

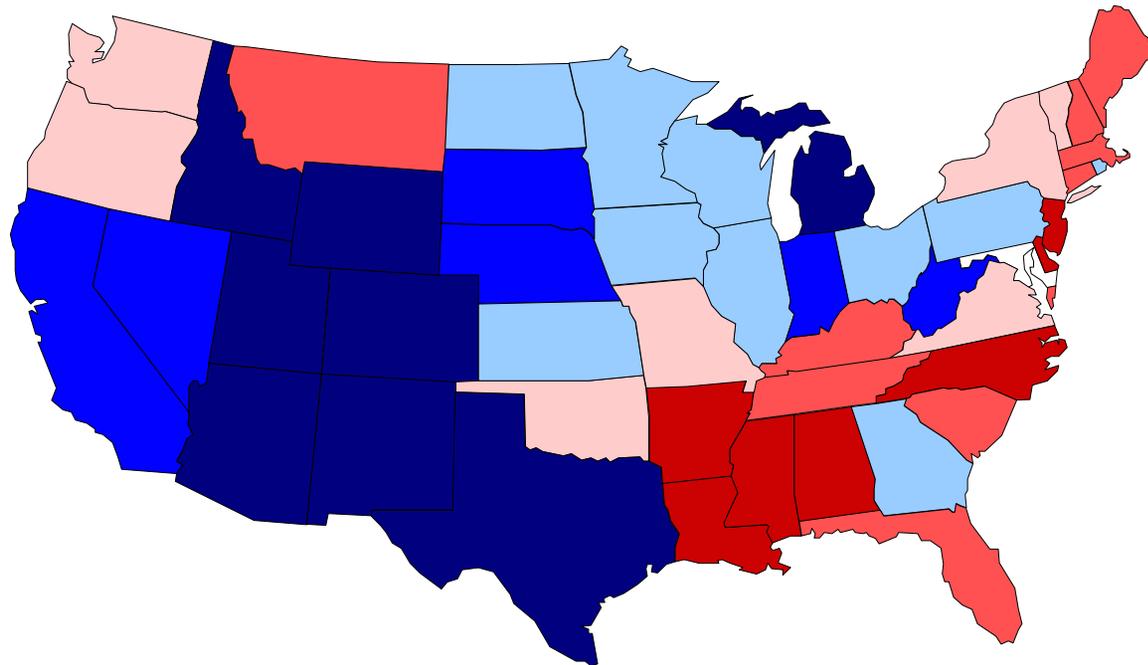
Overview of the Michigan Livestock Industry

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Animal agriculture in Michigan

- Agriculture is 2nd largest industry in Michigan
- Dairy is 25% of ag receipts

Change in Milk Production, 2005-06



Light Blue < 3% increase

Blue 3-5% increase

Dark Blue 5+% increase

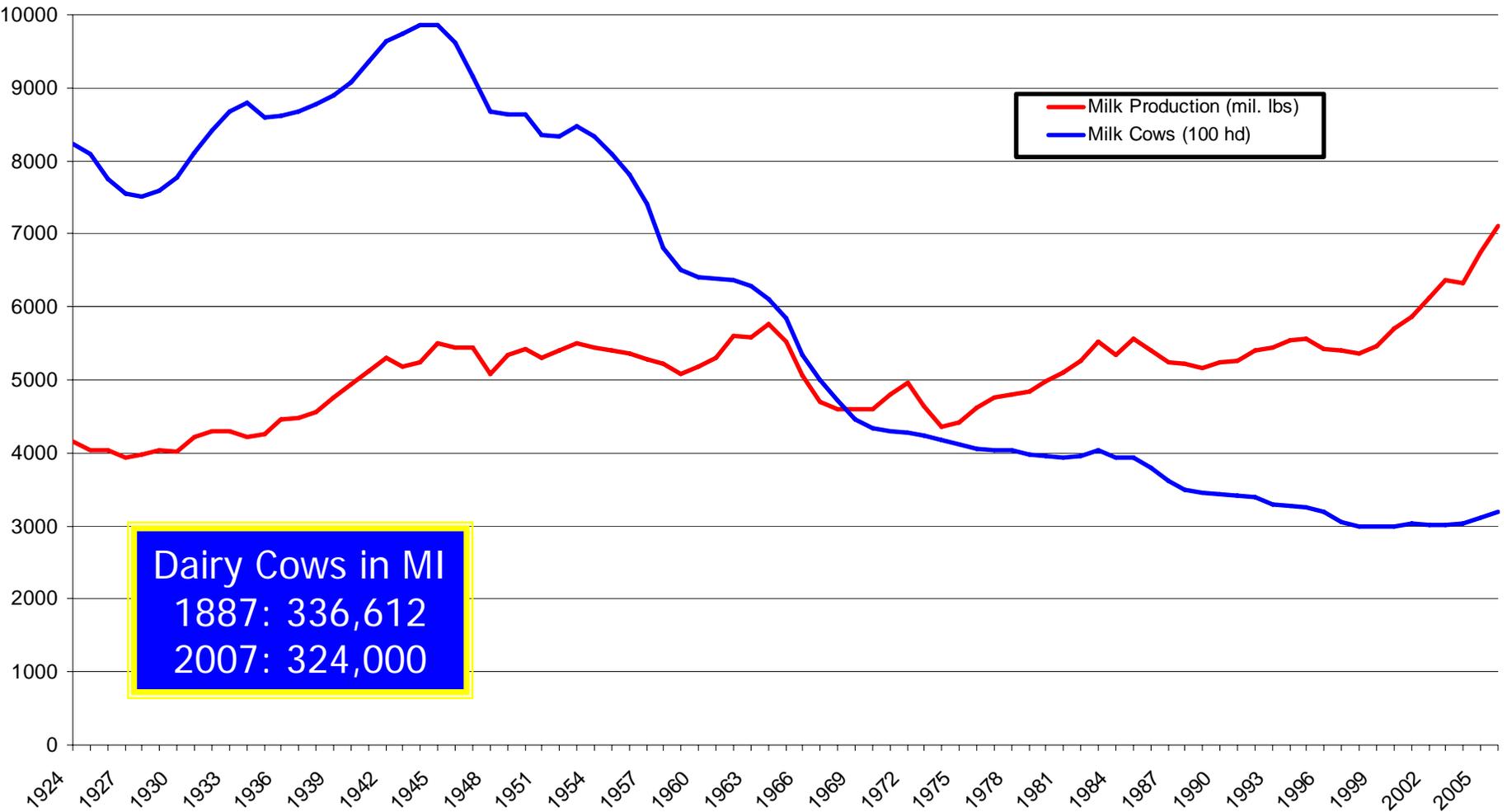
Light Pink <3% decrease

Pink 3-5% decrease

Red 5+% decrease

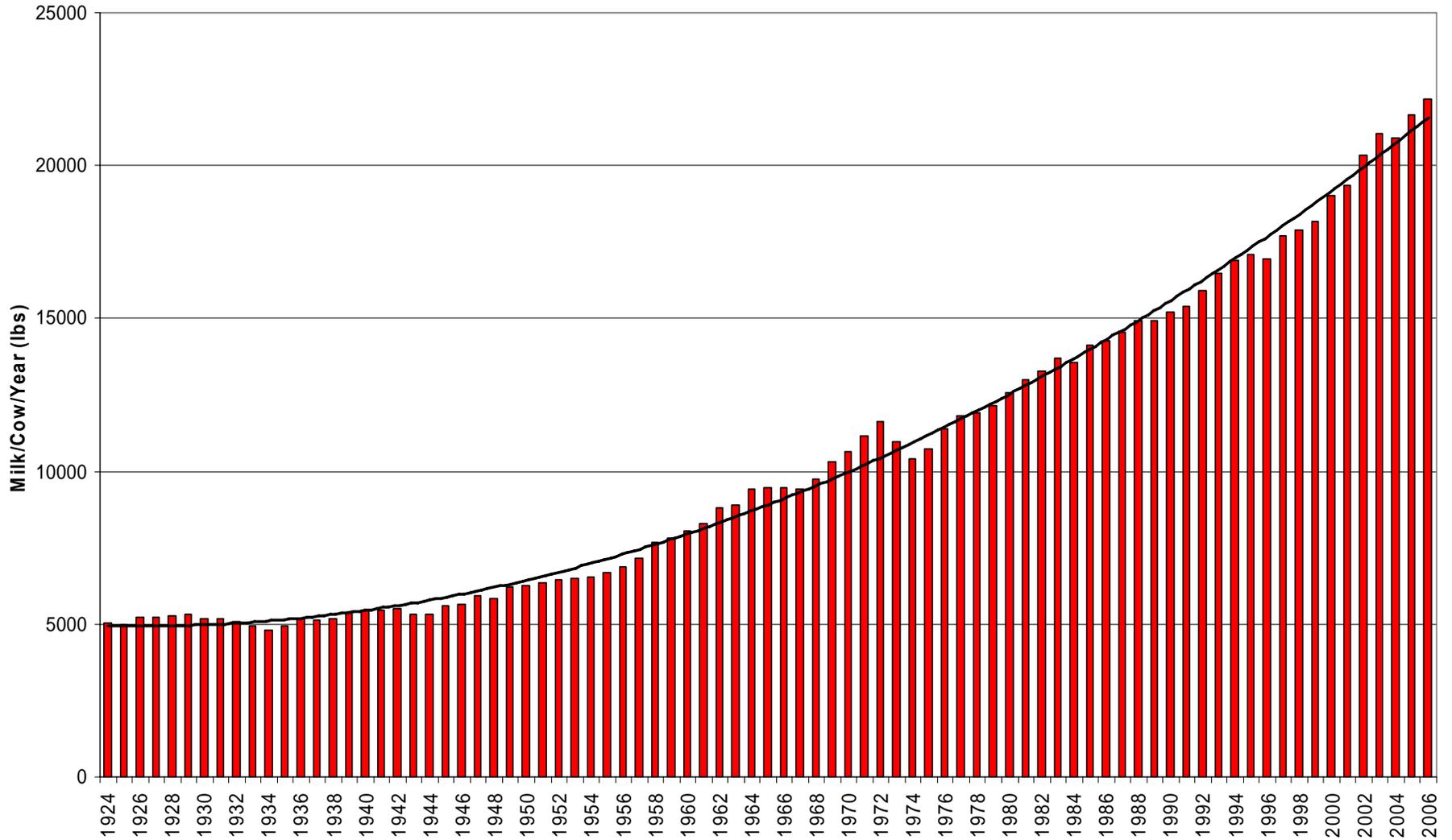
U.S. = 2.8% increase (consumption tends to increase 1-4% annually)

MI Cows & Milk, 1924-2006

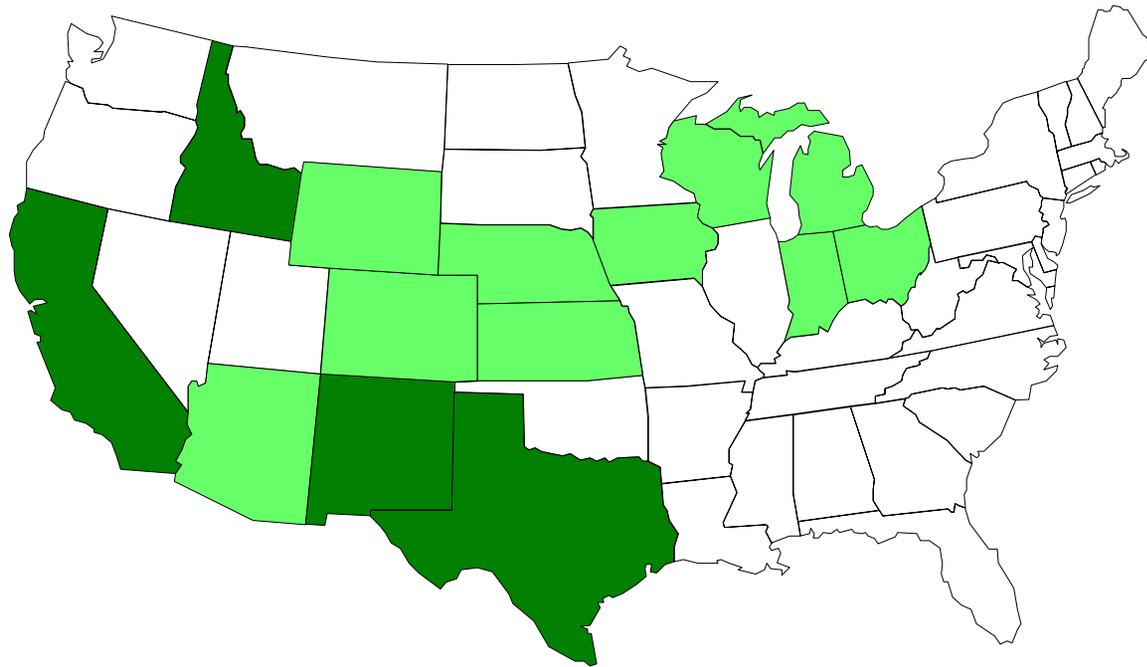


Dairy Cows in MI
1887: 336,612
2007: 324,000

MI Milk per Cow, 1924-2006

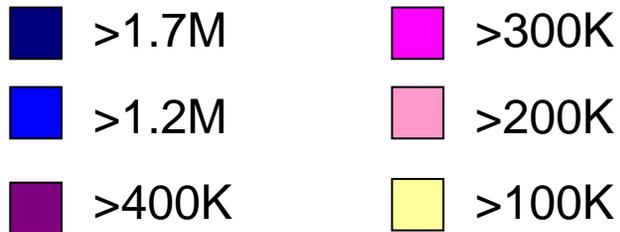
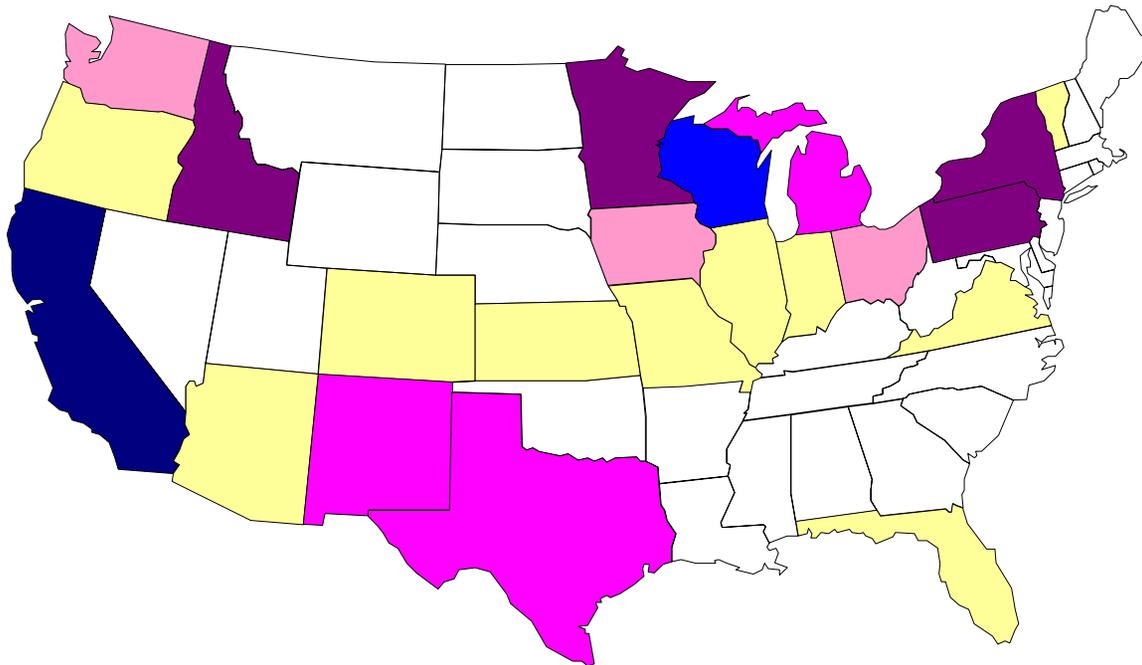


Change in Dairy Cows, 2005-06



-  >10,000 cow increase
-  <10,000 cow increase
-  <10,000 cow decrease

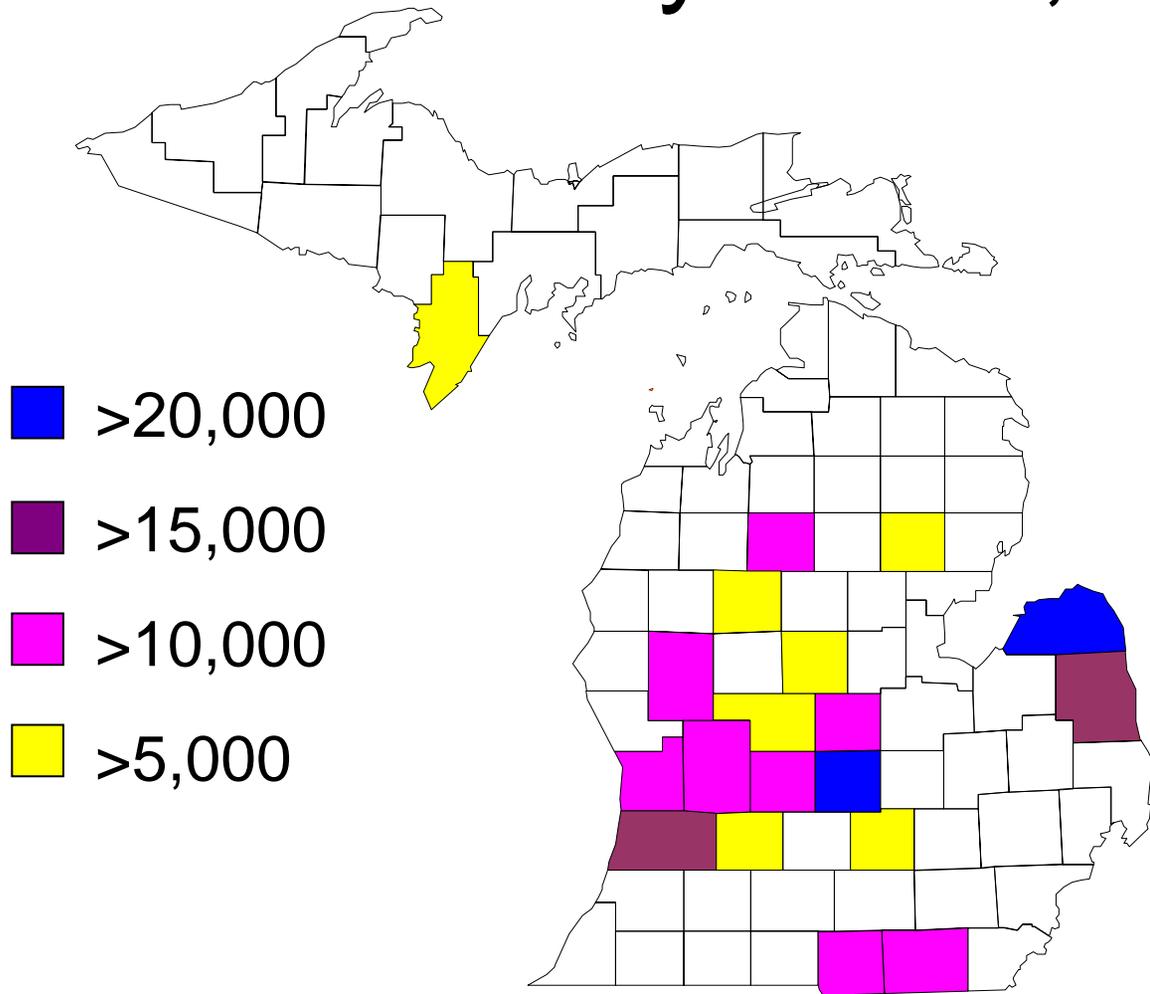
Dairy Cows (April, 2007)



Top Ten

California	1,797,000
Wisconsin	1,246,000
New York	627,000
Pennsylvania	550,000
Idaho	503,000
Minnesota	455,000
Texas	347,000
New Mexico	345,000
Michigan	328,000
Ohio	275,000

Dairy Cows, 2007

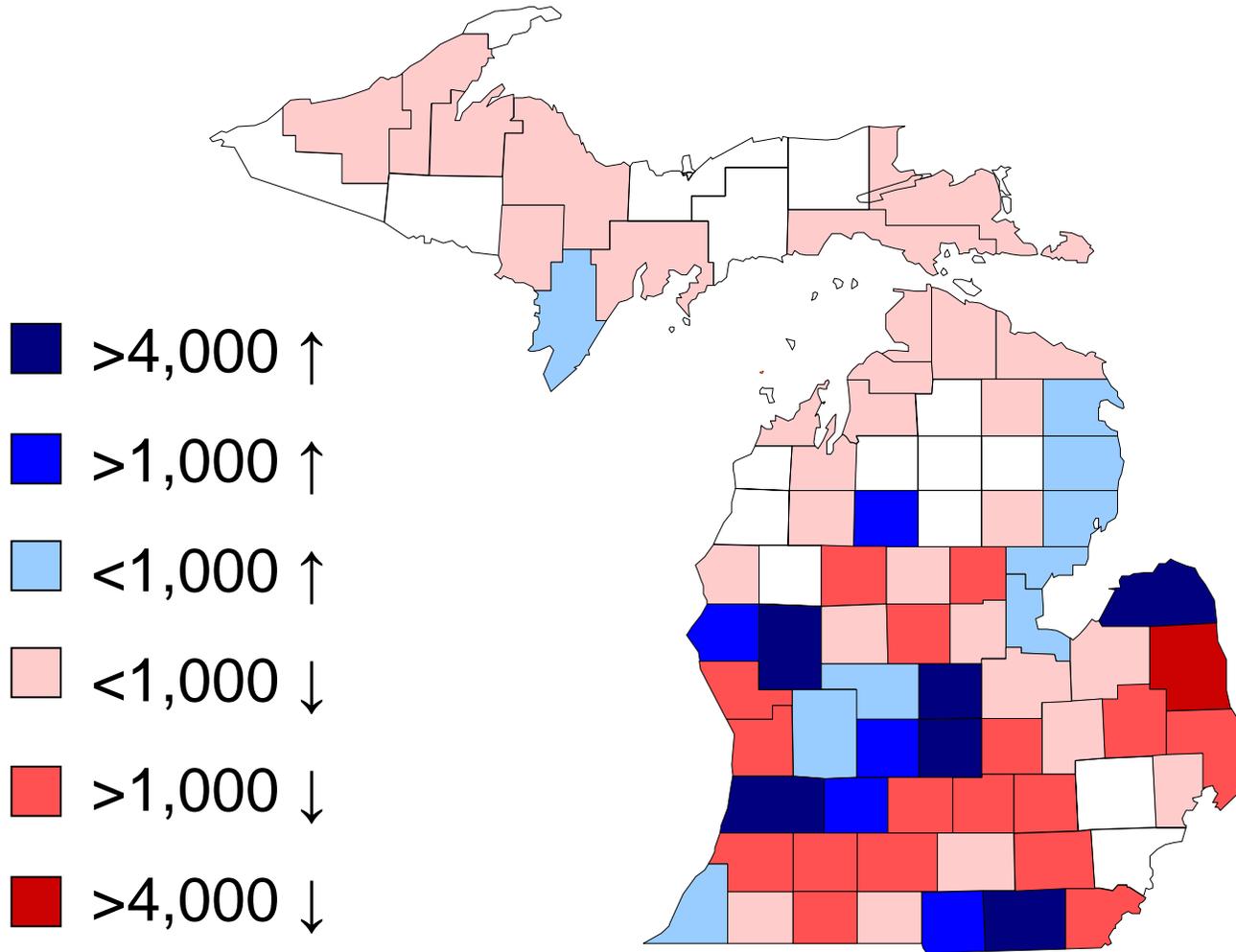


Top Ten

Huron	24,400
Clinton	21,100
Sanilac	19,500
Allegan	19,000
Newaygo	12,900
Ionia	21,100
Gratiot	11,800
Missaukee	11,700
Ottawa	11,200
Hillsdale	10,900

Change in Dairy Cows, '97-'07

Michigan +12,000 (312,000 to 324,000)

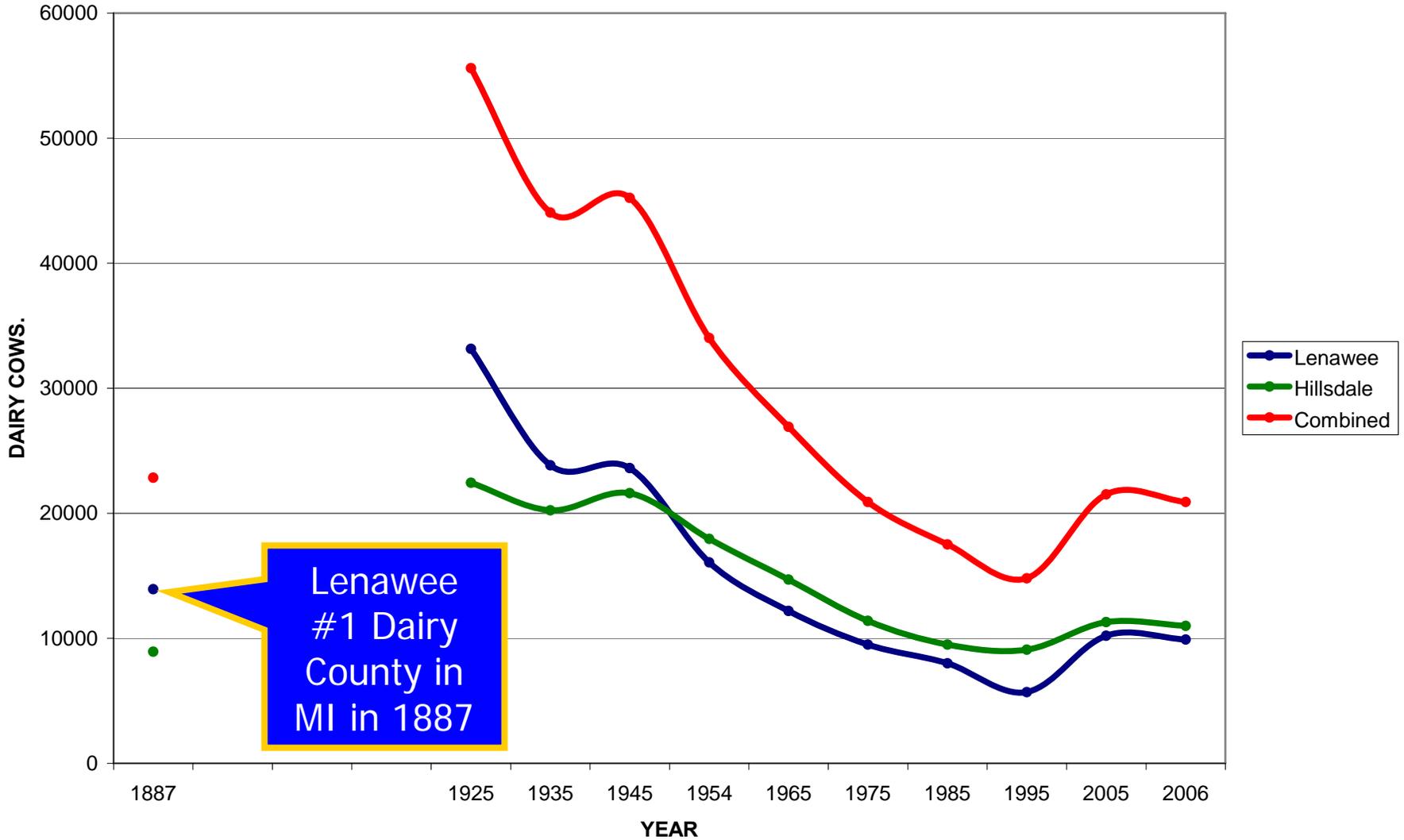


Top Five from both ends

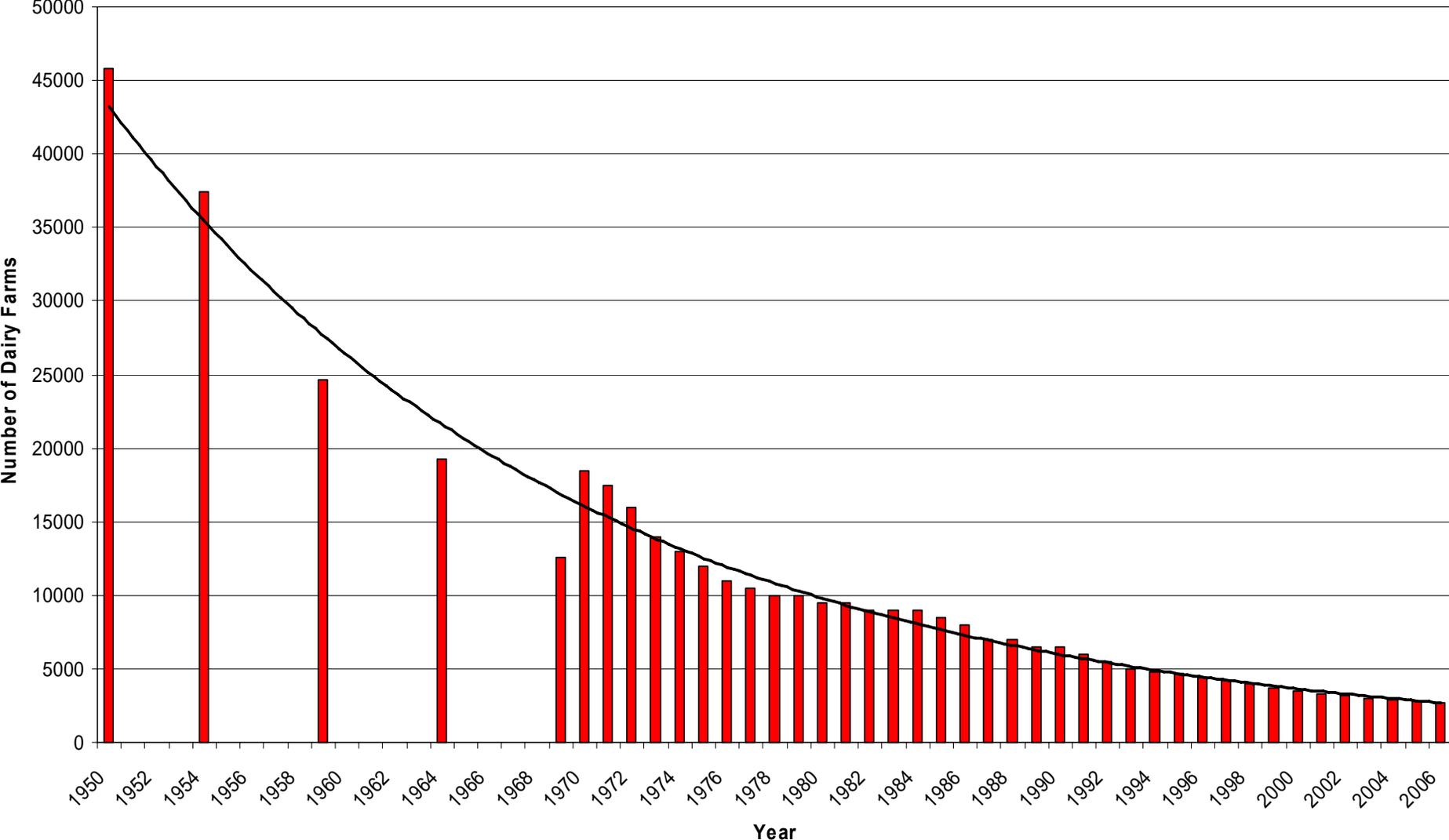
Huron	+8,900
Clinton	+5,600
Lenawee	+4,900
Newaygo	+4,900
Gratiot	+4,300
.....	
Lapeer	-3,000
Washtenaw	-3,200
Ottawa	-3,300
Muskegon*	-3,800
Sanilac	-5,000

* Reported as zero in 2007 because of too few farms

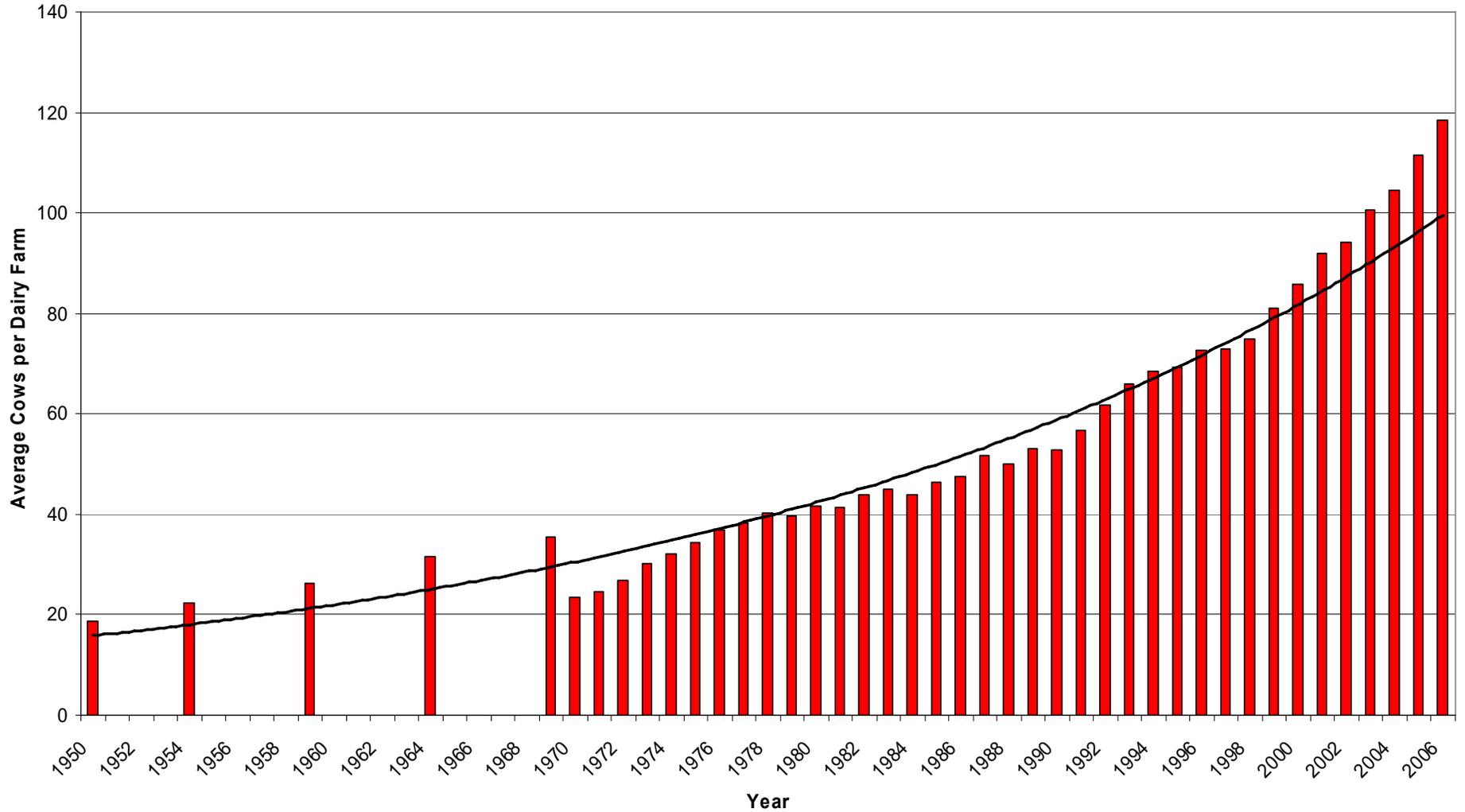
Hillsdale & Lenawee Co. Dairy Industry 1887-2006



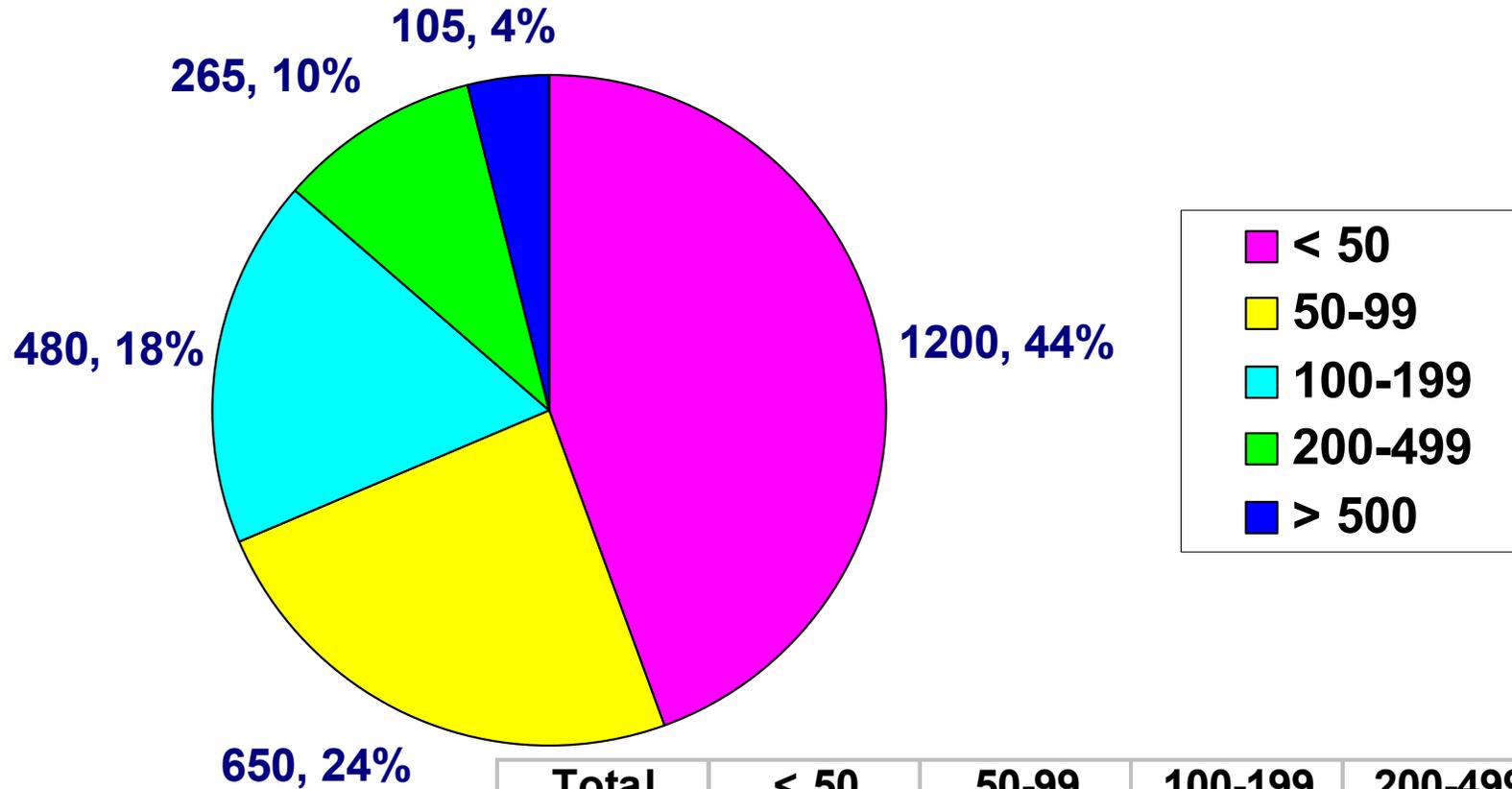
MI Dairy Farms, 1950-2006



Average Herd Size 1950-2006

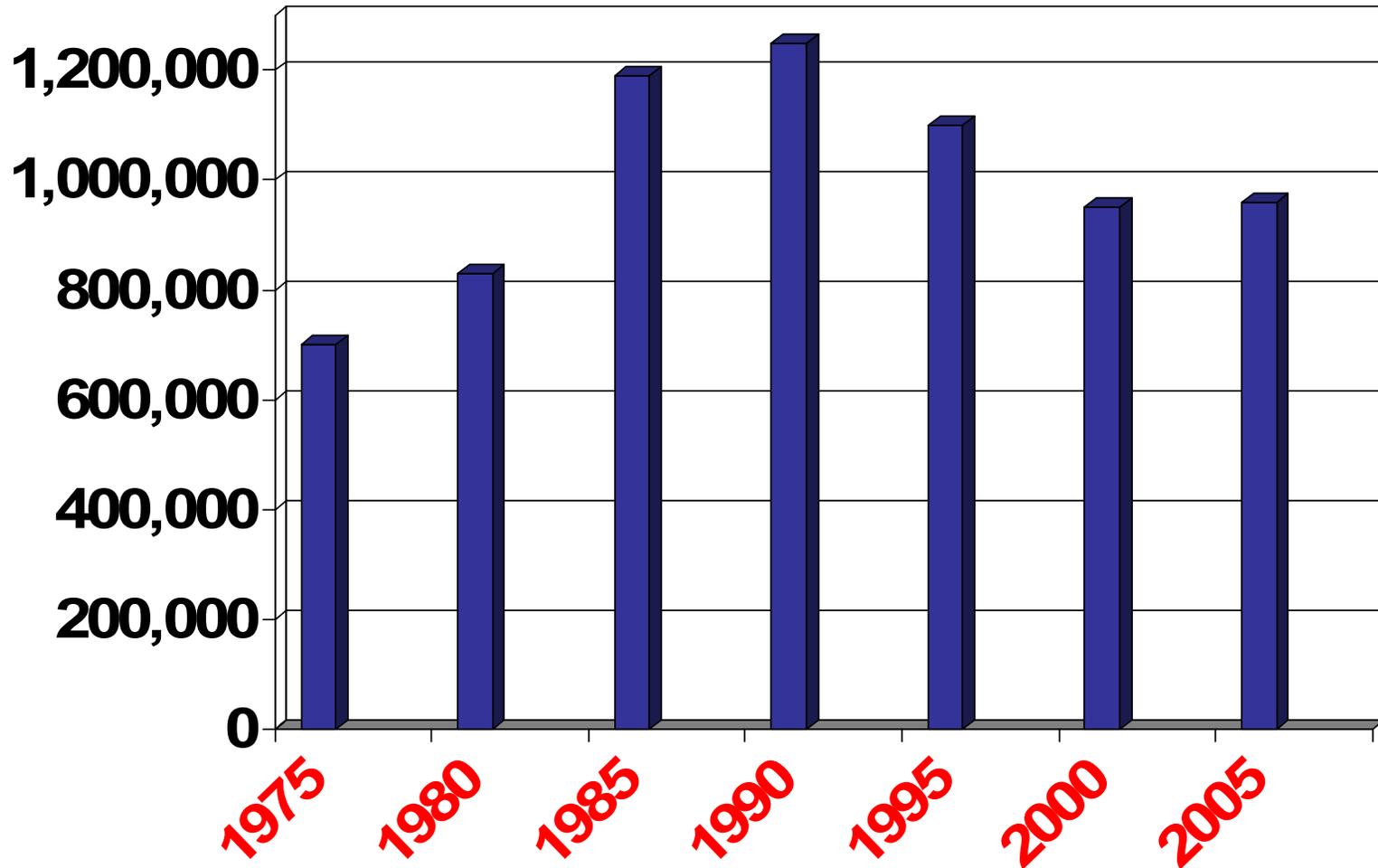


Michigan Dairy Farms by Herd Size, 2006



Total	< 50	50-99	100-199	200-499	> 500
2700	1200	650	480	265	105
<i>% herds</i>	44%	24%	18%	10%	4%
<i>% cows</i>	7%	15%	21%	23%	34%
<i>% milk</i>	5%	13%	19%	24%	39%

U.S. Hogs and Pigs Inventory 1975 to 2005

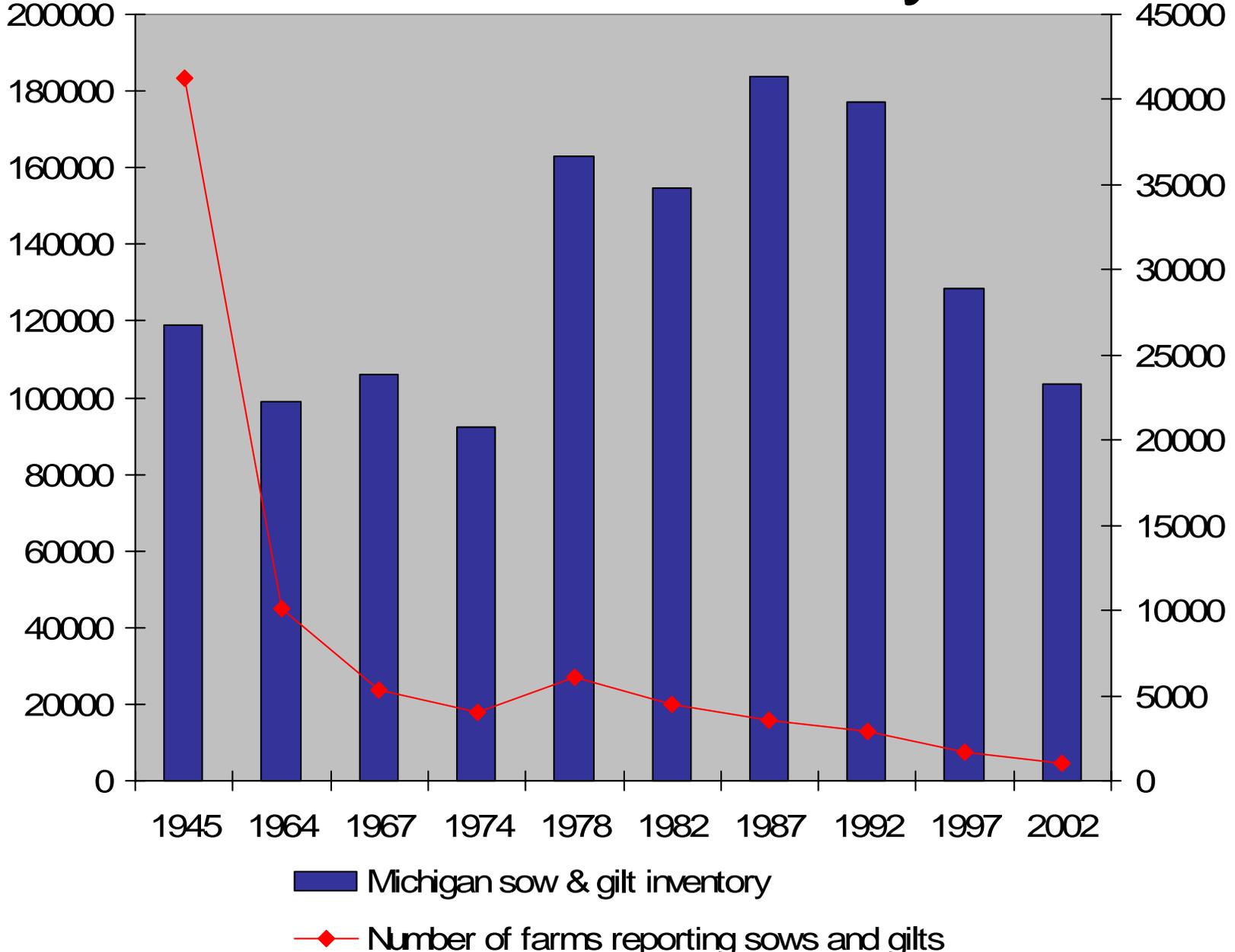


Sow farm inventory by state

6/29/07

IA	16,800
NC	9,400
MN	6,900
IL	4,050
IN	3,200
NE	3,050
MO	2,850
OK	2,340
KS	1,840
OH	1,700
SD	1,280
PA	1,100
MI	980

Sow inventory



Michigan swine industry

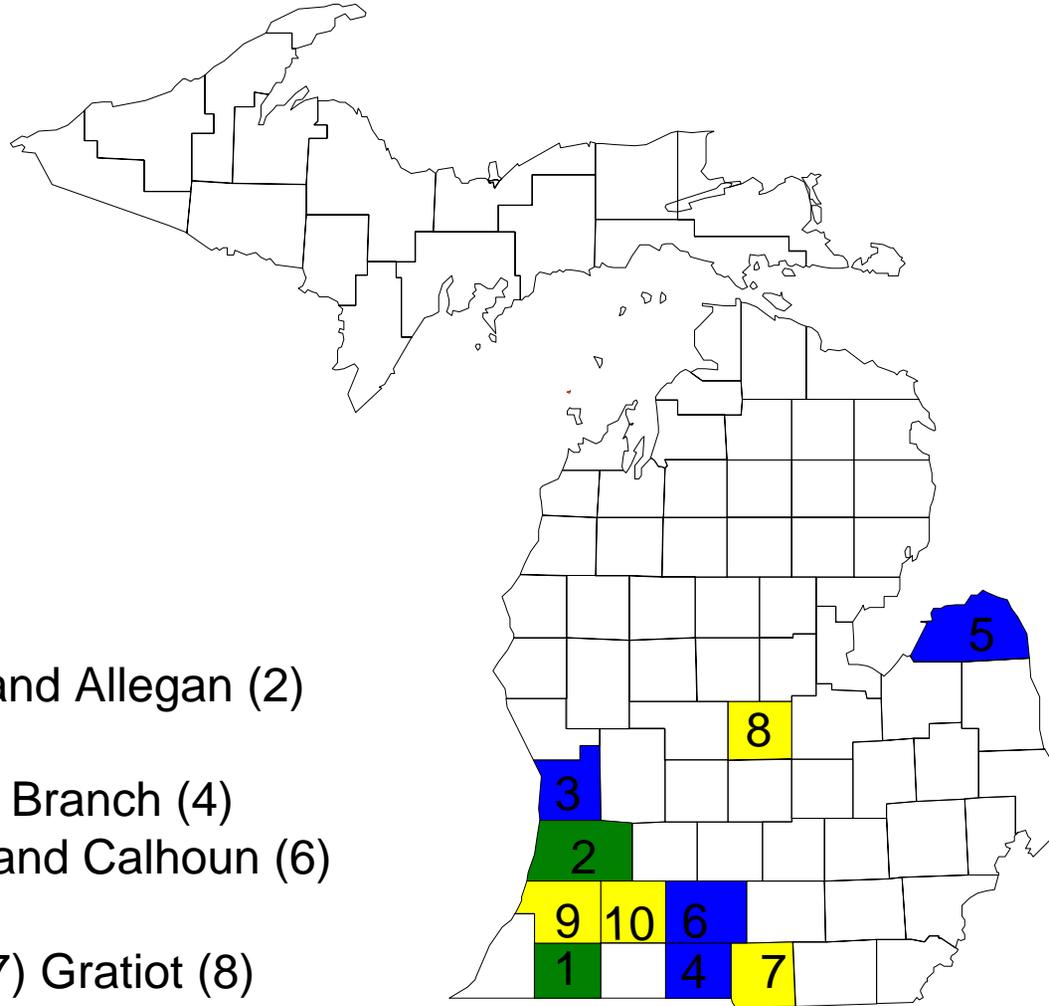
- In 1980, Michigan was reported to have 9,600 farm operations with hogs. In December 1991, this number had decreased by approximately 4,600 farms to a reported 5,000 farms with hogs.
- 1991 – ranked 11th in number of pigs

Michigan swine industry

- NASS – 2100 operations in 2006

1-99	100-499	500-999	1,000-1,999	2,000-4,999	>5,000
1540	240	75	80	120	45
73%	11%	4%	4%	6%	2%

Top 10 counties 2005



Green: Cass (1) and Allegan (2)

Blue: Ottawa (3) Branch (4)
Huron (5) and Calhoun (6)

Yellow: Hillsdale (7) Gratiot (8)
Van Buren (9) Kalamazoo (10)

Feedlots

- Generally moving north with highest concentration in the thumb

Feedlot numbers for 1999-2006: (1,000 hd)

	Steers >500 lb	Heifers Non-replacements >500
1999	195	45
2000	200	50
2001	190	45
2002	195	45
2003	195	42
2004	215	51
2005	200	47
2006	195	45

Cow-calf operations

- Spread out across state, focused in areas of lower land values and higher forage production capability
- Highest concentrations in the south-west and west-central regions
- Numbers have declined in the U.P. and north-east Michigan

Beef Cows 1999-2006 (1,000 hd)

1999	105
2000	95
2001	85
2002	71
2003	89
2004	85
2005	93
2006	108

Overall growth

- Dairy is essentially the only growing sector
- Dairy and other sectors continue to see fewer, larger operations with no net change in animal inventories for beef, swine and poultry

Rationale behind changes

- Increased productivity means increased profits
- Fewer people interested in growing their own food or the world's food
- Economies of scale leads to increased size
- Increasing size provides greater opportunities

Implications of change

- More waste in one place
- Specialization compounds the issue...
- as does urban sprawl/population increase

- But manure management has continually improved in the livestock industry

Challenges for producers

- Cost of compliance
 - May be better absorbed by larger operations
 - Get bigger to help spread the cost of compliance over greater units of production
- Siting
 - Availability of good sites
 - Availability of good siting tools

Challenges for producers

- Siting
 - Availability of good sites
 - Availability of good siting tools

Challenges for producers

- Public perception
 - Bad actors
 - ‘CAFO’

Things aren't black and white

- Manure application near tile line or on frozen ground always leads to runoff
- Size dictates pollution potential
- Extensive agriculture is better for the environment
- Agriculture has a larger impact than humans

Perspective is essential

- Air quality
- Water quality
- Quality of life
- Biodiversity
- Ecological footprint

Future of animal agriculture in Michigan

- Impact of a moratorium
 - Who benefits?
 - Who is hurt?
- Need for good siting
- Need for good community planning
- Do environmental regulations improve the environment?
- What are the social implications?