Socio-economic Model

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A farm not only produces goods….

Environment

Farm

Society

Environment quality

Landscape

Biodiversity

Products

Livestock farming system

Tourism

Employment

Social structure / social life

Economical activity

Economic assessment of benefits and costs

★ Can be monetary assessed at farm scale (*farm profit, farm employment*)

☆ Result from farming activity (*economic activity in food chains, tourism,..*)

Can be monetary assessed on connected markets and at other scales

☆ Hardly monetary assessed (*biodiversity, landscape,…*)

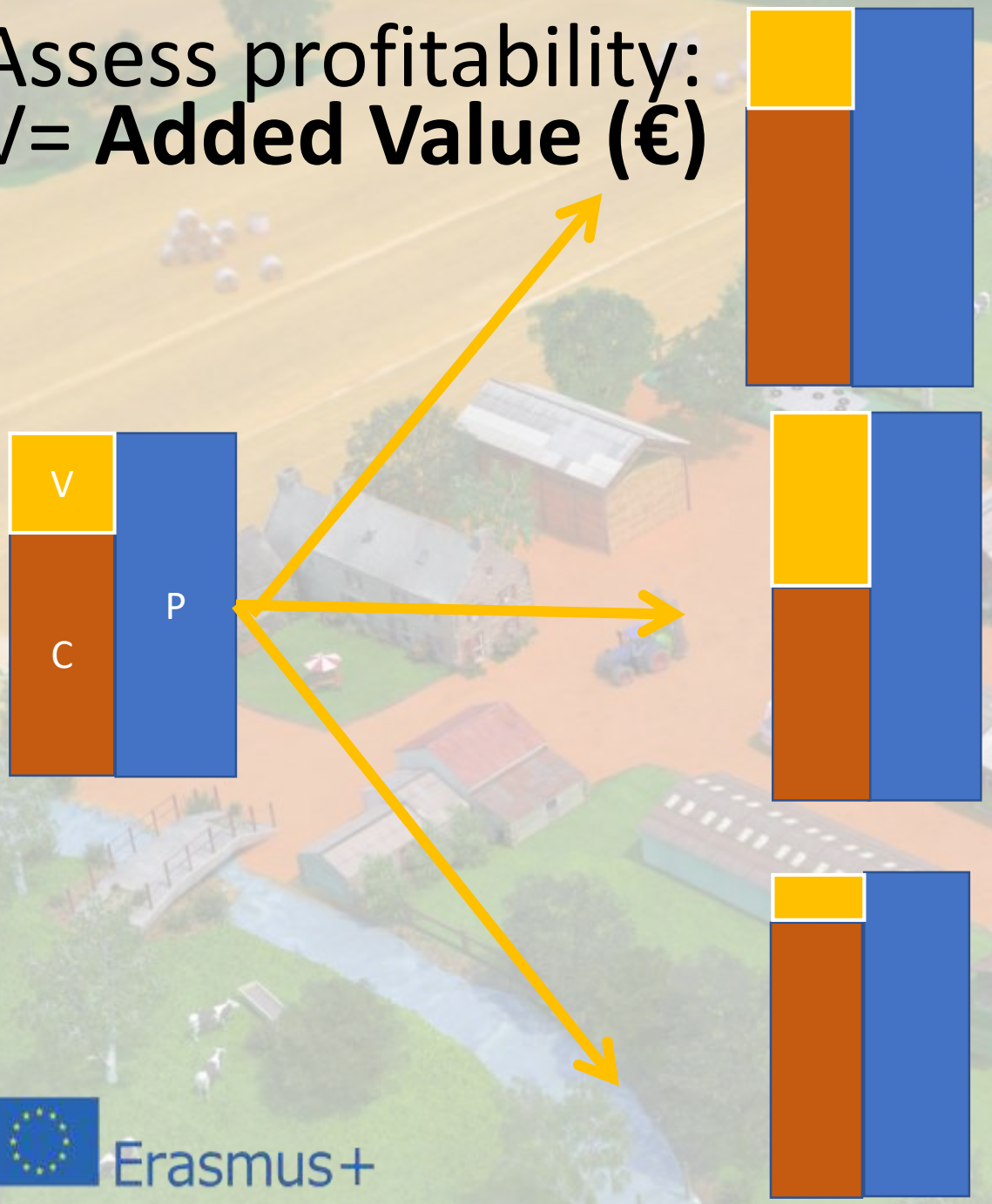
Non market : **externalities** ecosystem services and dys-services

Not always intentionally produced

Public support can regulate their production (CAP rural developpement)

Erasmus+

Assess profitability:
V= **Added Value (€)**



Other indicator:
E=**Efficiency (%)**

E= V/P

Independent of the production size

Erasmus+

Main Socio-Economic indicators in SEGAE

1 – Profitability	2- Income / Finance	3- Labor
FARM PROFIT (&Efficiency)	FARMER INCOME	LABOR PEAKS MANAGEMENT
	INVESTMENT CAPACITY	SKILLS

1 – Profitability	2- Income / Finance	3- Labor

CROP Gross Margin

LIVESTOCK Gross Margin

CAP Subsidies:
1st pillar (production)
2nd pillar (rural dev)

Hired workers

FARM PROFIT (EBITDA)

Earnings Before Interest Taxes Depreciation and Amortization

⇒ Indicator of farm profitability
⇒ Indicator of Cash-Flow

1 – Profitability	2- Income / Finance	3- Labor

CROP Gross Margin

LIVESTOCK Gross Margin

FARM PROFIT

Gross Margin = Products – Operating costs

	CROPS	LIVESTOCK
PRODUCTS	SALES Cash crops Forages Straw	SALES : Milk Meat (≠ breed)
OPERATING COSTS	PURCHASES Pesticides Mineral fertilizer Fuel Direct machinery costs + Other costs (land renting)	PURCHASES Concentrates, Cereals, Forages, Straw, Milk replacer Veterinary, Insemination Water, Energy Pregnant heifers

1 – Profitability	2- Income / Finance	3- Labor

CROP Gross Margin

LIVESTOCK Gross Margin

CAP Subsidies:
1st pillar (production)
2nd pillar (rural dev)

FARM PROFIT

CAP budget architecture

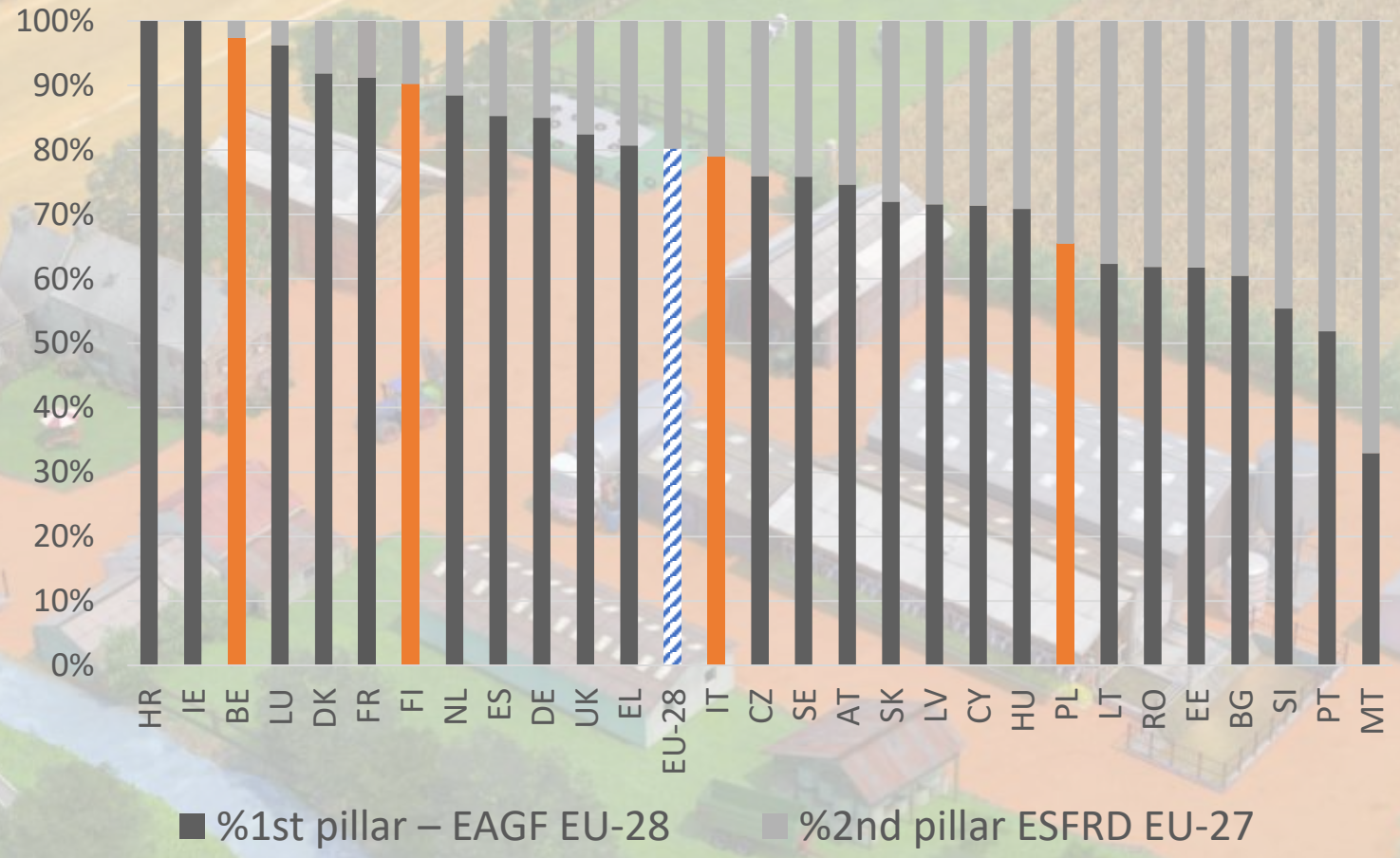
2nd pillar (<30%)
Rural Developpement
« an additional support to offset the cost of providing environmental public goods »

1st pillar **greening**
Cross compliance (up to 30%)

1. Minimum crops diversification
2. Maintain permanent grassland
3. Maintain Ecological Focus Areas (EFA) >5% SAU (fallow land, permanent pasture; field margins, hedges and trees, buffer strips,…)

1st pillar (>70%)
Production

CAP expenditure by Member State 2014
(EU Parliament, 2016)



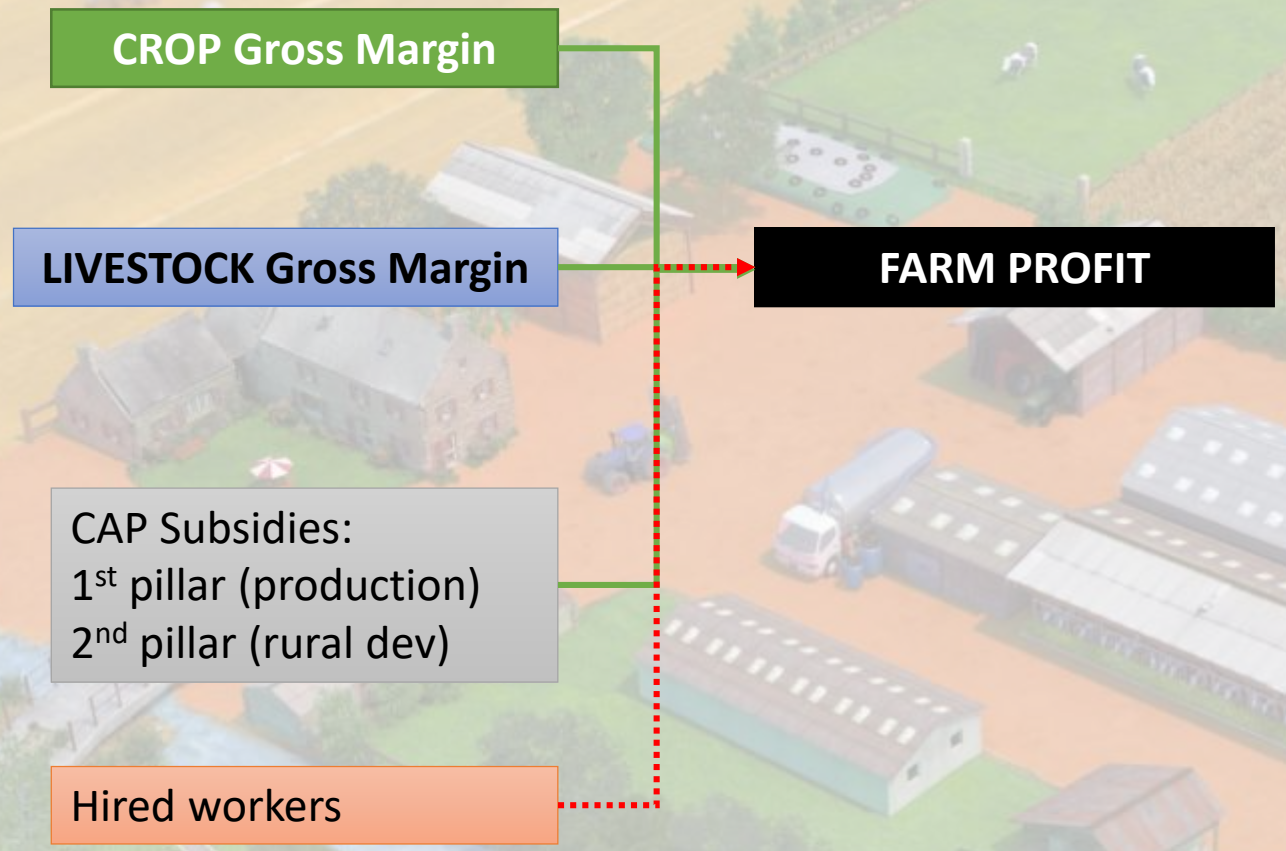
CAP subsidies in SEGAE

Support on **voluntary** basis to farmers who engage in long term on environmental commitments :

- High share of pasture + reduced pesticide treatments
- Conversion to organic farming
- Agroforestery

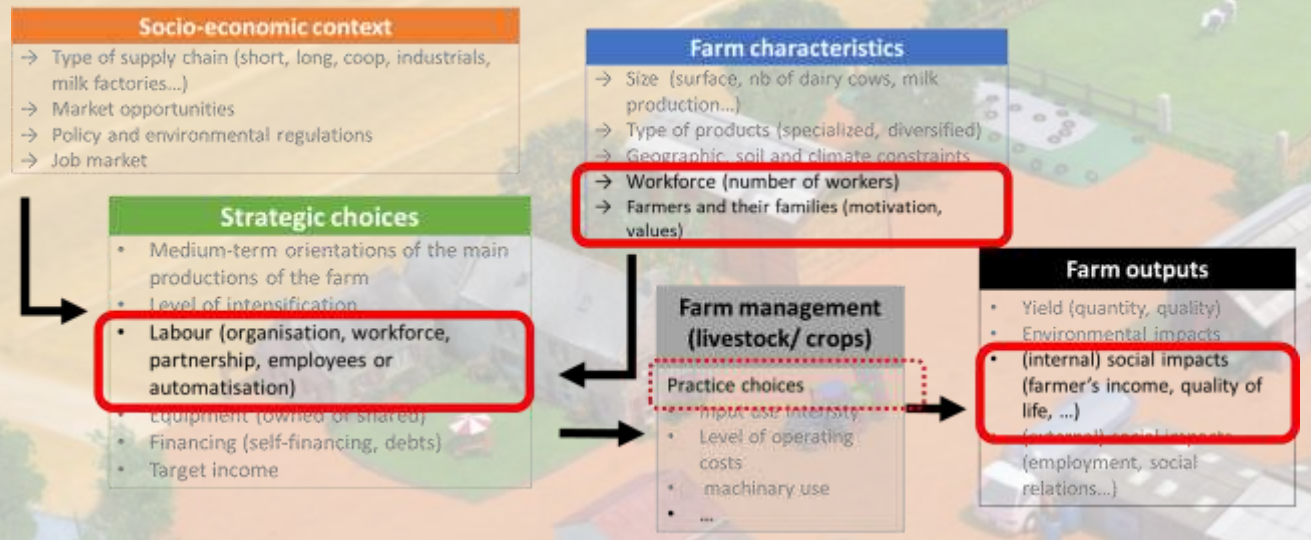
1. Medium – high diversity of cropping plan
2. Minimum elements of green infrastructure

1 – Profitability	2- Income / Finance	3- Labor

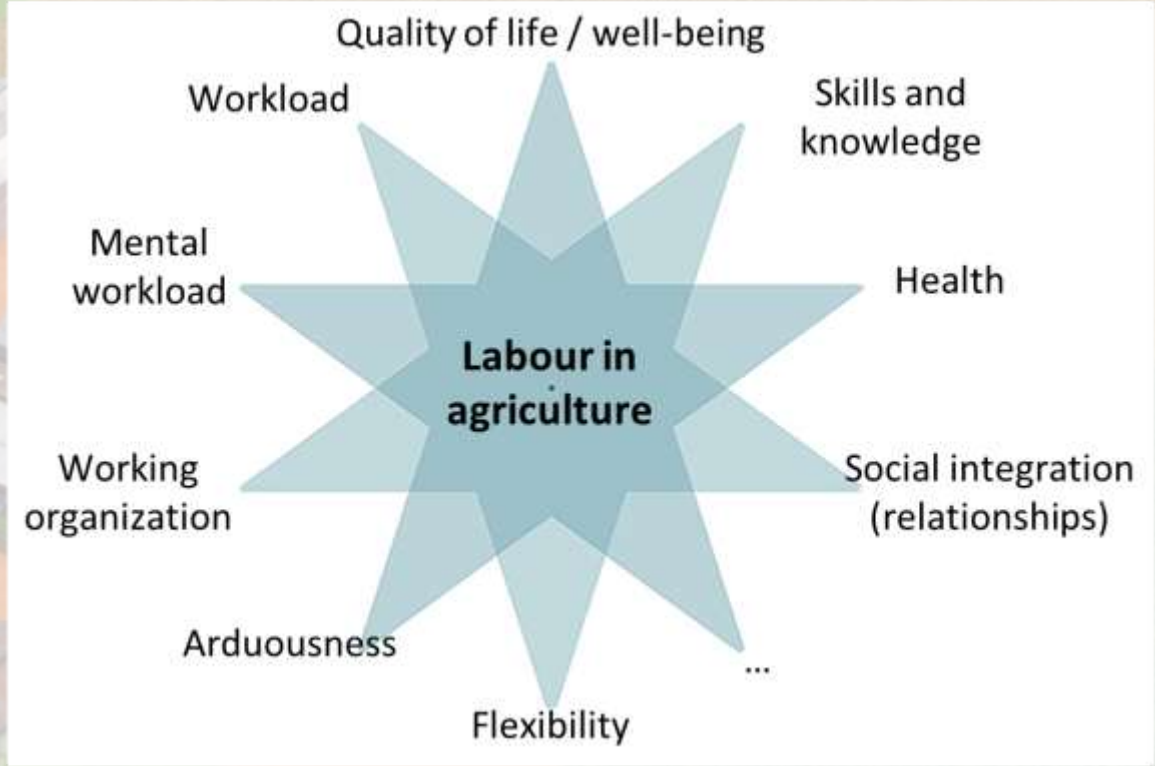


1 – Profitability	2- Income / Finance	3- Labor

What is labor?



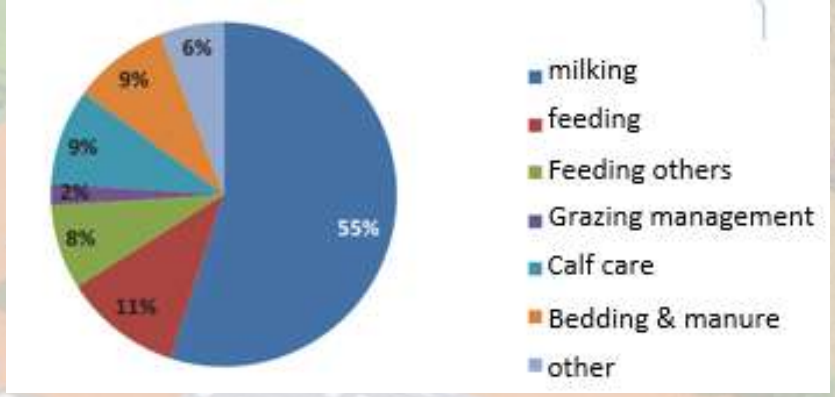
Multi-dimensionnal concept



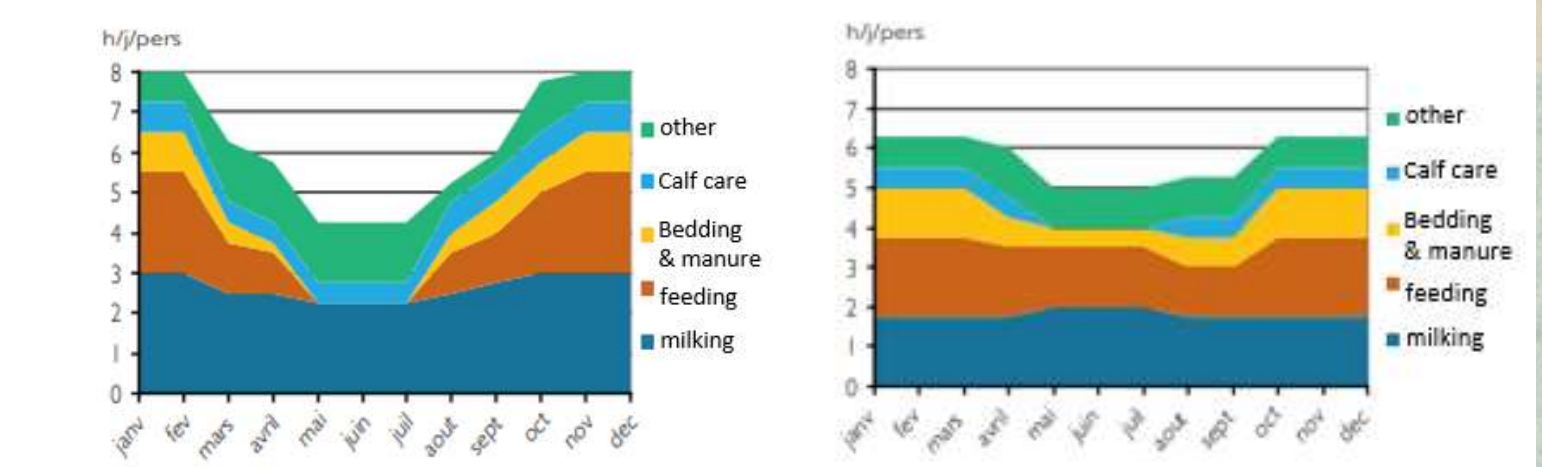
1 – Profitability	2- Income / Finance	3- Labor

Workload (work : as a resource allocated to different tasks to do)

- **« Routine » work**
- **Seasonal work**
- **Administrative work**
- **Other occasional work**



Idele (2010)



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Erasmus+

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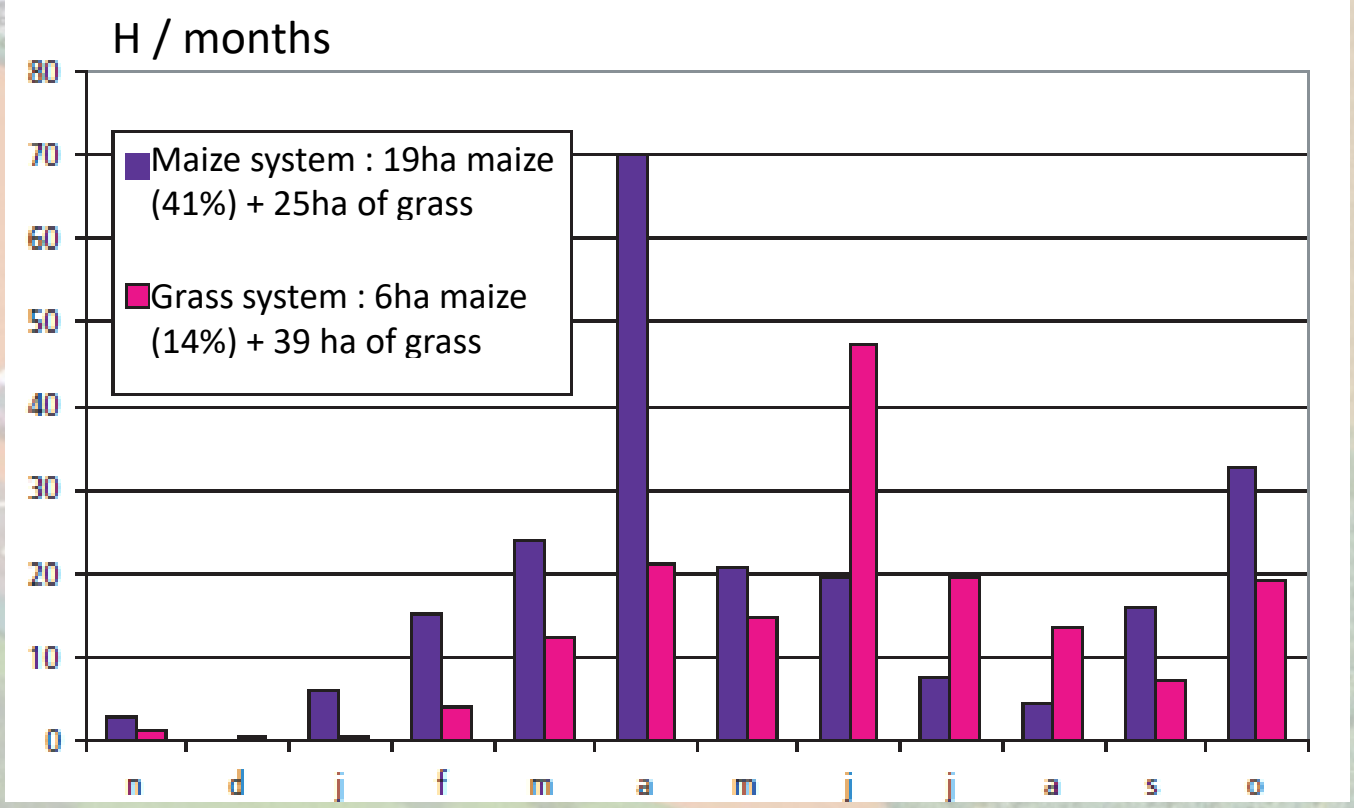


Crab (2006)

Erasmus+

1 – Profitability	2- Income / Finance	3- Labor

How do we calculate working time?

Labor

Labor resources ← → Labor needs

balance

NB of workers
1 full-time worker = 200h/months

-Depending on different tasks to do
-Depending on AEP choices

h/months

« seasonal » Labor

Crops
-sowing
-fertilizing
-….

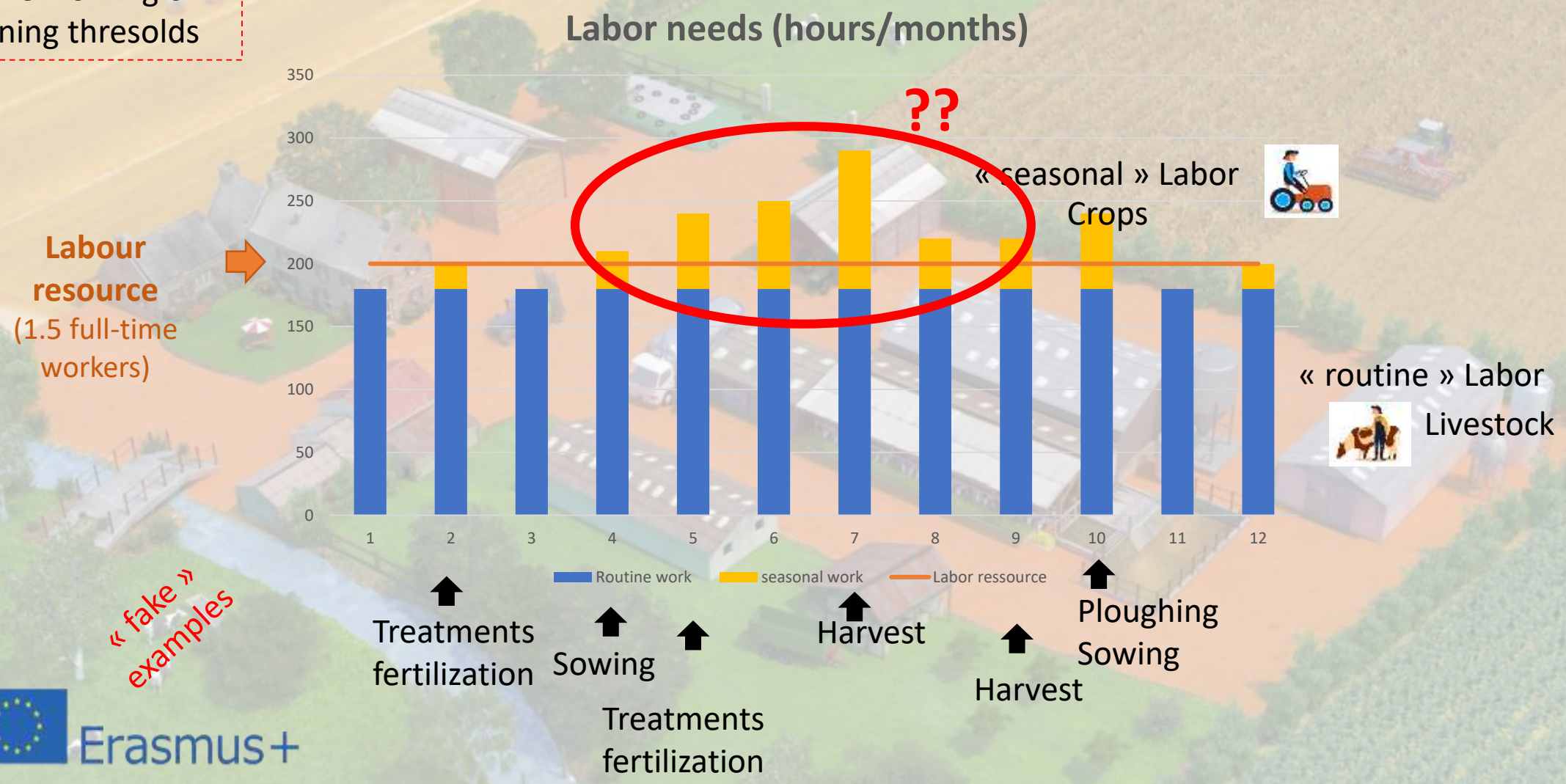
« routine » Labor

Livestock
-milking
-feeding dairy & other cattle
-manure management dairy & other cattle
-health & care, dairy & other cattle
-other tasks, dairy & other cattle)

Erasmus+

1 – Profitability	2- Income / Finance	3- Labor

Work in progress… we are working on defining thresolds



1 – Profitability	2- Income / Finance	3- Labor

Work in progress… we are working on defining thresolds

Considered as a « **Peak of work** » *(7/12)*

Labour resource (1.5 full-time workers)

Erasmus+

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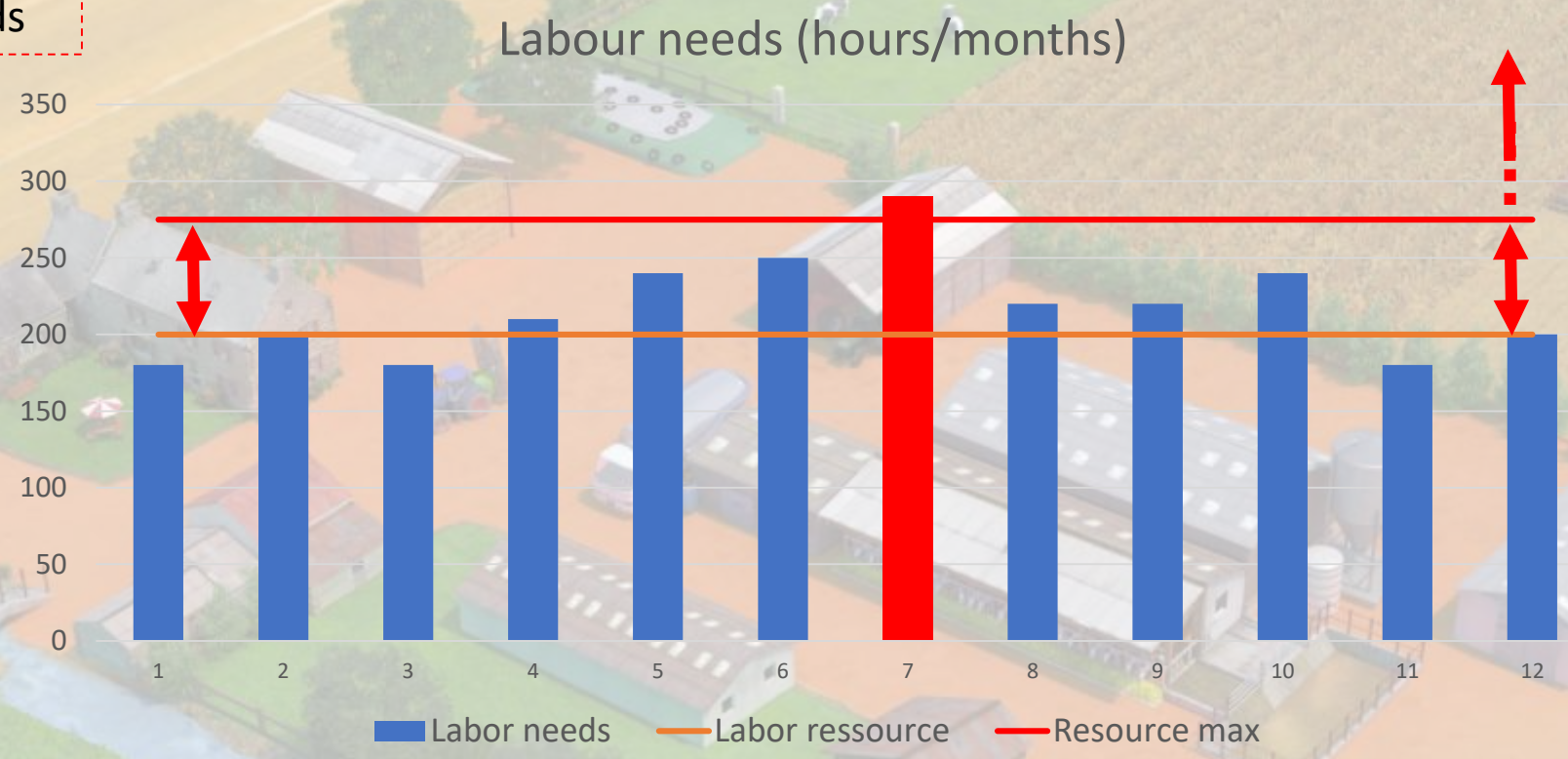
Work in progress… we are working on defining thresolds

Maximum of work

Labour resource (1.5 full-time workers)



We need to hire!

« too much work to do »

« Tolerance band »
Workers accept to work more than usual (<275h/months)

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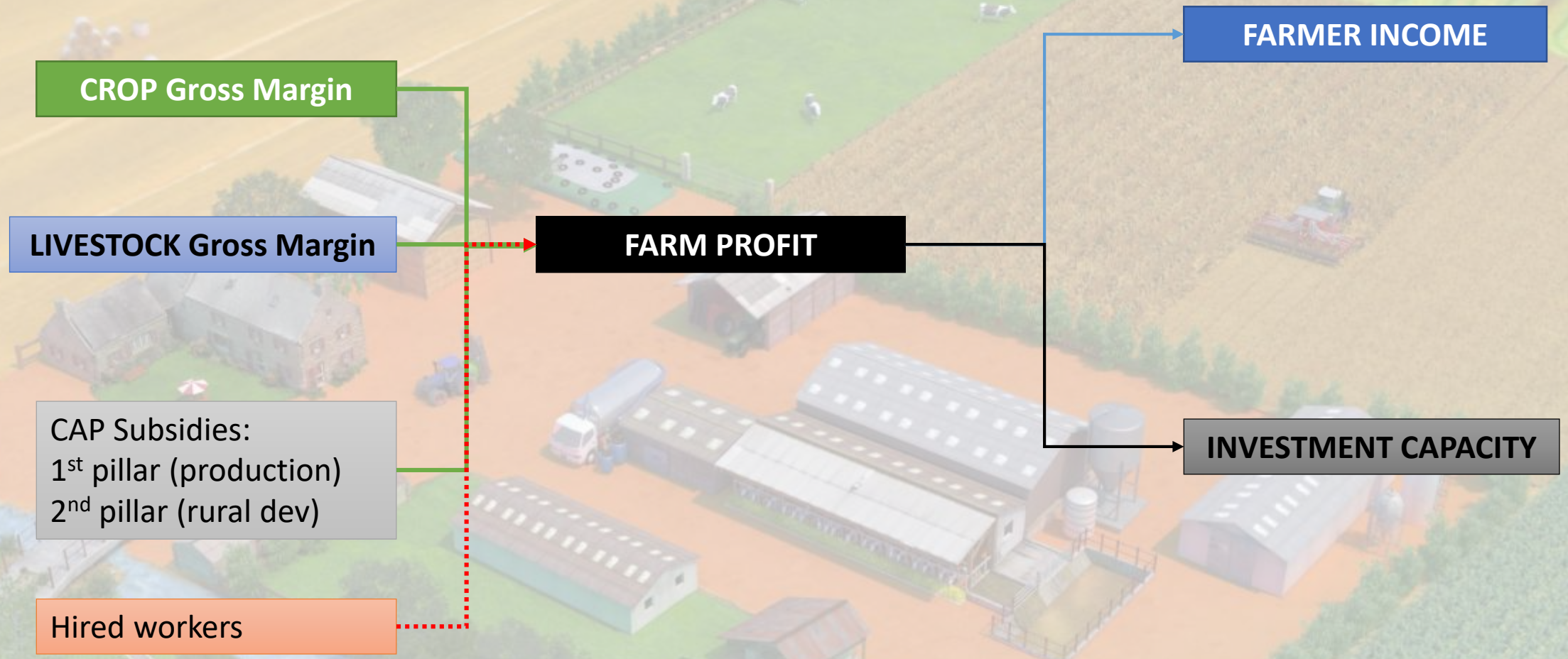

Distribution of Farm Profit between Investment/ Income

FARM PROFIT <0	
FARMER INCOME =0	INVEST CAPACITY< 0 DEBT

FARM PROFIT > 0 « Balanced »	
FARMER INCOME 50%	INVEST CAPACITY 50%

FARM PROFIT > 0 « Invest-oriented »	
FARMER INCOME 20%	INVEST CAPACITY 80%

FARM PROFIT > 0 « Income-oriented »	
FARMER INCOME 80%	INVEST CAPACITY 20%

Invest Capacity $(IC)_{T0}$ = 64 000€

Cumulated Invest Capacity $(CIC)_{T1}$= Invest Capacity $(IC)_{T0}$ + Invest Capacity $(IC)_{T1}$

Cumulated Invest Capacity $(CIC)_{T2}$ = Cumulated Invest Capacity $(CIC)_{T1}$ + Invest Capacity $(IC)_{T2}$

…

If CIC_T <0 during 3 consecutive years (ENDEBTNESS + NO FARM INCOME) => Game Over

AEPs subject to investment decisions

increase in herd size, unchanged density

change cow housing

change cattle bedding

In field Agroforestry

under process : breed change, new machinary with some AEPs,…