

10 Key points to increase weaned piglets / sow - year

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SUMMARY

- During this talk, 10 critical points to try to increase productivity at the sow unit will be discussed.
- It will be seen that with the genetics from nowadays, which are highly prolific, the biggest productive margin is localized at all the factors involved in weaning more piglets per farrowed sow:
 1. ¿When are we breeding our gilts for the first time? Age and weight at first service.
 2. ¿At how many days are we weaning? 21 vs 28 days.
 3. Methods to increase efficiency when checking oestrus and breeding sows.
 4. ¿Which feeding program are we following?
 5. ¿How are we placing pregnant sows in pens?
 6. ¿How much time are we losing when sows are losing pregnancy?
 7. ¿Do we really know the real productive potential of our sows?
 8. ¿It's usefull to induce the farrowing of our sows?
 9. The key point: Management during first 3-4 days of live.
 10. ¿Do we know how to do nurse sows?

INTRODUCTION

To find a good recipe for crisis time, the solution it's quite easy to explain, but more difficult to put into practice.

I can only imagine 2 options:

Increase productivity.

Decrease costs.

During this speak we will check some critical management points in the sow unit, pondering them over a productive point of view.

INTRODUCTION

¿Where is the main edge of productive benefit?

Length of reproductive cycle (weaning 21days) = **20 weeks**

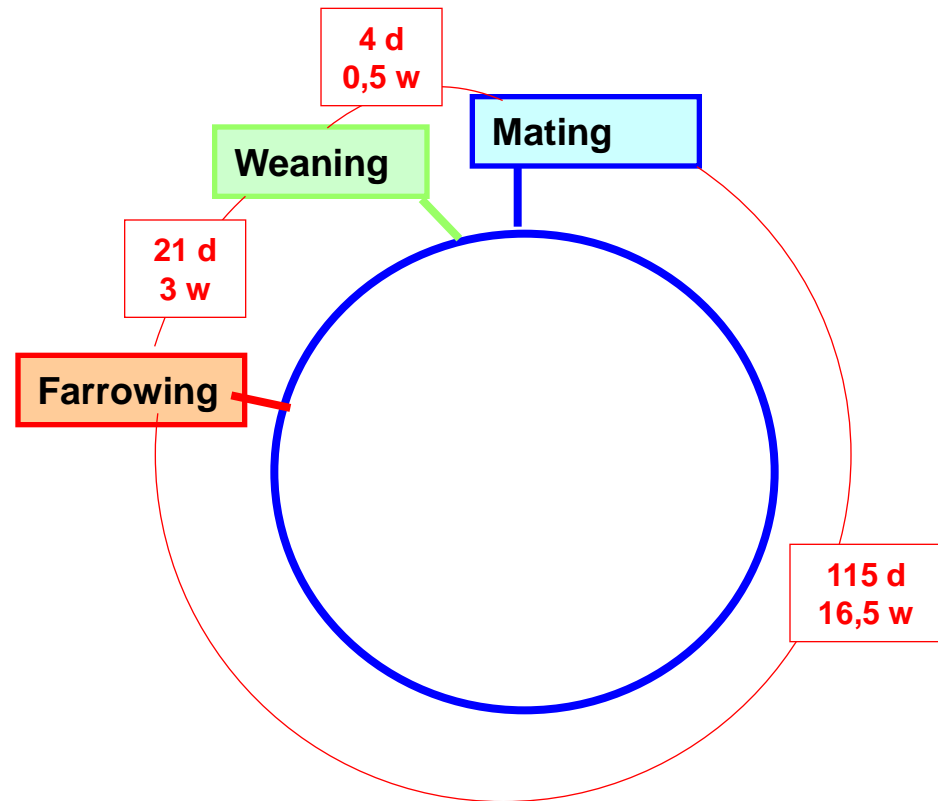
Weaned piglets / sow: **10**

To get 1 weaned piglet = **2 weeks time investment**

1 return at 21 days = Loose 1,5 piglets

If we wean 1,5 piglets more (11,5) → We could have a 100% of returns at 21 days and keep the same productivity

1,5 piglets = 100% Returns
Loosing 0,15 weaned / sow =
Increase 10% reprints at 21 days



INTRODUCTION

¿Where is the main edge of productive benefit?

If we increase 0,15 piglets weaned / farrowing, we compensate a 10% returns at 21 days.

Lots of times we plain an increase of returns at 21 days from a 10% to a 20%.

...and it's to plain...

But, lots of times we don't plain so much when weaning a batch at 9,8 piglets / sow when usually we where weaning at 10,1.

... And we are loosing the double!!!!

In the case of weaned piglets, even we round off and we forget decimals. It's not the same to wean "around 10,5" than at 10,36!

In farms that are starting to have a good productivity, the main improvement edge is usually number of weaned piglets / sow.

Objective: Maximize weaned n^o

Objective 1: Maximize prolificacy

“The first step to wean a lot, is to farrow a lot”.
(very clever...)

Actual genetics are more prolific every day.

Table 1 607 farms	Total born / sow -year	Total born / farrowing
Top 5 %	35.33	14.53
Top 10 %	34.55	14.20
Top 25%	33.16	13.73
Top 50%	31.90	13.27
All farms	29.85	12.69

Swine Management Services' farm benchmarking database 2009 (USA)

To get an elevated n^o of total born is vital: It has a great impact on the cost of the weaned piglet.

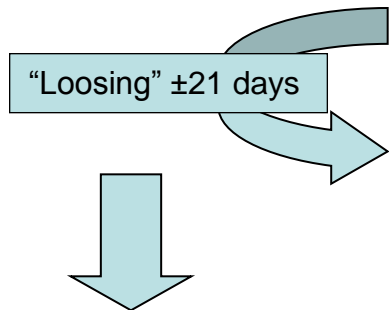
Then we have to know how to wean them: “Bring me piglets, as more as better, I will manage with them” (*Miquel Forcadell, “SAT La Vall” manager, 8000 sows. He is the “Rossi” of piglets*)

Objective 1: Maximize prolificacy

The first step to get a lot of total born is doing a good job with the replacement stock.

Problem 1: Gilts, ¿When do we breed them?

“Loosing” ±21 days



	N° sows	Born alive	% Sows remaining at 2nd cycle
120 Kg / 230 days	78	9,2	74,35 %
>140 Kg / 250 day (France)	87	11,6	93,10 %

Eduard Marcuello, Sus Scrofa 2004

21 days = 1,5 piglets
If the gilt farrows and weans (she or another sow) 1,5 piglets more, the higher time invested is compensated.



“Rebound effect”:

- Higher % sows remaining in the farm: % Replacement is reduced.
- Higher prolificacy and fertility at latter cycles.

Objetivo 1: Maximize prolificacy

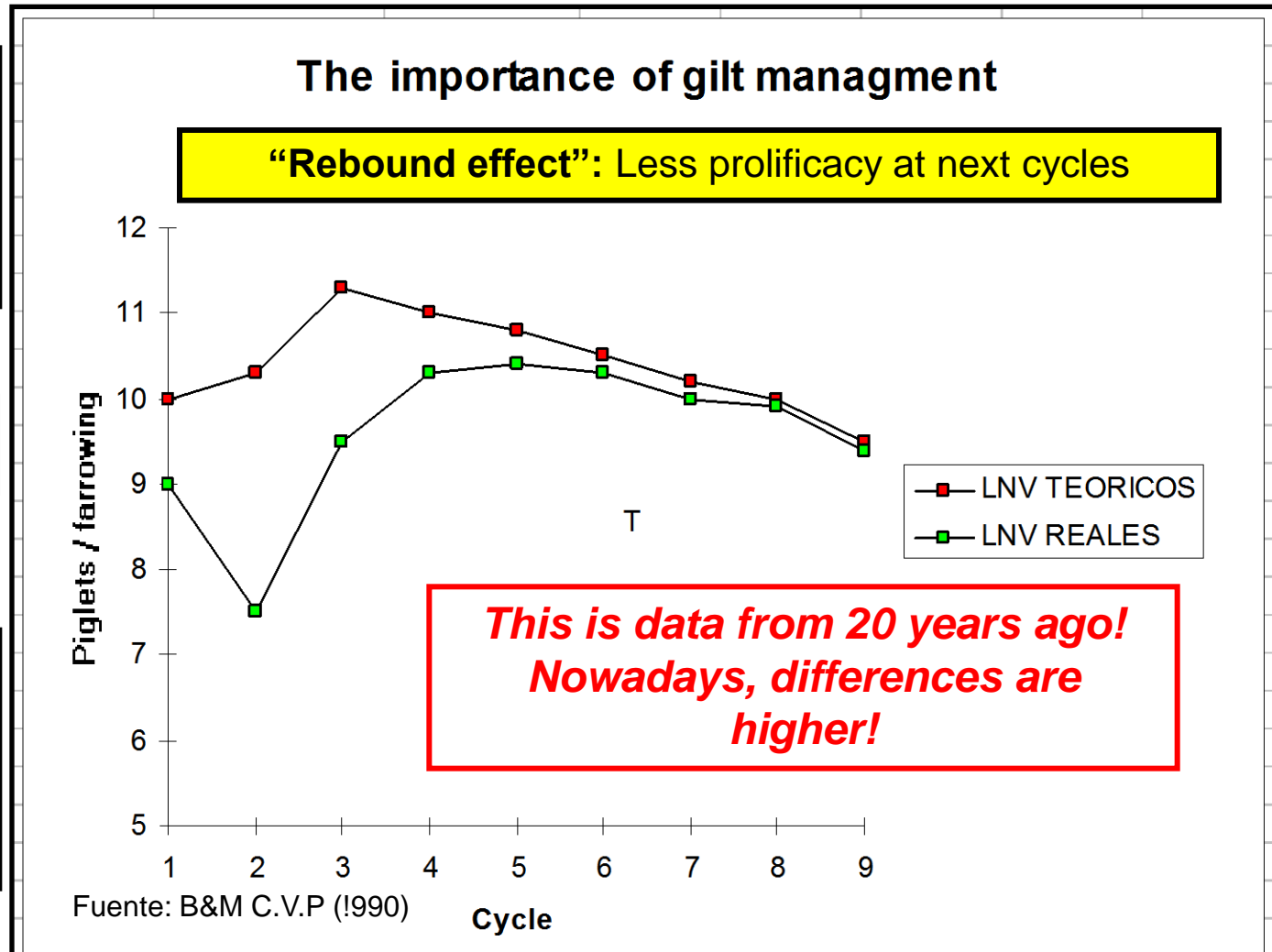
When gilts are bred at a short age and weight...

Problem 1: Gilts, ¿When do we breed them?

- Gilts: Are the 20% of the farm.
- If we give them 21 days more = \uparrow 20% returns at 21d.

As 0,15 weaned / sow = 10% returns

→ Increasing weaned piglets in 0,30 for all the sows, lost of time is compensated.



Objective 1: Maximize prolificacy

The first step to get a lot of total born is doing a good job with the replacement stock.

Problem 1: Gilts, ¿When do we breed them?

¿Danish system?: 160 Kg / 270 days

	N° sows	Born alive	% Sows remaining at 2nd cycle
120 Kg / 230 days	78	9,2	74,35 %
>140 Kg / 250 day (France)	87	11,6	93,10 %
>160 Kg / 270 days (Denmark)		13,1	>93,10 % ??

Eduard Marcuello, Sus Scrofa 2004

“Loosing” ±21 days

“Loosing” ±21 days

+0,3 weaned / sow

+0,6 weaned / sow

21 days = 1,5 piglets
If the gilt farrows and weans (she or another sow) 1,5 piglets more, the higher time invested is compensated.



“Rebound effect”:

- Higher % sows remaining in the farm: % Replacement is reduced.
- Higher prolificacy an fertility at latter cycles.

Objective 1: Maximize prolificacy

Second step to get a high born number is to do a good job during lactation.

Problem 2: Multiparous ¿When do we wean them?

From a productive point of view...

Reproductive cycle length (weaning at 21 days) = **20 weeks**

Reproductive cycle length (weaning at 28 days) = **21 weeks**

Increasing 1 week the cycle
= losing 1 part of 20 = 5%

If we were weaning 10 piglets, increasing it in 0,5 (10,5), the lost due to a slower farrowing rotation is compensated

Weaning ½ piglet more per sow is the same as reducing in 1 week the reproductive cycle of all the sows in the farm.

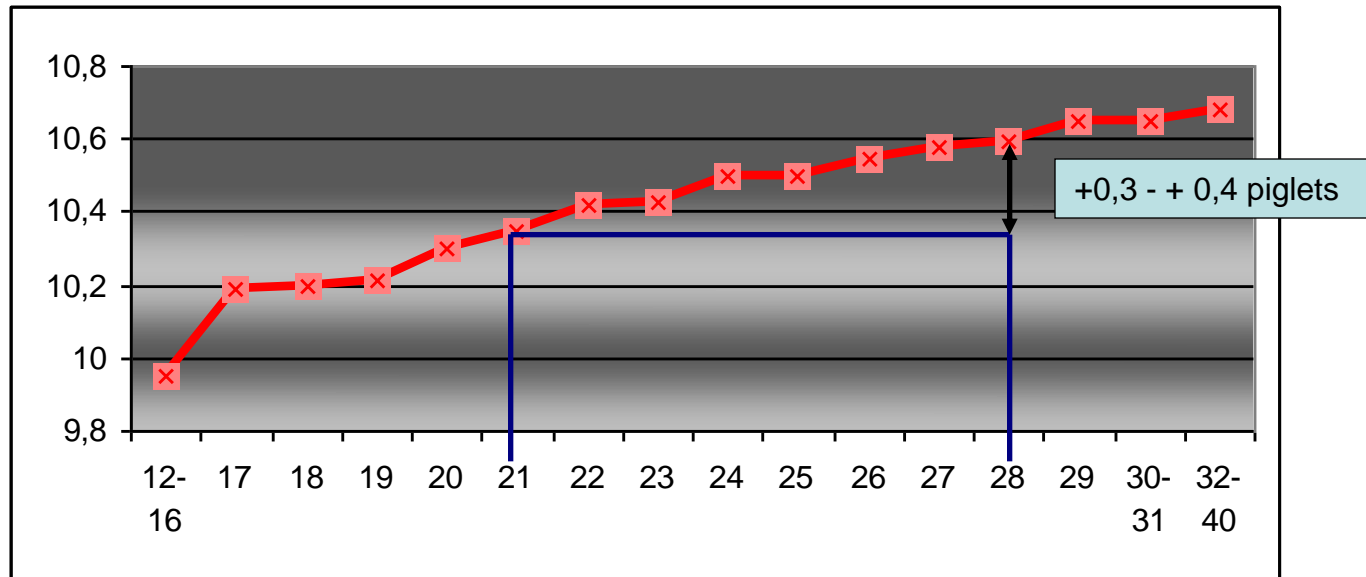
We could “stop” all the weaned sow during 1 week using altrenogest and we would reach the same productivity.

¿Would they farrow and wean 0,5 piglets more afterwards?

Problem 2: Multiparous ¿When do we wean them?

From a productive point of view...

Relation between lactation length and total piglets born at next farrowing



Fuente: Vidal, J., et al. (2001)

Average weaning age	21,5	27,5
Number of weaning	15.592	30.778
Total born / sow	11,88	12,42

Fuente: Martín, M.A. (2004)

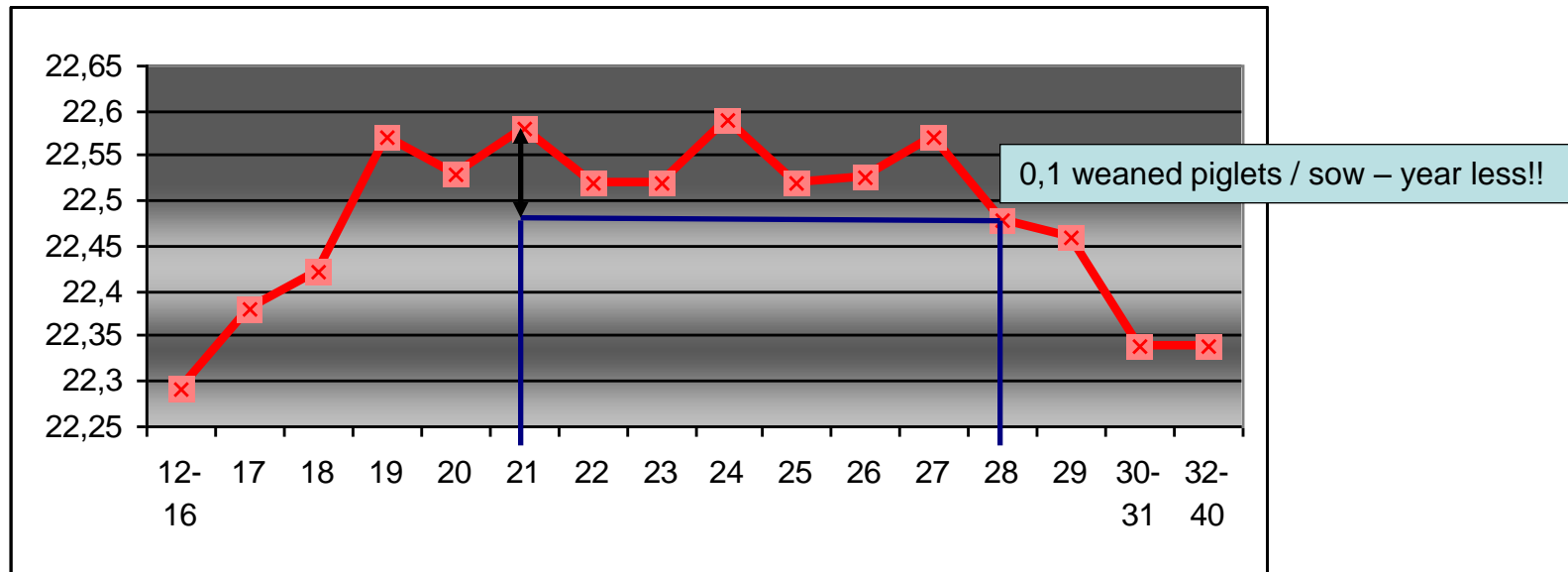
+0,54 lechones

**This are total born!
Afterwards we need to get
them alive and wean them!**

Problem 2: Multiparous ¿When do we wean them?

From a productive point of view...

Relation between lactation length and weaned piglets / sow - year



Fuente: Vidal, J., et al. (2001)

That's what happens when we are not able to achieve +0,5 extra piglets per weaned sow...

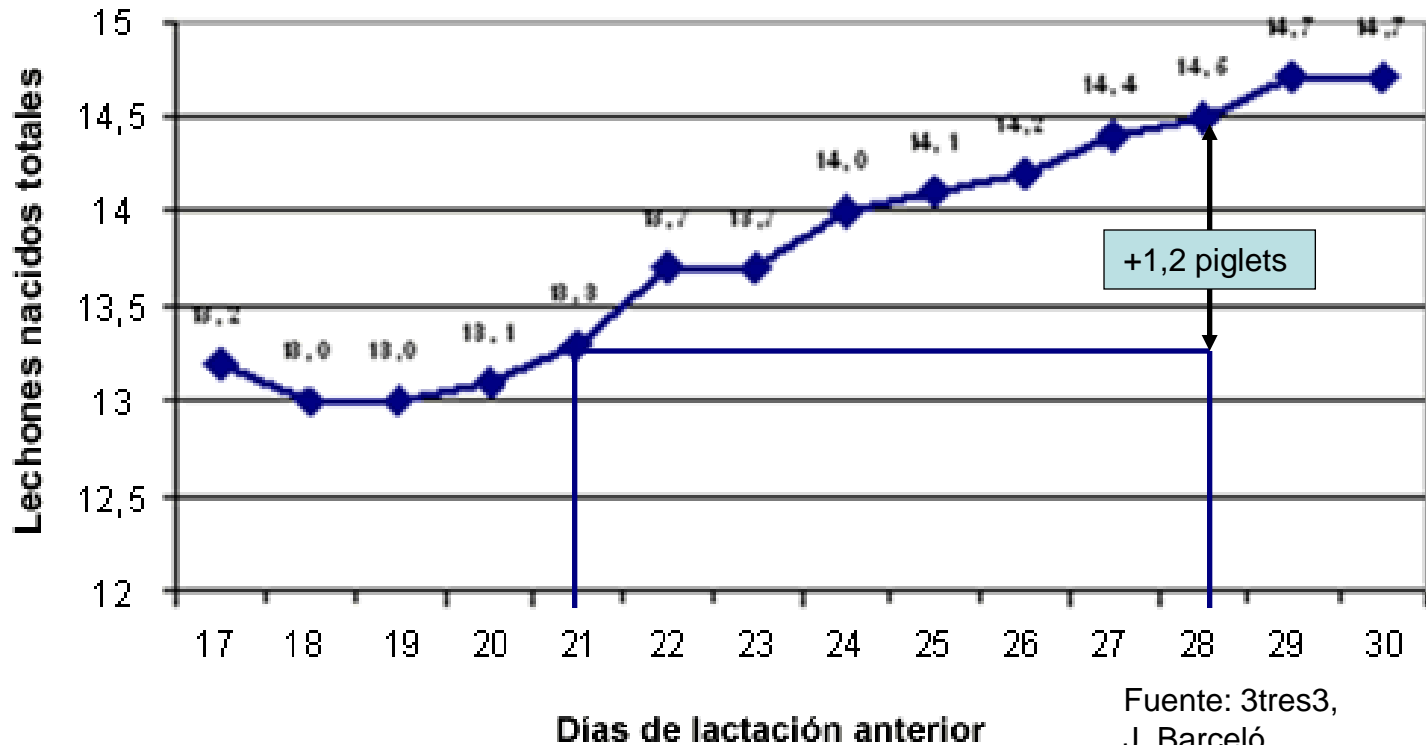
Problem 2: Multiparous ¿When do we wean them?

From a productive point of view...

We need to take into account...

- The data from Vidal is from 10 years ago!
- Nowadays, with hiperprolific sows, differences are greater.

Relation between lactation length and total piglets born at next farrowing (june 2009)



22.000 sows, studied during 2 years
Average results from 10 big sow units (1.000 a 3.000 sows)
Total farrowings analized: 97.551

Fuente: 3tres3,
J. Barceló
J. Oliva. CEFU SA

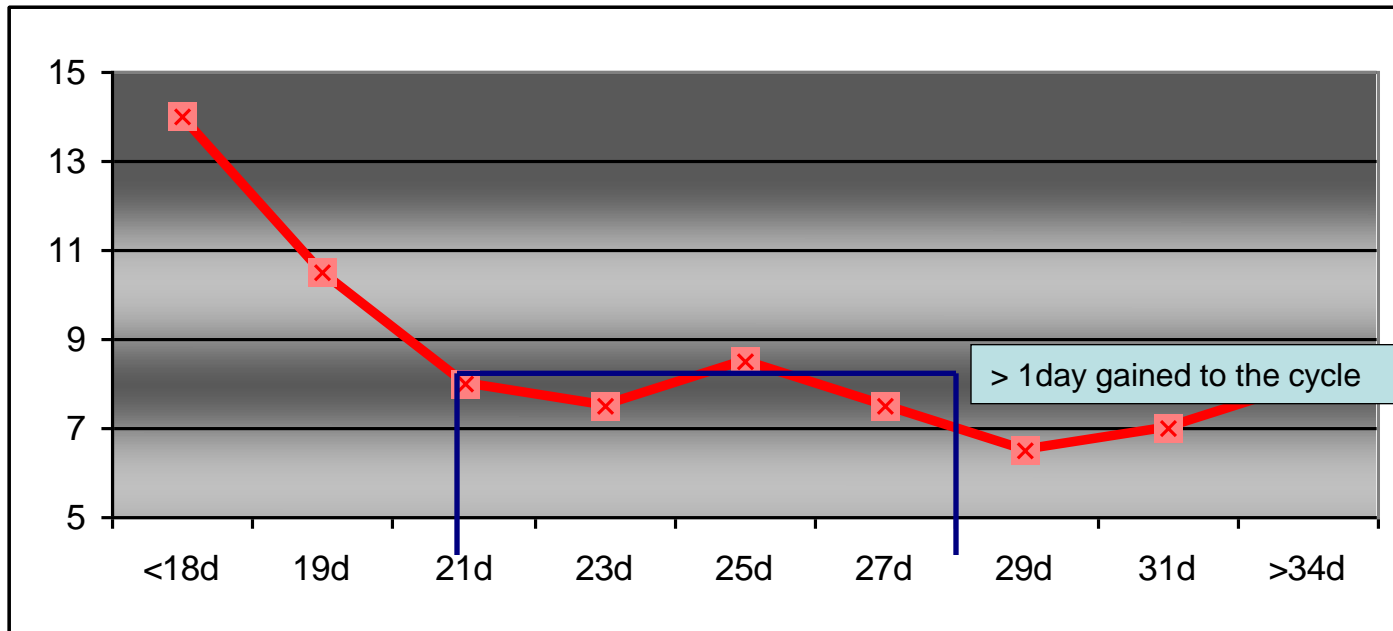
Problem 2: Multiparous ¿When do we wean them?

From a productive point of view...

We need to take into account...

- The data from Vidal is from 10 years ago!
- Nowadays, with hiperprolific sows, differences are greater.
- “Rebound” effect:
 - Shorter Weaning – Oestrus interval
 - Higher fertility

Relation between lactation length and the weaning to fertile breeding interval



Problema 2: Multíparas, ¿A qué edad destetamos?

Desde el punto de vista económico...

Suponiendo que logramos la misma productividad por cerda...

Destete 21 días
Peso medio: 6,5 Kg

Pienso extra lechones

- Ingesta / día \pm 140g x 7 días = 1 Kg.
- +1 Kg pienso = 1 Kg GMD si IT=1
- Coste 1 € /Kg = **+1 € / lechón**
- **- 0,5 Kg peso**

Menor espacio maternidad

- Rotación 4 semanas: 13 partos / plaza-año = 130 lechones / año
- Amortización 15 años = 130 x 15 = 1950 lechones
- coste plaza maternidad: 1500 €
- coste / lechón = **0,77 € / lechón**

+25%



+25%



Destete 28 días
Peso medio: 8 Kg

Pienso extra cerdas

- +8 Kg/día x 7 días pienso lactación.
- Coste 0,28 € / Kg = 15,68 € / cerda
- **+ 1,56 € / lechón**
- **+ 0,56 € / lechón diferencia**

Espacio extra maternidad

- Rotación 5 semanas: Se necesitan 25% de plazas más para producir los mismos lechones.
- Coste / lechón = **0,96 € / lechón**
- **+ 0,19 € / lechón diferencia**

Problema 2: Multíparas, ¿A qué edad destetamos?

Desde el punto de vista económico...

Suponiendo que logramos la misma productividad por cerda

Destete 21 días
Peso medio: 6,5 Kg

Destete 28 días
Peso medio: 8 Kg

Espacio extra transición

- Rotación 6 semanas: lechón 20 Kg

- Coste / lechón = **0,93 € / lechón**
- **+ 0,16 € / lechón**

TOTAL: + 0,16 €

TOTAL: - 0,5 Kg / lechón

Menos espacio transición

- Rotación 5 semanas: lechón 20 Kg
- 10,4 vueltas / año
- Amortización 15 años: 156 vueltas
- Coste por plaza destete: 120 €
- $120 / 156 = \mathbf{0,77 \text{ € / lechón}}$

TOTAL: + 0,75 €

+20%

+20%

Problema 2: Multíparas, ¿A qué edad destetamos?

Desde el punto de vista económico...

Suponiendo que logramos la misma productividad por cerda

Destete 21 días
Peso medio: 6,5 Kg

Otros:

Más gasto calefacción y ventilación al destete

Consumo energía (SIP Consultors):

0,7-0,8 € / lechón (6 sem. estancia)

→ **0,125 € / lechón – semana??**

→ **Gasto mayor al principio: 0,3 € / lechón??**

Necesidad instalaciones mejores

Más problemas sanitarios??

+ bajas

+ gasto medicamentos

Destete 28 días
Peso medio: 8 Kg

Otros:

Más gasto calefacción y ventilación en maternidad

Consumo energía (SIP Consultors): 1 €

/ lechón (4 sem. estancia)

→ **0,25 € / lechón – semana??**

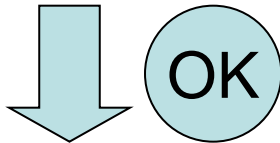
→ **Gasto menor al final: 0,1 € / lechón??**

Más margen para hacer nodrizas sin destetar lechones justos de días y peso.

Problem 2: Multiparous ¿When do we wean them?

If we suppose that the same productivity will be achieved

Weaning at 21 days
Average weight: 6,5 Kg

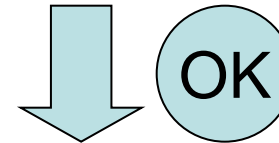


If we reduce to much productivity when weaning at 28 days. ¿Till where? More counts need to be done

It gains benefits with low prolific sows or with lack of profit of hiperprolific ones (bad management / bad facilities)

...Or if sows are already farrowing a lot of piglets, even being weaned at 21 days...

Weaning at 28 days
Average weight: 8 Kg



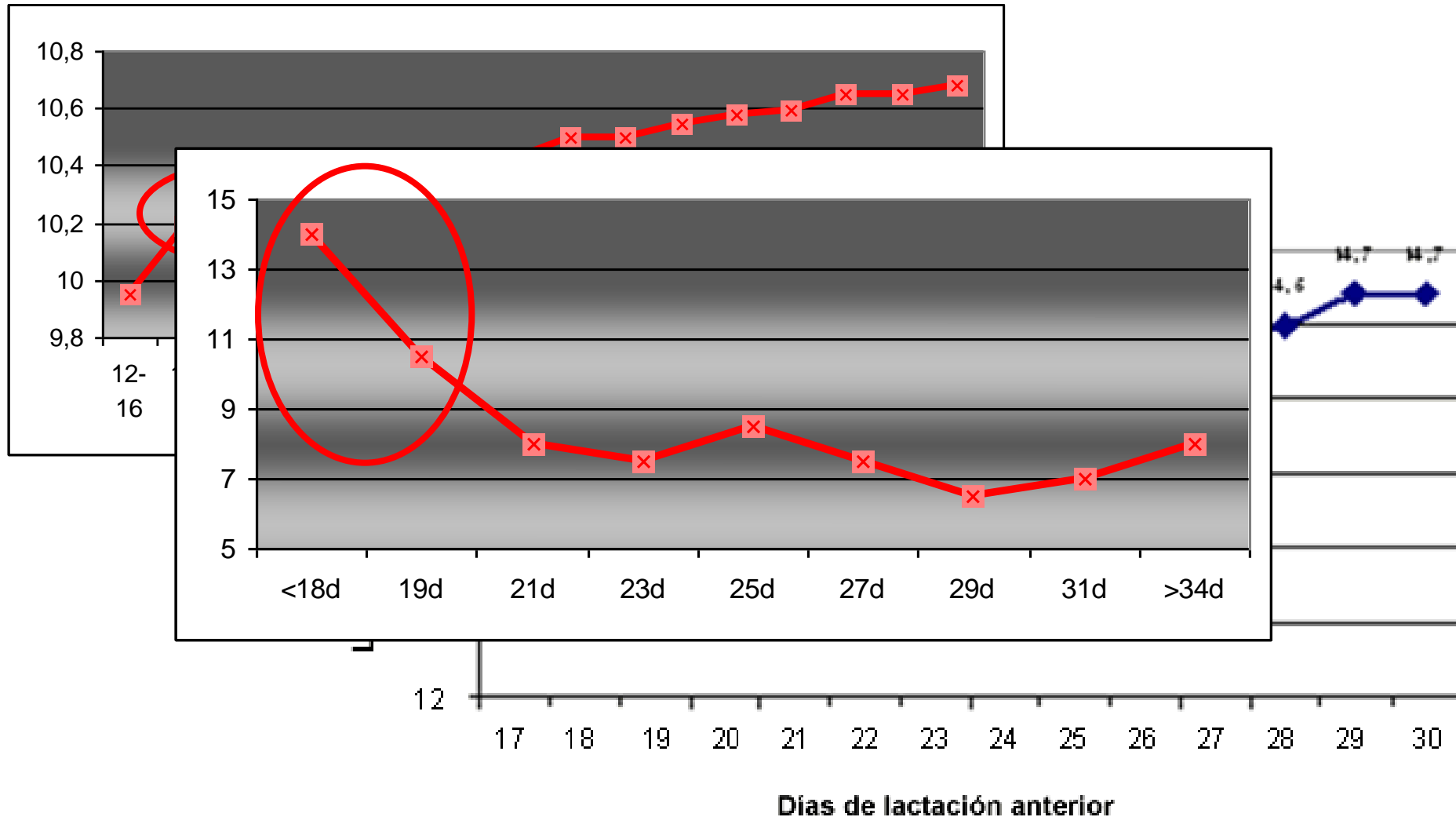
If we are able to maintain or increase the same productivity per sow as weaning at 21 days.

With hiperprolific sows and a good management this is very probable

If we have bad weaning facilities and / or sanitary problems

Problem 2: Multiparous ¿When do we wean them?

We can discuss if its better to wean at 21 or 28 days, but what's quite clear is that we don't have to wean under 21 days.

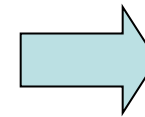


Problem 2: Multiparous ¿When do we wean them?

¿How do we do it?

Example: Wean-breed time = 4 days, gestation length = 115 days, only one weaning day / week in thursday, farrowing room rotation = 4 weeks

- Monday breedings → Thursday farrowings
- Tuesday breedings → Friday farrowings
- Wednesday breedings → Saturday farrowings
- Thursday breedings → Sunday farrowings
- Friday to Sunday breedings → Monday to Wednesday farrowings



**Maximum weaning age
21 d (from 15 to 21d)**

	Monday	Tuesday	Wednesd	Thursday	Friday	Saturday	Sunday
Task	Breed	Breed	Breed	Breed	Breed	Breed	Breed
	Farrow	Farrow	Farrow	Farrow	Farrow	Farrow	Farrow
	Weaned at 17 d	Weaned at 16 d	Weaned at 15 d	Weaned at 21 d	Weaned at 20 d	Weaned at 19 d	Weaned at 18 d

Problem 2: Multiparous ¿When do we wean them?

¿How do we do it?

Solution: Sows “out of place” (breedings > Wednesday) will be $\pm 10\% - 20\%$ on every batch.
 Option 1: Increase farrowing place in a 10-20% of the farrowing objective per batch → so we can give this sows one week more of lactation.

- Example: 16 rooms for de 20 sows (Farrowing Objective: 80 / week)
- With an extra room for 20 sows → **Minimum** weaning age: 20 days (from 20 till 27 days).
- **Extra benefit:** When doing nurse sows + offering one extra week to small piglets.

Option 2: If we don't have 1 extra room: Reduce farrowing objective in 5% for every batch = generating 20% extra space. Problem: It will suit to the AI – AO room management? OK for units with a high number of room (ususally big units).

Option 3: Doing >1 weaning / week. Problem: It suits only to big farms??

	Monday	Tuesday	Wednesd	Thursday	Friday	Saturday	Sunday
Task	Breed	Breed	Breed	Breed	Breed	Breed	Breed
	Farrow	Farrow	Farrow	Farrow	Farrow	Farrow	Farrow
	Weaned at 17 d	Weaned at 16 d	Weaned at 15 d	Weaned at 21 d	Weaned at 20 d	Weaned at 19 d	Weaned at 18 d

← ± 10 – 20% →

Problem 2: Multiparous ¿When do we wean them?

¿How do we do it?

Farms working with batch management systems with a farrowing room rotation of 4 weeks (BM every 2 / BM every 4 weeks).

BREEDING + FARROWING WEEK							WEANING WEEK						
Lu	Ma	Mié	Jue	Vie	Sá	Do	Lu	Ma	Mié	Jue	Vie	Sá	Do
Breed	Breed	Breed		Breed				Breed		Wean			
		Farrow	Farrow	Farrow		Farrow				Farrow			
		20 - 22 day weanings				17-18d weanings				13-14d weanings			

The problem is even higher. Example:

- Breeding at Friday during breeding week → farrowing Monday–Tuesday → weaning 17-18d.
- Breeding Tuesday weaning week → Farrow on Thursday–Friday weaning week → weaning at 3-14 d.

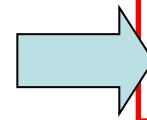
Problem 2: Multiparous ¿When do we wean them?

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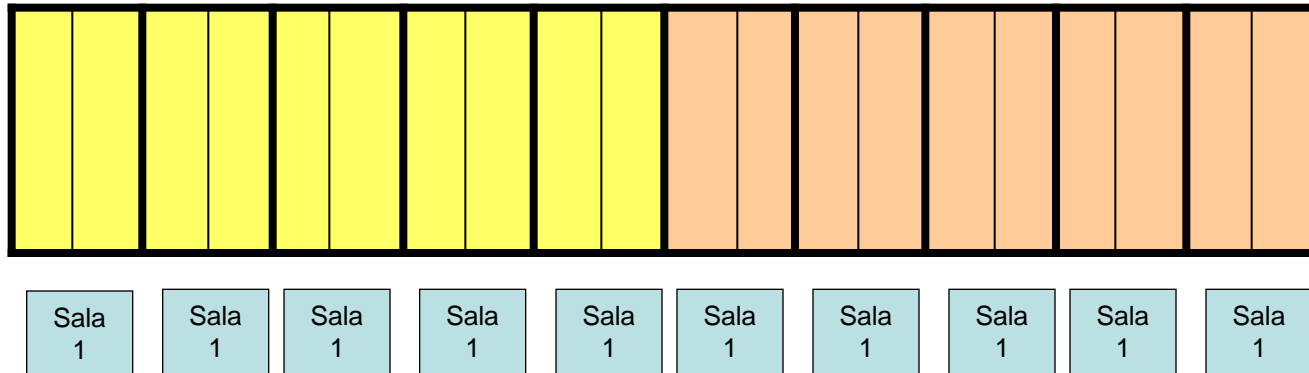
Farms working with batch management systems with a farrowing room rotation of 4 weeks (BM every 2 / BM every 4 weeks).

Example:

- Farm with 10 farrowing rooms: 10 places / room
- Farrowing objective: 50 farrowings / 2 weeks



**Maximum weaning age
21 d (from 12 to 21d)**



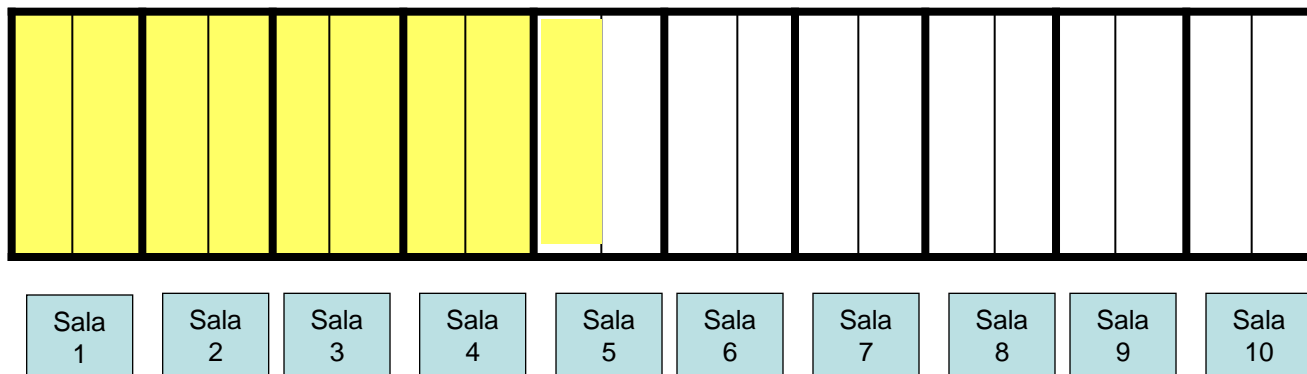
Problem 2: Multiparous ¿When do we wean them?

¿How do we do it?

Farms working with batch management systems with a farrowing room rotation of 4 weeks (BM every 2 / BM every 4 weeks).

Solution:

- Reduce farrowing objective in a 10% → **45 farrowings / 2 weeks**
- Enter sows into farrowing rooms following a strict farrowing date order, without leaving empty crates.
 - Batch 1: Room 1, 2, 3 and 4: Main group of sows bred during the breeding weak
 - ½ room 5: 10% remaining sows



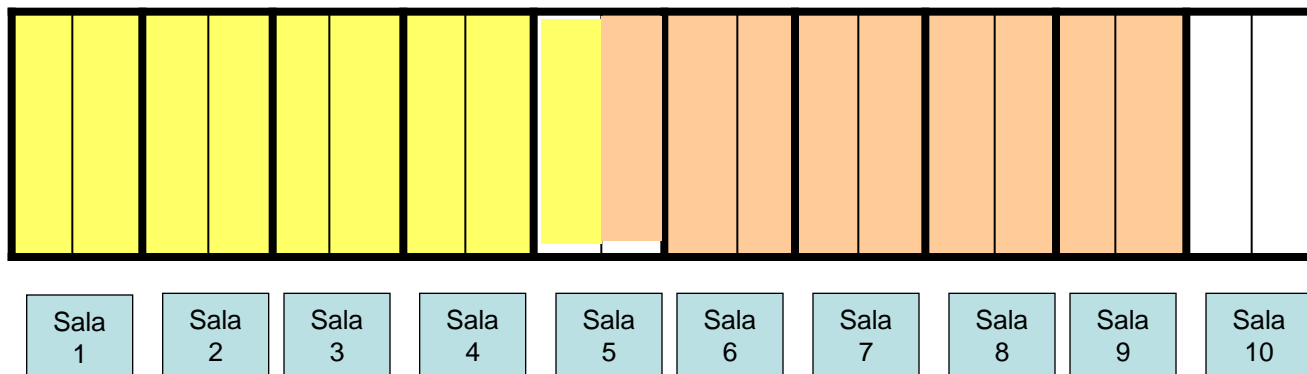
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 - ½ room 5: 10% remaining sows
 - Batch 2: Ends to fill room 5, all rooms 6, 7, 8 y 9. At ½ room 9 remain 10% “retarded” sows.



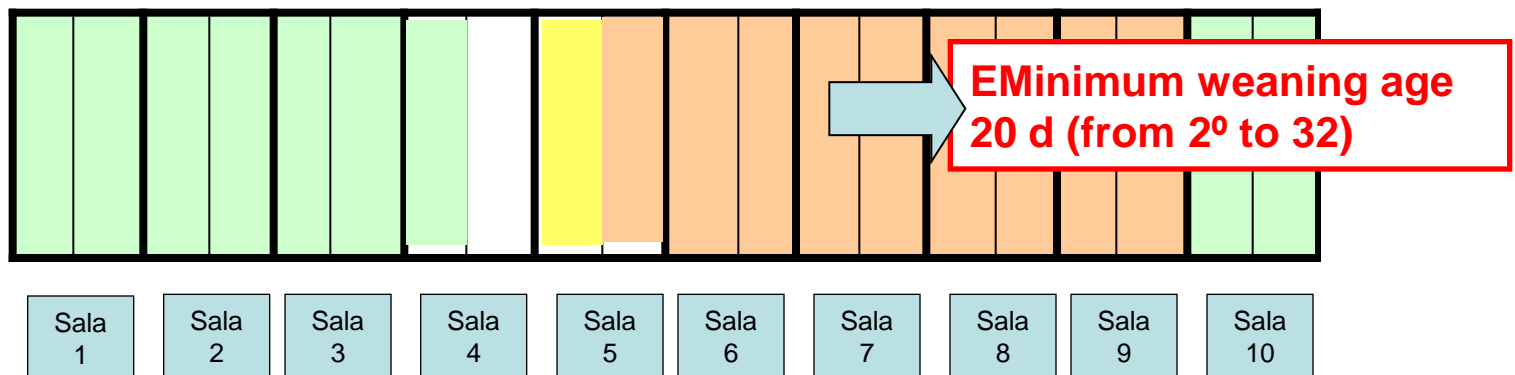
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 - ½ room 5: 10% remaining sows
 - Batch 2: Ends to fill room 5, all rooms 6, 7, 8 y 9. At ½ room 9 remain 10% “retarded” sows.
 - Batch 3: Room 10, 1, 2 and 3: Main group of sows bred at “good time”
 - ½ room 4: 10% retarded sows.
- **Retarded sows from batch 1 (yellow) will not be weaned with his batch, they will be weaned with the next one (with 28-32 days). They also can be used for nurse sows**



Problem 2: Multiparous ¿When do we wean them?

¿How do we do it?

Farms working with batch management systems with a farrowing room rotation of 4 weeks (BM every 2 / BM every 4 weeks)

Solution:

- Reduce farrowing objective in a 10% –
- Enter sows into farrowing rooms following empty crates.

- Batch 1: Room 1, 2, 3 and 4: Main
- ½ room 5: 10% remaining sows
- Batch 2: Ends to fill room 5, all rooms 6, 7, 8 y 9. At ½ room 9 remain 10% “retarded” sows.
- Batch 3: Room 10, 1, 2 and 3:
- ½ room 4: 10% retarded sows
- Batch 4: Ends to fill room 4, the retarded sows.

¿Reduce nº sows during crisis times?

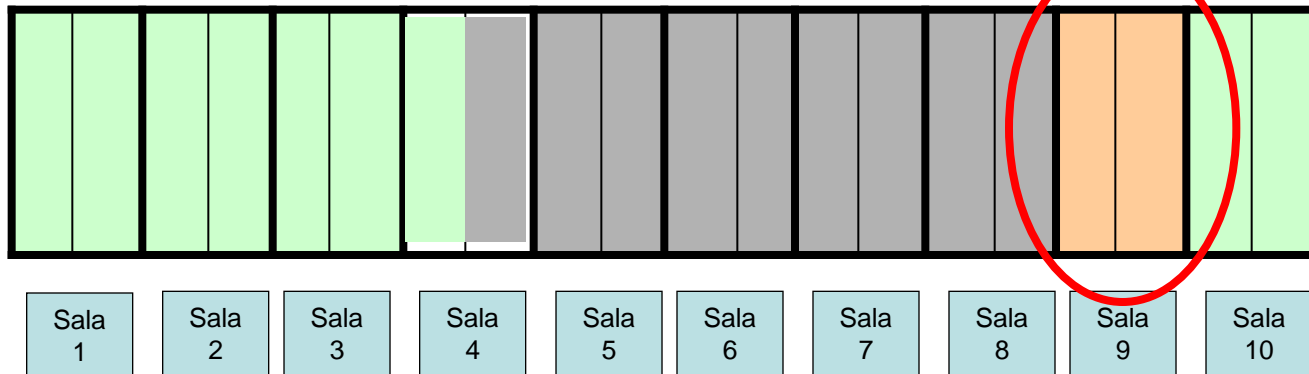
Good option if:

- Weaned piglet quality is increased
- Sows are more prolific afterwards
- Less sows → More time to pay attention to details, more productivity.

Problem: Lots of small rooms are needed to be able to work AI-AO

From 1 to ½ room to enlarge lactation. Extra time for:

- Retarded sows
- Small piglets
- Nurse sows



Objective 1: Maximize prolificacy

Third step to get a lot of piglets born is to check oestrus and breed properly

Problem 3: ¿How do we check oestrus and breed?

From a good breeding, we expect:

1. Maximum fertility

2. Maximum prolificacy: ¿More important than fertility?

(It has no sense to discuss it, cause both parameters are related)

¿Something more?

3. The method should be relatively fast:

It has no sense to use a method that optimizes fertility and prolificacy if afterwards there is no time to check the piglets cause we have been breeding Monday, Tuesday and Wednesday morning and afternoon.

(...if this method would give a significant number of extra piglets, maybe I would agree to establish it...).

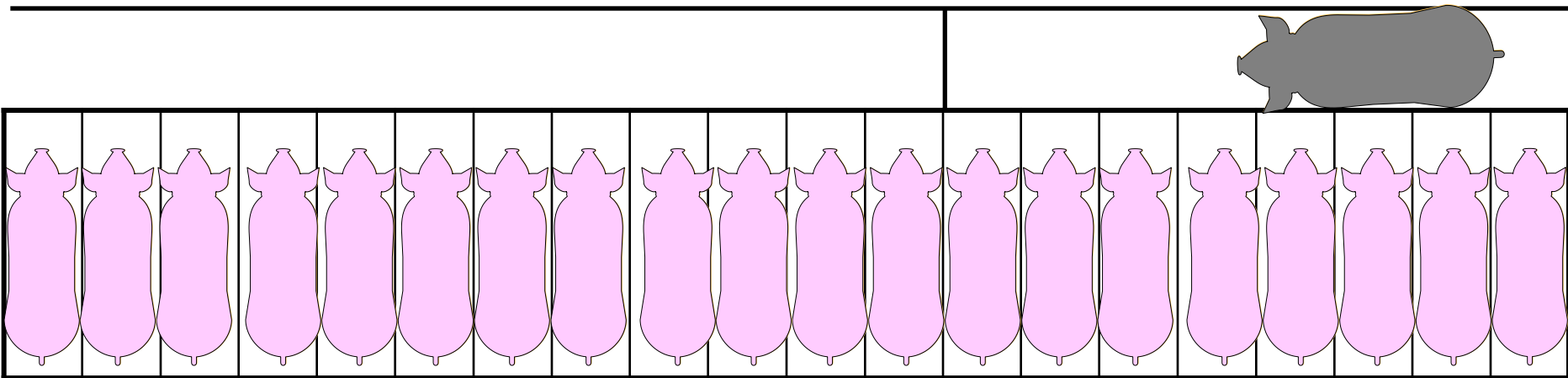
Problem 3: ¿How do we check oestrus and breed?

Let's see a method that combines speed with good results:

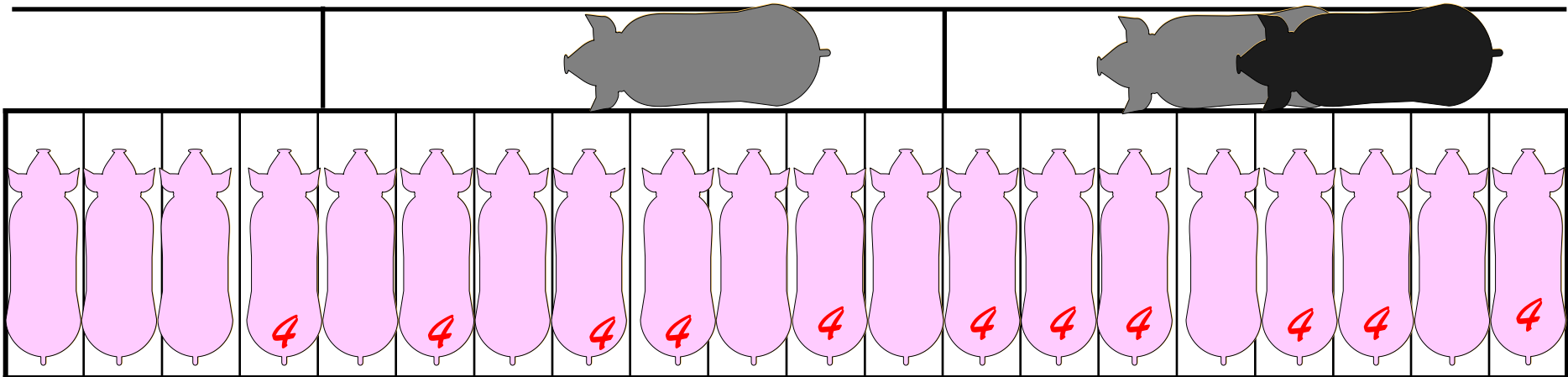
We suppose weaning on Thursday

1. Check oestrus + heat stimulation with the boar on Friday, Saturday and Sunday on CRATES.

- If one sow gets on heat on Saturday, we breed her.
- Sows that start to show oestrus signs on Sunday are bred on Monday.



Problem 3: ¿How do we check oestrus and breed?



2. Checking oestrus and breeding at the same time.

MONDAY:

Step 1: Close boar in front of maximum 10-12 sows.

Step 2: Check oestrus and mark sows with heat 100% sure.

Step 3: Clean vulva, introduce catheter, elastics and semen d

Step 4: Review heat of doubt sows

Step 5: Wait 5 minutes

Check sow that sit down / reflux semen

Time can be profited to register the breedings

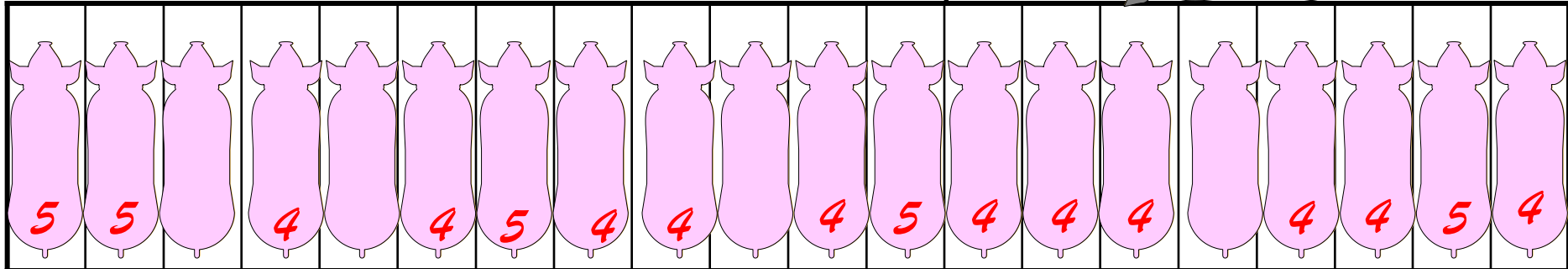
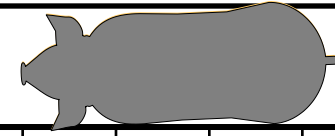
Step 6: Forward the the boar and repeat steps 1 to 5

Ideal situation: Introduce a 2nd boar: Longer stimulation

System that offers ↑ stimulation degree + speed



Problem 3: ¿How do we check oestrus and breed?



2. Checking oestrus and breeding at the same time.

TUESDAY:

Step 1: Check oestrus of 2nd heat day sows and check oestrus of “new” sows. Mark only the ones with 100% heat evidence.

Boar needs to be moved at short sections, stimulating only 10-12 sows: Breed sows at the optimal time.

Step 2: Clean vulva, introduce catheter, elastics and semen dose to the marked sows.

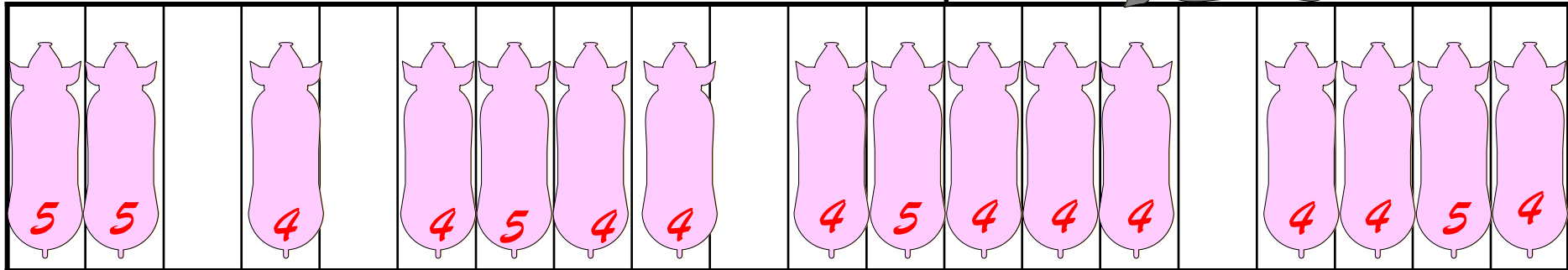
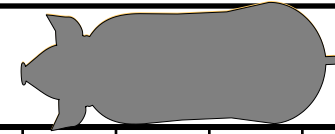
It's interesting to do this step quite fast (2 persons) in order to breed at the best moment (not latter than 10-15' after boar contact

Attention: Sponge catheter and long enough.

Step 3: Review heat of doubt sows.

Step 4: Once work at crates is finished, take ALL sows that have not shown oestrus signs and move them to pens. Check oestrus with direct contact with a different male.

Problem 3: ¿How do we check oestrus and breed?



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It's interesting to do this step quite fast (2 persons) in order to breed at the best moment (not latter than 10-15' after boar contact

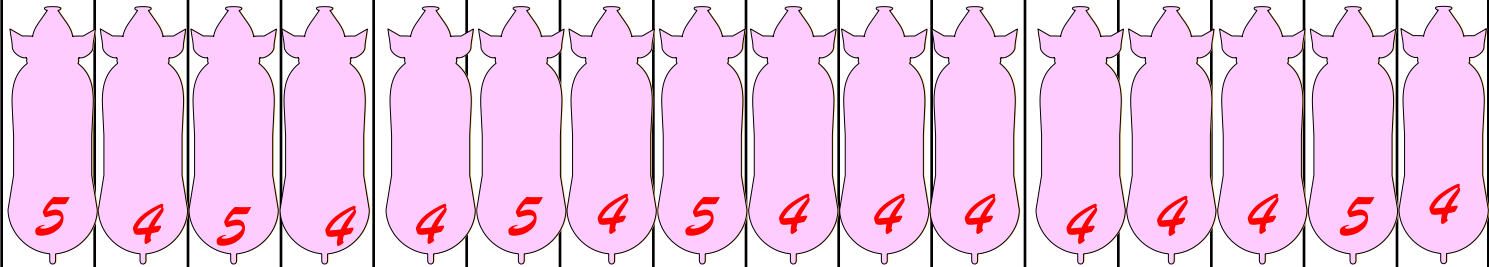
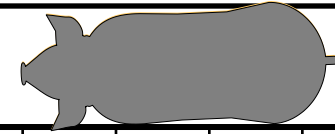
Attention: Sponge catheter and long enough.

Step 3: Review heat of doubt sows.

Step 4: Once work at crates is finished, take ALL sows that have not shown oestrus signs and move them to pens. Check oestrus with direct contact with a different male.

Step 5: At the afternoon: Organize sows

Problem 3: ¿How do we check oestrus and breed?



2. Checking oestrus and breeding at the same time.

TUESDAY:

Step 1: Check oestrus of 2nd heat day sows and check oestrus of “new” sows. Mark only the ones with 100% heat evidence.

Boar needs to be moved at short sections, stimulating only 10-12 sows: Breed sows at the optimal time.

Step 2: Clean vulva, introduce catheter, elastics and semen dose to the marked sows.

It's interesting to do this step quite fast (2 persons) in order to breed at the best moment (not latter than 10-15' after boar contact

Attention: Sponge catheter and long enough.

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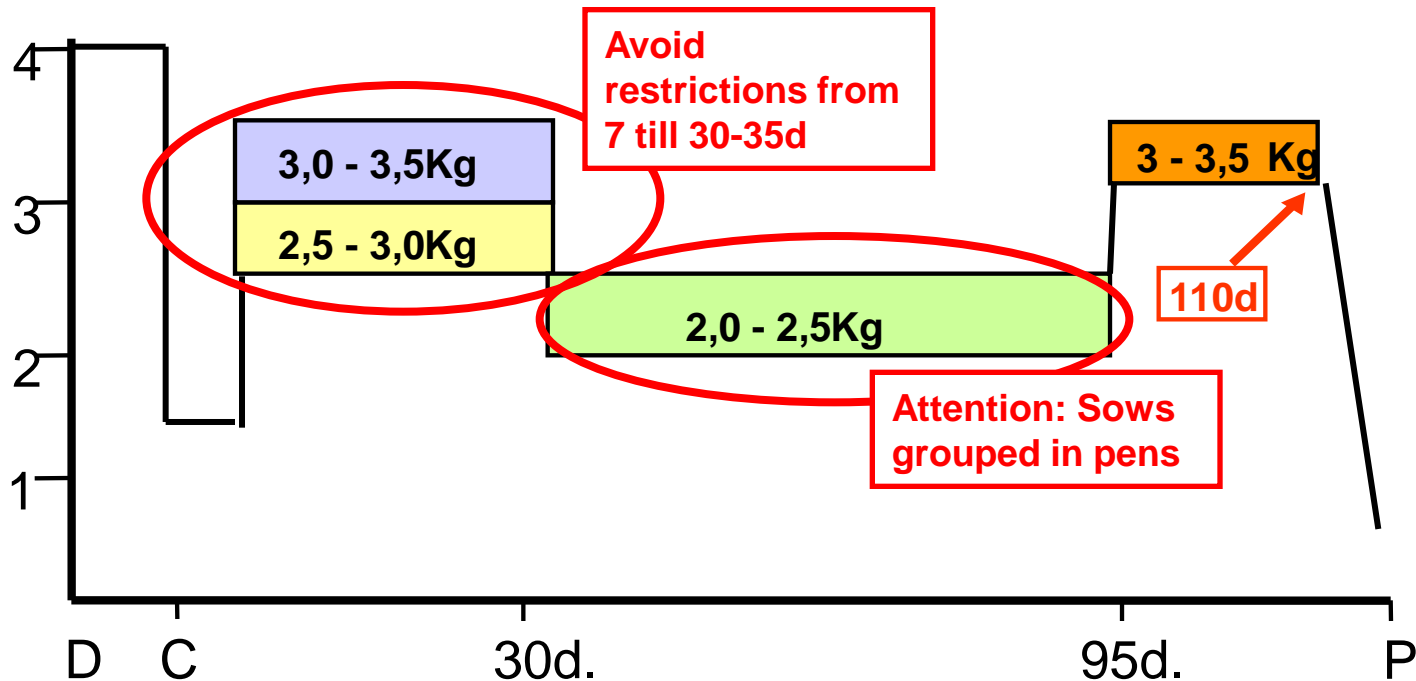
Step 5: At the afternoon: Organize sows

Objective 1: Maximize prolificacy

Fourth step to maximize piglets born is to minimize embryonic losses

Problem 4: ¿How do we feed our sows?

Feeding program for breeding sows



Objective 1: Maximize prolificacy

Fourth step to maximize piglets born is to minimize embryonic losses

Problem 5: ¿How do we place our pregnant sows in pens?



1st rule: Ensure food supply

- Badly made facilities are expensive afterwards!
- Floor feeding: ↑ food lost ↑ competence
- ¿How can we adjust the feeders? ¿Stair + accident?



1st rule: Ensure food supply

- That's not a badly made job, easy and cheap transformation from crates to pens
- Good regulation capability (but not individual)
- Less competence
- ¿A slow fall system could be established?

Objective 1: Maximize prolificacy

Fourth step to maximize piglets born is to minimize embryonic losses

Problem 5: ¿How do we place our pregnant sows in pens?



2nd rule: Make sure water availability

- Old grower: Small drinkers
- Pregnant sows during summer: need ↑ water intake
- The mouth is too big for the drinker → Embryonic losses, abortions



2nd rule: Make sure water availability

- Farrowing feeder + float = Cheap + easy + effective
- 2 floats (one closed) just in case one gets broken.



Objective 1: Maximize prolificacy

Fourth step to maximize piglets born is to minimize embryonic losses

Problem 5: ¿How do we place our pregnant sows in pens?



3rd rule: Try to introduce sows as latter as possible into pens.

Minimum 35 days, better 42

¿The law allows it?



4rd rule: As more space / sow, better

In this case is recommended to follow 100% the law. Even if more space can be given, better.

Reducing sow number on farm → Allows to move sows latter and introduce less sows / pen.

Problema 6: ¿Are we detecting losses at optimal time?

	Cub	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	más de 17	Dropouts	No parida	Partos	Parto retrasado	Tasa de partos
Semana 53, 2008	1 0.1%																			0 0.0%	0	1	0	100
Semana 01, 2009	26 2.5%				1	1										1				3 1.8%	0	23	0	88
Semana 02, 2009	3 0.3%		1	1																1 0.6%	0	2	0	67
Semana 03, 2009	7 0.7%		1	1	1															2 1.2%	0	5	0	71
Semana 04, 2009	0 0.0%																			0 0.0%	0	0	0	0
Semana 05, 2009	5 0.5%		1	1			1	1												2 1.2%	0	3	0	60
Semana 06, 2009	46 4.5%		1	1	1	1	1	1			1									5 3.1%	0	41	0	89
Semana 07, 2009	15 1.5%		2	1	1	1														3 1.8%	0	12	0	80
Semana 08, 2009	5 0.5%									1										1 0.6%	0	4	0	80
Semana 09, 2009	8 0.8%										1									1 0.6%	0	7	0	88
Semana 10, 2009	0 0.0%																			0 0.0%	0	0	0	0
Semana 11, 2009	47 4.5%		1	1								1								7 4.3%	0	40	0	85
Semana 12, 2009	17 1.6%	1	1									1								4 2.5%	0	13	0	76
Semana 13, 2009	3 0.3%																			0 0.0%	0	3	0	100
Semana 14, 2009	3 0.3%									1	1									2 1.2%	0	1	0	33
Semana 15, 2009	4 0.4%		1	1																1 0.6%	0	3	0	75
Semana 16, 2009	44 4.3%		1	1							1									6 3.7%	0	37	1	86
Semana 17, 2009	8 0.8%																			1 0.6%	0	7	0	88
Semana 18, 2009	2 0.2%																			0 0.0%	0	2	0	100
Semana 19, 2009	1 0.1%																			0 0.0%	0	1	0	100
Semana 20, 2009	6 1.2%																			2 1.2%	0	4	0	67
																				0 0.0%	0	4	0	100
																				6 3.7%	0	35	0	85
																				2 1.2%	0	8	0	80

1 abortion 15 weeks =
Minimum 5 Ret 21 days
= 7,5 weaned piglets

Good diagnose of
empty sows in pens!

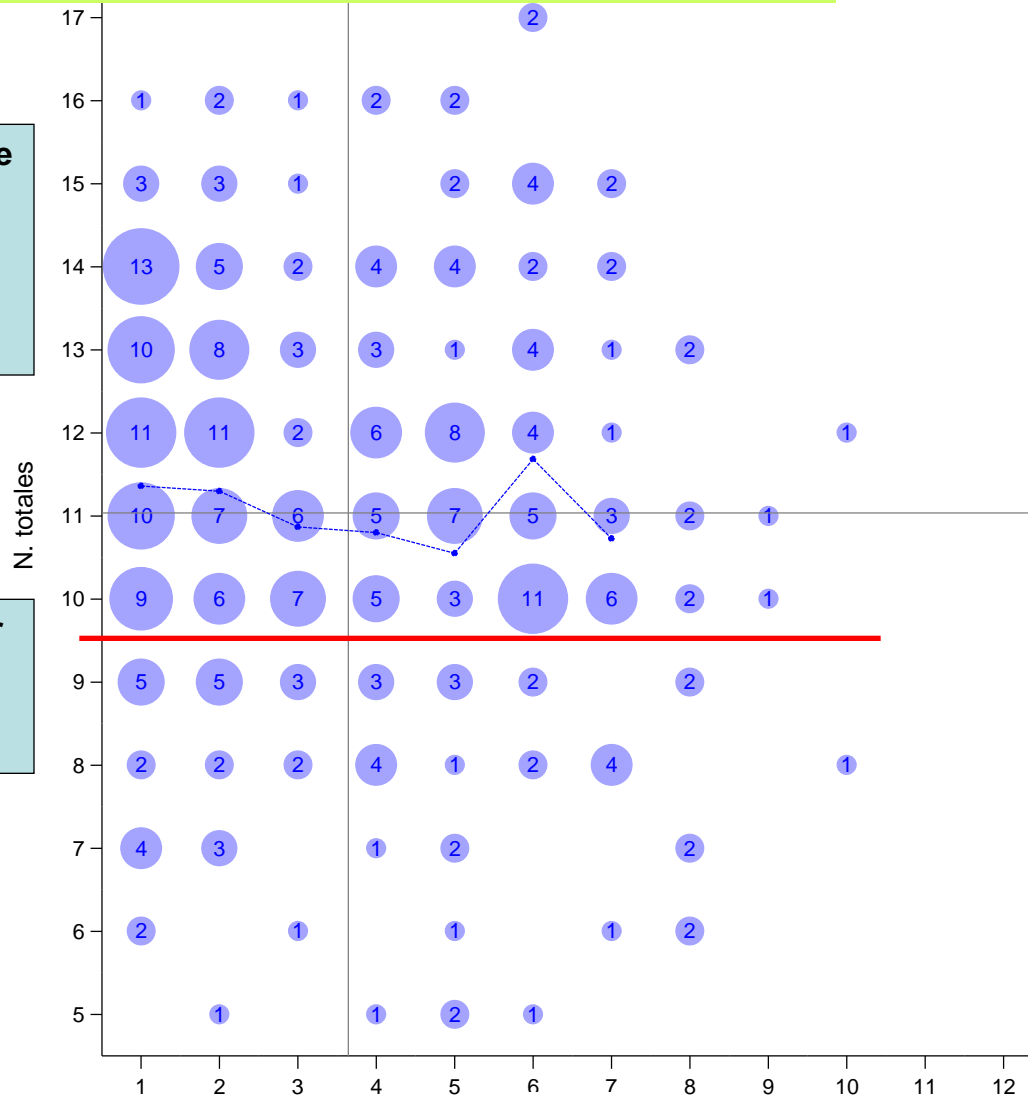
↑ negative Ecos = minimum
2 Returns = 3 piglets

2 objectives in gestation
1. Minimum loses
2. Loses at minimum time

Problem 7: ¿Do we know the real potential of our sows?

At this farm, most of the key points explained have been put into practice. Let's see the ↑ prolificacy during the following 3 years.

Review the litter scatter and the % mummified piglets is a key point to detect problems..

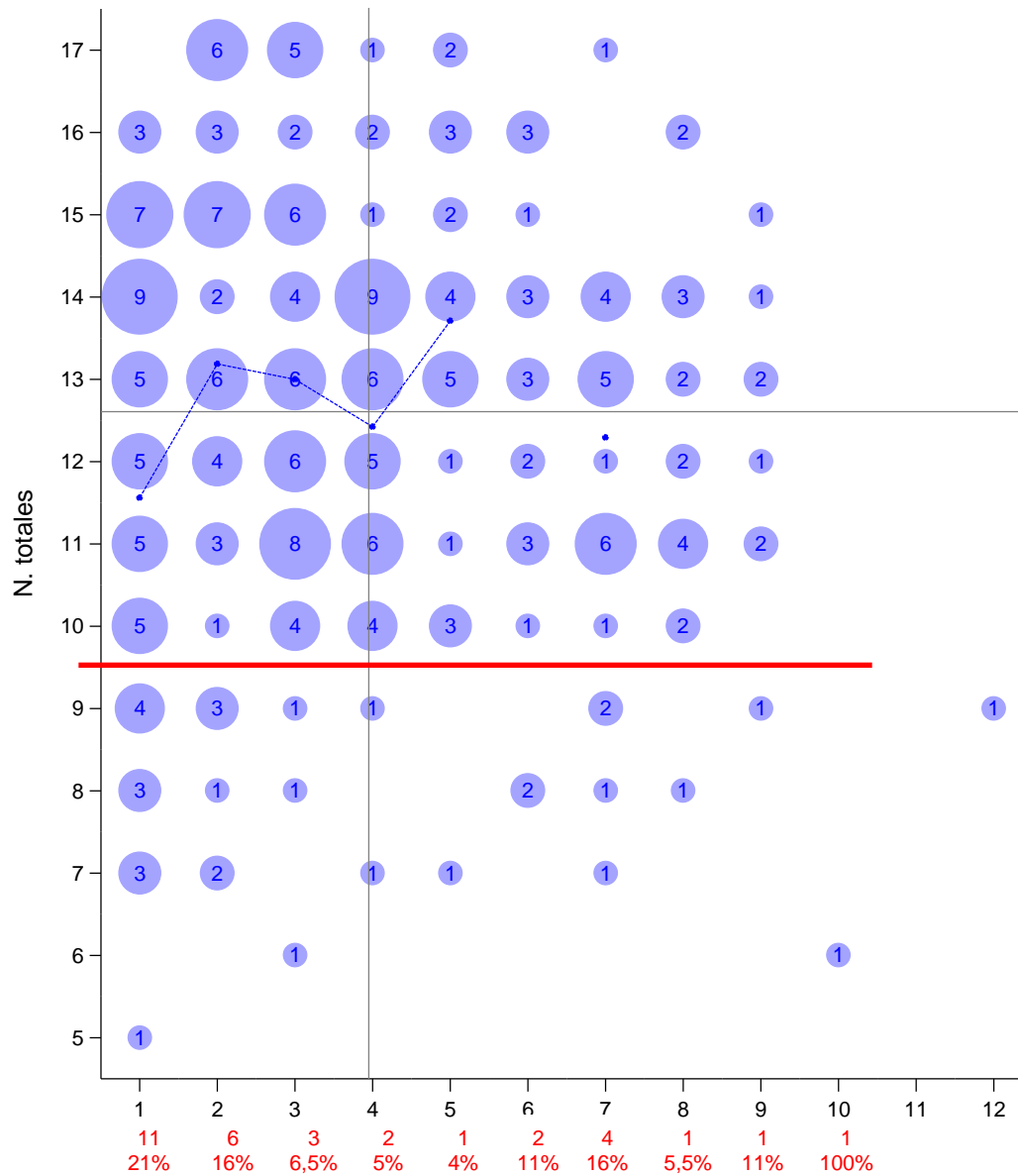


13 17% 11 20% 6 20% 9 25% 9 22% 5 13% 5 22% 6 75% 0 0% 1 50%

Nº de cerdas	75	54	30	35	40	38	22	12	2	2	0	0
Media	11,4	11,3	10,9	10,8	10,6	11,7	10,7	9,3	10,5	10,0		

268 cerdas Parida entre 01-ene-09 y 01-jul-09 (Media de partos 3,9)

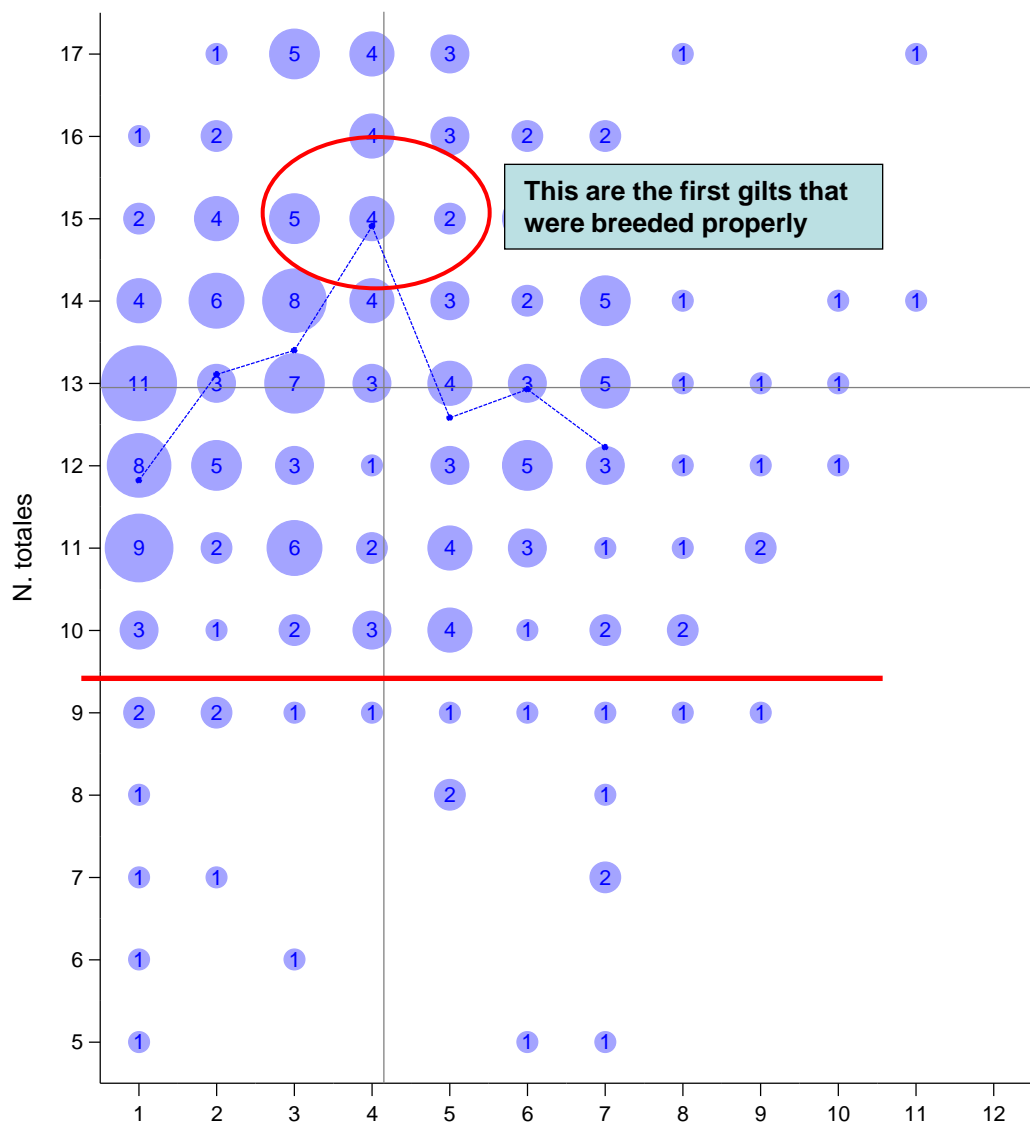
Gráfico de nº de parto frente a N. totales (MediaN. totales 12,6)



Nº de cerdas	52	38	45	38	24	18	24	18	9	1	0	1
Media	11,6	13,2	13,0	12,4	13,7	12,6	12,3	13,1	13,1	6,0		9,0

252 cerdas Parida entre 01-ene-10 y 01-jul-10 (Media de partos 4,2)

Gráfico de nº de parto frente a N. totales (MediaN. totales 12,9)



6 13% 3 10% 2 5% 1 5% 1 3% 2 7% 5 18% 1 11% 1 14%

Nº de cerdas	45	28	40	33	31	27	27	9	7	3	2	0
Media	11,8	13,1	13,4	14,9	12,6	12,9	12,2	12,3	12,3	13,0	15,5	

Objective: Maximize n° weaned piglets

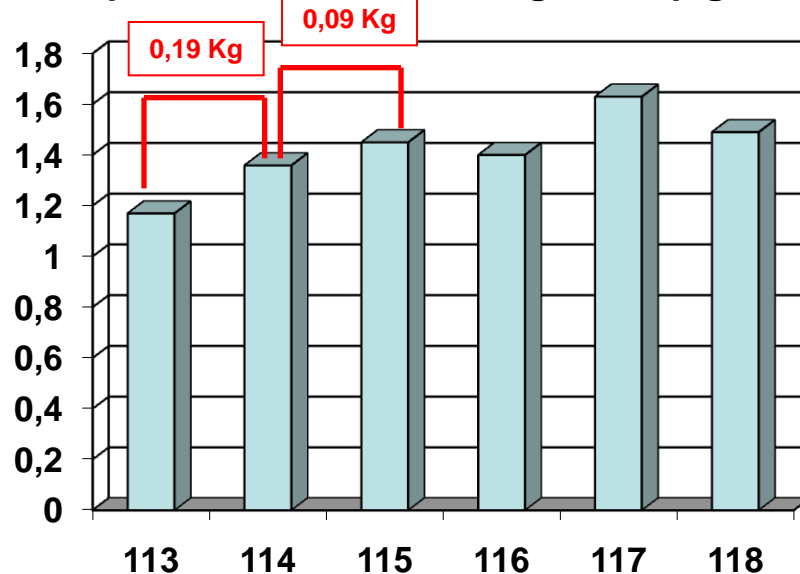
Objective 2: Minimize mortality

“Second step to wean a lot is that only a few are dying” (...very clever too...)

Problem 8: ¿Farrowing induction?

“First step to maximize number of piglets born alive is to reduce stillbirths”.

Relationship between gestation length and piglet weight



Fuente: Pinilla y Mickevicius, (2007)

¿What do we prefer?
Reduce stillbirths and have a more fragile piglet...
...less born alive, but stronger ones

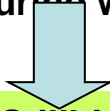
Objective 2: Minimize mortality

“First step to maximize number of piglets born alive is to reduce stillbirths”.

Problem 8: ¿Farrowing induction?



- Good assistance
- If we have \uparrow % stillbirths (>8%?): + common with hiperprolífico sows?
- Good facilities and management during first day of live (so weight is not so important)
- Labor organization, reduce farrowings during weekend



Good farms. Stillbirth reduction compensates the fact that the born piglet is weaker.

ANTICIPATE
INDUCTION

More than
yes or no, the
question
would be...

RETARD
INDUCTION



- Bad assistance: Lack of time??
- \downarrow % stillbirths
- Bad farrowing facilities and / or poorer management (in this case, pay attention to the weekend!)



→ In this case we give more importance to the “quality” of the piglet rather than the quantity.

- Capability to organize work turns, even during weekend (big farms)

Objective 2: Minimize mortality

“Second step to wean a lot is minimize piglet death during lactation”.

Problem 9: The critical point. Management during first 3 days after farrowing

Critical points:

- Sow feeding and Body Condition
- Piglet thermal confort
- Colostrum intake / extra intake to the smaller ones
- Equalization of litters after birth
- Movement of piglets between litters till 3-4 days of live



Extra colostrum intake to small piglets ¿How many farms are doing it? ¿Too much time?

- Milk extraction: Using retarded oxitocine, 5'-10' → 0,5l
- 1 piglet = 20cc → we have for 25 (2 litters of small piglets)
- Administration: Using a probe, 5' → 10 piglets

TOTAL: 20-25' to give colostrum to 25 small ones

If we achieve to save 1,5 = 1 return at 21 d less
¿How much time do we need to detect and breed a sow that is returning into heat?

Objective 2: Minimize mortality

“Second step to wean a lot is minimize piglet death during lactation”.

Problem 9: The critical point. Management during first 3 days after farrowing

PROBLEMS:

- Most farrowings on Wednesday / Thursday and Friday → 3 first days of live occur during the weekend
- Weaning day: Wednesday / Thursday → It affects plenty to the farrowings and born piglet checks.

SOLUCIONS:

- **Batch Management**
 - Not all weekends will be occupied by farrowings
 - Weaning never coincides with farrowings: We can focus on farrowings + weekend low oestrus check and breeding labor.
- ¿Weaning on Monday?
For people who prefer to pay more attention to harver rather than sowing!!

Objective 2: Minimize mortality

“Second step to wean a lot is minimize piglet death during lactation”.

Problem 9: The critical point. Management during first 3 days after farrowing



PESIMISTIC POINT OF VIEW:
16 bad piglets. They will die equally.

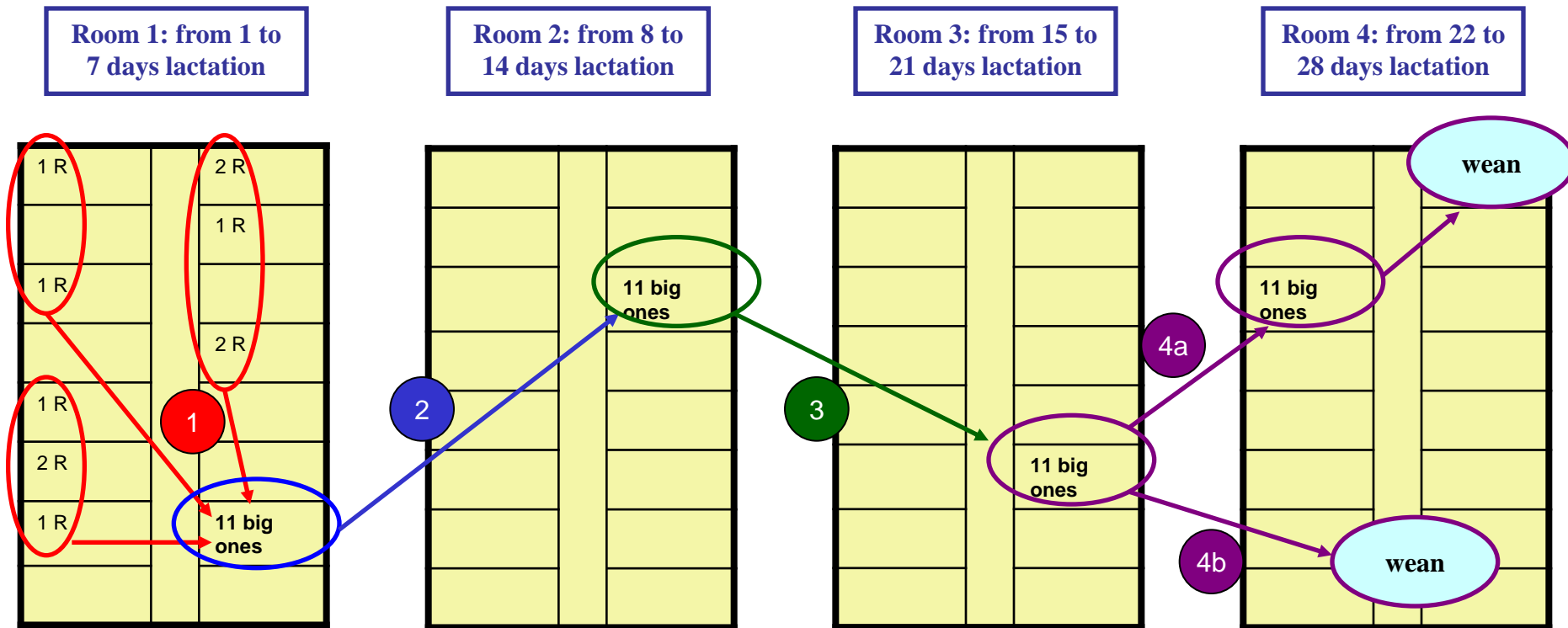
OPTIMISTIC POINT OF VIEW
Chance to reduce the effect of 10 returns at 21 days
(20% repeticiones in a 1000 sow unit)

Objective 2: Minimize mortality

“Second step to wean a lot is minimize piglet death during lactation”.

Problem 10: The more than critical point when a lot of piglets are born: NURSE SOWS

OPTION 1: Piglets go “forward”



PROBLEM: Piglets with less days at weaning: less than 21 days if weaning at 3 weeks.
When weaning at 28 days → + flexibility

Objective 2: Minimize mortality

“Second step to wean a lot is minimize piglet death during lactation”.

Problem 10: The more than critical point when a lot of piglets are born: NURSE SOWS

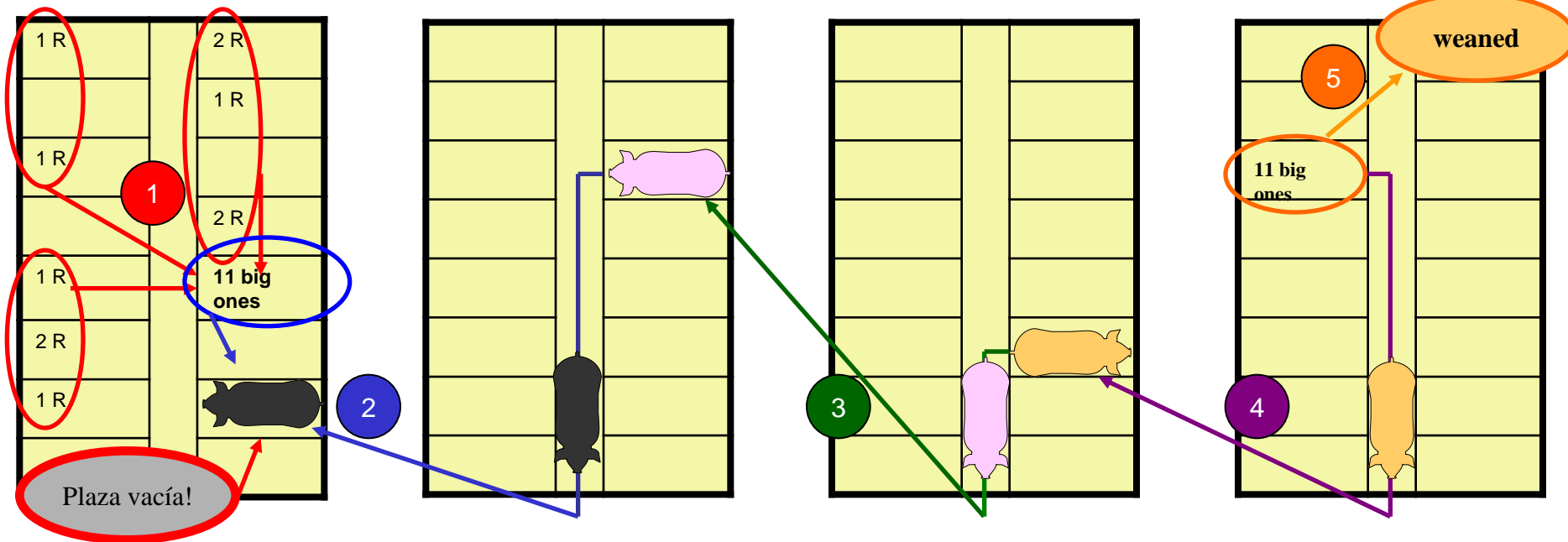
OPTION 2: Move sows backwards

Room 1: from 1 to 7 days lactation

Room 2: from 8 to 14 days lactation

Room 3: from 15 to 21 days lactation

Room 4: from 22 to 28 days lactation

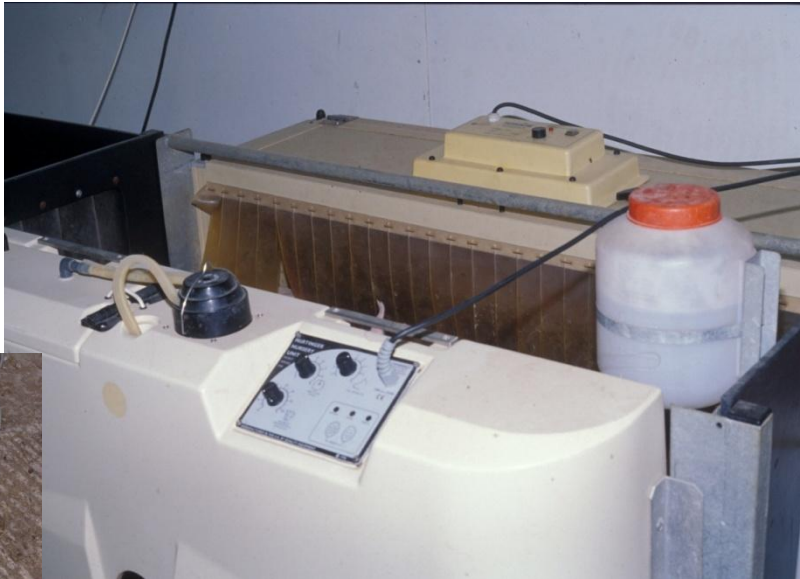


Objective 2: Minimize mortality

“Second step to wean a lot is minimize piglet death during lactation”.

Problem 10: The more than critical point when a lot of piglets are born: NURSE SOWS

OPTION 3: Future? Milk machines



Objective 2: Minimize mortality

“Second step to wean a lot is minimize piglet death during lactation”.

Problem 10: The more than critical point when a lot of piglets are born: NURSE SOWS

OPTION 3: Future? Milk machines



Objective 2: Minimize mortality

“Second step to wean a lot is minimize piglet death during lactation”.

Problem 10: The more than critical point when a lot of piglets are born: NURSE SOWS

OPTION 3: Future? Milk machines



CONCLUSION

We need to improve, at all farm levels, but mainly increasing prolificacy and saving more piglets at the farrowing unit.

¿That means more time is needed?

Try to make your time more profitable, invest it where it gives more return.

- Fast systems for checking heats and breeding sows, minimizing sow movements
- ¿Don't cut teethes?
- ¿Reduce sow number?
- Better labor organization: BATCH MANAGEMENT

Example: Sow unit with 120 farrowing crates

Rotation (BM 2w / 4w): weaning 21d → 120 farrow/4w → 1560 farrow/year

↓ 1/5 =
20%

Rotation (BM 5w / 3-2w): weaning 28d → 120 farrow/5w → 1248 farrow/year

↓ 1/6 =
16,6%

Rotation (BM 3w): weaning 28d → 120 farrow/6w → 1040 farrow/year

↓ 2/6 =
33,3 %

**THE ONE THAT DOESN'T LEARN TO FLY HIGH,
WILL NOT REACH THE GOAL**

**Thank's a lot
for your
attention!!!**

