

### Nutrition for extended lay cycles





#### H&N LAYER ACADEMY

# INTERACT WITH US!

Make use of our multiplechoice poll tool and pick what you think is correct.

# **1. Feeding for egg shell.**

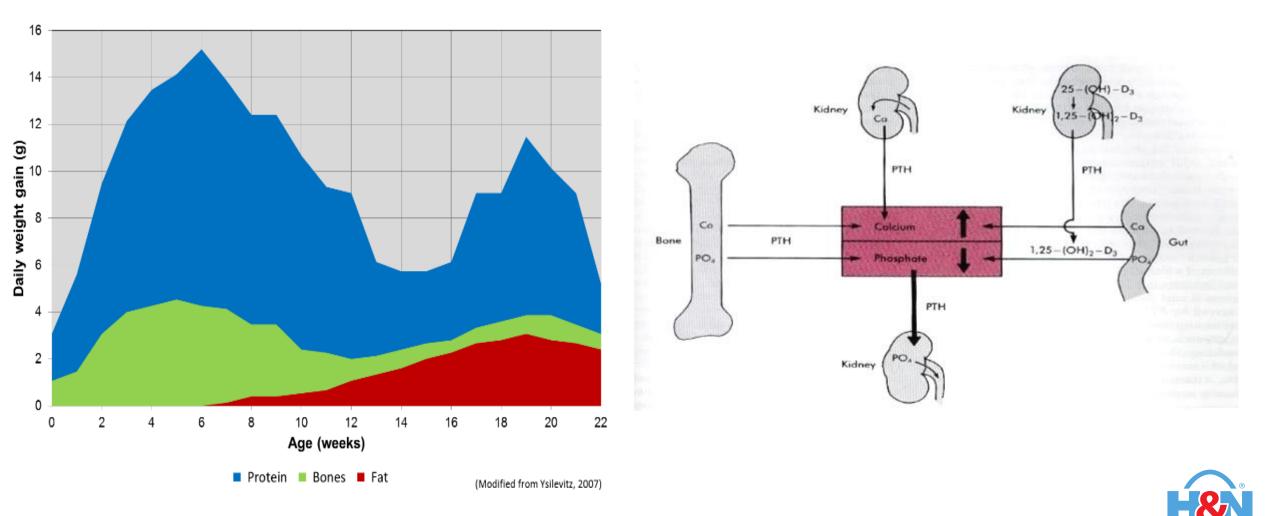
#### 2. Feeding for feathering.

#### 3. Feeding for gut health.

#### 4. Feeding for oxidation.



#### **Bone development and protection**



**INTERNATIONAL** 

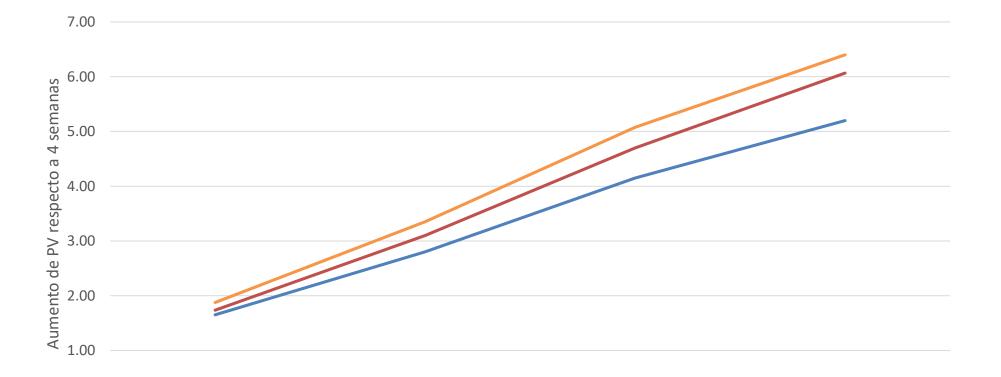
#### **Developing the carcass**

#### Starter diet

- >2900 kcal
- Use crumble in high density; low management; bad climate.
- Feeder space after 3 weeks



#### **Different feeder space – practical experience**



0.00						
	6	9	12	15		
<b>—</b> T 7	1.65	2.80	4.15	5.20		
<b>—</b> T 5	1.73	3.10	4.70	6.07		
<b>—</b> T 4	1.88	3.35	5.08	6.40		



### Hybrid feed - Concept

Nutrient		
ME	Kcal / kg	2700
Dig Lys	%	0.8
Dig Met	%	0.4
Dig M+C	%	0.72
Dig Thr	%	0.56
Dig Trp	%	0.176
Са	%	3.8
Av P	%	0.44
CF	%	4
Salt	%	0.28

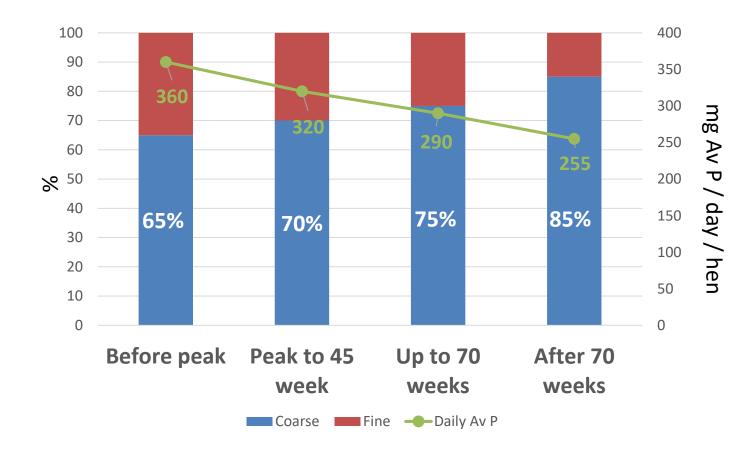


#### How to use the Hybrid





# **Calcium and Phosphorus**





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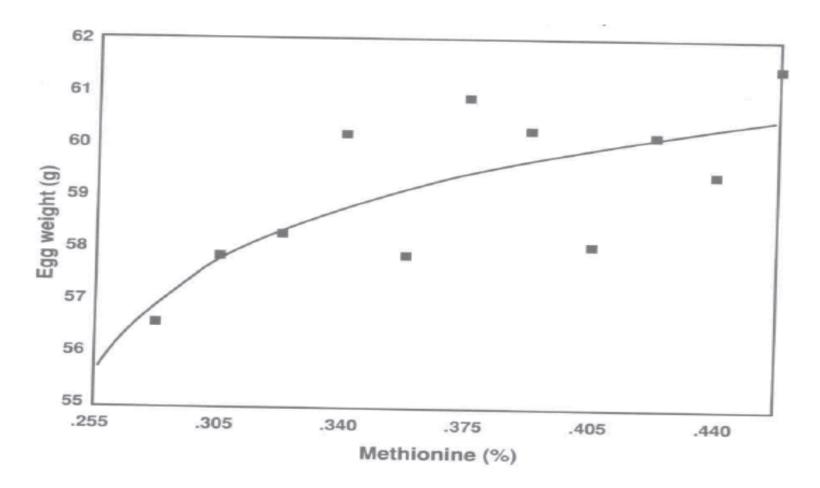
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#### 4. Feeding for oxidation.



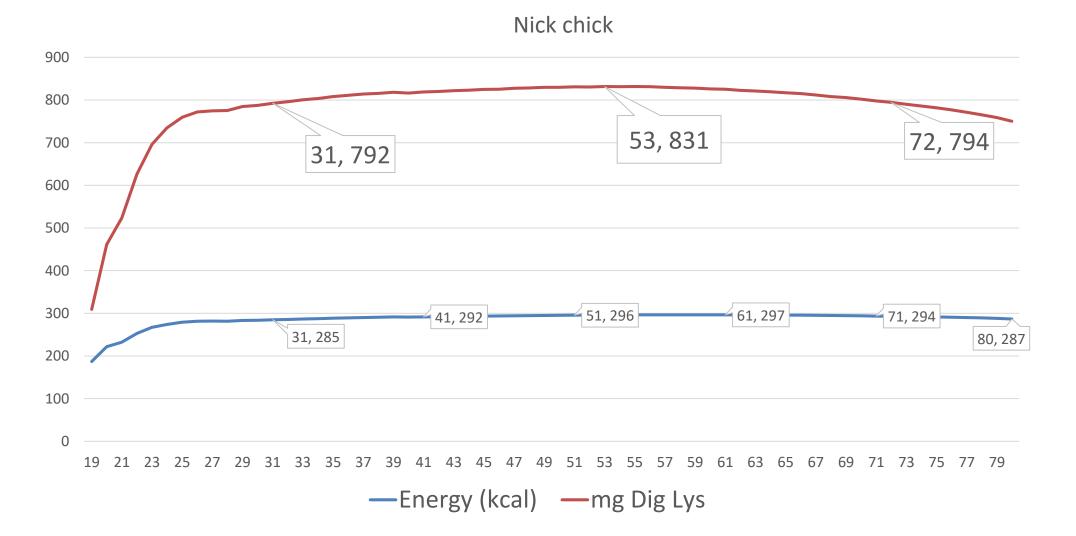
#### **Consumption - Methionine**





Courtesy S. Leeson

#### **Need / day**



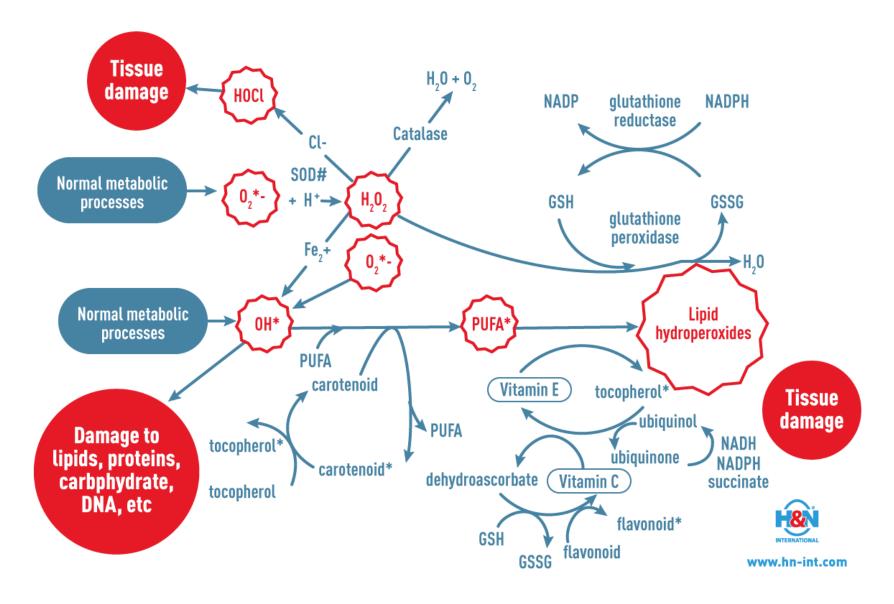
INTERNATIONAL

#### Change of feed vs bird needs

Needs	Age	mg / bird / day	D Lys in feed (%)	Feed intake (lb/100 bird)
D Lys	31	792	0.75	23.37
	53	831	0.72	25.35

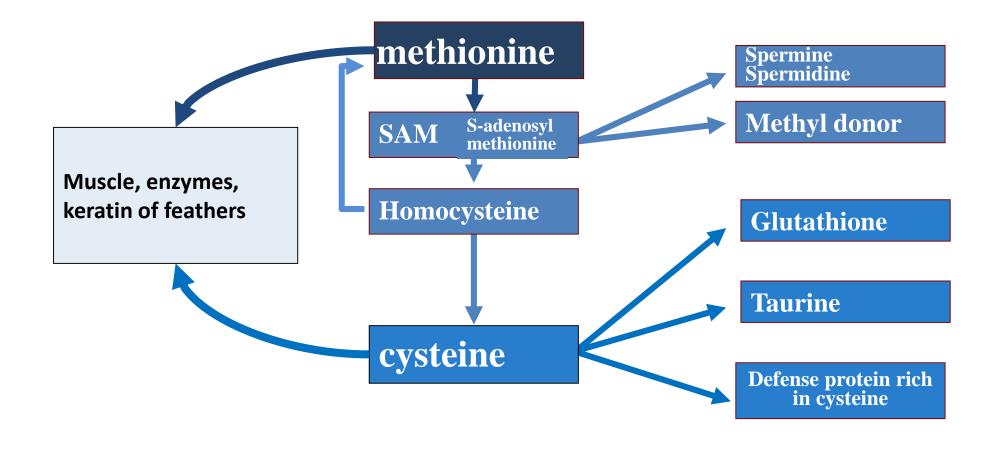


#### **Oxidative stress**





#### **Methionine + Cysteine**





# Egg size controlled by ALL the amino acids

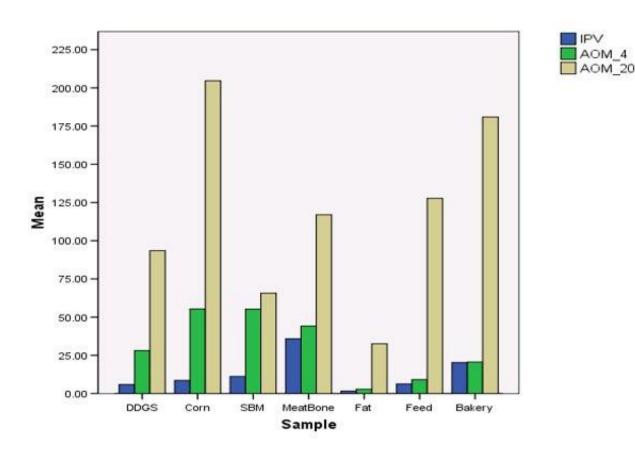
Pullet same size at 17 weeks, same energy feed and production from 22 to 50 weeks

Protein (%)	Fat (%)	Lay (%)	Egg size (gr)	Egg mass
18.5	1.8	91.6	65.2	59.7
17.5	1.8	92.4	64.9	60
16.5	1.8	92.3	64.3	59.3



Adapted from Perez-Bonilla et al 2011b

#### **Antioxidant system**



- Need to reduce the challenges.
  - Support the antioxidant system.
  - Reduce external challenges.



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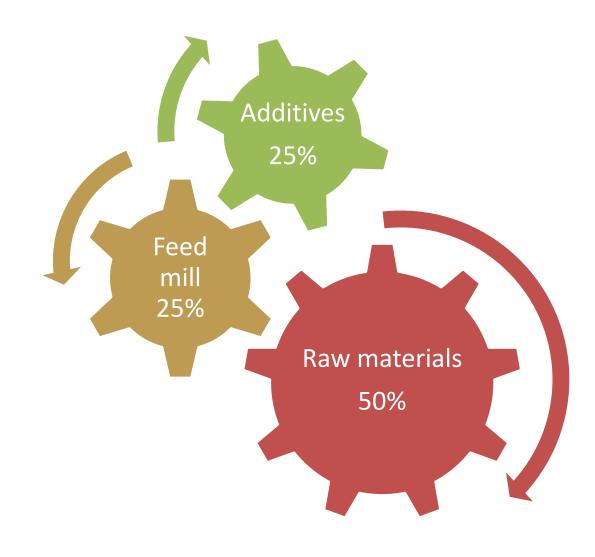
2. Feeding for feathering.

#### **3. Feeding for gut health.**

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#### Feed quality program





### **Strategy – Raw materials**

Parameter	Number	Minimum (CFU/g)	Maximum (log CFU/g)	Average (log CFU/g)	SUGGESTED (log CFU/g)
ASR46	300	< 1	3.69	1.80	< 1
E. coli	300	< 1	2.08	-	< 1
Enterobacteria	300	< 1	5.18	3.54	< 1
Moulds	300	< 1	4.46	3.16	< 1

Parameter	Number	% positive	% negative	Main serotypes
Salmonella	300	9	91	Liverpool, Rissen, Tennessee, Infantis, Senftenberg, Livingstone



#### **Strategy – Feed mill**





Mash feed but crumble might not be the answer.





- In layers prevention is the key of success.
- The genetic potential is there to develop.
- It is a matter of fine tuning the actual practices.
- The devil is in the details.



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