

Farm advisory services in international debates

What can we learn from evaluation of farm advisory services?

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And with the collaboration of all the PRO AKIS team!



Funded by European Commission
GA 311994



Take-home messages

- ❖ Evaluation can help designing better public programs
 - Not only for accountability and checking how money is spent
 - But also to learn and understand what works where and why...
- ❖ No gold standard or silver bullet methods
 - But many methods are available according to each goal
- ❖ New collective organisations provide support to evaluators
 - Guidelines, working groups, workshops...
- ❖ There are opportunities to develop new evaluation of farm advisory services in Europe
 - Examples from USA or from the South...
 - But we need more data!



Outlines of the presentation

❖ 1. Introduction

- Why more evaluation of advisory services are needed in EU?

❖ 2. Diversity of goals and methods for evaluation

- Learning, measuring and understanding the effectiveness of farm advisory services

❖ 3. An example

- A systematic review of the effectiveness of farm advice related to pesticides and health of farm labour

❖ 4. Discussion

- Can we learn from the South?
- Discussion introduced by Professor **Chris Garforth**, Reading University



Why a focus on farm advice evaluation? (1/3)

- ❖ Farmers' access to knowledge still matters
 - For innovation
 - For business as usual... in a context that generates new knowledge needs (health, pesticide reduction, climate change...)

- ❖ Conditions of access to knowledge change
 - Changes in farmers population
 - *less farmers more employees; new entrants vs bigger farms; more educated farmers, new demands from women...*
 - Changes in AKIS
 - *decreasing public funds and new funding schemes, commercialization of services...*
 - New technologies
 - *ICTs, Decision Support Tools...*



Why a focus on farm advice evaluation? (2/3)

- ❖ New expectations about farm advice (in public policies and at field level) :
 - for facilitating access to knowledge
 - including for smallholders
 - for bridging research and practice
 - Front-office: articulating heterogeneous needs
 - Back-office: participation to R&D (experimentation, data bases)
 - for supporting networks and collective learning among “people involved in farm activities” (farmers, employees, rural entrepreneurs...)



Why a focus on farm advice evaluation? (3/3)

❖ Different conceptions of farm advisory services

- Methods
 - Group / individual / ICT based advice?
- Funding
 - Does commercialization work?
- Organisations
 - Front-office / back-office staff distribution
- Institutions
 - How to involve farmers' organisations?

...

❖ It appears clearly with FAS implementation (ADE 2009)

❖ → we need to better know what works, where... (and if possible, why...)



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Three main goals of evaluation of effectiveness

- ❖ To measure effectiveness
 - Assessing the specific impact of farm advice
 - Methods: econometric studies (RCTs, matching...)
- ❖ To understand
 - Mapping the impact pathways (causality frameworks) of farm advice
 - Based on scientific theories
- ❖ To learn
 - Evaluation as a learning device
 - Participatory approaches
- ❖ For more information:
 - Berriet-Sollic, M., Labarthe, P., & Laurent, C. (2014). Goals of evaluation and types of evidence. *Evaluation*, 20(2): 195-213.



Some illustrations in South context (e.g. FFS)

- ❖ To measure effectiveness
 - Assessing the specific impact of farm advice
 - → *Impact assessments of FFS* (Godtland et al. 2008)

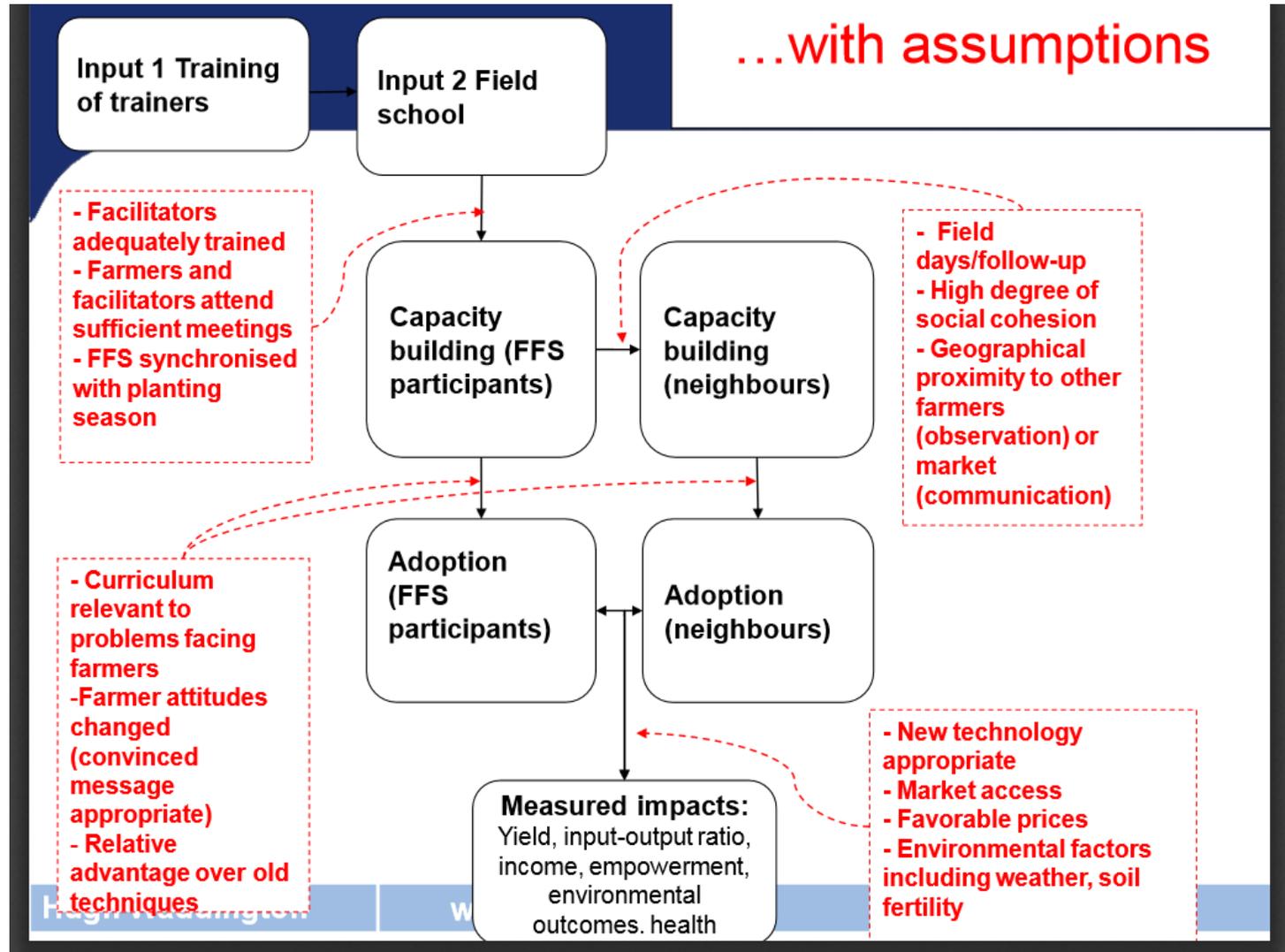
- ❖ To understand
 - Mapping the impact pathways (causality frameworks) of farm advice
 - → *Drawing hypothesis on mechanisms* (Birner et al. 2009, Waddington 2014)

- ❖ To learn
 - Evaluation as a learning device
 - -> *Soft System Methodology for evaluating advisors' training programs* (Rohs et Navarro 2008)



To understand / causal framework of FFS (Waddington

et al 2014)



To measure effectiveness of farm advice (1/2)

- ❖ A main issue: attributing outcomes to farm advisory services
 - → comparison of the outcomes of a group of people who benefited from farm advice with the outcomes of a control group
 - *How to limit the differences between the control group and the group of beneficiaries?*

- ❖ Different methods are available to address this issue
 - Experimental methods: Randomized Controlled Trials (RCTs)
 - *Random allocation of people between a group of beneficiaries and of non beneficiaries (Banerjee & Duflo 2003)*
 - Quasi-experimental methods: difference-in-difference, propensity score matching, longitudinal studies...
 - *Non random allocation*



To measure effectiveness of farm advice (2/2)

- ❖ There is no gold method or standard solution
 - RCTs are the best method for solving attribution issue but:
 - *Raise many ethical issues*
 - *Produce very contextualized knowledge*
 - Other methods are more suitable for farm advisory services
 - *But are less powerful to solve the attribution issue (i.e. which part of the observed change can be really attributed to the program)*

- ❖ A need to choose the method that fits with the goal and context of evaluation

- ❖ But in any case...
 - a need for data!
 - And for syntheses of existing evidence!
 - *<-> e.g. systematic reviews of academic literature*



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Goal and history of systematic reviews

- ❖ Methodology elaborated in medical sector
- ❖ Aim = to make it possible to make a judicious use of the best available knowledge in the conditions of the practice
- ❖ Content = review of academic literature based on very precise questions raised in practice
 - Is treatment B effective for curing disease A?
- ❖ Collective organisations & Guidelines are available
 - Cochrane, Campbell...
- ❖ The method has been applied to farm advice
 - E.g. about the effectiveness of a specific method of farm advice (e.g. Waddington et al. 2014 about Farmers' Field Schools-FFS)



A standardised method (guidelines)

Step of the Systematic review	Description
Step 1. Planning of the work	
Phase 0	Identifying the practical knowledge needs that shall be addressed in the systematic review
Phase 1	Proposition of the proposal
Phase 2	Preparation of the search protocol (identifying relevant keywords, sets of academic data bases) from which the review will be implemented
Step 2. Implementation	
Phase 3	Debates and agreement on the question to address (may involve interactions with practitioners)
Phase 4	Agreement on criteria of inclusion of studies to include in the study (internal quality, relevance...)
Phase 5	Evaluation of the quality of the study selected
Phase 6	Data Analysis
Phase 7	Synthesis
Step 3. Writing of the report	
Phase 8	Report and recommendation

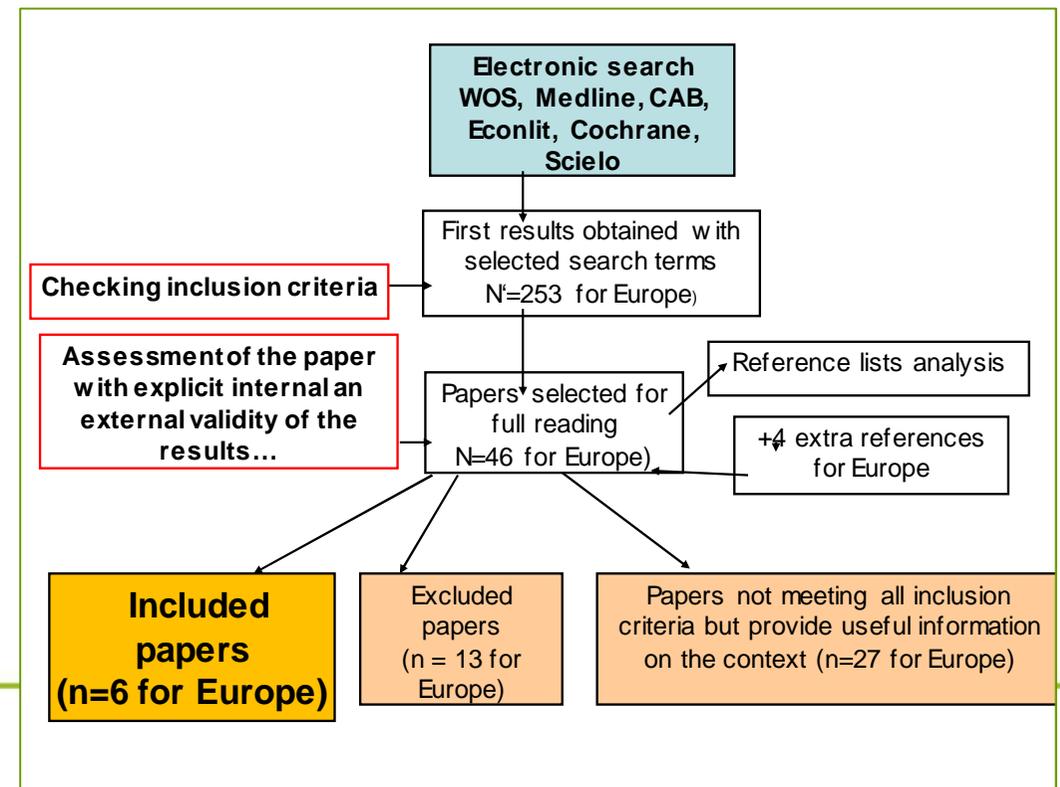


An example of systematic review

C. Laurent et al. (2014) (1/3)

- ❖ Use of pesticides and occupational health of farm labour
 - Pesticide use = major health hazard
- ❖ Assessment of the effectiveness of advisory services
 - An issue for FAS (1782/2003/CE, 128/20019/CE, ADE 2009)

- ❖ For details on the methodology & results
 - See Laurent et al. (2014)



An example of systematic review

C. Laurent et al. (2014) (2/3)

❖ Result (1/2)

- **only one study in the EU provides data**

Authors	Type of study	Conclusion
<ul style="list-style-type: none">• <i>Keifer M. 2000</i>	Review	"We found no study that examined the effect of prevention programs on pesticide poisoning per se"
<ul style="list-style-type: none">• <i>De Roo et al. 2000</i>• <i>Lehtola et al 2008</i>• <i>Rautinen et al. 2009</i>	Review.	"Measures to decrease these risks [pesticides health hazards] have been seldom evaluated"
<ul style="list-style-type: none">• <i>van den Broucke, Colemont 2007</i>• <i>Colemont, van den Broucke 2008</i>	Cross section survey (510 farmers)	Determinants of occupational health related to behaviour in Belgium. Correlations between behavioural risk factors and level of education (<0), and age (>0)



An example of systematic review

C. Laurent et al. (2004) (3/3)

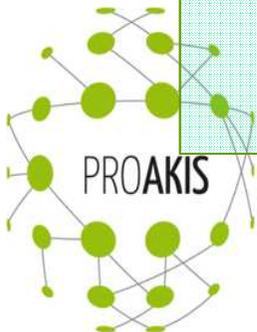
- ❖ Result (2/2): Learning from foreign experiences.
 - **Assessments are possible and implemented (e.g. in USA)**
- ❖ Different choices of indicators of farm advice outcomes
 - Knowledge acquisition (e.g. risk perception, ability to read labels)
 - Changes in practices (e.g. to wear adapted protection equipment)
 - Level of exposure (e.g. skin contamination)
 - Health impact (e.g. health related expenses)
- ❖ The choice of indicators is a key dimension of the usefulness of evaluation
 - Indicators measuring visible results for people are more eager to induce change in practice
 - e.g. measure of skin contamination
 - <-> evaluation can enhance the effectiveness of advice



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Conclusions (1/2)

- ❖ New methods are available to evaluate farm advisory services
 - To measure impact of farm advice
 - To understand mechanisms
 - To learn

- ❖ There are new collective, guidelines, arenas of debates...

- ❖ No gold standard or unique recipe
 - ❖ A need to adapt the method to the goal and context of evaluation

- ❖ Methods have been applied to farm advisory services methods
 - More and more in South countries
 - Almost not in Europe



Conclusions (2/2)

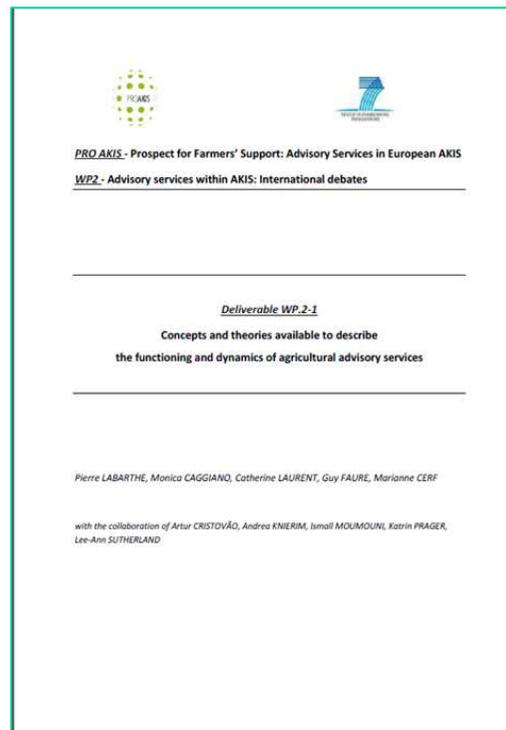
- ❖ To apply such methods, it is necessary to produce and provide new sets of data
 - Data about farmers' access to services
 - Data bases connecting farmers' access to services and data about farmers' practices or farm performance

- ❖ To Launch a debate about innovative procedures for producing such data
 - Citizen sciences
 - Assessment of local knowledge
 - Monitoring of public policies
 - Data base from ICTs and DSTs



Thank you for your attention!

You can learn more with the deliverables of WP2



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PROAKIS Final Conference, Brussels, May 20th

Funded by European Commission
GA 311994



Discussion

Professor Chris GARFORTH
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