



## **Nutrition updates in cage free**

**Additional needs we need  
to remember.**

**Xabier Arbe**



**A**

## REARING

- Feed intake development
- Hybrid feed

**B**

## PRODUCTION

- Activity needs
- Ideal protein ratio

**C**

## PREMIX

- Oxidative stress focused.

# REARING

**Specifications:** the birds requirements don't really change for the growth.

**Activity:** there will be certain activity of the rearing birds moving in the farm. This is difficult to evaluate, but it will be limited effect as there will be an increase of the feed intake.

**Feed intake:** it will be critical for the success of the flock to follow the recommendations about management of the feed in the guide.

# FEED INTAKE DEVELOPMENT

**Target:** the objective of the rearing diets to develop the bird, body weight and feed intake.

**Fibre:** there should be increasing levels of the fibre in the feed as the birds get older. The developer feed is critical to develop the feed intake.

**Sources of fibre:** in each country you have different options, that should give you enough to develop the feed intake.

**Good start, high feed intake at start**

# HYBRID FEED

**Pre-lay:** it doesn't exist any more in our recommendations.

**Transition:** we keep increasing the feed intake and enough nutrients for start the production.

## **What to keep in mind:**

- Bird is growing
- Sexual maturity
- First egg

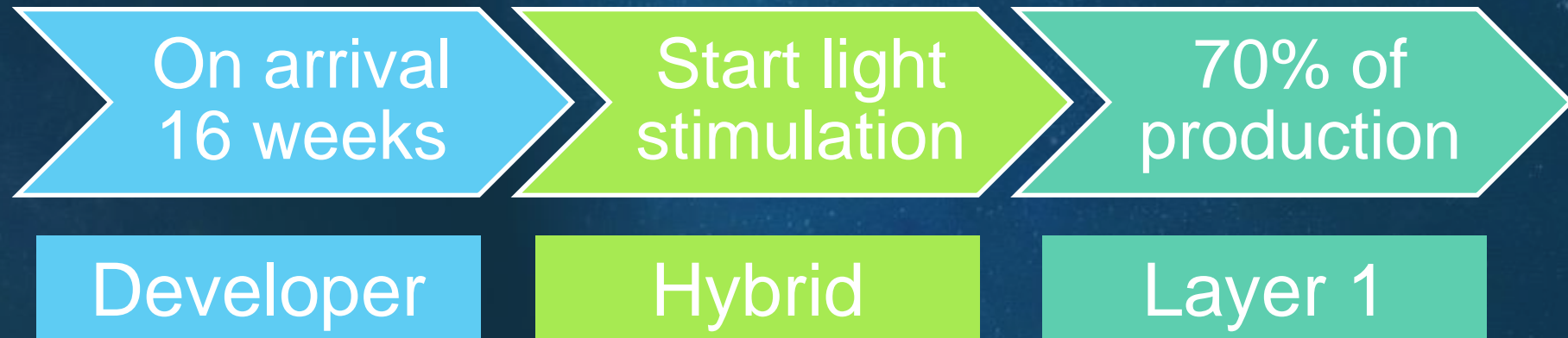
# Needs and feed intake

## Hybrid vs Super Starter Lay



**We want a continuous feed intake development**

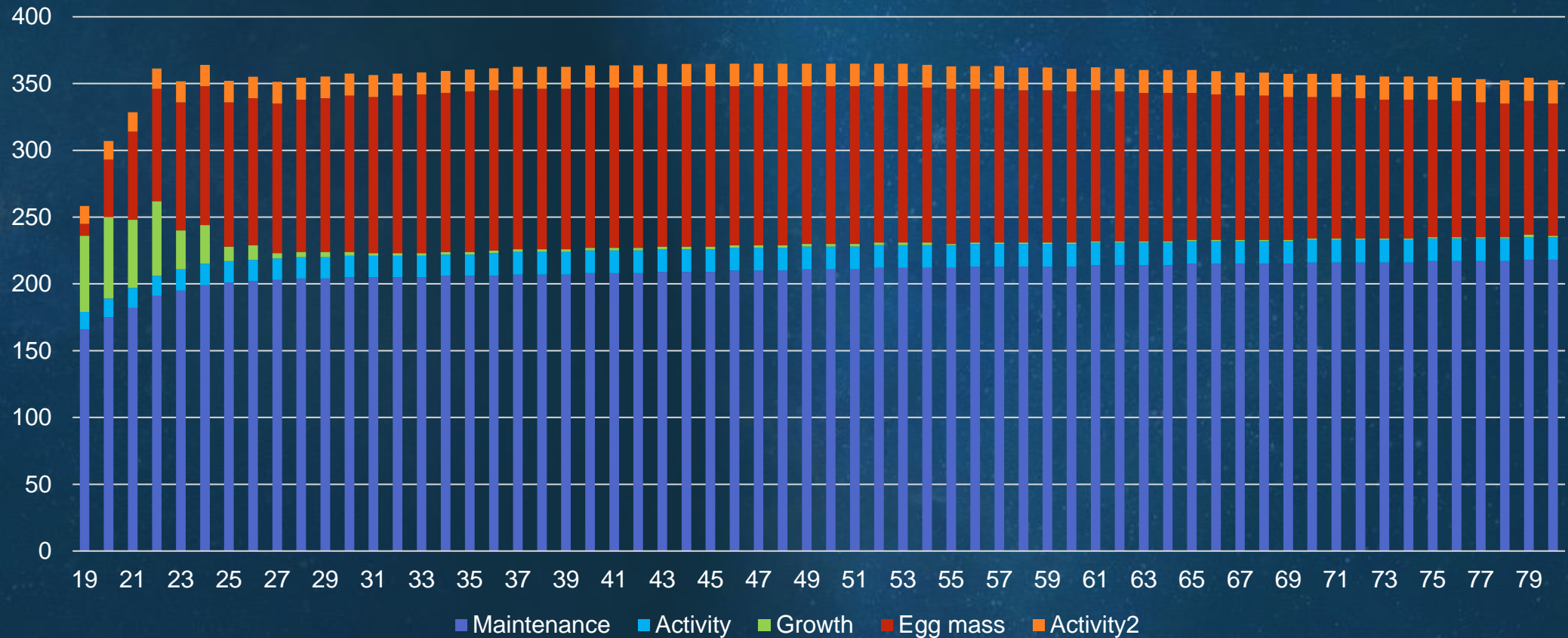
# FEEDING PROGRAM



# Production needs increase

We need to take into account the activity

Kcal / day BN





# IDEAL PROTEIN CAGE

	%
Lys	100
Met	50
Met + Cys	90
Thr	70
Trp	20
Ile	80
Val	88
Arg	104

# IDEAL PROTEIN CAGE FREE

	%
Lys	100
Met	50
Met + Cys	<b>92</b>
Thr	70
Trp	<b>24</b>
Ile	80
Val	88
Arg	104

# PREMIX – Oxidative stress

**Exposure:** the birds will be exposed to new challenges related to a new environment.

**Vitamins:** focus on E and C

- Vitamin A: involved in antioxidant system, it needs higher levels than in cages, closer to parent stock levels.
- Vitamin C: it could be optional but in summer time it should be added in the premix.

**Minerals:** the organic trace minerals have shown better performance in managing oxidative stress in long term production.

# OTHERS

**Temperature:** those farms in hot areas they will need to take into account and additional energy will be required to manage it.

**Gut health:** the hens will be in contact with more contaminants than in cages, therefore we need to have in place a program to control any gut health challenge.

**Particle size:** the feeding behavior has changed, we need a uniform particle size of feed.

# Thank you for your attention!



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