# Global economic environment and trends

**By**
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**Milk Forum, 12<sup>th</sup> of April, 2023**

# Timing is everything

# A timeline of unseen events… all happening in the last 18 months
*Strong fluctuation of dairy & energy prices which requires new adaptation*

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## Key Dairy indicators, 2019-2023



Legend:
- EU food inflation (%)
- EU Milk price (EUR/100kg)
- SMP+Butter milk price equivalent (EUR/100kg)
- Energy index World bank
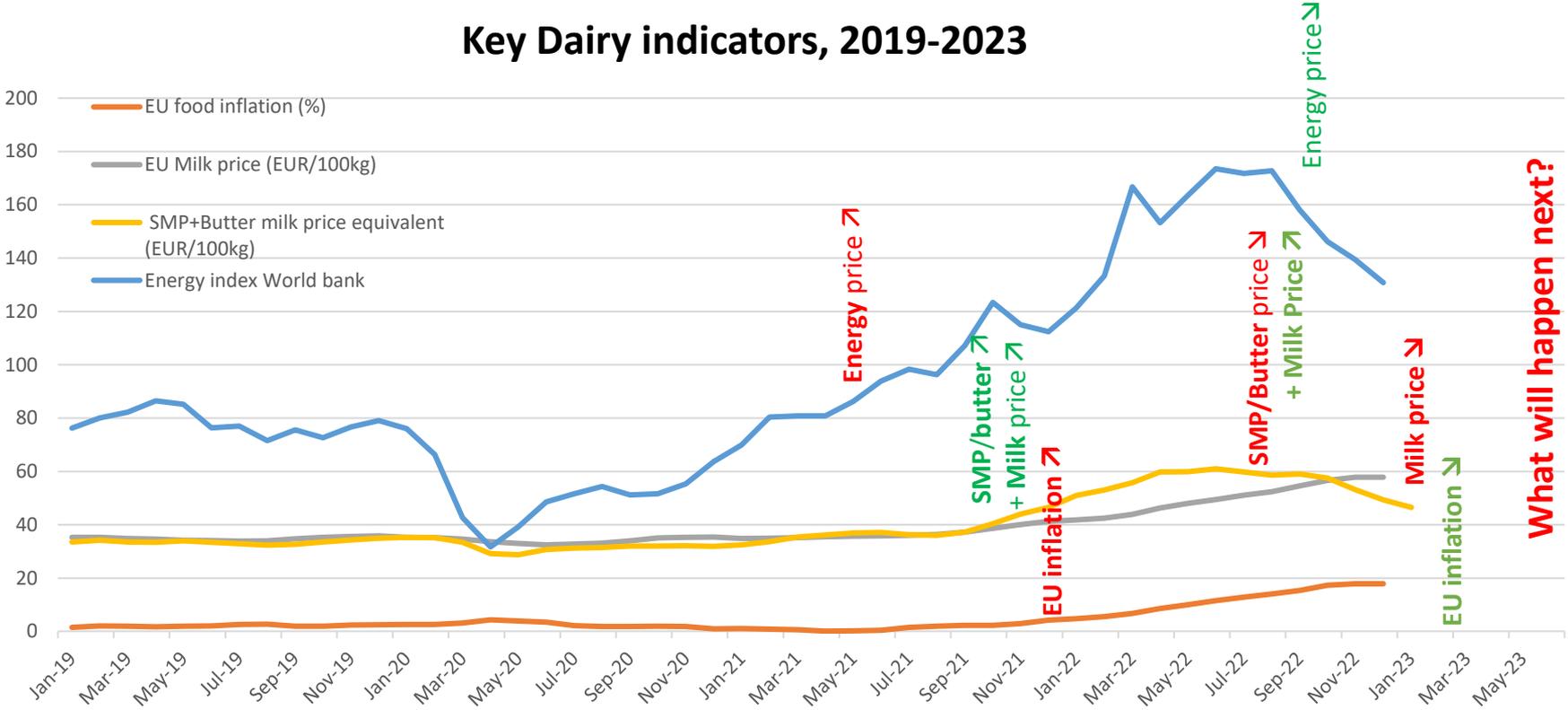
Annotations on chart:
- Energy price ↗
- SMP/butter + Milk price ↗
- EU inflation ↗
- SMP/Butter price ↗ + Milk Price ↗
- Energy price ↗
- Milk price ↗
- EU inflation ↗
- What will happen next?

*Source: Gira compilation, Jan 2023.*

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# And at the same time, China was quiet
*What would have been prices otherwise?*

## Chinese WMP, SMP, Cheese & SDF Import Change, 2018-2022



Source: TradeMap

Legend: ■ 2019/18  ■ 2020/19  ■ 2021/20  ■ 2022/21

Y-axis: Import Change (% y.o.y)

Categories: WMP, SMP, SDF, Cheese
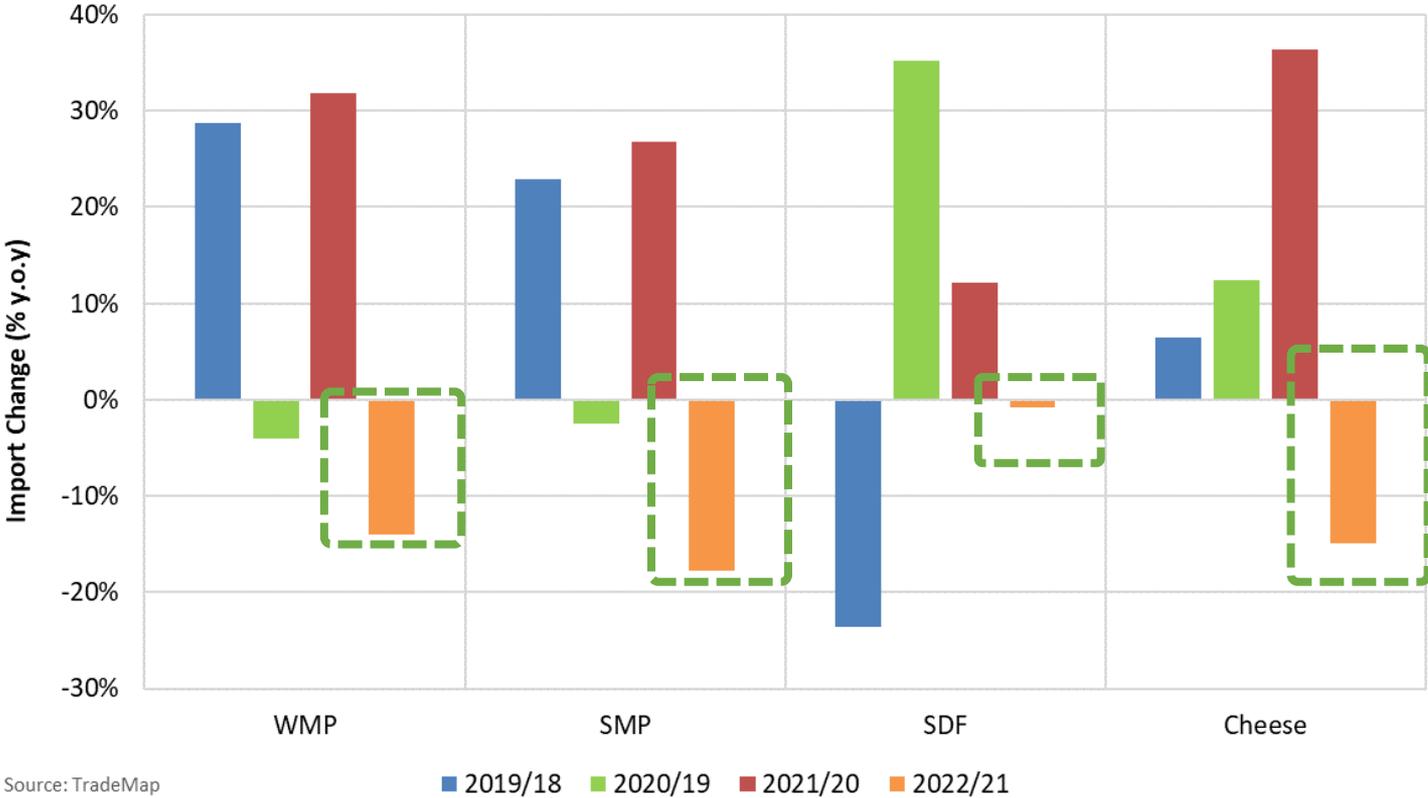
# SMP/Butter prices vs. Milk price
## *And milk price is decreasing fast! To which level?*



Raw milk price based on SMP and butter price
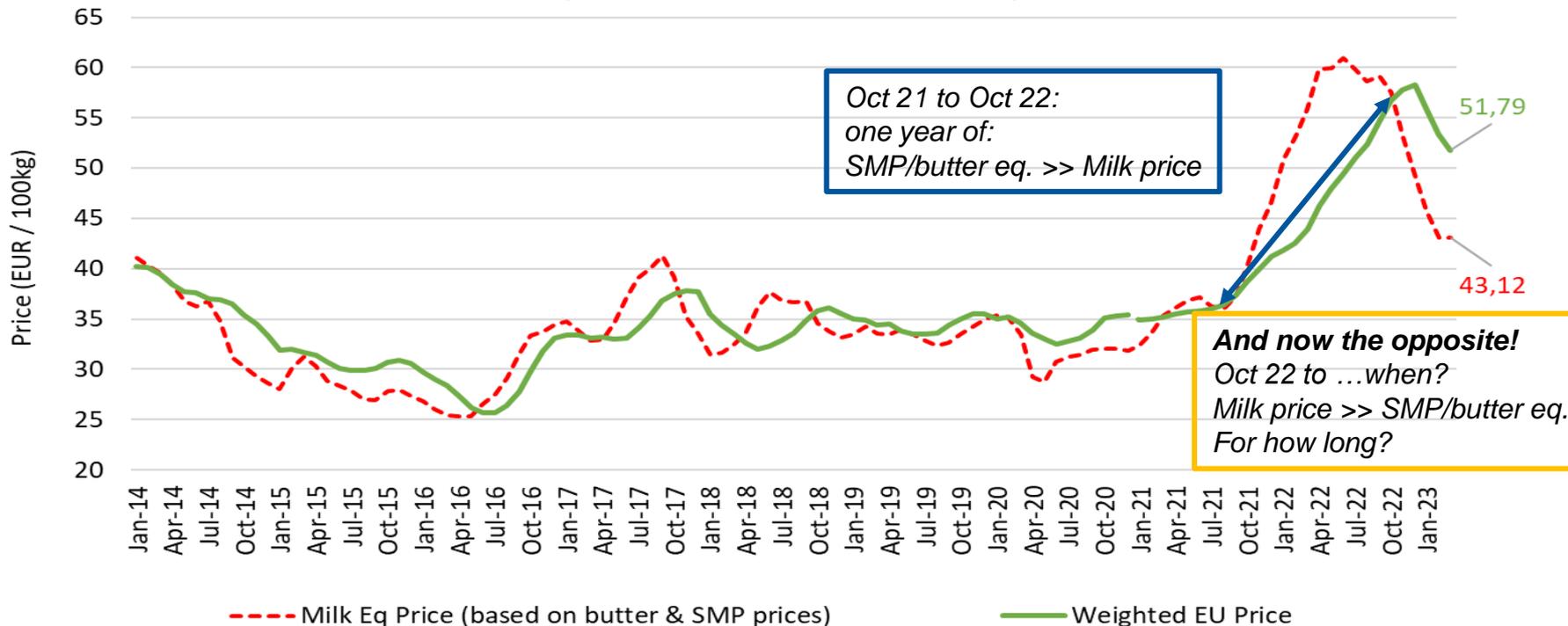
Oct 21 to Oct 22:
one year of:
SMP/butter eq. >> Milk price

*And now the opposite!*
Oct 22 to …when?
Milk price >> SMP/butter eq.
For how long?

51,79

43,12

- - - Milk Eq Price (based on butter & SMP prices) ——— Weighted EU Price

# EU milk price: heading to 40€/100Kg in average in May?
## *Impact on milk collection by Q3/Q4*

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### Raw milk price in EU countries

EUR/100 kg

Y-axis: 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75

X-axis: Jan-20, Mar-20, May-20, Jul-20, Sep-20, Nov-20, Jan-21, Mar-21, May-21, Jul-21, Sep-21, Nov-21, Jan-22, Mar-22, May-22, Jul-22, Sep-22, Nov-22, Jan-23, Mar-23

51,79

Legend: DE, IE, FR, PL, FI, EE, LV, LT, EU
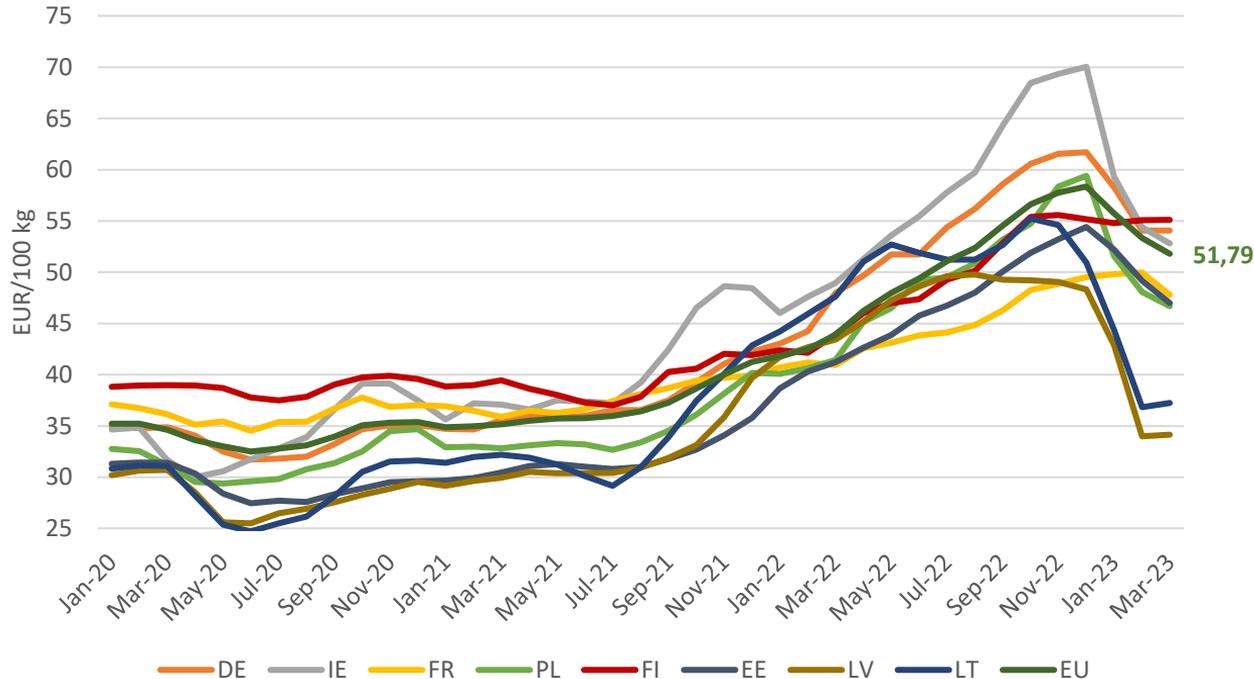
### Milk price increase Mar. 23/Mar. 22

| Country | Value |
|---|---|
| IT | 41,0% |
| FI | 25,4% |
| EU | 17,9% |
| FR | 17% |
| DK | 15% |
| EE | 14% |
| DE | 13% |
| PL | 13% |
| NL | 9% |
| IE | 8% |
| LV | -21% |
| LT | -22% |

X-axis: -40%, -20%, 0%, 20%, 40%, 60%

Source: DG Agri
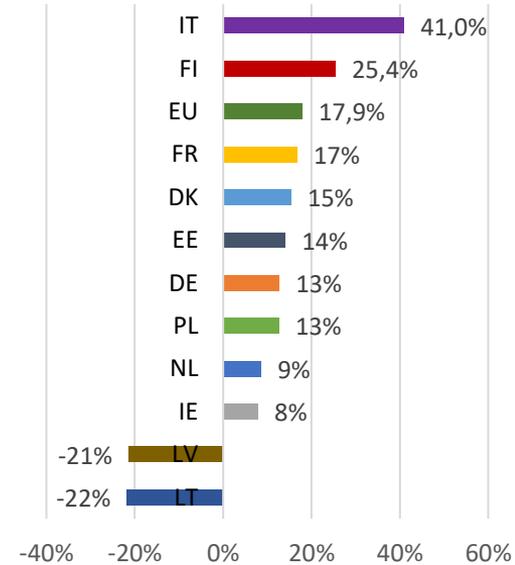
# Gas price: back to sept 2021 situation
## *Price could potentially continue to go down during H1*

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## Natural Gas PEG Nord EEX FR (nearby contract)

# EU Feed prices: lower than 22 average but still high
## *Watch impact potential of Ukraine*

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### Feed Ingredient Prices EU



Legend: 9K51 - Maize fca Mannheim DE (MBP); FB03 - Wheat feed Hamburg DE
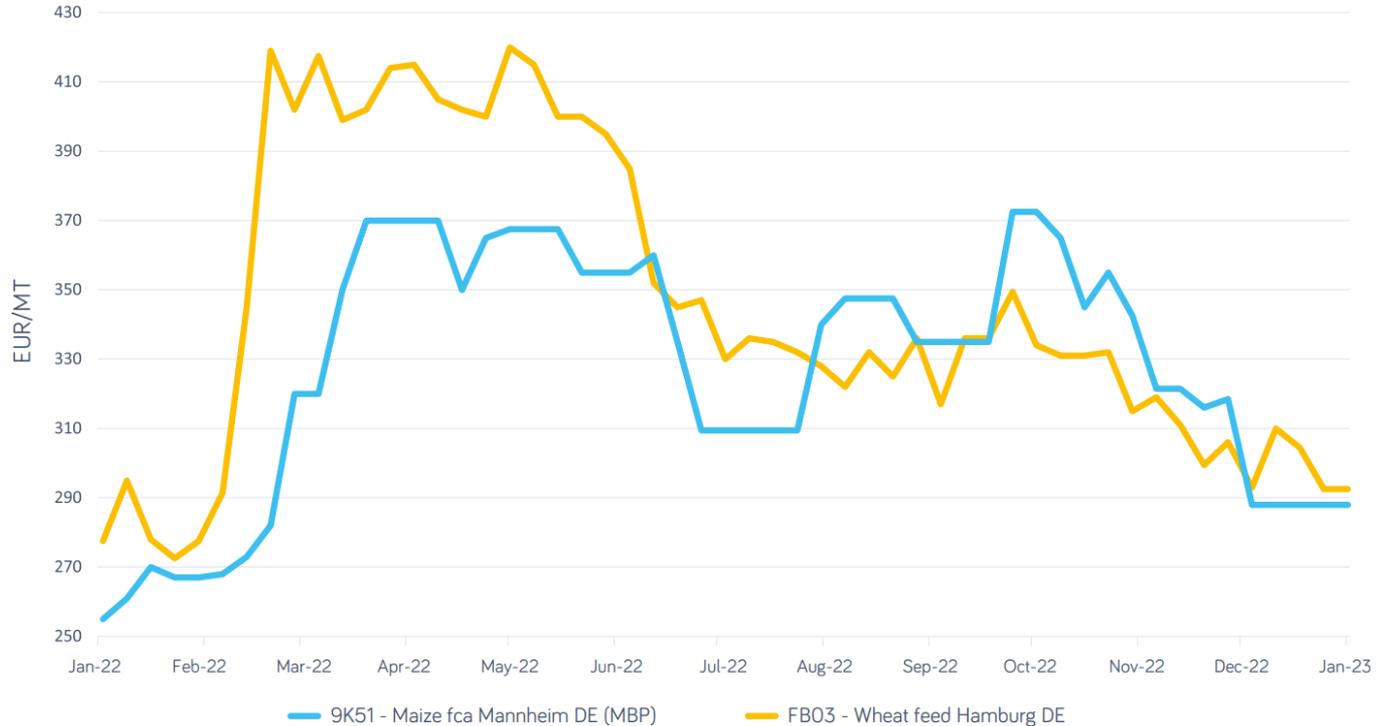
# What about milk collection?

# Milk collection growth in the EU could be close to 0% in 2023
*Less milk will be produced in the second half of 23*



Milk collection growth 2022/2021

2023 could be between 0% growth but also potentially negative (EU commission)
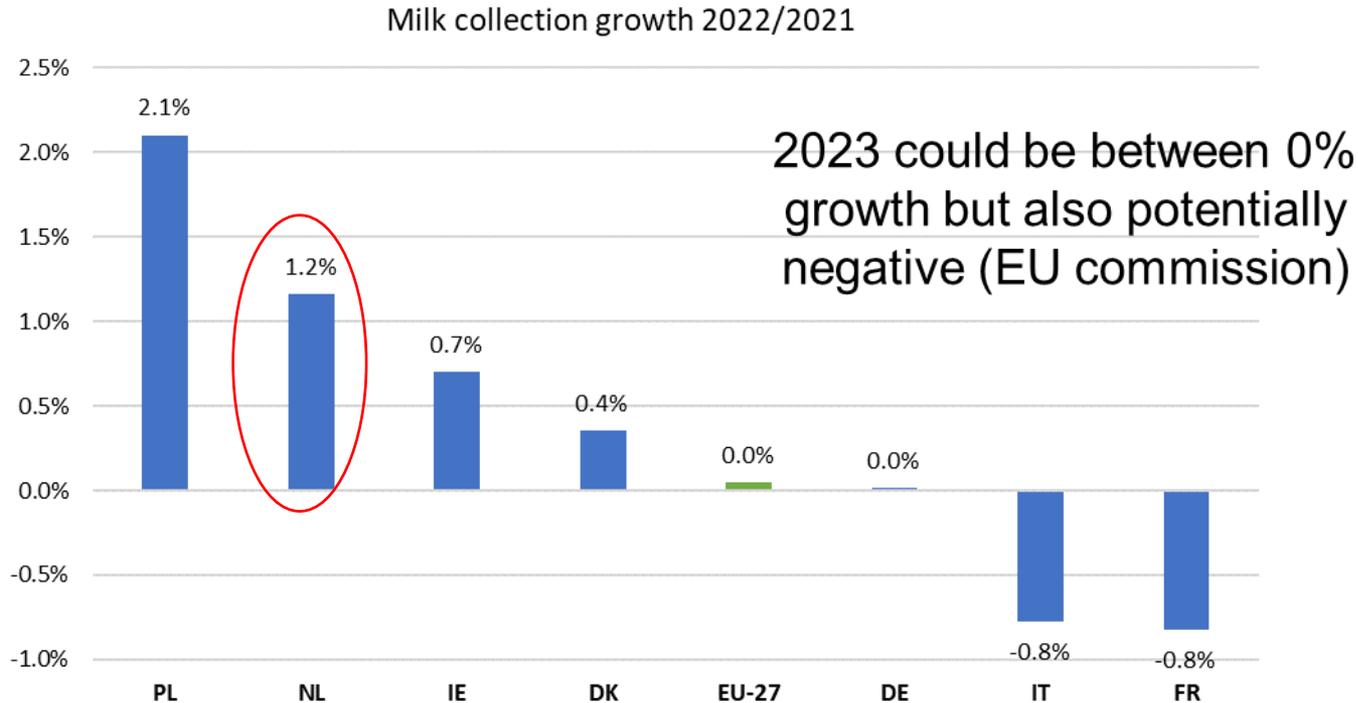
Source: Eurostat, FranceAgrimer and Milchland Niedersachsen

# EU milk production January 2023: +0.4%
## *When prices goes down, volumes are up*

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## Milk collection growth 2023/2022*

| | NL | EE | DE | PL | DK | EU-27 | LV | FR | IE | LT | IT |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | +4,7 % | +4,0 % | +2,7 % | +1,6 % | +0,9 % | +0,4 % | +0,2 % | -1,9 % | -2,4 % | -4,8 % | -9,5 % |
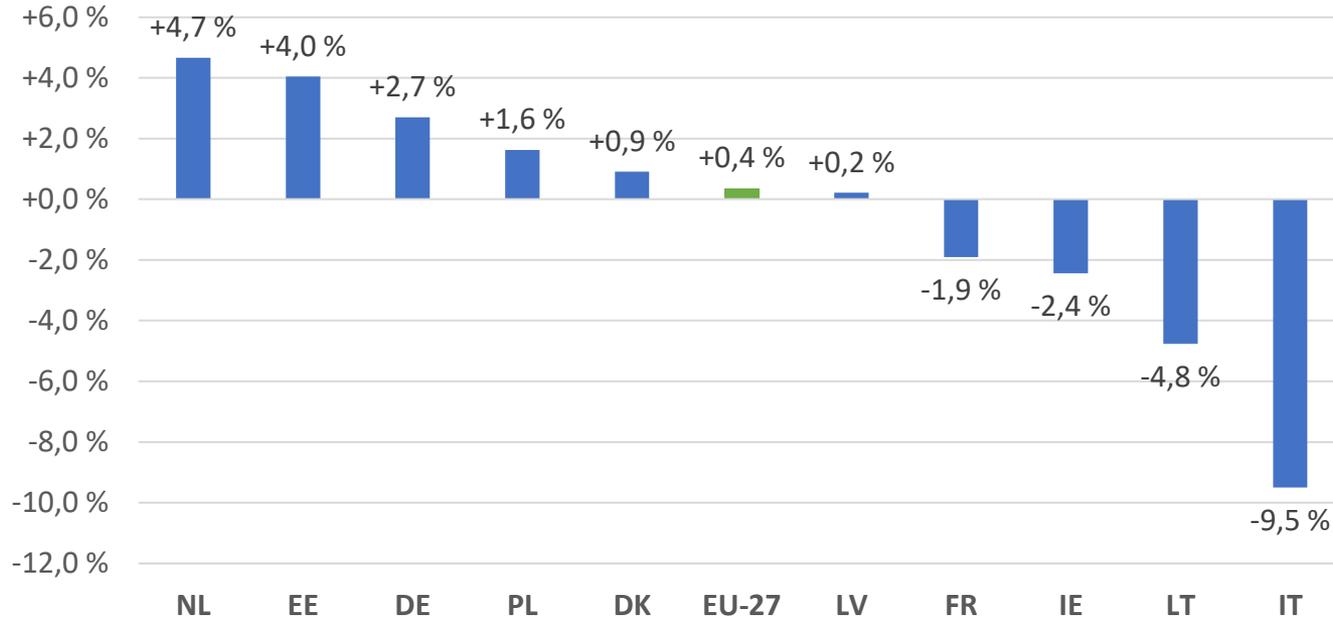
\* end of January for NL, PL, NL, IE, IT and EU-27, end of February for DE, FR, EE, LV and LT

Source: Eurostat, FranceAgrimer and Milchland Niedersachsen

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# Milk collection in Jan 2023 is only up by 0.4% compared to Jan 22
*This level is relatively low as it is -0.1% compared to 2020-2022 average*



EU-27 Milk collection

Legend:
- 2020-2022 min-max
- 2023
- 2020-2022 average

Y-axis: Milk collection (kt), from 10'000 to 14'000

X-axis: Jan. Feb. Mar. Apr. May Jun. Jul. Aug. Sep. Oct. Nov. Dec.
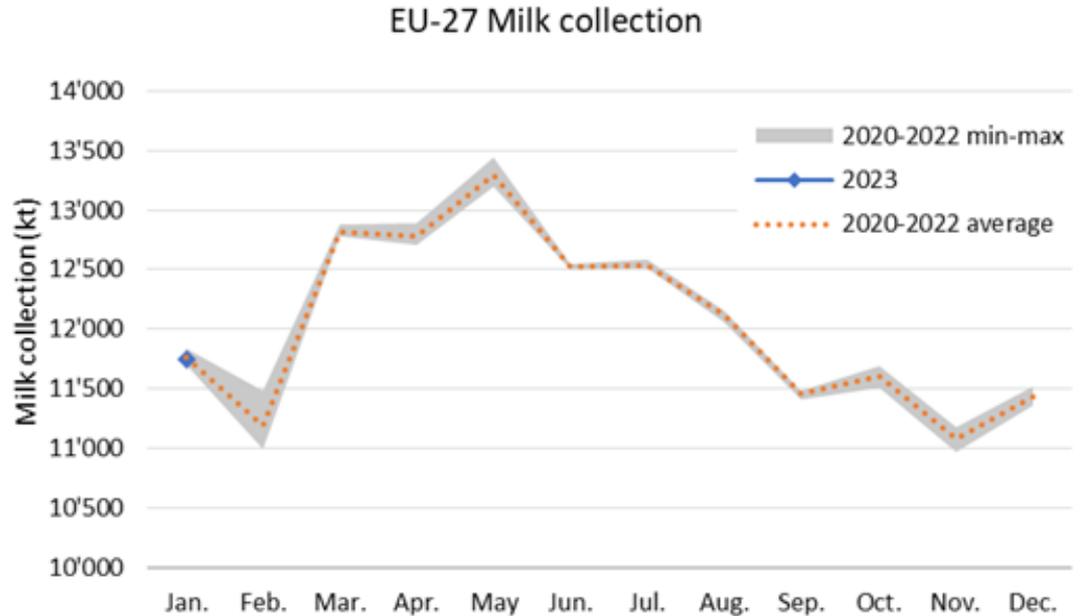
Source: Eurostat

# What have we done with that milk?
## SMP production has been favoured last year compare to 2021



Variation of production and export* volumes (2022/2021)
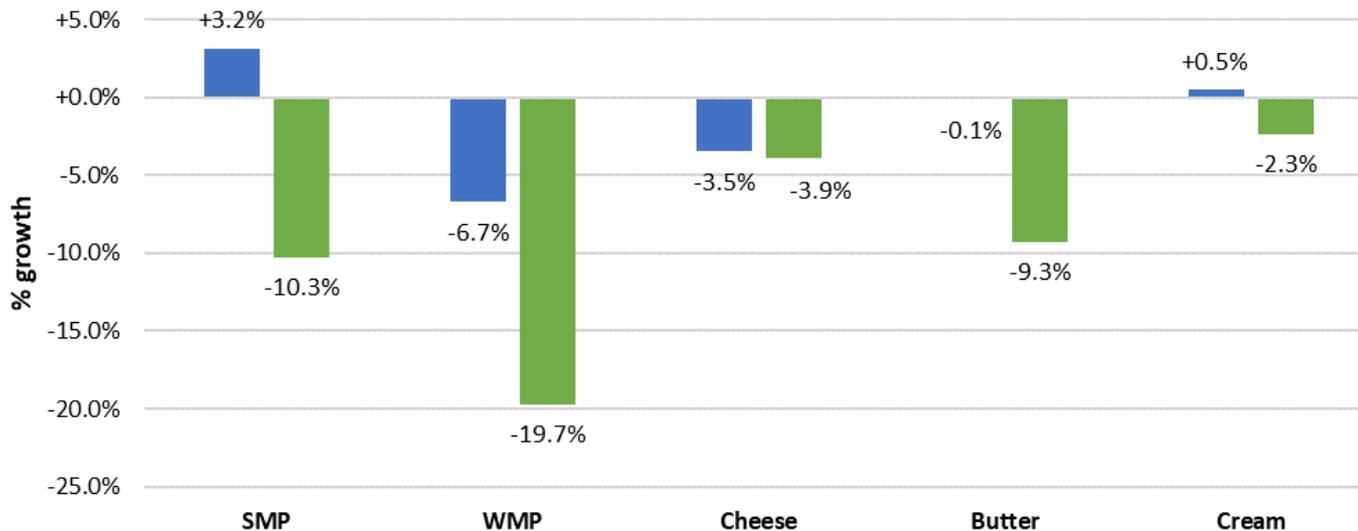
Source: Eurostat
* UK excluded

■ Production  ■ Exports

Variation of production and export* volumes (Jan. 23/Jan. 22)



% growth

| | Production | Exports |
|---|---|---|
| SMP | +6.3% | +16.3% |
| WMP | -6.9% | -28.4% |
| Cheese | +0.9% | -3.9% |
| Butter | +6.4% | +19.9% |
| Cream | +3.2% | -12.6% |
| Drinking milk | +0.9% | -26.7% |
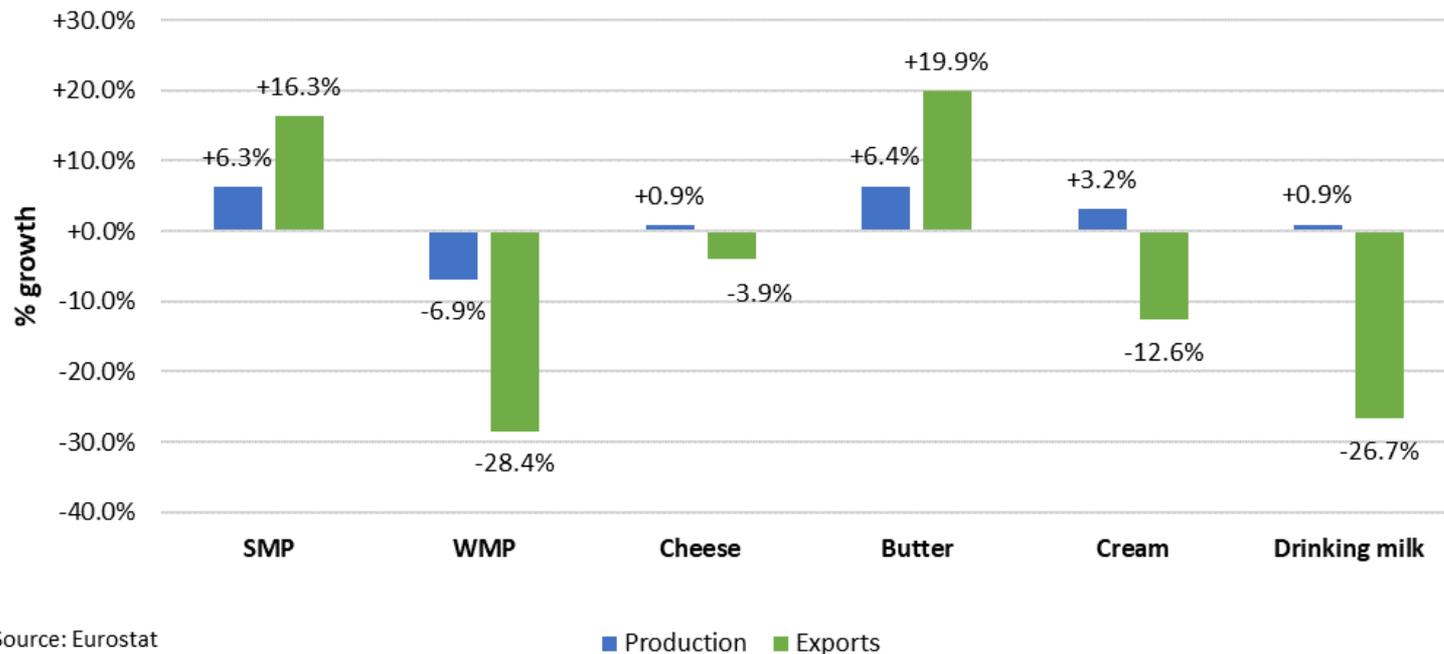
Source: Eurostat

■ Production  ■ Exports

# EU inflation by country: what are we talking about?
## *3 clusters of countries…*

**Food inflation rate in 2022**
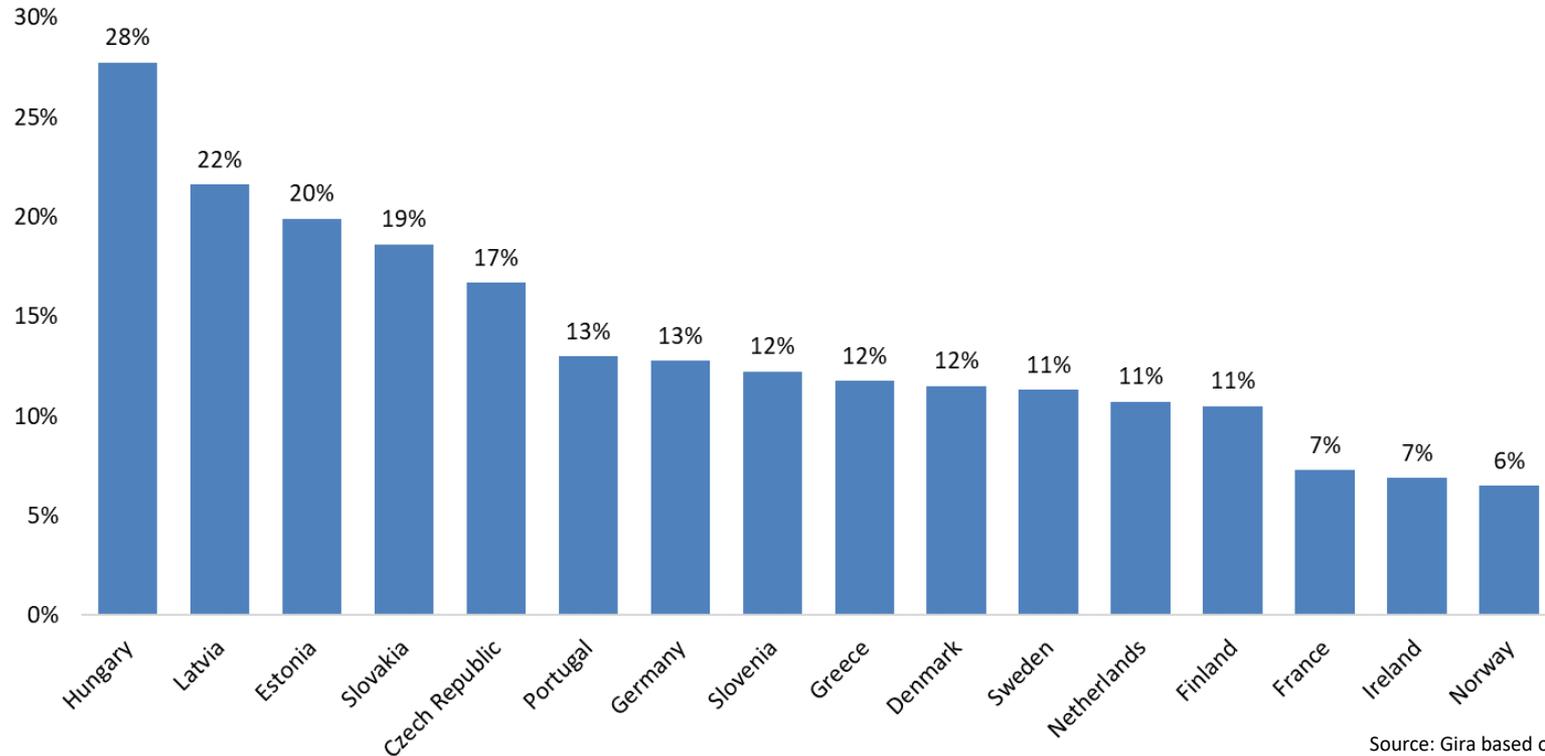


Source: Gira based on Eurostat

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# How Hard the Inflation could Hurt the Food Basket?
## *EU estimated inflation impact: around +47 EUR/month/person*

**Estimated per capita impact of food inflation for 2022**



Additional food expenditure per month and per capita (USD) 2022
Source: Gira compilations

Germany 56
Norway 30
France 34
Denmark 42
Estonia 89
Spain 44
Hungary 103
Poland 66

Total disposable income per capita in USD in 2021

Food expenditure (% of total)
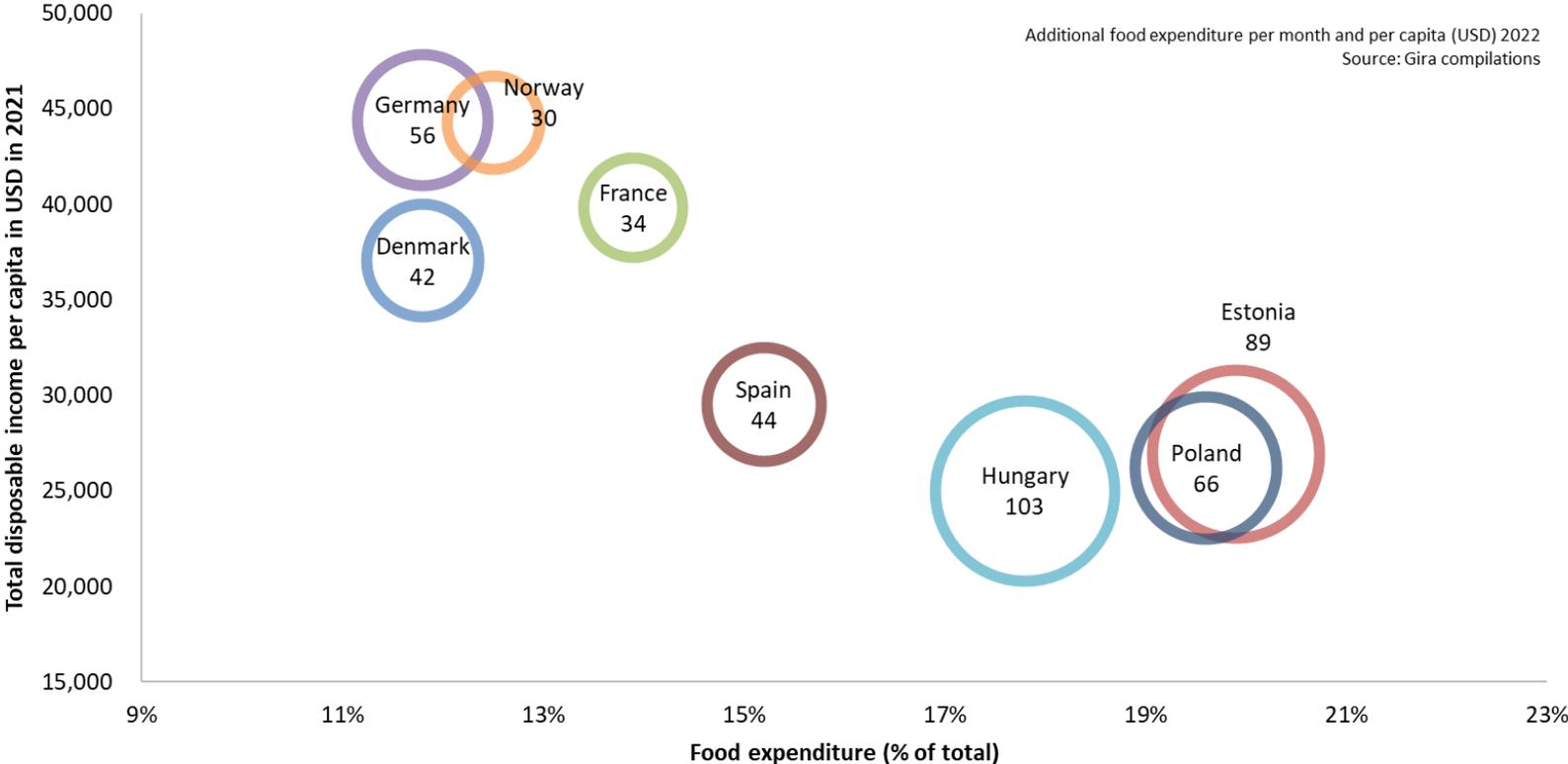
© Gira

# Current Economic Situation Impact on Dairy Demand
## *Cheese: volumes remain unimpacted*



**DE: Emmental retail volumes sales**

**Volumes changes 2022/19**

Source: Gira compilation

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# Current Economic Situation Impact on Dairy Demand
## Butter: Important decrease; better in December due to decrease price

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### DE: Butter retail volumes sales



000 tons

Legend: 2019, 2021, 2022

### Volumes changes 2022/19



000 tons
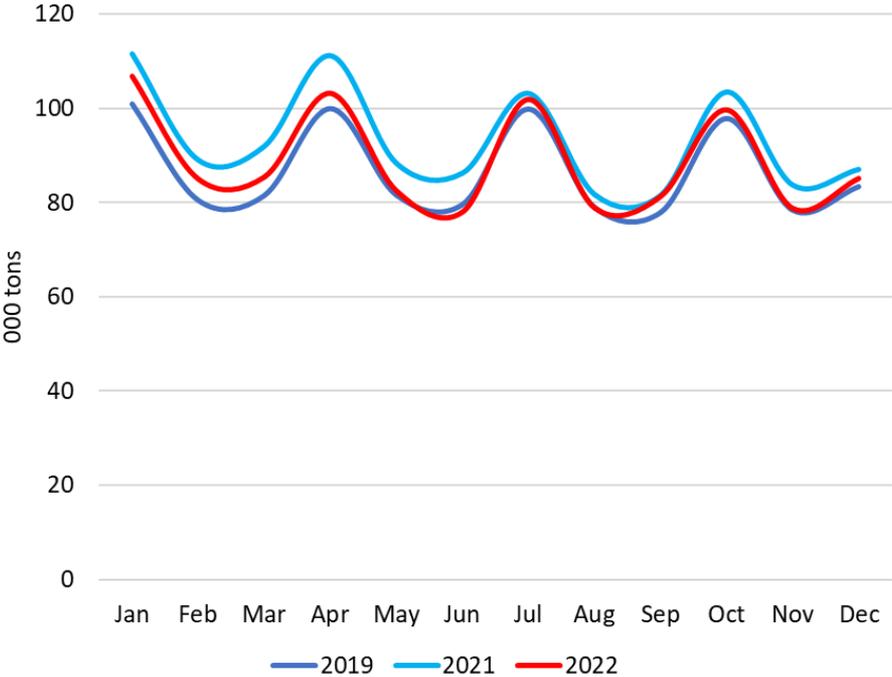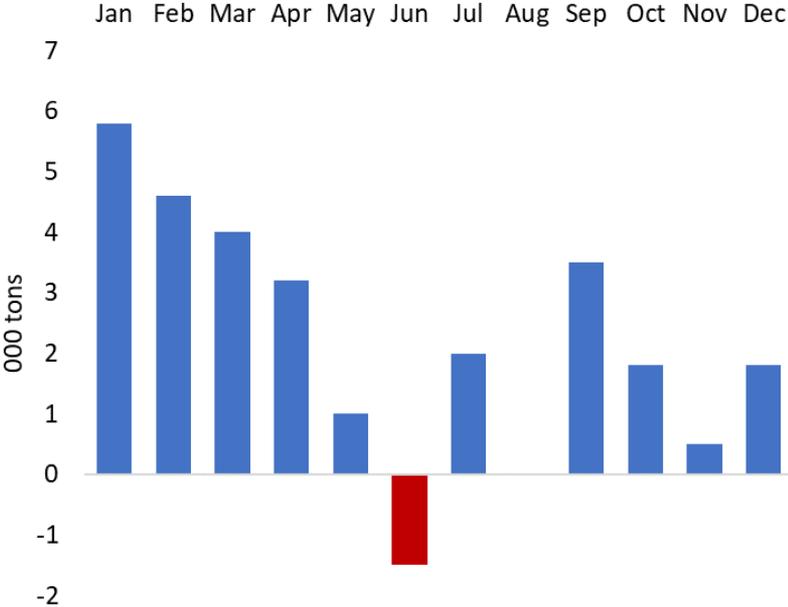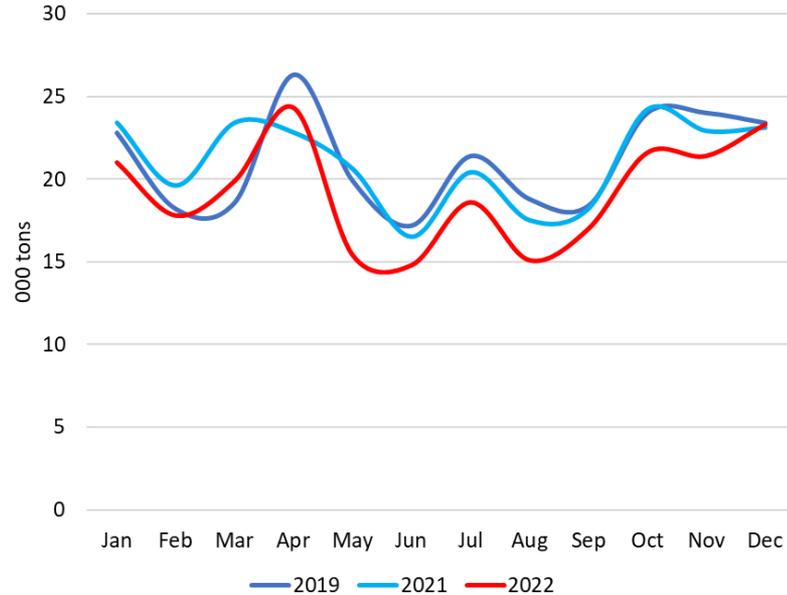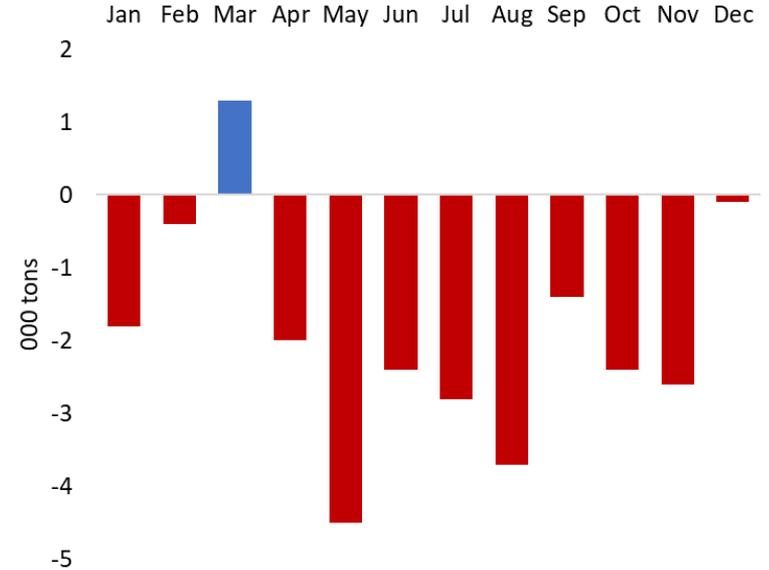
Source: Gira compilation

# Current Economic Situation Impact on Dairy Demand
## *Drinking milk: going heavily down. Will it be a problem?*

**DE: Drinking milk retail volumes sales**
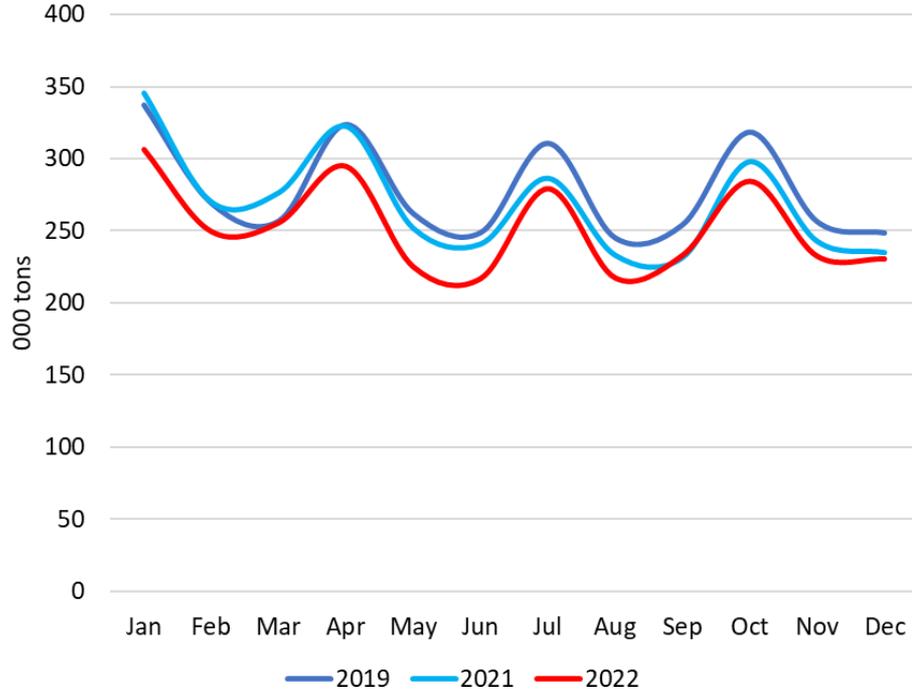


**Volumes changes 2022/19**
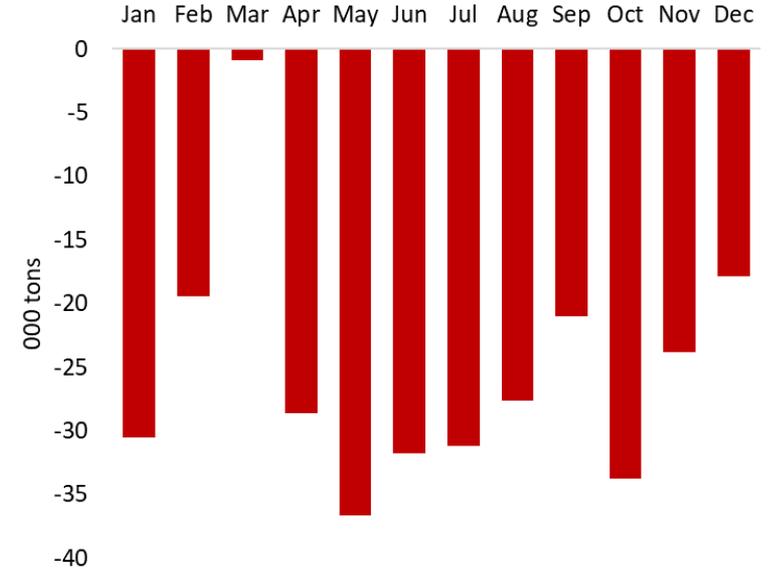


Source: Gira compilation

© Gira

Chinese situation

Are they back? What about the future?

# Jan.-Feb. 2023 China Dairy Imports
## Back on track for SMP and for cheese, not for WMP at all

**Jan.-Feb. 2023 China Dairy Imports (compared to previous years)**

Imports ('000 t)

Legend: Jan-Feb 19, Jan-Feb 20, Jan-Feb 21, Jan-Feb 22, Jan-Feb 23

% change: Jan-Feb 23/Jan-Feb 22

- WMP: -68%
- SMP: -2%
- Cheese: +4%
- Solid dairy fats: -22%
- Cream: -17%
- Drinking milk: -46%
- IF: +35%
- Whey products (except WPC80): +63%
- WPC80: -11%
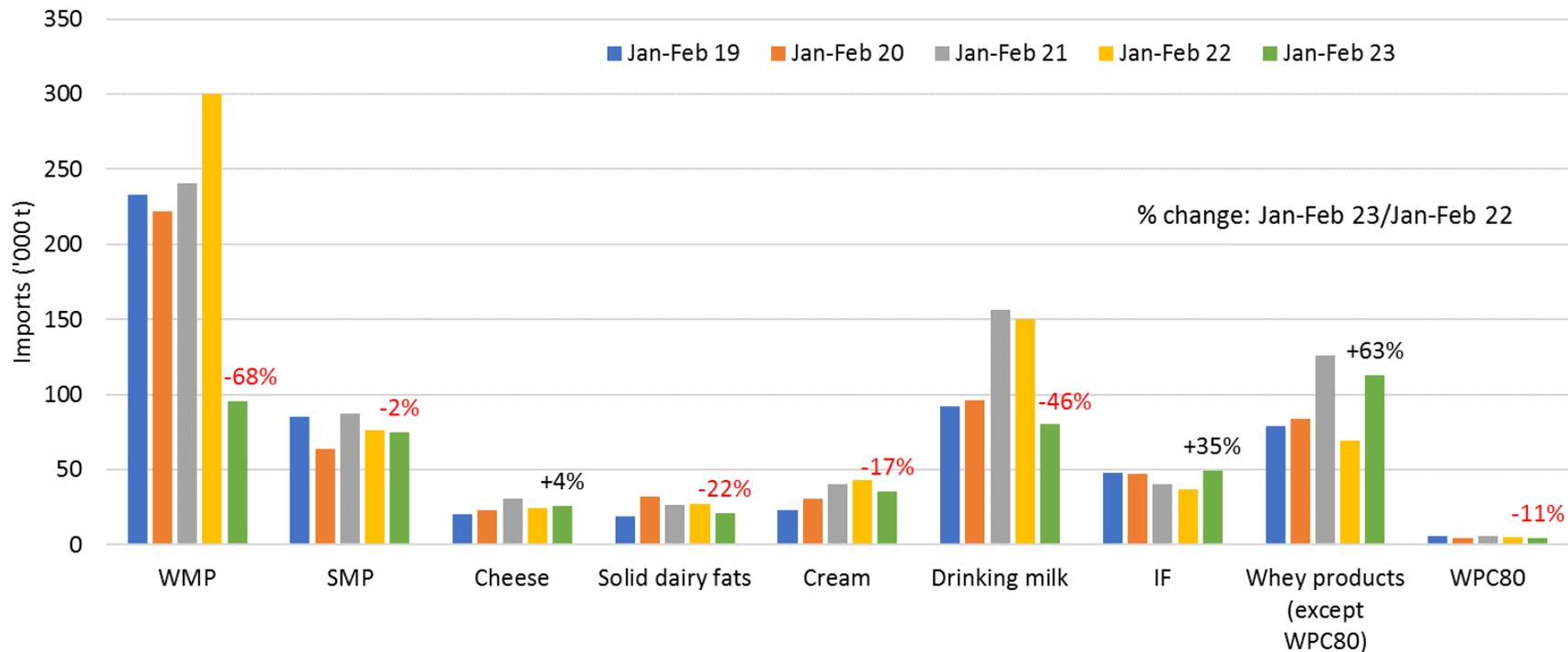
*Source: Chinese Customs*

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**Monthly SMP imports, Jan.-Feb. 2022/2023**



SMP
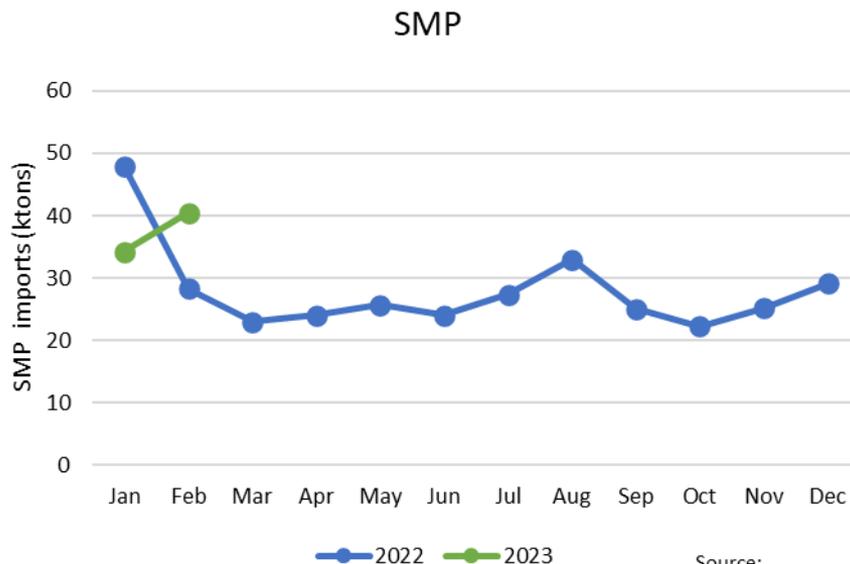
Jan.-Feb.
23/22
-2% YoY

Source:
Highground

# Dairy Self-sufficiency Rate
## Scenario 1: Staying at about 70% for 2027

**Milk collection and dairy imports (LME), 2011-2027f, base case scenario**
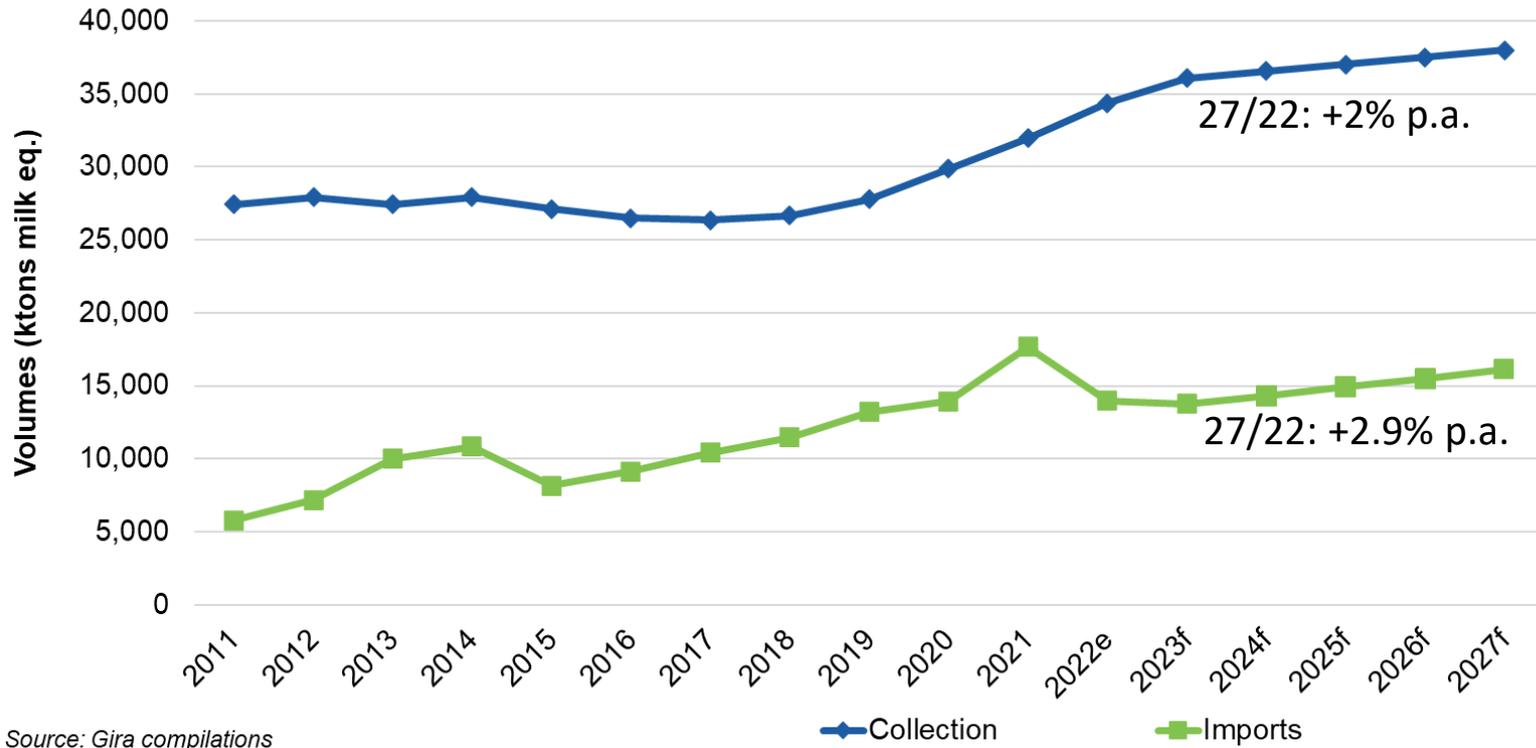
27/22: +2% p.a.

27/22: +2.9% p.a.

Y-axis: Volumes (ktons milk eq.)

Legend: Collection, Imports

*Source: Gira compilations*

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## Milk collection and dairy imports (LME), 2011-2027f, alternative case scenario



27/22: +4.5% p.a.

27/22: -3.1% p.a.

*Source: Gira compilations*
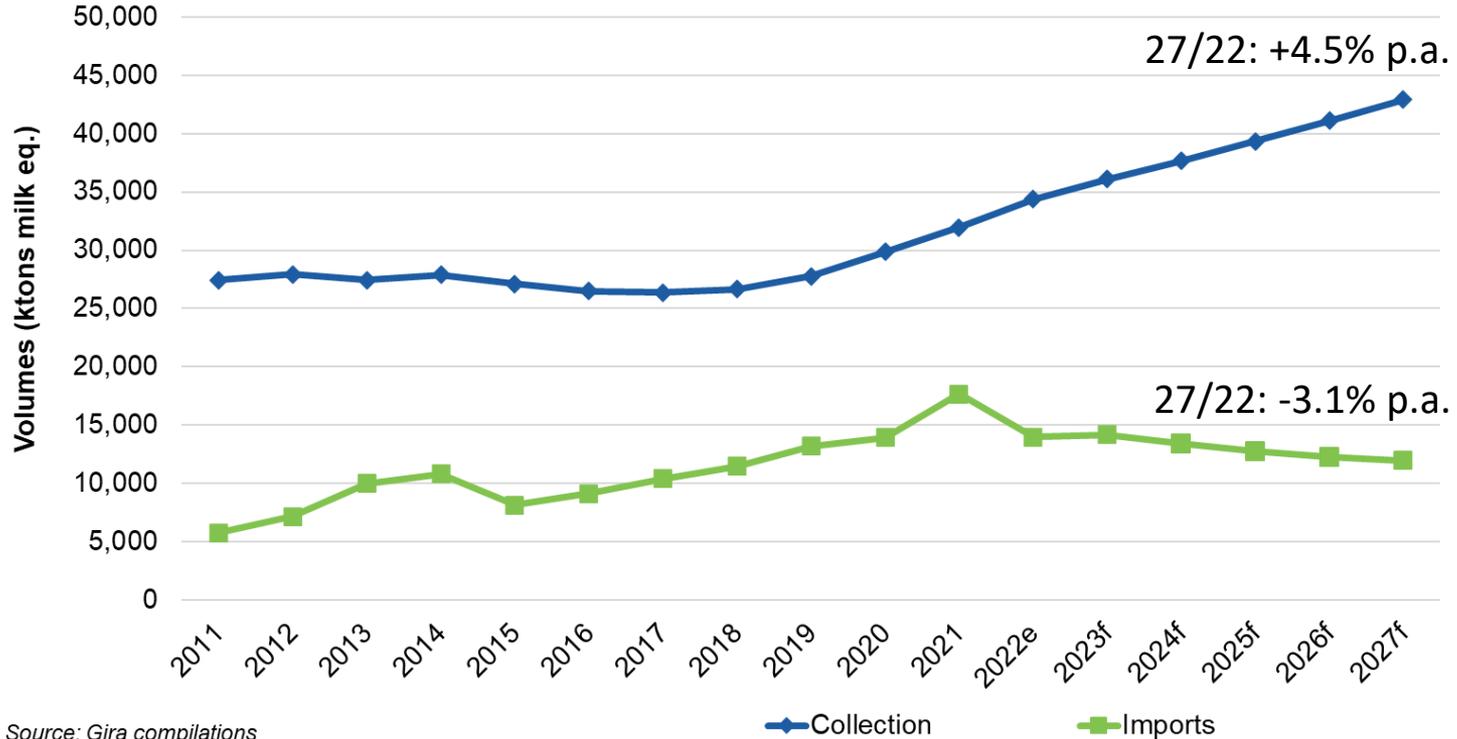
Collection    Imports

What about the future: there will be less milk available

2021 and 2022 are good proxies to understand the future

# World milk collection 2022 – 2027f (excluding India)
*US and China will lead the growth in volume. Not anymore the EU and NZ*

## Milk Collection Volume (mio tons) by Country, 2022 – 2027f
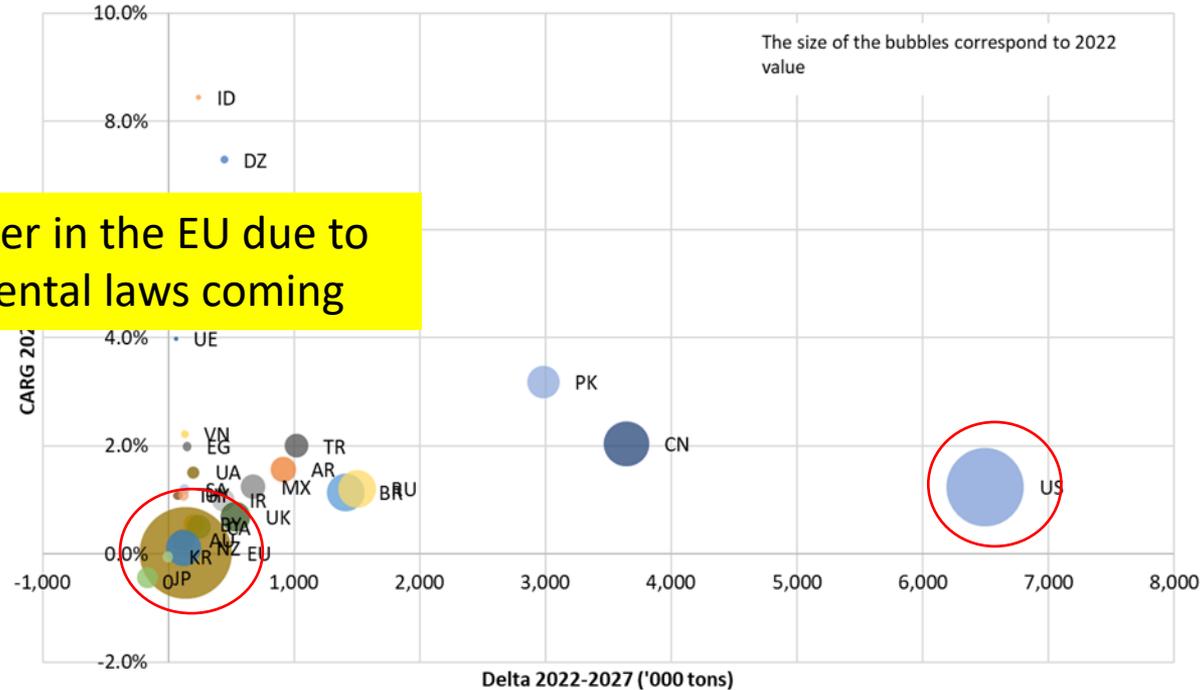
But will be lower in the EU due to new environmental laws coming



The size of the bubbles correspond to 2022 value

Y-axis: CARG 20... (10.0%, 8.0%, 4.0%, 2.0%, 0.0%, -2.0%)

X-axis: Delta 2022-2027 ('000 tons) (-1,000, 1,000, 2,000, 3,000, 4,000, 5,000, 6,000, 7,000, 8,000)

Labels: ID, DZ, UE, VN, EG, UA, SA, IR, MX, TR, AR, BR, RU, UK, BY, NL, AU, NZ, EU, KR, JP, PK, CN, US

# 2027: Slowdown of Dairy Production in the EU
## *More cheese, more fats and less powders*

**Production growth of dairy products**



CAGR

- 5,0%
- 4,0%
- 3,0%
- 2,0%
- 1,0%
- 0,0%
- -1,0%
- -2,0%

Drinking milk: -0,9% / -0,6%
Cream: +1,2% / +0,8%
Yogurts: +0,1% / -0,3%
Solid Dairy fats: +2,4% / +0,2%
Cheese: +1,7% / +0,5%
SMP: +4,1% / -0,0%
WMP: +2,0% / -1,0%

■ 2019/2011   ■ 2027/2022
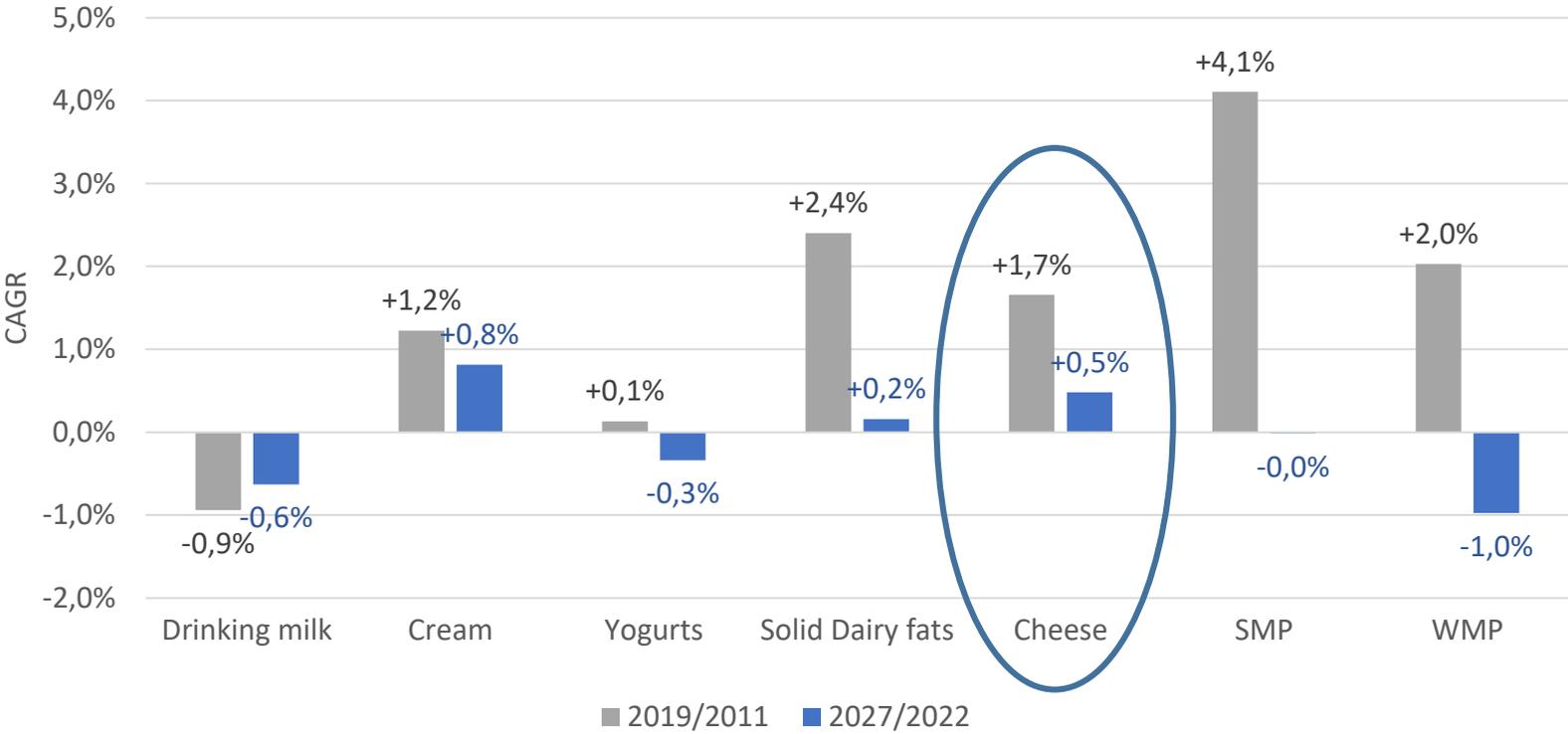
Source: Gira

# Dairy Consumption by Region will continue to grow
## *Milk deficit should continue to grow*

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### Dairy consumption 2022-27f, excl. IN & PK

**+ 21 mn t**

**+0.9% p.a**

mn tons LME

| | |
|---|---|
| 450 | 471 |
| 2022e | 2027f |
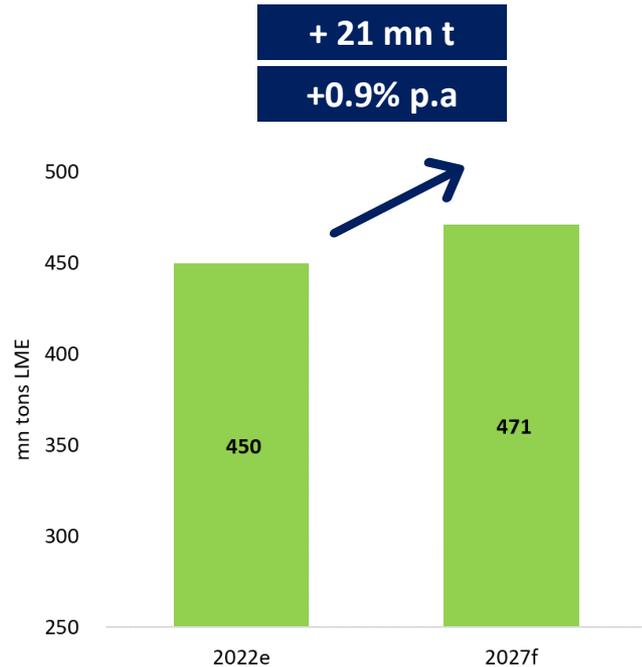
Source: Gira

### Region contribution to the midterm growth (2022-27f)

- Oceania 2%
- JP+S.Korea 1%
- CIS 1%
- UK 3%
- Russia 6%
- SSA 7%
- SEA 10%
- MENA 11%
- L.America 13%
- China 27%
- N.America 26%
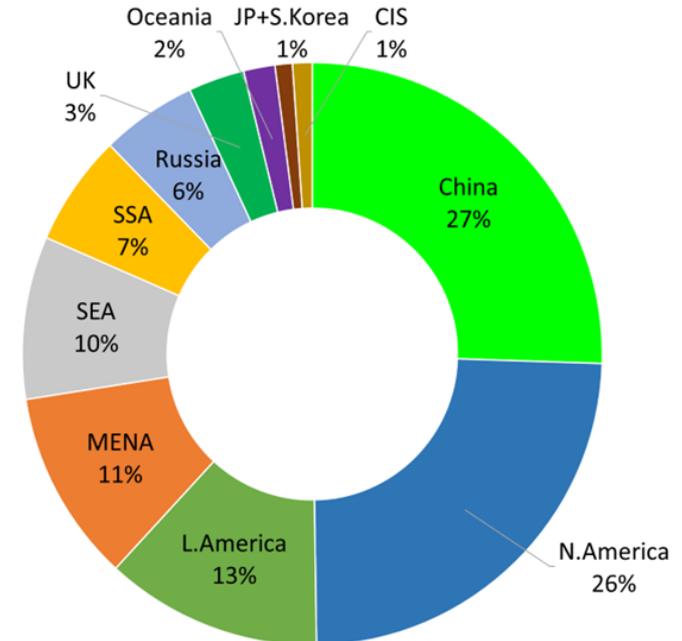
Source: Gira

# Overview of consumption growth by product
*For most dairy products: between 0% and +1.5% p.a*



**Global Consumption growth, excl. IN & PK 2022e-2027f**

Bubble size :
Volume estimated in 2022

Drinking Milk
0.6%

Yogurts
1.2%

Cheese
1.2%

Solid Dairy Fats
1.0%

Cream
0.9%

Fat-Filled Milk
1.9%

WMP
-0.03%

SMP
0.4%

Whey
1.2%

Vol growth (000 tons pw) 27/22

CAGR 27/22

Source : Gira dairy club 2022

© Gira
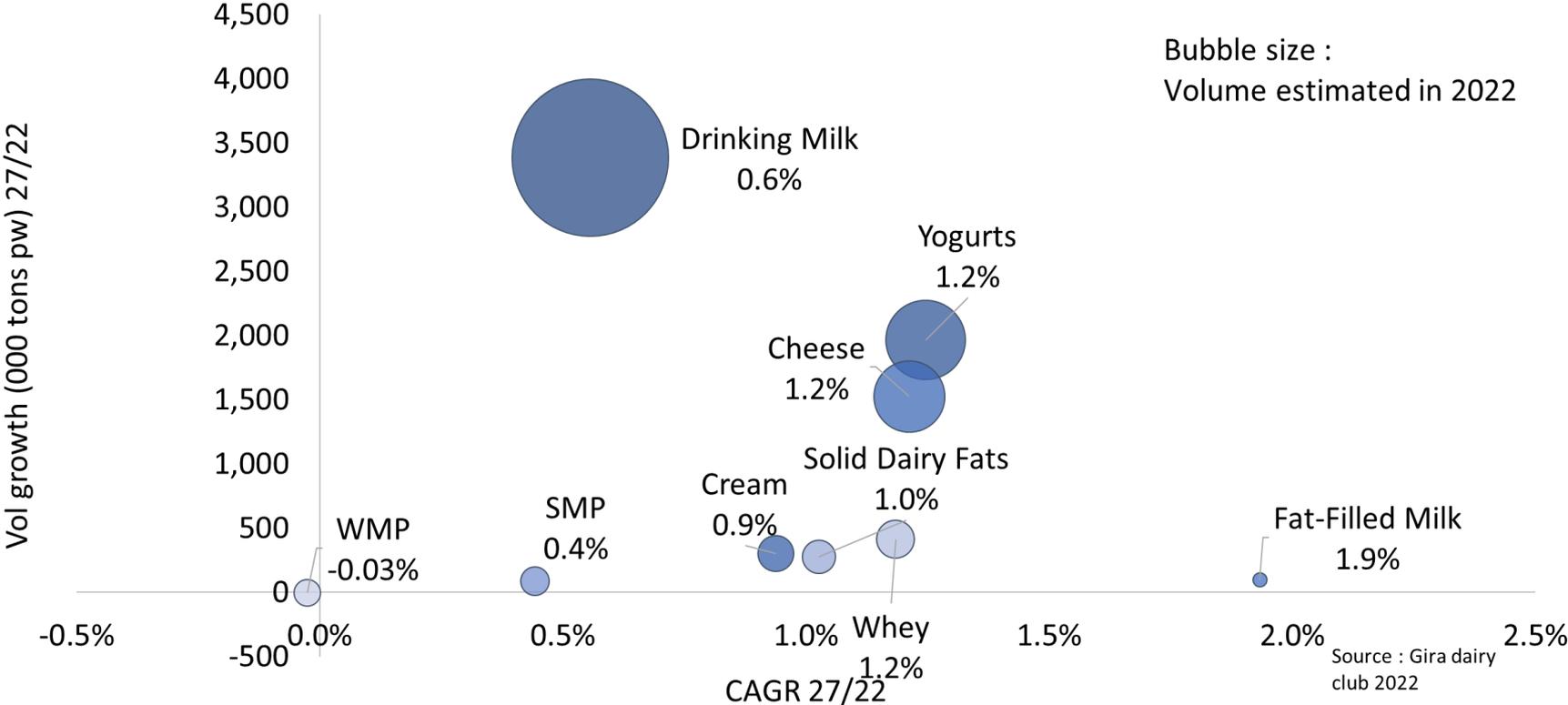
There will be less milk and it'll be more expensive

And we are going to add a new layer of complexity at least in the EU

Policies :

- States subsidies (ex: CAP subsidies)
- Carbon markets (ex: Californian Cap and trade program)
- Repressive laws (ex: "Fart tax" in New-Zealand)

Consumers :

- Raising awareness
- Looking for sustainable products

NGOs & Influencers

Dairy industry

Sector vulnerability to climate change :

- Feed supply
- Water supply
- Warm temperatures decreasing yields
- Extreme weather events increase in both intensity and frequency
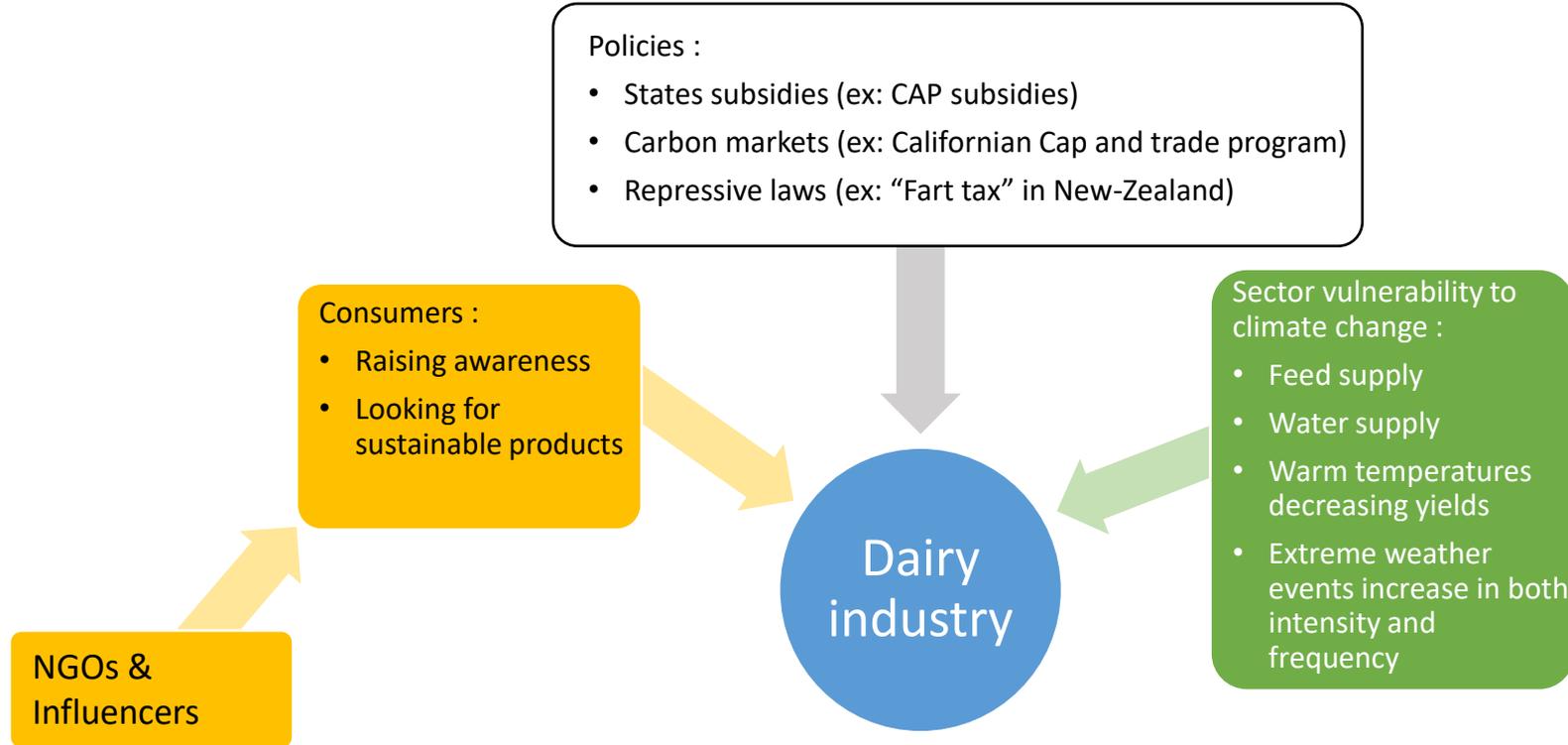
# Worst Case Scenario for Europe
*Sharp reduction of the Top 7 EU dairy herd: -23% !*

**Gira**

## Reduction of the dairy herd by 2030 as the methane emissions target are reached

**Worst case scenario** :
We assume that culling dairy cows is the only way to reduce dairy emissions



Dairy herd ('000 heads)

- DE: -25%
- FR: -15%
- PL: -16%
- IT: -32%
- NL: -23%
- IE: -25%
- DK: -55%

**% of reduction**

■ Currently  ■ Forecast 2030
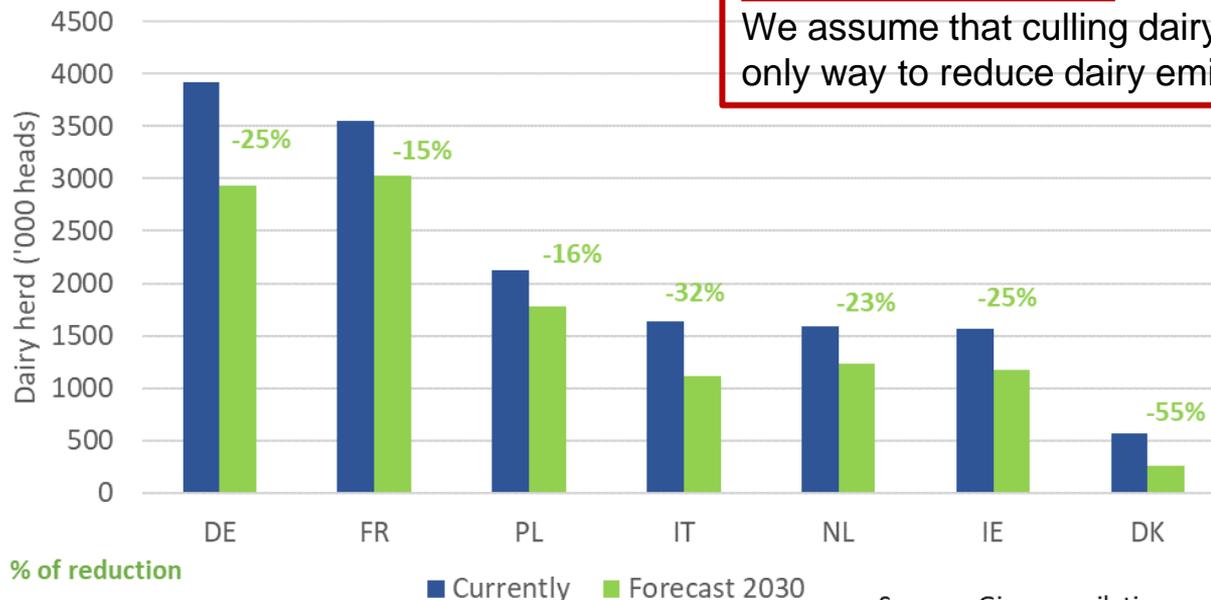
Source : Gira compilations

| | NL | FR | DK | DE | PL | IT | IE | Total |
|---|---|---|---|---|---|---|---|---|
| Dairy herd cut in '000 head | -359 | -528 | -312 | -983 | -343 | -531 | -392 | -3,448 |

**Milk collection loss = 26.3 mio tons**

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# Regulation: the Urgency of Reducing Nitrogen Emissions
## *The Netherlands Case*

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### Nitrogen Reduction Map of the Netherlands



areas with less restrictions
12%: from water, soil, nature and nitrogen
12%: areas in Gelderland
47%: transition areas
47%: peat area
58% reduction following from deposit potential in Gelderland
70% ring around nitrogen-sensitive Natura 2000-areas
>95%: Natura 2000-areas
Nature Network Netherlands (NNN)
Urban, semi-urban, and recreational areas

110622 © de Volkskrant . Bron:Ministerie van Landbouw, Natuur en Voedselkwaliteit

- **Objective**: -30% of nitrogen emissions by 2030

- **Potential consequences as announced by NL government**:
  - -5000 farms
  - -33% of the herd size

  - To maintain 2022 milk production:
    - Yield needs to increase to reach 13,123kg/cow/year (+5.2% p.a.)

- Aug. 22: "*Rabobank has said it is no longer putting money into farms which are close to protected Natura 2000 environments*"

# Conclusions

# Food for thought for 1H 2023
## Expect further bumps as prices & costs are far from being stabilised

| | 1H 2023 in the EU |
|---|---|
| **Energy** (oil/electricity/gas) | Now back to two years ago situation.<br>**Stabilisation** or **slight decreasing again** (Chinese impact?) |
| **Milk Price** (farmers) | Have **decreased a lot.** Will continue to go down (April, May?)<br>We are going to **harm milk production** (will be the case in H2) |
| **Milk production** | **Increase** milk production in Q2 but **slowing down and decrease in Q3/Q4** |
| **Production cost** (processors) | **Stable/down** in theory for energy, **down** for milk<br>(but electricity/gas contracts may need to be renegotiated) |
| SMP/Butter **Prices** | Potential further **decrease for SMP** (April/May?)<br>For Butter, what about **baker's situation**? |
| **Cheese prices** | Production will continue to goes up. **Demand is weak**<br>**Prices will continue to be under threat? For how long?** |
| **Inflation**<br>(at consumer level) | **Stable/slight decrease (but will remains at a high level)**<br>**Threat of further demand destruction**! |

# The new rules of the game for the future
## *Adapting the strategy to the new «stagnant/decreasing» milk volume*

- **A lot of uncertainty for the future**

- EU: Lower milk collection → Higher competition for milk→ Higher milk prices
  - Which could also help to grow again milk collection in the future….
  - Greater power to farmers will **force processors to react to avoid squeezing of margin or loss of raw materials**

> *Securing milk/dairy supply will be paramount!*

- **4 key strategic moves for dairies:**
  - **Secure dairy supply to secure sales**
  - **Reposition to better valorise dairy products but also to reduce costs**
  - **The company landscape will evolve leading to greater concentration and/or industry cooperation**
  - **And in any case, continue to implement measures/actions to increase the sustainability level of your company**
    - Carbon neutral by 2030?

> *High **milk valorisation** & reduce cost & sticking with **consumer demand** will be crucial!*

Should you require more information, please contact:

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