Critical elements of MSAS efficacy

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Summary

- Components of MSAS

-Policy

-Compliance

-Enforcement

- The challenge of evaluating efficacy

ALOP, FSO, PO and the case of meat

Concepts

- Meat safety assurance systems (MSASs) comprise the whole set of measures aimed at guaranteeing the delivery of safe food for human consumption.
- The effectiveness of such systems depends mostly upon two key elements: policy (both public and private) and compliance. Each of them is a necessary but not sufficient condition to reach the goal.
- Performance based Vs specification based

MSAS components

-***Policy****:*

a) definite course or method of action selected from among alternatives and in light of given conditions to guide and determine present and future decisions

b) high-level overall plan embracing the general goals and acceptable procedures especially of a governmental body

-***Compliance****:* conformity in fulfilling official requirements

Enforcement*:* the act of compelling observance of or compliance with a law, rule, or obligation.

MSAS components

	Responsibility	Policy	Compliance assessment		Enforcement
			Who?	**How?**	
FBOs MSAS	FBO	Good practices + HACCP	Private RM (Quality team)	Monitoring	Internal rules
Public MSAS	CA	Law	CA	Audit	-
Public MSAS	FBO	Law	CA Risk Manager	Inspection, Audits, Samples	Sanctions, Advice, Prosecution
Private MSAS	FBO	Standard	Certification body	Audits	Commercial incentive

How many MSAS?

Private scheme (s)				2 or +	3 or +
Third country MSAS			2		2
EU MSAS		1	1	1	1
Own MSAS (HACCP)					
Special rules (national/local)					
	Small businesses Art. x reg 853/2004	**FB**	**Exporting FB**	**FB selling to LSRT**	**FB selling to LSRT and exporting**

Baseline

Art. 1(3) Reg 853/2003

Policy

- Hard to evaluate ex post
- A matter of **a priori scientific evaluation**

SCIENTIFIC EVIDENCES

+

Data from surveillance activities

Risk assessment to quantify and rank risk to allow intervention and resource allocation

RIA: Regulatory Impact Assessment (RIA) that is a systemic approach to critically assess the positive and negative effects of proposed and existing regulations and non-regulatory alternatives. As employed in OECD countries (Antle 1999) it encompasses a range of methods. It is an important element of an **evidence-based approach to policy making** (https://www.oecd.org/regreform/regulatory-policy/ria.htm).

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Compliance evaluation

	Activity	Approach	PRO	CONS
AUDITS	means a systematic and independent examination to determine whether activities and the related results of such activities comply with planned arrangements and whether these arrangements are applied effectively and are suitable to achieve the objectives;	Checklist based Risk based	-Standardization and reproducibility -High flexibility in capturing complexity	-Low flexibility in capturing complexity -Real situation? -Need for high level competence -Time consuming -Real situation
INSPECTION	Routinary examination of specific MSAS components		Real situation	Non systematic
LAB samples	Collection of samples	Risk based Statistical?	Directly measure PO	Sensibility Cost

Enforcement

		Policy effectiveness	
		Low	**High**
Compliance	**Low**	No food safety	Unknown food safety
	High	No food safety	ALOP

		Driver of compliance behavior	
		Contribution to industrial performance	**Administrative enforcement**
Net economic benefits of compliance/ consequences of non compliance	**Low**	Non compliance	Conditional non compliance
	High	Performance-driven compliance	Enforcement driven compliance

Modified from Henson, Spencer, and Julie A. Caswell. 1999. 'Food Safety Regulation: An Overview of Contemporary Issues'. Food Policy. https://doi.org/10.1016/s0306-9192(99)00072-x.

Enforcement

		Context		Effect	
		Public	Private	Big firm	Small firm
Positives	Incentives	V	V	Medium	High
	Certification/Logo	X	V		
	Rating (score on door)	V (Art.3 2017/625)	V		
Negatives	Sanctions (prosecution)	V	X	High	High
	Sanctions (€)	V	(V)	Low	High
	Rating (score on door)	V (Art.3 2017/625)	(V)		
	Naming and shaming	V	X	High	Low
	Product withdrawal	V	X	Medium/High	High
	Production STOPPED	V	X	High	Low
Neutral	Advice	V	X	Low	High

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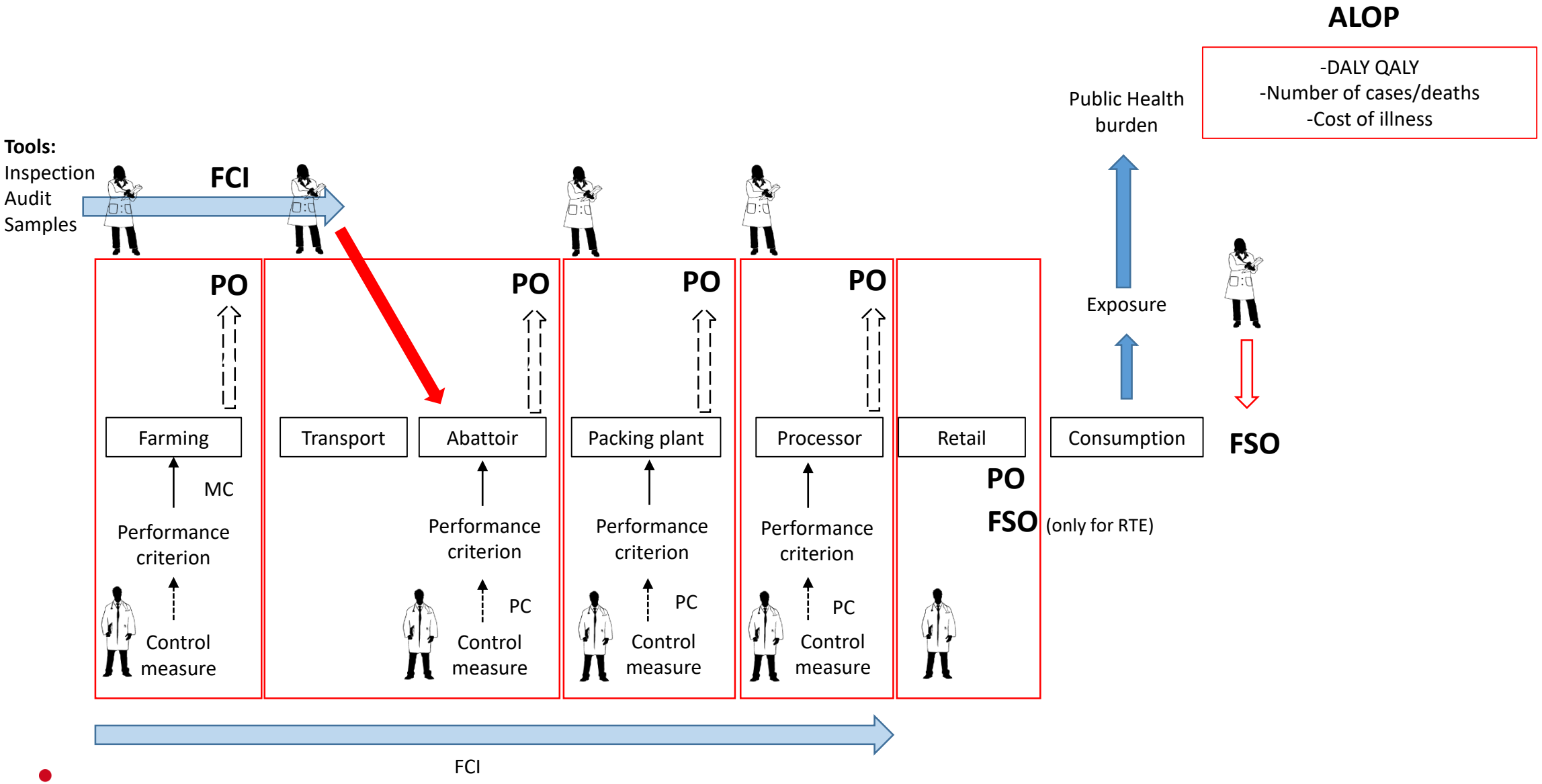
MSAS: What works?



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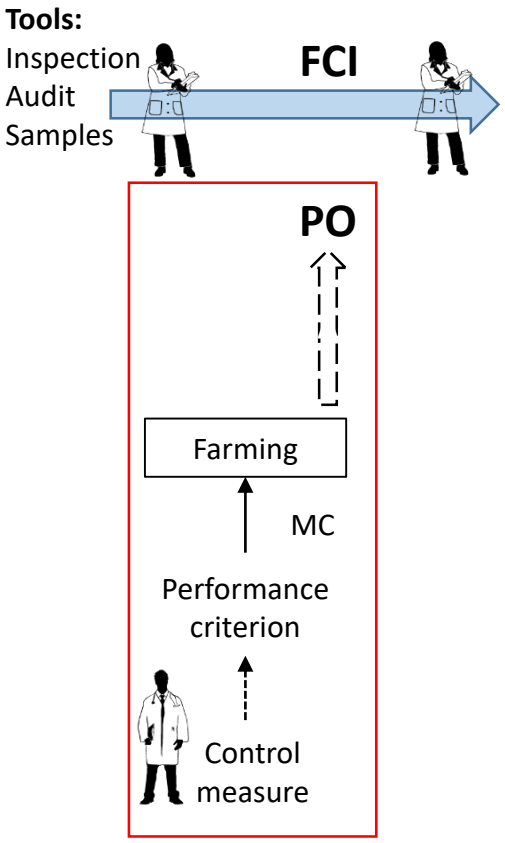
MSAS: What works? The example of Salmonella



Salmonella
Primary production
National control plans for poultry farms
-harmonized
-mandatory execution
-mandatory reporting

COMPLETE AND RELIABLE DATA

However, comparing FBO data with CA data (possible for broiler, turkeys) show statistical significant differences

(EFSA and ECDC (European Food Safety Authority and European Centre for Disease Prevention and Control), 2021. The European Union One Health 2020 Zoonoses Report. *EFSA Journal* 2021; 19(12):6971, 324 pp. https://doi.org/10.2903/j.efsa.2021.6971)

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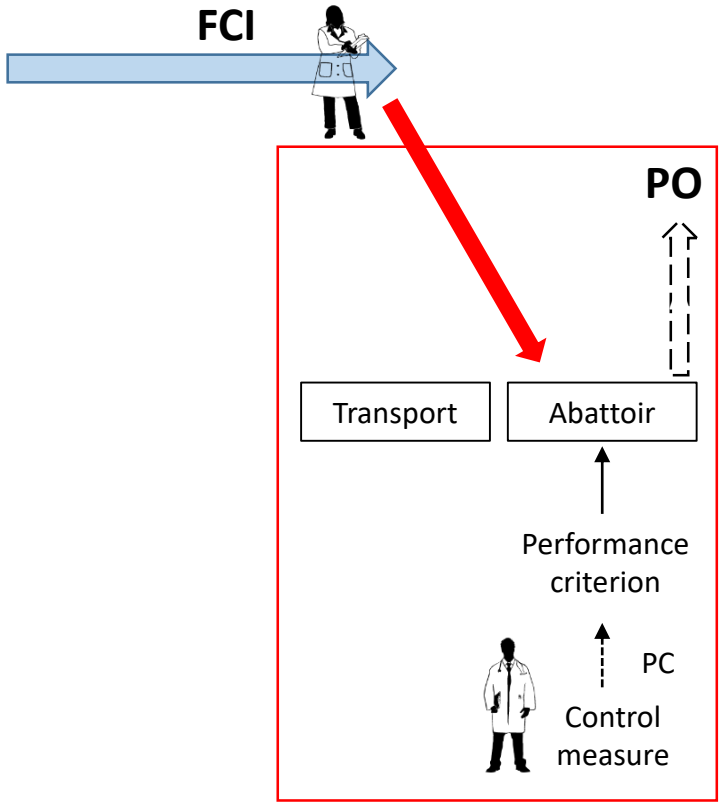
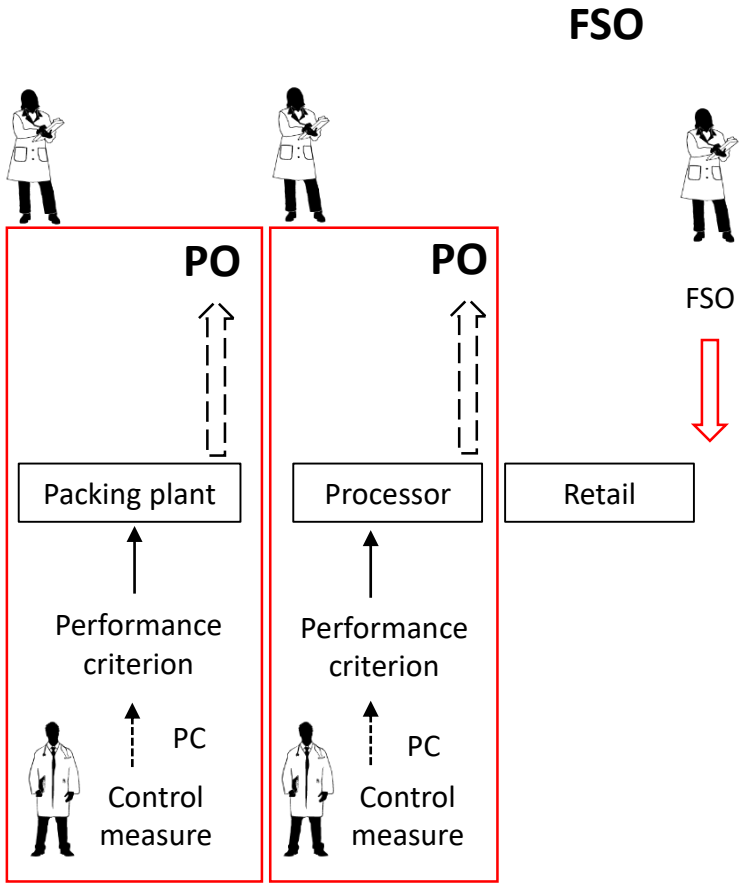


FCI

Slaughterhouse data
Process Hygiene Criteria (Reg. 2019/627)
Mandatory reporting
-official sampling plan
AND/OR
-use of FBO own-check data

Differences between FBO data and CA data

MSAS: What works? The example of Salmonella



Food data
Food safety criteria
Non mandatory reporting
Poor data (low number)

Conclusions

- The assessment of MSAS efficacy is a very **complex** issue
- The evaluation of ALOP achievement requires an explicit ALOP with clear metrics (Whic ALOP have been set?) and **reliable surveillance** data
- The evaluation of FSO requires well designed **sampling plan**, it is really appliable obly for RTE food
- The evaluation of **PO** is more feasible, however also in this case we need reliabel data to assess the level of compliance

Conclusions

- Critical elements with known effectiveness are:

-the availability of well-synthetized reliable experimental or observational data to allow the design of **evidence based policies**.

-the level of **food safety culture** both at professional and consumer level

-the fundamental role of **Risk manager**, both at private (FBOs) and public (CA) level

Thank you for your attention

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