

# Western Dairying Science of Cows and Crops to Improve Communities

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# Western Dairy Industry 2000

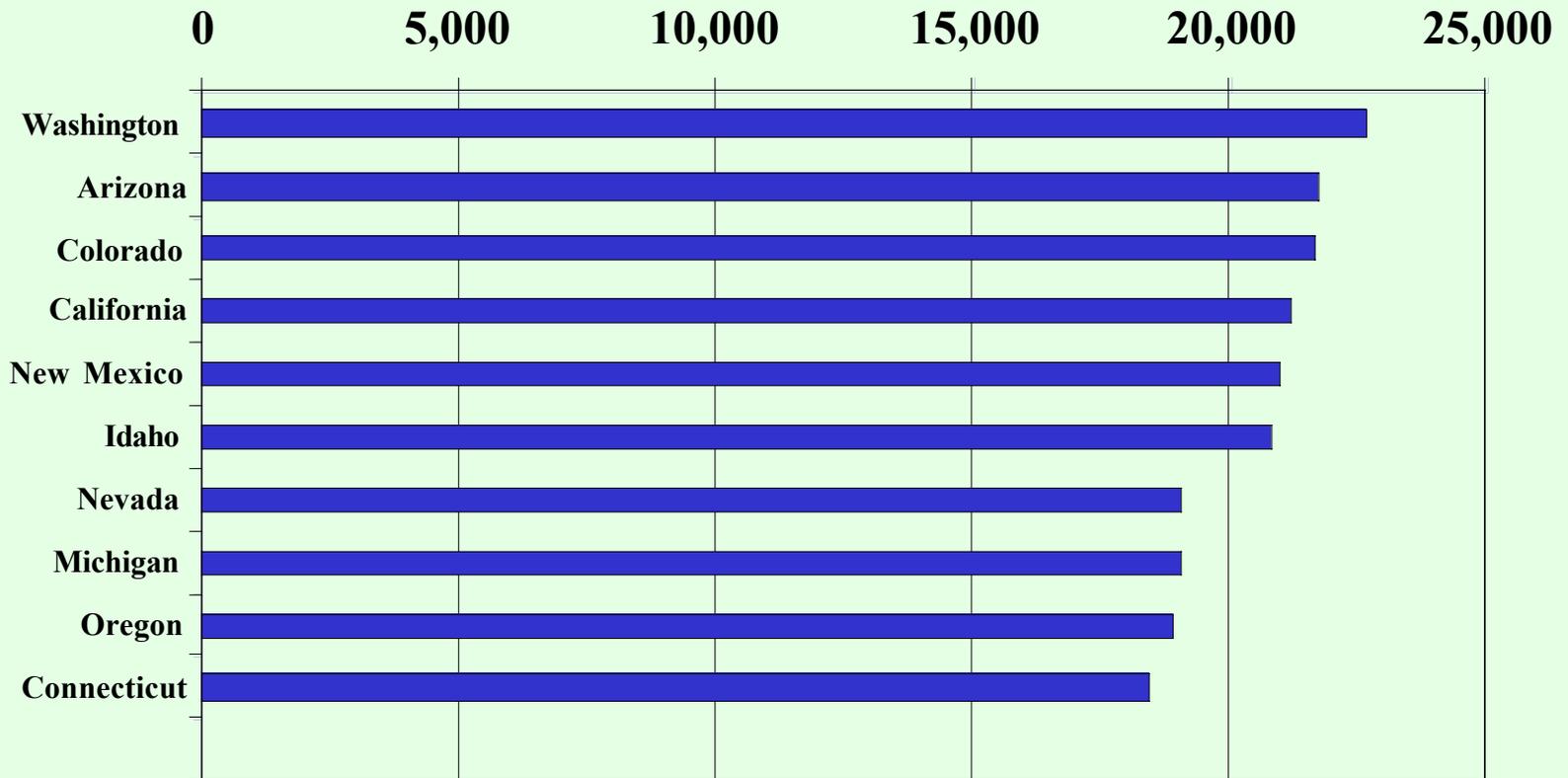
- Industry within a dairy industry.
- West increased production twice the national rate.
- West expanded cow numbers six times the national rate.
- West increased cow numbers 129,000 head.
- Excluding the Western Dairy Production
  - U.S. Average = 17,087 lbs.
- Production per Cow.

# Western Dairy Phenomenon



# Production per Cow

## Top Ten States



# West Efficient use of Water and Crops

- 24 hour harvest, 18 day cutting interval, up to 10 cuttings per year.



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- Recycled water use on Dairies
  - milk cooling water to flush water to crop irrigation.
- Dairy wastewater used to irrigate various crops.
- West, feeders of many byproducts.

# Cooling methods in the South West



# Lactation Performance of Holstein and Brown Swiss Cows During Thermal Stress

Environmental Modification	<u>Holsteins</u>		<u>Brown Swiss</u>	
	Lbs/d 4% FCM		Lbs/d 4% FCM	
Shades (control)	68.2	62.7	65.56	60.06
Shades, fans, cooling	84.7	71.94	69.08	63.8
Cooling difference	16.5	9.24	3.52	3.74

# Reproductive Performance of Holstein and Brown Swiss Cows During Thermal Stress

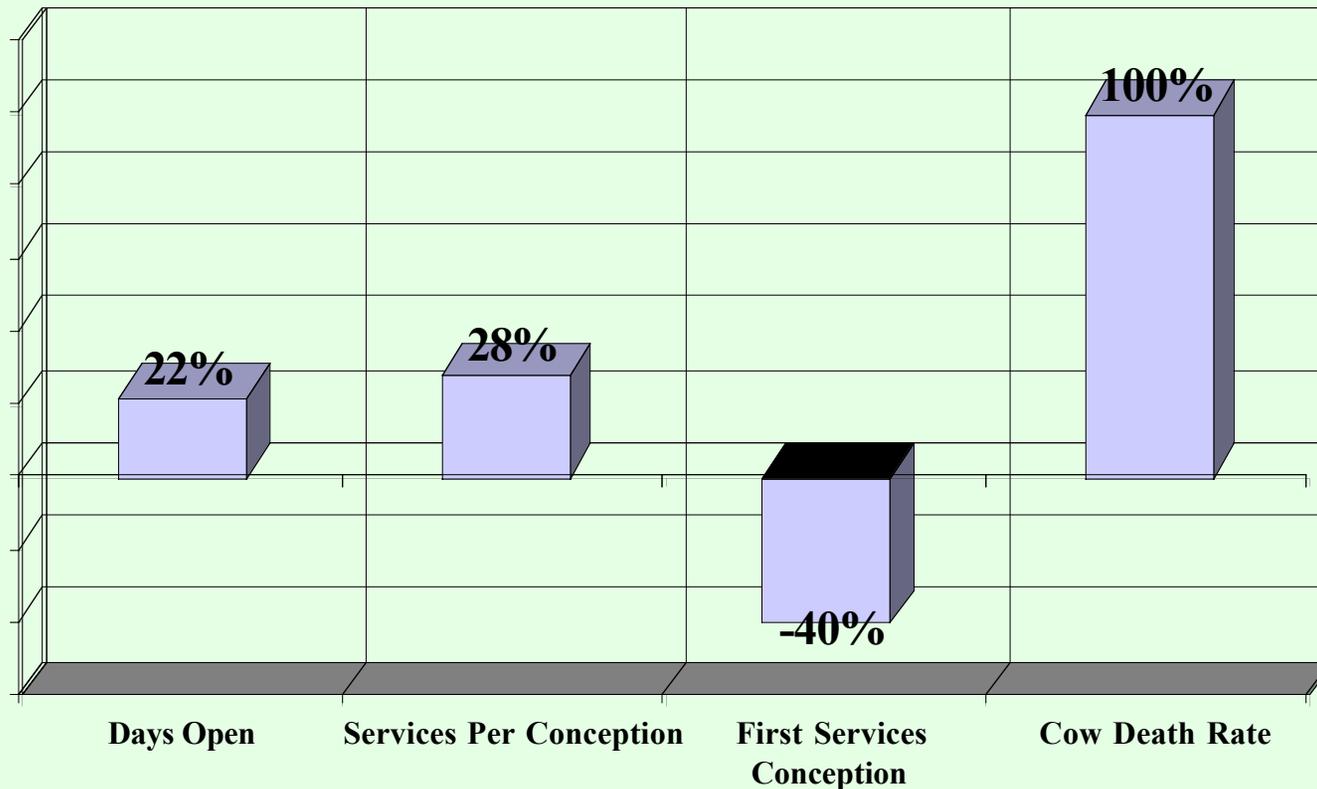
Environmental Modification	<u>Holsteins</u>		<u>Brown Swiss</u>	
	No. Cows	% Preg	No. Cows	% Preg
Shades (control)	23	8.7	16	37.5
Shades, fans, cooling	36	50.0	21	41.9
Cooling difference		41.3		4.4

# Present Dairy Industry Trends

- Waste management rules require dairymen to become growers.
- Compost for Recycling
- Methane for energy production.
- Western Farm Industry will become much larger.
  - >5000 cows.
  - >10,000 acres.

# Forage/Concentrate ratio affects on Reproduction and Health

Changes from 56% forage to 38% forage in ration.



# Research needed in Forage Production and Use

- Present crop changes.
- Elimination of forage contamination problems.
- Forage harvesting, packaging and marketing.
- Develop lower risk, higher profit forage.
- Higher yield, faster rotation.
- Forage digestibility.
- Forage maceration – Time is now.

# Thank you!

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