

Status and prospects for smallholder milk production: a global perspective

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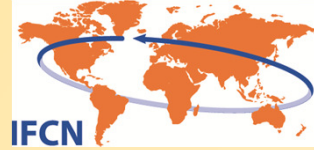
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FAO Rome
Pro Poor Livestock
Policy initiative



Outline



Introduction

IFCN method

Milk production

Farm structure

Farm economics

Summing up



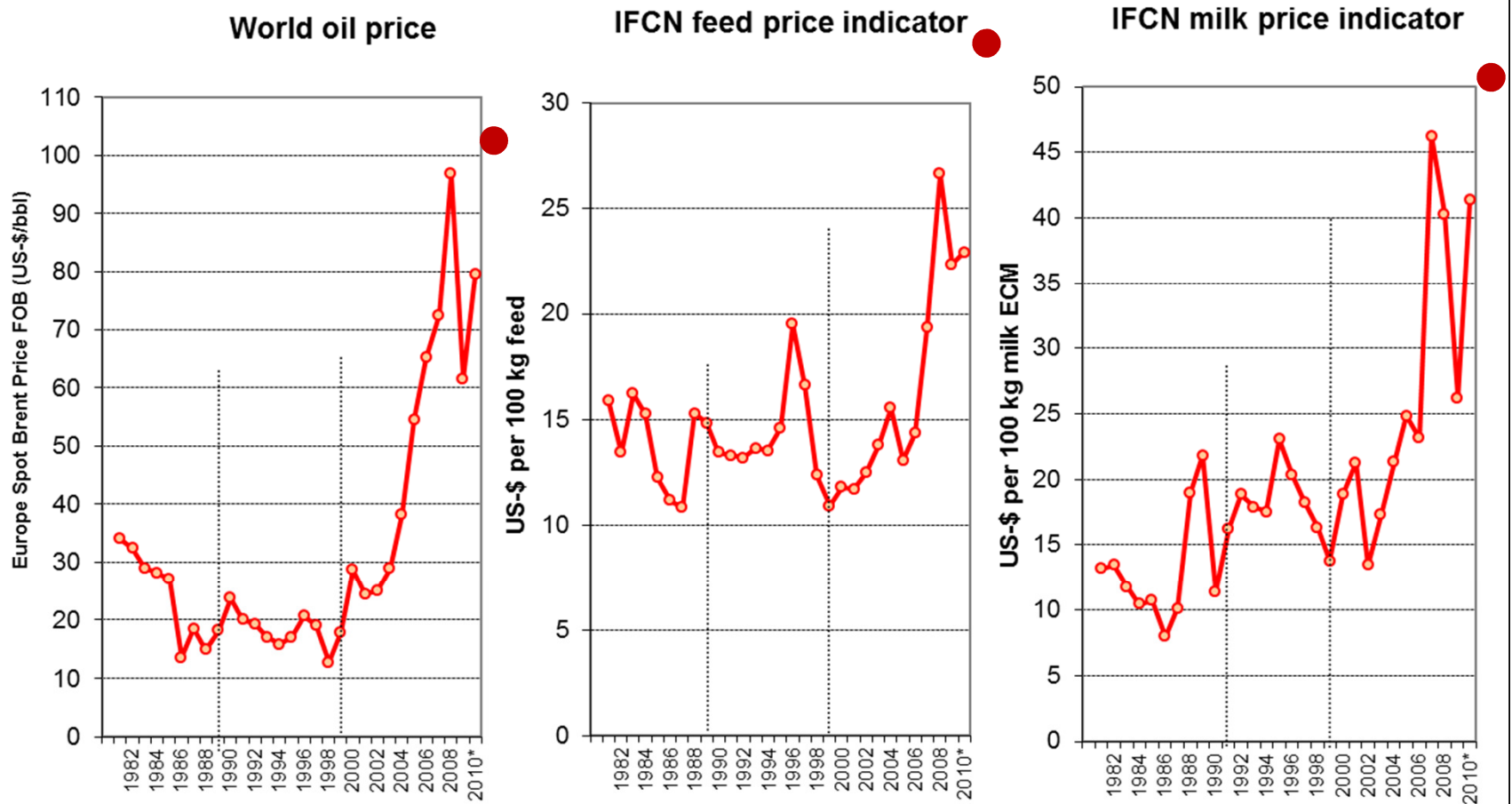
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1. Oil, feed & milk prices are related

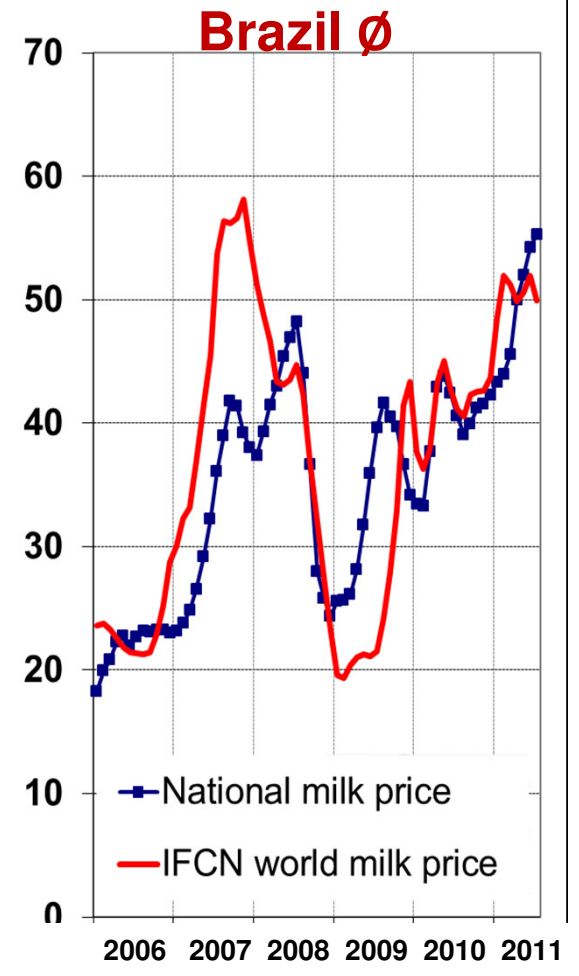
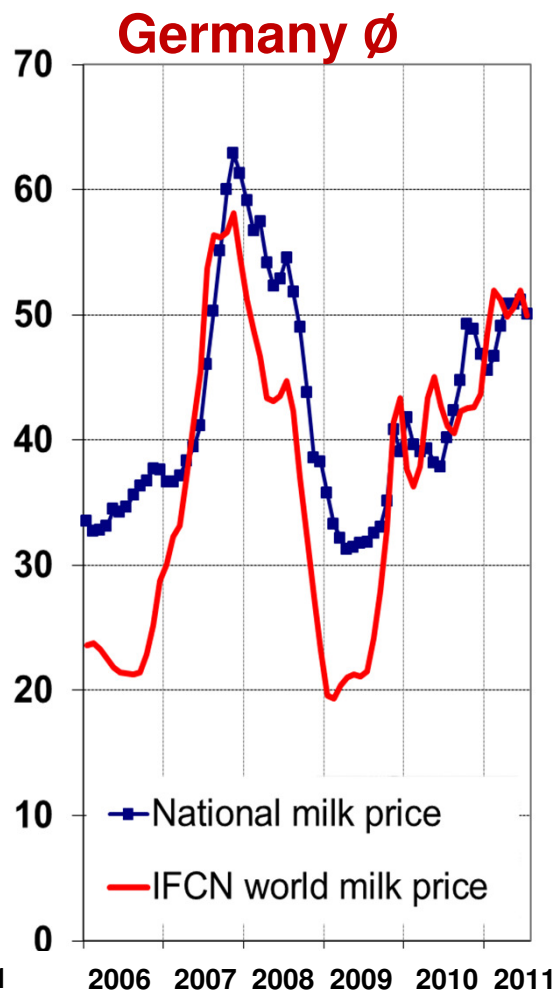
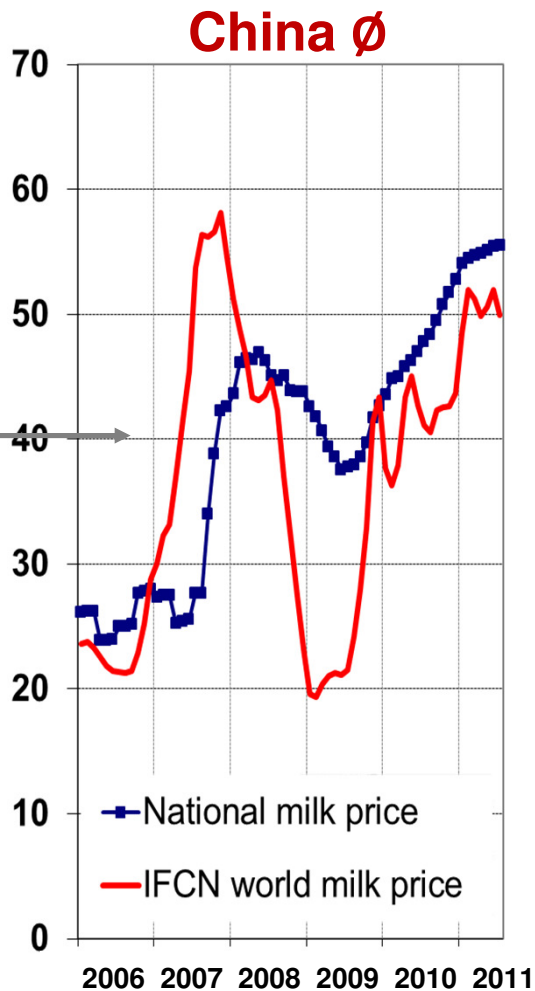
The world markets 1981 – 2010 (+Feb 2011)



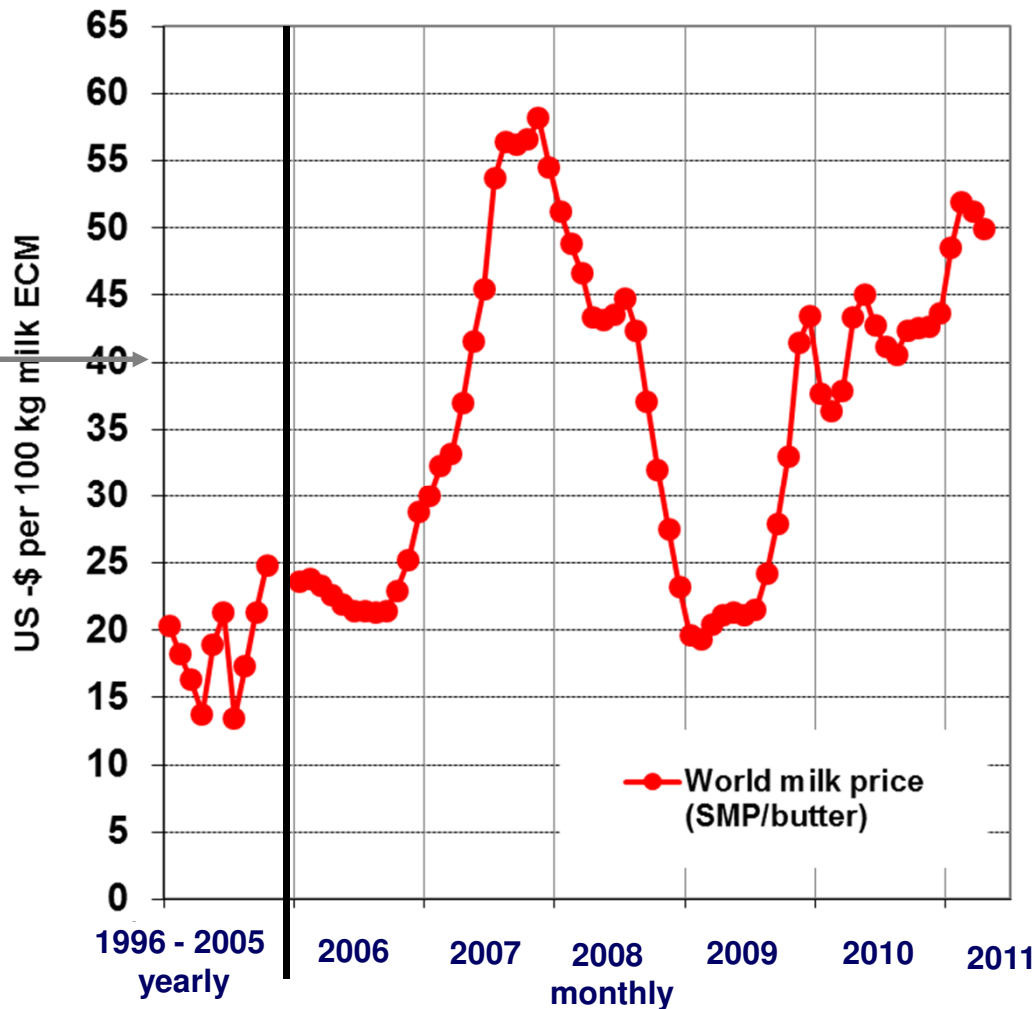
2. Every country follows the world price

Monthly milk prices (US\$/100 kg milk at 4% fat, 3,3% protein)

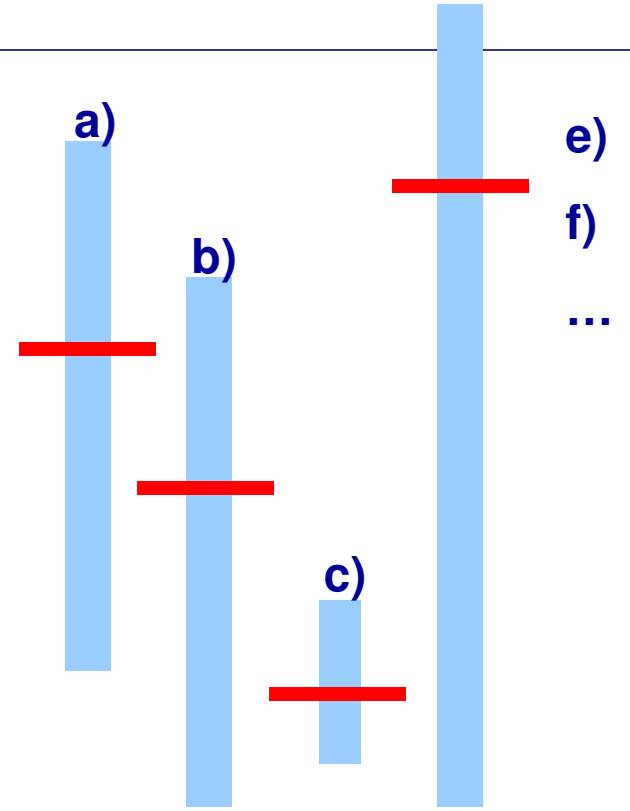
17.1 US-
\$/CWT
6.8 NZ-\$/kg
milk solids



Question: Future milk price levels?



17.1 US-\$/CWT
 6.8 NZ-\$/kg milk solids



- Two dimensions:**
1. New Ø price level?
 2. New min max levels?



IFCN is a way to understand a complex & fast changing dairy world



What is IFCN ? – International Farm Comparison Network

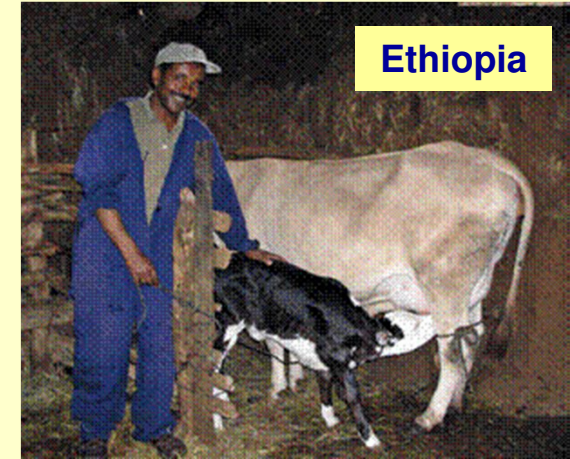
The IFCN is a global dairy **network of researchers, companies and other stakeholders** who are active in the dairy chain.

The IFCN has a **Dairy Research Center (DRC)** with 15 dairy researchers coordinating the network & running research activities.



IFCN mission

We create a better understanding of milk production world wide



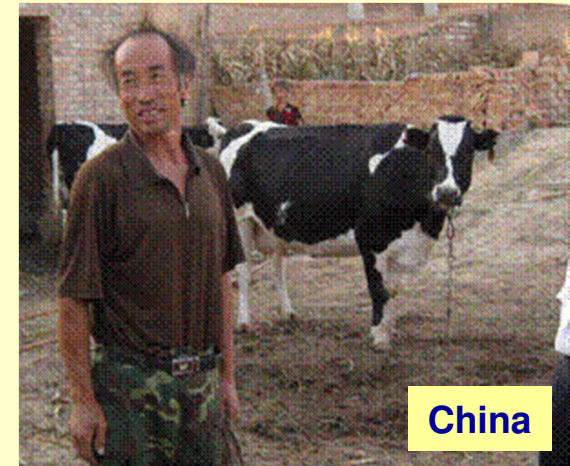
Ethiopia



Brazil



Argentina



China



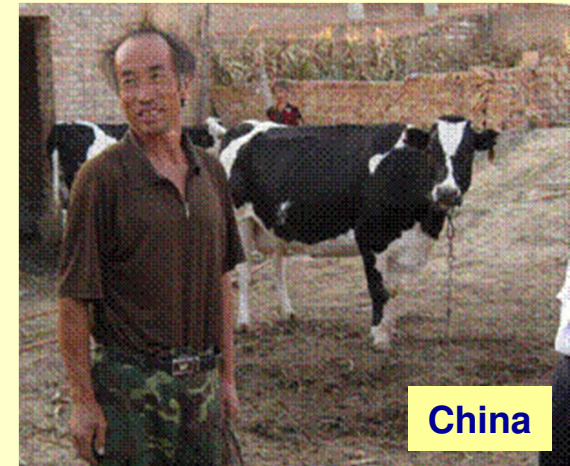
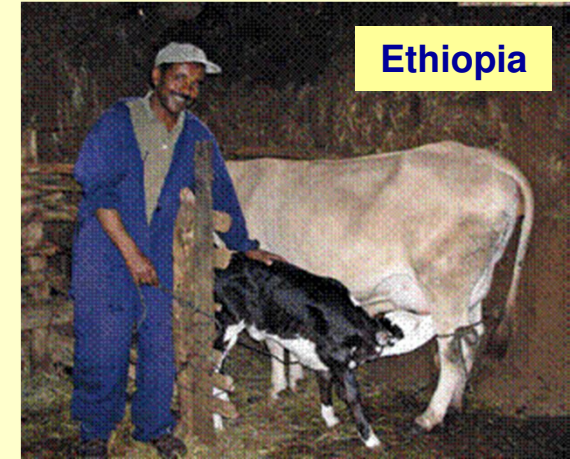
India



USA

In the dairy chain, milk production represents the major share of:

- a) the costs,**
- b) people employed,**
- c) resources used / emissions created**
- d) the political challenges**

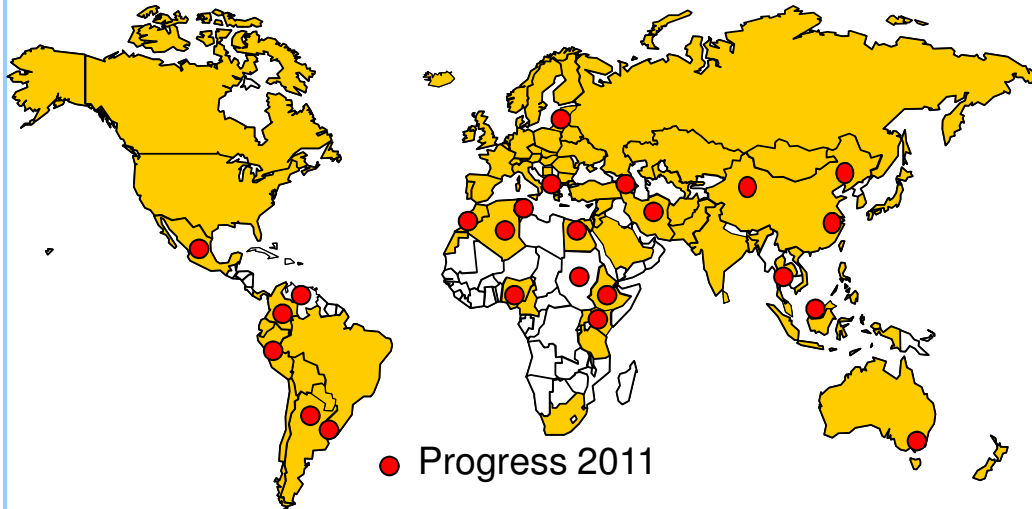




Status of the IFCN Network in 2011

IFCN

Researchers partners f. 86 countries



Albania	Afghanistan	Argentina	Armenia	Australia	Austria	Bangladesh	Belarus
Belarus	Belgium	Bolivia	Brazil	Brazil	Bulgaria	Cameroon	Canada
China	Colombia	Czech Republic	Denmark	Ecuador	Egypt	Ethiopia	Finland
Germany	Hungary	Iceland	India	Indonesia	Iran	Iran	Ireland
Italy	Japan	Jordan	Kazakhstan	Korea, Republic of	Latvia	Lithuania	Luxembourg
Dairy farmer	Mexico	The Netherlands	Nepal	New Zealand	Nigeria	Nigeria	Norway
Paraguay	Peru	Philippines	Poland	Portugal	Romania	Russian Federation	Serbia
Slovenia	South Africa	Spain	Sri Lanka	Sweden	Switzerland	Taiwan	Thailand
Uganda	Ukraine	United Kingdom	Uruguay	Uruguay	USA	USA	Vietnam
Belarus	Chile	France	Israel	Macedonia	Pakistan	Slovakia	Turkey

Institutional partners



80 agribusiness partners

Milk processing	Milk packaging	Milking	Health & hygiene	Feed industry
Fonterra	Nestlé	SIG	ELOPAK	DeLaval
Dean	Food service/special dairy foods	Pfizer	ECOLAB	Alltech
LACTALIS	KRAFT	GEA	SLOTEN	Milkmaid
BANDINI	CABURY	BOUMATIC	Intervet	provimi
Saputo	HOCHDORF	Fullwood Packs	HYPPRED	ab agri
parmalat	BARRY	InterPuls	MERIAL	Josera
Amul	CALLEBAUT	AVON	Elanco	Cargill
müller	volac	afimilk	LALLEMAND	
TINE	Heró	nedap		
Crim	Genetics	Forage & machinery	Other branches	
Brazzale	MASTER RIND	JOHN DEERE	FOSS	MILKLINE
BAM	Dairy Crest	streammann	canabean	Kite
agropur	frischli	BARENBRUG	OLAM	ALJAFI
	SEMEX	LLAAS	GENERAL MILLS	Ferraroni
	CRV	KRAIBURG		

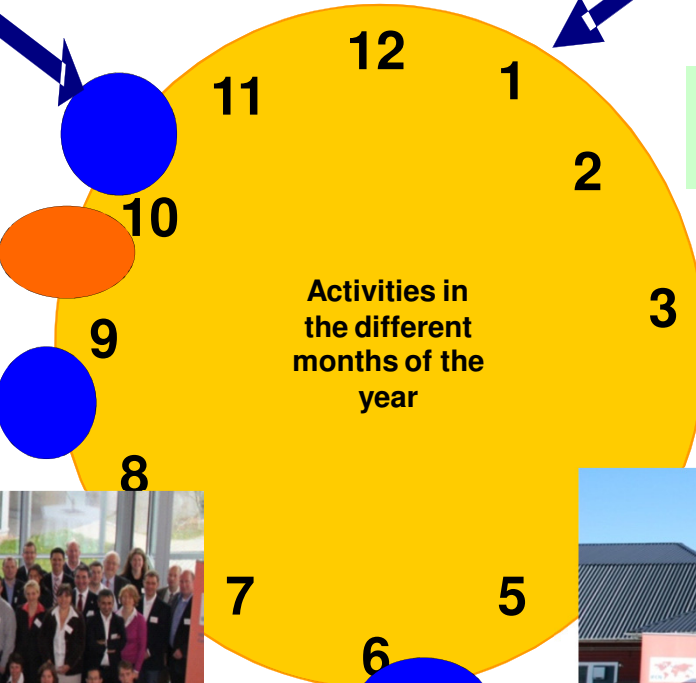


IFCN results at public events

IFCN
An ongoing
knowledge
creation system



Kick off meeting Kiel



Method
work

Data + validation
+ analysis

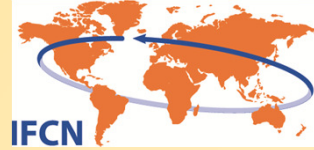


September Conference



June Conference

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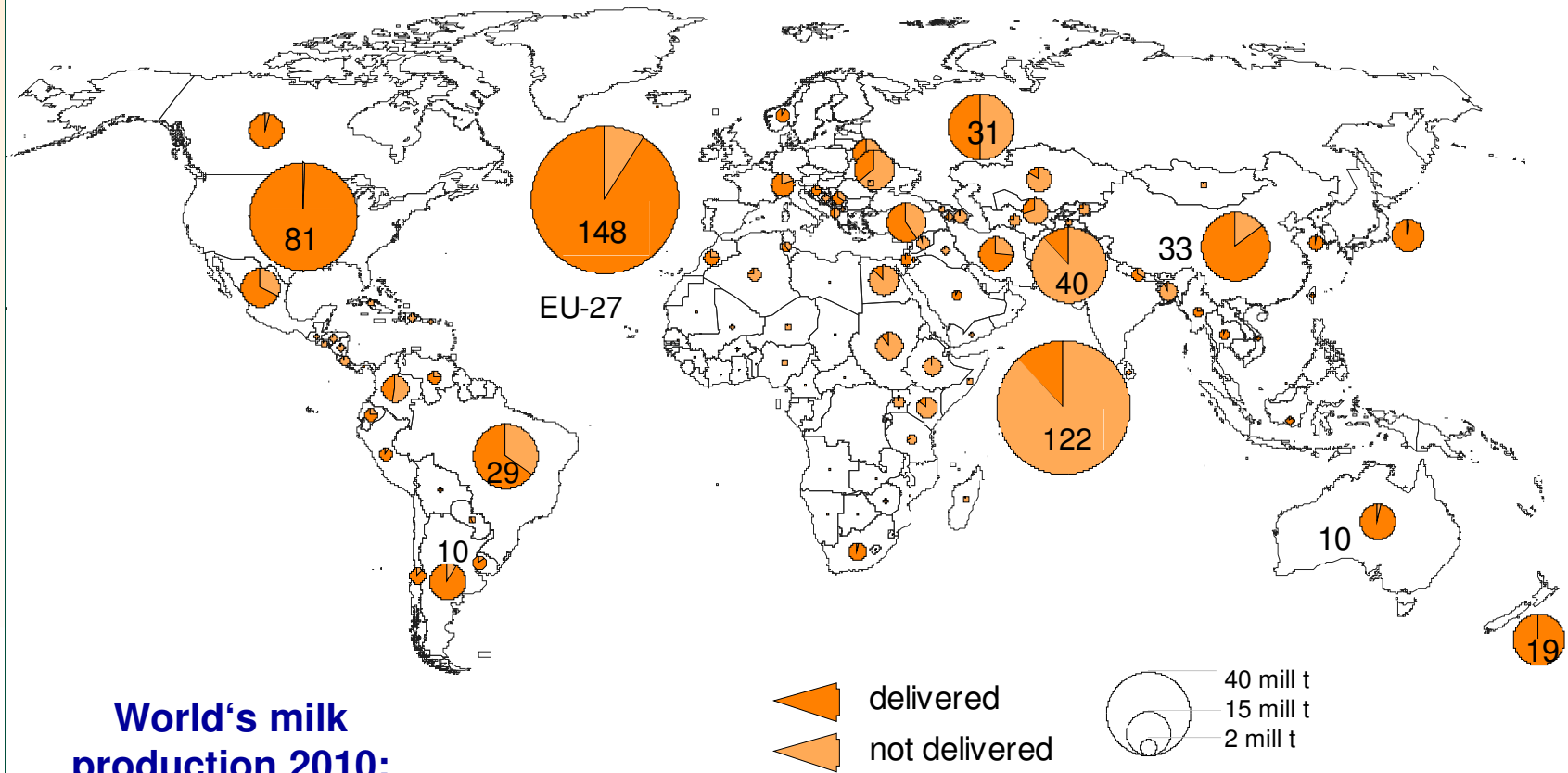
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Status of milk production in 2009

Cow and buffalo milk in mill. t ECM



World's milk production 2010: 685 mill. t ECM



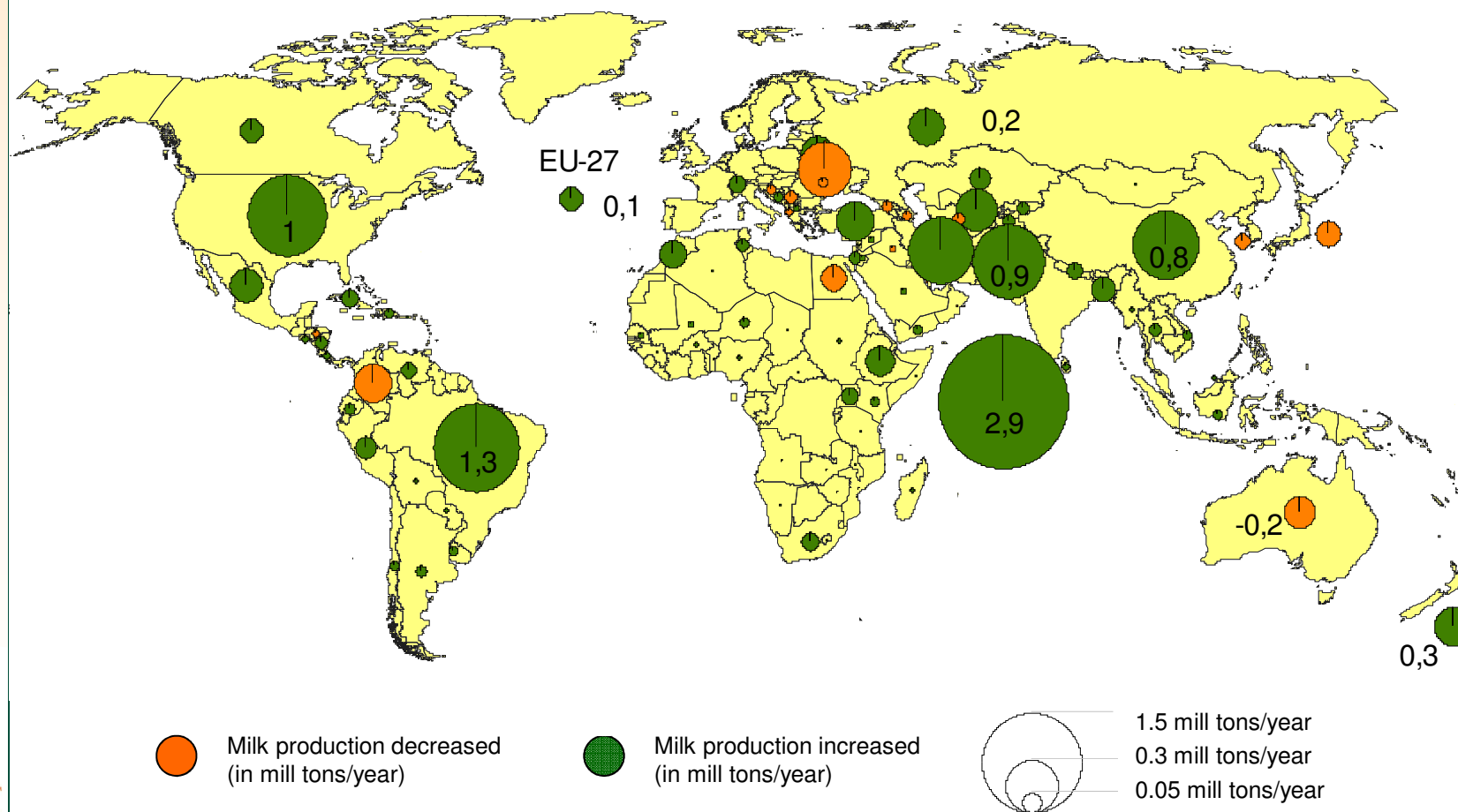
IFCN Top 21 Milk processors list

measured by milk intake 2009 / 2010

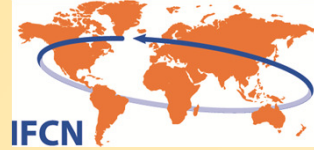
Rank	Company name	Country	Dairy processing plants main location	Milk intake in mill. t	Market share in % of world milk production
1	Fonterra	New Zealand	international	20.5	3.0%
2	Dairy Farmers of America	USA	USA	17.1	2.5%
3	Nestle	Switzerland	international	14.9	2.2%
4	Dean Foods	USA	USA	11.8	1.7%
5	Royal FrieslandCampina	The Netherlands	The Netherlands	10.3	1.5%
6	Lactalis	France	international	10.2	1.5%
7	Arla Foods	Denmark/Sweden	Denmark/Sweden	8.7	1.3%
8	Danone	France	international	8.0	1.2%
9	California Dairies Inc.	USA	USA	7.7	1.1%
10	Kraft Foods	USA	international	7.5	1.1%
11	Nordmilch & Humana (DMK)	Germany	Germany	6.7	1.0%
12	Saputo	Canada/USA	Canada/USA	6.2	0.9%
13	Land O' Lakes Inc.	USA	USA	5.8	0.9%
14	Sodiaal & Entremont alliance	France	France	4.2	0.6%
15	Mengniu group	China	China	3.8	0.6%
16	Parmalat	Italy	international	3.7	0.6%
17	Yili group	China	China	3.7	0.5%
18	Amul	India	India	3.4	0.5%
19	Northwest Dairy Association	USA	USA	3.3	0.5%
20	Schreiber Foods Inc.	USA	USA	3.3	0.5%
21	Murray Goulburn	Australia	Australia	3.2	0.5%
Sum top 21				163.9	24%



Change in milk production 2006-2010 on average in mill. t ECM per year



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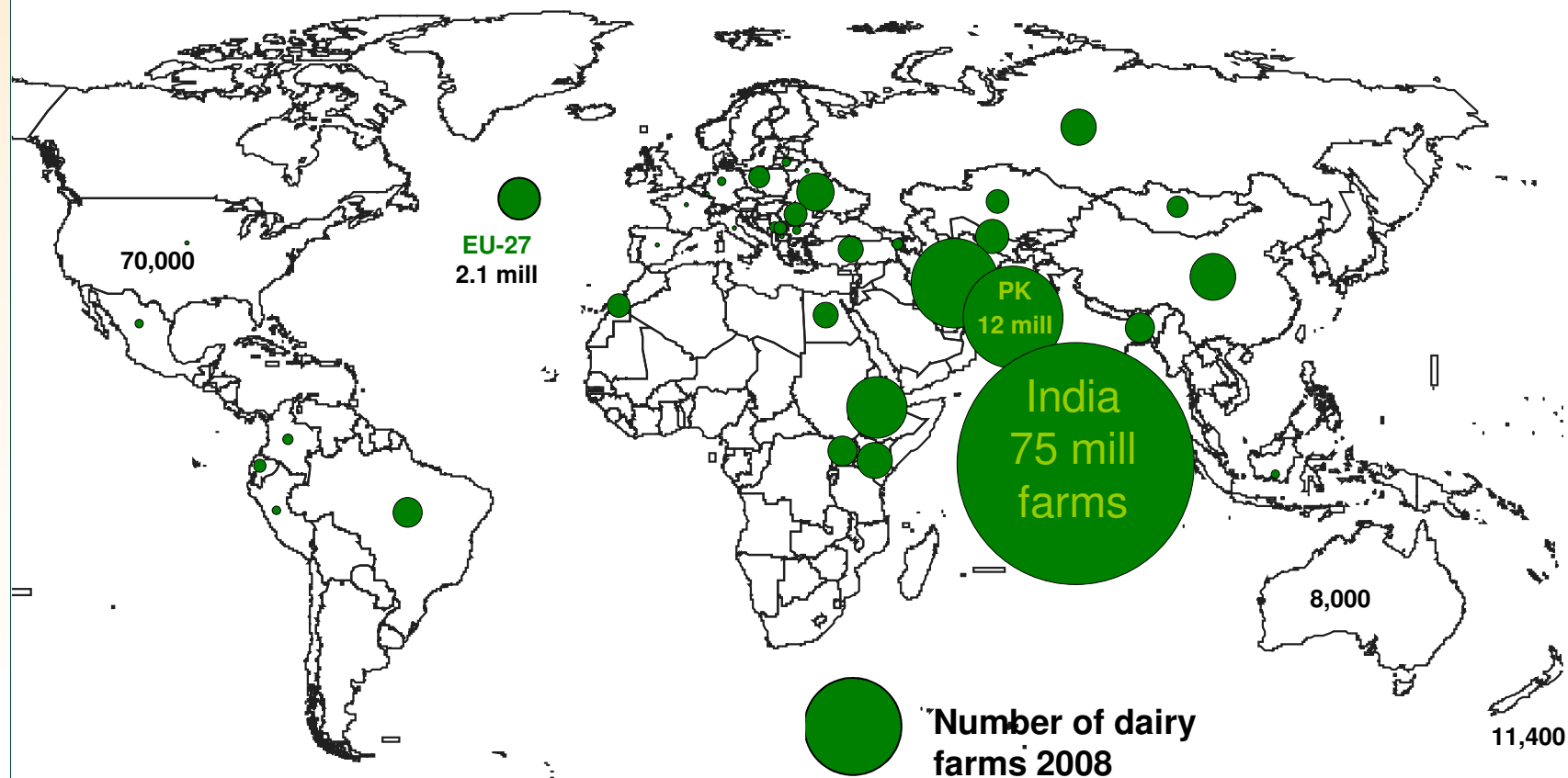
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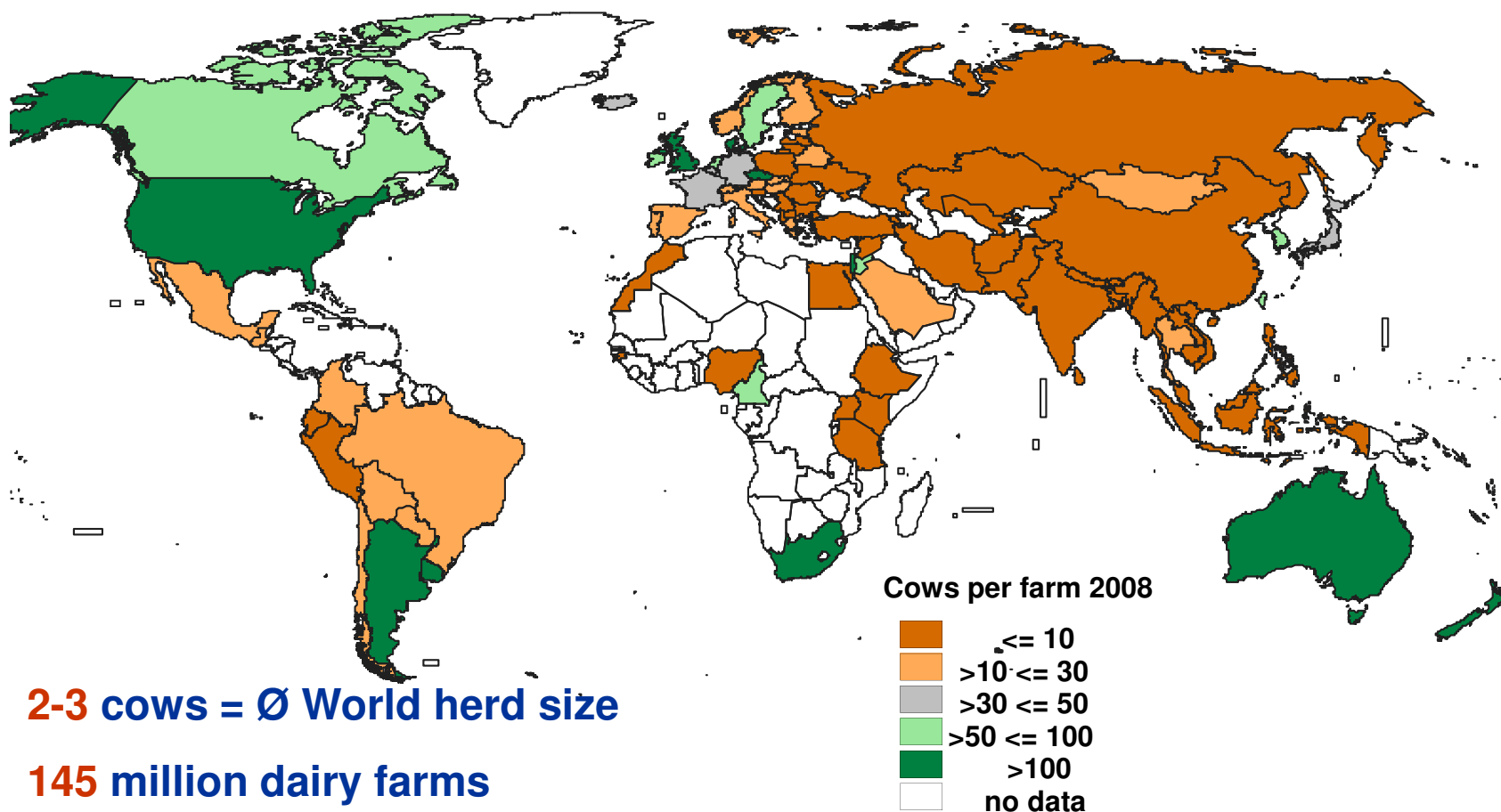


Number of dairy farms world wide

145 million farms - IFCN estimate



IFCN results: Average dairy farm size



2-3 cows = \emptyset World herd size

145 million dairy farms

0.7 – 1 billion people live on dairy farms



A very simplified picture

□ Three dairy farm types

Household farms = 75% of the farms; 30-40% of the milk

Key characteristics: Small farms 1-3 cows, dairy is one income source,
50% of the milk is consumed on the farm, 50% sold.

Key driver: Selling milk provides daily cash for family needs

Family farms = 24 % of the farms 40-50% of the milk

Key characteristics: Work is mainly done by the family,
Size in developed countries 10 up to 100/300 cows?

Key driver: Generate an income, pass on the farm to the next generation

Business farms = 0,4 % of the farms 10-20% of the milk

Key characteristics: Work is mainly done by employees,
Size in developed countries > 300 cows?

Key driver: Generate the expected ROI, return to labor, etc.

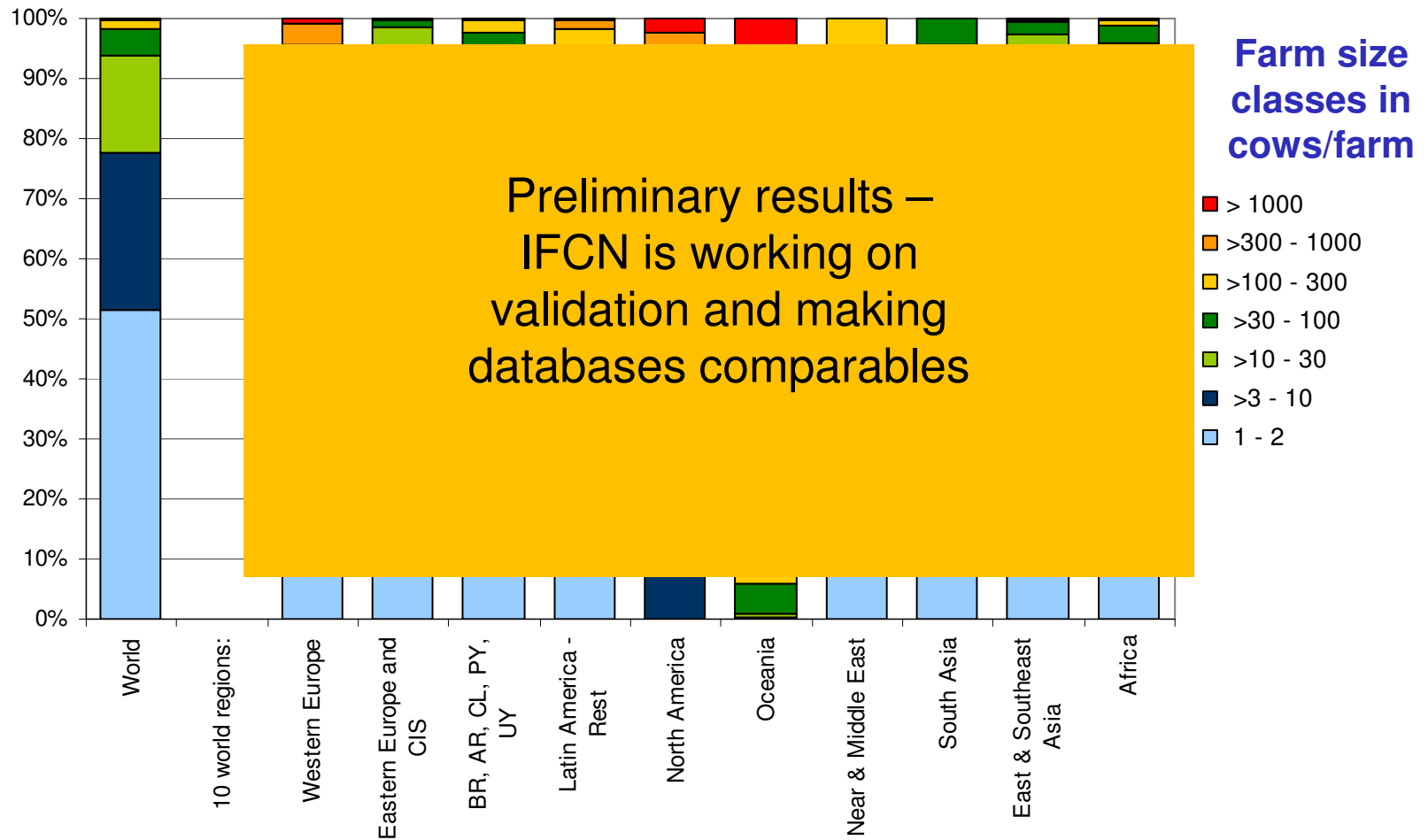


Farm structure analysis -% farms / size class

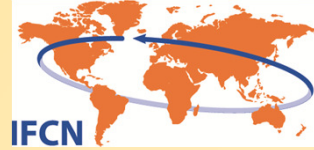
Business farms

Family farms

Household farms



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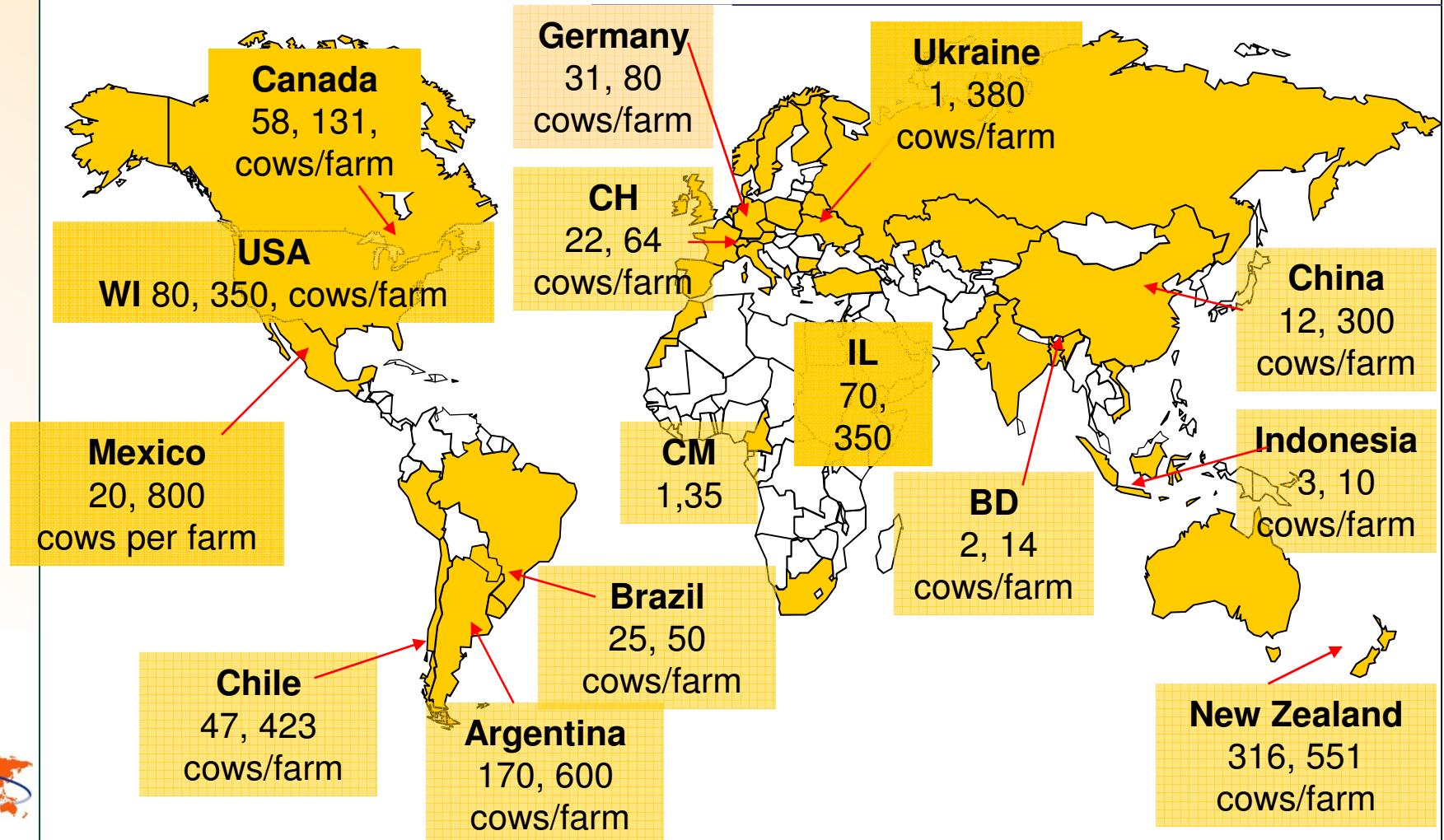
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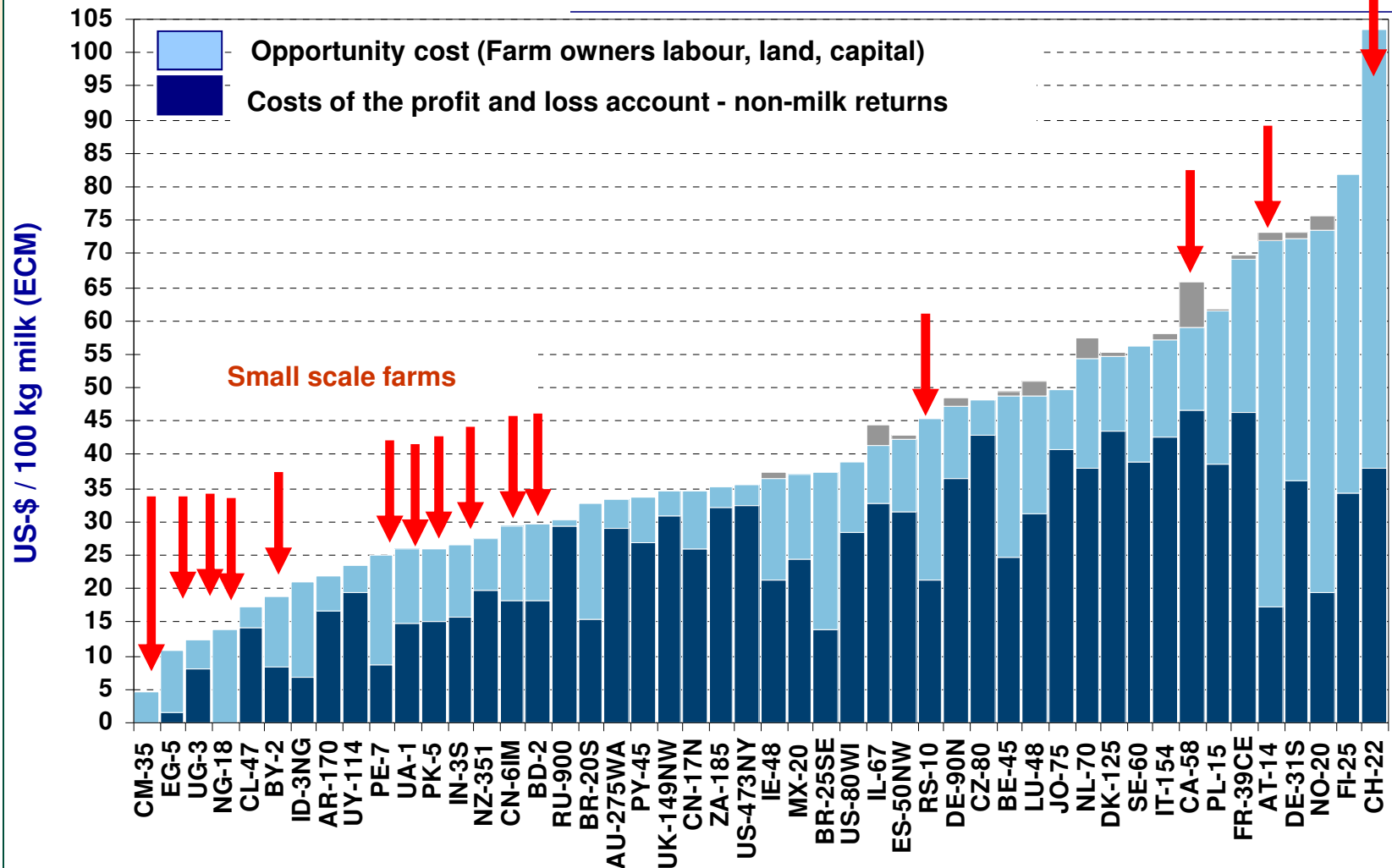
IFCN concept of typical farms

they represent in a country a certain share of milk production



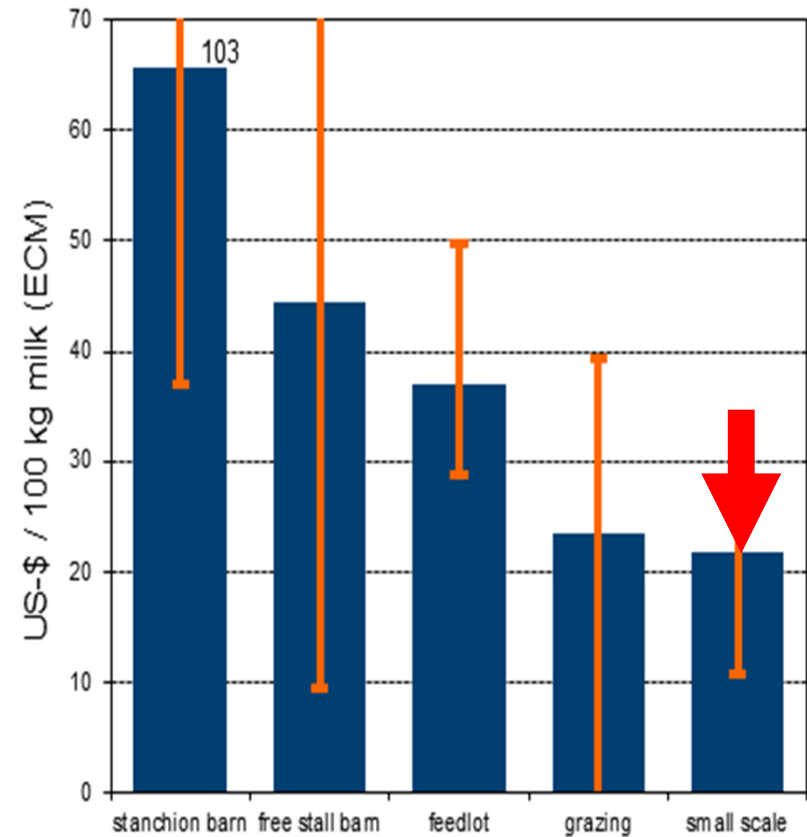
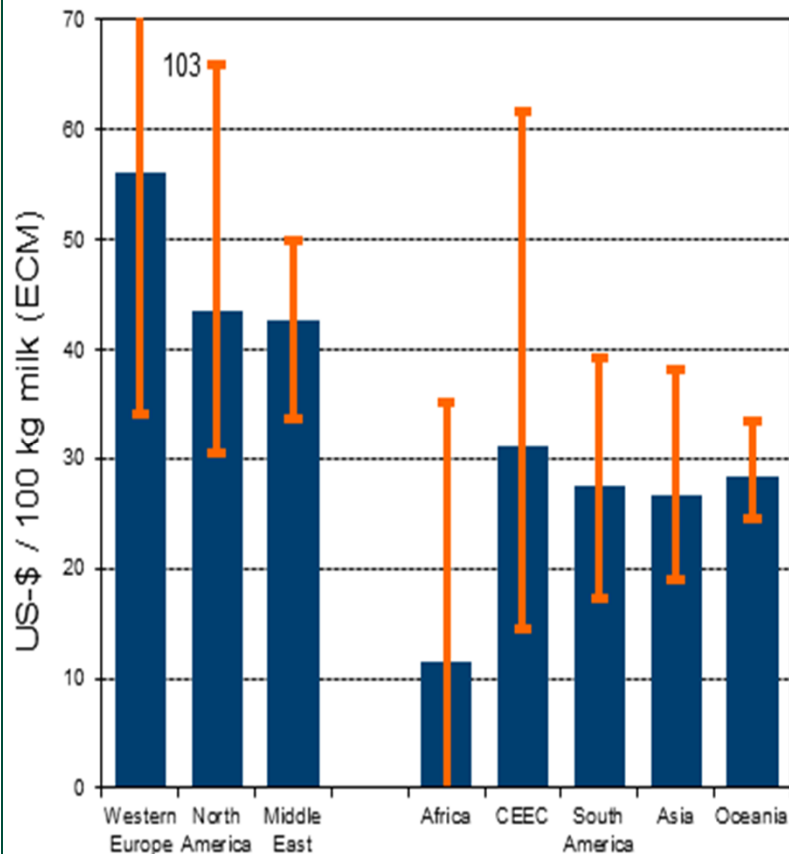
IFCN comparison of “Ø size” farm types

Cost of milk production only in 2009



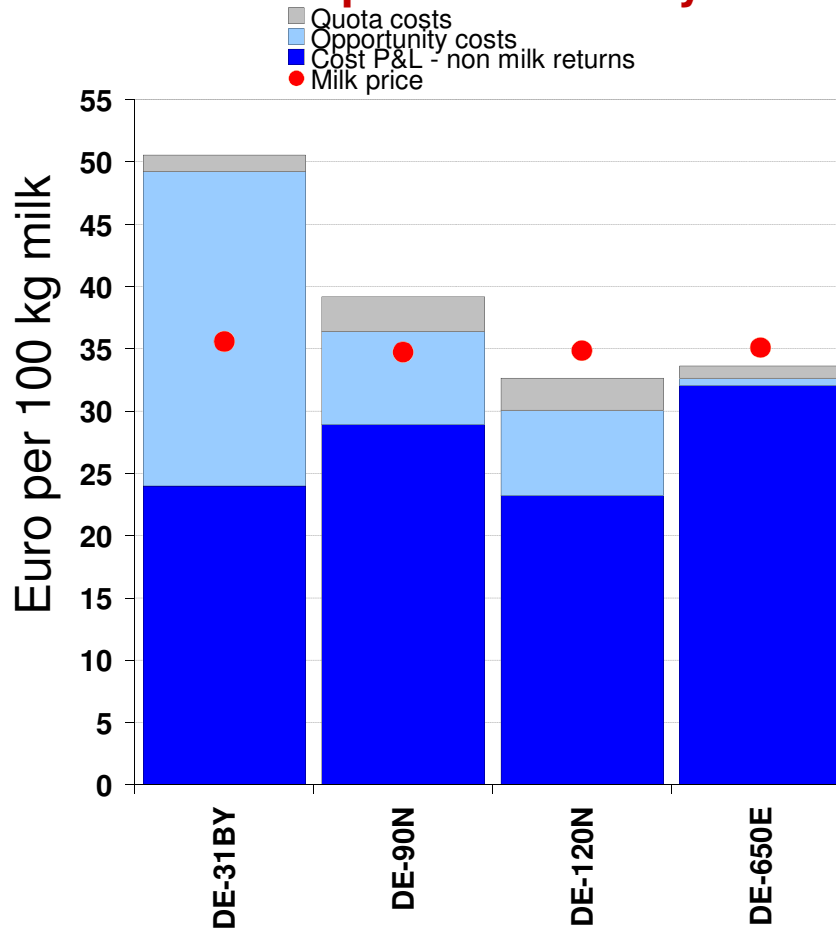
Cost of milk production by clusters

World regions – farming systems

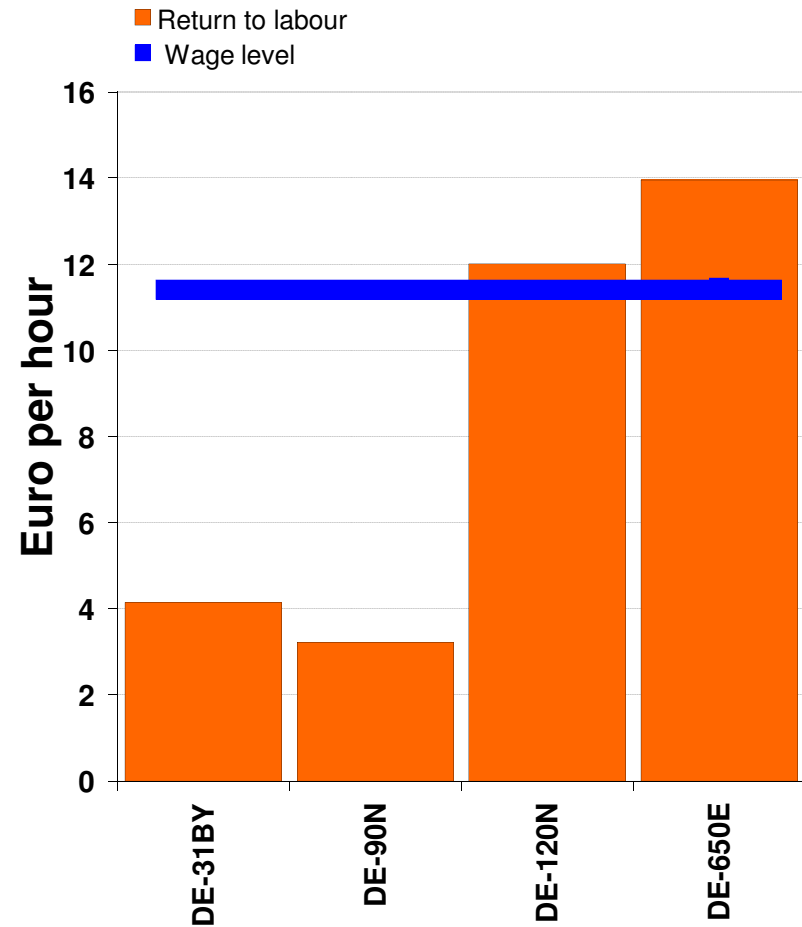


Dairy farm economics and farm size typical farms from Germany 2008

Cost of milk production only

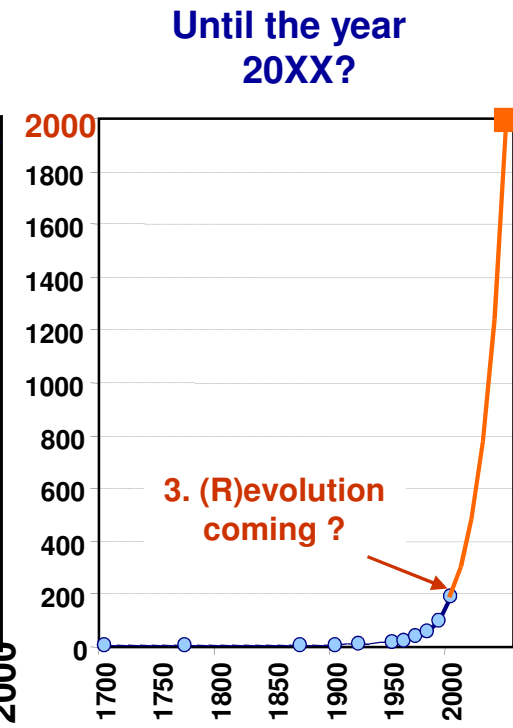
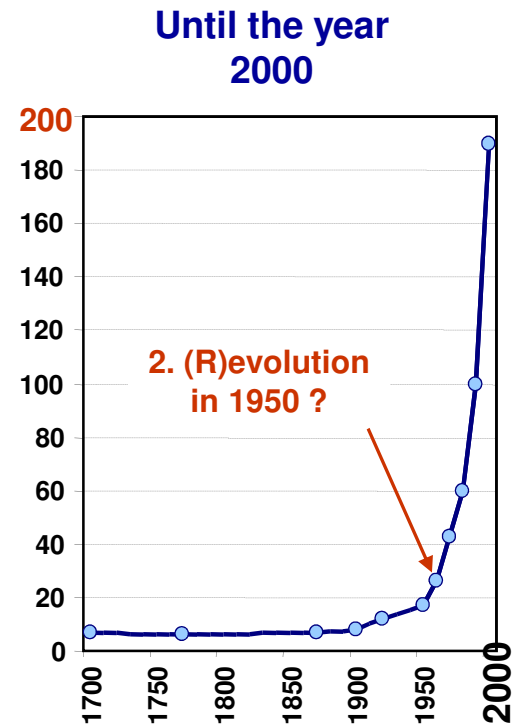
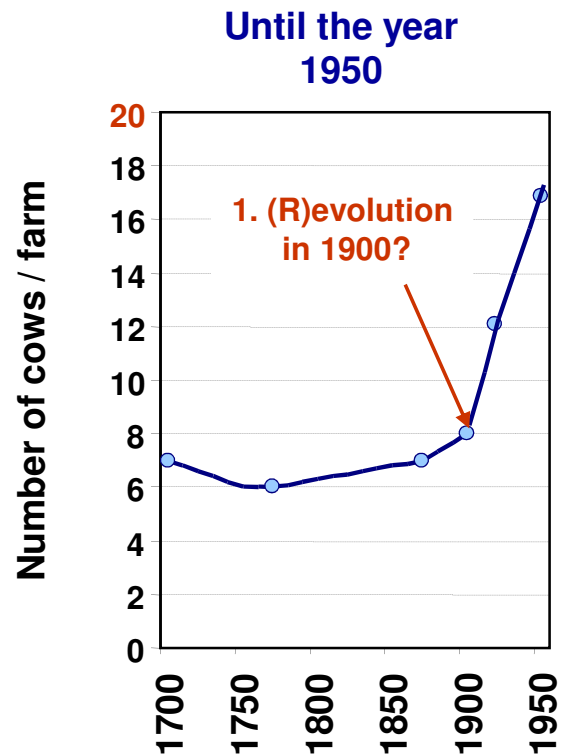


Return to labour



Is there a pattern of change in farm structure?

Case study: A German dairy farm 1700-2000



Summing up

2-3 cows/farm = The world average farm size
Every 7th person on earth live on a dairy farm

Success in the past: Small holder dairy farms have gained market share in the past

Competitive position: Small scale dairy farming system have low cost of production if wages are low

Economic forces are strong and after a certain point will drive rapid structural change.

Dairy is a tool to fight poverty and create prosperity if the chain is managed well.



Indonesia - Java

Dairy can create prosperity in the villages



A dairy farmer

No cows so far