Path Toward 2030: The Globalization of Dairy?

22 January 2019

IFCN Dairy Research Network

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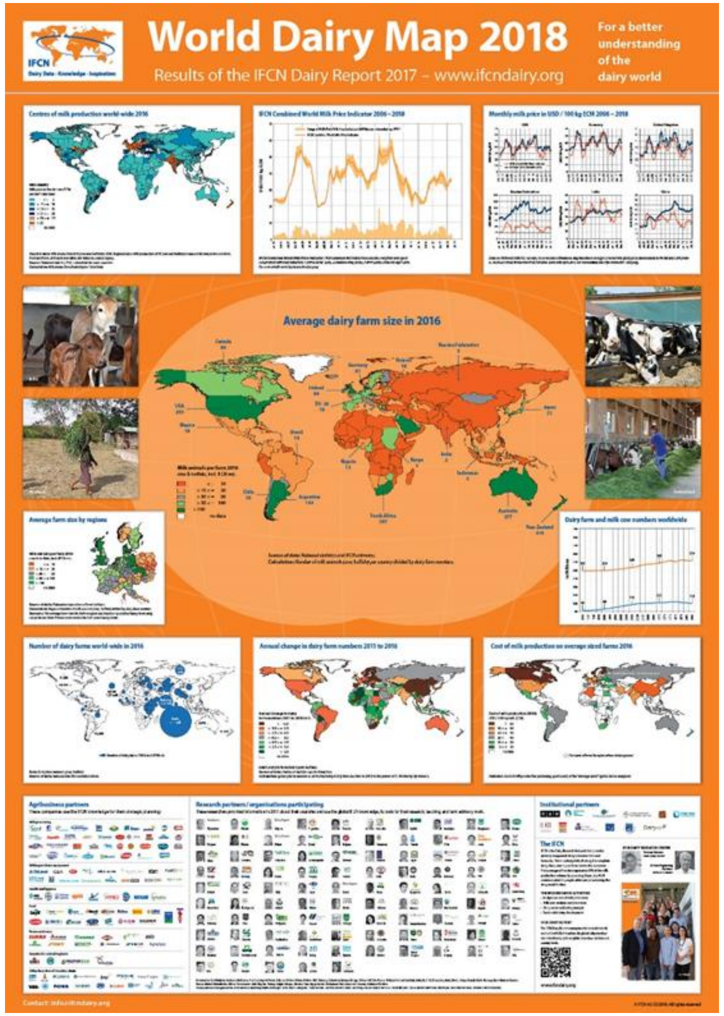
Agenda

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)

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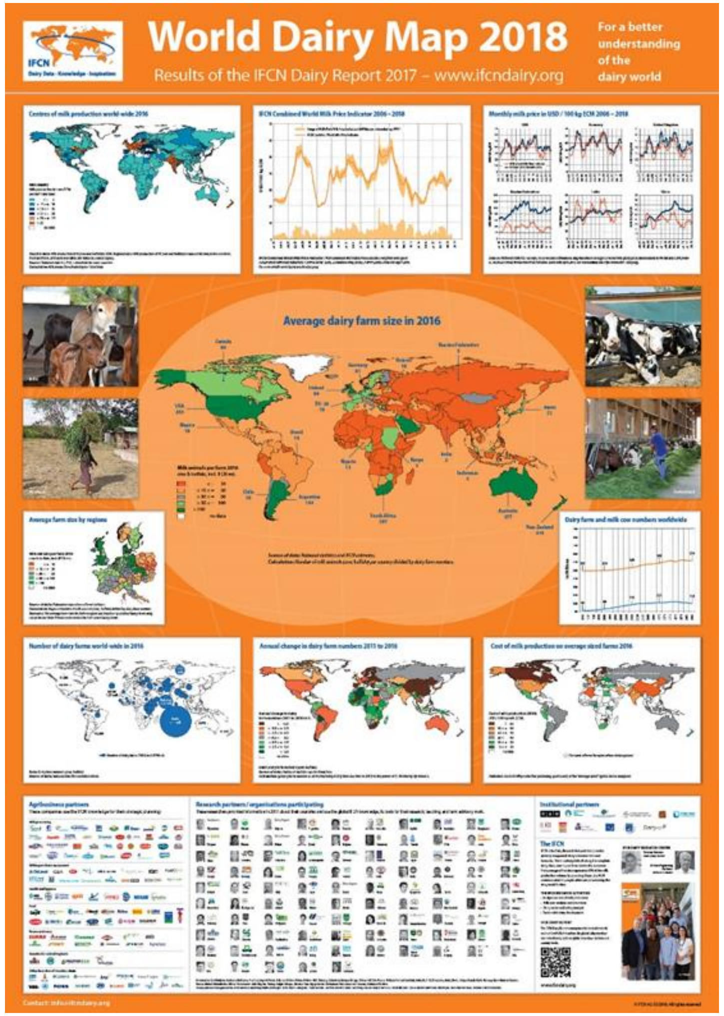


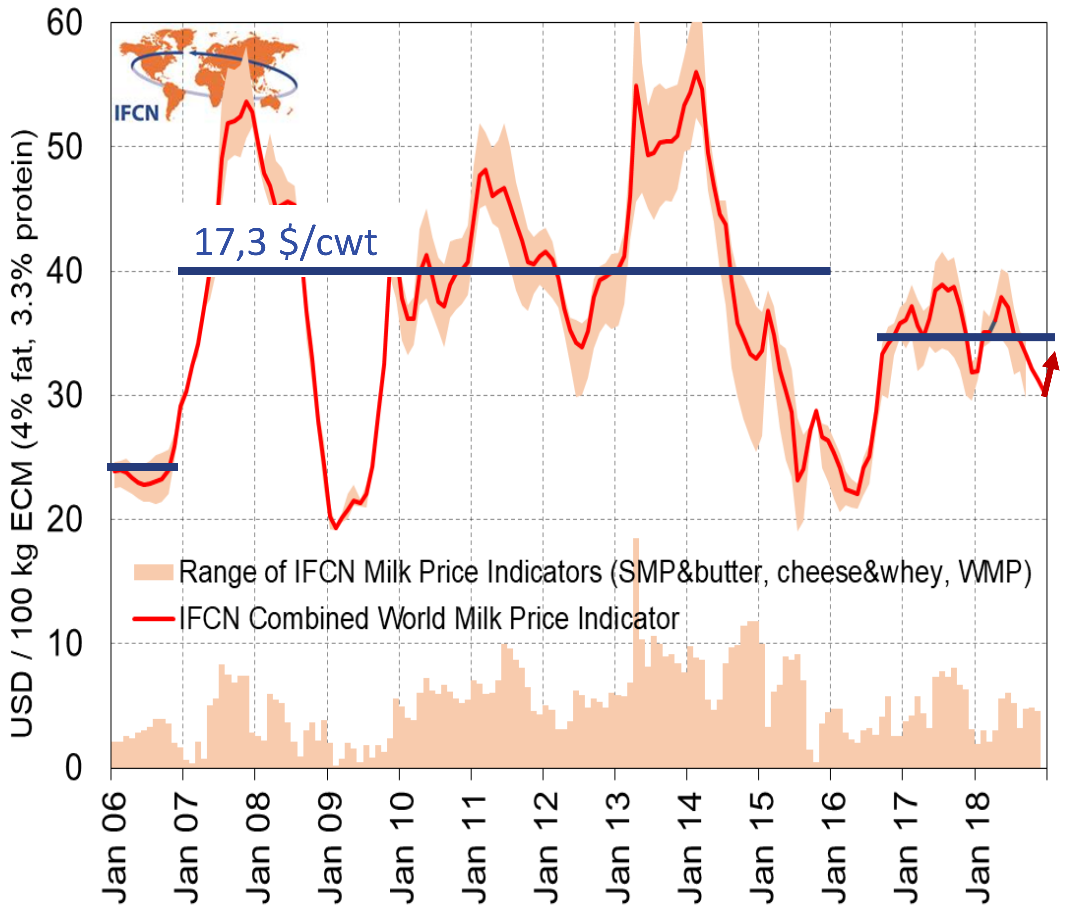
World Milk Price 2006 – 2018

21,6 $/cwt

17,3 $/cwt

13 $/cwt

9 $/cwt



US cwt prices: Fat : 3,76 % fat, 3,12% protein

Price levels (simplified)

2000 – 2006 – 25 $/ 100 kg
or 11 $ / cwt

2007 – 2016 – 40 $/ 100 kg
or 17,3 $ / cwt

Since 2017 – 35 $/ 100 kg
or 15,2 $ / cwt

Key driver for prices:
Milk supply and demand shifts.

Source: D3.4 - IFCN Monthly Real Time Data and Farm Economics – 10/18

Changing Fat / Protein Content - Case USA

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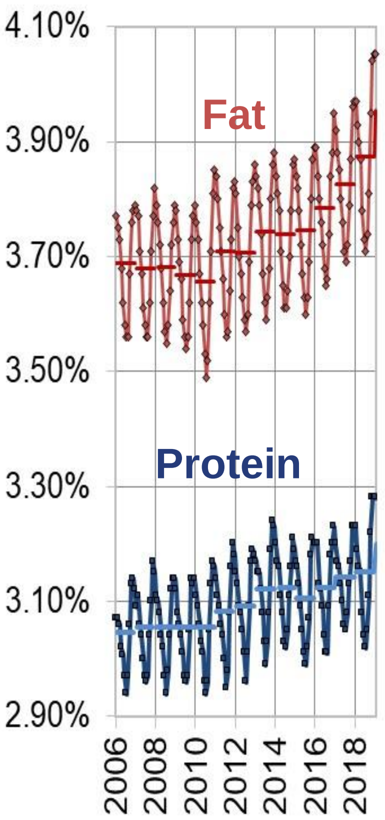
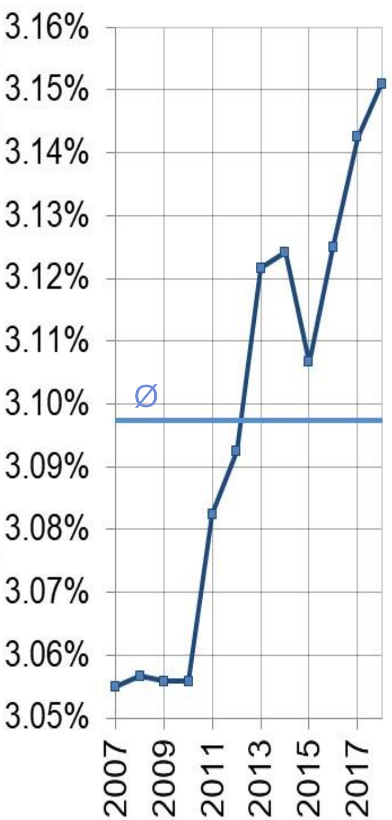
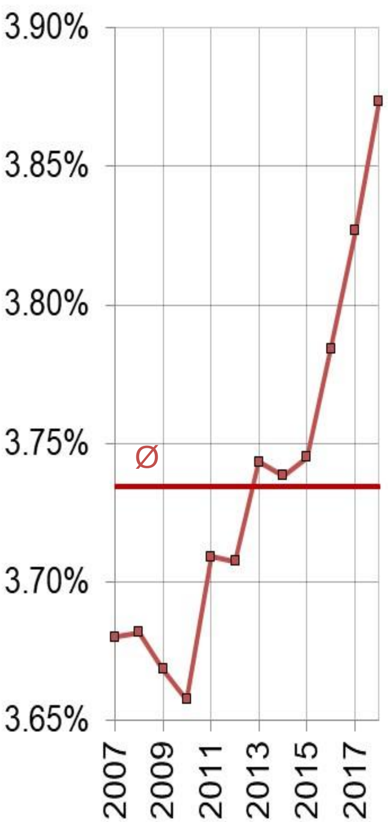
Fat and protein in milk



Protein vs.
Long term average



Fat vs.
Long term average



Milk production growth 2018 (partly est):

1.0% natural content
1.6% ECM (Energy corrected)
1.8% SCM (Solid corrected)

Implications: Milk supply data on global level have the potential to improve.

Discussion session today: World milk supply developments considering fat/protein trends
Time: **2.30 – 3.30 pm, Tuscany Ballroom F**

Data fixed until October 2018 + estimates for November & December based on growth rates from previous year

Relation of World to National Milk Price

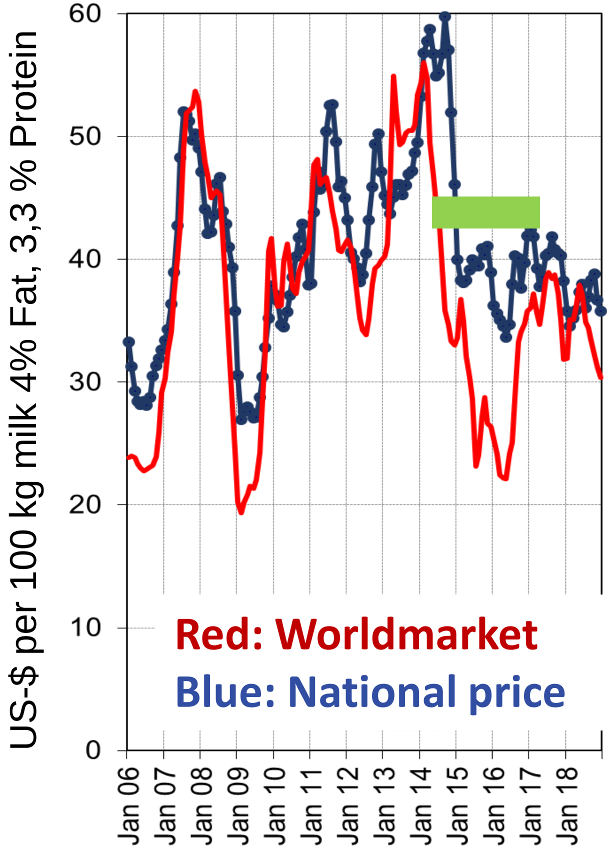
21,6 $/cwt

17,3 $/cwt

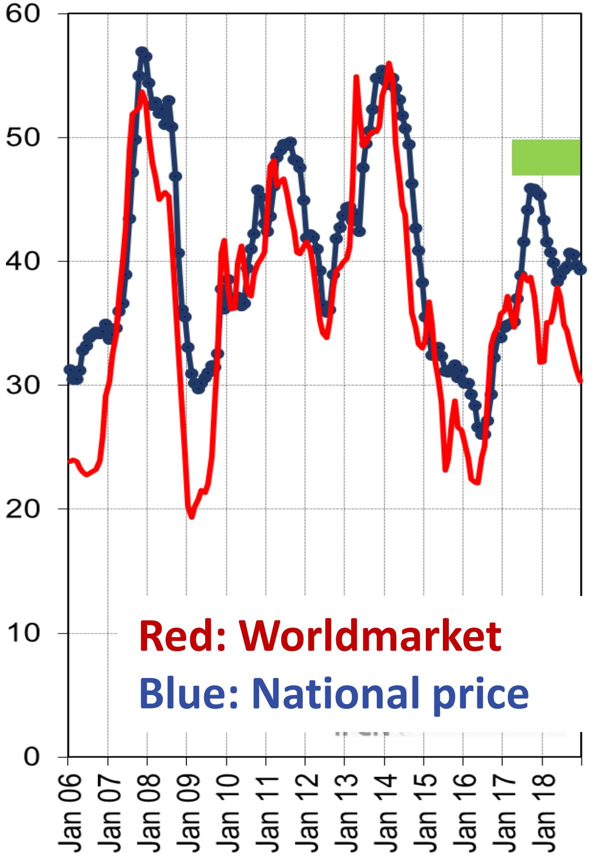
13 $/cwt

9 $/cwt

United States



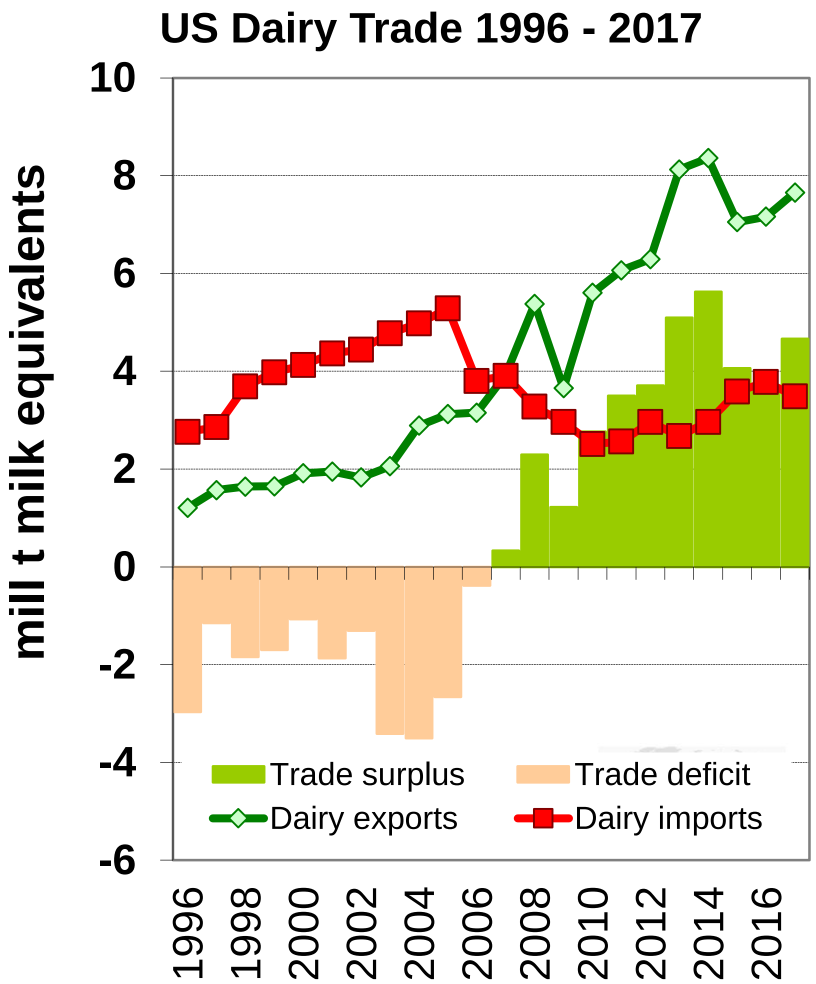
Germany

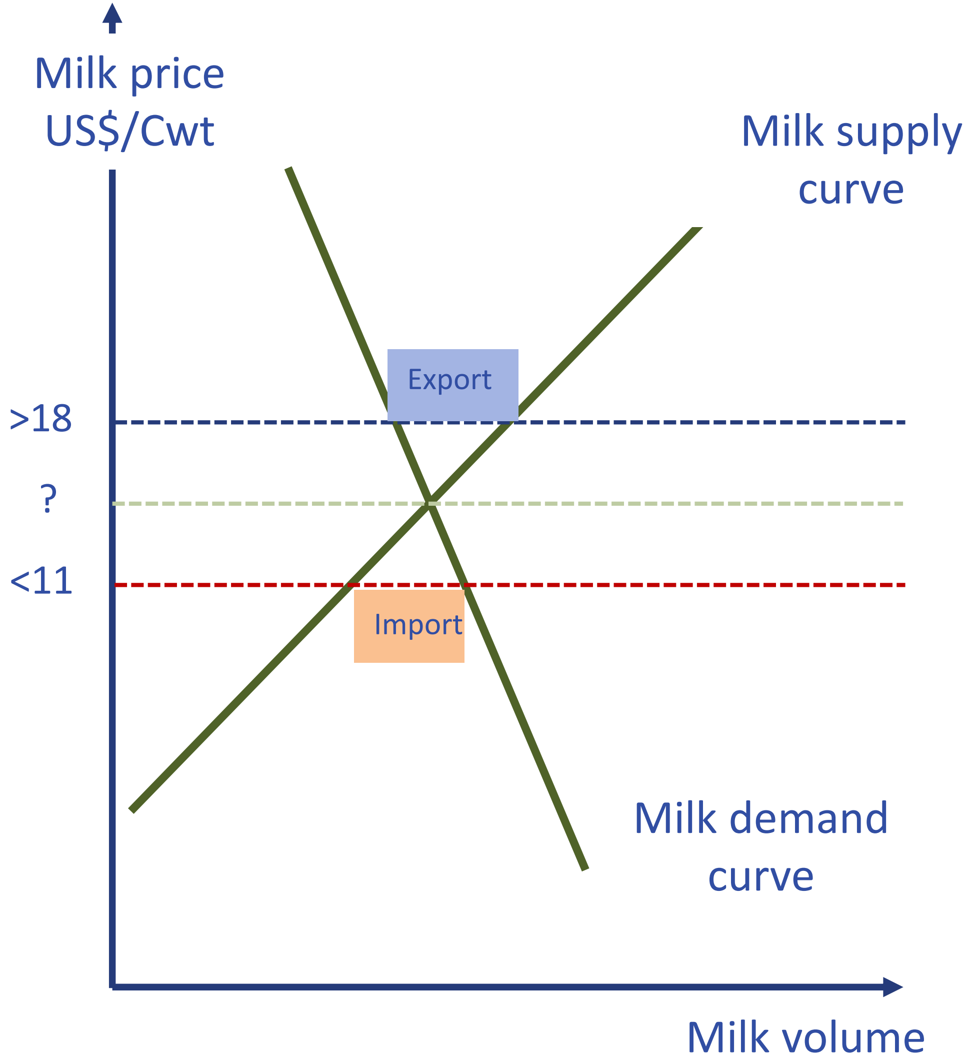


World market price is the major driver for national milk price.

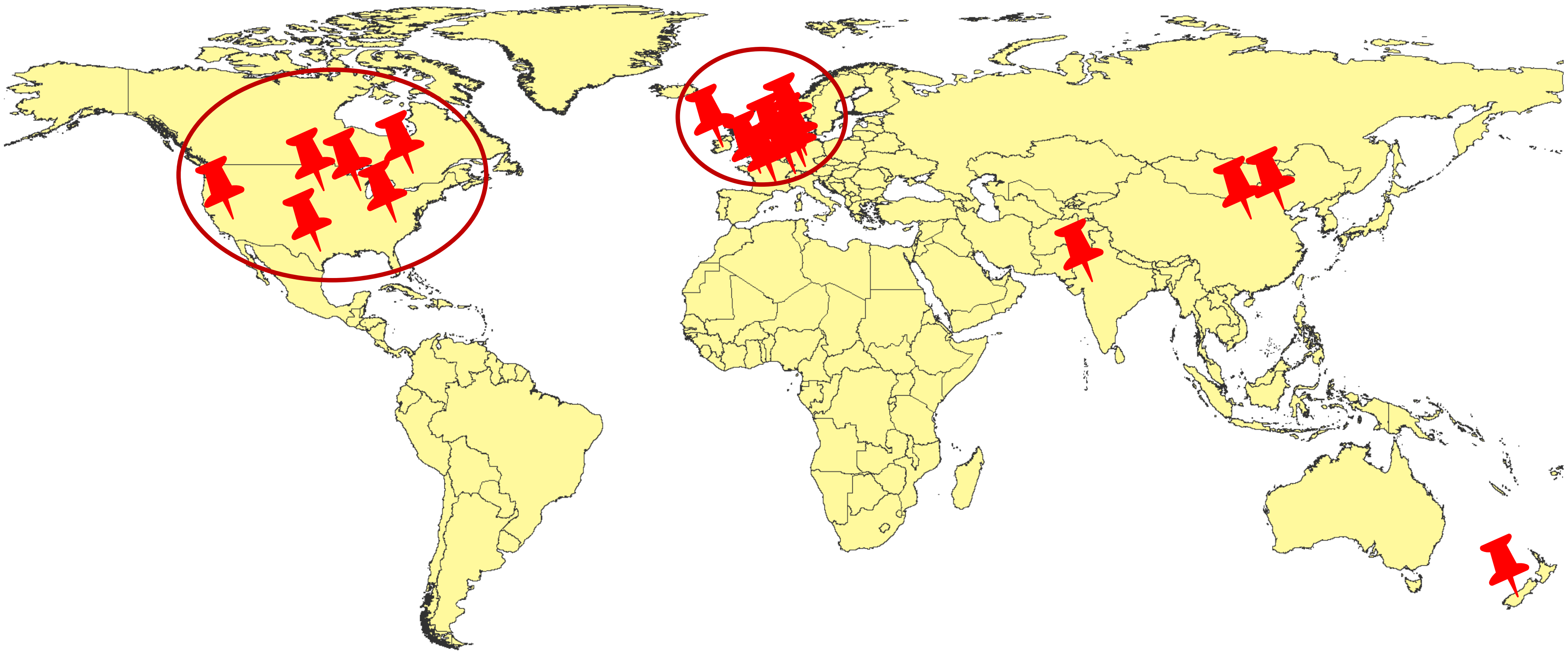
The relation between the two lines describe how competitive milk can be sources in a country.

USA- A Net-Exporter or Importer for Dairy?





Top 20 milk processors 2018 – Locations



Headquarters: 10 in Northwest Europe, 6 North America, 4 in Asia/Oceania
Processing of top 20: 25% of worlds milk 2017; 42% of milk delivered

IFCN Top 20 Milk Processors List 2018

Method: Milk intake by company data or estimates; year 2017

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	Rank 2018	Company name	Origin & main operation countries	Milk intake in mill. t ME	Estimated turnover per kg milk, in USD	Market share in % of world milk production
	1	Dairy Farmers of America	USA	29,2	0,5	3,5%
	2	Fonterra	New Zealand/ others	23,7	0,6	2,8%
+	3	Groupe Lactalis	France/others	19,6	1,1	2,4%
	4	Arla Foods	Denmark/Sweden/others	13,9	0,8	1,7%
	5	Nestlé	Switzerland/others	13,7	1,8	1,6%
	6	FrieslandCampina	Netherlands/others	13.6*	1.0*	1,6%
+	7	Saputo (incl.MG)	Canada/USA/others	9.8*	1.1*	1,2%
	8	Dean Foods	USA	9,4	0,8	1,1%
+	9	Amul (GCMMF)	India	9,3	0,7	1,1%
	10	Danone	France/others	8,6	2,0	1,0%
	11	DMK	Germany/Netherlands	8.1*	0.9*	1,0%
	12	California Dairies	USA	7,7	0,5	0,9%
	13	Yili Group	China	7.2*	1.4*	0,9%
	14	Glanbia Group	Ireland/USA/others	6,5	0,6	0,8%
	15	Mengniu	China	6,4	1,4	0,8%
	16	Agropur	Canada/USA	6,3	0,8	0,8%
	17	Groupe Sodiaal	France	4,9	1,2	0,6%
	18	Müller	Germany/UK/others	4.6*	1.1*	0,6%
	19	Schreiber Foods	USA	4.5*	1.1*	0,5%
	20	Bongrain/Savencia	France/others	4,1	1,3	0,5%
	Sum of Top 20			**211**	**1,0**	**25,4%**

Highlights

212 mill t processing
(+12 mill t to 2016 list)

1.0 US$ per kg milk
(Range 0,5-2 US$)

Top3: no change
DFA, Fonterra, Lactalis

Up compared to 2016
+ 4,5 mill t Lactalis
+ 2.8 mill t Amul (ECM)
+ 2.1 mill t Saputo

Down in milk intake to 2016
Arla, Dean foods

50% are “cooperatives”

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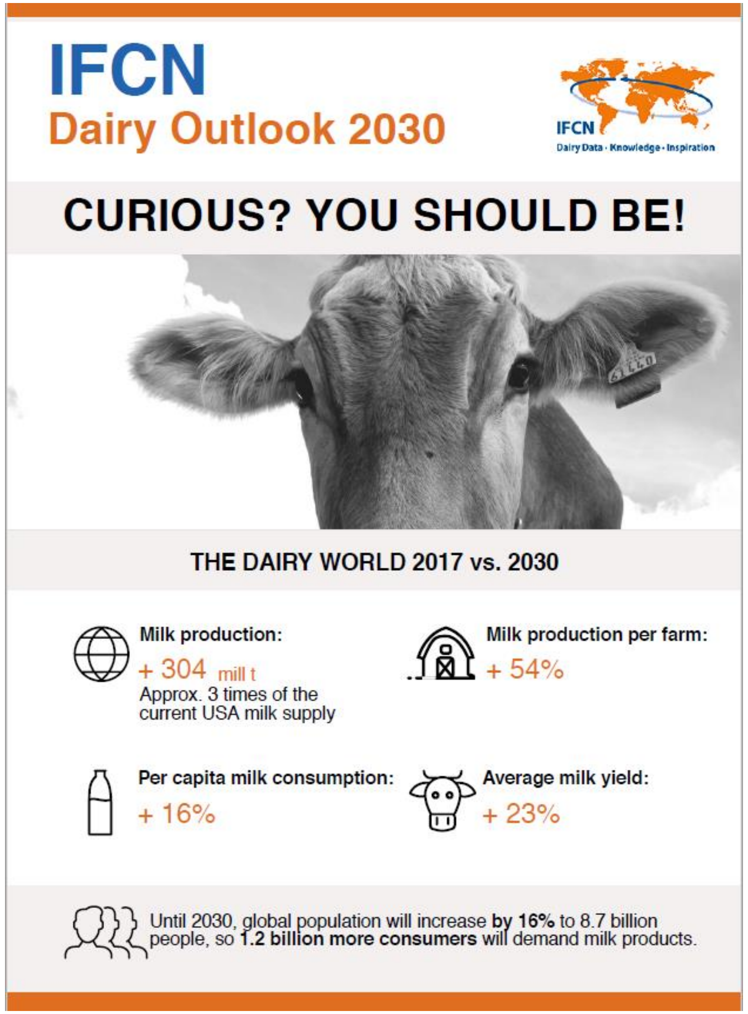


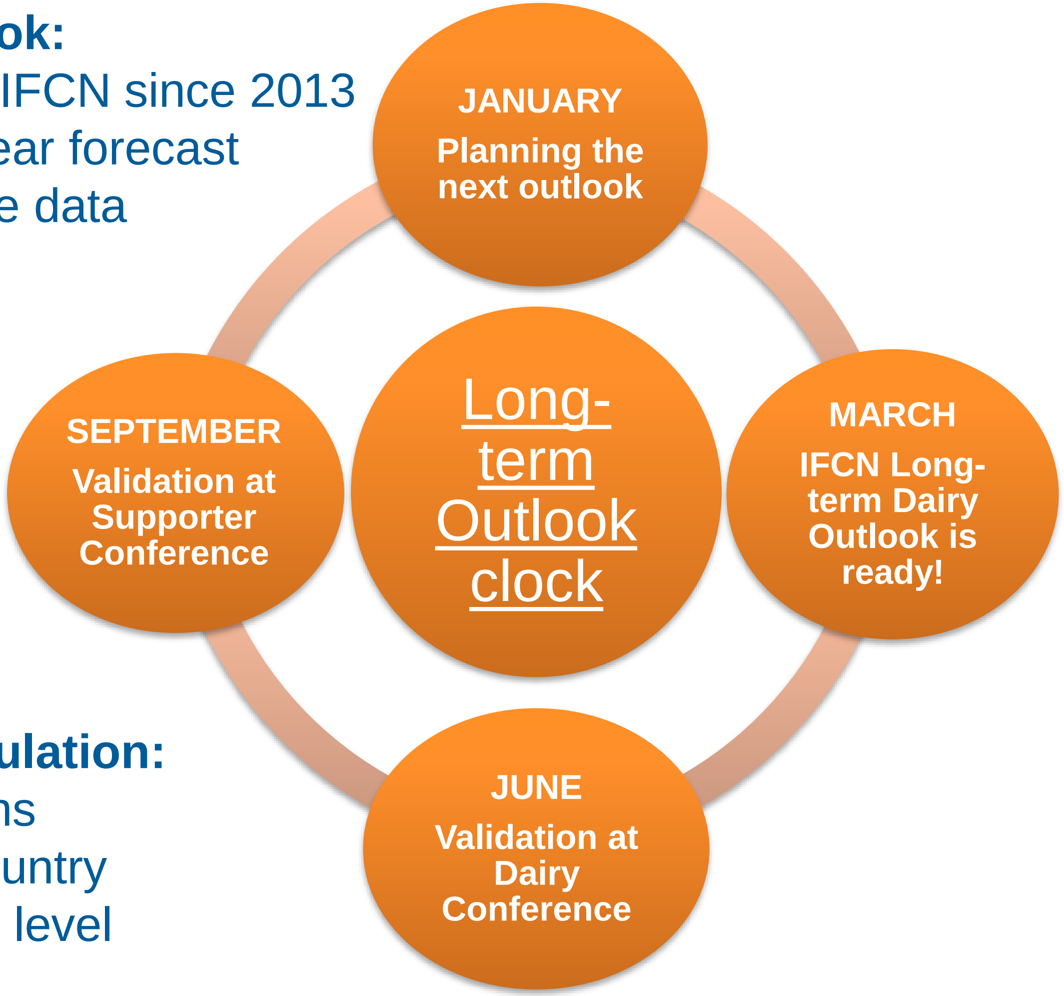
IFCN Long-term Dairy Outlook – concept

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

Source: D3.2 - Dairy Sector Analysis with IFCN Long-term Dairy Outlook 2030, status 3/2018

IFCN Long-term Dairy Outlook scenario definition

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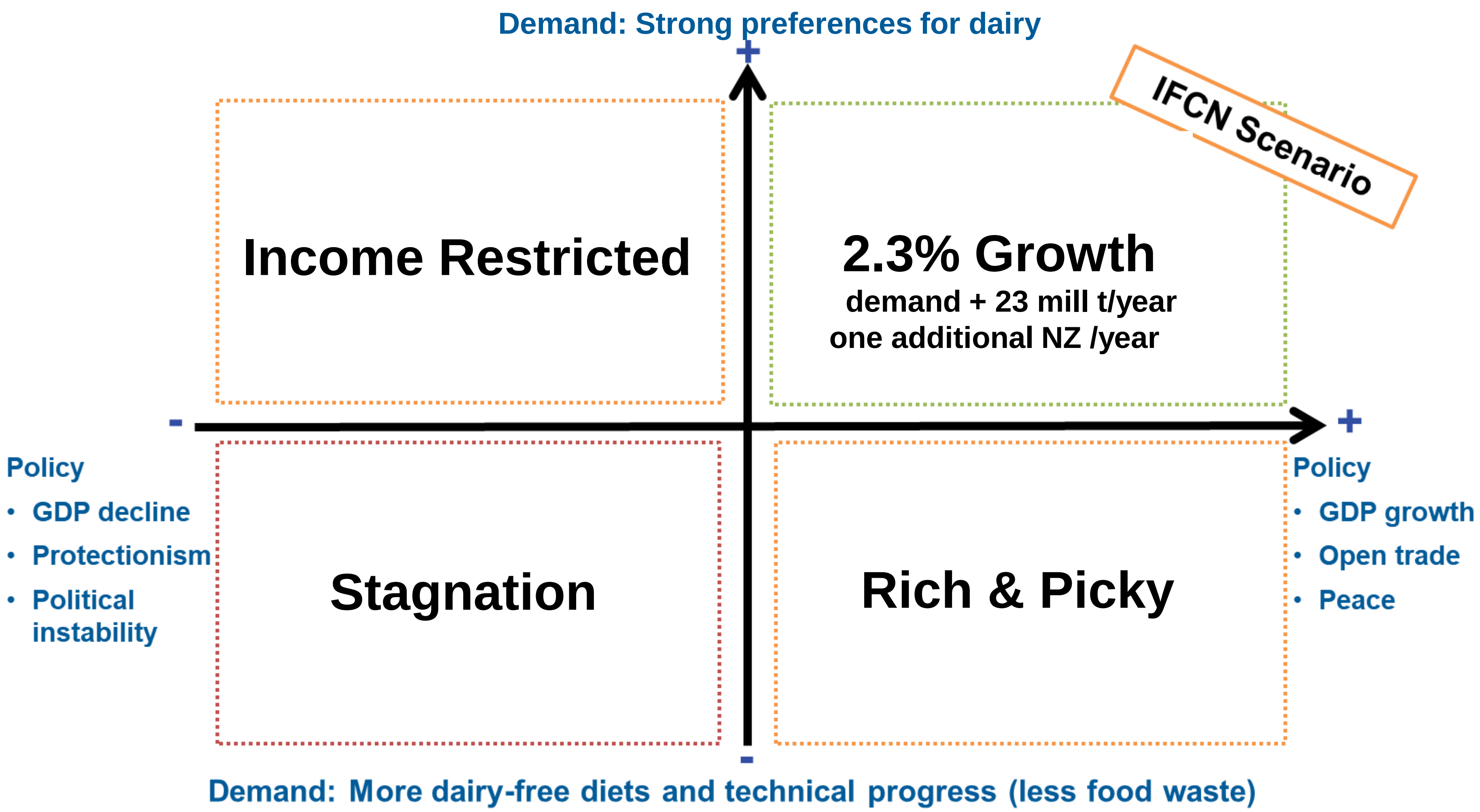

IFCN Long-term Dairy Outlook scenario definition

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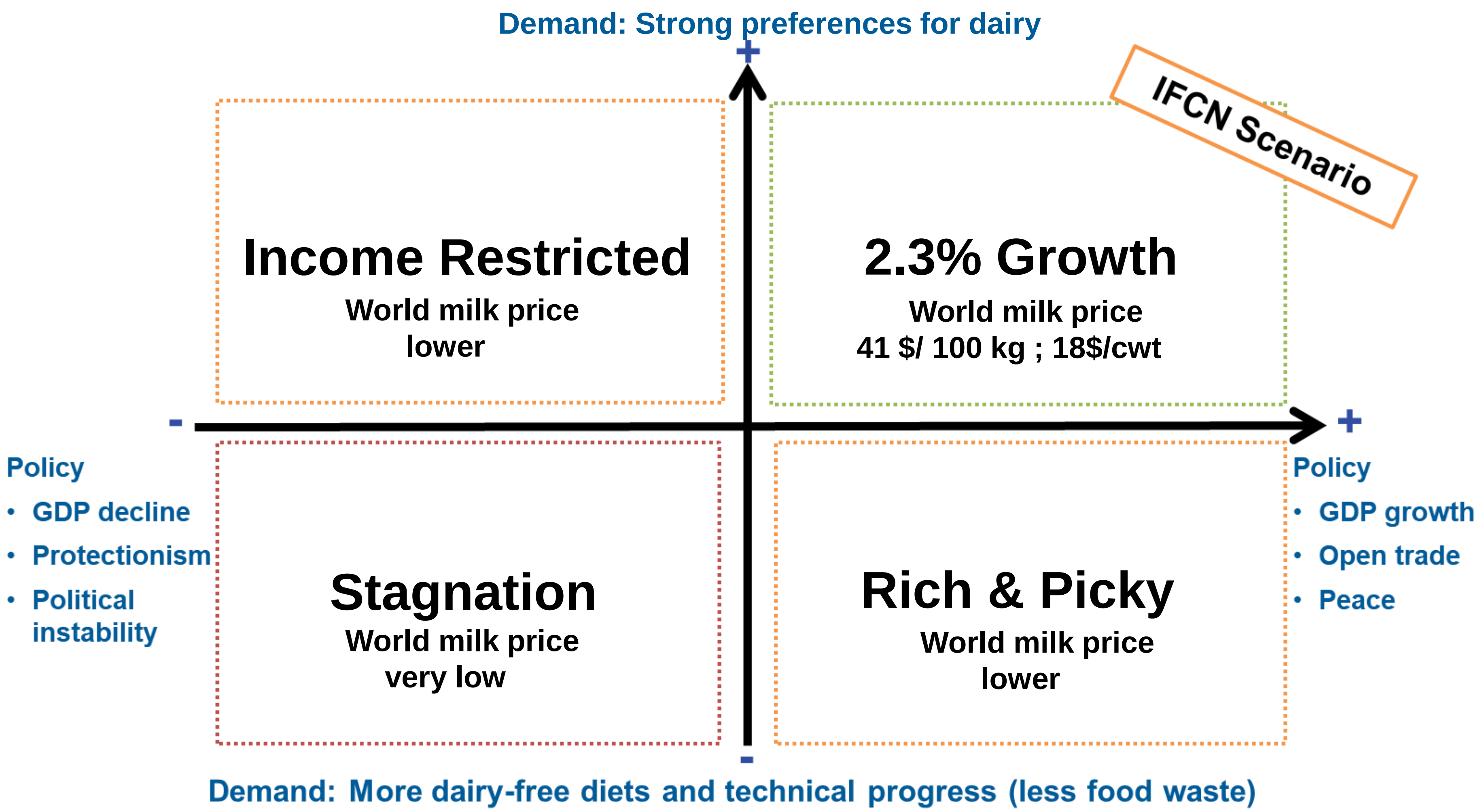

Source: D3.2 - Dairy Sector Analysis with IFCN Long-term Dairy Outlook 2030, status 3/2018

The Dairy World 2030 vs. 2017 (Scenario 2,3%)

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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.

Source: D3.2 - Dairy Sector Analysis with IFCN Long-term Dairy Outlook 2030, status 3/2018

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

Results based on 3/2018 data

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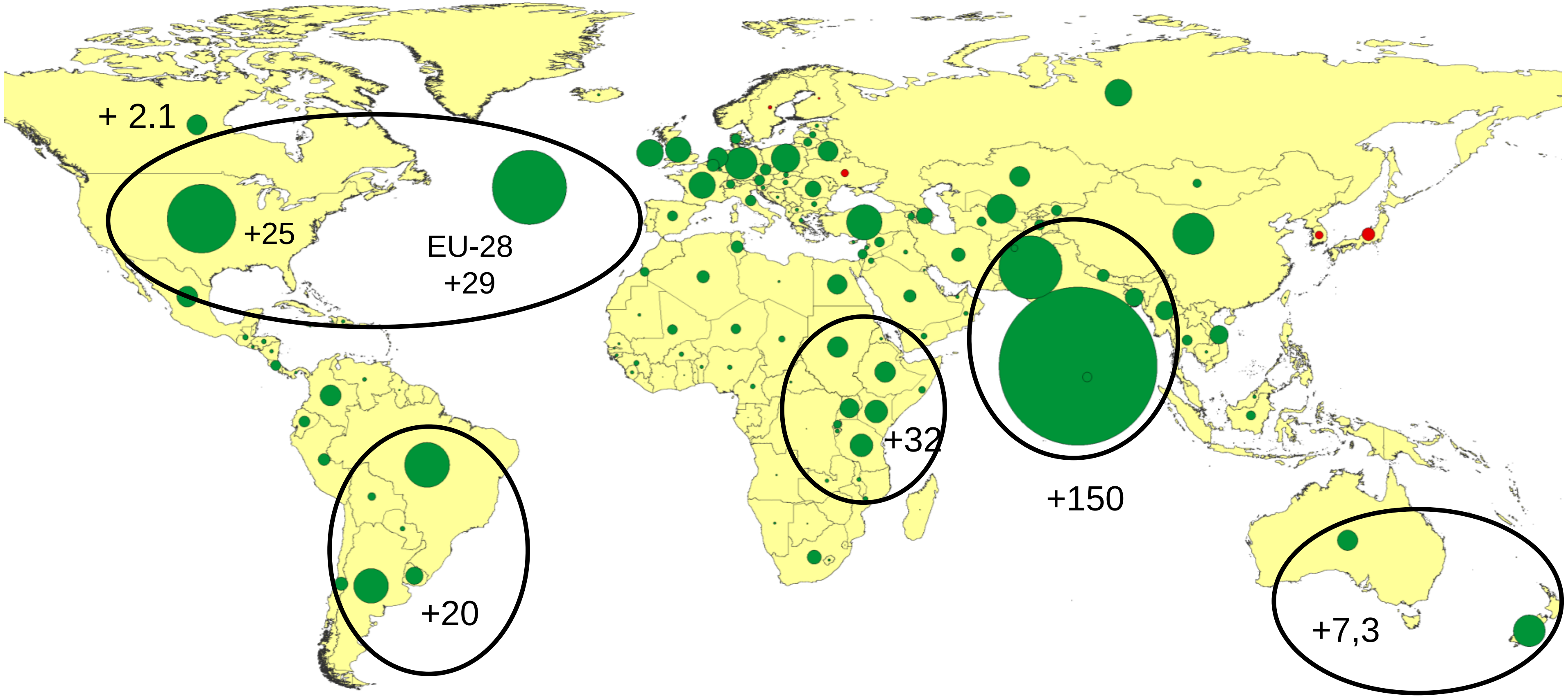
World	Unit	Annual values			Change 2030 vs. 2017		
		2007	2017*	2030	Absolute	%	CAGR %/year
Milk supply and demand							
Milk production ≈ milk demand**	mill t ECM	696	864	1168	304	35%	2.3%
World trade							
Excl. EU-28 intra trade***	mill t ECM	36	55	95	40	73%	4.3%
Supply drivers							
Number of milk 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?

Source: D3.2 - Dairy Sector Analysis with IFCN Long-term Dairy Outlook 2030, status 3/2018

World Milk Production Growth until 2030



Milk production growth 2030 vs 2017 (all milk) in mill t ECM (Scenario 2,3% growth)

Source: D3.2 - Dairy Sector Analysis with IFCN Long-term Dairy Outlook 2030, status 3/2018

Local for local

or

Local for global?

IFCN Outlook 2018: Dairy Trade + 74% more in 2030

Source: D3.2 - Dairy Sector Analysis with IFCN Long-term Dairy Outlook 2030, status 3/2018

For whom : Local or Global?

Annual absolute growth world 1997 – 2030 in mill t/ year

	1997-2007	2007- 2017	2017-2030
Production growth/ year	14	17	23
Local for local	13	15	20
Local for global	1	2	3

87% consumed where produced

13% additional milk will be traded

Share of „local for global“ increasing

Source: D3.2 - Dairy Sector Analysis with IFCN Long-term Dairy Outlook 2030, status 3/2018

Milk Surplus and Deficit per Country 2017

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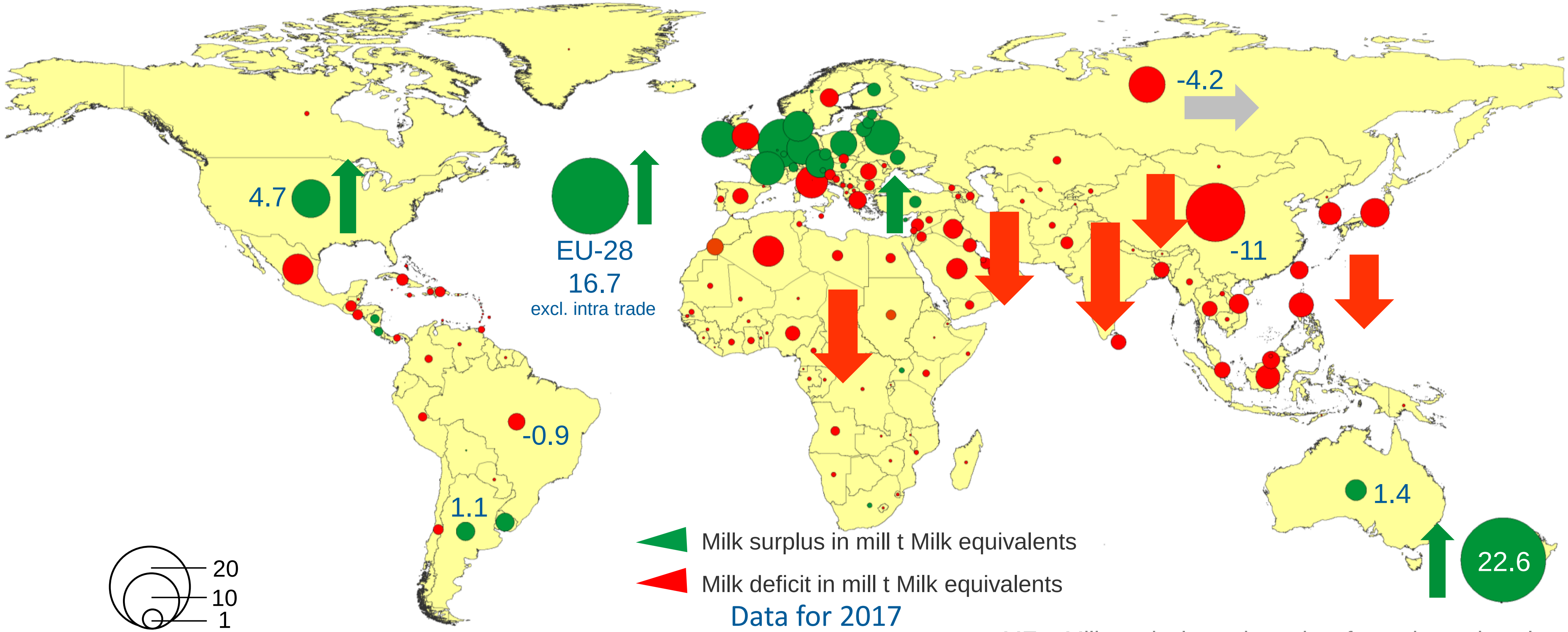

ME = Milk equivalents, based on fat and protein only

Cases from the Top 6 Asian Importers

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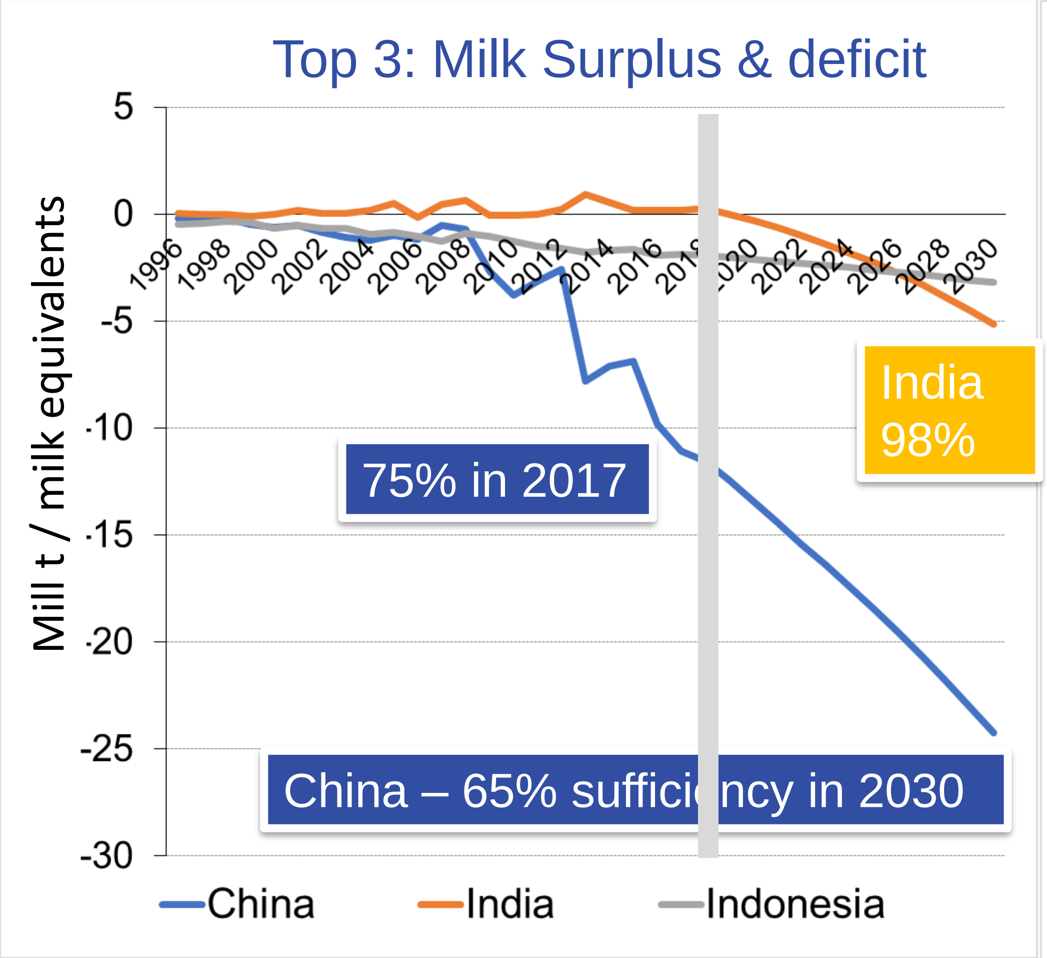

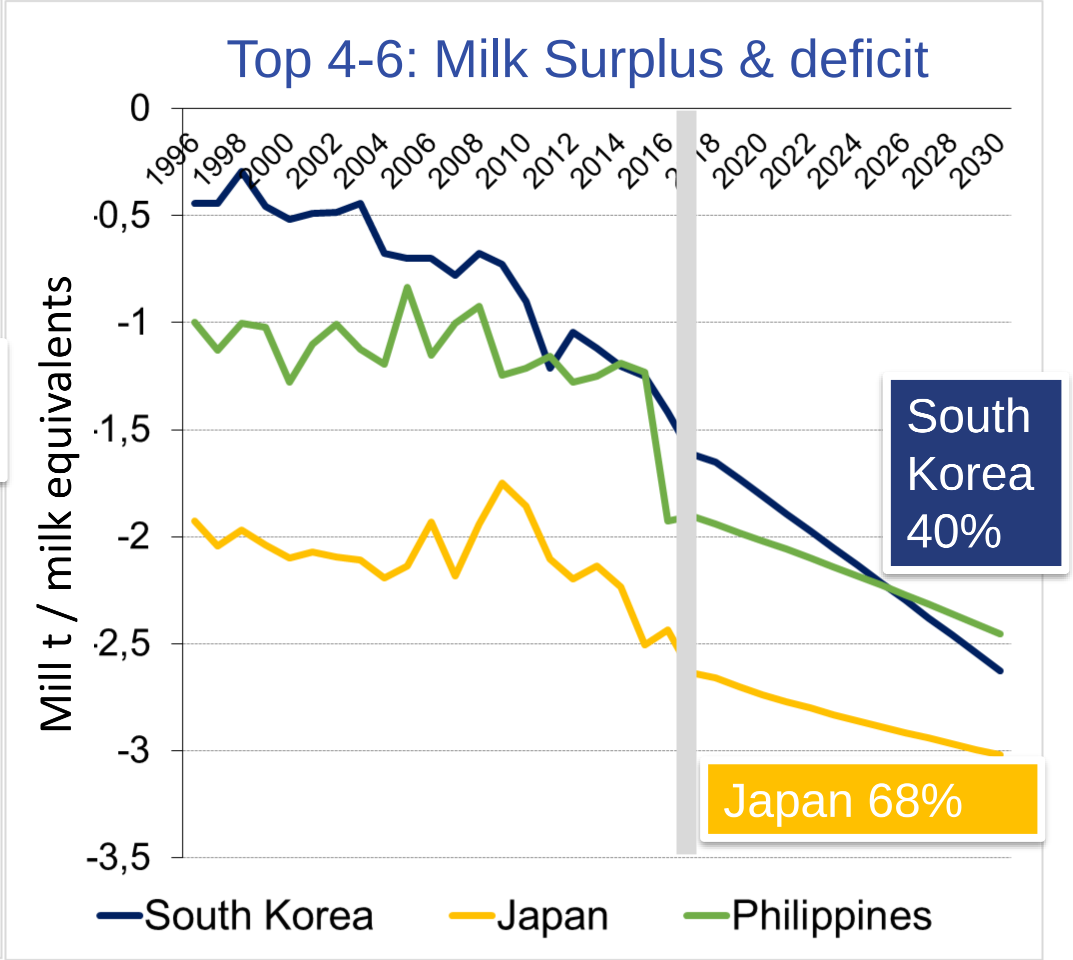

Cases from the Key Dairy Exporters

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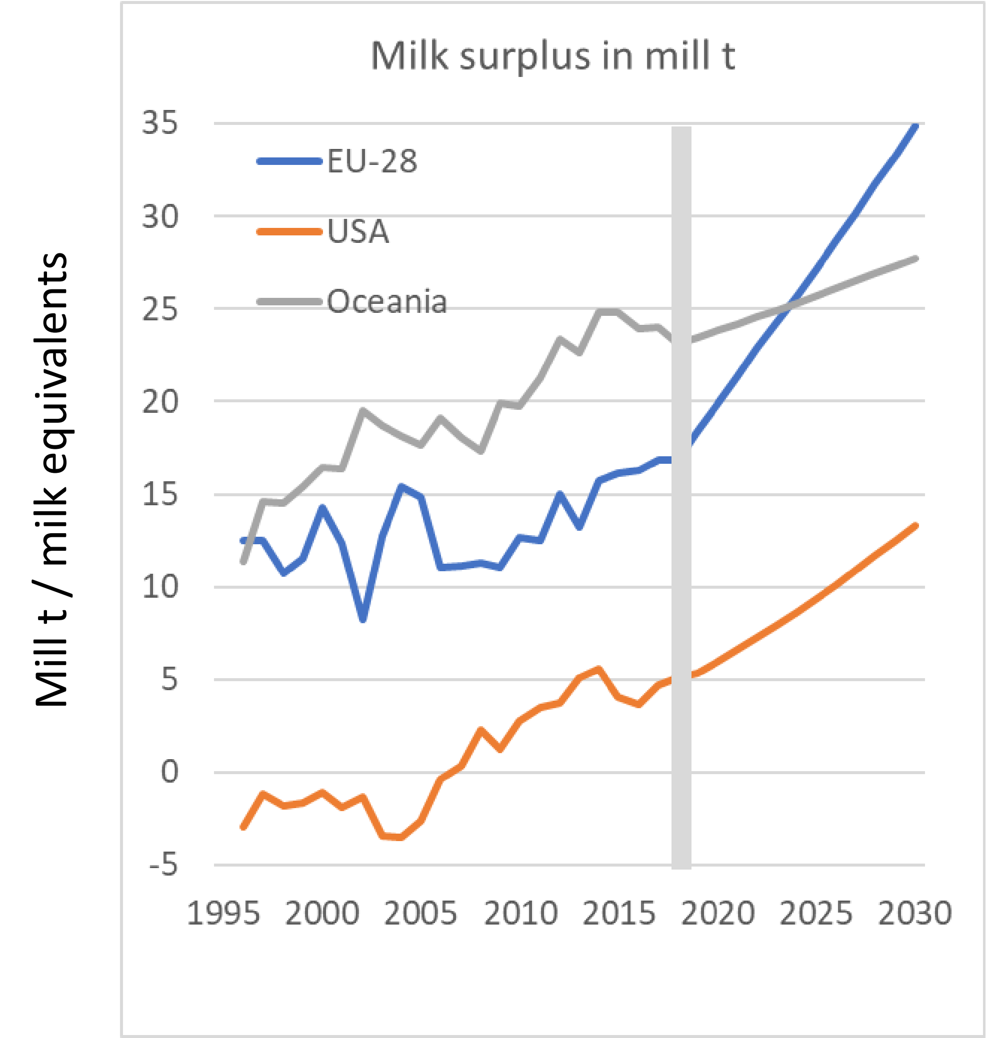

Oceania: Minor growth to 2030
Milk supply growth + 1,5% / year.
Milk surplus growth from New Zealand, not Australia

EU: Doubling milk surplus 2030
Milk supply growth + 1,1%/ year, demand growth + 0,4%/year.

USA: Reaching current EU levels
Milk supply growth + 1,8%/year, demand growth + 1,2%/year.

Source: D3.2 - Dairy Sector Analysis with IFCN Long-term Dairy Outlook 2030, status 3/2018 FOR INTERNAL USE

The Dairy World in 2030

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1. Key drivers: Consumer trust in dairy and “policy”

2. We need a lot more milk 2030 - scenario + 2,3% growth

3. How to prepare for 2030
- For US companies international growth opportunities will arise
- Consider local dairy development besides just exports
- Besides the +2,3% growth scenario have a backup plan

Discussion session : 22nd January, Tuscany Ballroom F, 14:30 – 15:30

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.