the produce dissemination channel were the markets themselves. Knowledge of produce distribution locations and identification of relevant partners resulted in other community partners, such as the Salt Lake County Jail Horticulture Program and Merit Medical Employee Garden, to lean on me for help distributing their produce. Traditional outlets, such as farmers’ markets and cafeterias, were disrupted. For example, in 2021 due to Covid-19, the Salt Lake County Jail Horticulture Program did not man a farmers’ market booth at two local farmers’ markets and Merit Medical was unable to harvest produce for the employee cafeteria. As a result, the jail horticulture program dropped-off weekly harvests for USU Extension to disseminate to food insecure seniors. I also worked with Merit Medical to identify donation locations. Therefore, not only was USU Extension managing delivery of produce from our program, but we also played a key role in keeping produce dissemination channels functioning for our community partners. In this regard, I played a critical role in growing, guiding, sorting, and/or
delivering several hundred pounds of fresh produce weekly for consumption of those severely impacted by the pandemic. It was the pinnacle experience of my Extension career to serve such an important role in the movement of thousands of pounds of fresh produce to food insecure seniors. I’ll always remember one senior at a low-income senior housing complex who looked at me, smiled and told me I was the person who fed her. My volunteers and I were constantly thanked by grateful seniors who often expressed they had limited food options let alone access to fresh produce outside of the markets. Several seniors told us they utilized the markets to ‘stock up’ on produce to put away for fall and winter month meals.

Several other valuable connections emerged from this program in the past few years. For example, a University of Utah community health project nursing student contacted me about our senior center farmers’ market in Kearns. She informed me we hosted the only farmers’ market in Kearns and a local food pantry, run through Kearns High School, had a high demand for fresh produce. Therefore, we were asked if we could contribute excess produce acquired through our program to support their pantry. Kearns is listed as one of 15 food insecure regions in Utah (University of Utah Health, 2020). I am very encouraged by this partnership and although the food bank primarily services young families, not seniors, I see a need and value in sustained donation to them as increasing food prices and food shortages continue to strain food bank resources. I was also approached by Farmers’ Feeding Utah to supply produce for a July 28, 2021, food drive at Granger High School. Our program donated about 500 pounds of cucumbers, zucchini, hot peppers, and eggplant to support the event. The West Valley food drive benefitted approximately 1,500 families. Our program also supplied Wheeler Farm grown zucchini (250 pounds) and carrots (190 pounds) to two additional Farmers’ Feeding food drives in 2020. In 2021, the senior center farmers’ market program distributed 7,500 pounds of produce to seniors and other food delivery programs. Donated produce had a market value of $16,366. About 1,600 pounds of produce was donated by Master Gardeners from home gardens which gave volunteers a unique way to earn service hours safely at home. The following table summarizes produce donations from 2018 – 2021.

<table>
<thead>
<tr>
<th>Year</th>
<th>Pounds of Produce</th>
<th>Number of Serviced Seniors</th>
<th>Number of Markets</th>
<th>Market Value</th>
<th>Farmers’ Feed Utah (pounds donated)</th>
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<td>1,929</td>
<td>36</td>
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<tr>
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<td>2,500</td>
<td>40</td>
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<tr>
<td>2021*</td>
<td>7,448</td>
<td>720*</td>
<td>13</td>
<td>$16,366</td>
<td>500</td>
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<tr>
<td>2022</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>36,036</td>
<td>6,770</td>
<td>121</td>
<td>$60,443</td>
<td>940</td>
</tr>
</tbody>
</table>

*Most donated produced was dropped-off at senior centers and lobbies of low-income senior housing complexes in 2021. There were fewer planned farmers’ markets in 2021 however it is
likely that as many or more seniors were serviced compared to previous years. These outlets ensured minimal food waste as any produce leftover from senior center markets was available for client pick-up in lobbies as seniors returned to their apartments. Drop-offs streamlined faculty time and minimized the need for cold storage and large transport vehicles.

- **Program Impact: Select Program Highlights from 2021 Farmers’ Market Surveys.**

A 2021 survey of seniors at two centers (n=74) found the following impacts.
- 93% reported the markets saved them time.
- 97% reported the markets saved them money.
- 100% reported the markets increased their consumption of fresh produce.
- 100% reported the markets increased their access to fresh produce.
- 99% reported the markets improved their overall well-being.

Salt Lake County Adult and Aging Services collected a survey from seniors who picked-up produce at two centers. Those that responded to the survey reported the following when asked to describe their household income. Respondents were not asked to report their household size (in persons).

<table>
<thead>
<tr>
<th>Income Level</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0 Less than $1K</td>
<td>11%</td>
</tr>
<tr>
<td>$1K-1,999</td>
<td>9%</td>
</tr>
<tr>
<td>$2K-2,999</td>
<td>22%</td>
</tr>
<tr>
<td>$3K-3,999</td>
<td>17%</td>
</tr>
<tr>
<td>$4K-4,999</td>
<td>14%</td>
</tr>
<tr>
<td>$5K-5,999</td>
<td>3%</td>
</tr>
<tr>
<td>$6K-6,999</td>
<td>5%</td>
</tr>
<tr>
<td>$7K-7,999</td>
<td>2%</td>
</tr>
<tr>
<td>$8K-8,999</td>
<td>5%</td>
</tr>
<tr>
<td>$9K-9,999</td>
<td>3%</td>
</tr>
<tr>
<td>More than $10K</td>
<td>6%</td>
</tr>
</tbody>
</table>

Poverty level (PL) for individual*  
*12% of survey respondents chose not to provide a monthly household income.

**In 2021, Salt Lake County Housing and Community Development identified poverty levels in the state of Utah at $12,880 (per year for a household of 1), $17,420 for 2, $21,960 for 3, $26,500 for 4, $31,040 for 5 and $35,580 for a household of 6.

Almost three quarters (73%) of serviced seniors reported their monthly income as low (80% of FY 2021 median family income of $92,900) even if their household size was one person per household ($51,650/year/1-person household). Approximately half of seniors (59%) reported their monthly income as very low (50%) even if their household size was one person ($32,300/year/1-person household). Approximately 42% of seniors reported a monthly income in the extremely low-income limit category ($19,400/year/1-person household). Survey results indicate that our program successfully reached low-income seniors. Income
Selected comments from seniors further identified qualitative program impacts from the 2021 farmers’ markets.

- “Definitely helps with grocery bills and it’s a treat to take home garden produce. The quality is far better than grocery store.” – Liberty Center (LC) senior
- “Helps with my diet and my mental health well-being and saves on groceries.” – LC senior
- “If you hadn’t come today, I would have no produce. I don’t like to grocery shop.” – LC senior
- “The farmers’ market is a blessing! I get fresh produce, and don’t have to pay the higher grocery price of food products. Thank you.” – LC senior
- “Fresh produce is a wonder addition to my diet.” – LC senior
- “I have been able to try many things I wouldn’t have tried. Thank you!” – Kearns Center (KC) senior
- “I am trying new produce. Everything looks so fresh!” – KC senior
- “I will try to improve my usage of fresh produce. Food preparation of fresh is important.” – KC senior
- “The farmers’ market makes shopping super and much easier for us. We appreciate the service and produce. Thanks.” – KC senior
- “It is nice to have good fresh food.” – KC senior
- “We love to try new produce. We don’t waste any of it.” – KC senior
- “I think the farmers’ market is a very great thing the centers do. It does improve the ability for seniors to get fresh vegetables. Thank you all for your services.” – KC senior
- “Thank you for making fresh produce available to one who seldom shops at the supermarket.” – KC senior
- “Nice advantage to get fresh veggies. Thank you for your service.” – KC senior
- “We appreciate the food donated by the market. It helps much.” – KC senior
- “It’s nice to have fresh vegetables and take different kinds of vegetables. We are grateful.” – KC senior
- “More access to fresh food! Don’t have garden space at home to grow our own!” – KC senior
- “Enjoy the friendly people and the good produce.” – KC senior
- “The people that run the farmers’ market are great, they help so much. Getting the fresh veggies are so nice. They don’t realize how much this means to me.” – KC senior
URBAN & SMALL FARMS CONFERENCE
FEBRUARY 22-25, 2022

Virtual Event | FREE but registration is required

For more information, visit diverseag.org
or contact USU Extension, Salt Lake County, at 385-468-4824.
ginger.dalde@usu.edu.

- Dates Tuesday February 22 through Friday morning February 25th
- DiverseAg.org
- Online – free but registration is required

- The conference is online, but we will be offering in-person events that will be hands on
  - March 24th Tunnel production at Greenville farm
  - End of June – field day in Kaysville
Tuesday

- Morning - Micro Farming
  - Irrigation solutions for micro-scale farms
  - Utah House Bill 390 – Urban Farming
  - Mental health resources for farmers
  - Using Social Media for Success
  - Needs Assessment for Microscale Farmers
- Afternoon
  - FDA proposed regulations for pre harvest water safety
  - Making decisions to adopt new production systems
  - USDA programs for farmers
    - NRCS Programs
    - FSA Programs

Wednesday

- Morning - Berries and Grapes
  - Raspberry tunnels research
  - Day neutral strawberries
  - High tunnel strawberries
  - Grape cultivars
  - Grape IPM
- Afternoon – Cut Flowers
Thursday

• Morning – vegetables
  • Brussel Sprouts
  • Annual Asparagus
  • New Mexico Chile Peppers
  • Weird and wonderful vegetables
  • Transplant approaches for tomatoes
  • Weed management for pumpkins
• Afternoon – marketing and management

Friday

• Morning - Animals