



 **World
Rabbit
Congress**
2016
Qingdao, China



Convegno ASIC 2016

11th WRC: Inviati speciali in Cina

30 settembre 2016, Padova



11th WORLD RABBIT CONGRESS, 15-18 June 2016, Qingdao, China

2. MANAGEMENT AND ECONOMY

Simona Mattioli

Università degli Studi di Perugia

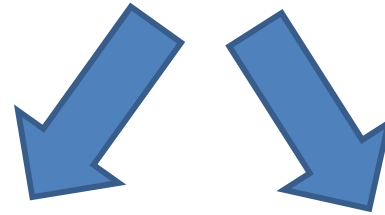


24 presented
papers

+

invited paper
rabbit production in Asian

14 papers
Rabbit farming in LDC



10 papers
Alternative housing systems for
rabbit



Tunisia



China



Indonesia



Cote d'Ivoire



Nigeria



Thailand



Nepal



Kenya

Problems of the rabbit farming in LDC

1. RABBIT PRODUCTION AND RESEARCH IN ASIA: PERSPECTIVES AND PROBLEMS. Raharjo et al. (Indonesia)
2. RABBIT PRODUCTION IN NEPAL: A SOLUTION TO FOOD INSECURITY AND POVERTY. Chapagain et al. (Nepal)
3. CHARACTERIZATION OF RABBIT'S PRODUCTIONS IN THE DISTRICT OF ABIDJAN, COTE D'IVOIRE. Kimsé et al. (Côte d'Ivoire)
4. MEAT RABBIT PRODUCTION IN CENTRAL, WESTERN AND EASTERN THAILAND: SOCIAL NETWORK AND CURRENT STATUS. Kovitvadhi et al. (Thailand)
5. DETERMINANTS OF RABBIT KEEPING IN SOUTH WESTERN NIGERIA. Oluwatusin et al. (Nigeria)
6. A SWOT ANALYSIS OF COMMERCIAL RABBIT OPERATIONS IN SOUTHWEST NIGERIA. Oseni et al. (Nigeria)
7. CRITICAL REQUIREMENTS FOR UNDERGRADUATE TRAINING CURRICULUM IN RABBIT PRODUCTION IN LESS DEVELOPED COUNTRIES. Oseni et al. (Nigeria)
8. THE CONTRIBUTION OF CHINESE RABBIT INDUSTRY AND ITS SUSTAINABLE DEVELOPMENT. Wu et al. (China)
9. CONSUMER DEMAND FOR RABBIT MEAT IN URBAN CHINA: 2011-2015. Gao et al. (China)
10. AN ANALYSIS OF THE SCALE EFFICIENCY OF MEAT RABBIT INDUSTRY IN CHINA. Guo et al. (China)
11. PARTIAL EQUILIBRIUM ANALYSIS AND FORECAST OF CHINESE RABBIT MEAT MARKET. Huang et al. (China)
12. DRAMATIC CHANGES OF CHINESE ANGOLA RABBIT INDUSTRY FROM 2011 TO 2015: REASONS, CHALLENGES AND COUNTERMEASURES. Li et al. (China)
13. AN ANALYSIS OF TECHNICAL EFFICIENCY OF MEAT RABBIT BREEDING INDUSTRY IN CHINA. Zhan et al. (China)
14. THE DEVELOPMENT PROSPECTS OF RABBIT SECTOR IN TUNISIA BASED ON A VALUE CHAIN DIAGNOSIS. Ouertani et al. (Tunisia)

Rabbit farming in LDC

- Small farms (<50 does)

- technical deficiencies;
- low initial investment;
- unavailability of good races;
- cheap food (self-feed, by-products);
- low cost management.



COOPERATION

- Large farms (>50 does)

- increase production efficiency;
- opening to the big market.



SUSTAINABILITY

Alternative housing systems for rabbit

1. CONSUMER SEGMENTATION BASED ON FOOD-RELATED LIFESTYLES AND ANALYSIS OF RABBIT MEAT CONSUMPTION. Buitrago-Vera et al. (Spain).
2. PASTURE FINISHING OF ORGANIC RABBIT : GRASS INTAKE AND GROWTH – FIRST RESULTS. Duprat et al. (France)
3. MARKET AND SOCIETY DRIVEN INNOVATIONS IN THE DUTCH RABBIT PRODUCTION SYSTEM. de Greef et al. (The Netherlands)
4. EFFECT OF A PROTOTYPE OF COLONY CAGE WITH REMOVABLE WALLS ON THE REPRODUCTIVE PERFORMANCE OF RABBIT DOES. Martino et al. (Italy).
5. ENERGY BALANCE AND ATMOSPHERE MANAGEMENT PARAMETERS OF BUILDINGS FOR RABBITS. Menini et al. (France).
6. FORECASTING THE PRICE CHANGE OF COARSE RABBIT WOOL BY THE TECHNICAL ANALYSIS INDICATORS. Nie et al. (China).
7. ECONOMIC VALUE OF RABBIT LINES SELECTED FOR DIFFERENT CRITERIA. Szendrő et al. (Hungary).

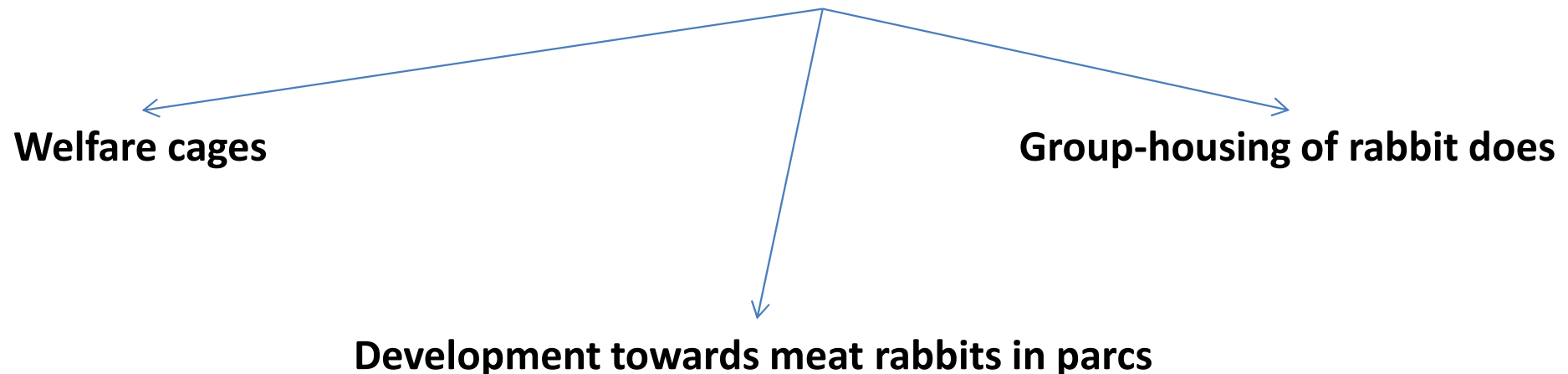
MARKET AND SOCIETY DRIVEN INNOVATIONS IN THE DUTCH RABBIT PRODUCTION SYSTEM

Karel de Greef, Jorine Rommers and Sjef Lavrijsen.

SOCIETAL PRESSURE → ANIMAL WELFARE

- better connection with societal demands
- exploit associated with added value markets

THREE KEY OF INNOVATION



KEY OF INNOVATION

Welfare cages (enrichments, platforms, boxes equipped with the most comfortable materials, compartment size)

Collective cages for meat-rabbits
(2016: 60-70% of rabbit meat is produced with free-range systems in Belgium)

Group-housing of rabbit does
(isolation during critical periods: kindling, the first part of lactation ...)

**ETHOLOGY
AND
WELFARE**

**PASTURE FINISHING OF ORGANIC
RABBIT : GRASS INTAKE AND GROWTH –
FIRST RESULTS**

PASTURE FINISHING OF ORGANIC RABBIT : GRASS INTAKE AND GROWTH – FIRST RESULTS

Duprat A., Goby J.P., Roinsard A., Van Der Horst F., Le Stum J., Legendre H., Descombes M., Theau J.P., Martin G., Gidenne T.

Aim

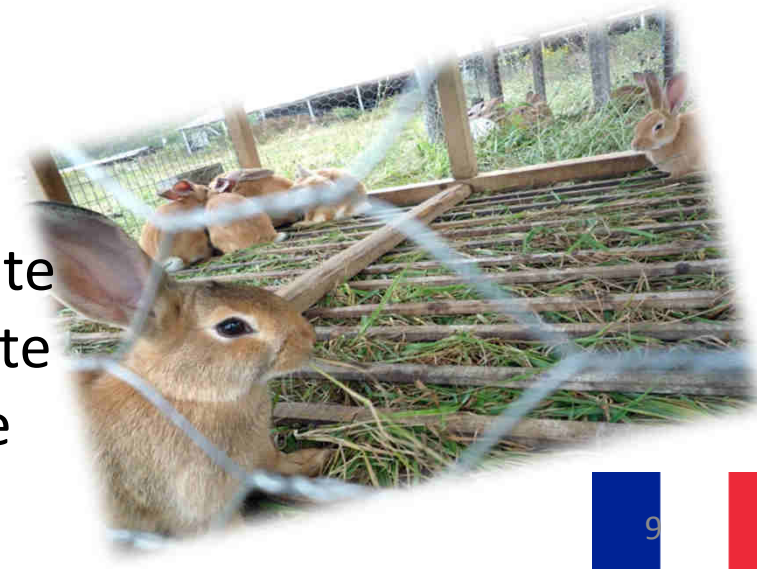
characterize the grass and food intake and the growth of rabbits reared in mobile cages placed on the grass, under different environmental conditions and management (climate, type of pasture, feed).

M&M

6-7 rabbits - 52d reared in mobile cages (1 rabbit/0.4 m²) on the grass (until 100d).

6 experimental groups:

- 3 environmental conditions :
 - O = oceanic climate
 - Ch = semi-mountain climate
 - M = mediterranean climate
- 2 seasons:
 - S1 = spring
 - S2 = autumn
 - Mf: tall fescue
 - Ms: sainfoin



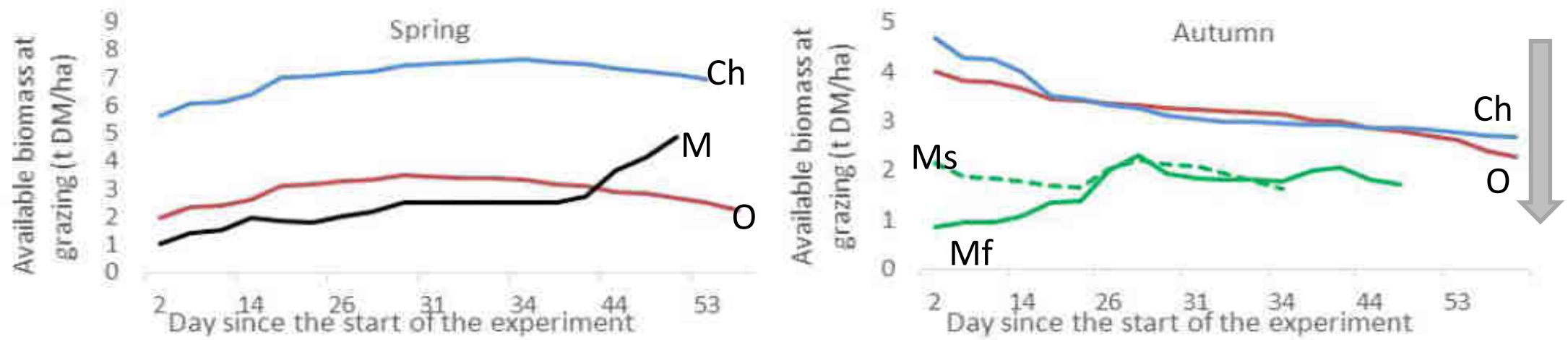


Figure 1: Available biomass (t DM/ha) over time in spring (left graph) and in autumn (right graph), in O (red line), Ch (blue line), M.S1 (black line), Mf.S2 (green line), and Ms.S2 (dashed green line).



SITE	S2			
	O	Ch	Mf	Ms
Growth (g/d)	16.1b	18.8c	20.2e	18.5c
Grass intake (g DM/rab/d)	55b	39a	78d	51c
Pellet DM	The growing rabbits are able to assume grass until ¼ of their body weight.			52

76% Grass

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**ETHOLOGY
AND
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**PASTURE FINISHING OF ORGANIC
RABBIT : GRASS INTAKE AND GROWTH –
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**EFFECT OF A PROTOTYPE OF COLONY
CAGE WITH REMOVABLE WALLS ON THE
REPRODUCTIVE PERFORMANCE OF
RABBIT DOES**

EFFECT OF A PROTOTYPE OF COLONY CAGE WITH REMOVABLE WALLS ON THE REPRODUCTIVE PERFORMANCE OF RABBIT DOES

Martino M., Mattioli S., Cambiotti V., Mugnai C., Moscati L., Castellini C., Dal Bosco A.



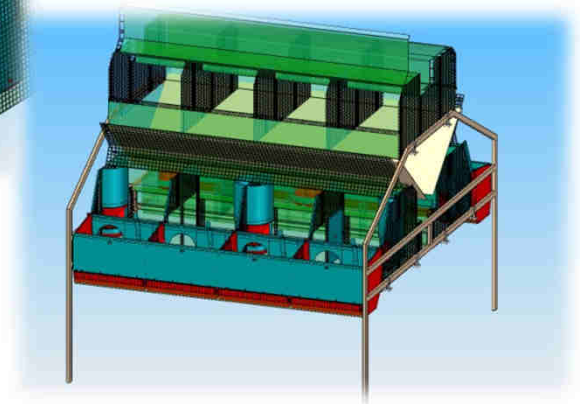
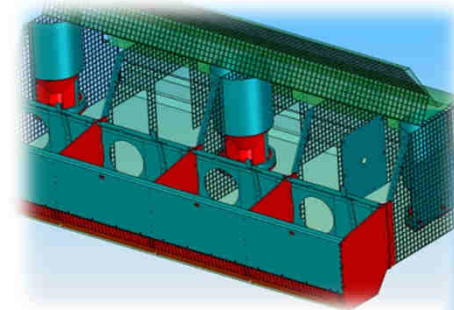
Aim

evaluate the effect of a new colony cage on the reproductive performance of rabbit does

M&M

32 NZW nulliparous rabbit does were AI and transferred:

- SC:** Standard colony group (n=16);
- PC:** Prototype colony group (n=16):
5 days before kindling, walls were closed and removed one week after it;
- C:** single cages (positive control) (n=16).



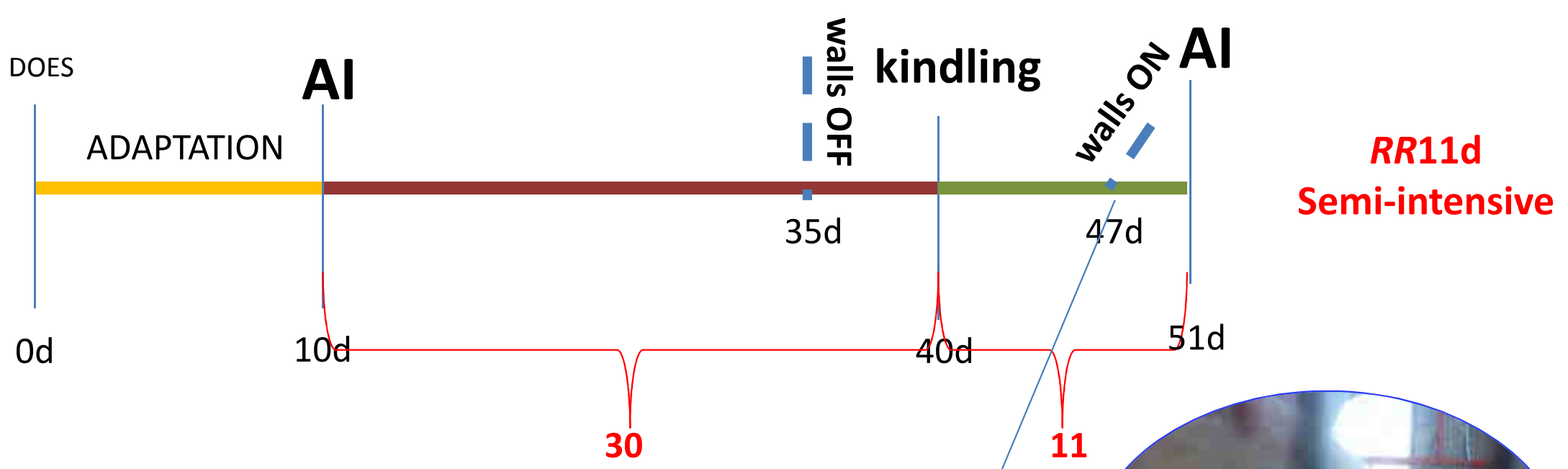


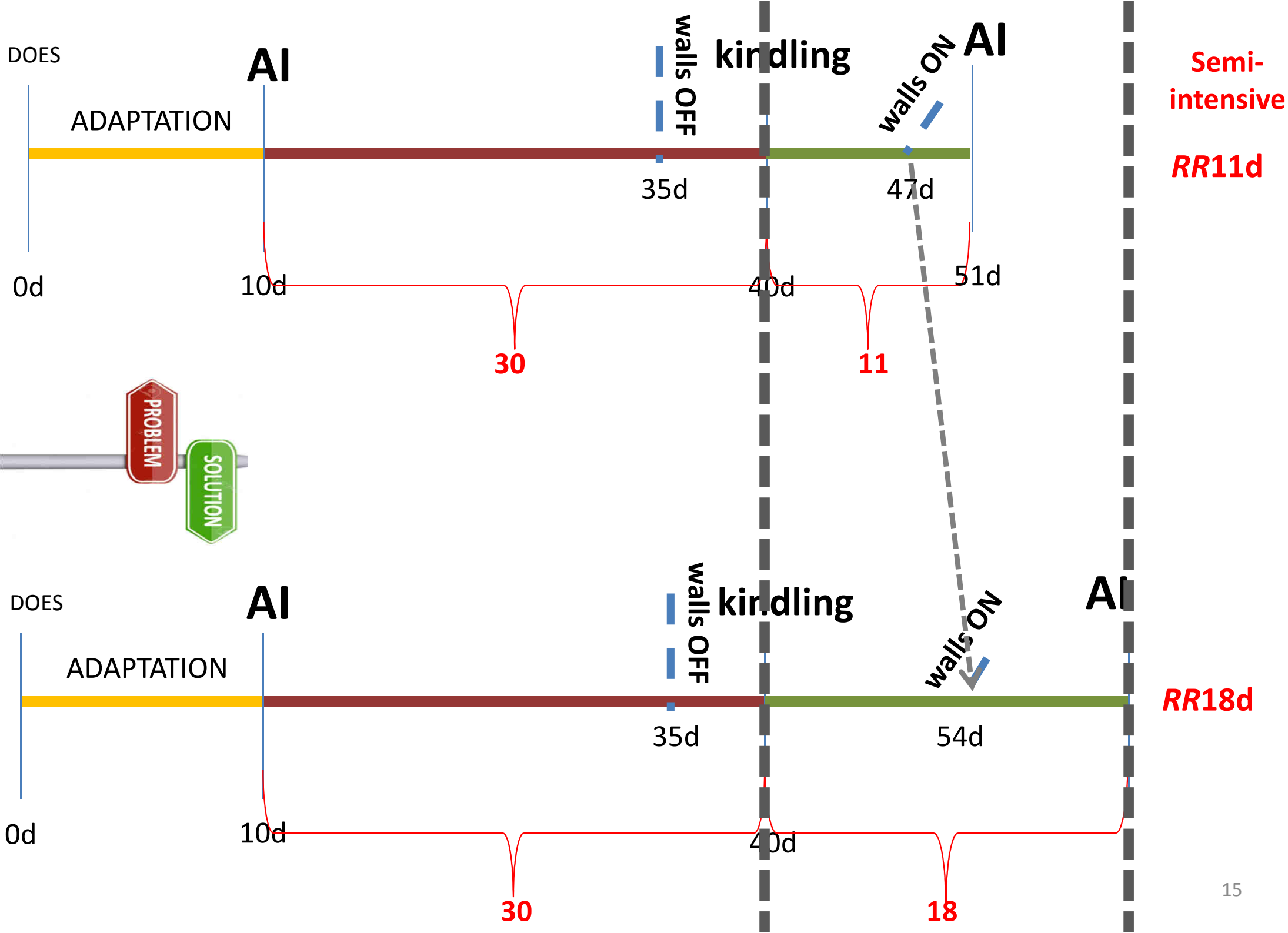
Table 1 Reproductive performance (mean \pm SD)

		Prototype colony	Standard colony	Single cage
Sexual receptivity*	%	69.6b \pm 2.9	56.2a \pm 3.6	79.8c \pm 4.4
Fertility*	"	60.3b \pm 5.0	46.1a \pm 4.3	72.6c \pm 3.8
Doe weight at kindling	g	3450 \pm 315	3305 \pm 230	3750 \pm 410
Doe weight at weaning	"	3855 \pm 305	3740 \pm 255	4195 \pm 457
Alive-born	N	6.5b \pm 1.3	5.6a \pm 1.8	6.5b \pm 1.4
Weaned pups	N	5.6 \pm 2.0	5.1 \pm 1.5	6.0 \pm 1.7
Individual weight at weaning	g	565 \pm 36	578 \pm 31	559 \pm 28
Pre-weaning mortality*	%	7.2 \pm 2.0	8.3 \pm 1.6	6.4 \pm 1.8

Table 2 Indexes of global productivity (mean \pm SD)

		Prototype colony	Standard colony	Single cage
Rabbits sold/year/doe	N	26.3b \pm 2.8	15.6a \pm 1.7	31.8b \pm 4.2
Live weight sold/year/doe	g	59.1b \pm 10.1	40.5a \pm 14.2	71.2b \pm 13.1
Production losses	"	47.2ab \pm 9.6	63.8b \pm 10.4	38.8a \pm 8.2
Kindling interval	D	83.3b \pm 7.1	95.5c \pm 6.2	73.3a \pm 2.3
Kindling/year/doe	N	4.4ab \pm 0.9	3.8a \pm 0.8	4.7b \pm 0.6
Annual replacement of does*	%	78.1b	85.6c	63.2a
Severely injured does	%	5.6ab	7.9b	1.5a

N^o: 288 (16 does x 3 groups x 6 breeding cycles). *: χ^2 . a,...c: P<0.05.



PROBLEMS

- Disagreeable social encounters
- Injuries and productive problems
- High mortality of kids
- Difficulties of replacement for aggressiveness

- High standards of hygiene
- Higher production costs

SOLUTIONS

-Further investigations-

- Lengthen the re-opening of the walls of 1wk and opt for an extensive RR (INTERPARTUM 42d) to allow the kids more autonomous.

- Cage dimensions, equipment and floor types, to avoid abnormal behaviour and poor hygiene and health of kids and growing and reproducing rabbits



THANKS FOR ATTENTION

