

How will the Dairy World look like in the year 2030?

14 November 2018

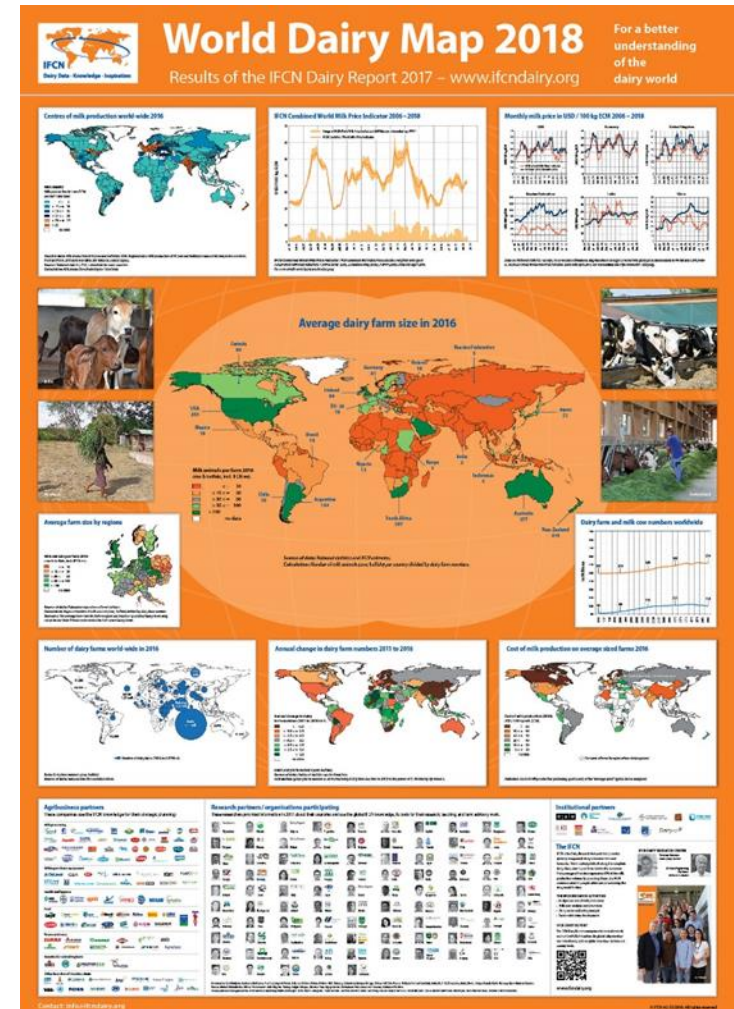
IFCN Dairy Research Network

Dr. Torsten Hemme,

Torsten.Hemme@ifcndairy.org

Agenda

1. The IFCN concept
2. The dairy world today
3. The dairy world 2030
4. Summary



The IFCN Network



Mission:

Create a better understanding of the dairy world by providing comparable data, knowledge and inspiration.



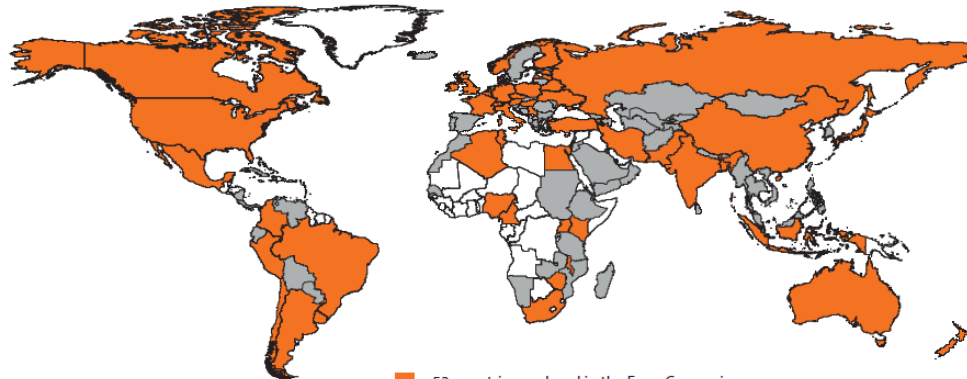
The IFCN Network Approach – 3 knowledge pillars

- Network of Researchers
- Network of Supporters (companies and organizations of the dairy industry)
- IFCN Research Center in Kiel (with >20 employees)



Status of the IFCN Network in 2018

Research partners in over 100 countries



■ 53 countries analysed in the Farm Comparison
■ 60+ countries participated in the Country Pages

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Supporting partners (> 120)

Milk processing

Milking and barn equipment

Health and hygiene


Feed

Farm machinery

Genetics for animal & plants


Other branches of the dairy chain

IFCN Material & Publications in 2018



Dairy Report 2018

For a better understanding of the dairy world

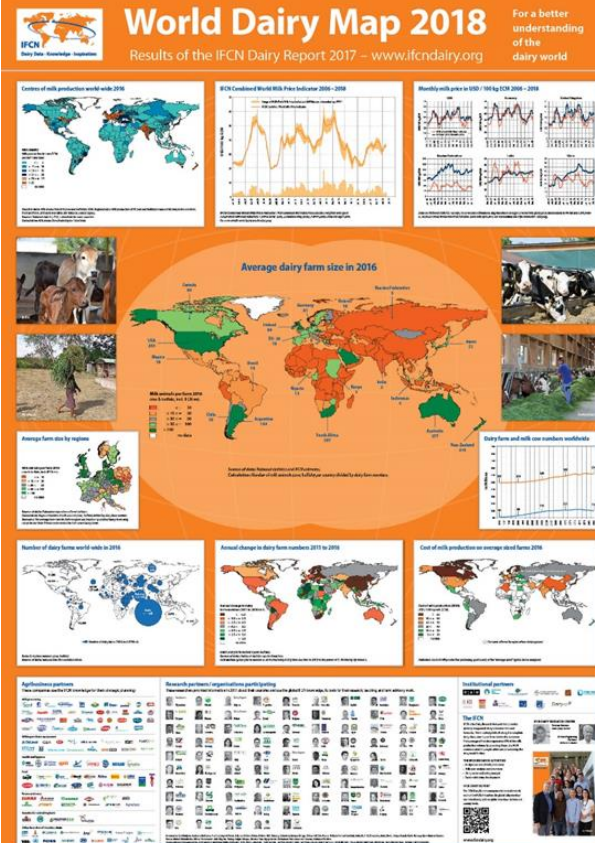


IFCN
The Dairy Research Network

World Dairy Map 2018

Results of the IFCN Dairy Report 2017 – www.ifcndairy.org

For a better understanding of the dairy world



Centres of milk production world-wide 2016

IFCN Combined World Milk Price Indicator 2006-2016

Monthly milk price in USD / 100 kg EUM 2006-2016

Average dairy farm size in 2016

Average farm size by region

Dairy farms and milk use numbers worldwide

Number of dairy farms world-wide in 2016

Annual change in dairy farm numbers 2015 to 2016

Cost of milk production on average dairy farms 2016

Agribusiness partners

Research partners / organisations participating


Institutional partners

IFCN Dairy Outlook 2030

For a better understanding of the dairy world

IFCN Dairy Data · Knowledge · Inspiration

CURIOUS? YOU SHOULD BE!



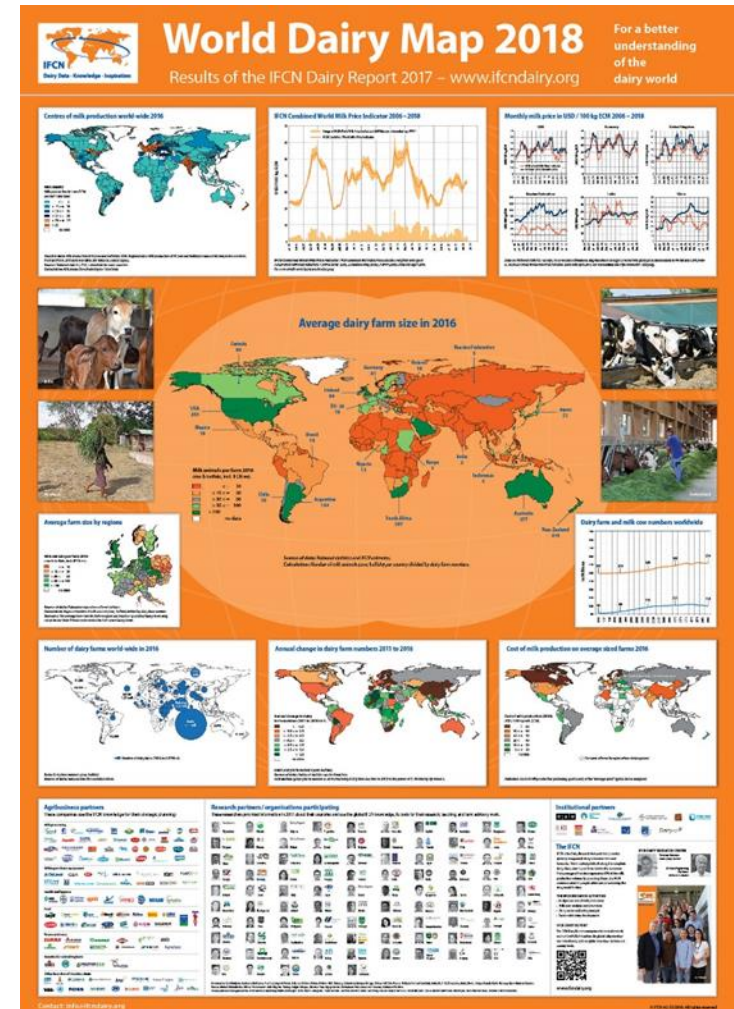
THE DAIRY WORLD 2017 vs. 2030

- Milk production:** + 304 mill t
Approx. 3 times of the current USA milk supply
- Milk production per farm:** + 54%
- Per capita milk consumption:** + 16%
- Average milk yield:** + 23%

Until 2030, global population will increase by 16% to 8.7 billion people, so 1.2 billion more consumers will demand milk products.

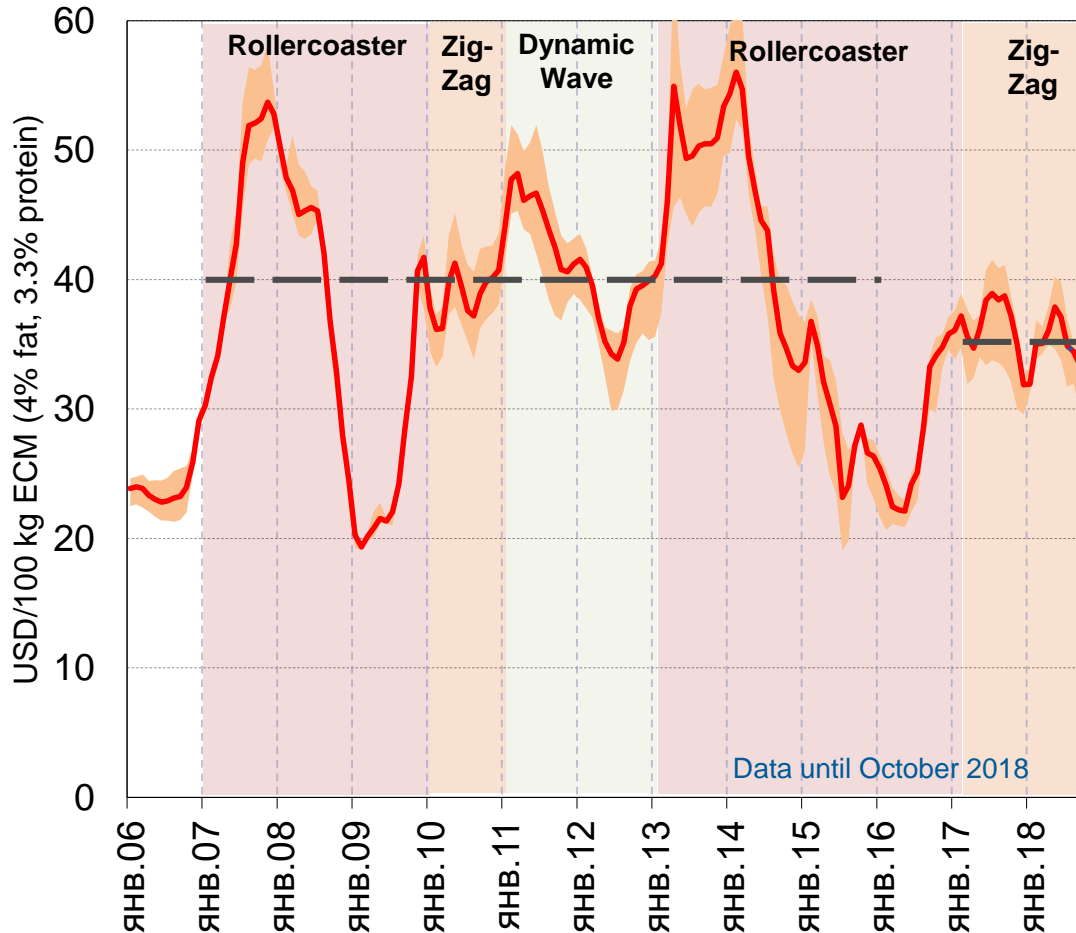
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World milk price 2006 - 2018

IFCN World Milk Price Indicator



Long-term Average



2007 – 2015 = 40\$

2016 – 2018 = 35\$ "new reality"

30€

Price Cycles (simplified)

1st Rollercoaster from 2007 to 2009 (imbalance)

Length: 3 years; Fluctuation: $\pm 50\%$

1st Zig-Zag in 2010 (balance)

Length: 1 year; Fluctuation: $\pm 10\%$

1st Dynamic Wave from 2011 to 2012 (balance)

Length: 2 years; Fluctuation: $\pm 20\%$

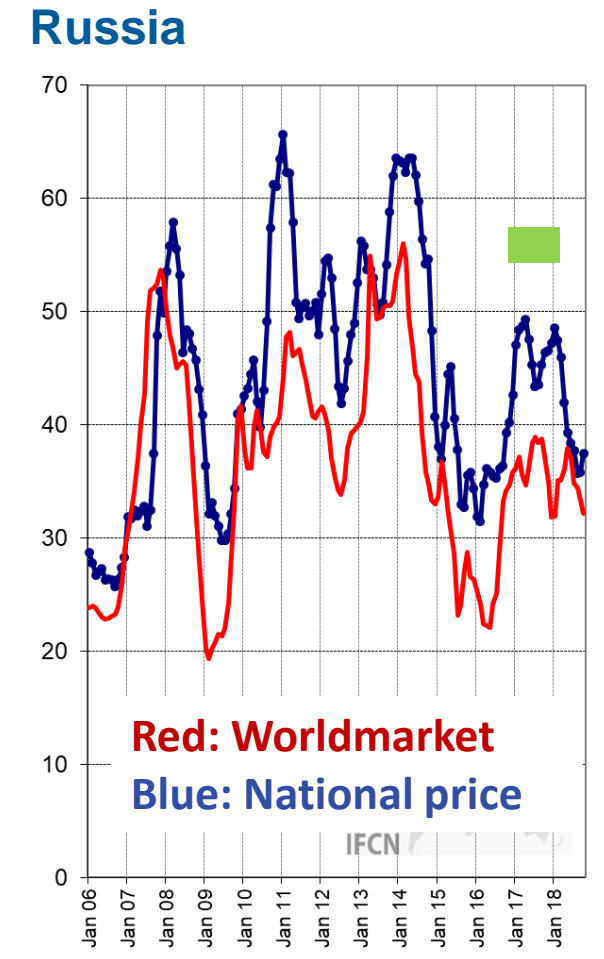
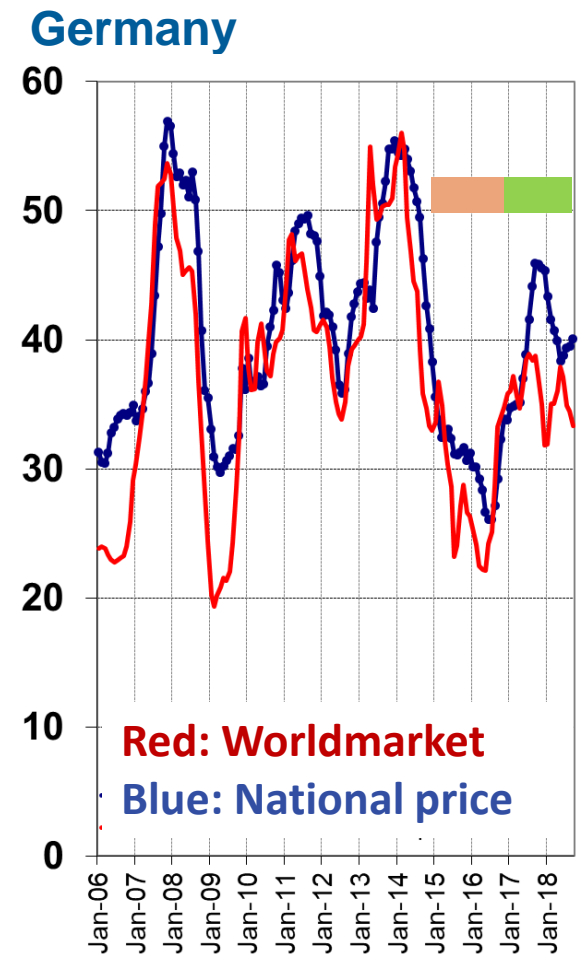
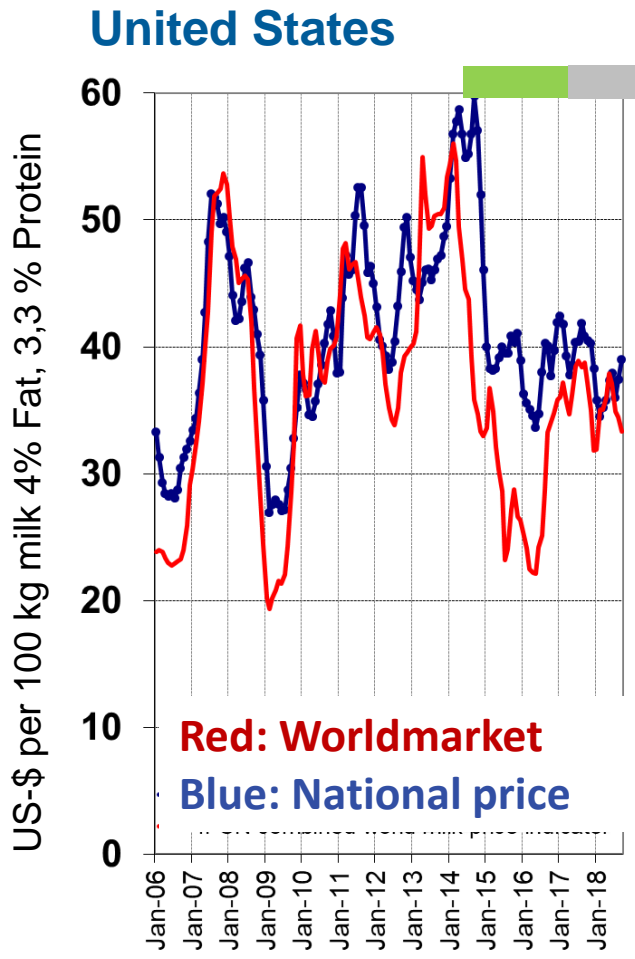
2nd Rollercoaster from 2013 to 2016 (imbalance)

Length: ~4 years; Fluctuation: $\pm 50\%$

2nd Zig-Zag from 2017 until now (balance)

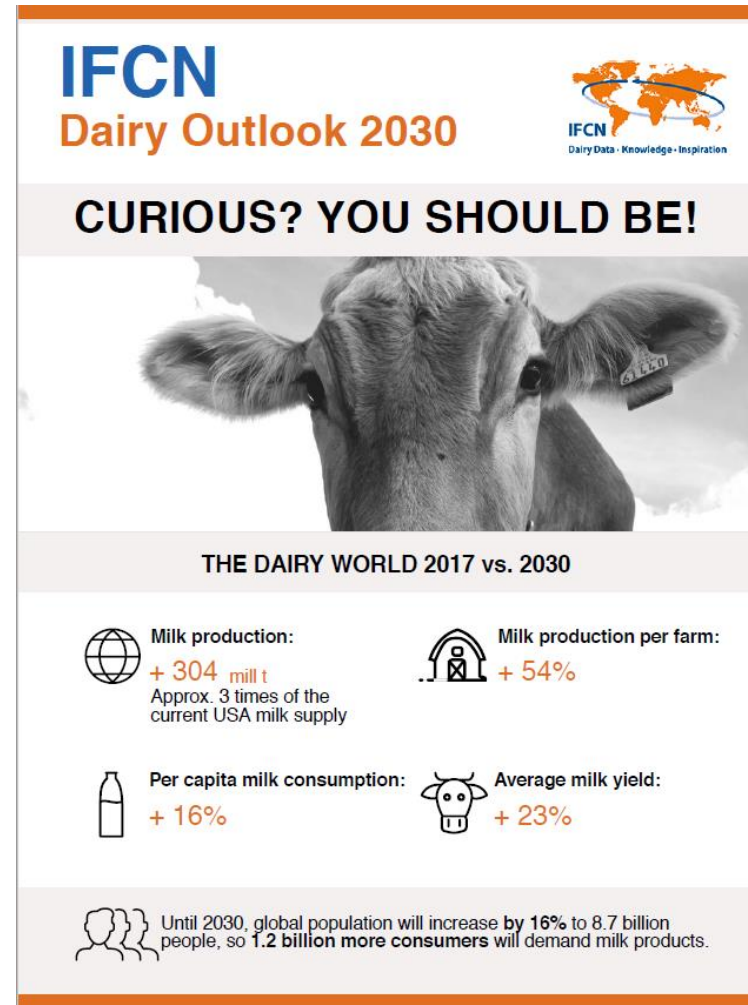
Length: so far 20 months; Fluctuation: $\pm 10\%$

Relation of world to national milk price



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IFCN Long-term Dairy Outlook – concept

What is the IFCN Long-term Dairy Outlook:

It has been an ongoing research project in IFCN since 2013

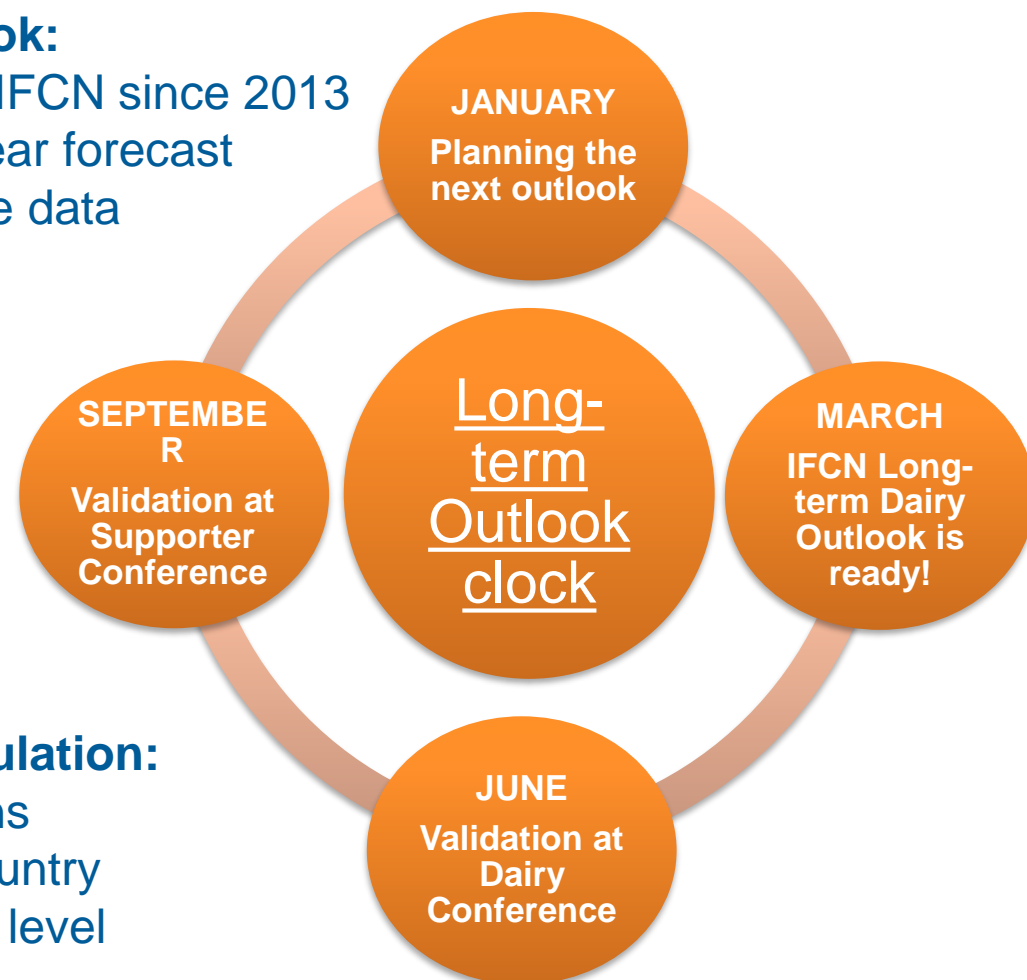
It is a database ex post 1996–2017 & 13 year forecast

It covers 200 countries and has comparable data

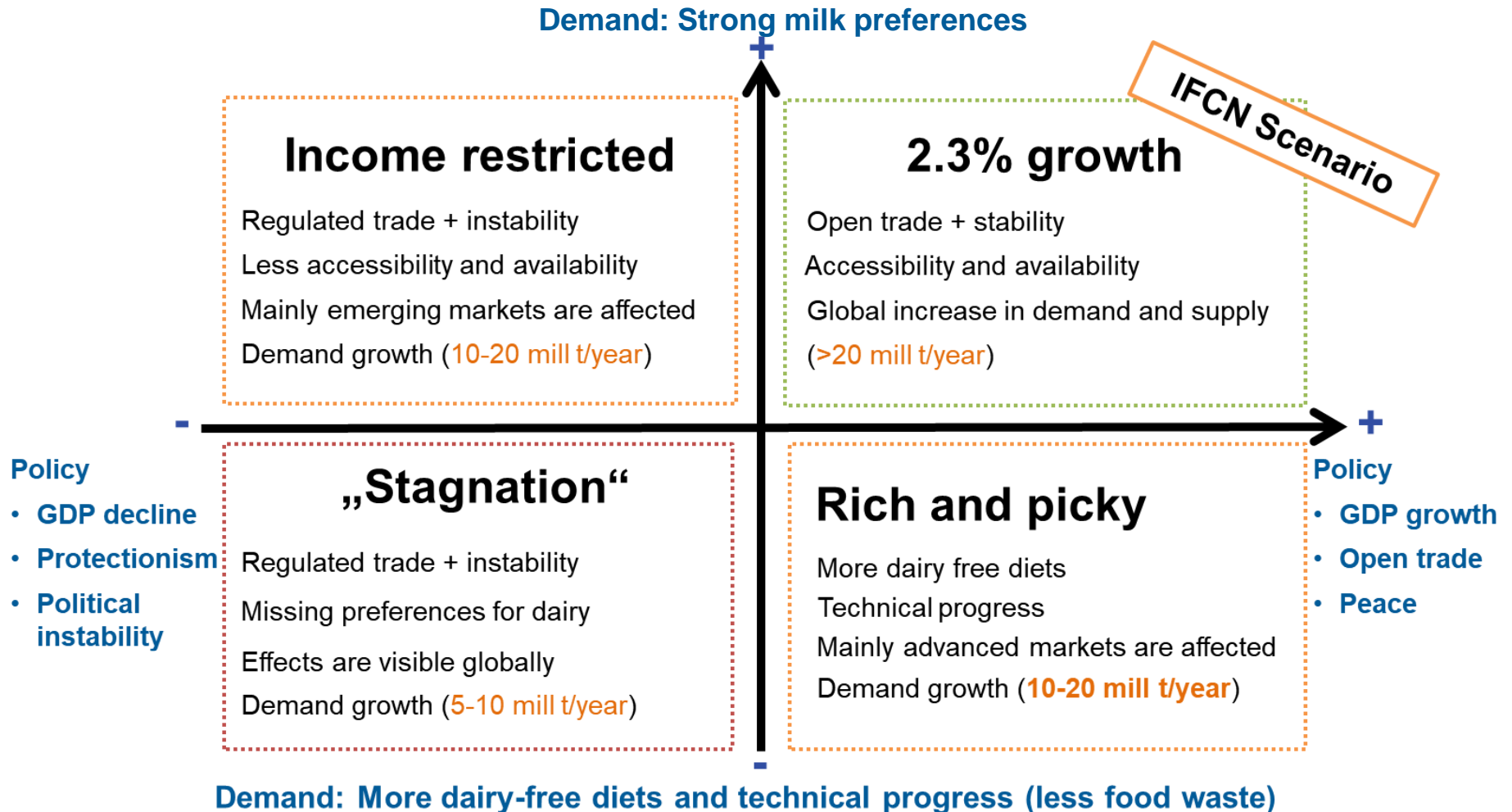


Method – Iterative supply & demand simulation:

1. Define a scenario + technical assumptions
2. Simulate milk supply and demand per country
3. Search for the balancing world milk price level



IFCN Long-term Dairy Outlook scenarios



The Dairy World 2030 vs. 2017



Milk production:

+ 304 mill t

Approx. 3 times of the
current USA milk supply



Milk production per farm:

+ 54%



Per capita milk consumption:

+ 16%



Average milk yield:

+ 23%



Until 2030, global population will increase **by 16%** to 8.7 billion people, so **1.2 billion more consumers** will demand milk products.

Dairy World in 2007 / 2017 / 2030 Scenario 2,3%

Results based on 3/2018 data



| World | Unit | Annual values | | | Change 2030 vs. 2017 | | |
|---------------------------------|------------------------|---------------|-------|------|----------------------|------|-------------|
| | | 2007 | 2017* | 2030 | Absolute | % | CAGR %/year |
| Milk supply and demand | | | | | | | |
| Milk production ≈ milk demand** | mill t ECM | 696 | 864 | 1168 | 304 | 35% | 2.3% |
| World trade | | | | | | | |
| Excl. EU-28 intra trade*** | mill t ECM | 36 | 55 | 95 | 40 | 73% | 4.3% |
| Supply drivers | | | | | | | |
| Number of milk animals | mill head | 332 | 372 | 417 | 45 | 12% | 0.9% |
| Average milk yield | t / milk animal / year | 2.0 | 2.2 | 2.7 | 0.5 | 23% | 1.6% |
| Farm number | mill | 119 | 118 | 104 | -14.0 | -12% | -1.0% |
| Average farm size | head / farm | 2.8 | 3.1 | 4.0 | 0.9 | 29% | 2.0% |
| Demand drivers | | | | | | | |
| Population | billion | 6.5 | 7.5 | 8.7 | 1.2 | 16% | 1.1% |
| Dairy consumption per capita | kg ME/ capita/ year | 104 | 116 | 135 | 19 | 16% | 1.2% |

Explanations:

Results based on Scenario 1 (High milk demand due to consumer preferences and beneficial political and economic situation)

* Preliminary data of the year 2016, partly estimated

** Small deviations of total supply and demand due to changes in stocks

*** Representing volume traded from surplus countries; imports from net exporters not included

ECM= Energy corrected milk (standardized to 4% fat and 3.3 % protein)

ME= Milk equivalents, method: "fat and protein only"

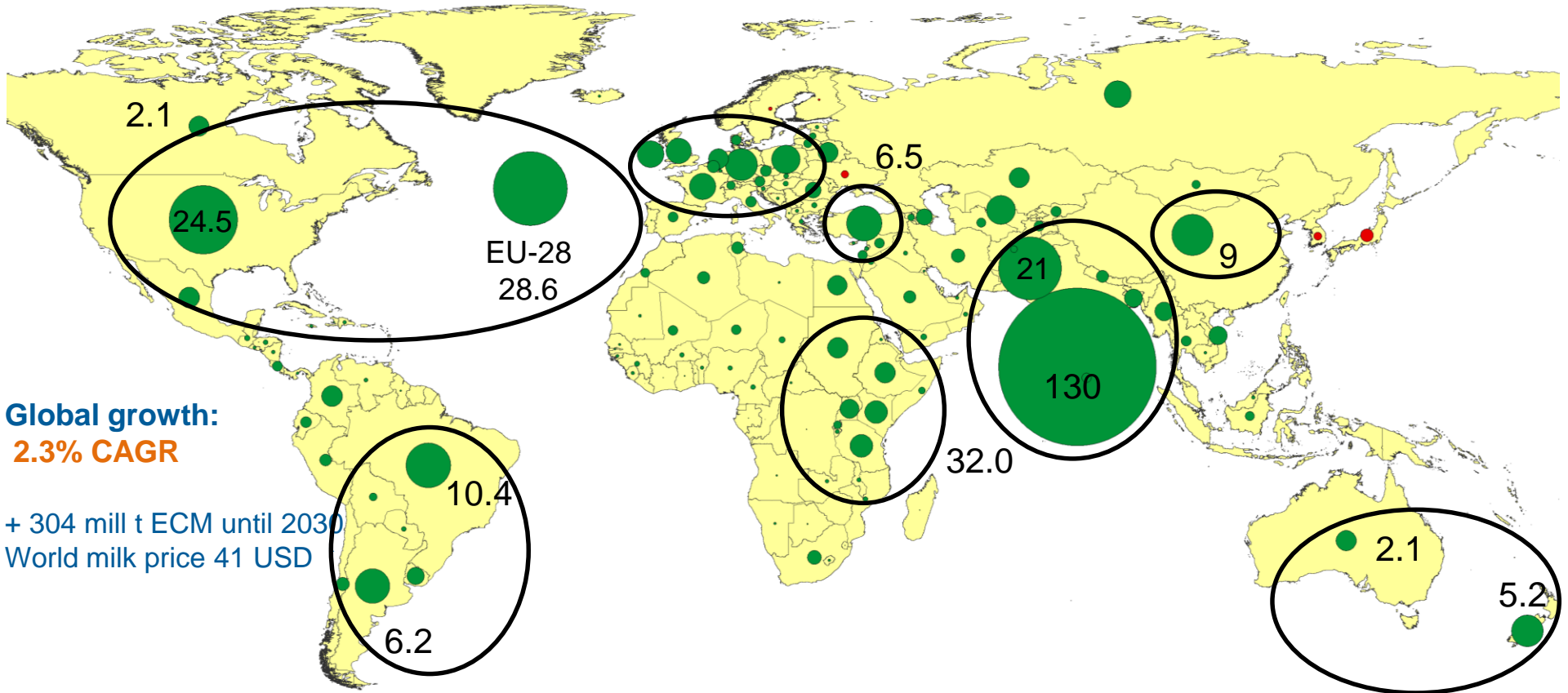
CAGR= Compound Annual Growth Rate

Status of data : 03/2018

Where will the
milk of the future
be produced?



World milk production growth until 2030



Global growth:
2.3% CAGR

+ 304 mill t ECM until 2030
World milk price 41 USD

 Milk production growth 2030 vs 2017 (all milk) in mill t ECM

Local for local

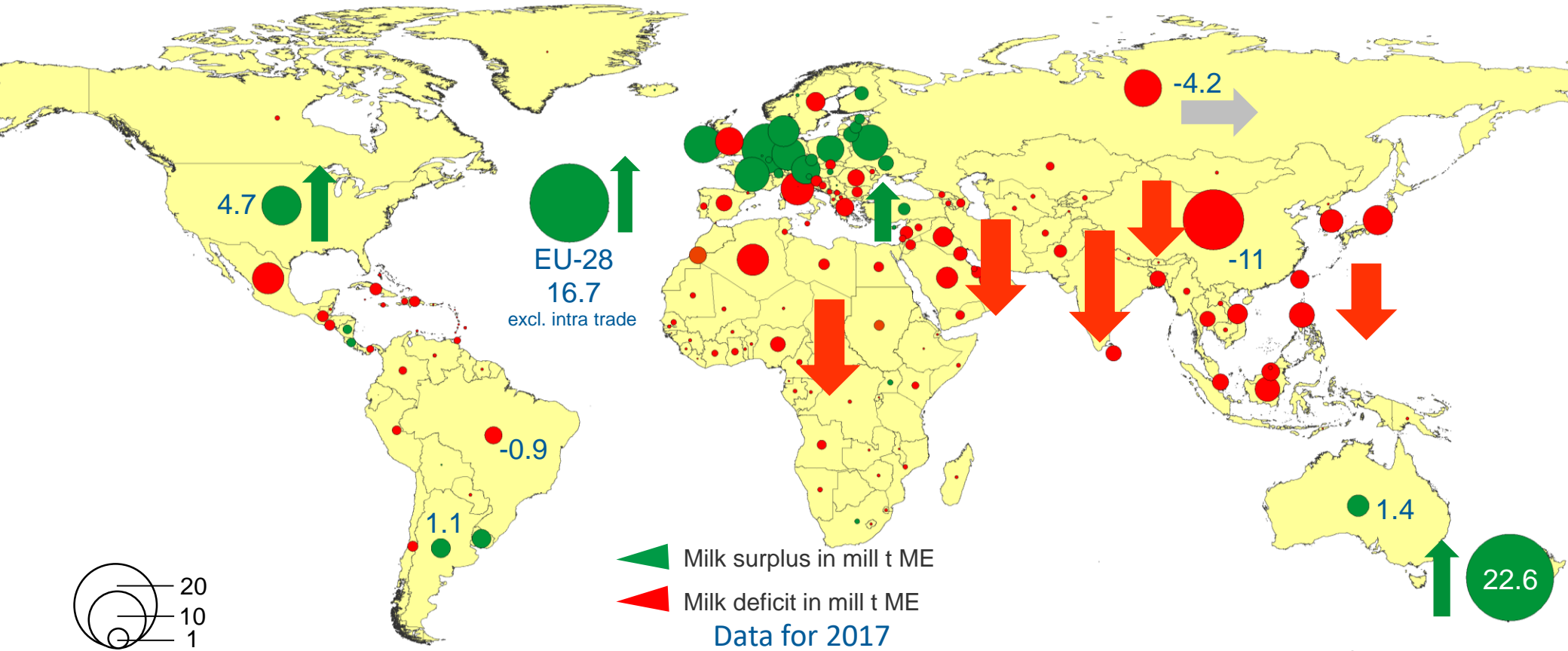
or

Local for global?



IFCN Outlook: Dairy Trade + 74% more in 2030

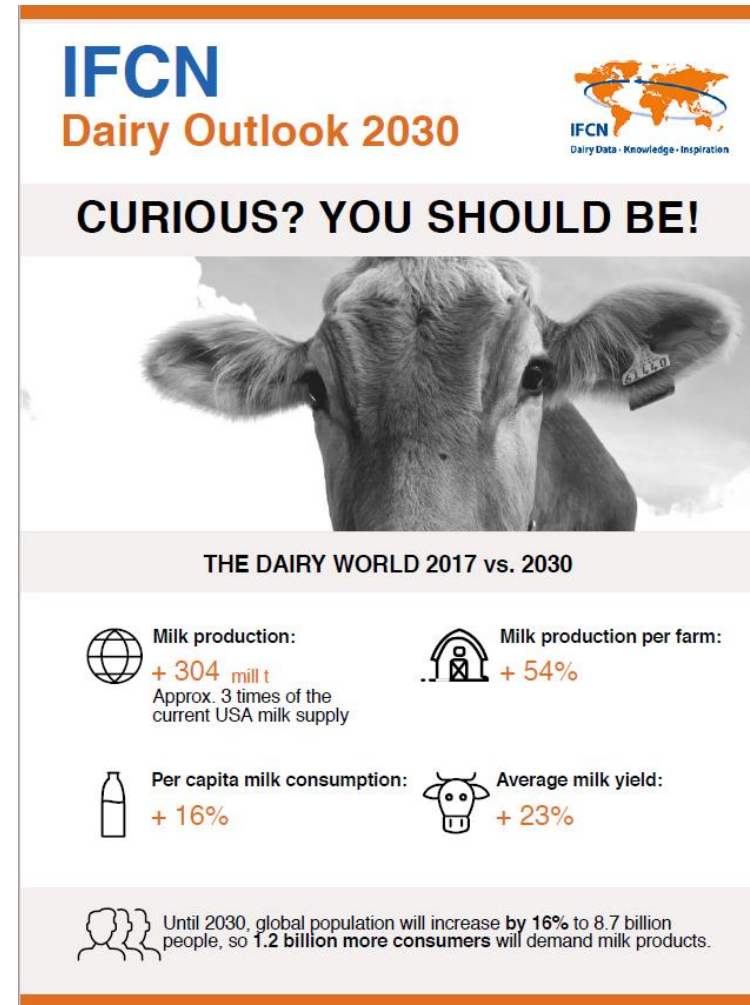
Milk surplus and deficit per country 2017



New Zealand and the EU-28 provide ~70% exports
 New net exporters: India, Iran, Turkey, Uganda, South Africa, Costa Rica, Nicaragua

Dairy World in 2030

1. **Consumer trust in dairy and “policy” are key uncertainties.**
2. **We need a lot more milk 2030 scenario + 2,3% growth**
3. **How to prepare 2030**
 - assume change + that it will be much faster than in the past.
 - Use strategic / operational navigation systems like IFCN
 - think positive



Thank you for your attention



Network of IFCN Researchers



Network of IFCN Supporters



IFCN Dairy Research Center

A great number of people have collaborated since the year 2000 to make this presentation possible.