

California Dairy Overview



December 3, 2018

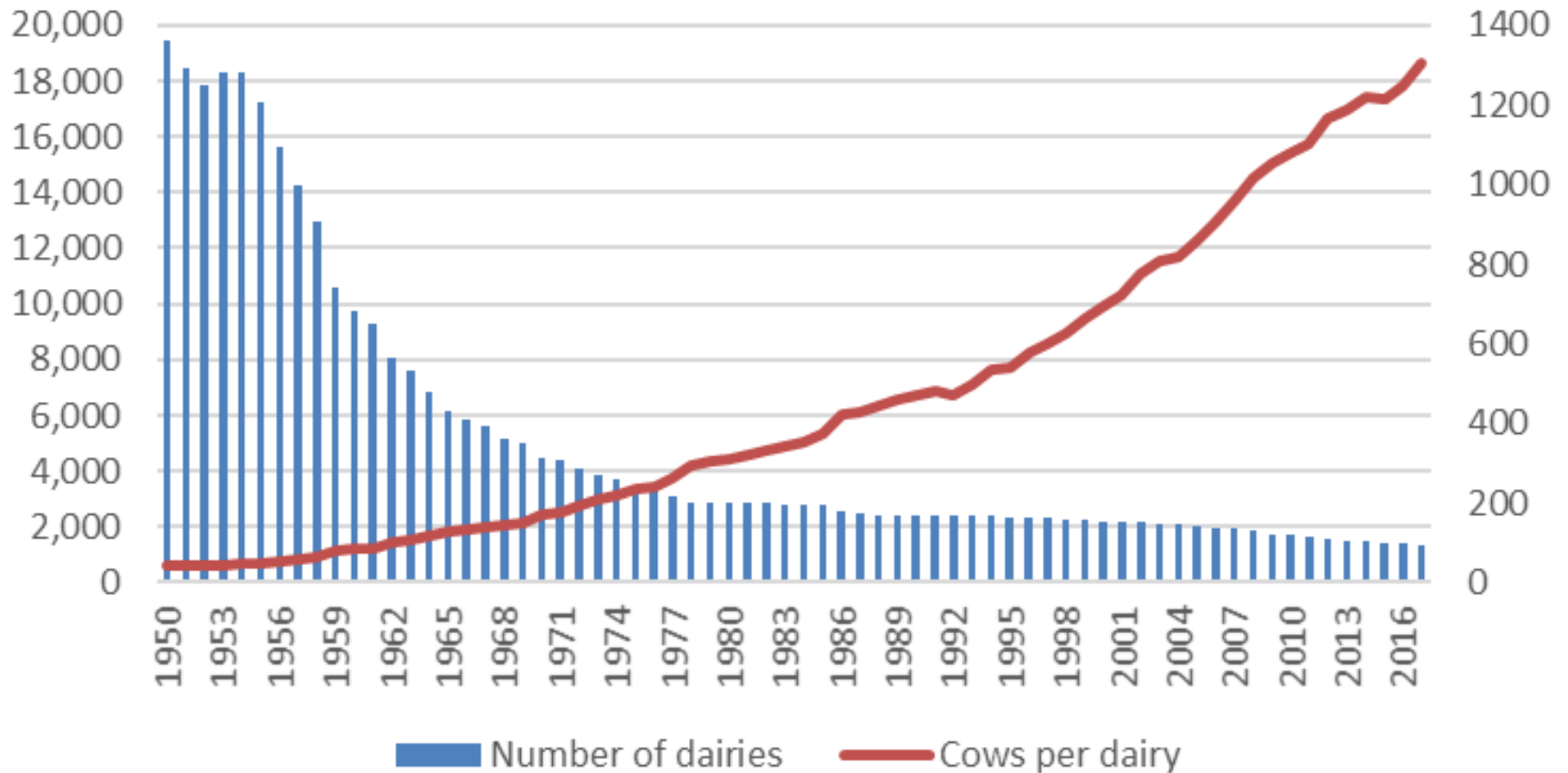


Background

- ▶ California remains top dairy producing state
 - ▶ Producing 18.5% of national production
- ▶ 1331 dairies, primarily family owned and operated
- ▶ Mix of conventional and pasture-based
- ▶ Average herd size 1258
- ▶ Dairy consumption continues to increase both nationally and globally

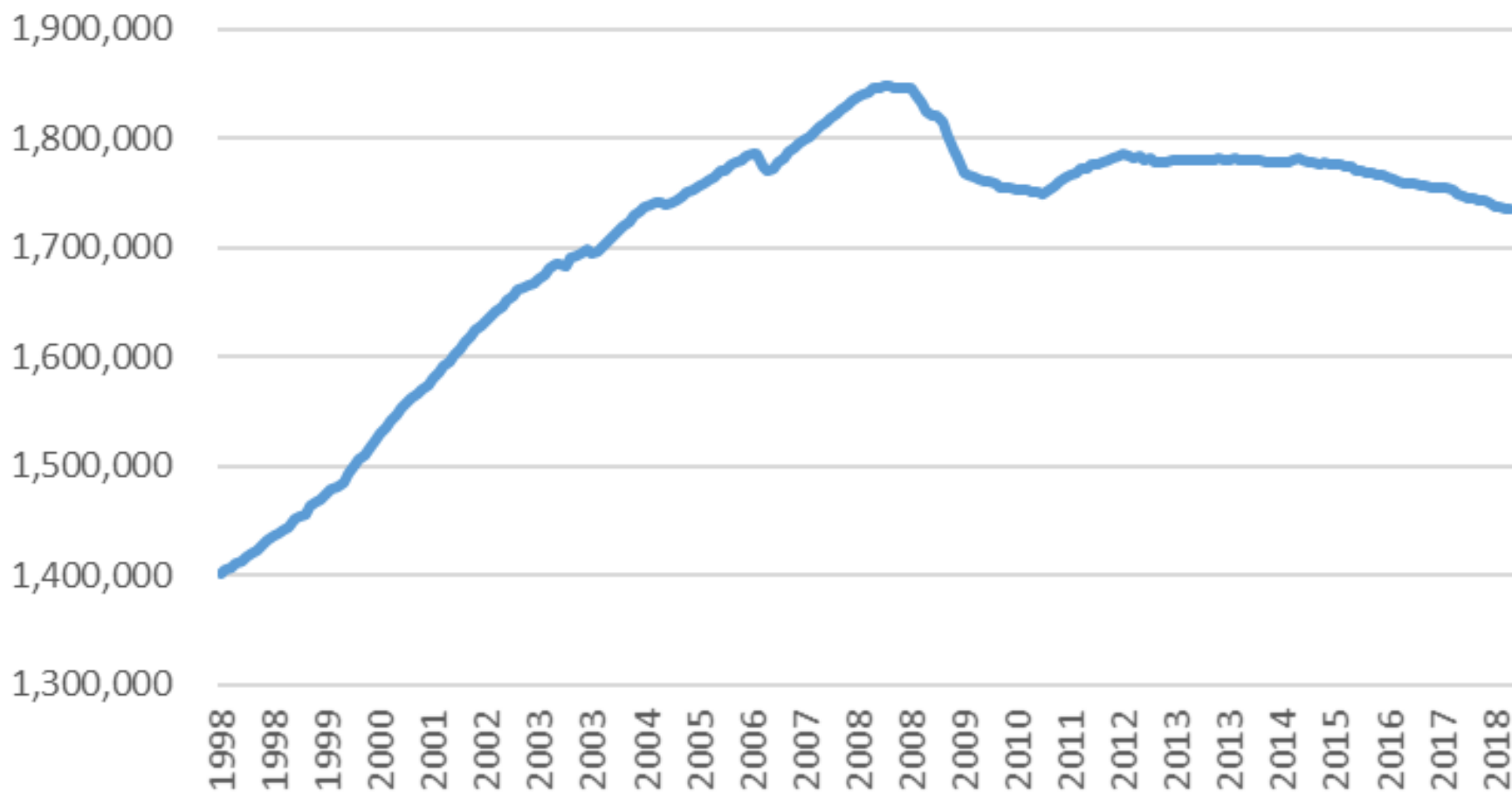
Trends

California Number of Dairies and Cows per Dairy



Cow Numbers

California Cow Numbers





Historical Perspective

- ▶ The carbon footprint of a gallon of milk is 2/3 smaller today than it was 70 years ago.
 - ▶ Improved feed efficiency
 - ▶ Improved health
 - ▶ Improved productivity
- ▶ Fewer cows...more milk
 - ▶ Reduced environmental footprint
 - ▶ Reduced GHG (methane) per gallon
 - ▶ Fewer fossil fuels, less water, less energy
- ▶ Production intensity and emission intensity are inversely related



Significant Forward Momentum

- Significant dairy methane reduction progress since passage of SB 1383
- 64 dairy digester projects funded to date
- 57 AMMP projects funded
- Significant and growing interest, additional incentive funds
- On pace to achieve 40% reduction in manure methane
- Didn't happen by accident...state incentives driving development
- Total investment of \$750 million and growing (public & private)

California Dairy Digester Development

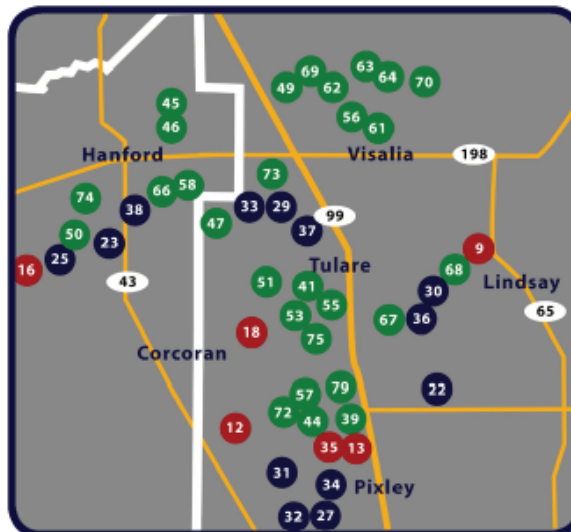


- Existing
- Under Construction
- 2018 Grant Recipient

Kern County (11)



Kings & Tulare Counties (47)



Merced, Madera & Fresno Counties (11)



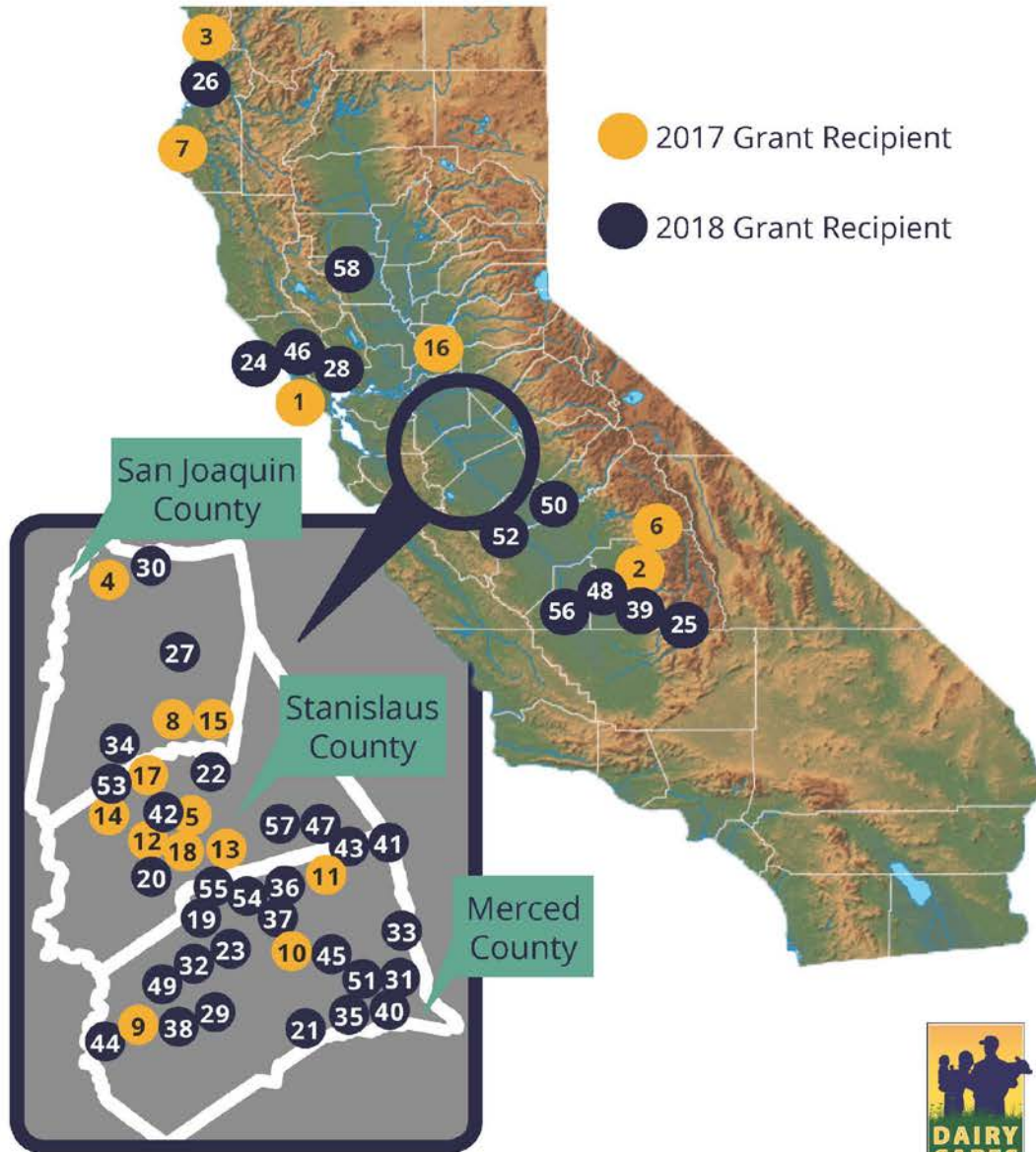
Learn more at DairyCares.com/dairy-digesters

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|---|------------------------------|------------------------------|-----------------------------------|-------------------------|
| 1. Bidart- Old River | 16. Verwey Dairy– Hanford | 33. Moonlight Dairy | 50. Double L Dairy | 67. Riverbend Dairy |
| 2. Bidart- Stockdale | 17. Verwey Dairy– Madera | 34. Robert Vander Eyk Dairy | 51. Dykstra Dairy | 68. Riverview Dairy |
| 3. Blakes Landing Farms/ Straus Family Creamery | 18. GJ TeVelde Ranch | 35. Circle A Dairy | 52. 5H Dairy | 69. Rob Van Grouw Dairy |
| 4. Castelanelli Brothers Dairy | 19. Carlos Echeverria & Sons | 36. Bos Farms | 53. FM Jerseys Dairy | 70. Rocking Horse Dairy |
| 5. Cottonwood Dairy/ Joseph Gallo Farms | 20. Lakeview Dairy | 37. Hamstra Dairy | 54. Hoogendam Dairy | 71. Rockshar Dairy |
| 6. Denier Dairy* | 21. West Star Dairy | 38. Hollandia Farms | 55. Horizon Jersey Dairy | 72. Sousa & Sousa Dairy |
| 7. Fiscalini Farms | 22. Van Beek Dairy | 39. 4k Dairy | 56. Jacobus De Groot #2 Dairy | 73. Udder Dairy |
| 8. Giacomini Dairy | 23. Wreden Ranch | 40. Ackerman Dairy | 57. Little Rock Centralized Dairy | 74. Valadao Dairy |
| 9. Hilarides Dairy | 24. Trilogy Dairy | 41. Aukeman Farms | 58. Lone Oak #1 Dairy | 75. Vander Poel Dairy |
| 10. New Hope Dairy* | 25. Cloverdale Dairy | 42. Belonave Dairy | 59. Double D Dairy | 76. Vander Woude Dairy |
| 11. Open Sky Ranch | 26. T & W Farms | 43. BV Dairy | 60. Meirinho Dairy | 77. Vista Verde Dairy |
| 12. Pacific Rim Dairy | 27. K & M Visser | 44. Cornerstone Dairy | 61. Mellema Dairy | 78. Western Sky Dairy |
| 13. Pixley Biogas | 28. Maple Dairy | 45. De Groot Dairy (North) | 62. Milky Way Dairy | 79. El Monte Dairy |
| 14. Van Steyn Dairy | 29. S & S Dairy | 46. De Groot Dairy (South) | 63. Mineral King Dairy | *Temporarily Offline |
| 15. Van Warmerdam Dairy | 30. Rancho Teresita Dairy | 47. Decade Centralized Dairy | 64. Rancho Sierra Vista Dairy | |
| | 31. Pixley Dairy | 48. DJ South Dairy | 65. Red Rock Dairy | |
| | 32. Legacy Ranch | 49. Double J Dairy | 66. River Ranch Dairy | |

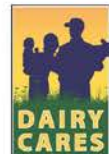
Updated November 15, 2018

Alternative Manure Management in California

Fifty-eight California dairy farms have been awarded grants to reduce methane through the California Department of Food and Agriculture (CDFA) Alternative Manure Management Program (AMMP). Dairy farms across the state are continually working to improve manure management using a variety of technologies and strategies.



1. Lafranchi Ranch
2. Sierra View Dairy
3. Alexandre Family EcoDairy Farms
4. De Snayer Dairy
5. Double D Dairy
6. Milk River Dairy
7. Regli Jerseys
8. DaSilva Dairy Farms LP
9. Correia Family Dairy Farms
10. Matos Dairy
11. Magneson Dairy
12. Alamo Farms
13. Robert Gioletti and Sons Dairy
14. Rivercrest Cattle Co.
15. Manuel DaSilva Dairy
16. Cal-Denier Dairy LLC
17. Martins Farm LP
18. Alamo Dairy
19. AJ Borba Holsteins
20. Andrew Zylstra Dairy, Inc.
21. Antonio Brasil Dairy
22. Art Silva Dairy
23. Arthur Oliveira Dairy
24. Bordessa Family Dairies
25. Bosma Milk Compnay
26. Brodt Dairy
27. BWC Weststeyn Dairy LP
28. Deniz Dairy
29. Den-K Holsteins, Inc.
30. Dewit Dairy Inc
31. Diamond J Dairy, LLC
32. Dias Family Dairy
33. Double B Dairy
34. F&S Brasil Dairy
35. Frank Coelho & Sons
36. GM Silva Dairies #1
37. GM Silva Dairies #2
38. Godinho Dairy, Inc
39. Henry A Garcia Dairy
40. J Troost Dairy, LP
41. JB Dairy
42. Joe Meirinho & Son Dairy LP
43. John Machado Dairy
44. Jose V Silviera Dairy
45. Manuel Oliveira
46. McClelland Dairy
47. Ray-Lin Dairy
48. SBS AG Dairy
49. Silva Dairy Farms
50. Silveira Dairy
51. T & C Louters Dairy
52. Thommen Dairy
53. Tony & Fatima Garcia Dairy Inc.
54. Vierra Dairy Farms
55. Vierra Dairy Farms #3
56. Wilgenburg West LLC
57. Willem Postma Dairy #1
58. Zuppan Dairy



Learn more at DairyCares.com/alternative-manure-management



Questions?