Dynamic Model Outcomes for Policy and Market Scenarios

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The Need for Detailed Product and Component Coverage

- Trade depends on product specifications
- Trade policies also very product-specific
- Products are linked as joint products, as intermediate products and as substitutes in production or in use

The Model





DGDSCM Products			
Product Category	Final Product	Intermediate Product	Tradable Product
Fluid Milk	X		Х
Yogurt	X		Х
Frozen Desserts	X		Х
Cottage Cheese	X		
American-type Cheeses	X		Х
Other Cheeses	X		Х
Fluid Whey		X	
Separated Whey		Х	
Whey Cream		Х	
Dry Whey	X	Х	Х
Whey Protein Concentrate 34% Protein	X	Х	Х
Whey Protein Concentrate 80% Protein	X	Х	Х
Lactose	X	Х	х
Butter	X		Х
Anhydrous Milk Fat (AMF)	X		Х
Nonfat Dry Milk	X	Х	Х
Infant Formula	X		Х
Condensed Skim Milk	X	Х	
Other Evaporated, Condensed & Dry products	X		х
Casein	X	Х	Х
Caseinates	X	Х	Х
MPC, < 50% protein	X	Х	Х
MPC, >= 50% protein	X	Х	Х





We Assess Globalization with Limited, Inconsistent Data

- Inventory data lacking for price discovery
- S&U data often lack consistency
 - Especially for component balance
- Import and Export totals differ
- Trade policy data not generally available

The Model























Outcome	Baseline with DMC	MPP-Dairy to 2023	Difference compared to MPP
All milk price, \$/cwt	17.95	18.45	-0.50
Net Farm Operating Income, \$/farm/year			
1-99 cows	53,757	43,035	+10,721
100-499 cows	101,026	107,171	-6,145
500-1999 cows	399,050	451,156	-52,106
2000+ cows	1,413,799	1,595,264	-181,464
Total Government Expenditures, \$mil	4,012	-404	+4,416
Annual Average Value of Exports, \$bil/year	10.6	10.3	+0.4











Continuous Program			Conditioned on Milk:Feed			
Assumption	Continuous MAF 1	Continuous MAF 2	Assumption	Non-Continuous MAF 1	Non-Continuous MAF 2	
Allowable growth, %/year	1%	1%	Allowable growth %/year			
Aarket Access Fee, \$/cwt			Milk Feed Price Patio < 1.75	-3%	-3%	
1-99 cows	0.25	0.25	Milk/Ead Price Patio > 1.75 $k < 2.5$	-3%	-5%	
100-499 cows	0.50	0.50	Which feed the Ratio > 1.75 $\alpha < 2.5$	078	078	
500-1999 cows	0.75	2.00	Milk:Feed Price Ratio > 2.5	+3%	+3%	
2000+ cows	1.00	3.00	Market Access Fee, \$/cwt			
			Milk:Feed Price Ratio < 2.5			
			1-99 cows	0.25	0.25	
			100-499 cows	0.50	0.50	
			500-1999 cows	0.75	2.00	
			2000+ cows	1.00	3.00	
			Milk:Feed Price Ratio > 2.5 & < 3.0			
			1-99 cows	0.065	0.065	
			100-499 cows	0.13	0.13	
			500-1999 cows	0.195	0.52	
			2000+ cows	0.26	0.78	
			Milk:Feed Price Ratio > 3.0			
			1-99 cows	0.015	0.015	
			100-499 cows	0.03	0.03	
			500-1999 cows	0.045	0.12	
				2.015	5.12	













Summa	014-2020	21/1	
Outcome	Baseline	SM with Continuous MAF	SM with Milk:Feed Trigger
All milk price, \$/cwt	17.00	18.09	18.10
Milk Revenue, \$/cwt	17.00	19.59	19.98
Variation from average value, \$/cwt	0.88	0.87	0.96
Net Farm Operating Income, \$/farm/year			
1-99 cows	33,633	68,855	66,345
100-499 cows	58,794	195,322	197,795
500-1999 cows	359,012	981,426	962,881
2000+ cows	1,844,715	4,780,447	4,553,660
Total Government Expenditures, \$mil	1,676	1,209	431
Annual Average Value of Exports, \$bil/year	9.9	8.2	8.3













Summary of Export Impacts			
Outcome	Baseline	Faster Export Growth	Sudden Export Reduction
All milk price, \$/cwt	16.77	16.86	16.75
Net Farm Operating Income, \$/farm/year			
1-99 cows	33,655	33,880	34,152
100-499 cows	58,816	61,371	58,925
500-1999 cows	359,191	370,191	352,395
2000+ cows	1,845,322	1,889,016	1,826,998
Total US NFOI 2015-2020, \$ bil	41.4	42.6	41.2
Total Government Expenditures, \$mil	1,681	1,418	2,180
Annual Average Value of Exports, \$bil/year	10.7	11.4	9.6
\$200 million/year overall increase N	VFOI with fas	ter growth ir	exports

