

2022 Dairy Price Outlook— Spotlight on Demand, Inflation & Regulation

Mark Stephenson, Director of Dairy Policy Analysis, UW-Madison

2

Factors impacting milk prices

- Domestic Demand
 - Where are we consuming dairy products—in-home vs out-of-home eating
- Domestic Supply
 - Too much milk→Not enough milk→Too much milk→Not enough milk
- Export Demand
 - Activity on all products
- Export Competition
 - EU and NZ produce less milk
- Export Friction
 - Port congestion & strength of dollar
- Inflation

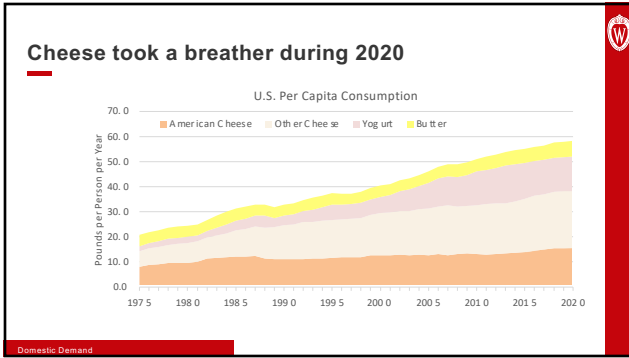
3

Domestic demand has been good.

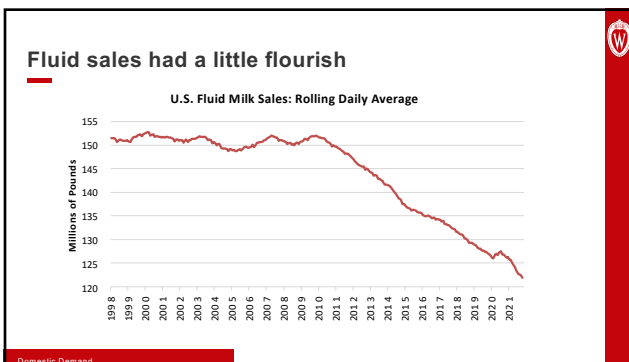
Milk Equivalent Consumption—All Products

Year	Pounds per Person per Year
1975	540
1980	550
1985	600
1990	570
1995	580
2000	590
2005	610
2010	600
2015	630
2020	660

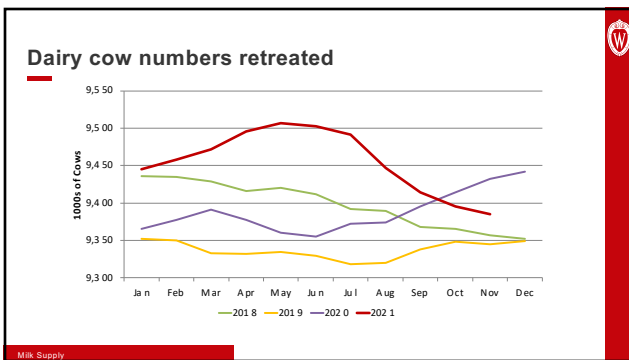
4



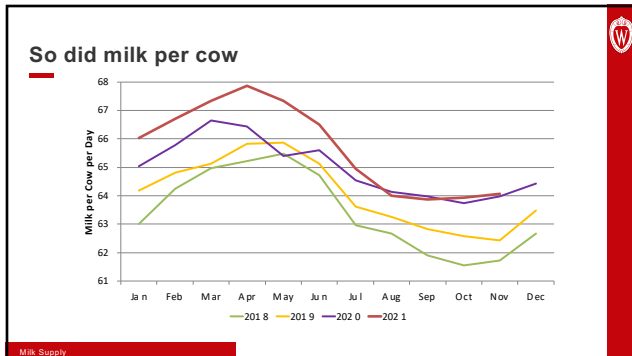
5



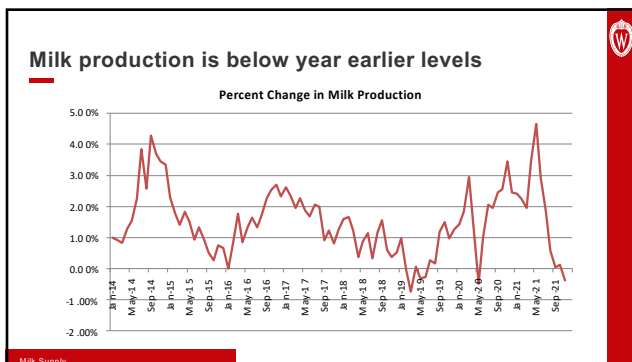
6



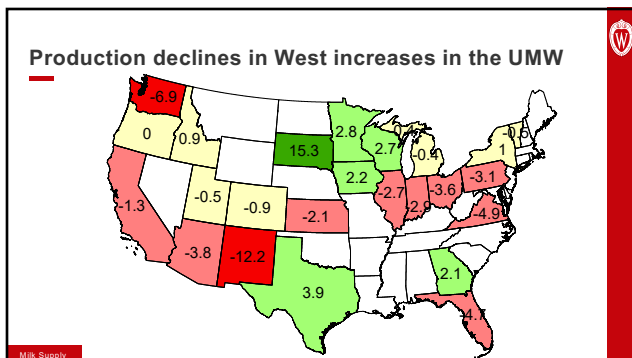
7



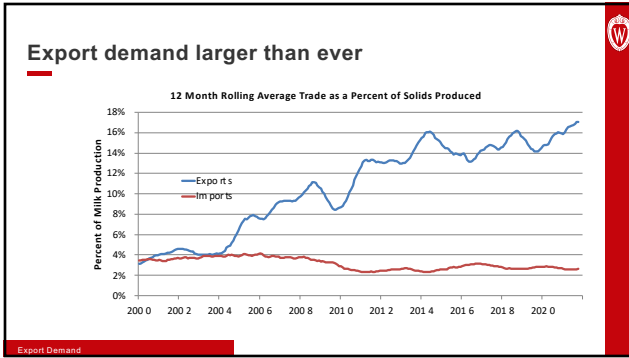
8



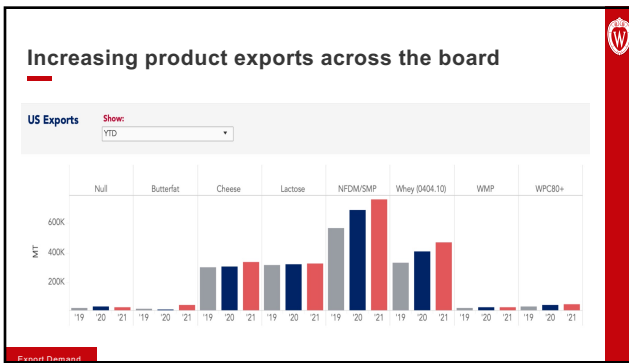
9



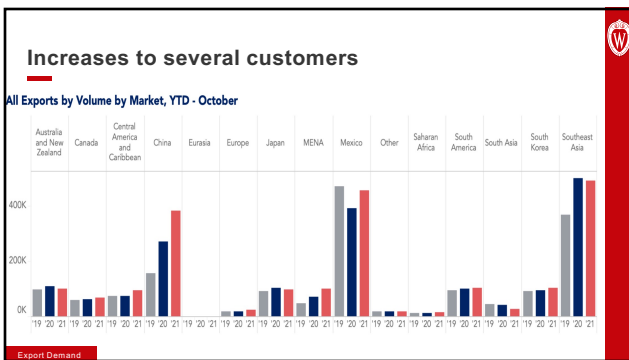
10



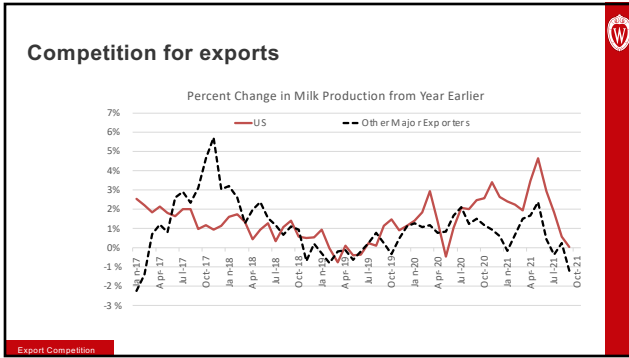
11



12



13



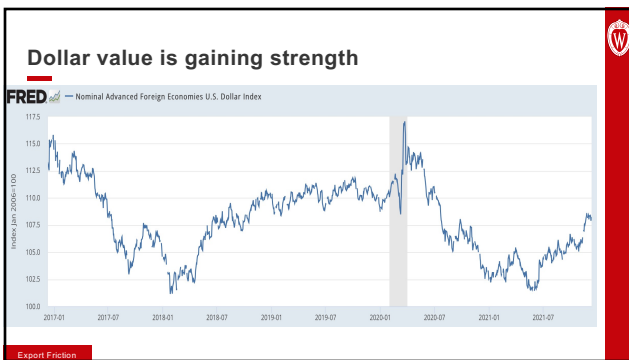
14

Port congestion

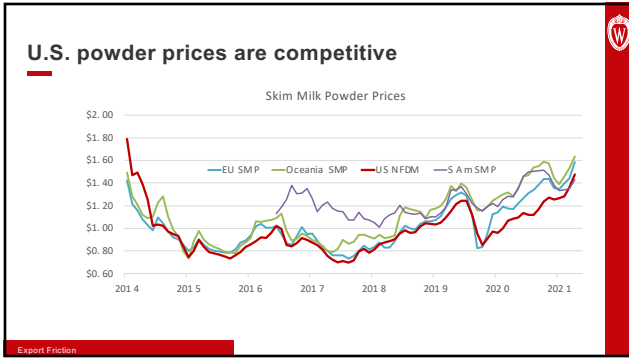
Shipping costs have gone from about \$3,000 per container to about \$20,000. Somewhat better now—about \$12,000.

Export Friction

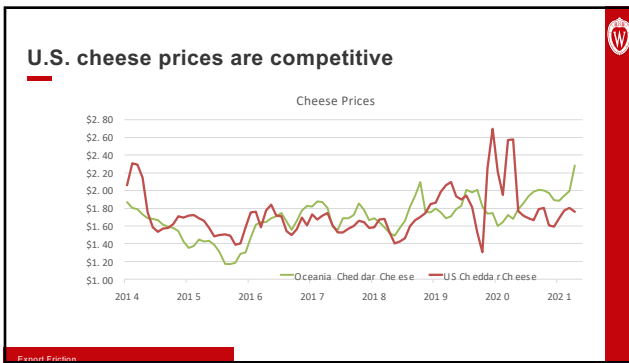
15



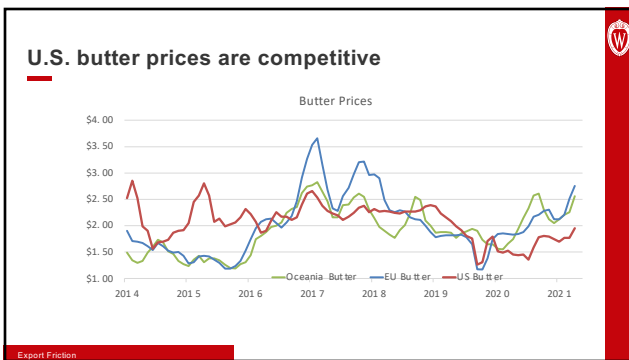
16



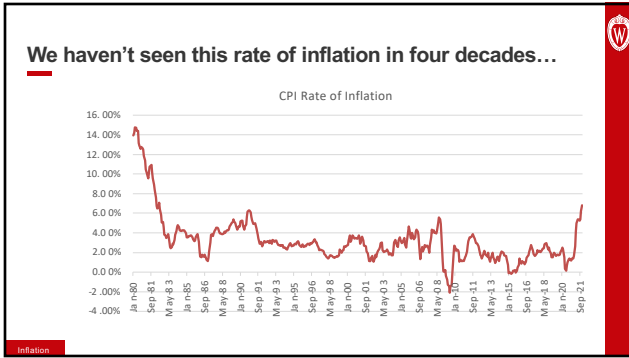
17



18



19



20

Fiscal policy has historically been the cause of persistent inflation

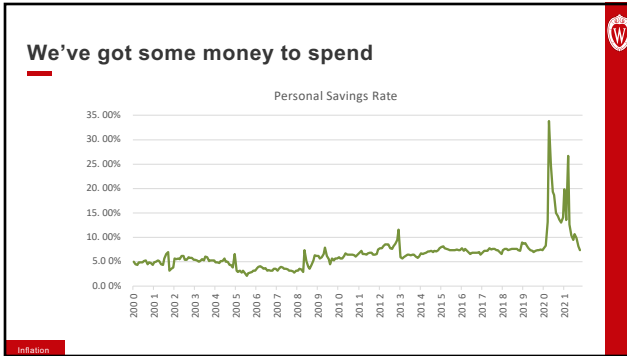
- War spending has caused inflation
- Today, stimulus spending to counteract COVID job losses may be a source (I received stimulus money)
- Infrastructure spending can be large enough to be a source
- Climate change abatement can be a source

21

Monetary policy is not the cause, but it is always the cure

- If the FED feels like they need to reign in inflation, they will have to increase interest rates.
 - Makes borrowing less appealing—i.e., cuts down on spending
 - Makes saving more attractive—i.e., cuts down on spending

22



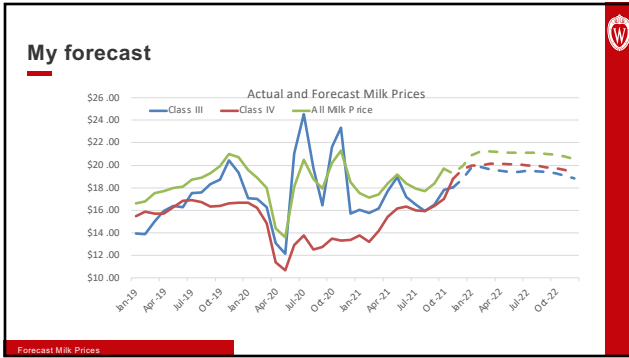
23

- ### Structural causes of inflation
- 40 years ago, inflation was a cost-push from energy
 - OPEC was formed to short oil supplies and increase prices
 - Govt mandate to make cars more efficient
 - Govt incentives to insulate homes
 - Energy is at the base of all things we build and do
 - Today, cost-push is coming from labor
 - Pandemic inspired job changes
 - Dual income houses making the calculation to keep one person home with the kids
 - Baby boomers making retirement decisions earlier than in the past
 - These would have all happened without the pandemic, but they've happened sooner and all at the same time.
 - Labor wages are at the base of all things we build and do

24

- ### Evaluate capital investments carefully
- Forecast return on investment... not return on asset value
 - Since labor shortage is real and probably long-lasting, consider investment in labor saving capital investments
 - Automated milking, feed pushing, etc.
 - Tractors and field equipment is rushing to automate

25



26

In summary...

- Domestic Demand: some product shifting, but demand has been good
- Domestic Supply: things are a little tight now, particularly in the west where a lot of powder and butter are made
- Export Demand: has been very strong across all product categories
- Export Competition: less milk from EU and NZ
- Export Friction: some, but port congestion is getting better and product prices are competitive. We should pick up market share.
- Inflation: big unknown. We'd better keep our eyes on investments.
- Milk Prices: pretty good year, but continue to look at risk management options and control variable costs.

Dairy Summary

27

Regulatory Changes?

Mark Stephenson, Director of Dairy Policy Analysis, UW-Madison

28

Federal Orders are of a Different Time and Place



- They are all about fluid milk—manufacturing just comes along for the ride.
- If you have a federal order:
 - Only producers get to vote on it, and only processors are regulated by it.
 - The producer vote is for all or nothing.
 - Only fluid plants **must** be regulated, other plants **may** be regulated.
 - Primary tools are classified pricing and pooling, order and equity are the goals.
- Classified Pricing and Pooling were Cooperative ideas from back in the Boston Market in the 1880s. Those tools predated FMMOs by 60 years!

29

What Is Special About Milk?



- It's perishable
- It's bulky
- It's produced and must be sold 365 days a year
- Specialized assets for production
- Many more sellers than buyers
- Relatively inelastic demand for products
- Historically led to "destructive competition"

30

A Brief History of FMMOs



- 1800s—Farmers fight back with cooperatives and bargain with processor organizations for price.
- Ability of cooperatives to bargain effectively erodes prior to and during great depression.
 - Most people convinced that cooperatives can't do it alone.
- Agricultural Adjustment Act of 1933 amended in 1935 first authorizing marketing orders.
- 1937 Agricultural Marketing Agreement Act passed to preserve order language.

31

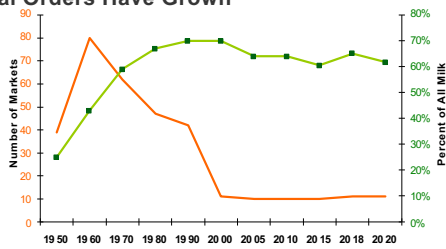
Big Picture

- FMMO Goals
 - Order across the market
 - Equity for producers, processors and consumers
- FMMO Tools
 - Classified pricing
 - Pooling



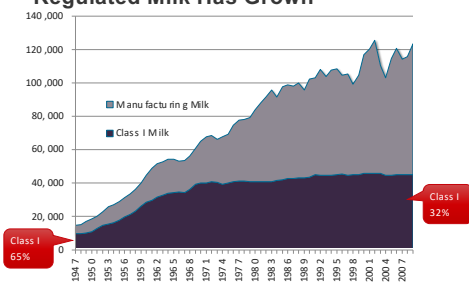
32

Federal Orders Have Grown



33

Regulated Milk Has Grown



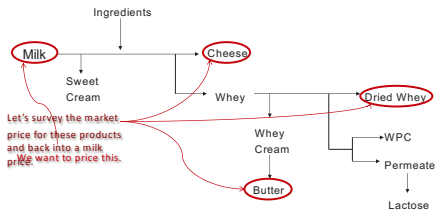
34

Price Discovery

- Used to use a competitive pay price
 - Survey unregulated sales of milk
 - Use that base-price as the beginning of regulated pricing
 - Almost all milk is regulated today
- Product price formulas used today
 - Survey manufacturers weekly for sales price and volume of very specific products
 - Impute a value of milk from those product prices

35

Ingredient & Product Streams



36

Product Price Formulas

$$\text{Butterfat Price} = (\text{Butter price} - 0.1715) \times 1.211$$

Make Allowance - What does it cost you to transform milk into 1 pound of butter?

Yield Factor - How many pounds of butter can you make from 1 pound of butterfat?

37

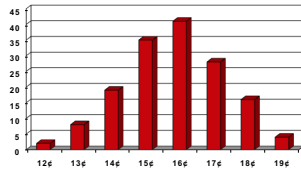
Product Price Formulas

- Dairy producers want a *small* make allowance and a *large* yield factor
- Dairy processors want a *large* make allowance and a *small* yield factor
- How do you determine the correct parameter values?



38

The Issue of Make Allowance



- Who's price?
 - Highest
 - Lowest
 - Average



39

Observations...

- Classified Pricing and Pooling are blunt tools in an increasingly sophisticated market place.
- Negative PPDs were not the problem, they were a symptom
- We will have a Federal Order hearing in the near future
 - Senators Gillibrand, Sanders and others have said "fix it".
 - Not easy to do
- In my opinion, we first need to define the problem and then consider fixes.
- Big question will be the "scope" of the hearing.



40



41