



COUNTY OF GLENN

2022 DROUGHT IMPACT REPORT

An overview of the 2022 drought impacts to the lifeblood of the county: AGRICULTURE.



MARCIE SKELTON
GLENN COUNTY AGRICULTURAL COMMISSIONER

“

Agriculture is our wisest pursuit, because it will in the end contribute most to real wealth, good morals, and happiness.

THOMAS JEFFERSON

“

Farming looks mighty easy when your plow is a pencil, and you're a thousand miles from the cornfield.

PRESIDENT DWIGHT D. EISENHOWER

“

The farmer has to be an optimist or he wouldn't still be a farmer.

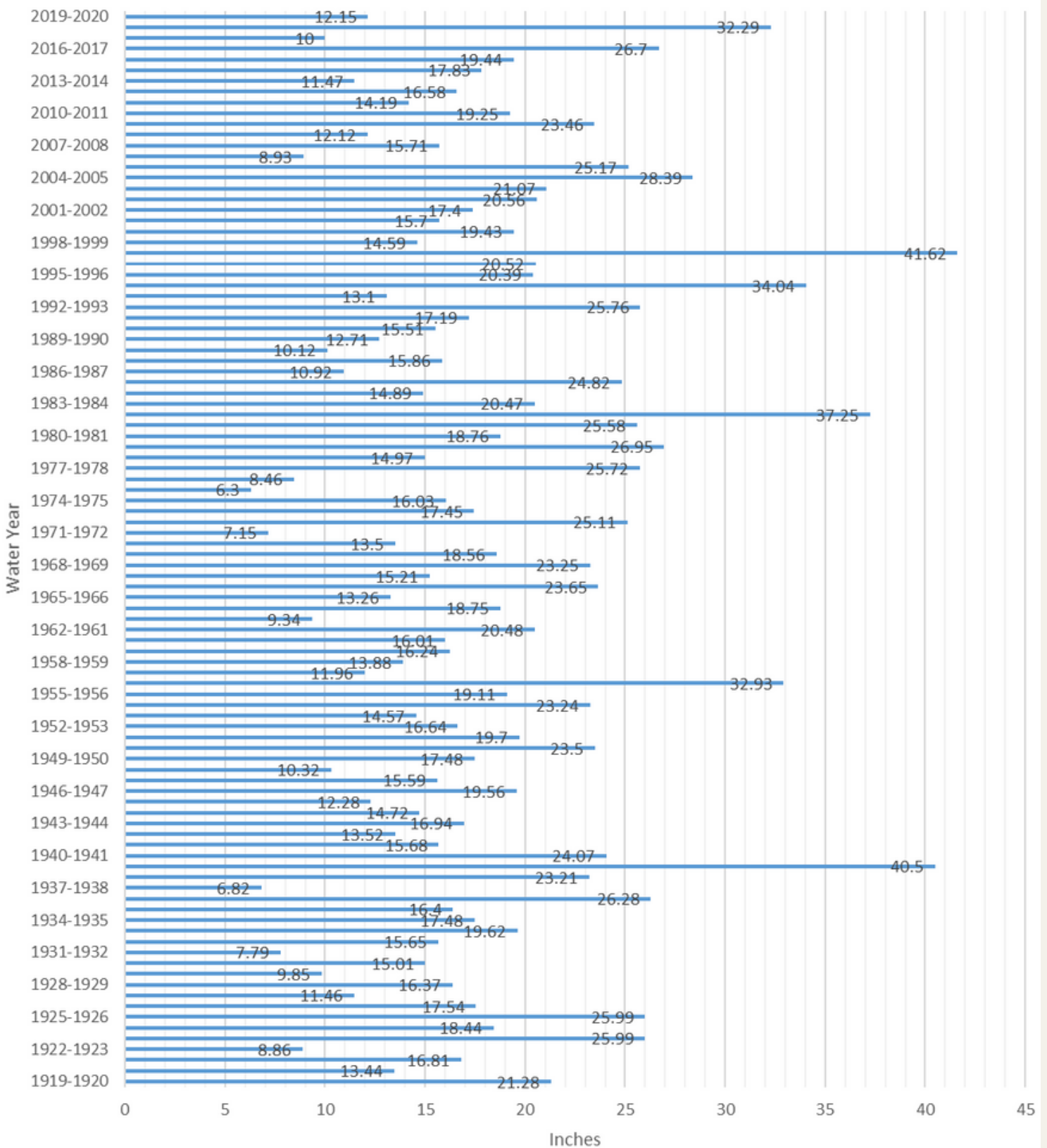
WILL ROGERS

“

Agriculture is the most healthful, most useful and most noble employment of man.

GEORGE WASHINGTON

Glenn County Average Rainfall 1919-2021



2020-2021 Water Year

Average Rainfall was 9.01 inches

100 year average = 18.17 inches

In the Last 100 Years:

Years with 10 inches or LESS of Rainfall

1923-1924	8.86
1930-1931	9.85
1932-1933	7.79
1936-1937	16.4
1938-1939	6.82
1963-1964	9.34
1971-1972	7.15
1975-1976	6.3
1976-1977	8.46
2006-2007	8.93
2017-2018	10
2020-2021	9.01



Years with 25 inches or MORE of Rainfall

1924-1925	25.99
1926-1927	25.99
1937-1938	26.28
1957-1958	32.93
1972-1973	25.11
1977-1978	25.72
1979-1980	26.95
1981-1982	25.58
1994-1995	34.04
1997-1998	41.62
2004-2005	28.39
2005-2006	25.17
2018-2019	32.29



1878-2021 Water Year Average Rainfall

17.66 inches - 143 year average

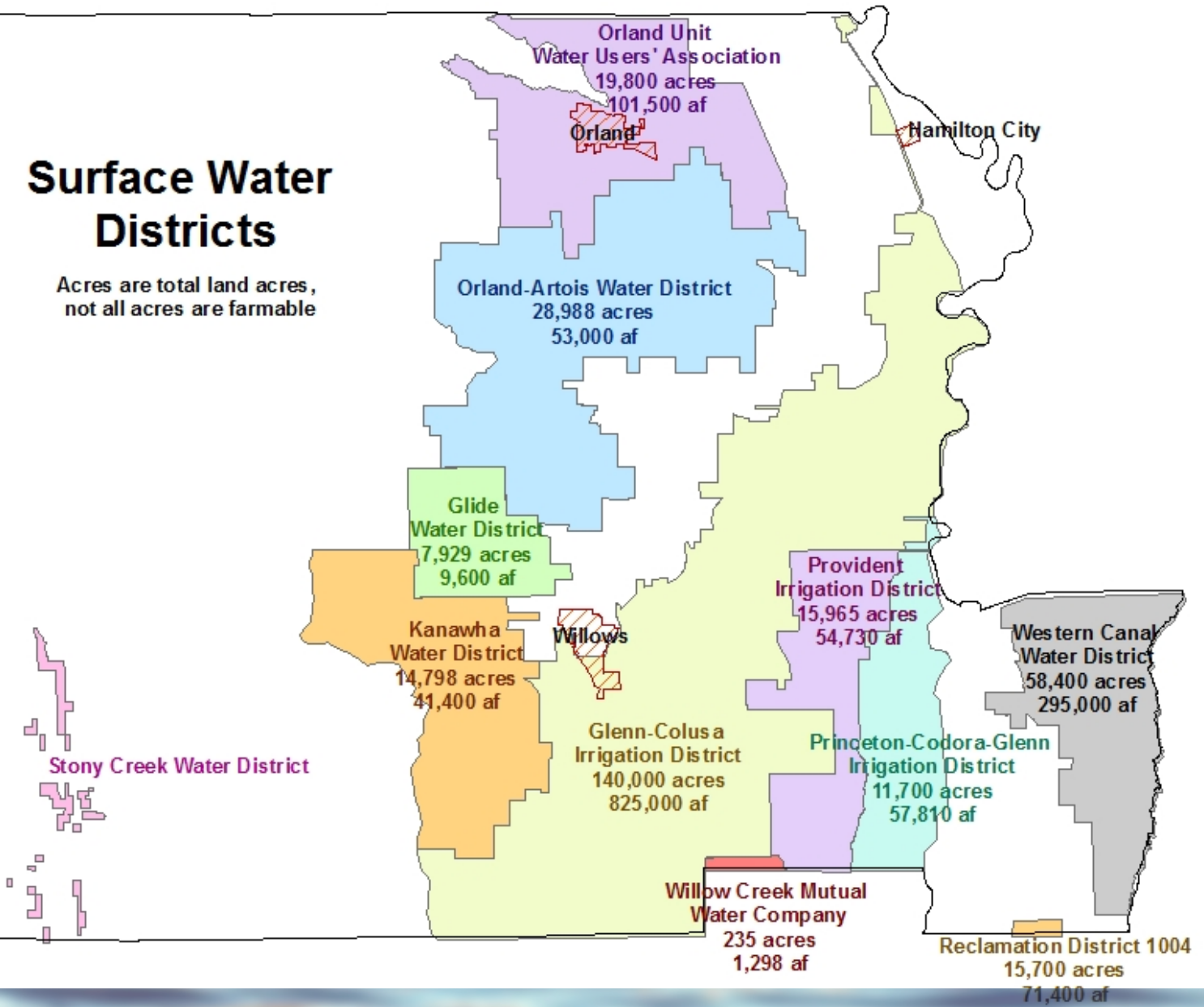
Glenn County Rainfall Totals 1878-2021

1878-1879	7.01	1914-1915	27.19	1950-1951	17.48	1986-1987	10.92
1879-1880	19.96	1915-1916	18.11	1951-1952	23.5	1987-1988	15.86
1880-1881	13.85	1916-1917	11.43	1952-1953	19.7	1988-1989	10.12
1881-1882	8.28	1917-1918	11.9	1953-1954	16.64	1989-1990	12.71
1882-1883	8.45	1918-1919	12.9	1954-1955	14.57	1990-1991	15.51
1883-1884	18.84	1919-1920	7.7	1955-1956	23.24	1991-1992	17.19
1884-1885	7.8	1920-1921	21.28	1956-1957	19.11	1992-1993	25.76
1885-1886	19.15	1921-1922	13.44	1957-1958	32.93	1993-1994	13.1
1886-1887	8.07	1922-1923	16.81	1958-1959	11.96	1994-1995	34.04
1887-1888	8.97	1923-1924	8.86	1959-1960	13.88	1995-1996	20.39
1888-1889	10.3	1924-1925	25.99	1960-1961	16.24	1996-1997	20.52
1889-1890	29.94	1925-1926	18.44	1961-1962	16.01	1997-1998	41.62
1890-1891	19.01	1926-1927	25.99	1962-1963	20.48	1998-1999	14.59
1891-1892	18.82	1927-1928	17.54	1963-1964	9.34	1999-2000	19.43
1892-1893	27.3	1928-1929	11.46	1964-1965	18.75	2000-2001	15.7
1893-1894	11.15	1929-1930	16.37	1965-1966	13.26	2001-2002	17.4
1894-1895	26.04	1930-1931	9.85	1966-1967	23.65	2002-2003	20.56
1895-1896	22.18	1931-1932	15.01	1967-1968	15.21	2003-2004	21.07
1896-1897	18.82	1932-1933	7.79	1968-1969	23.25	2004-2005	28.39
1897-1898	6.58	1933-1934	15.65	1969-1970	18.56	2005-2006	25.17
1898-1899	13.05	1934-1935	19.62	1970-1971	13.5	2006-2007	8.93
1899-1900	15.23	1935-1936	17.48	1971-1972	7.15	2007-2008	15.71
1900-1901	17.49	1936-1937	16.4	1972-1973	25.11	2008-2009	12.12
1901-1902	21.67	1937-1938	26.28	1973-1974	17.45	2009-2010	23.46
1902-1903	17.1	1938-1939	6.82	1974-1975	16.03	2010-2011	19.25
1903-1904	20.28	1939-1940	23.21	1975-1976	6.3	2011-2012	14.19
1904-1905	24.55	1940-1941	40.5	1976-1977	8.46	2012-2013	16.58
1905-1906	19.85	1941-1942	24.07	1977-1978	25.72	2013-2014	11.47
1906-1907	17.88	1942-1943	15.68	1978-1979	14.97	2014-2015	17.83
1907-1908	13.44	1943-1944	13.52	1979-1980	26.95	2015-2016	19.44
1908-1909	22.09	1944-1945	16.94	1980-1981	18.76	2016-2017	26.7
1909-1910	14.36	1945-1946	14.72	1981-1982	25.58	2017-2018	10
1910-1911	17.75	1946-1947	12.28	1982-1983	37.25	2018-2019	32.29
1911-1912	11.26	1947-1948	19.56	1983-1984	20.47	2019-2020	12.15
1912-1913	13.18	1948-1949	15.59	1984-1985	14.89	2020-2021	9.01
1913-1914	29.18	1949-1950	10.32	1985-1986	24.82		

Glenn County Irrigation District Map

Surface Water Districts

Acres are total land acres,
not all acres are farmable





Glenn County Fallowed Acres Survey

The Glenn County Department of Agriculture has been asked to quantify the losses to agriculture, in relation to water issues that have occurred this year due to drought conditions. If you were unable to plant this year or have failed crops, as a result of reduced water allocations or limitations on ag well use, please let us know.

This information will be valuable in a multitude of ways. County Agricultural Commissioners are often asked to relay summaries of what is occurring relative to agriculture. We are asked by the Board of Supervisors, California Department of Agriculture, state and federal legislators, media, and members of the public. Additionally, the department is mandated to complete an annual crop report for the county, where total harvested acres are listed along with the yield and value. For these reasons, your assistance with the below survey would be most appreciated.

No individual information will be disclosed, only aggregated data will be shared. Please limit your responses to land located within Glenn County.

1. Commodities with fallowed/failed acres:

Check all that apply

Corn - all

Cotton

Hay - all, except alfalfa

Rice

Tomatoes

Seed Crop - all

Other

2. Total acres fallowed/failed:

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

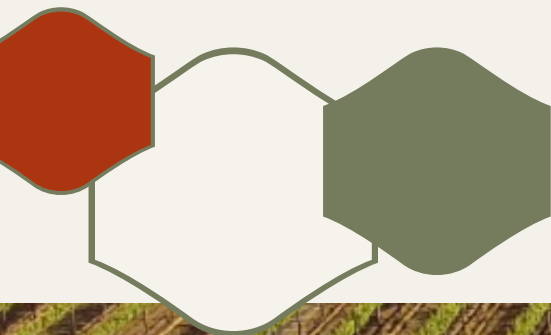


2022-23 Budget - Agriculture

May 2022

Overview

- \$789M to CDFA and **~\$1.2B for agriculture** in total for FY22-23
- \$656M for **drought and water programs** specifically supporting agriculture
- \$520M for **climate action on agricultural lands** and a more resilient food system
- \$75M for farms in the CA State University System



CALIFORNIA AGRICULTURAL ISSUES LAB

of the University of California

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JUNE 14, 2022 BY SWETA CONJEEVARAM

Continued Drought in 2022 Ravages California's Sacramento Valley Economy

[Click here to view the study](#)



Economic Contributions

of the Agricultural Industry

FOR 2017

\$1.352 billion

Glenn County Agriculture's total contribution to the local economy



Employment Effects

of the Agricultural Industry

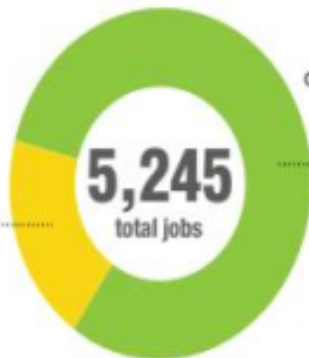
ONE in THREE

(30.2%)

jobs in Glenn County was attributable to the agricultural industry

1,000+

additional jobs attributable to multiplier effects: expenditures by agricultural companies and their employees



4,182

direct employees

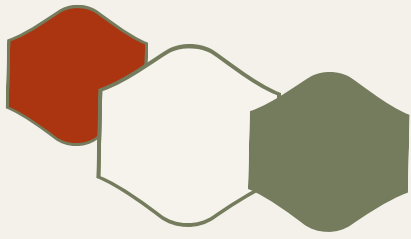
One Dollar
out of
every **\$2.20**



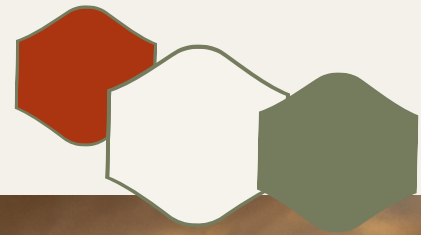
Agriculture accounted for 1 dollar out of every \$2.20 of the county's direct economic output



List of Most Impacted Commodities

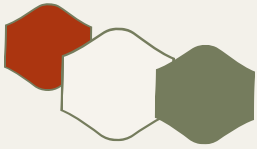


Rice
Seed Crops
Corn
Cotton
Apiaries
Cattle & Sheep



10 Years of Planted Acres Data

| | Corn | Corn Silage | Cotton | Rice | Seed Crops |
|-------------|--------------|-------------|------------|---------------|--------------|
| 2013 | 17,609 | 4,303 | 1,252 | 85,253 | 11,366 |
| 2014 | 17,797 | 2,120 | 1,832 | 73,318 | 8,277 |
| 2015 | 13,948 | 2,133 | 1,414 | 68,400 | 8,345 |
| 2016 | 12,867 | 1,731 | 2,200 | 77,400 | 9,516 |
| 2017 | 12,620 | 1,455 | 2,978 | 83,407 | 8,592 |
| 2018 | 12,363 | 1,204 | 1,809 | 83,484 | 9,121 |
| 2019 | 11,978 | 1,308 | 2,700 | 82,306 | 8,502 |
| 2020 | 11,819 | 935 | 1,663 | 72,455 | 7,982 |
| 2021 | 10,377 | 518 | 1,898 | 61,120 | 7,208 |
| 2022 | 3,899 | 150 | 645 | 21,429 | 3,407 |



Rice

Data Source: 2017 Economic Contribution of Glenn County Agriculture, pg 6

| FARM PRODUCTION | Output Effects (\$ Millions) | | | TOTAL |
|--|------------------------------|----------|---------|-----------|
| | Direct | Indirect | Induced | |
| Tree Nut Farming | \$413.6 | \$64.3 | \$42.7 | \$520.7 |
| Grain Farming | \$158.3 | \$47.8 | \$10.0 | \$216.0 |
| Livestock & Livestock Products | \$102.9 | \$23.4 | \$9.6 | \$136.0 |
| Fruit Farming | \$70.0 | \$11.3 | \$7.4 | \$88.7 |
| Seed Crop Production | \$41.4 | \$5.7 | \$4.0 | \$51.1 |
| Miscellaneous Other Crop Farming | \$20.5 | \$3.8 | \$2.2 | \$26.5 |
| Support Activities for Agricultural Production | \$40.0 | \$0.6 | \$10.2 | \$50.7 |
| TOTAL ECONOMIC OUTPUT | \$846.7 | \$156.9 | \$86.1 | \$1,089.7 |

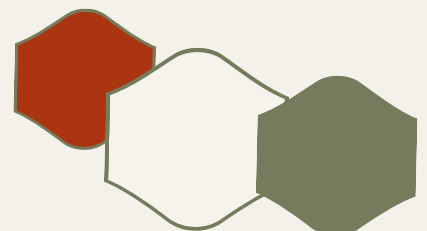
"Grain Farming" Includes: Barley, Corn, Corn Silage, Oats, **Rice**, Wheat, Wheat Silage, Sorghum

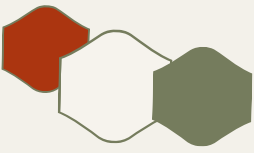
--79% of the "Grain Farming" category is attributable to rice production.

--The economic effects of rice production in 2017 was \$170,719,000

--In 2022, only 28% of normal rice production occurred, with an estimated 21,430 acres planted.

--With an estimated 21,430 acres of rice planted, the result could be an **estimated economic loss of \$122,917,680**, when applying the the 2017 Crop Report Plus data.





Corn

Data Source: 2017 Economic Contribution of Glenn County Agriculture, pg 6

| FARM PRODUCTION | Output Effects (\$ Millions) | | | TOTAL |
|--|------------------------------|----------|---------|-----------|
| | Direct | Indirect | Induced | |
| Tree Nut Farming | \$413.6 | \$64.3 | \$42.7 | \$520.7 |
| Grain Farming | \$158.3 | \$47.8 | \$10.0 | \$216.0 |
| Livestock & Livestock Products | \$102.9 | \$23.4 | \$9.6 | \$136.0 |
| Fruit Farming | \$70.0 | \$11.3 | \$7.4 | \$88.7 |
| Seed Crop Production | \$41.4 | \$5.7 | \$4.0 | \$51.1 |
| Miscellaneous Other Crop Farming | \$20.5 | \$3.8 | \$2.2 | \$26.5 |
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| TOTAL ECONOMIC OUTPUT | \$846.7 | \$156.9 | \$86.1 | \$1,089.7 |

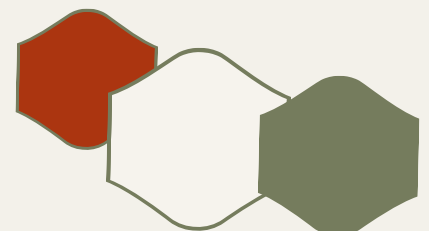
"Grain Farming" Includes: Barley, **Corn, Corn Silage**, Oats, Rice, Wheat, Wheat Silage, Sorghum

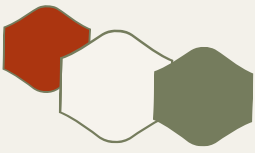
--8% of the "Grain Farming" category is attributable to corn production

--The economic effects of corn production in 2017 was \$17,504,000

--In 2022, only 25% of normal corn production occurred, with an estimated 4,050 acres planted.

--With an estimated 4,050 acres of corn planted, the result could be an **estimated economic loss of \$13,128,075**, when applying the 2017 Crop Report Plus data.





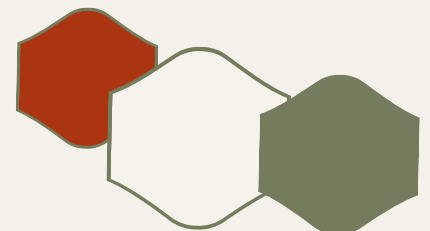
Seed Crops

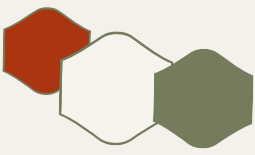
Data Source: 2017 Economic Contribution of Glenn County Agriculture, pg 6

| FARM PRODUCTION | Output Effects (\$ Millions) | | | TOTAL |
|--|------------------------------|----------------|---------------|------------------|
| | Direct | Indirect | Induced | |
| Tree Nut Farming | \$413.6 | \$64.3 | \$42.7 | \$520.7 |
| Grain Farming | \$158.3 | \$47.8 | \$10.0 | \$216.0 |
| Livestock & Livestock Products | \$102.9 | \$23.4 | \$9.6 | \$136.0 |
| Fruit Farming | \$70.0 | \$11.3 | \$7.4 | \$88.7 |
| Seed Crop Production | \$41.4 | \$5.7 | \$4.0 | \$51.1 |
| Miscellaneous Other Crop Farming | \$20.5 | \$3.8 | \$2.2 | \$26.5 |
| Support Activities for Agricultural Production | \$40.0 | \$0.6 | \$10.2 | \$50.7 |
| TOTAL ECONOMIC OUTPUT | \$846.7 | \$156.9 | \$86.1 | \$1,089.7 |

"Seed Crop Farming" Includes: Beans, Rice, Sunflowers, Vine Seeds, and Other (carrots, chard, gourds, onions, kale, mustard, radishes)

- The economic effects of seed crop production in 2017 was \$41,400,000
- In 2022, only 39% of normal seed production occurred with an estimated 3,410 acres.
- With an estimated 3,410 acres of seed crops planted, the result could be an **estimated economic loss of \$25,254,000**, when applying the the 2017 economic effect data.





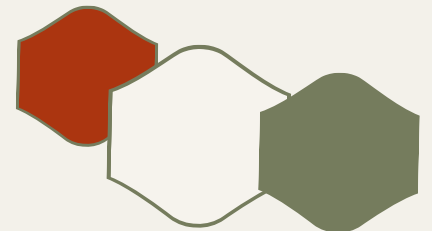
Cotton

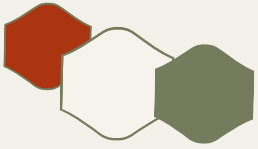
Data Source: Economic Contribution of Glenn County Agriculture, pg 6

| FARM PRODUCTION | Output Effects (\$ Millions) | | | TOTAL |
|--|------------------------------|----------|---------|-----------|
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| Tree Nut Farming | \$413.6 | \$64.3 | \$42.7 | \$520.7 |
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| Miscellaneous Other Crop Farming | \$20.5 | \$3.8 | \$2.2 | \$26.5 |
| Support Activities for Agricultural Production | \$40.0 | \$0.6 | \$10.2 | \$50.7 |
| TOTAL ECONOMIC OUTPUT | \$846.7 | \$156.9 | \$86.1 | \$1,089.7 |

"Miscellaneous Other Crop Farming" Includes: Alfalfa, Beans, **Cotton**, Hay, Nursery, bees, Vegetables, Honey, Beeswax, Pasture and Rangeland.

- 25% of the "Misc. Other Crop Farming" category is attributable to cotton production
- The economic effects of cotton production in 2017 was \$5,196,000
- In 2022, only 33% of cotton was produced, at an estimated 645 acres
- With an estimated 645 acres of cotton planted the results could be an **estimated economic loss of \$3,481,822**, when applying the 2017 economic effect data.





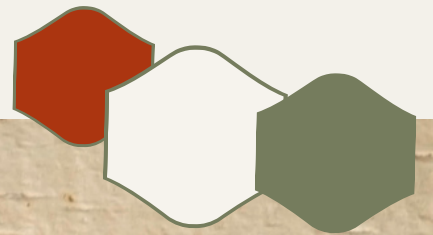
Apiaries

In order to not experience greater than normal losses beekeepers have increased their inputs to maintain healthy as possible hives. These additional inputs have substantially increase costs of products and associated labor.

Estimated Added Costs accrued in 2022 due to the drought:

-- 40% increase of fuel, attributed to both rising cost but also increased travel to administer hive medications, provide supplemental water and feed

--25% increase in supplemental sugar syrup feed



Cattle & Sheep

COUNTY OF *Glenn*

DEPARTMENT OF AGRICULTURE/WEIGHTS & MEASURES



720 North Colusa Street
P.O. Box 351 Willows, Ca 95988
Phone: 530-934-6501
Fax: 530-934-6503
agcommr@countyofglenn.net
www.countyofglenn.net

Marcie Skelton
Agricultural Commissioner
Sealer of Weights & Measures

Jason Beauchamp
Assistant Agricultural Commissioner
Assistant Sealer of Weights & Measures

September 15, 2022

Glenn County Farm Service Agency
132 N. Enright Ave
Willows, CA 95988

RE: Glenn County Loss of Rangeland Forage Due to Persistent Drought Conditions

As the current water year comes to an end on September 30th, the lack of precipitation in Glenn County is taking its toll on livestock production, along with many other facets of agriculture. Multiyear shortfalls of rain add to the pressures already being faced by ranchers. The USDA drought monitor categorizes the majority of Glenn County as in Extreme Drought (D3). Rangeland in the western foothills of Glenn County in 2022, have reduced forage available due to a lack of adequate spring rainfall.

The beginning of the water year was initially wet. The early fall rains in October 2021, led to forage growth in the parched western foothills of Glenn County. This welcomed reprieve was short lived, the new year started very dry and continued that way. The early fall rains germinated the annual plants that were grazed by livestock and wildlife. Without enough rain over winter and spring, the annual plants completed their lifecycle in a shortened period. The limited precipitation turned the hills brown much earlier than normal.

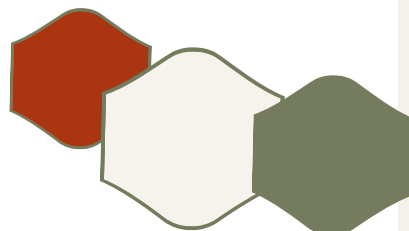
This weather pattern led to an estimated 70% reduction of forage availability for ranchers, during the usual fast-growing period of the spring. Often ranchers retain spring forage for the fall. There simply was not enough precipitation to promote adequate forage growth during the spring months, let alone save any for fall. This puts further pressure on ranchers and their current need for additional feed and grazing access. The results will mean purchasing extra hay to feed, feeding earlier, or staying longer on out of state summer grazing land. Many ranchers could be forced to consider downsizing their herd in order to make any plan economically viable.

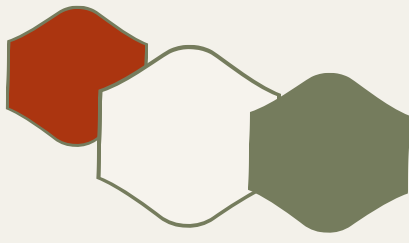
In summary, from my observations, data reviewed, and conversations with ranchers, the drought has resulted in an approximate 70% reduction of available forage for grazing cattle. If you have any questions or desire further information, please reach out. I can be contacted at (530)934-6501 or by email at mkskelton@countyofglenn.net.

Sincerely,

A handwritten signature in cursive script that reads "Marcie Skelton".

Marcie Skelton
Glenn County Agricultural Commissioner/Sealer of Weights & Measures





Ecological Impacts



