

History of Federal Dairy Programs

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Dairy Policy Overview

- Review of policy mechanisms used
 - Cost of programs
 - Program objectives
 - Program effects

- Programs
 - Price support
 - Direct payments
 - Dairy termination
 - Dairy diversion
 - Assessments
 - Federal orders

Federal Dairy Policy Components Have Different Effects/Missions

- **Price supports** – have been used to create market price floors
- **Direct payments** - partially moderate the effect of low milk prices on producers
- **Assessments** – economic incentive to curb production growth
- **Supply reduction** – direct approach to curb production growth
- **Orders** – allow milk uses to be valued differently, orderly marketing

There Are Interactions Across Programs

Federal Dairy Policy

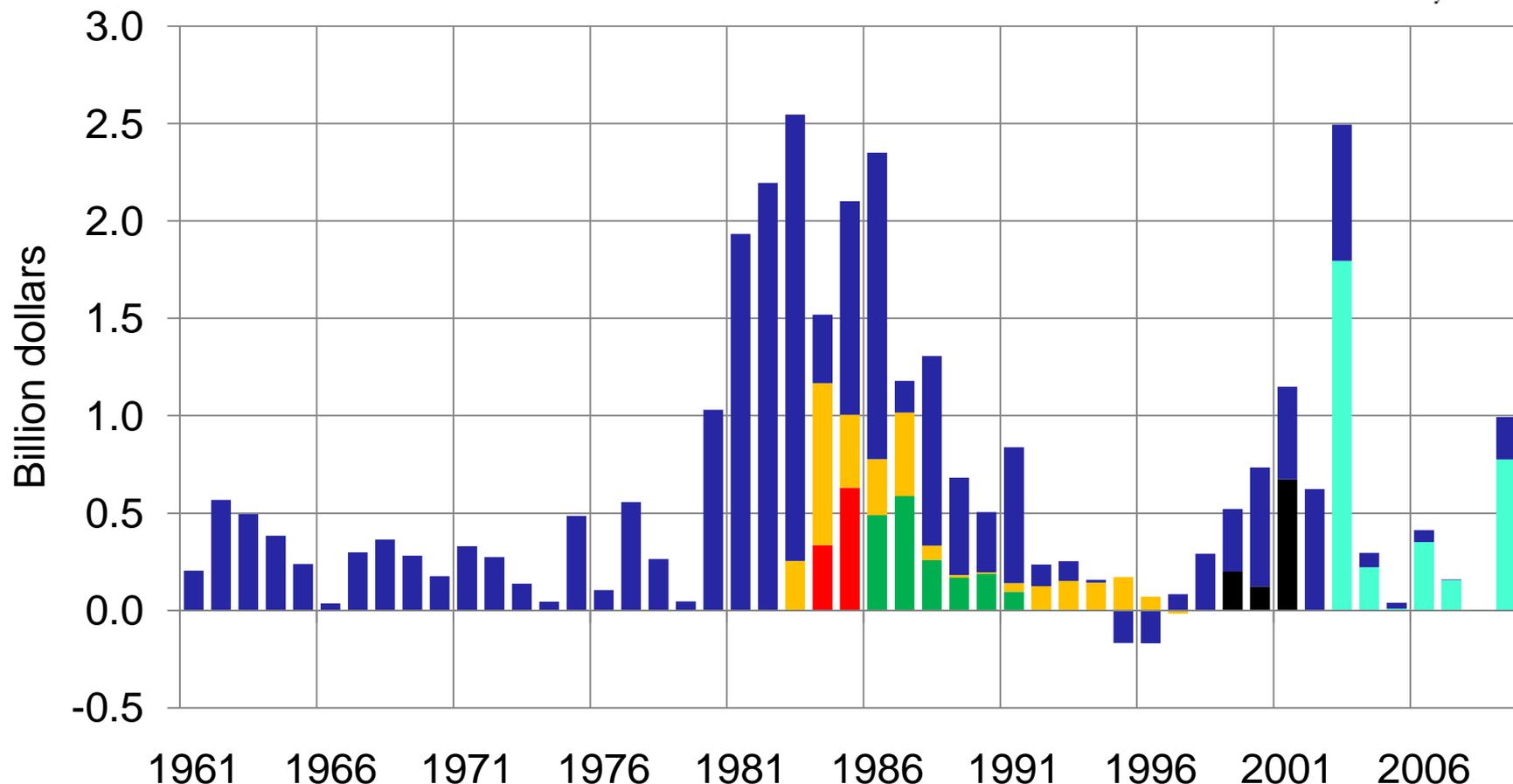
Price Support
and Related

Federal
Market
Orders

Direct
Payments

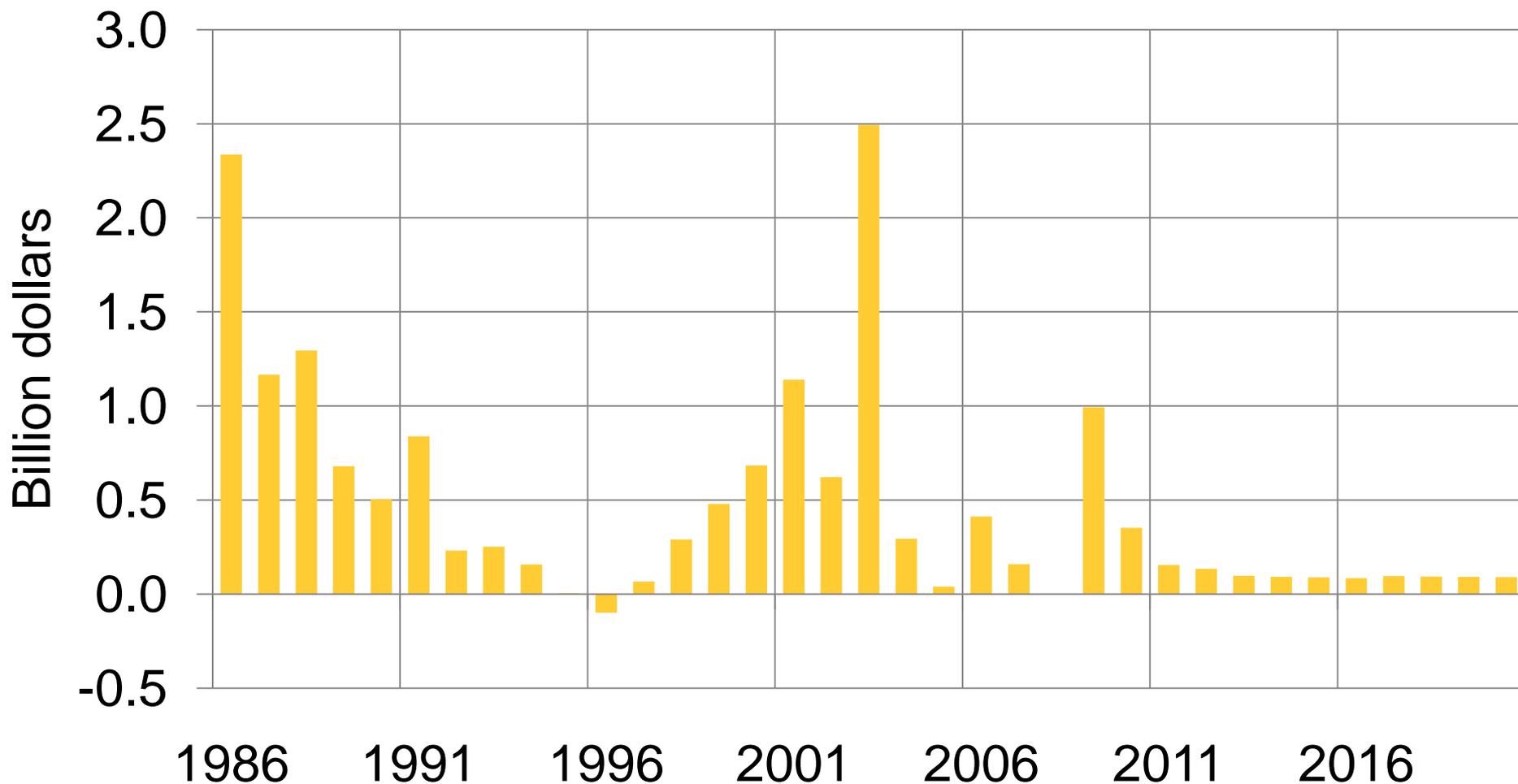
Other
Programs

Commodity Credit Corporation, Dairy Net Outlays



- Diversion
- Dairy Termination Program
- Net Assessments
- Market Loss Assistance
- Milk Income Loss Contract
- Price Support and Other

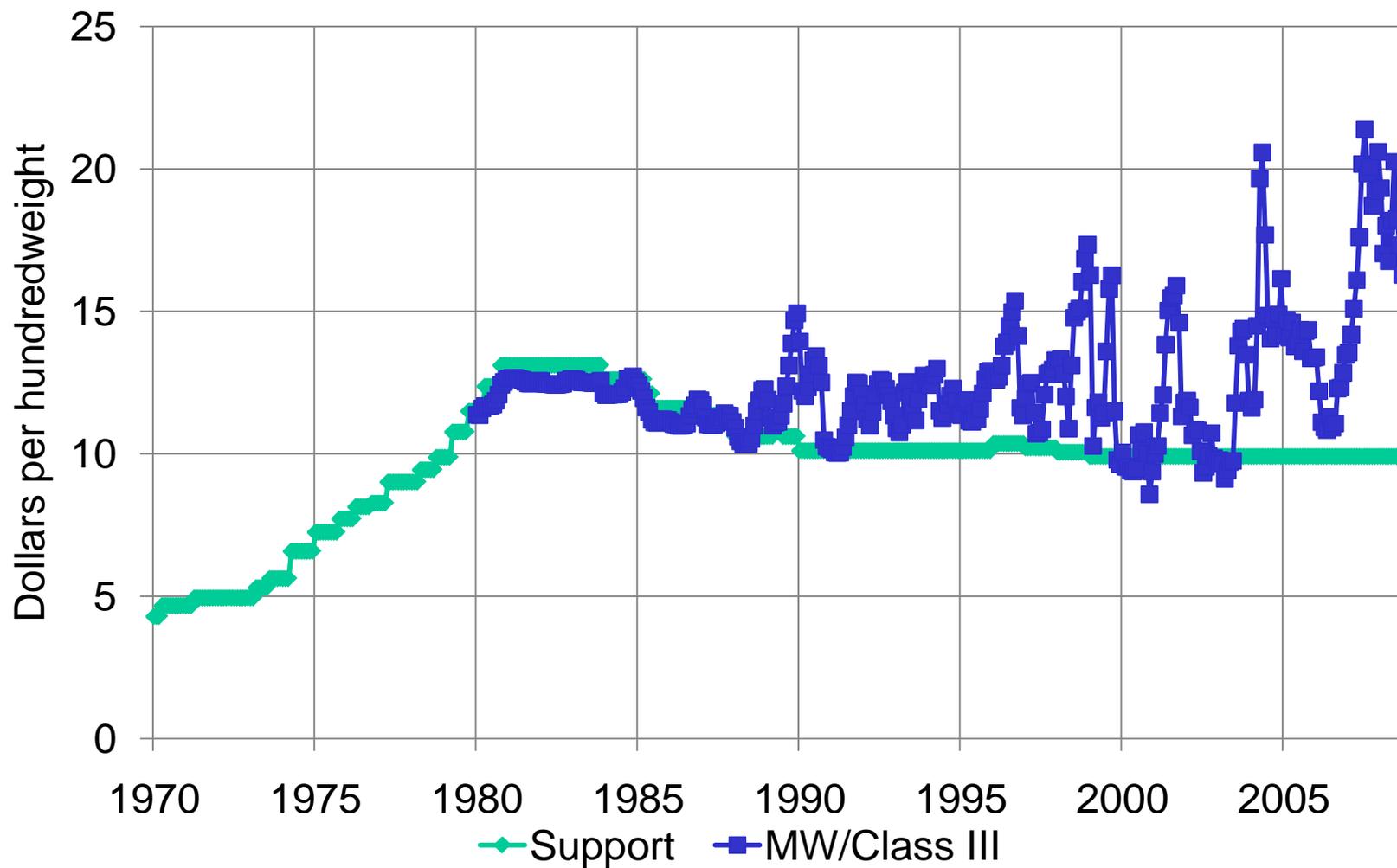
CCC Dairy Outlays



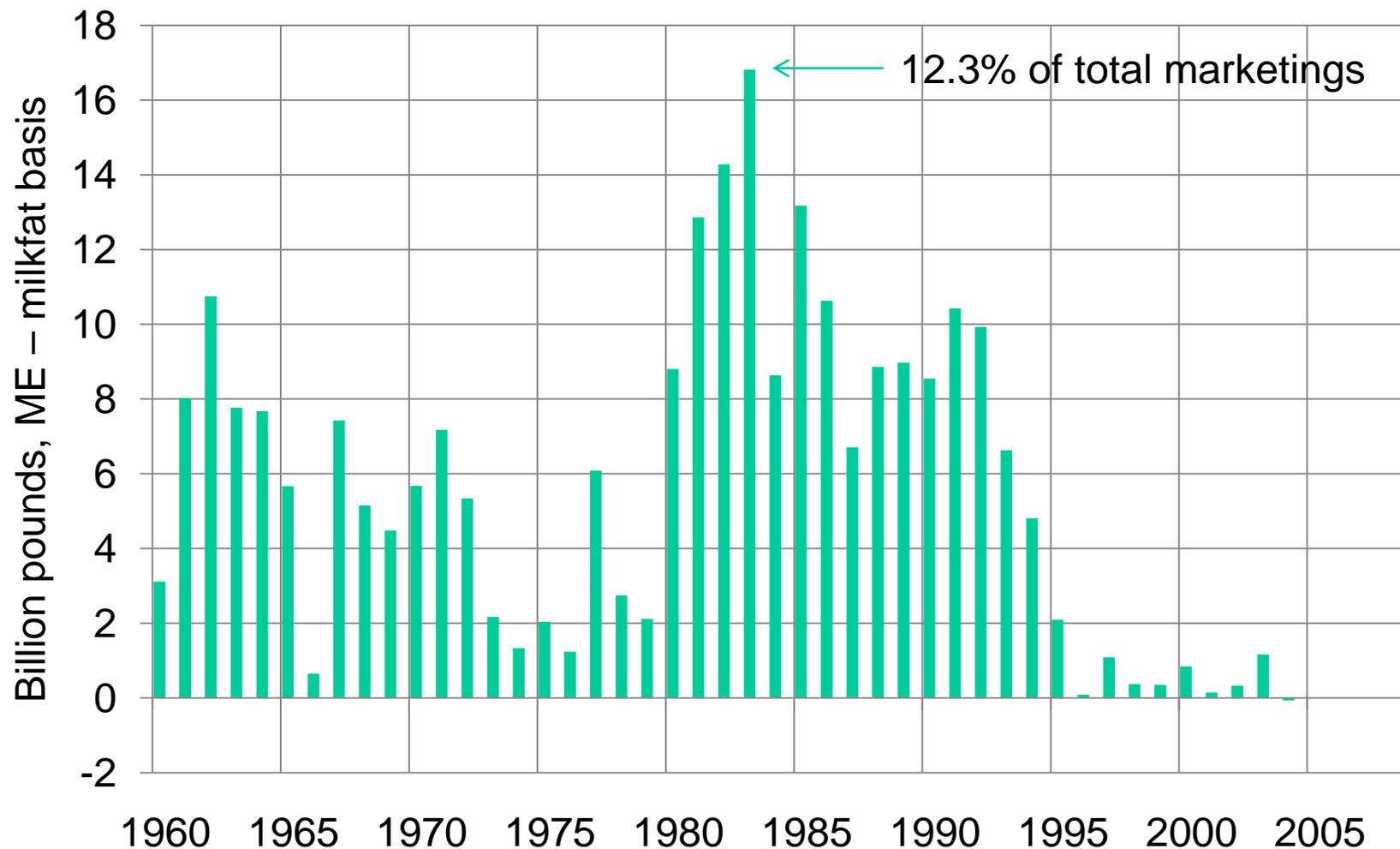
Source: CBO, January 2010



Milk Prices



Milk Removals



Dairy Price Support Program

- Supports the milk price through purchases of American cheese, butter and nonfat dry milk
- Origin to the Agricultural Act of 1949
- Parity pricing used originally to set support levels
 - Minimum – 75% of parity (raised to 80% in 1970s)
 - Maximum – 90% of parity
- Secretary determined support price within the minimum and maximum levels
 - Adequate milk supplies
 - Reflect current costs of production
 - Maintain farm income to maintain productive capacity
- Agricultural Act of 1981 tied support level to amount of surplus
- Was set to be terminated with the 1996 farm bill but extended in agricultural appropriations bills

Understanding the Pre-2008 Farm Bill Method of Determining Product Support Levels

Support price, \$/cwt, at 3.67% milkfat	10.10
Support price, \$/cwt, at 3.5% milkfat	10.00
Butterfat differential 1/	6.1

Yields per 100 pounds of milk (3.67% milkfat)

Butter	4.48
Nonfat dry milk (NDM)	8.13
Cheese	10.1

1/ (Butter purchase price times 0.138) - (.0028 times 3.67 price).

Understanding the Pre-2008 Farm Bill Method of Determining Product Support Levels

Butter-Nonfat dry milk calculations

Return to butter-powder plants, \$/cwt	10.10
CCC manufacturing allowance for butter and NDM, \$/cwt	1.22
Value of butter and NDM (U.S. average) made from 100 pounds of milk, \$/cwt	11.32
Nonfat dry milk purchase price (rounded), \$/lb	1.0340
Value of NDM per 100 pounds milk, \$/cwt 2/	8.41
Value of butter:	
Dollars per 100 pounds of milk	2.91
Dollars per pound (calculated) 3/	.6496
Butter purchase price (rounded), \$/lb	.6500

2/ NDM price per pound times 8.13. 3/ Value of butter per 100 pounds of milk divided by 4.48.

Understanding the Pre-2008 Farm Bill Method of Determining Product Support Levels

Cheese calculation

Return to cheese plants, \$/cwt	10.10
CCC manufacturing allowance for cheese and whey, \$/cwt	1.37
Value of cheese and whey per 100 pounds of milk, \$/cwt	11.47
Value of .25 pounds of whey fat: \$ 4/	.16

Value of cheese:

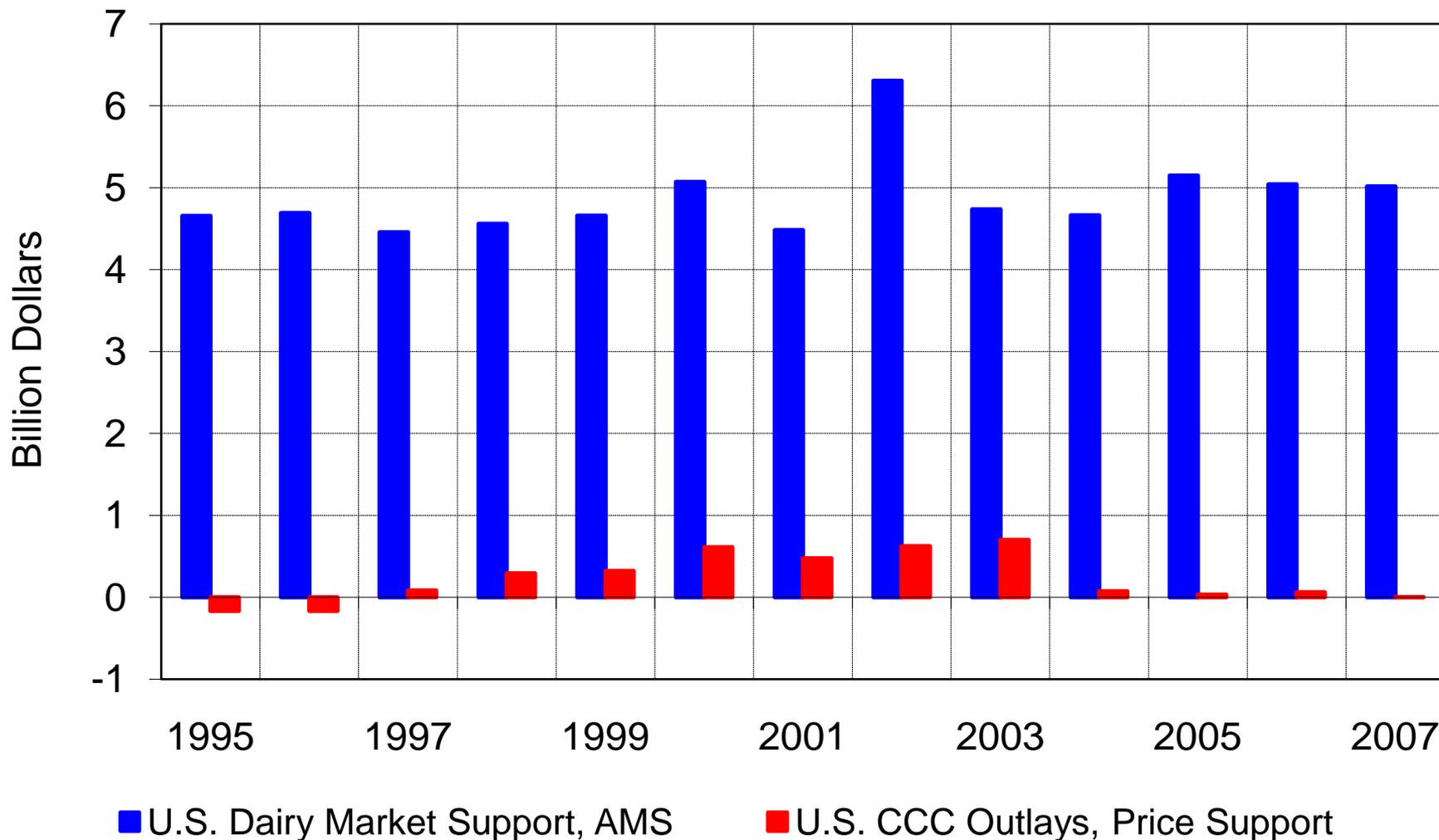
Dollars per 100 pounds of milk	11.31
Dollars per pound (calculated) 5/	1.1198
Cheese purchase prices (rounded), \$/lb	
Block	1.1200
Barrel	1.0900

4/ Butter purchase price times 0.25. 5/ Value of cheese per 100 pounds divided by 10.1.

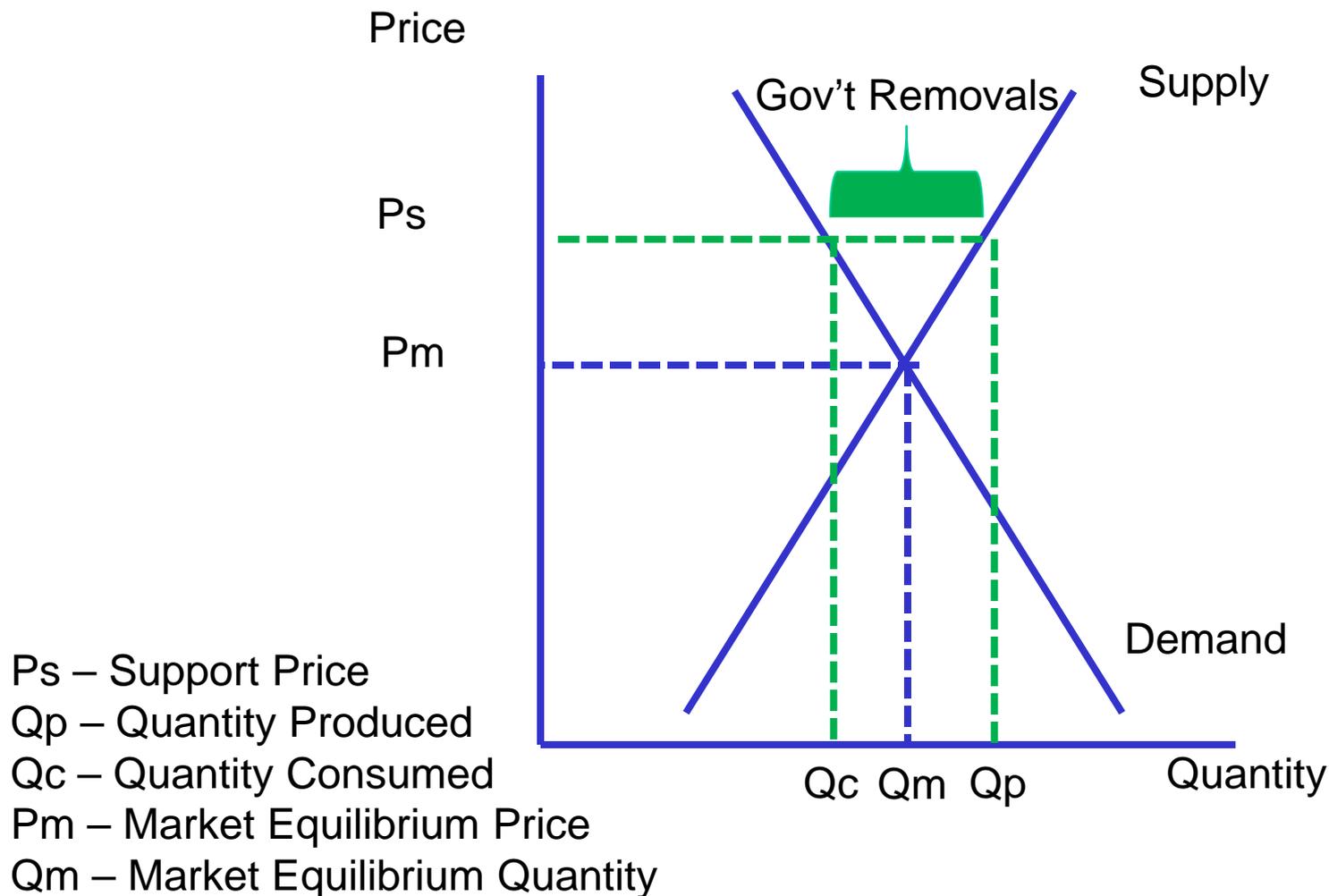
Dairy Price Support Program

- Amendments to the original legislation have continued through the 2008 farm bill
- The 2008 farm bill moved from a milk support price to directly establishing product support prices
 - Block cheese – not less than \$1.13 per pound
 - Barrel cheese – not less than \$1.10 per pound
 - Butter – not less than \$1.05 per pound
 - Nonfat dry milk – not less than \$0.80 per pound
- In 2009, Secretary temporarily raises cheese and nonfat dry purchase levels
- Before the 2008 farm bill changes, the program used a large amount of AMS relative to program outlays

U.S. Dairy Aggregate Measure of Support

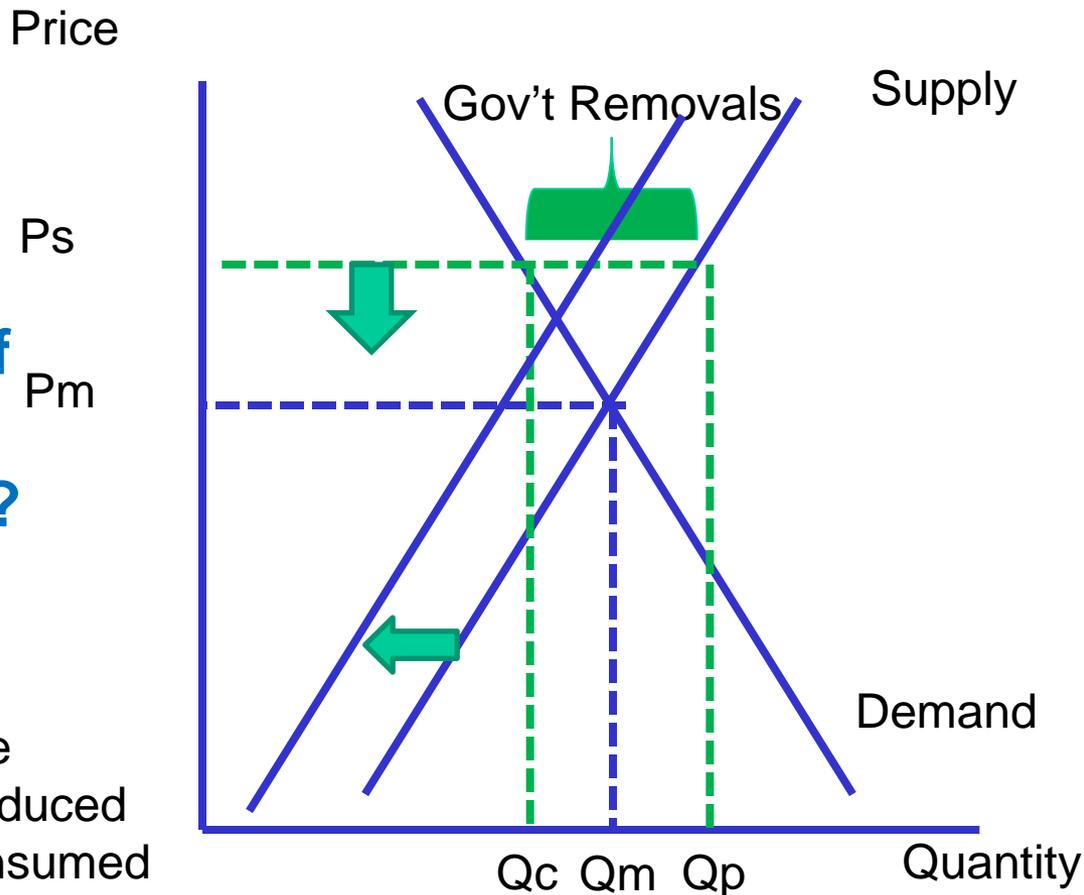


A Simplified Example – Dairy Price Support Program



A Simplified Example – Dairy Price Support Program

Effectiveness of price support lessened today?



P_s – Support Price
 Q_p – Quantity Produced
 Q_c – Quantity Consumed
 P_m – Market Equilibrium Price
 Q_m – Market Equilibrium Quantity

Dairy Termination Program

- Introduced in the Food Security Act of 1985, referred to as the dairy-herd buyout
- Producers remove all production based on 1985 marketings
- Sell all cattle for slaughter or export
- Producer had to remain out of production for 5 years
- Brick and mortar also had to stay out of production
- Three liquidation periods
 - April-August 1986
 - September 1986-February 1987
 - March-August 1987

Dairy Termination Program (continued)

- Producers bid to have their operation removed
 - Bids ranged from \$3.40 per cwt to over \$1,000 per cwt
 - Bids up to \$22.50 were accepted
 - 13,988 bids were accepted
 - These operations marketed about 12 billion pounds of milk, 1.55 million cows
 - 2/3 of the bidders choose the first period to exit

- Issues
 - Effect on beef cow and cattle prices
 - Long run effect on production
 - Expansion by non-participants to stronger milk prices
 - Re-entry after 5 years by participants

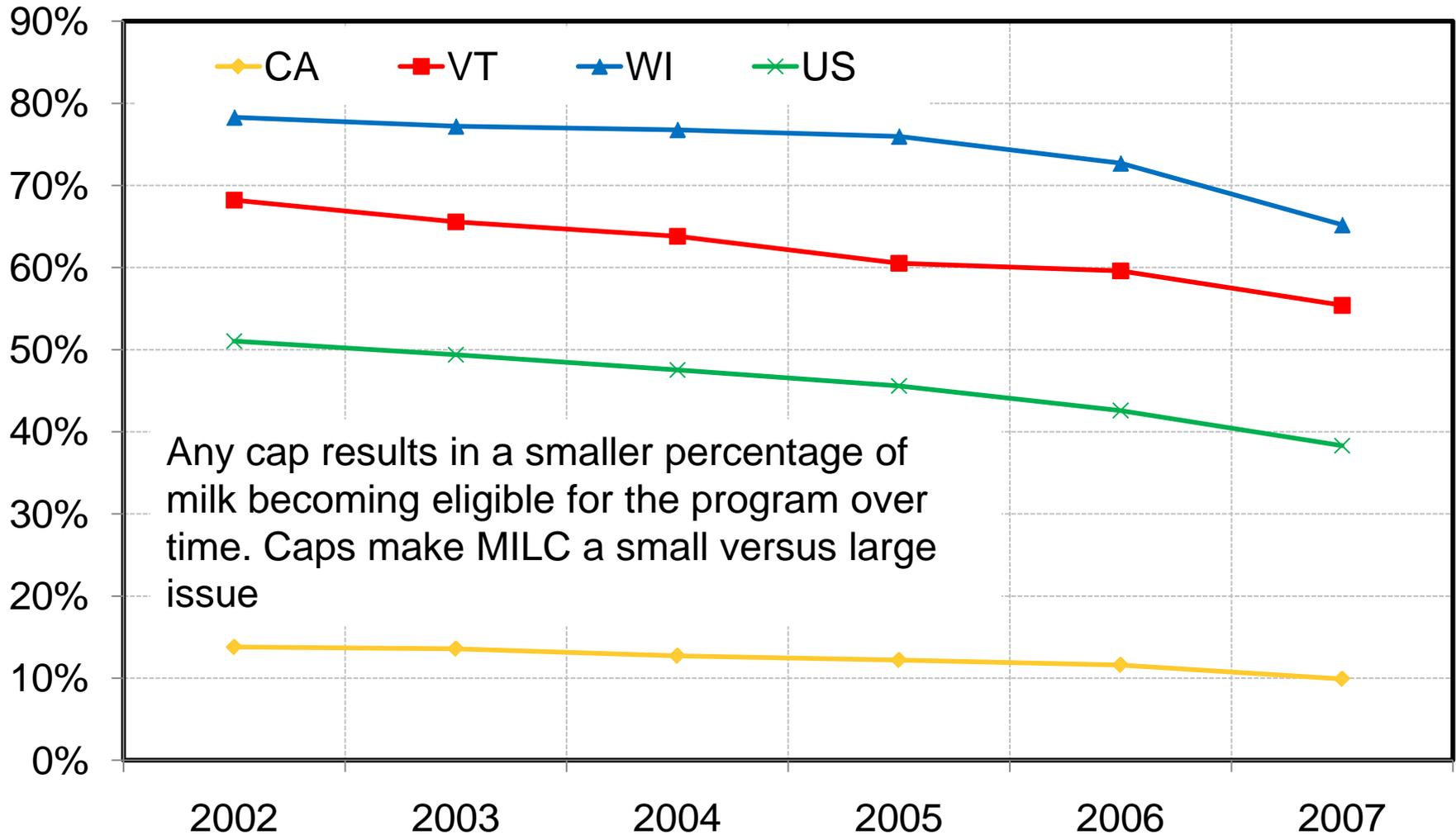
Milk Diversion Program

- The Dairy and Tobacco Adjustment Act of 1983 authorized the milk diversion program
- Producers entered into contracts with the CCC to reduce marketings between 5 to 30 percent over the January 1, 1984 to March 31, 1985 period
- Participants paid \$10 per cwt of marketings reduced
- 38,000 producers participated
- A \$0.50 refundable assessment occurred in 1982 for those producers who did not expand production
- Small effect on longer term milk production

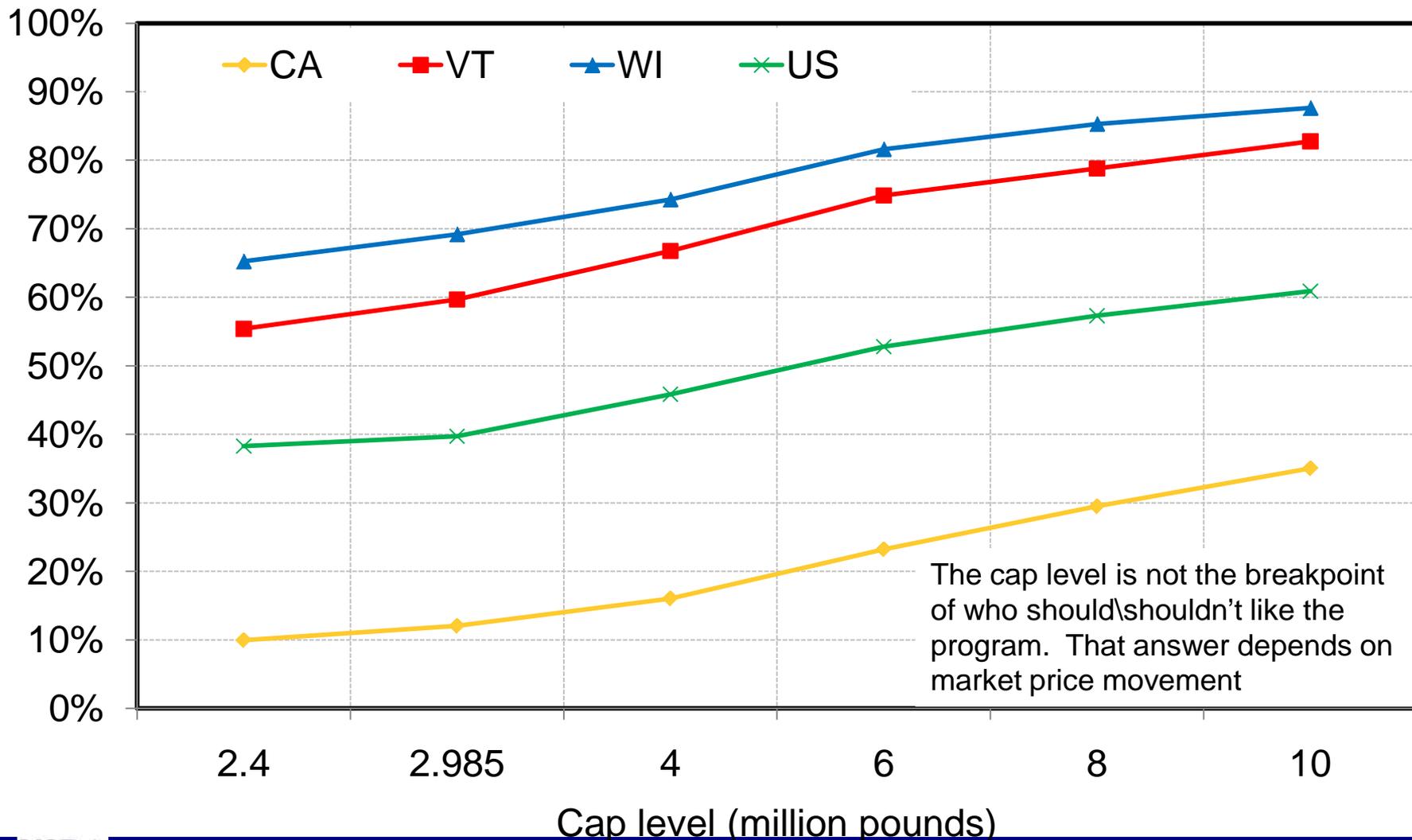
Milk Income Loss Contract (MILC) Program

- Started with the 2002 farm bill
- Production eligible for the program capped
 - 2002 farm bill – 2.4 million pounds
 - 2008 farm bill – 2.985 million pounds, reverting back to 2.4 10/1/2012
 - Favors smaller producers
- Payment Rate = $0.45 * (\text{Feed cost adjuster} * \$16.94 - \text{Boston Class I price})$
- Feed cost adjuster = $1 + \max(0, (0.45 * (\text{DRV} - 7.35) / 7.35))$
- Extends period of low prices
- Large producers unhappy with the program, lowers market prices

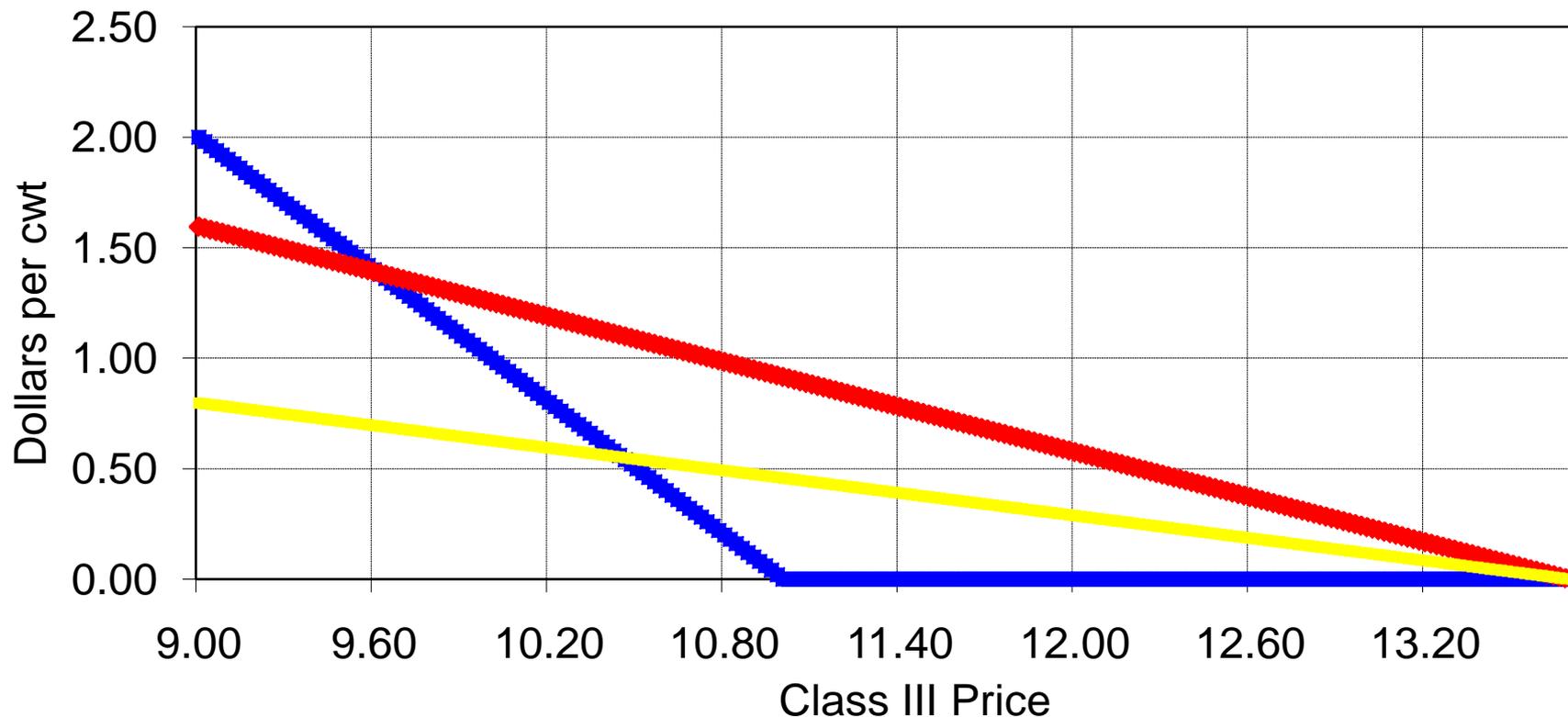
MILC Eligibility, 2.4 Million Pound Cap



MILC Eligibility at Alternative Production Caps



Alternative Direct Payment Programs



— TPDP — MILX 130 cows — MILX 260 cows

TPDP - Pay 100% of the difference when the class III price falls below \$11

MILX – Pre 2008 Farm Bill, 34%, no feed cost adjuster, 2.4 million pound cap

Federal Milk Market Orders

Program Objectives:

To stabilize market conditions, benefit producers and consumers by establishing and maintaining orderly marketing conditions, and assure consumers of adequate supplies of pure and wholesome milk at all times.

Benefits of the Program:

Assures dairy farmers a reasonable minimum price for their milk throughout the year.

Assures consumers of an adequate supply of milk to meet their needs throughout the year and help prevent wild fluctuations in price through periods of heavy and light milk production.

Source: AMS Dairy Division Website

Federal Milk Market Orders

Each milk marketing order includes:

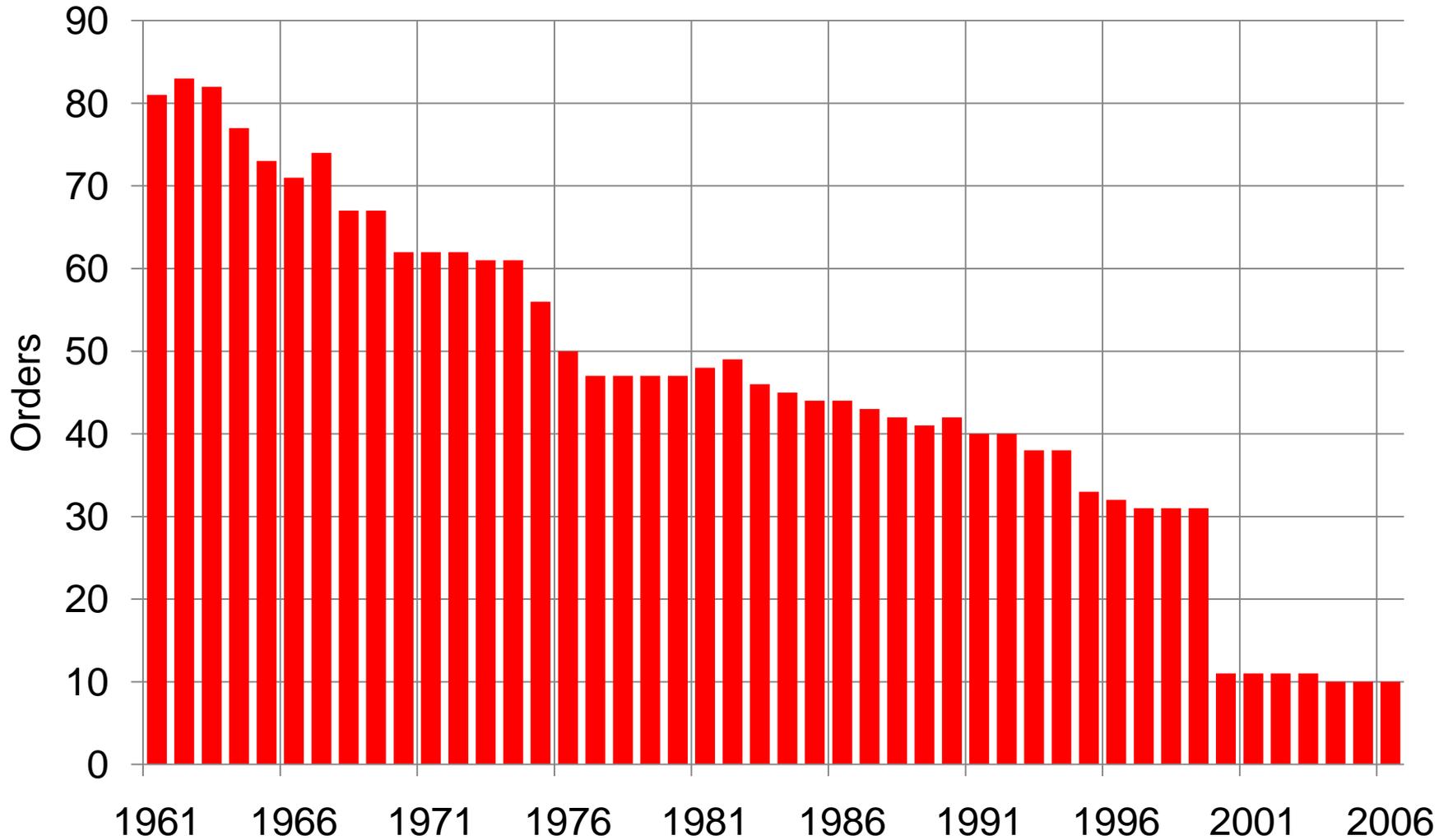
- Classified price plan
- System of minimum prices
- Terms of the order
- Provisions for administering the order

Federal Orders Establish Minimum Prices

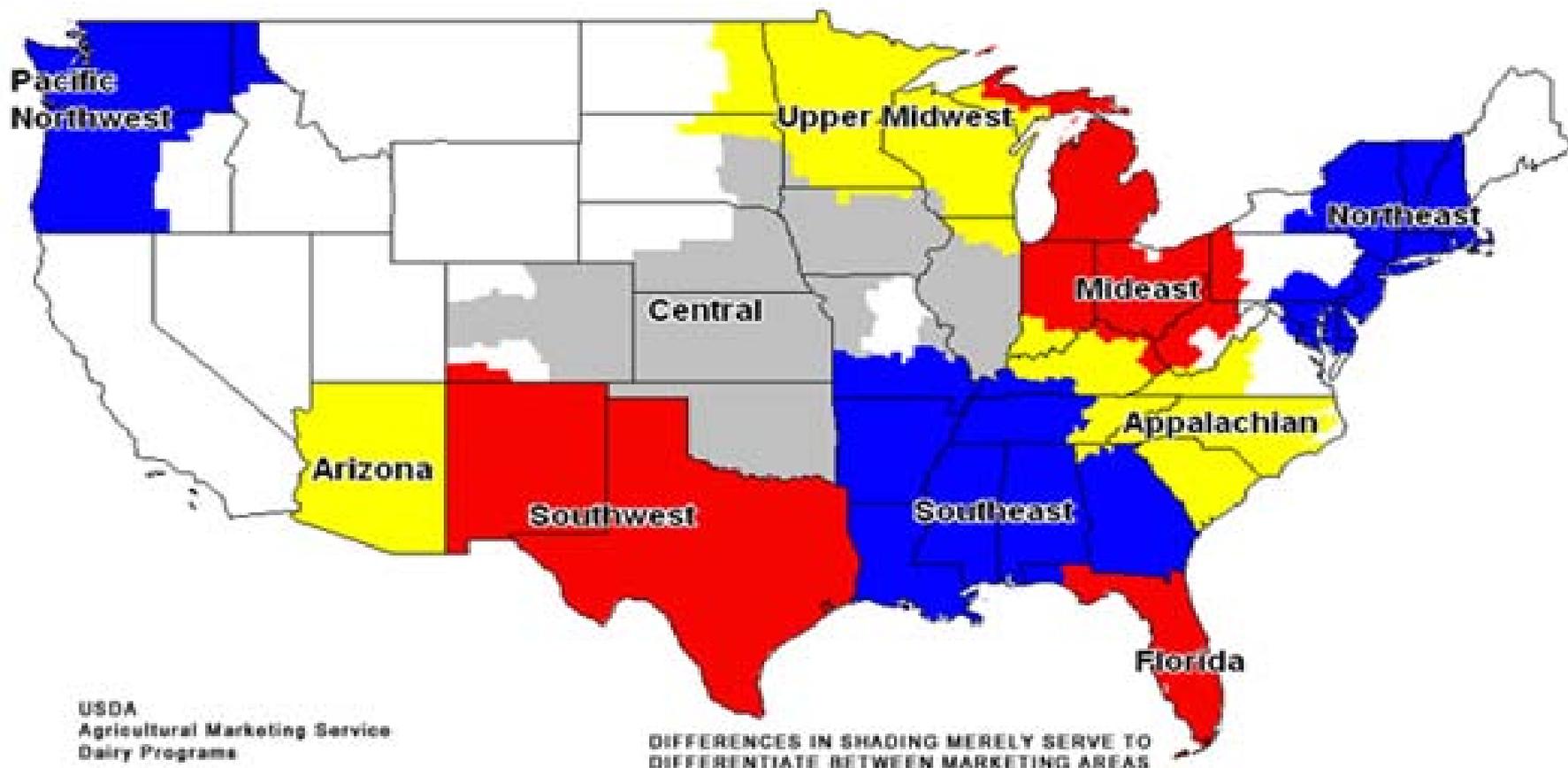
- Regulated handlers must pay for Grade A milk
- Class I – Beverage
- Class II – Fluid cream products, yogurt, ice cream, cottage cheese
- Class III – Cream cheese and hard manufactured cheese
- Class IV – Butter and milk in dried forms

- Producers are paid a blend price that is a weighted average of pool receipts

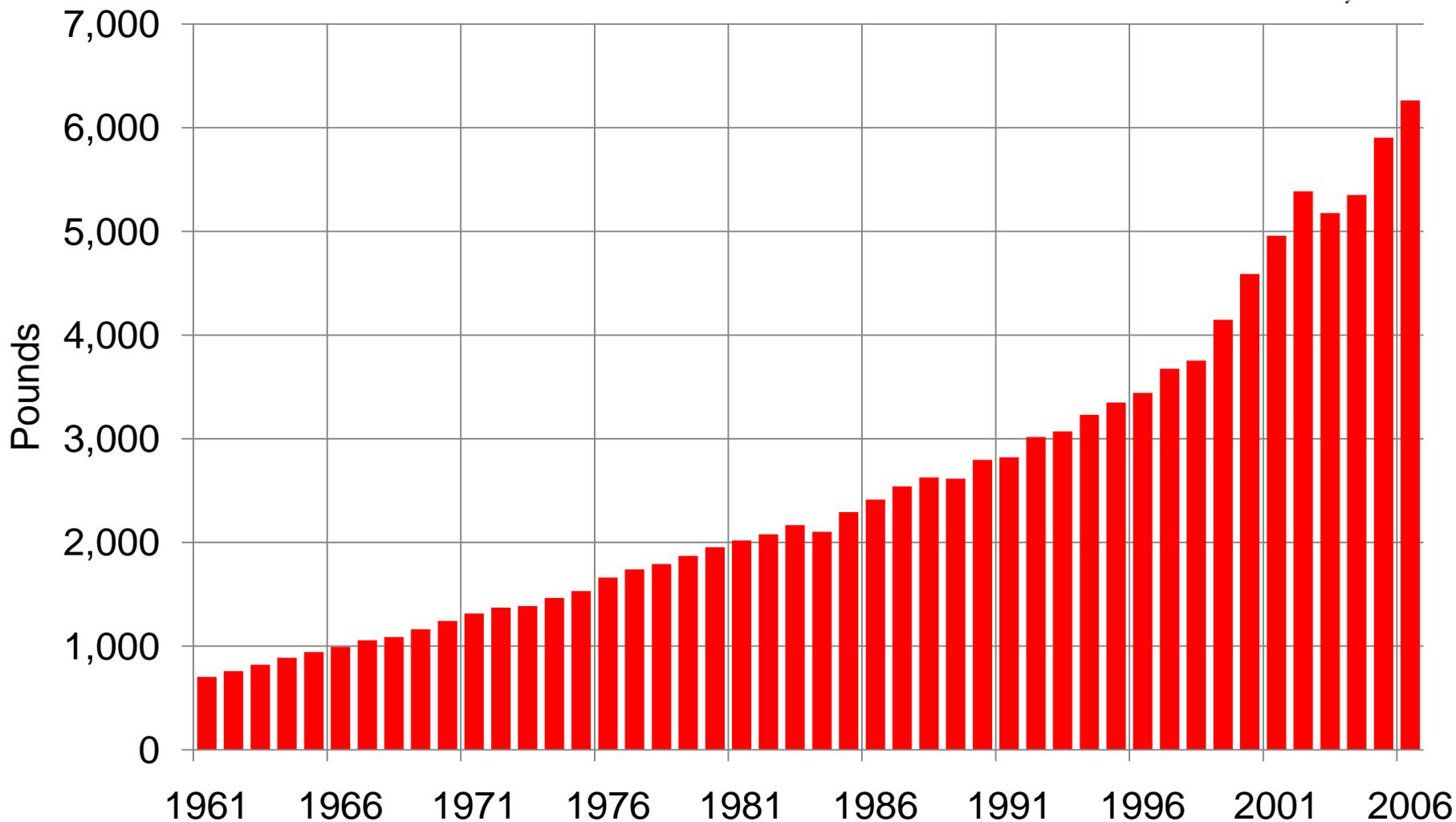
Number of Market Orders



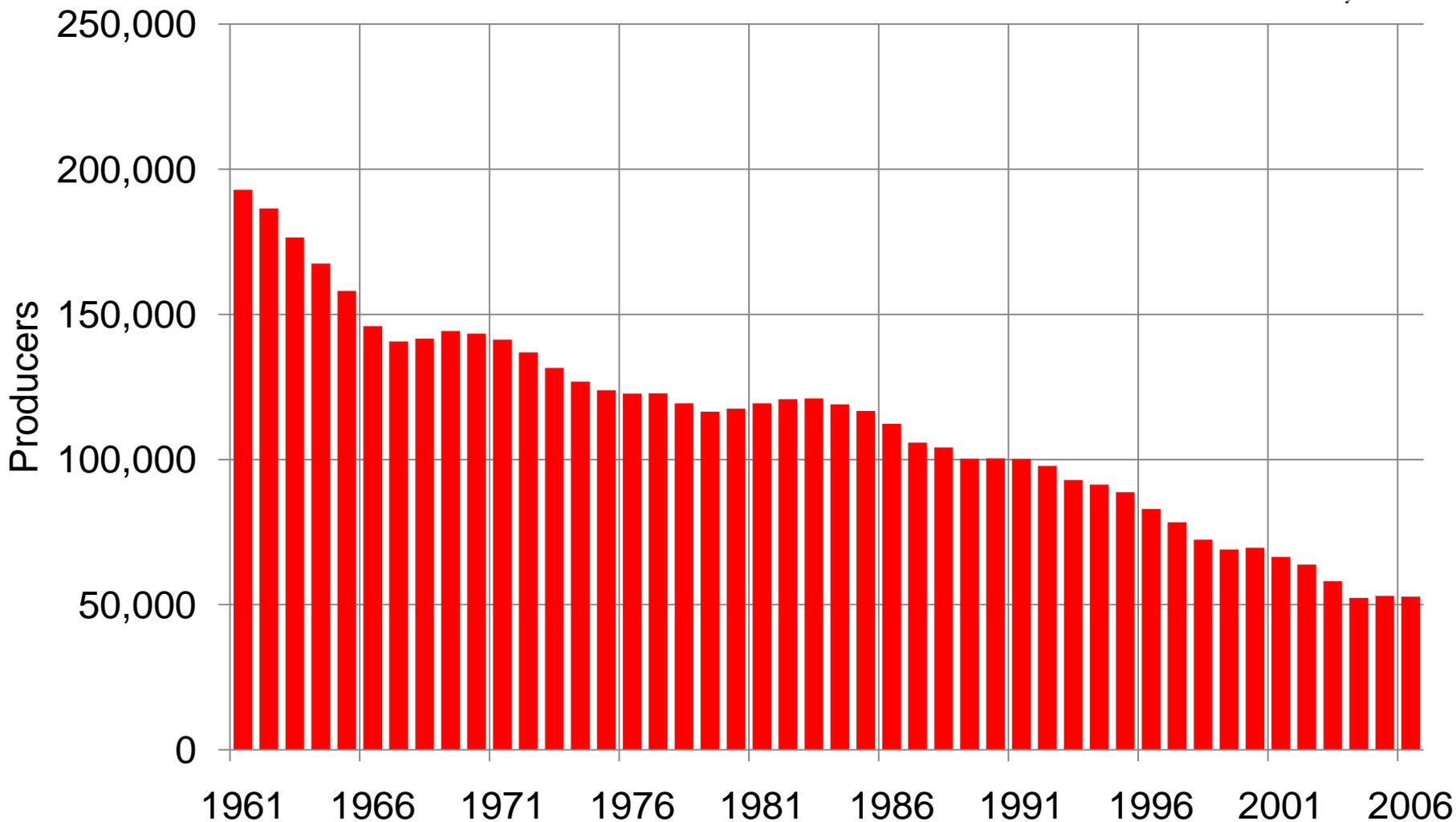
Federal Milk Marketing Order Areas



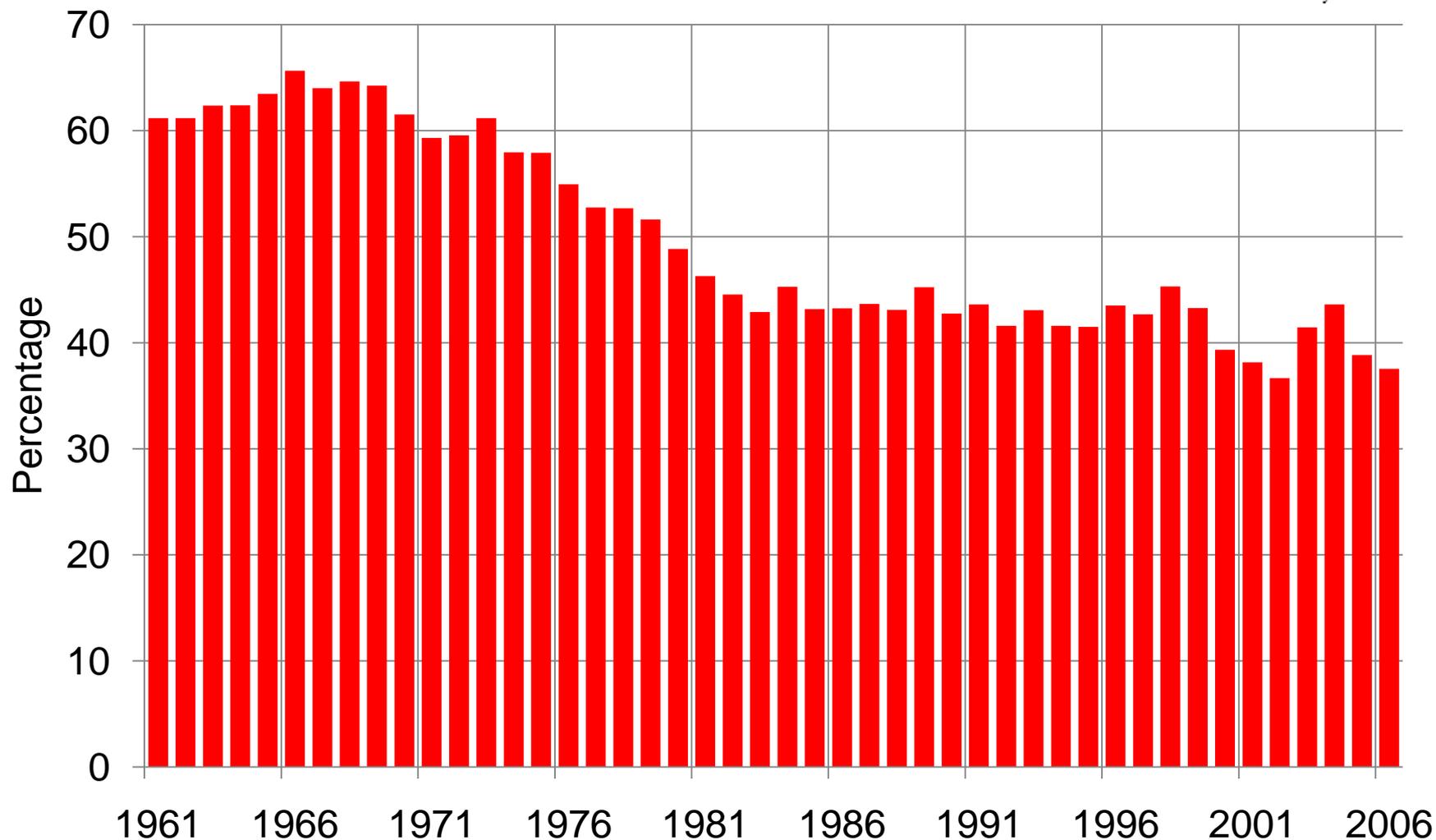
Daily Deliveries of Milk Per Producer



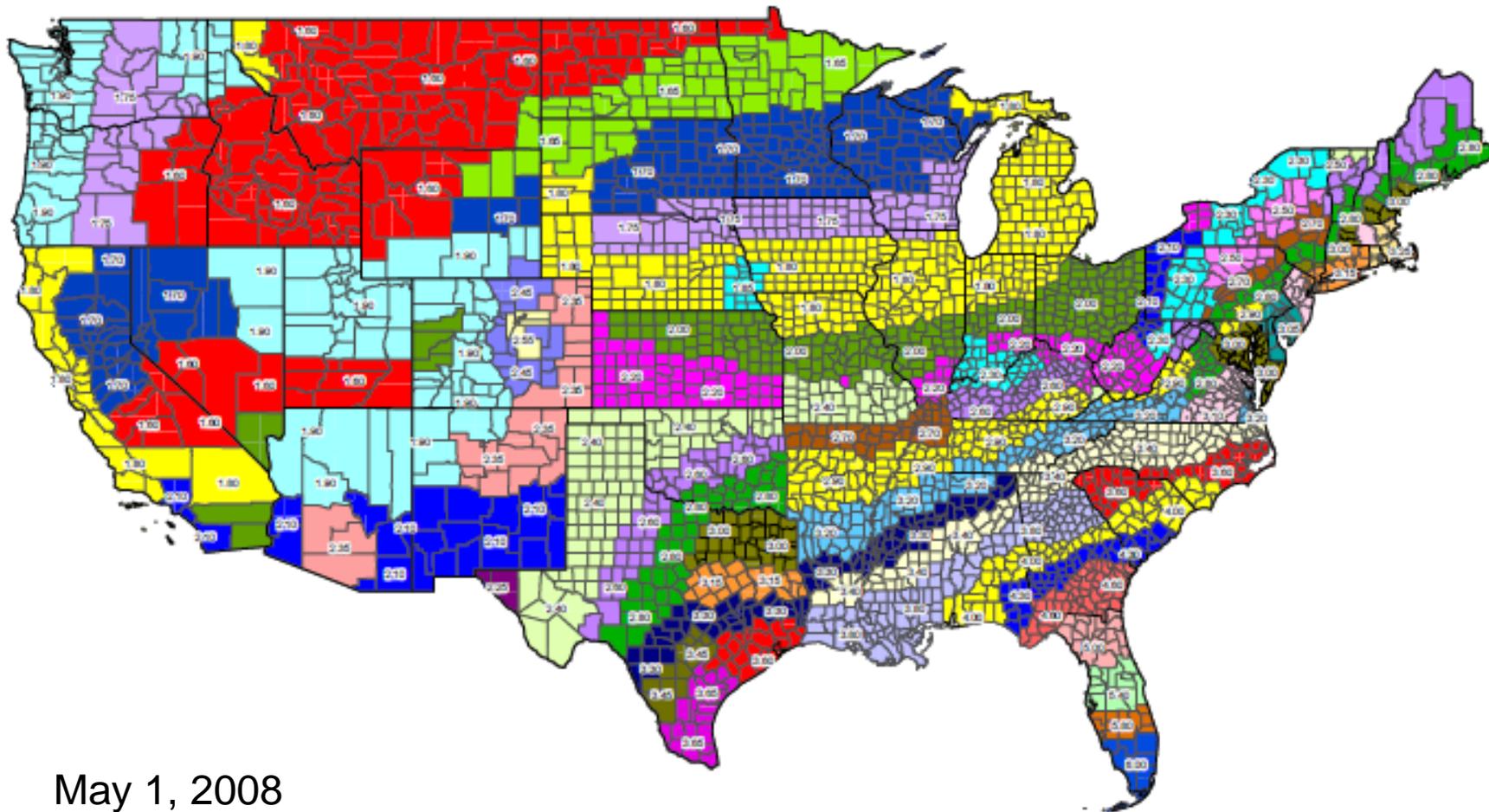
Producers in Federal Orders



Percentage of Producer Milk Used For Class I



Federal Milk Market Orders – Class I Price Surface



May 1, 2008

Pricing Formulas Determine Minimum Prices

Class III

- Class III Price = (Class III skim milk price x 0.965) + (Butterfat price x 3.5).
- Class III Skim Milk Price = (Protein price x 3.1) + (Other solids price x 5.9).
- Protein Price = ((Cheese price – 0.2003) x 1.383) + (((Cheese price – 0.2003) x 1.572) – Butterfat price x 0.9) x 1.17).
- Other Solids Price = (Dry whey price – 0.1991) times 1.03.
- Butterfat Price = (Butter price – 0.1715) times 1.211.

Dairy product prices – USDA/NASS survey prices

Pricing Formulas Determine Minimum Prices

Class IV

- Class IV Price = (Class IV skim milk price x 0.965) + (Butterfat price x 3.5).
- Class IV Skim Milk Price = Nonfat solids price times 9.
- Nonfat Solids Price = (Nonfat dry milk price - 0.1678) times 0.99.
- Butterfat Price = See Class III.

Pricing Formulas Determine Minimum Prices Class I and II

- Class I Price = (Class I skim milk price x 0.965) + (Class I butterfat price x 3.5).
- Class I Skim Milk Price = Higher of advanced Class III or IV skim milk pricing factors + applicable Class I differential.
- Class I Butterfat Price = Advanced butterfat pricing factor+ (applicable Class I differential divided by 100).
- Class II Price = (Class II skim milk price x 0.965) + (Class II butterfat price x 3.5).
- Class II Skim Milk Price = Advanced Class IV skim milk pricing factor + \$0.70.
- Class II Butterfat Price = Butterfat price + \$0.007.
- Class II Nonfat Solids Price = Class II skim milk price divided by 9.

Over-Order Charges, November 2009

Federal Milk Order Marketing Area 2/	Order Number	Weighted Average of Over-Order Charges Spread Over Total Class I Milk 1/	Weighted Average of Over-Order Charges Spread Over Total Class II Milk 1/
		\$/cwt	
Appalachian	005	2.65	1.21
Southeast	007	2.78	2.14
Florida	006	3.58	1.06
Mideast	033	2.17	1.37
Upper Midwest	030	2.07	0.84
Central	032	2.26	1.03
Pacific Northwest	124	0.75	0.61
All Reporting Areas Combined 3/		2.25	1.17

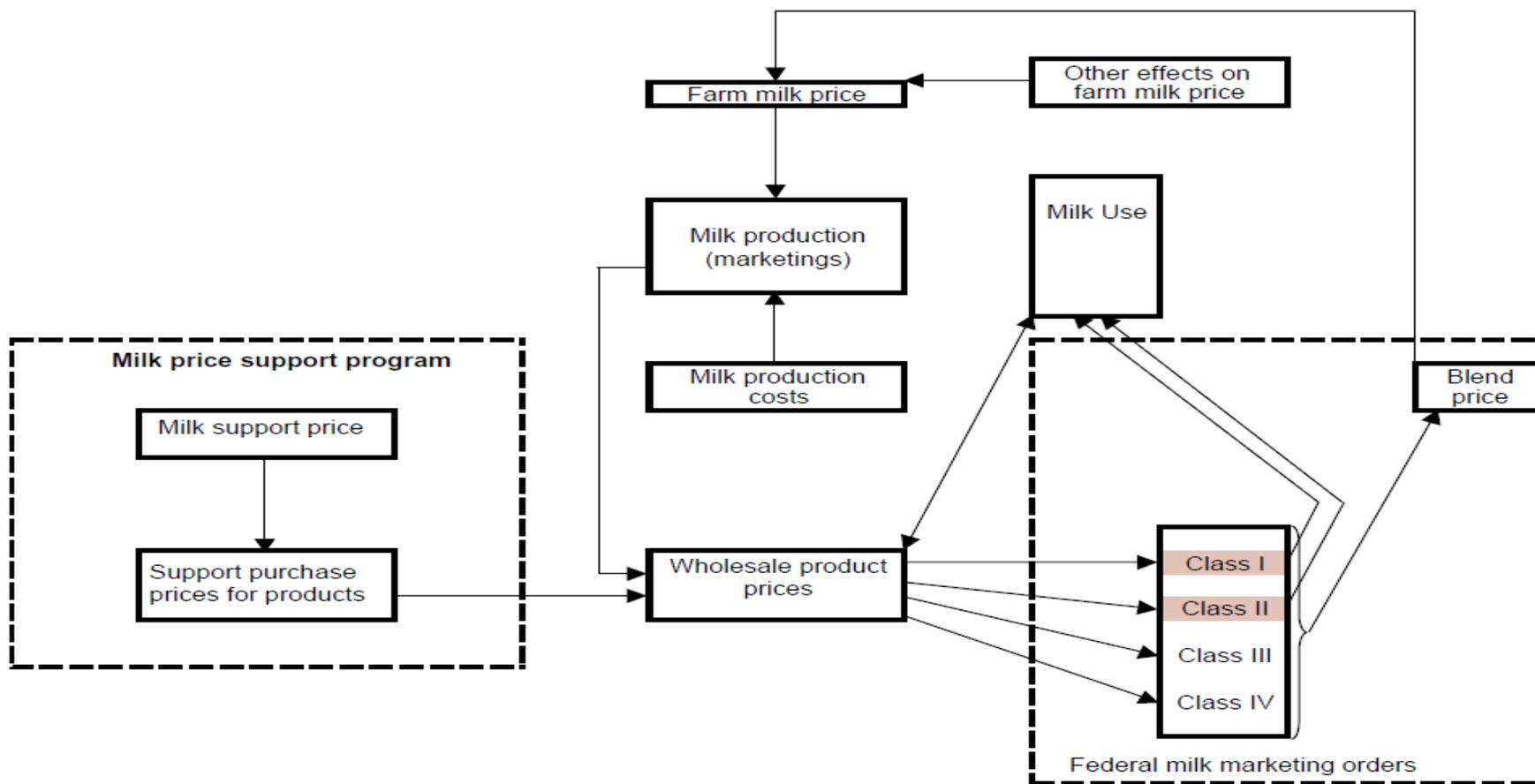
1/ Figures are weighted averages of all the over-order charges applicable to any volume of milk used in the respective class spread over 100 percent of the producer milk used in that class. Includes some producer milk for which there was no over-order charge.

2/ Information is available for all Federal milk marketing areas except the Northeast and Southwest. See 3/.

3/ Figures are weighted averages of the available individual marketing area data; includes information for the Arizona order which is administratively confidential.

Understanding How Policies Affect the Sector

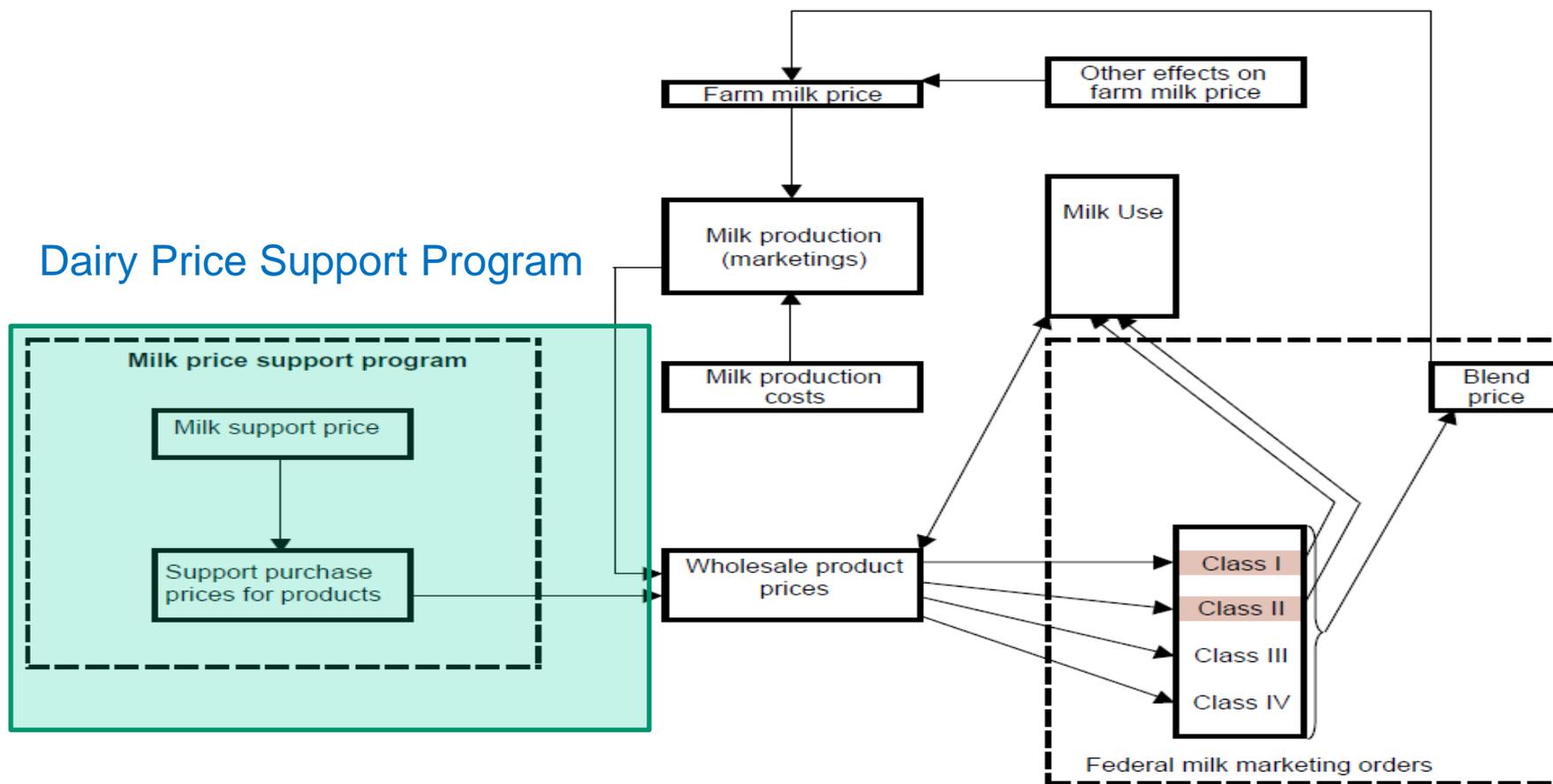
Figure 3
Linkages between the milk price support program and the Federal milk marketing orders



Source: Economic Research Service, USDA.

Understanding How Policies Affect the Sector

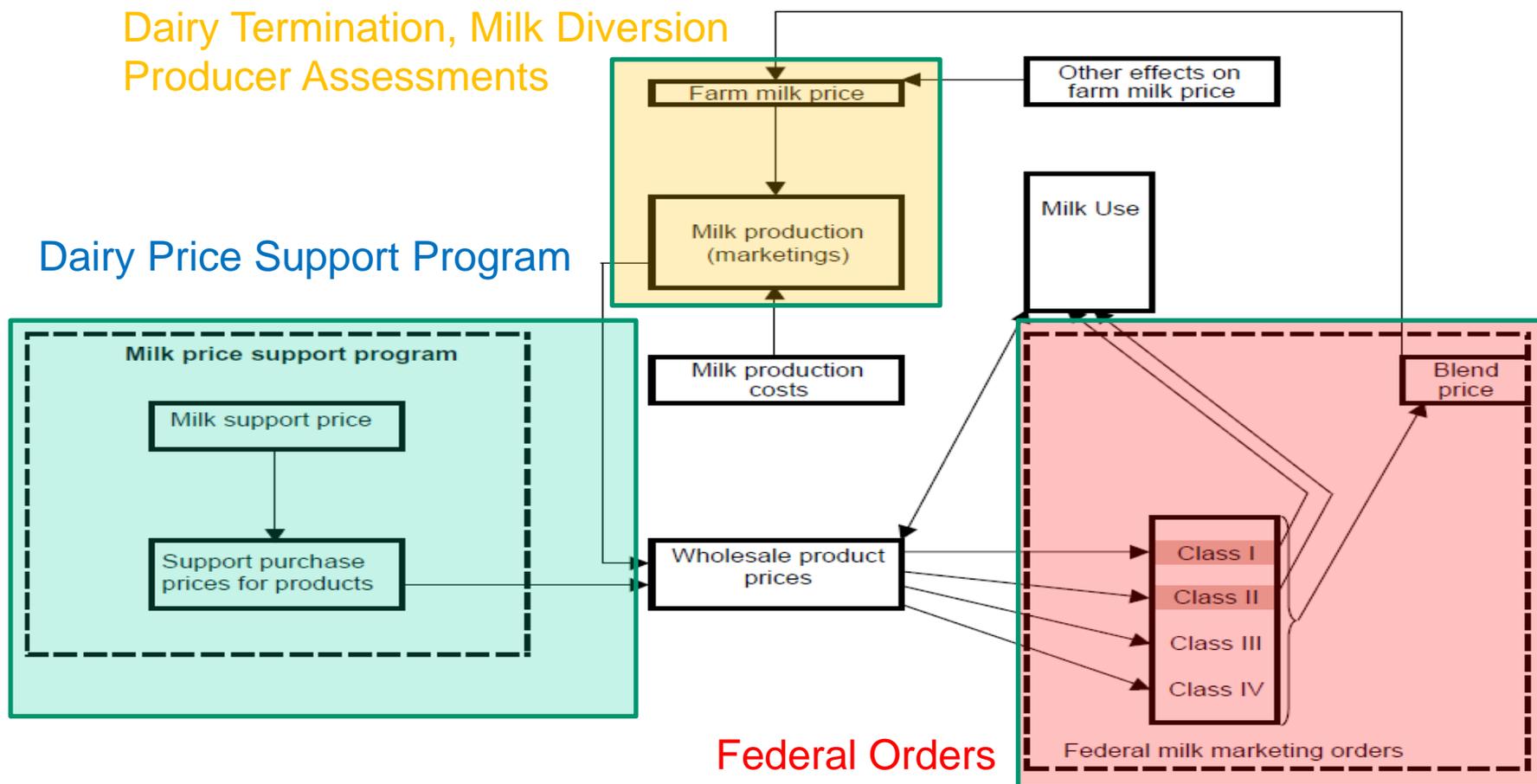
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Understanding How Policies Affect the Sector

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Source: Economic Research Service, USDA.

Summary

- Policy can have large short run effects on milk supplies
- Crop/biofuel policy indirectly effects milk supplies
- Many policies do not affect the long-run path of milk supplies
 - Exceptions: Quotas, Capped programs like MILC
- It is hard to develop policy that eliminates price volatility without needing large levers
 - \$18 equivalent price support
 - Quota
 - An uncapped target price program
- These large levers often have large price tags