

Securing quality on a sustainable basis – what concepts are feasible?

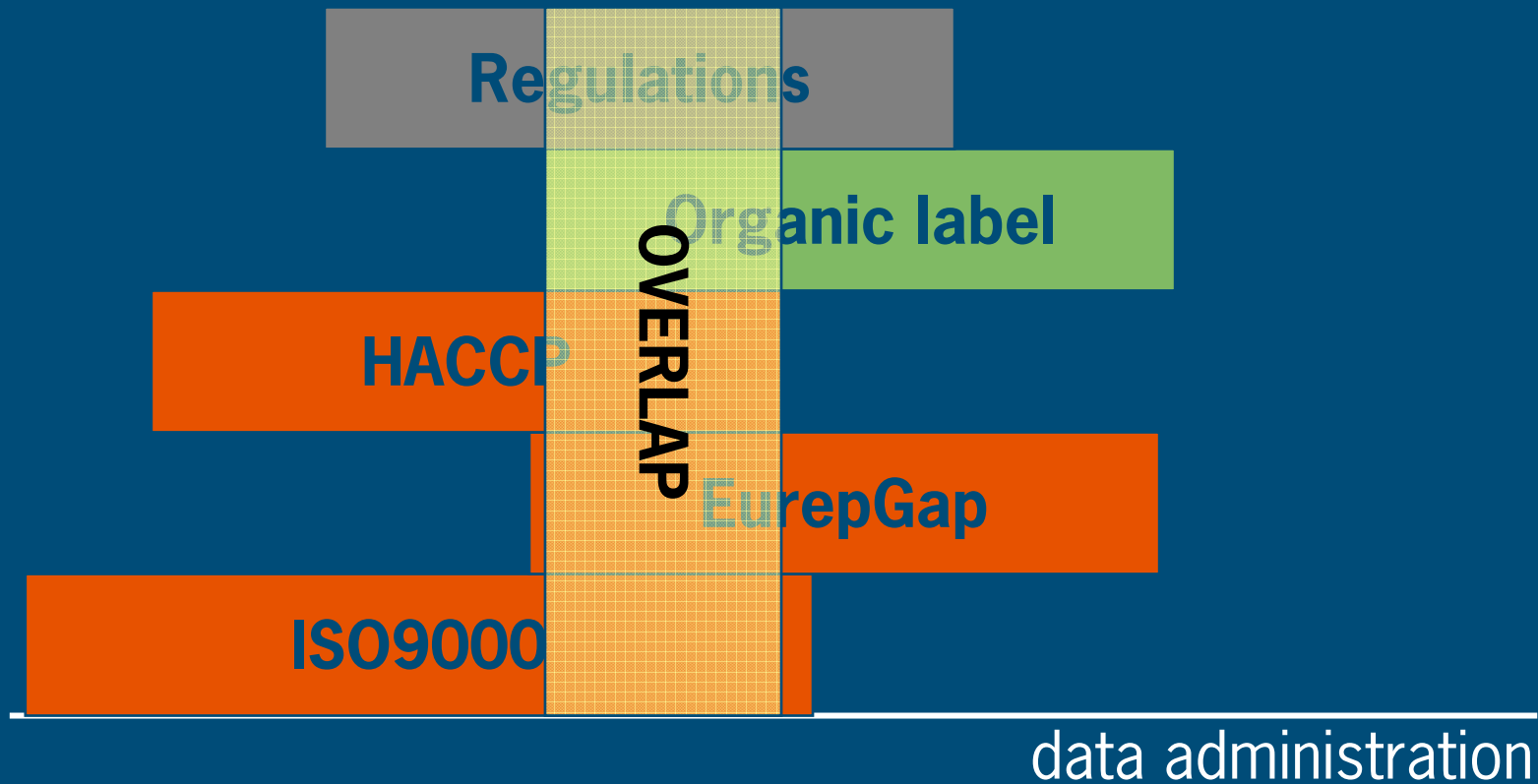
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What is Quality?

- meet specified requirements of product/service
 - demand driven
- product + how is it produced
 - 3P sustainability: People, Profit and Planet
- value driven

Quality standards + data = administrative burden



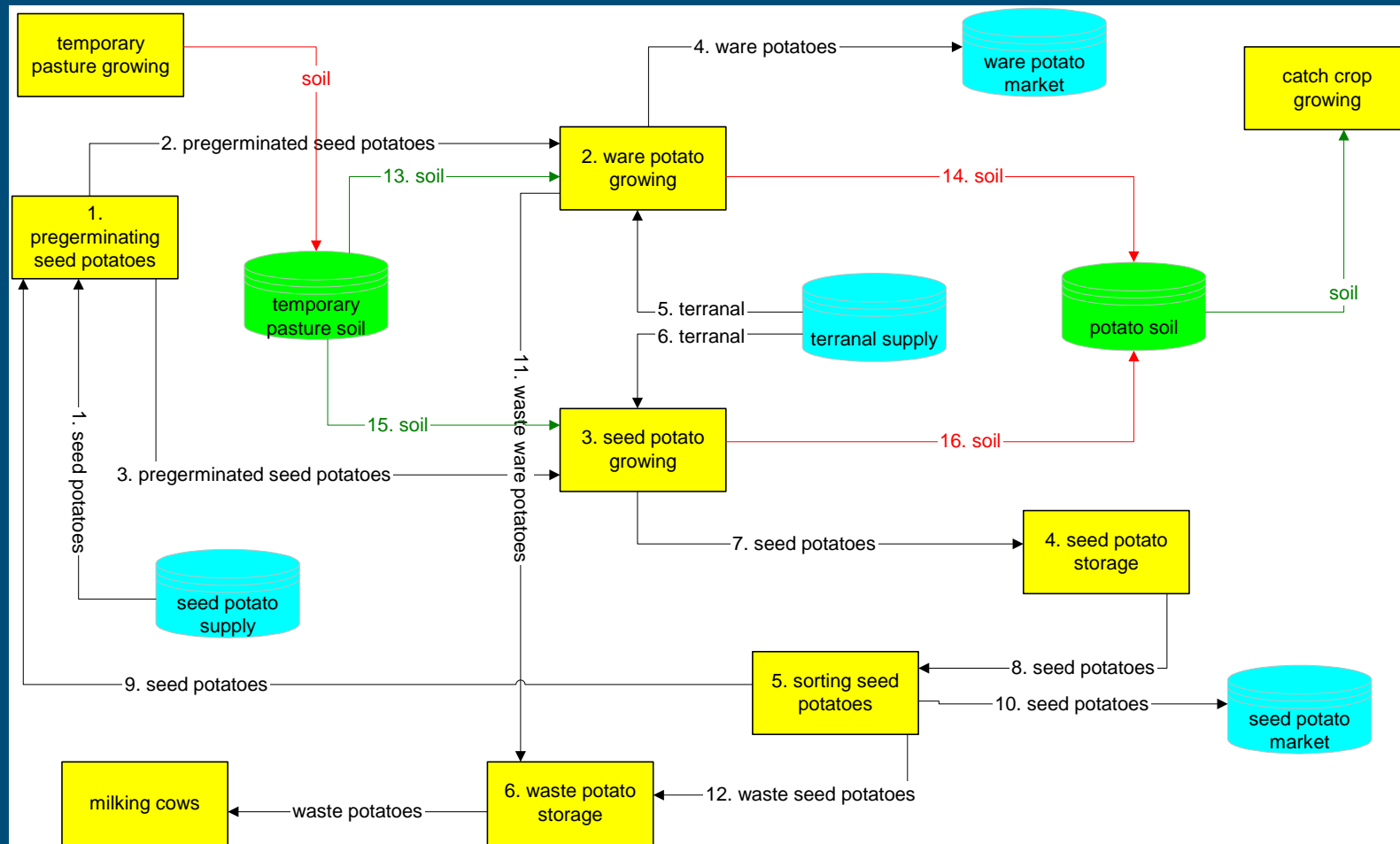
Sustainability (quality) assurance concept

- basis: preventive management
- production = series of management processes or operations linked with each other in time and space

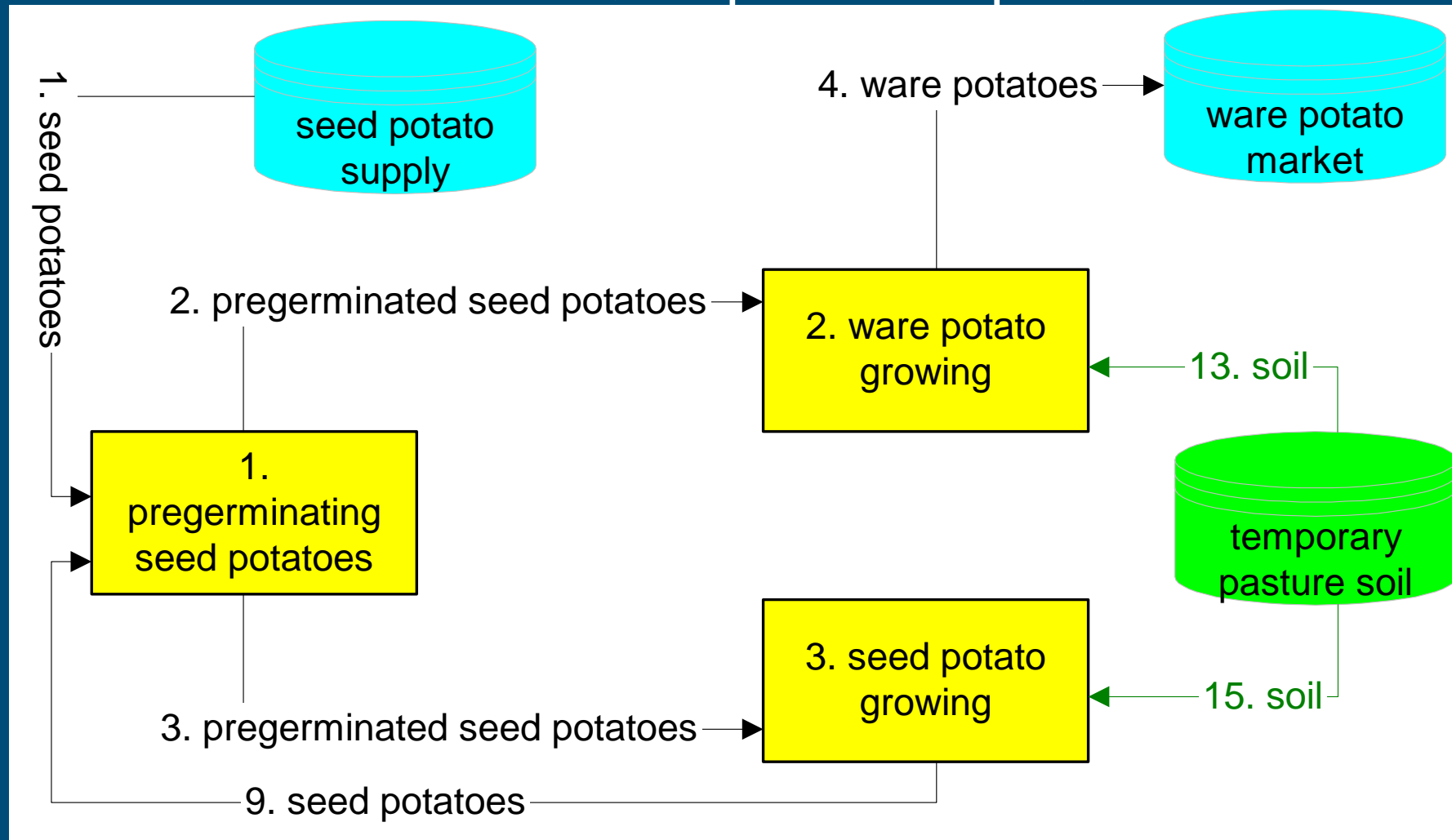
components:

- product flow model
- model of goals
- handbook for operational management

Product Flow Model (reality)



Product Flow Model (simple example)



Goal Hierarchy

Sustainability goals

- economic
- ecological
- social

Economic Goals

- Ware potato revenue
 - gross return
 - allocated costs
- Onion revenue
- Sugar beat revenue
- ...

■ = goal

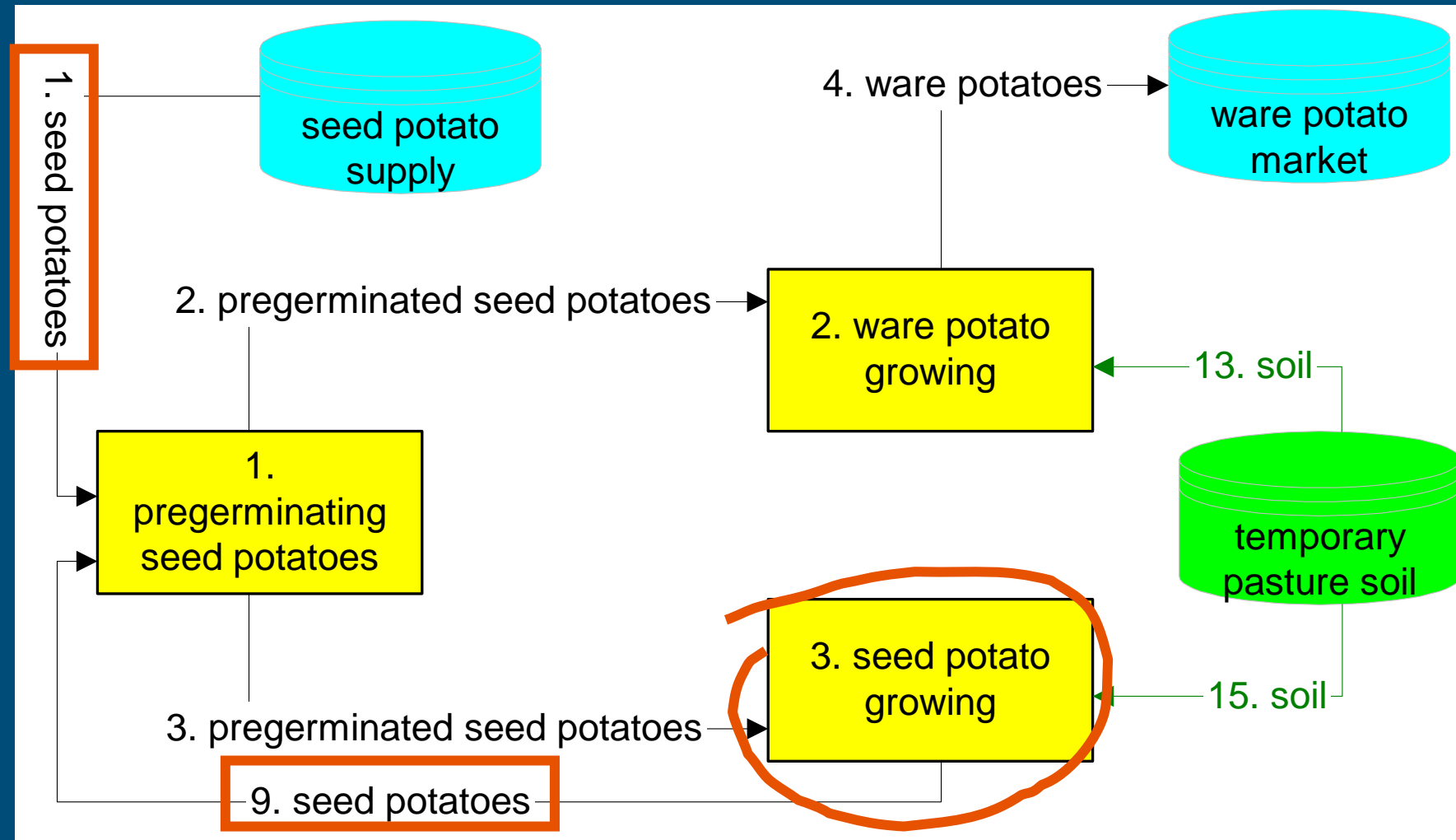
● = aspect

Gross return (ware potato revenue)

- price
 - quality
 - starting material
 - growing conditions
 - soil treatment
 - soil structure
 - market
 - yield

- = goal
- = aspect

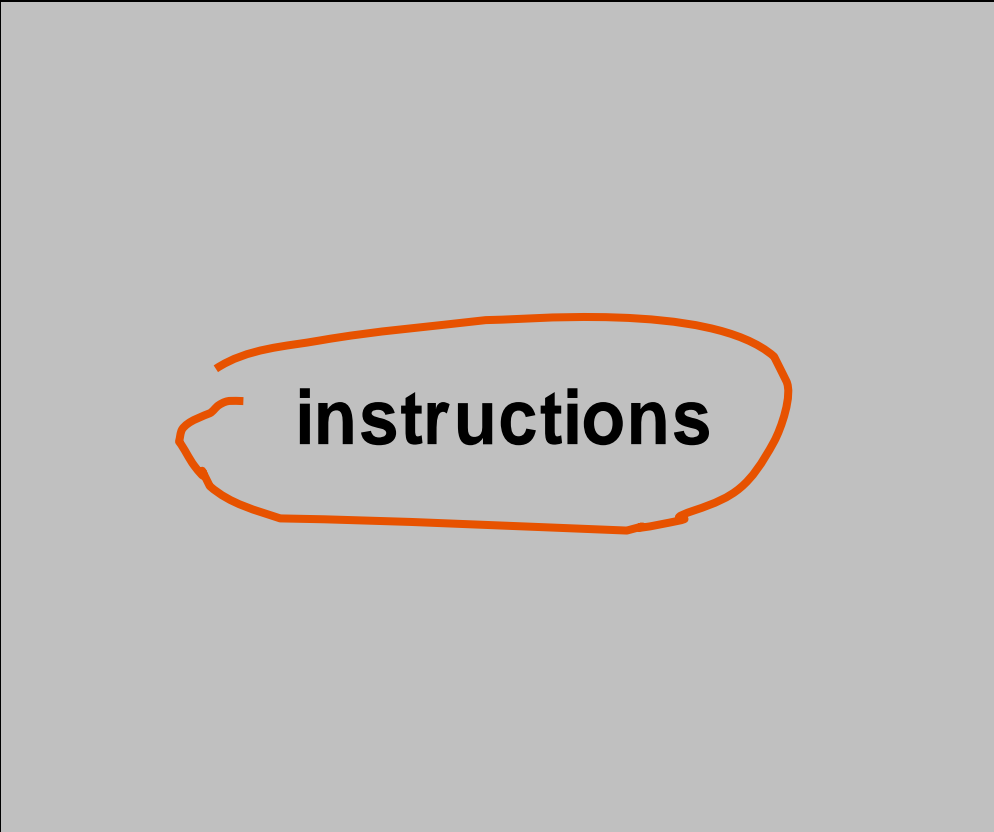
Connecting 'starting material' to product flows



Connecting to operations

3. seed potato growing				operations								
goal			unit	weight	seed bed preparation	sowing	rotary cultivating rows	selecting	haulm destruction	harvesting	boxing	plowing
min	max											
9. seed potatoes												
Phytophthora		0	%	4	1	3		9	9			
Rhizoctonia		10	%	4				9		9		
size	25	33	mm	3	3	9			9			
tuber defects		2	%	3						9	3	

Writing the handbook

production unit:	3 seed potato growing
operation:	3.5 haulm destruction
flow properties	
9. <i>seed potatoes</i>	
1. Phytophthora	
2. size	
critical control points	
1. timing	
2. weather	
3. soil condition	
4. haulm status before	
5. haulm status after	

Instructions examples

- Determine the time of haulm destruction. It should be as late as possible in order to reach a higher yield level. If a serious infection of Phytophthora is detected, the haulm should be burned immediately. *Write down the results on form x.*
- Determine the method of destruction (pulling, burning or slashing) according to the weather and soil conditions and the haulm status before destruction. *Write down the results on form x.*
- Check the haulm status after destruction. Carry out a second destruction if necessary. *Write down the results on form x.*

Summary

- Identify your goals and production system
- Connect them with each other and merge it into your farm-specific handbook that you can use for operational management
- Monitor and record essential information

Say what you want to do

Do what you say

Show others what you are doing

Conclusions

- Trivial example; reality more complicated
- Continuous improvement: quality emerges with the grip a farmer can get on product properties by monitoring and assurance throughout the complete production process
- Reduced administration: one fact, one place, multi-purpose → from *burden* to *joy*!

Bottlenecks and challenges

- Different information systems → standardize exchange and harmonize information
- Data owned/stored by several actors in the production chain → set up consortia/platforms (independent)
- develop common architecture/infrastructure (compare with e.g. WWW)
- Multiple-win: share information with e.g. scientific research, advisory services → improve and share knowledge

The end

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