Use of a livestock-adapted ADKAR® change management model for reducing AMU

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AACTING 2019

Bern, Switzerland

FACULTY OF VETERINARY MEDICINE
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GHENT UNIVERSITY

i-4-1 HEALTH

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GD

avans hogeschool

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CIDER

GGD West-Brabant

AmphiA

et:z

GGD Brabant-Zuidoost

ADMIRAAL DE RUYTER ZIEKENHUIS

UCR University College Roosevelt

GGD Gemeenschappelijke Gezondheidsdienst Zeeland

elkerliek ZIEKENHUIS

ZorgSaam Zeeuws-Vlaanderen

UZA Kennis / Ervaring / Zorg

Provincie Antwerpen PROEFBEDRIJF PLUIMVEEHOUDERIJ

GGD Limburg-Noord

UZ Universitair Ziekenhuis Gent

Universiteit Antwerpen

UNIVERSITEIT GENT

universiteit hasselt

Vlaams Agentschap Zorg & Gezondheid

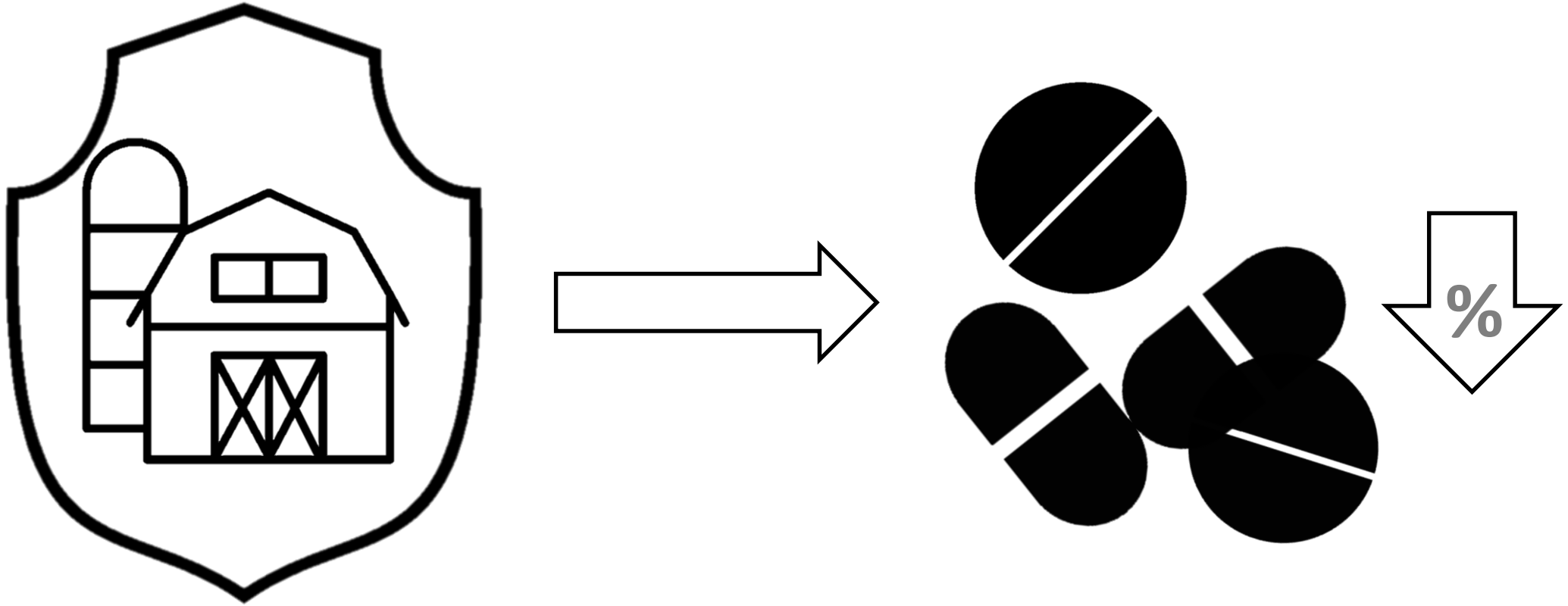
GGD ZUID LIMBURG

APPLIED MATHS

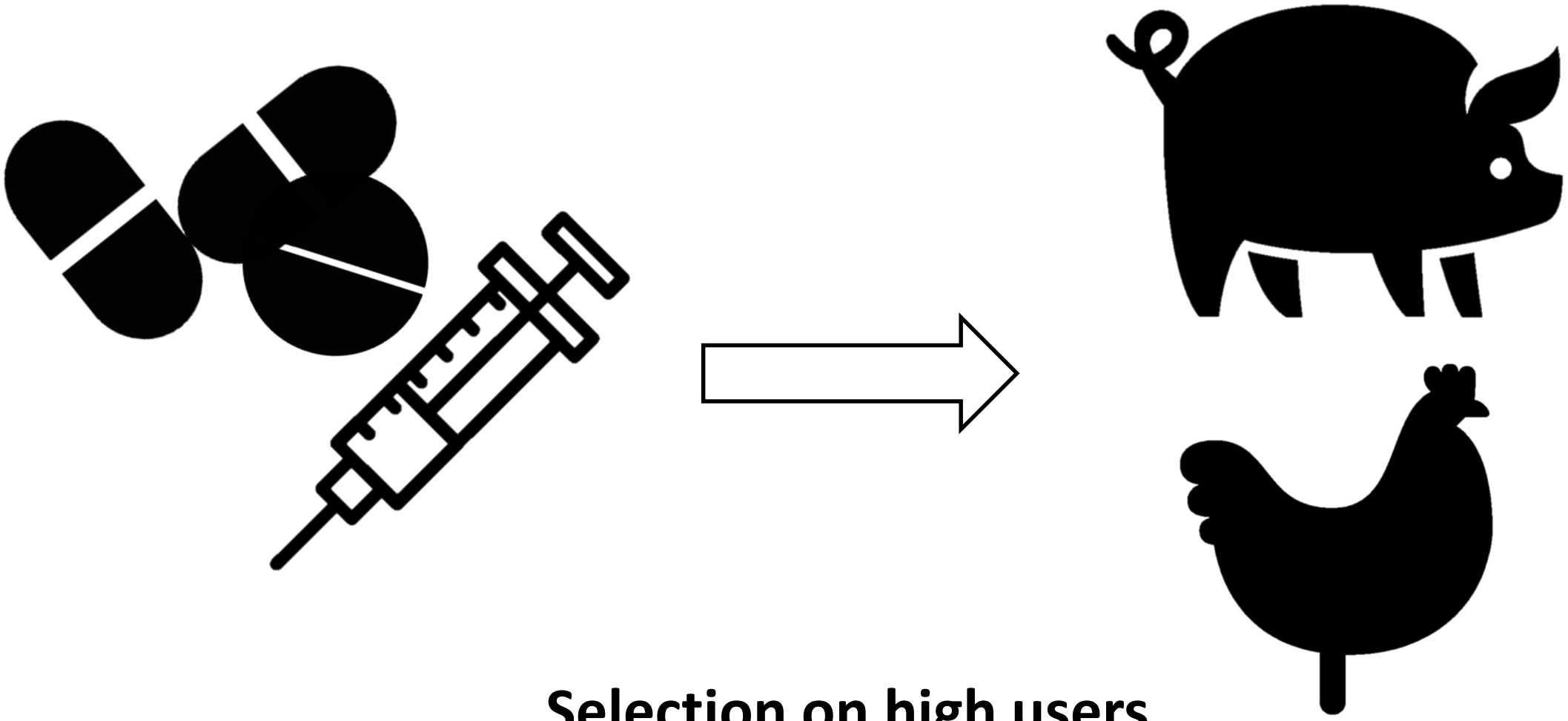
UZ LEUVEN

azM

Improve farm health to reduce AMU

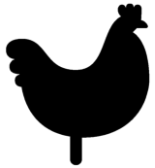
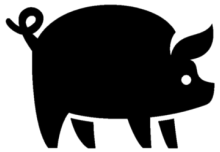


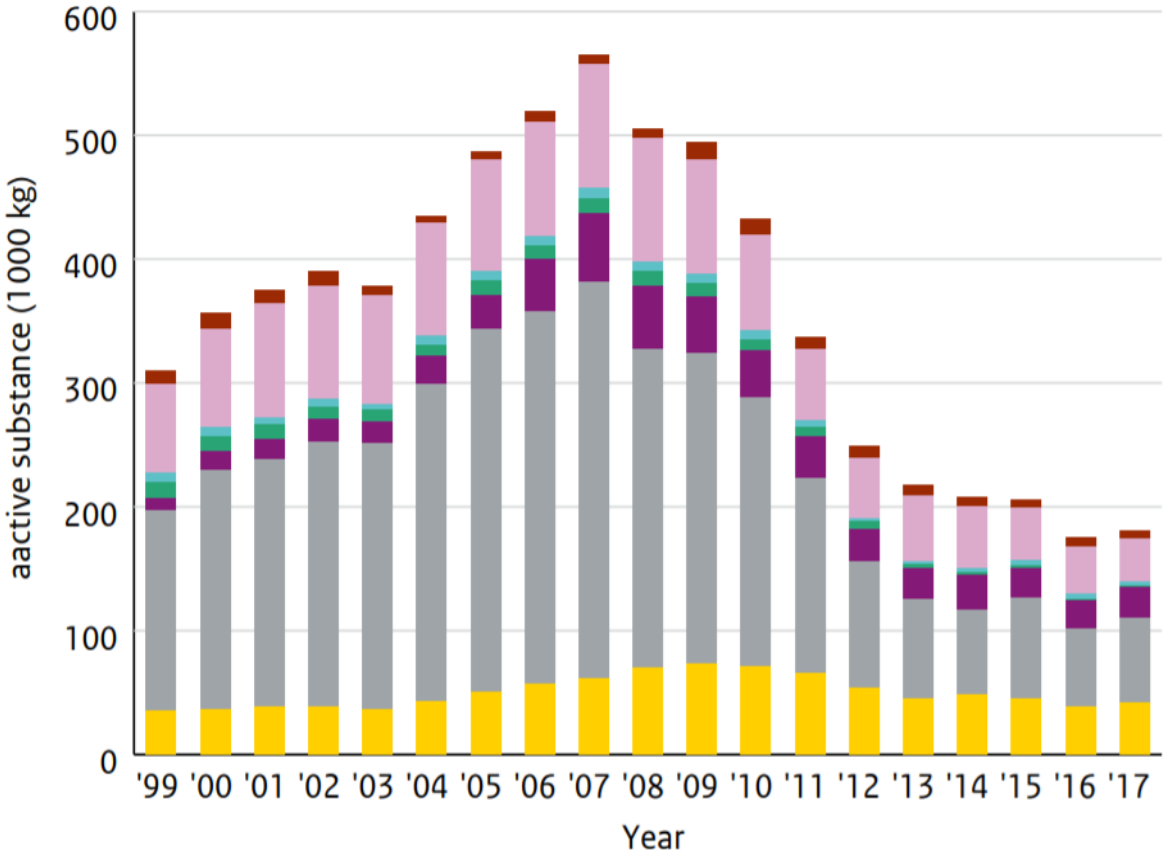
AMU on pig and broiler farms

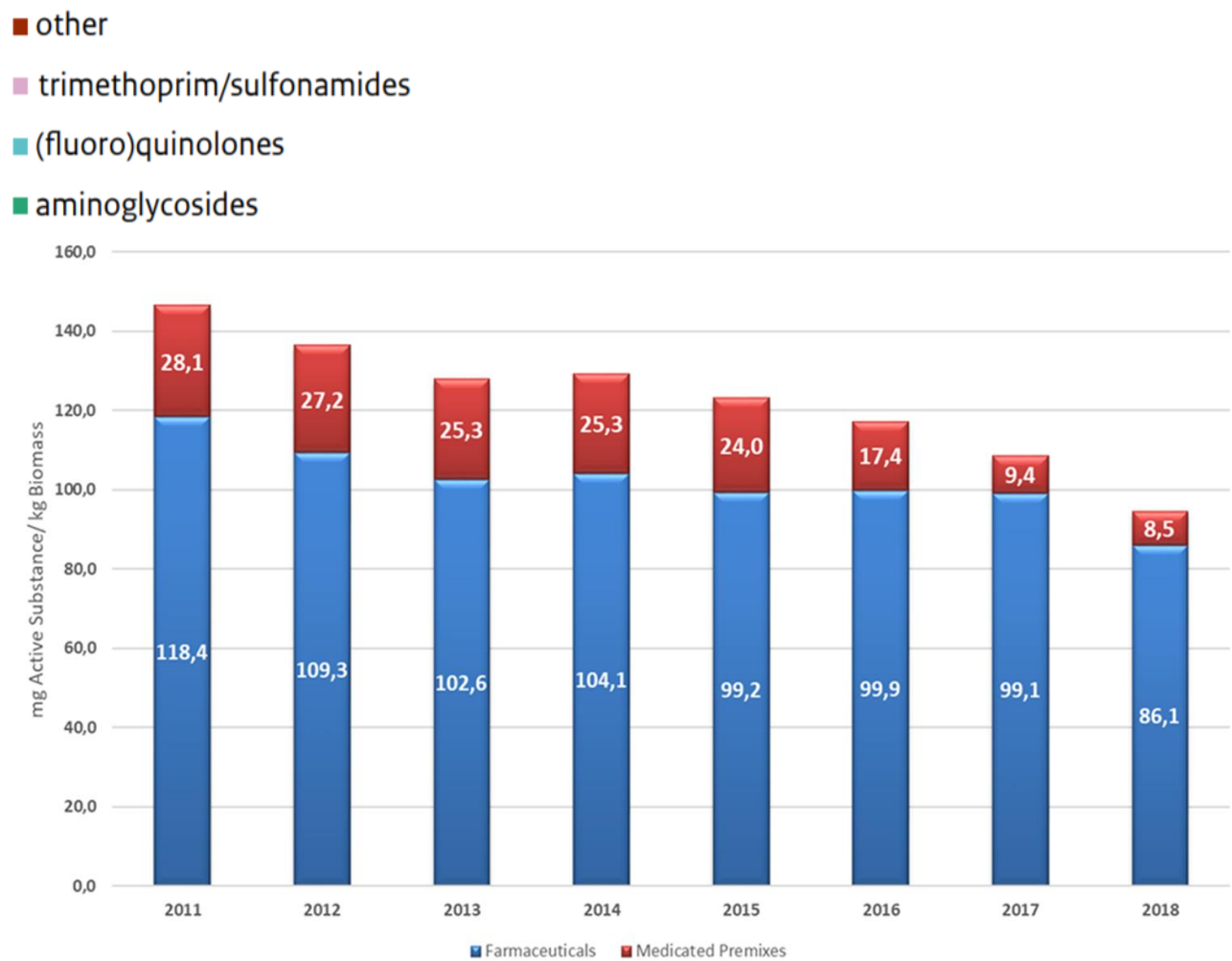


Selection on high users

Reduction in AMU 2018

	Belgium	the Netherlands	
Reduction in poultry 	+13% Ref 2017	-68% Ref 2009	+26,3% Ref 2017
Reduction in pigs 	-26% Ref 2014	-58% Ref 2009	
Total reduction	-35,4% Ref 2011	-63,8% Ref 2009	


aactive substance (1000 kg)
600
500
400
300
200
100
0
'99 '00 '01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11 '12 '13 '14 '15 '16 '17
Year


other
trimethoprim/sulfonamides
(fluoro)quinolones
aminoglycosides
mg Active Substance/ kg Biomass
160,0
140,0
120,0
100,0
80,0
60,0
40,0
20,0
0,0
28,1
27,2
25,3
25,3
24,0
17,4
9,4
8,5
118,4
109,3
102,6
104,1
99,2
99,9
99,1
86,1
2011
2012
2013
2014
2015
2016
2017
2018
Farmaceuticals
Medicated Premixes

Sociological factors

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doi:10.3168/jds.2009-2794

Debunking the myth of the hard-to-reach farmer: Effective communication on udder health

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ABSTRACT

Worldwide, programs to control mastitis are implemented using different strategies to reach farmers. Even though education materials and best practices may be technically optimal, they need to be used to be successful. Thus, effective communication with farmers is essential in order to change their behavior and to improve their farm management. During a Dutch national mastitis control program, a substantial number of farmers seemed to be hard to reach with information on udder health. Consequently, this study was designed to provide insight into the attitude and motivation of such farmers. In the period of October 2007 to July 2008, 24 in-depth, semistructured interviews were conducted with farmers whose veterinarians considered to be difficult to approach with advice on udder health management (8 practices, 3 farmers from each practice). The interviews included questions about the farms and the farmers, their attitude and behavior regarding mastitis, and their information sources and social environment. information on udder health. Consequently, this study can contribute to the optimization of future programs designed to control and prevent diseases.
Key words: mastitis, communication, education, extension

INTRODUCTION

Mastitis is one of the main health issues in dairy production (Bradley, 2002; LeBlanc et al., 2006). As a result, mastitis control programs are implemented in various countries using different strategies to reach farmers. Most of these control programs focus on the development of education materials and recommendations for best practices. Although this information may be technically optimal for decreasing mastitis, to be implemented it has to be effectively and consistently communicated to farmers (Chase et al., 2006; LeBlanc et al., 2006). Mastitis control programs worldwide find that, despite all efforts, not all farmers are reached by mastitis information. A study of a national mas-

Feature Series – Review Article

Challenging the myth of the irrational dairy farmer; understanding decision-making related to herd health

E Kristensen*§ and EB Jakobsen†

Abstract

Veterinarians working with dairy cows are suggested to refocus their efforts from being task-oriented providers of single-cow therapy and develop themselves into advice-oriented herd health management advisors. The practising cattle veterinarian's ability to translate knowledge into on-farm application requires a profound understanding of the dairy farm as an integrated system. Consequently, educating and motivating farmers are key issues. To achieve such insight the veterinarian needs to work with several scientific disciplines, especially epidemiology and (behavioural) economics. This trans-disciplinary approach offers new methodological possibilities and challenges to students of dairy herd health management.

Advisors working with dairy herd health management may sometimes experience that farmers do not follow their advice. Potentially, this could lead to the interpretation that such farmers are behaving irrationally. However, farmers who are confronted with advice suggesting a change of behaviour are placed in a state of cognitive dissonance. To solve such dissonance they may either comply with the advice or reduce the dissonance by convincing themselves that the suggested change in management is impossible to implement. Consequently, herd health management advisors must understand the fundamental and on science and the authors' experience is presented. The aim is to guide practising cattle veterinarians into a personal learning process considered necessary for them to be recognised by farmers as trustworthy dairy herd health advisors.

KEY WORDS: *Herd health management, mixed-methods research, motivating farmers, educational framework, trans-disciplinary, evolving veterinary science*

Introduction

In this review, we reflect on various cognitive processes involved in dairy farmers' voluntary decision-making related to herd health management programmes, and how these processes affect farmers' cooperation with veterinarians in advice-giving situations. Farmers' involuntary decisions, however, e.g. decisions following new legislation, are equally interesting from a decision-making perspective. Involuntary decisions are beyond the scope of this review, and interested readers are therefore recommended to study the work of, for example, Tenbrunsel and Messick (1999), Dernburg *et al.* (2007), and Heffernan *et al.* (2008).

The major points of progress and challenges in dairy herd health management were discussed, in an already classical paper, by

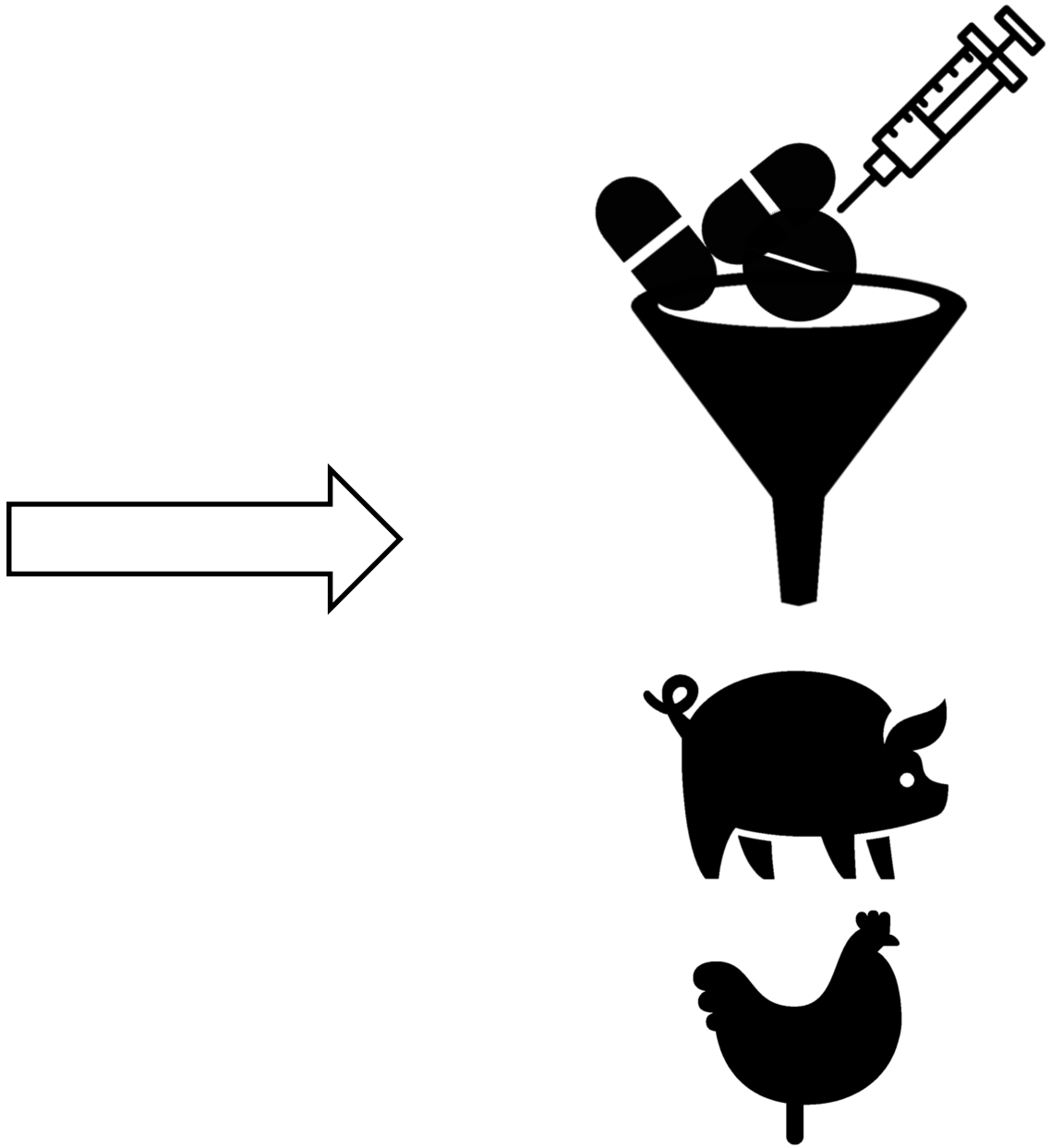
A

D

K

A

R



Hiatt, 2006

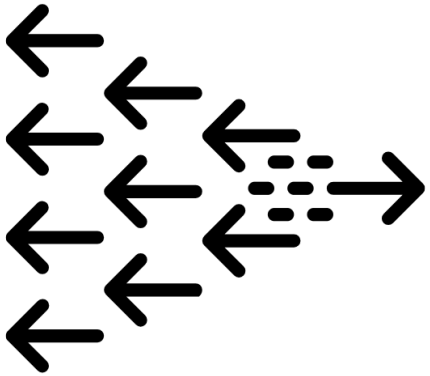
Livestock-adapted ADKAR®

Livestock-adapted ADKAR®

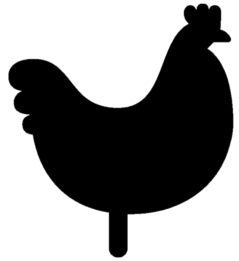
ADKAR building block	Description building block	Score	Explanation scores
A (wareness)	Represents the awareness that AMU in livestock production should be reduced while this is a risk for introduction of antimicrobial resistant bacteria in animals and men.	1	Farmer missed all information regarding AMU and AMR. Is not aware there are reduction goals, nor is aware AMU is a risk for AMR.
		2	Farmer is aware of the recommendation to reduce AMR, but is completely denying the problems related to AMR.
		3	Farmer is aware that AMR should be reduced, but contests the role AMU in livestock. Mentions the role of AMU in human medicine and/or the role of AMU in dogs and cats.
		4	Farmer is aware that AMU should be reduced, and accepts the reduction goals.
		5	Farmer is fully aware that AMU should be reduced, as he accepts the risks and opportunities for livestock production. He takes responsibility for the AMU in the farm and embraces the reduction goals for the farm.
D (esire)	Represents the personification of the awareness. "Does the farmer himself want to reduce AMU in his farm?"	1	Farmer states: "This is not my problem. It does not concern me".
		2	Farmer will reduce, but is not the first adaptor. Farmer states: "my "neighbour" should also reduce".
		3	Farmer wants to reduce, but slowly. The goal is not to reach the lowest use possible, just enough is also OK.
		4	Farmers goal is to reach the lowest AMU possible, with equal costs.
		5	Farmers goal is to reach the lowest AMU possible, even if there are considerable costs related to the reduction.
K (nowledge)	Represents the knowledge and skills of the farmer to implement measures to improve health and to reduce the need for antimicrobial treatment.	1	It is not clear what is causing the health problems in the farm. It is not possible to draw up an action plan. The farmer and his network really do not know where to start.
		2	Low or inaccurate knowledge, experience or skills which are needed for the execution of the action plan are available for the farmer. Or, the underlying cause of the problem is not yet identified.
		3	Information on health problem(s) is available for the farmer, action plan can be drawn up.
		4	Information is available, but some discussion about the implementation. Support for the farm and farmer is needed to implement change.
		5	Information is available, Action plan is accepted and knowledge and skills are sufficiently available at level of

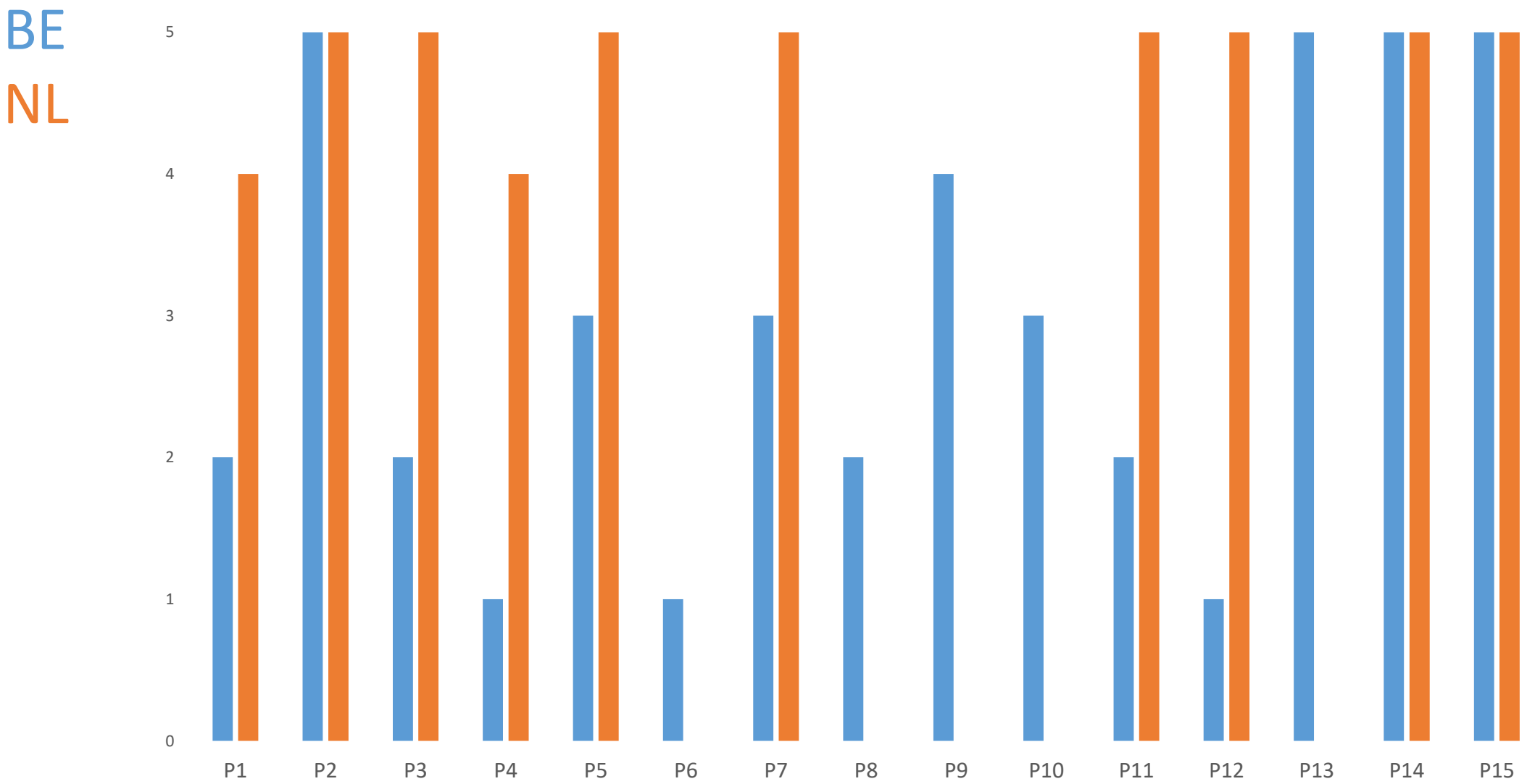
Results

ADKAR



ADKA(R): initial situation



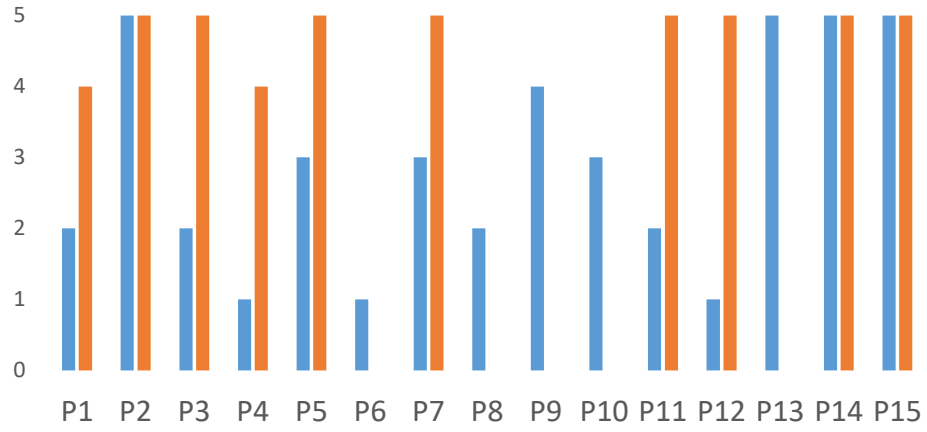


ADKA(R): initial situation

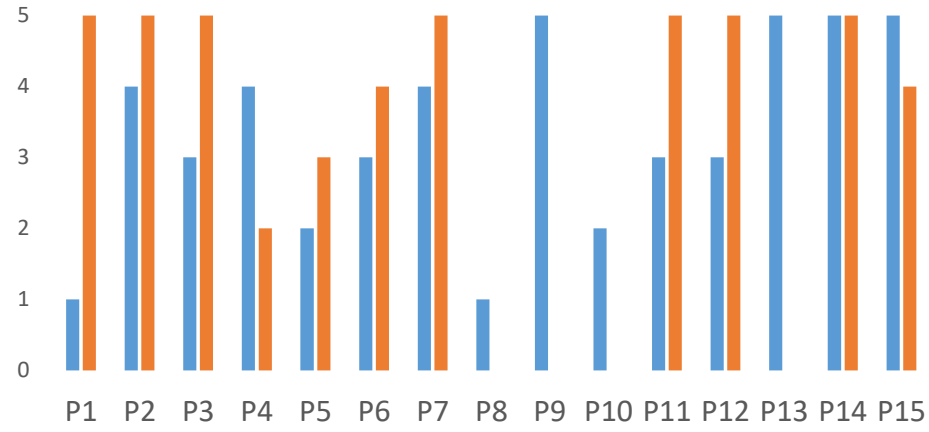
BE

NL

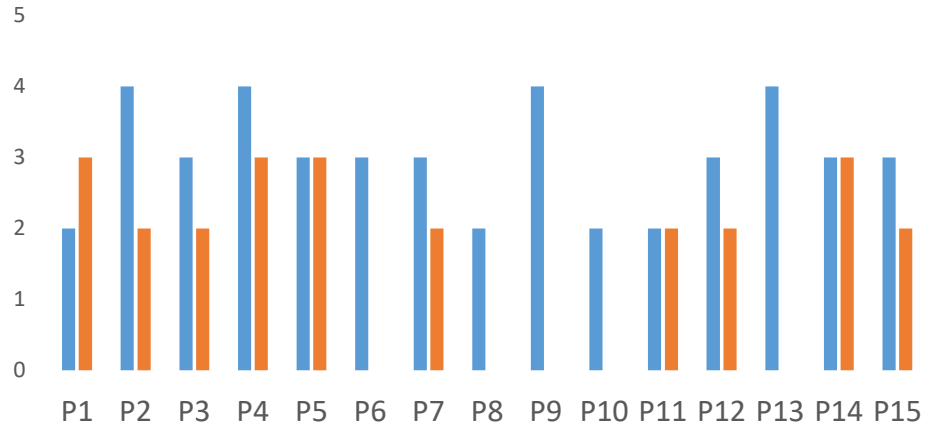
Awareness



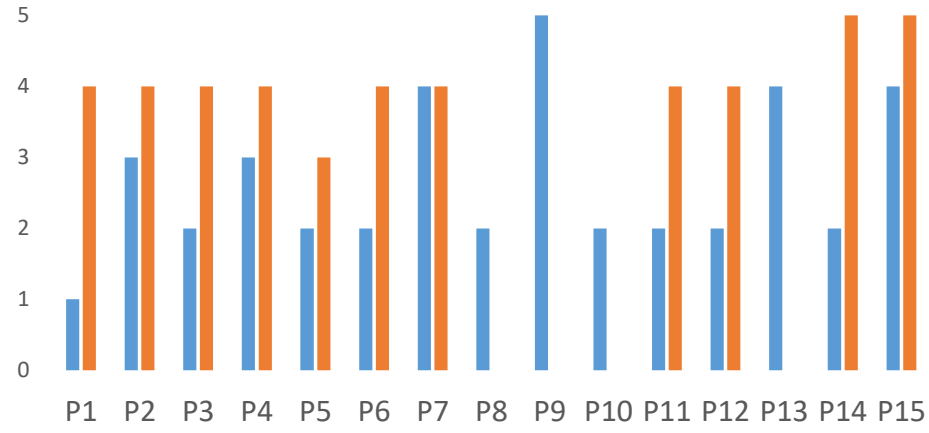
Desire



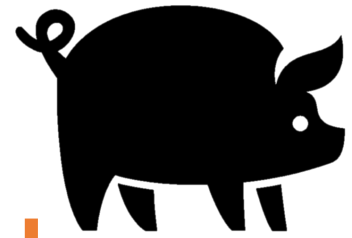
Knowledge



Ability



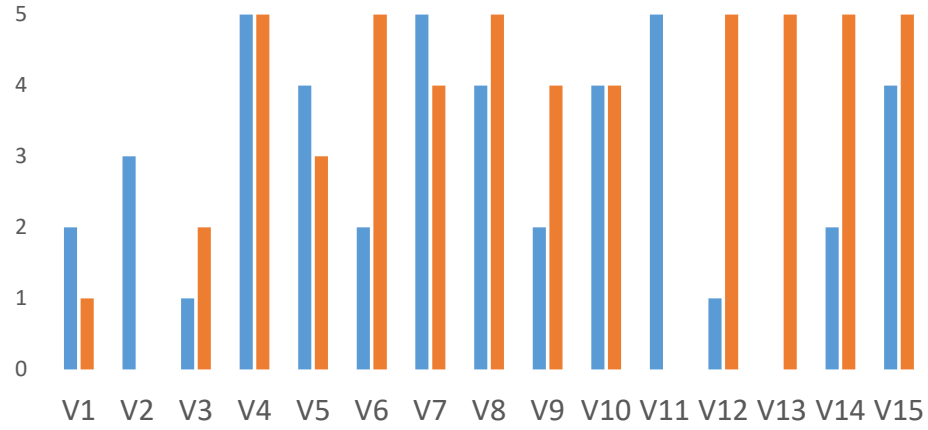
ADKA(R): initial situation



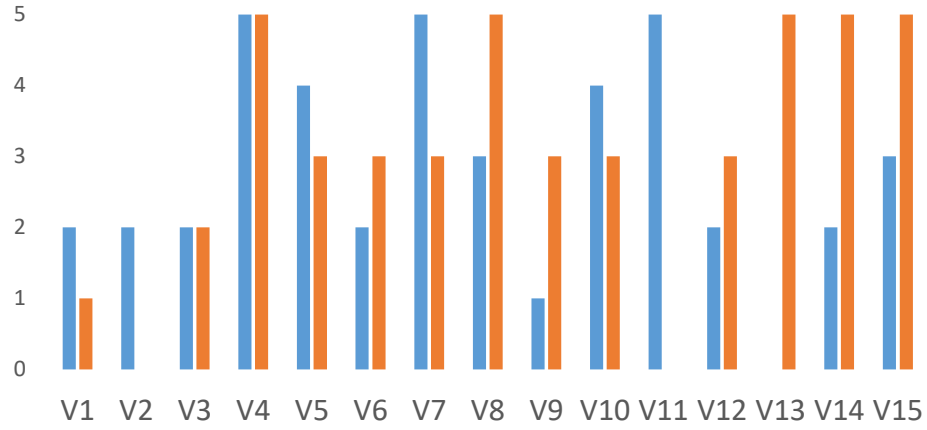
BE

NL

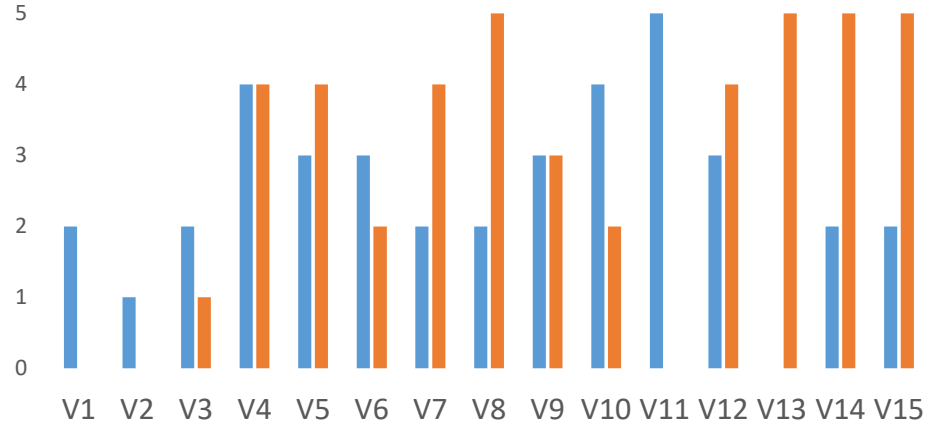
Awareness



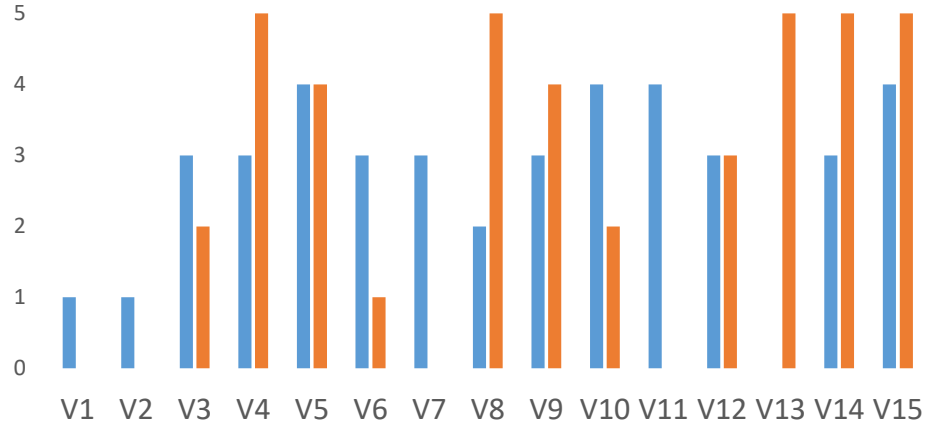
Desire



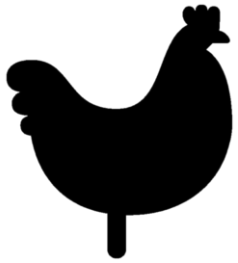
Knowledge

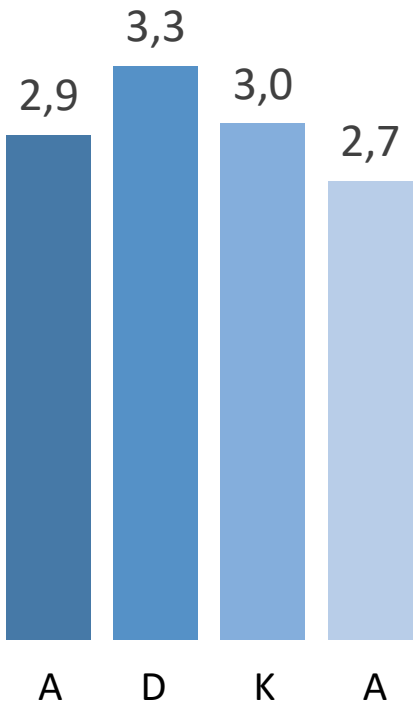


Ability

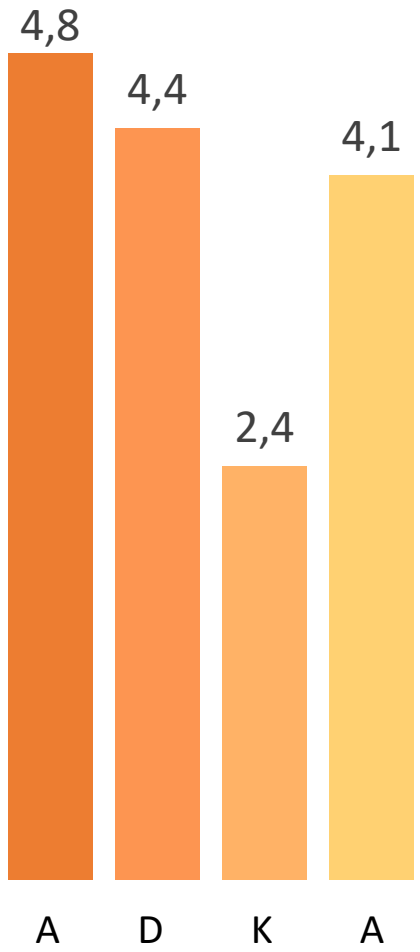


ADKAR initial situation: averages

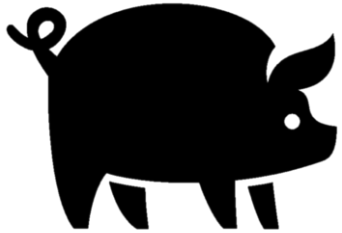


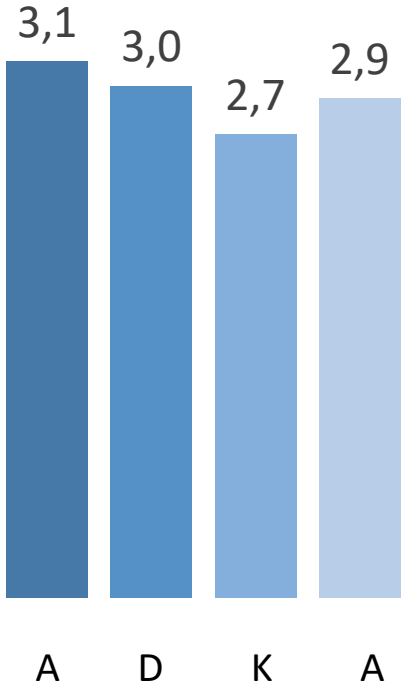


Belgium



the Netherlands



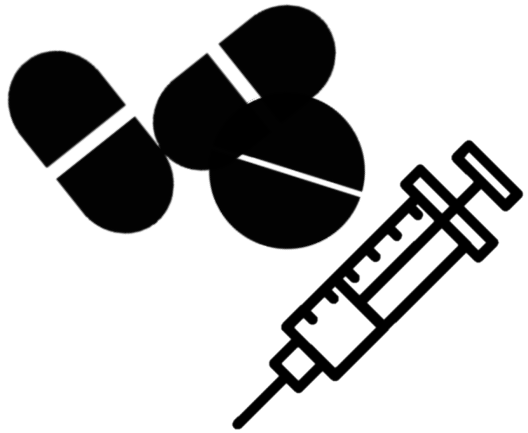


Belgium

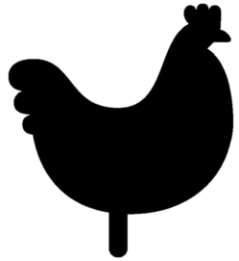
the Netherlands

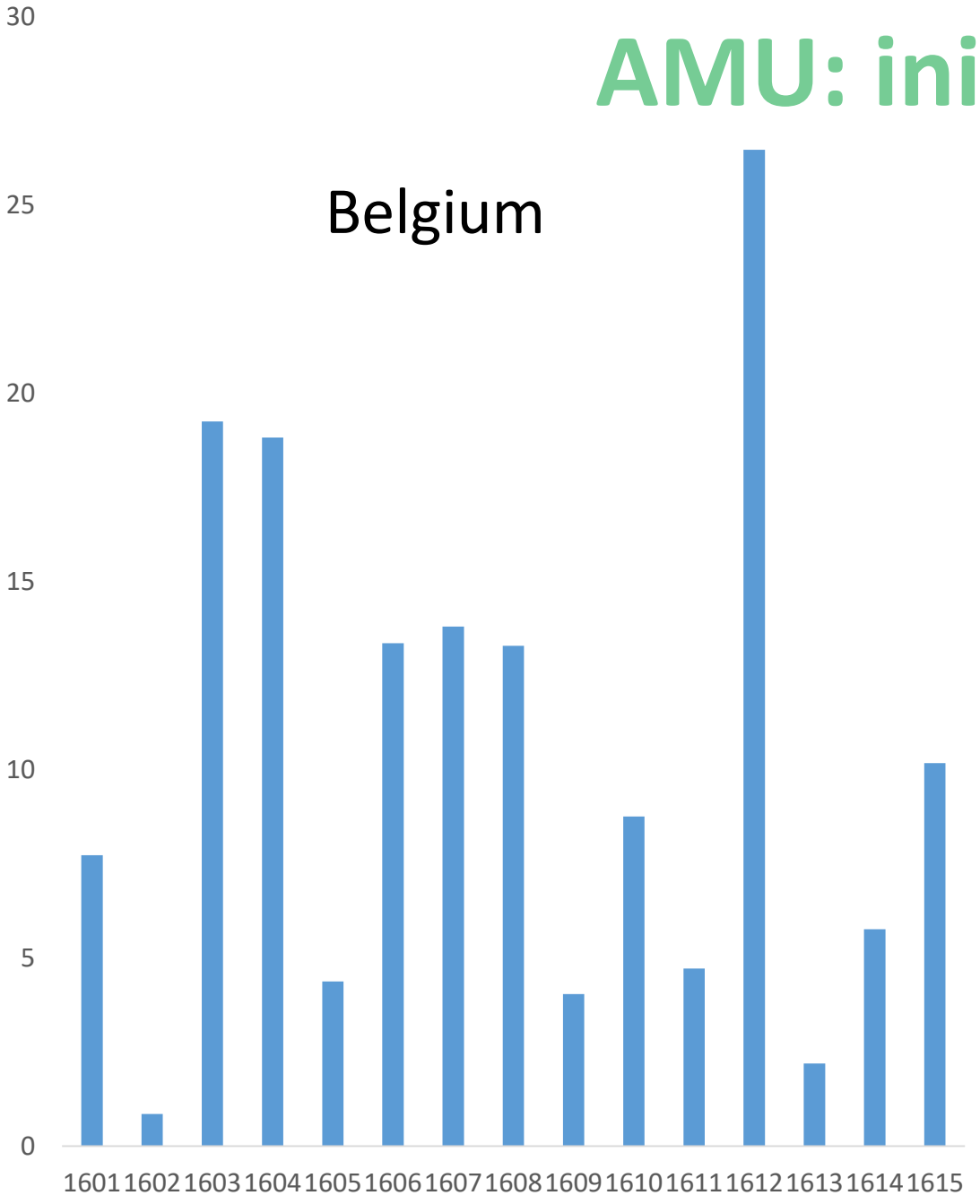
Results

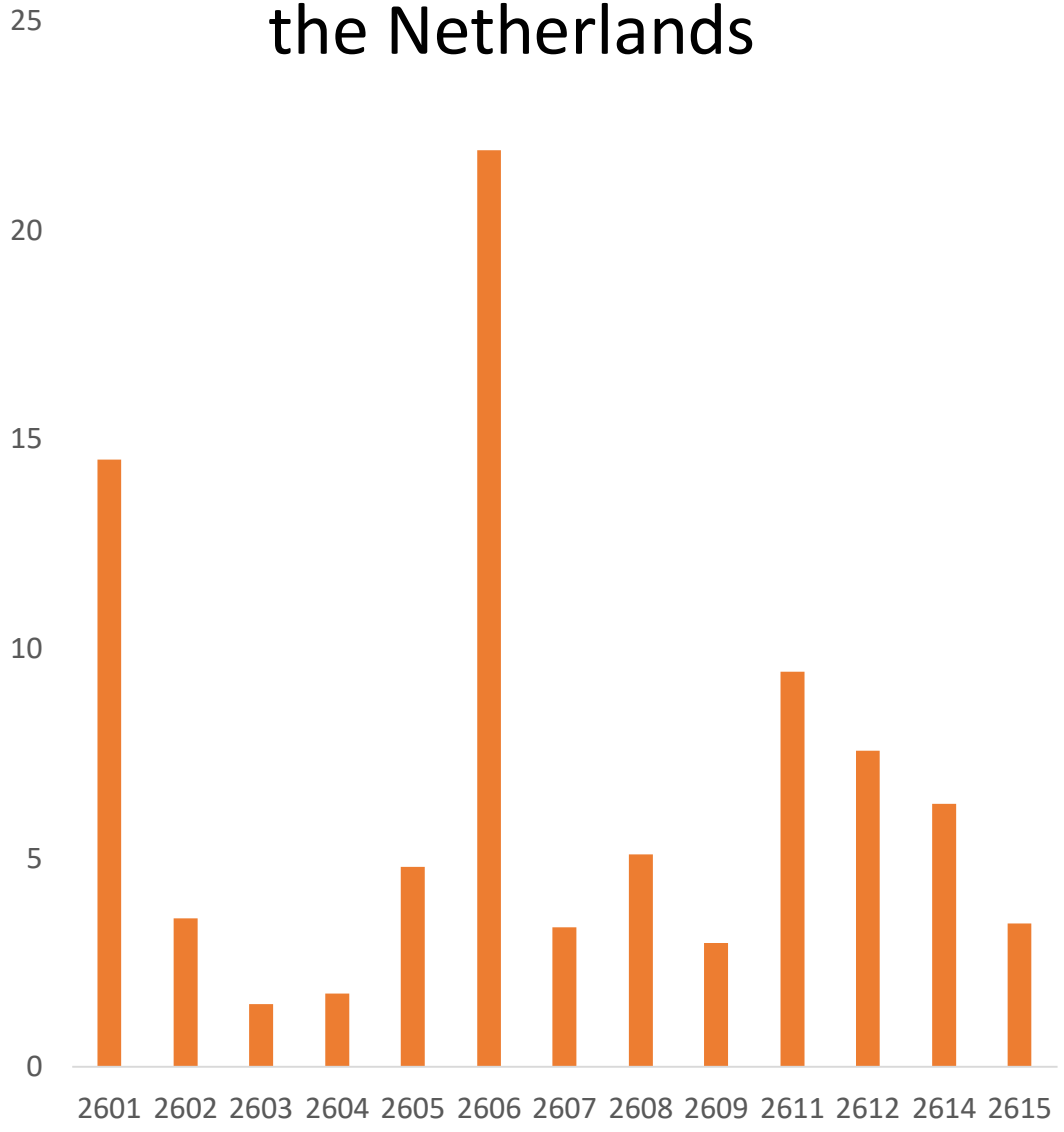
AMU



AMU: initial situation







AMU initial situation: averages

Belgium

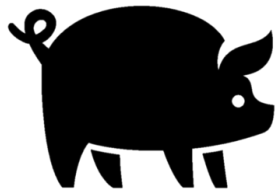
the Netherlands

TI =10,24

TI = 6,63

AMU: initial situation

Belgium



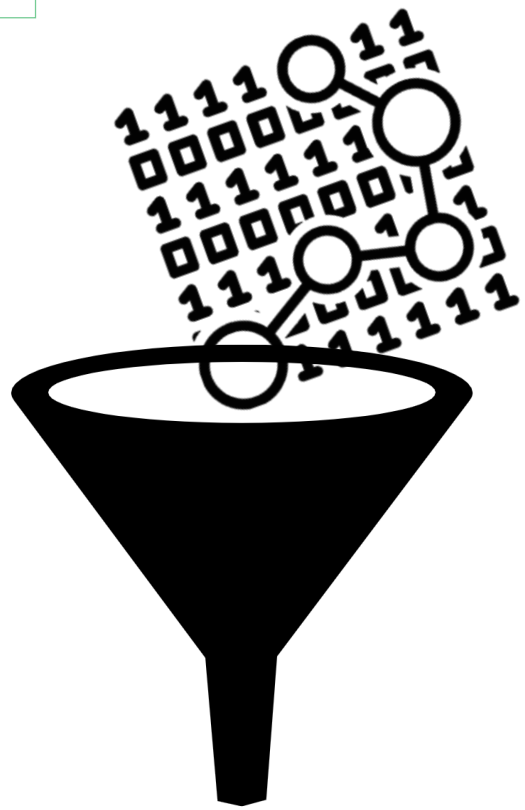
the Netherlands

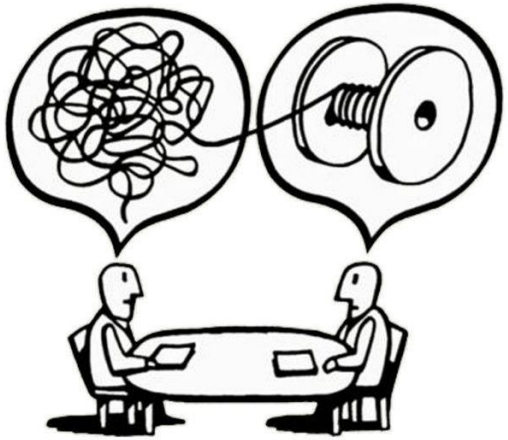
AMU initial situation: averages

Belgium		the Netherlands
	Weaners	
TI = 43,78		TI = 14,07
	Fatteners	
TI = 6,57		TI = 1,22

Visit 1 Visit 2

6 months

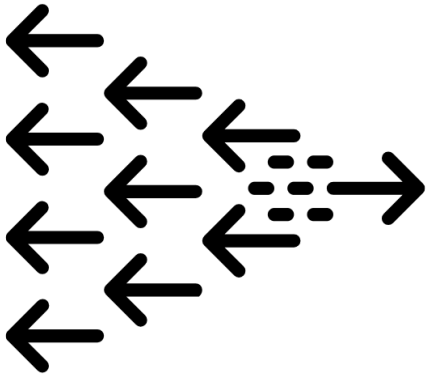


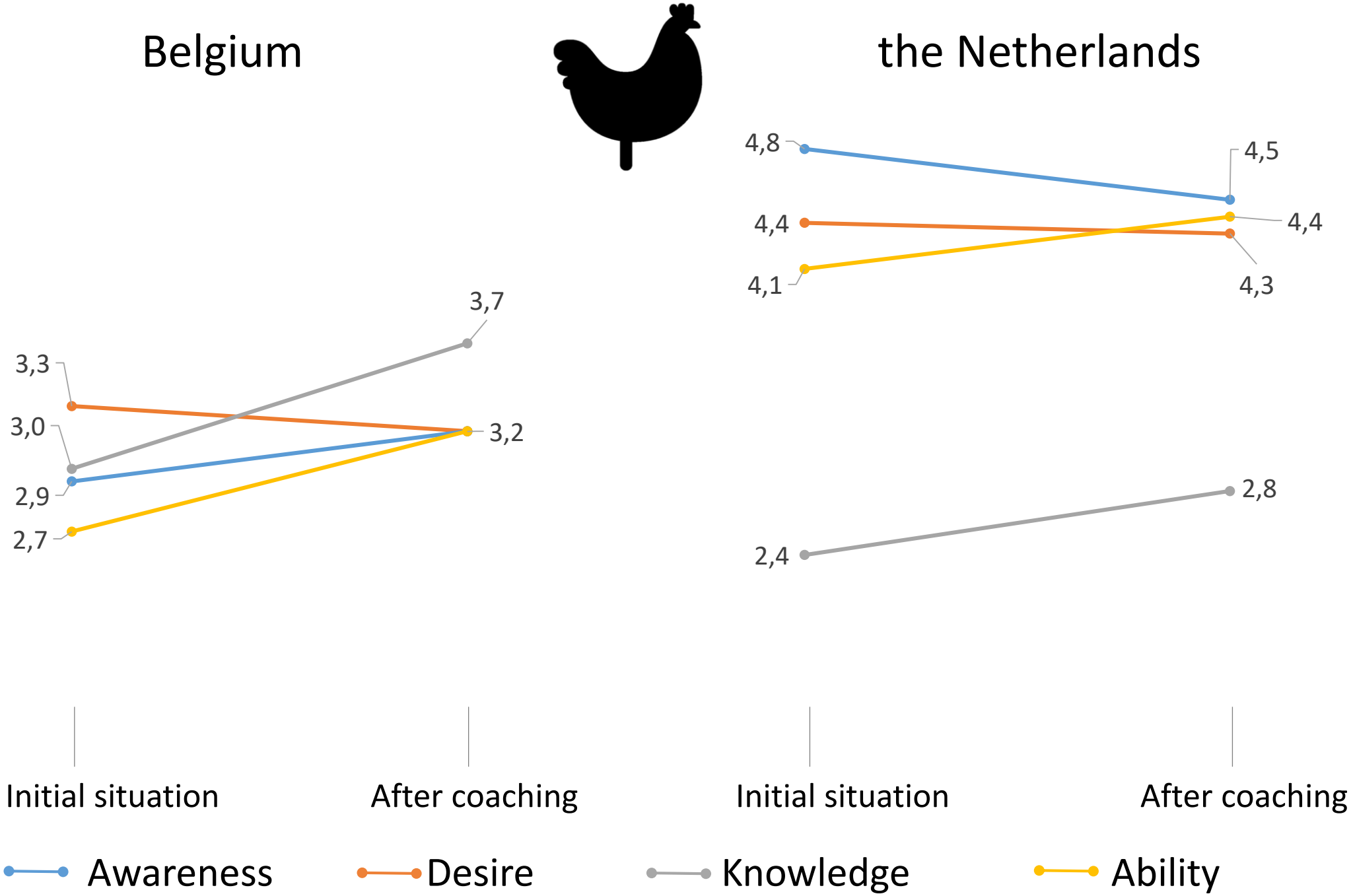


Farm specific action plan

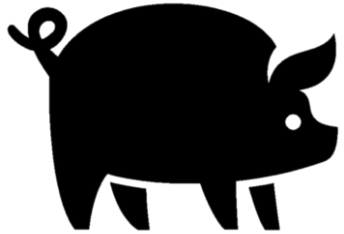
Visit 2

ADKAR

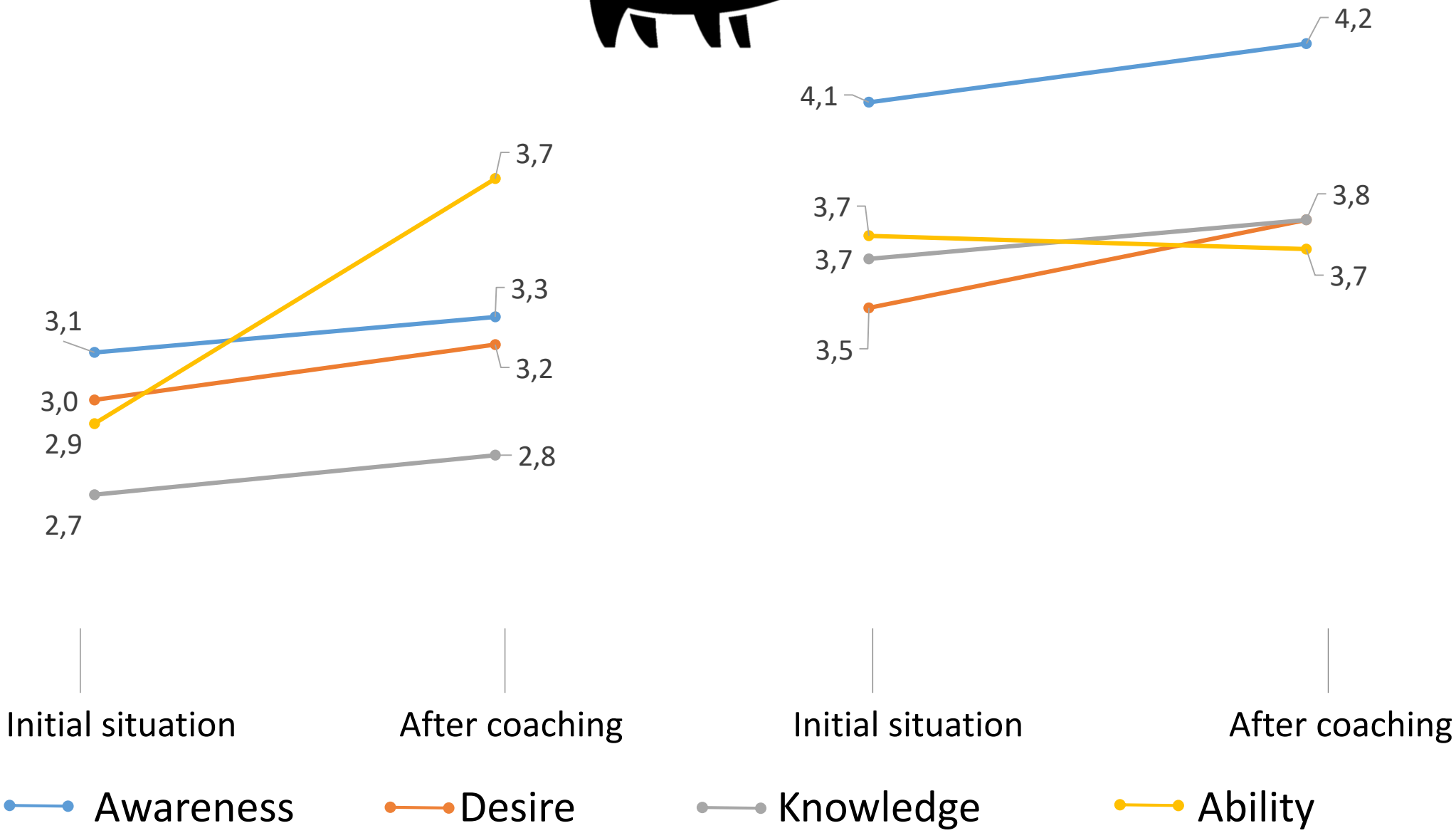



Belgium
the Netherlands
3,7
3,3
3,0
3,2
2,9
2,7
4,8
4,5
4,4
4,4
4,1
4,3
2,8
2,4
Initial situation
After coaching
Initial situation
After coaching
Awareness
Desire
Knowledge
Ability

Belgium



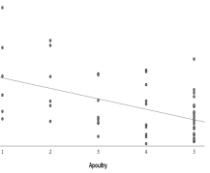
the Netherlands



ADKAR

AMU

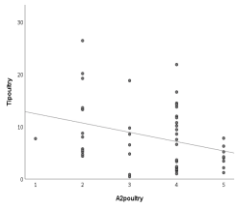
AMU



P= 0,001

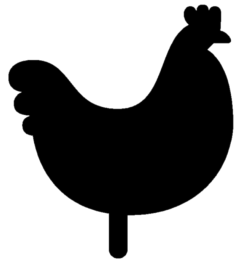
ρ= -0,440

AMU



P= 0,021

ρ= -0,319



Awareness

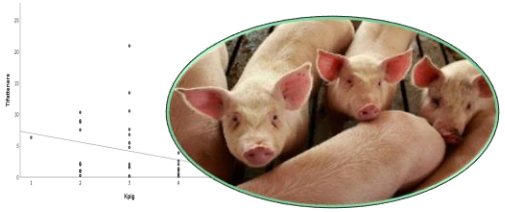
Ability

AMU weaner

P= 0,005

ρ= -0,373

AMU fattener



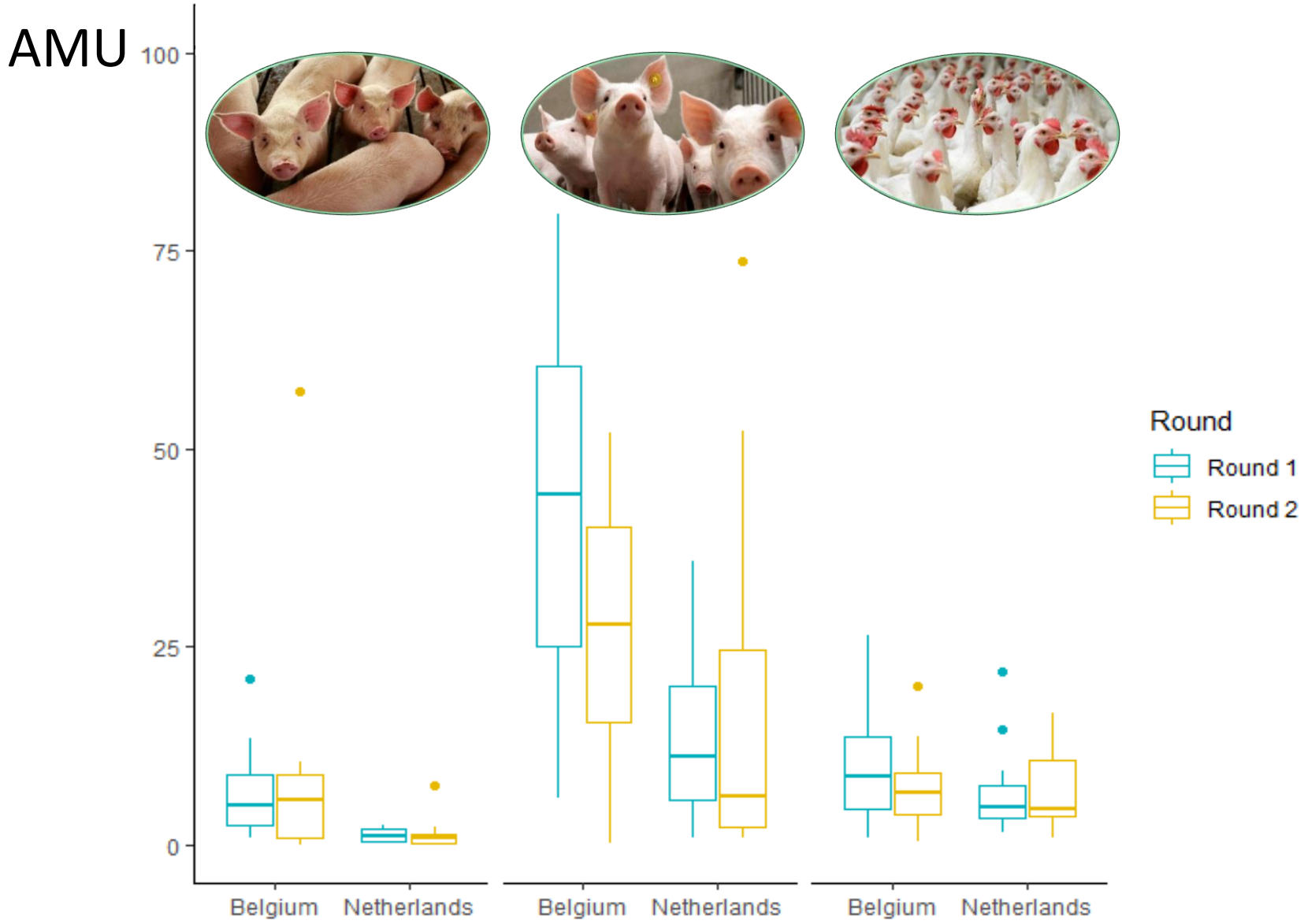
P= 0,004

ρ= -0,432

Desire

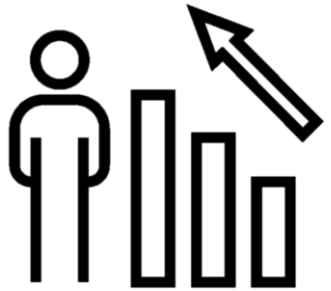
Knowledge

Effect of coaching on AMU



Key messages

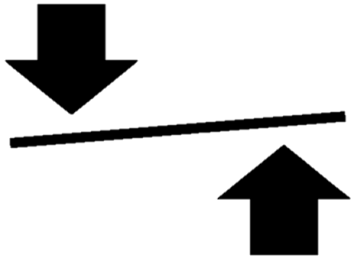
Effect coaching on ADKA(R)



ADKAR

AMU

AMU



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