



On the road to dual purpose chickens for Europe – experiences from pullet rearing in Denmark and Germany

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PPILOW project:

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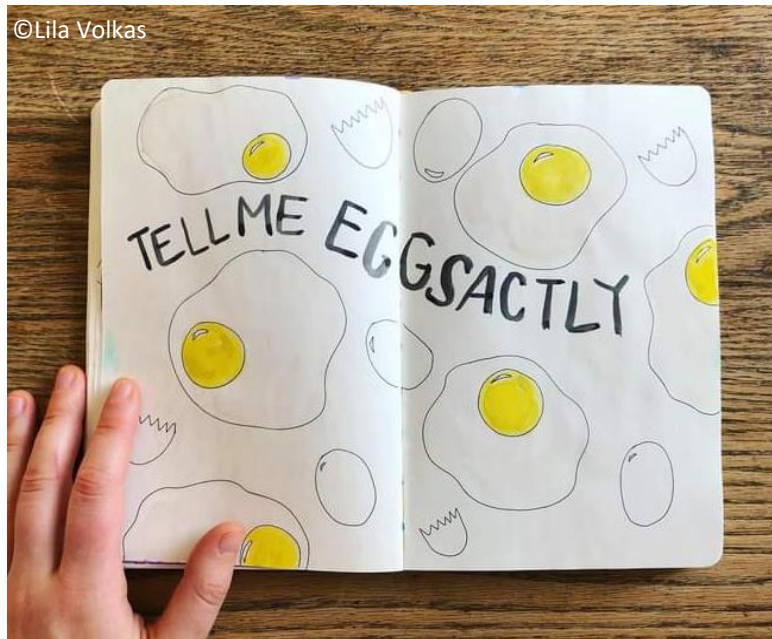
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DUAL PURPOSE

Evaluate three newly developed dual purpose poultry genotypes under organic rearing conditions*:

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- On-station (WP 5.1) and on-farm (WP 5.2)
- Flock performance & economics
- Differing behaviour?
- Overall health and welfare status?
- Good product quality of meat and eggs?
- Genotype x environment interaction (F, DK, DEU)
 - DK = AU → University of Aarhus
 - DEU = TI → Thuenen Insitute for Organic Farming

*in comparison to control groups (commercial layer and broiler genotypes)

Results from rearing phase of pullets in Germany (TI) and Denmark (AU) up to 18 weeks of age

1. Rearing conditions
2. Feed consumption
3. Body weight development
4. Animal welfare indicators
5. Behaviour observations
6. Summary



1. Rearing conditions of pullets in AU and TI

- Organic rearing conditions, similar vaccination and light regime
- floor-based rearing in barn with access to outdoor run
- Day-old chicks:
 - 80 per genotype in TI – 4 replicates per genotype
 - 250 per genotype in AU – 3 replicates per genotype
- AU: November 2019 – April 2020
- TI: October 2020 – February 2021

GT A – meat-type

GT B – rustic, balanced

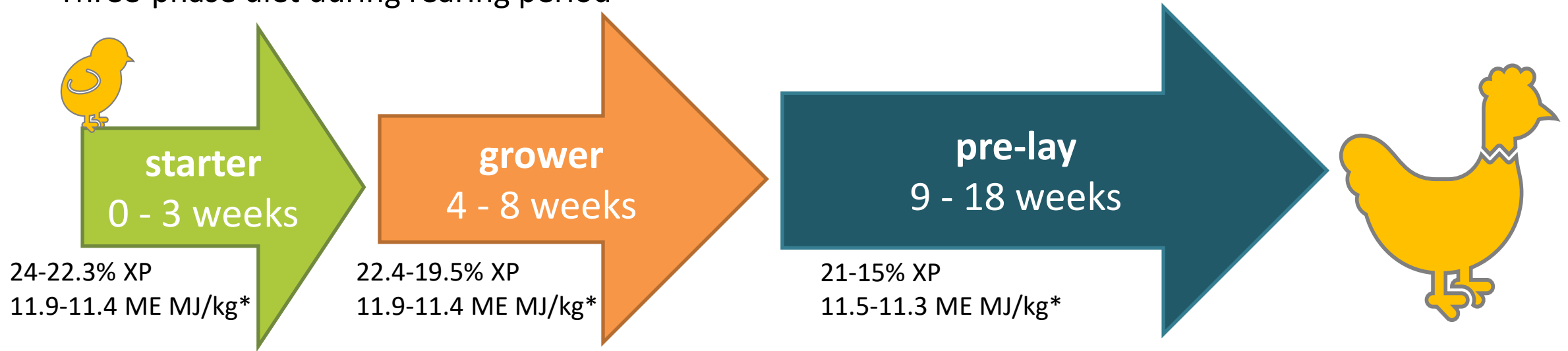
GT C – layer-type



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1. Rearing conditions of pullets in AU and TI

- Three-phase diet during rearing period



- Maize silage from day 4 → enrichment
- TI: wheat grains scattered in litter from pre-lay phase onwards → enrichment
- Access to additional calcium source in pre-lay phase
- Mortality up to week 18:

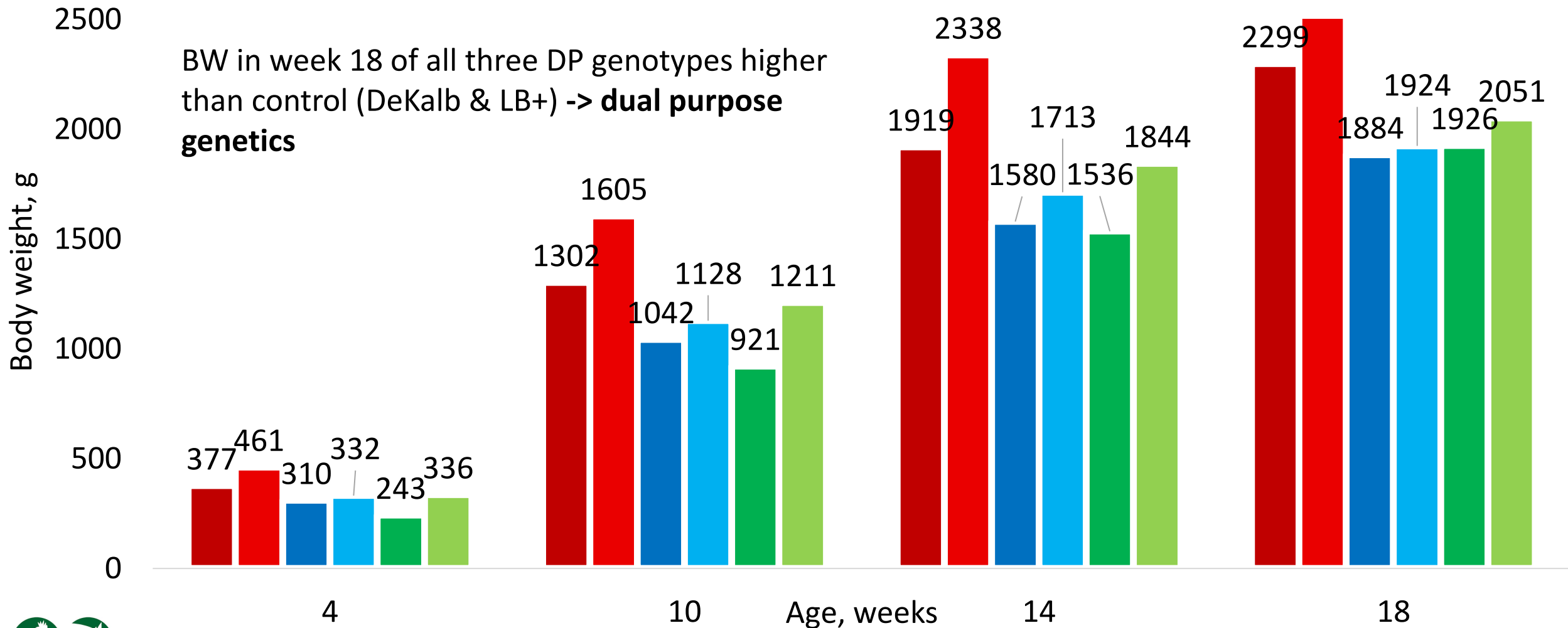
A: 2.5/4.8% **B: 2.4/7.0%** **C: 7.0/8.0%**

* Based on combined data from AU & TI

2. Body weight (BW) development

■ TI-A ■ AU-A ■ TI-B ■ AU-B ■ TI-C ■ AU-C

BW in week 18 of all three DP genotypes higher than control (DeKalb & LB+) -> **dual purpose genetics**



3. Feed consumption (FM g d⁻¹)*

- Similar feed consumption between genotypes in different phases
- **A** had highest feed consumption during rearing phase

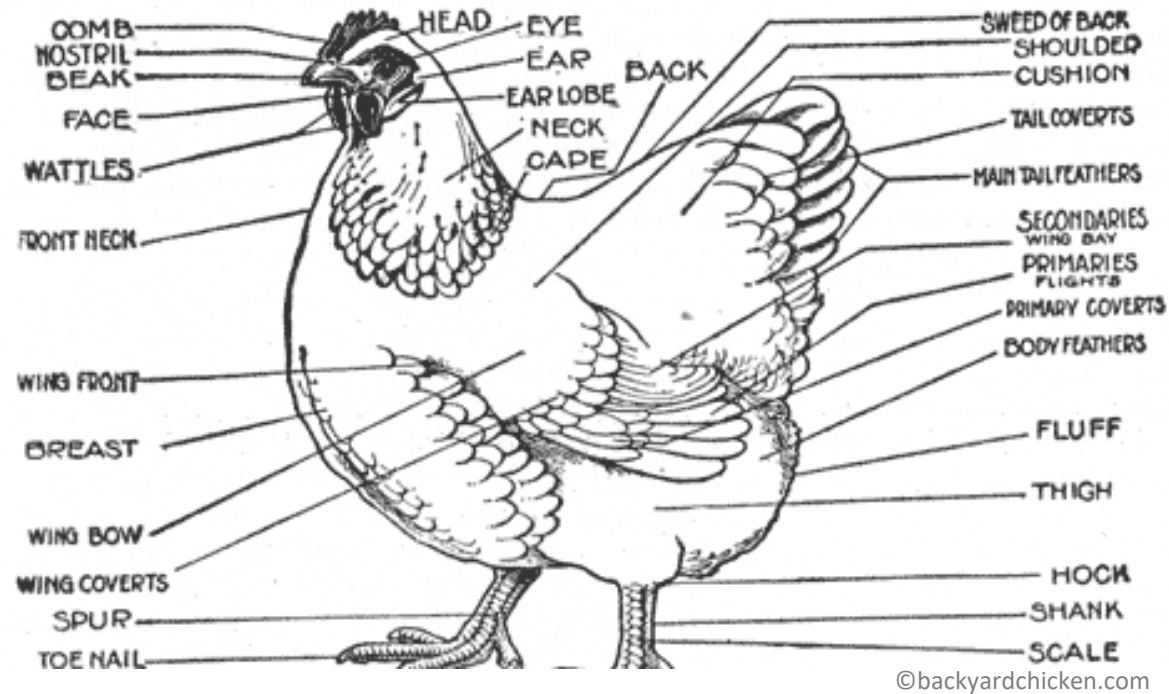
	A	B	C
Starter	32	19-26	18-35
Grower	64	59-61	61-84
Pre-lay	114	97-102	96-100

- Average daily weight gain day-old up to week 18:
B (15 g per d) ≤ **C** (15-16 g per d) < **A** (18-20 g per d)

* Based on combined data from AU & TI

4. Animal welfare indicators

- A total of 17 categories were scored in week 6, 10, 14, 18



- minor damage in primary wing feathers
- overall no health issues and good development in TI and AU

PPILOW WP5.1 – on the road to dual purpose genotypes for Europe...



5. Behaviour Observations:

- In week 7, 11, 15, inside and outside, 5 min per zone
- A total of 11 categories were used during scan and continuous sampling



- Overall all genotypes very active and explorative
- No abnormalities recorded

6. Summary



- Mortality up to week 18:
AU: **A** < **B** < **C** TI: **B** < **A** < **C**
- Body weight:
A highest, **B** and **C** similar
- Feed consumption week 1-18
B ≤ **C** < **A**
- All genotypes:
 - excellent plumage development & hardly any abnormalities
 - Similar behaviour profiles: very active and curious birds!

- Feed consumption (FM g d⁻¹) & BW @ 18 weeks of age:

A → 124-134 g; 2.3-2.5 kg

B → 105-109 g; 1.9 kg

C → 109-110 g; 1.9-2.0 kg

...and we are curious about their laying period!

Results are soon ready...

Thank you for your attention 😊



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