

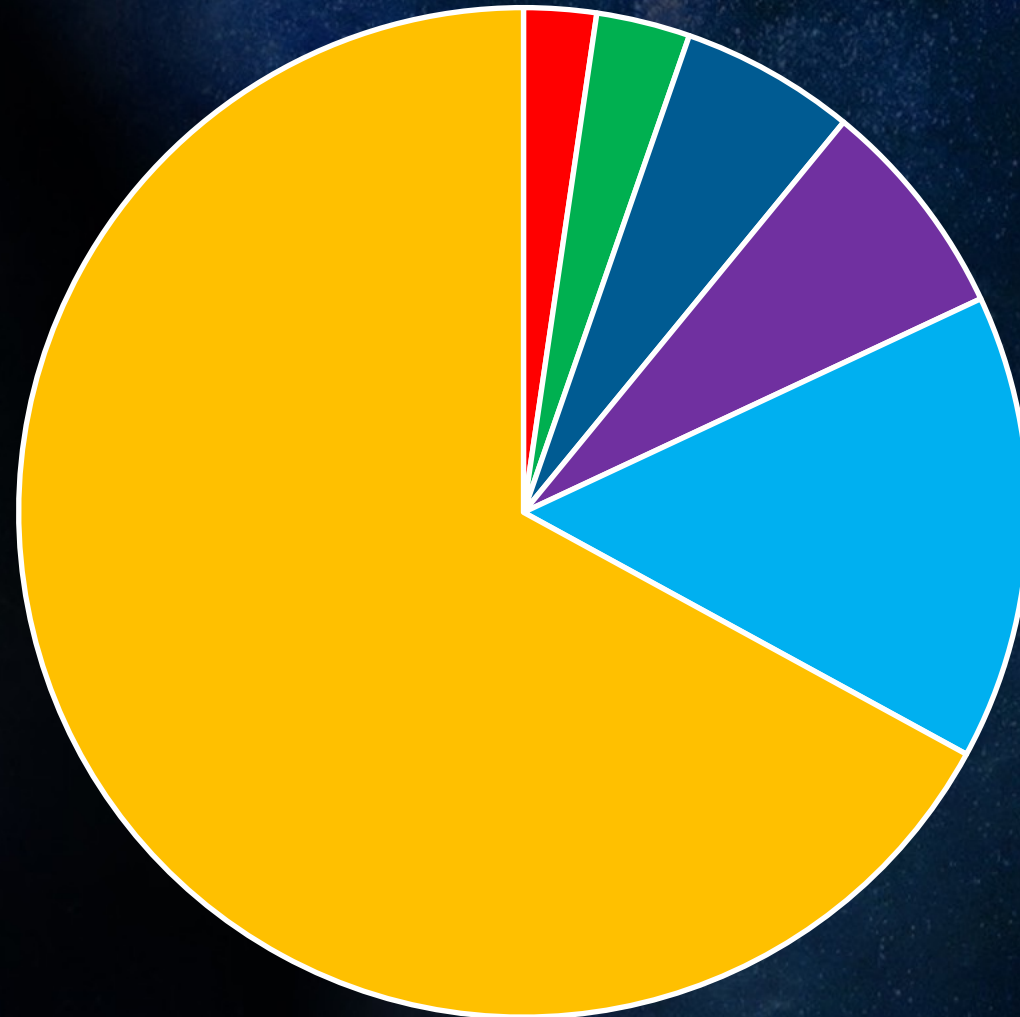


# Feed Efficiency vs Money Efficiency

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H&N Layer Academy, Dubai – 11.09.2022

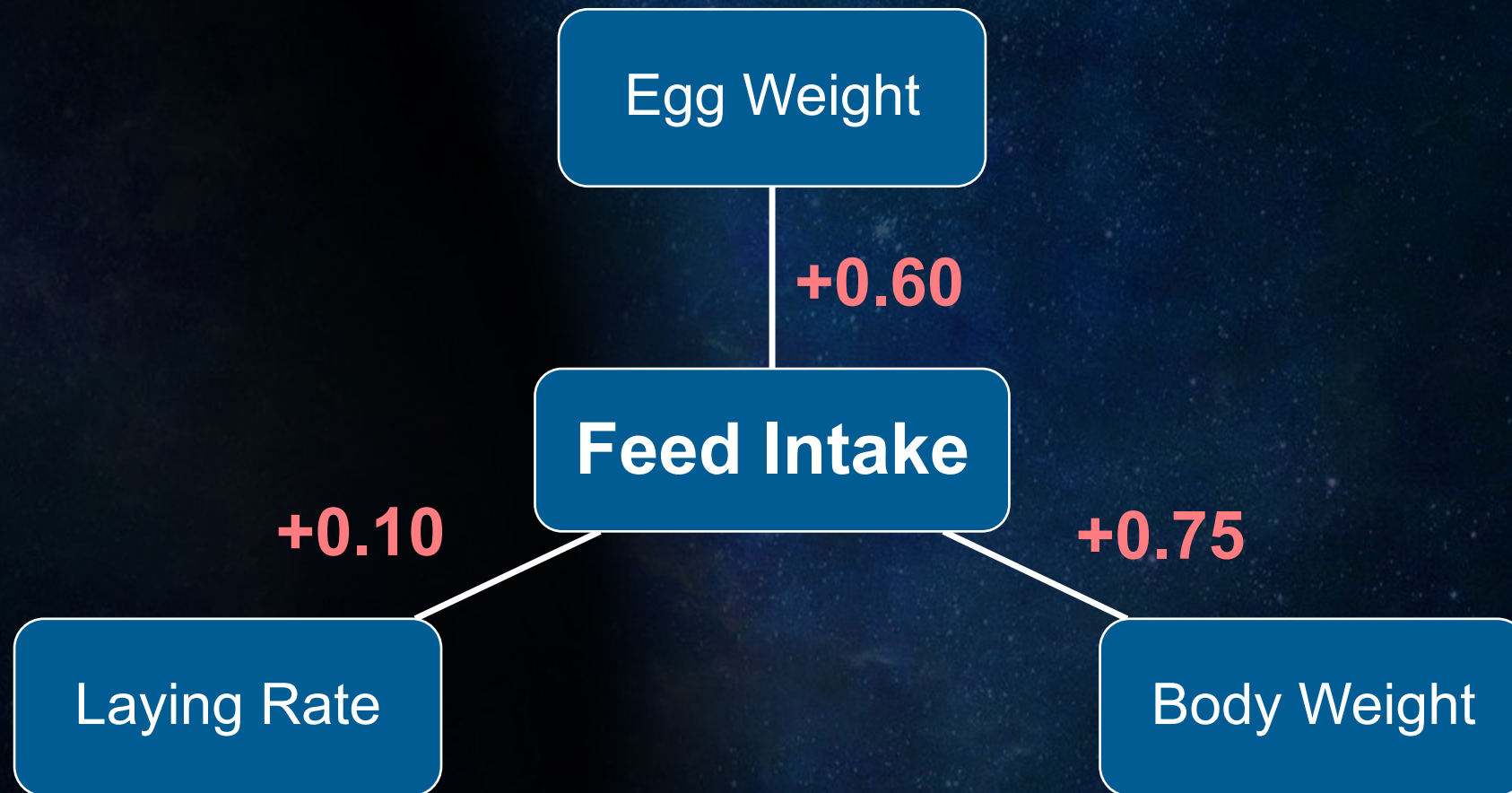
# Egg Production Costs



■ Management ■ DOC ■ Others ■ Fix cost ■ Pullet ■ Feed

# Feed Intake - Genetic Correlations

Feed Intake:  $h^2 \sim 0.3 - 0.4$



# Selection for better feed efficiency



- **Sufficient feed intake at greatest nutrient demand**
- Focus is not only in FCR, but mainly in IOFC
- **No special high-density diet – Flexible in raw material**
- Feed intake according to production

# Use of Challenge Feed

Diluted feed - Lower E, Vit., CP, aa

**Breeding Farm:** separate silos for group cages

**Field Test:** Use of two different feeds



# Feed efficiency



**20 kg Eggs**

**30 Years ago**

**Feed: 60 kg  
FCR 3.0**

**15 Years ago**

**Feed: 50 kg  
FCR 2.5**

**Today**

**Feed: 40 kg  
FCR 2.0**

# FCR – Feed Conversion Ratio

Difficult to compare



115 g



105 g



FCR

1.98

1.81



So what?

# Income over Feed Cost

“Standard” Formula:

$$\text{IOFC} = 0.8 \times \text{Egg Mass} - 0.2 \times \text{Feed Consumption}$$

➤ **Adjust the formula to your condition:**

✓ Feed Cost:

– Price per kg feed

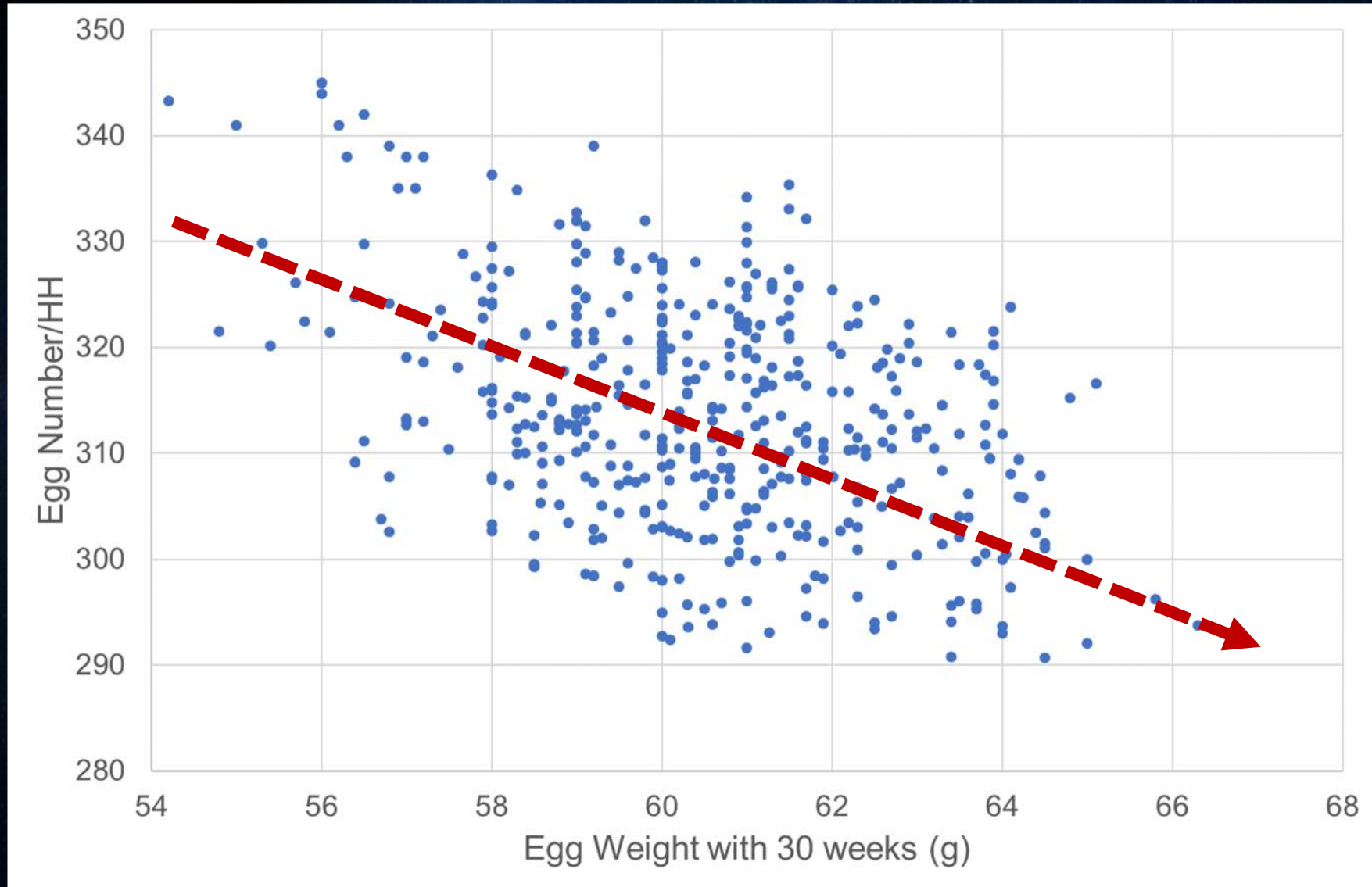
✓ Income:

– Egg Price (kg or depending on egg grading)

– Price of the spent hen



# Relationship between EW and EN



# Effect of BW in the rearing (14 w)

	Lower 25%	Middle 50%	Upper 25%
<b>BW Rearing</b>	<b>1027</b>	<b>1101</b>	<b>1170</b>
<b>Prod (20-28w)</b>	68.5	69.7	69.6
<b>EN 72W</b>	318	327	323
<b>EN 80W</b>	362	374	369
<b>EG</b>	58.6	59.6	61.1
<b>BW 32 w</b>	1,540	1,626	1,706
<b>Feed Intake</b>	97.2	101.0	102.9

# Let's make a fast exercise at 80w

Modify EW 1g by Management (Light, Feed)

EW	EN	EM	EM/d	BW 32w
62.4	374	23.35	55.58	1970
63.4	370	23.46	55.85	2050
64.4	366	23.57	56.12	2130

Assumptions:  $\pm 1 \text{ g} \rightarrow \text{EN} \pm 4 \text{ \& BW} \pm 80 \text{ g}$



# Let's make a fast exercise at 80w

Modify EW 1g by Management (Light, Feed)

EW	EN	EM	EM/d	BW 32w	FI
62.4	374	23.35	55.58	1970	113
63.4	370	23.46	55.85	2050	115
64.4	366	23.57	56.12	2130	117

Assumptions:  $\pm 1 \text{ g} \rightarrow \text{EN} \pm 4 \text{ \& BW} \pm 80 \text{ g}$

Feed (Xabier):

4 kcal/50g additional BW

2 kcal/1g additional daily EM



# Let's make a fast exercise at 80w

Modify EW 1g by Management (Rearing, Lighting, Feed)

EW	EN	EM	EM/d	BW 32w	FI	FCR
62.4	374	23.34	55.58	1970	113	2.03
63.4	370	23.46	55.85	2050	115	2.06
64.4	366	23.57	56.12	2130	117	2.09

Assumptions:  $\pm 1 \text{ g} \rightarrow \text{EN} \pm 4 \text{ \& BW} \pm 80 \text{ g}$

Feed (Xabier):

4 kcal/50g additional BW

2 kcal/1g additional daily EM



# Let's make a fast exercise at 80w – Part II

## Payment per EM

Feed Price: 350€/t

1. Egg Price (x3.5) → 1.2 €/kg
2. Egg Price (x4.0) → 1.4 €/Kg
3. Egg Price (x4.5) → 1.6 €/kg



EM	FI	Feed Cost	IOFC-1	IOFC-2	IOFC-3
23.34	113	16.61	11.39	16.06	20.73
23.46	115	16.91	11.24	15.94	20.63
23.57	117	17.20	11.09	15.80	20.51

# Let's make a fast exercise at 80w – Part III

## Payment per Egg Size

	Price 1	Price2	Price3
S (<53g)	0.09	0.09	0.09
M (53-63g)	0.14	0.14	0.14
L (63-73g)	0.16	0.17	0.18
XL (>73g)	0.18	0.20	0.22



EW	EN	%S	%M	%L	%XL
62.4	374	6.5	45.0	46.3	2.2
63.4	370	5.2	39.1	52.0	3.7
64.4	366	4.1	33.4	56.6	5.9

# Let's make a fast exercise at 80w – Part III

## Payment per Egg Size

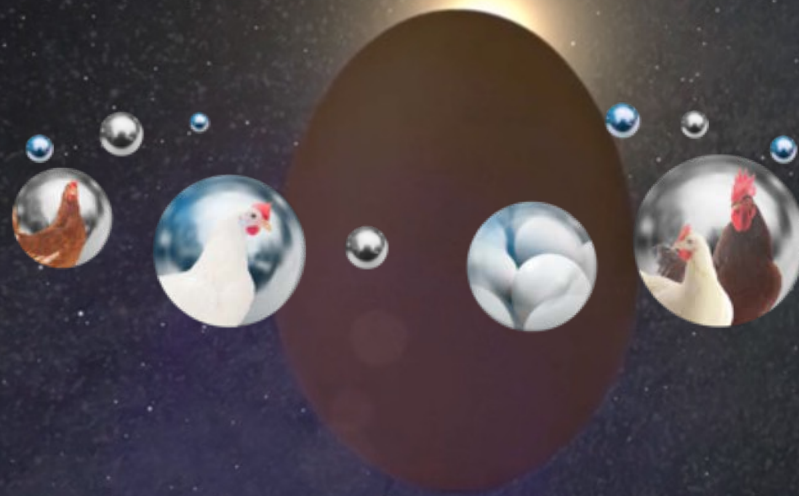
	Price 1	Price2	Price3
S (<53g)	0.09	0.09	0.09
M (53-63g)	0.14	0.14	0.14
L (63-73g)	0.16	0.17	0.18
XL (>73g)	0.18	0.20	0.22



EW	EN	%S	%M	%L	%XL	IOFC-1	IOFC-2	IOFC-3
62.4	374	6.5	45.0	46.3	2.2	38.33	40.22	42.12
63.4	370	5.2	39.1	52.0	3.7	38.33	40.53	42.72
64.4	366	4.1	33.4	56.6	5.9	38.30	40.80	43.30



# Thank you for your attention!



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