

Performance of dual-purpose types, an extensive broiler and a layer type fattened for 67 and 84 days

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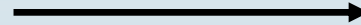


Introduction

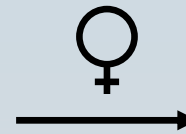
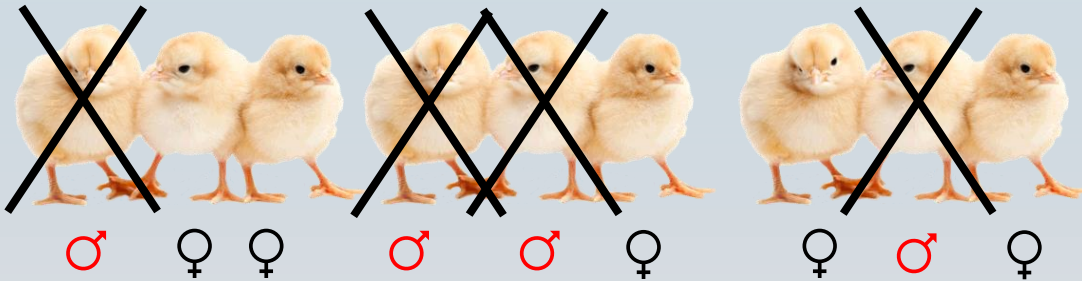
Meat production:



♂ ♀



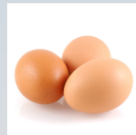
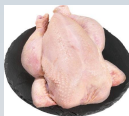
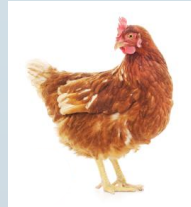
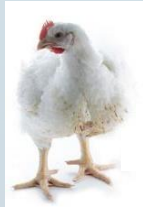
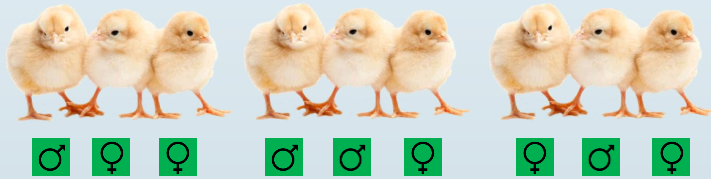
Egg production:



EU27: > 300 million

Introduction

Dual-purpose types



lower
→
performance



Questions

- To which extent can dual-purpose types compete with a slow-growing broiler in growth and slaughter performance?
- How long does the optimal fattening period last?
- How is the performance of male laying cockerels under farm practice conditions?

Types



Hubbard S 757;
HU;
♂ + ♀



Lohmann Dual;
LD;
♂



Novogen Dual;
ND;
♂



Lohmann Brown;
LB;
♂

- 1350 chickens from each type
- Slaughter: On d 67 (according to the Swiss guidelines for organic production) and d 84 of age

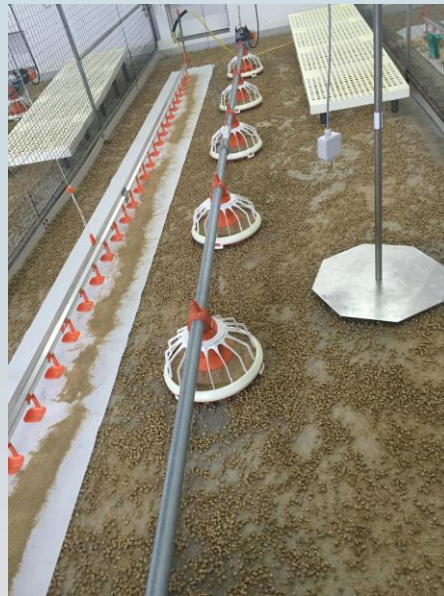
Diets

- Commercial organic starter diet (12.4 MJ/kg metabolisable energy, 230 g crude protein/kg diet)
- Commercial organic fattening diet
 - Main components: Maize, soybean cake, wheat
 - 12.8 MJ/kg metabolisable energy
 - 230 g crude protein/kg diet
- *Ad libitum* access to feed and water



Housing

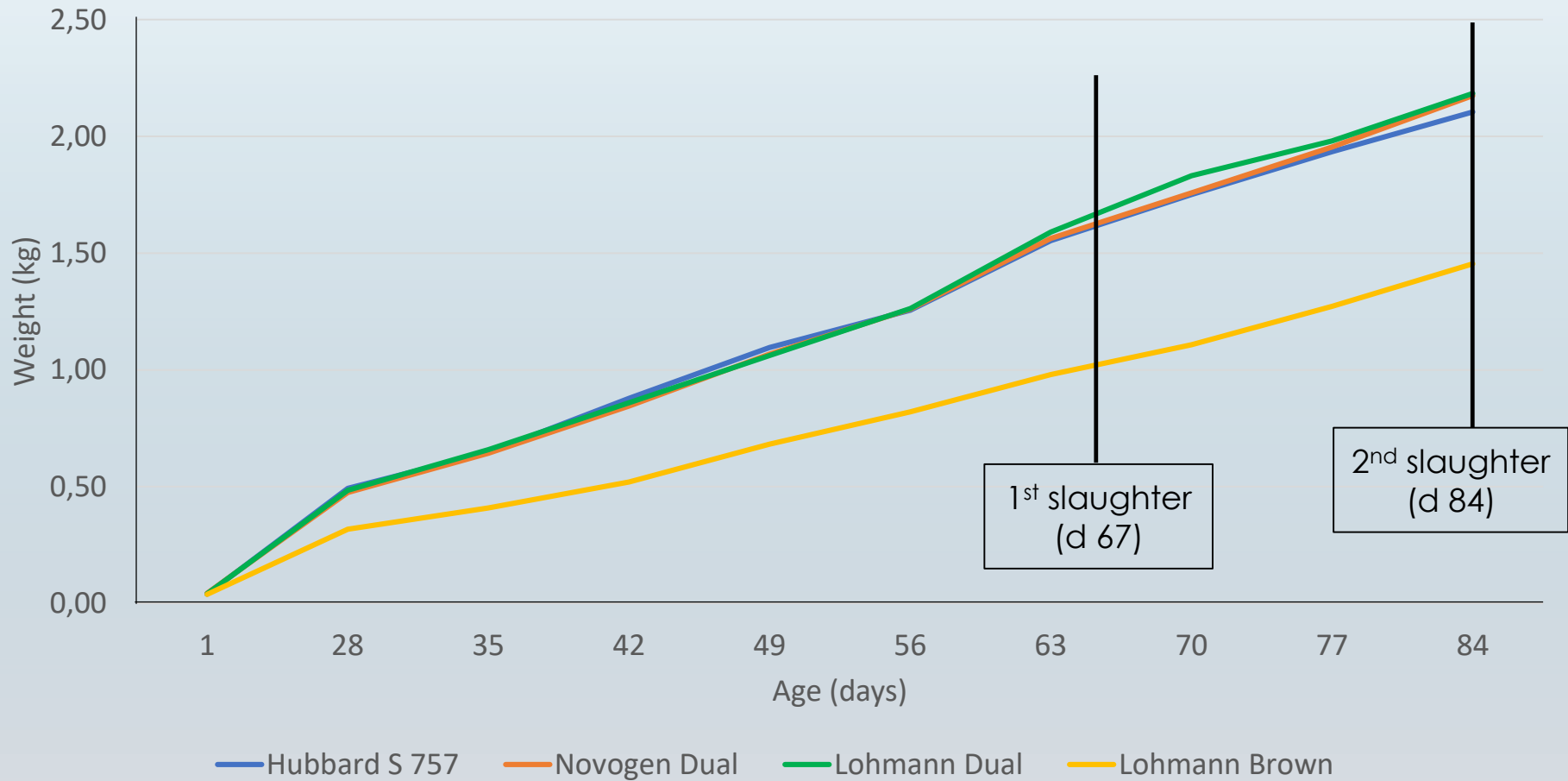
- Research station Aviforum, Zollikofen, Switzerland
- 20 compartments (20 m²), 5 compartments per type
 - From d 21 on: access to a protected outdoor area
- 270 animals per type and compartment



Parameters

- Weekly: Body weight, feed intake
- At slaughter: Carcass weight and morphology
 - ↳ breast, legs, wings
- Calculations: Dressing percentage, breast meat, leg & wing proportion of carcass
- Statistics: ANOVA, considering type, age at slaughter and their interaction as fixed effects

Weight development



Growth characteristics

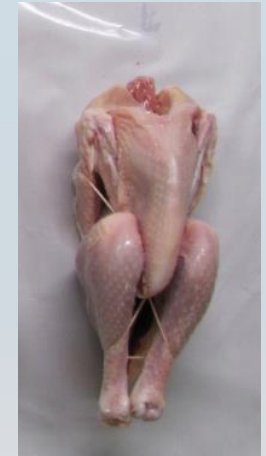
	Hubbard S 757		Lohmann Dual		Novogen Dual		Lohmann Brown	
	67	84	67	84	67	84	67	84
Days of fattening	67	84	67	84	67	84	67	84
Average daily feed intake (g/bird)	65 ^d	76 ^b	71 ^c	84 ^a	68 ^{cd}	79 ^b	56 ^f	60 ^e
Feed conversion ratio (g feed/g weight gain)	2.6 ^d	2.7 ^{cd}	2.8 ^{bc}	2.9 ^{bc}	2.8 ^{bc}	3.0 ^b	3.7 ^a	3.6 ^a

^{a-f}Means within a row carrying no common superscript are significantly different (P<0.05)

Slaughter characteristics

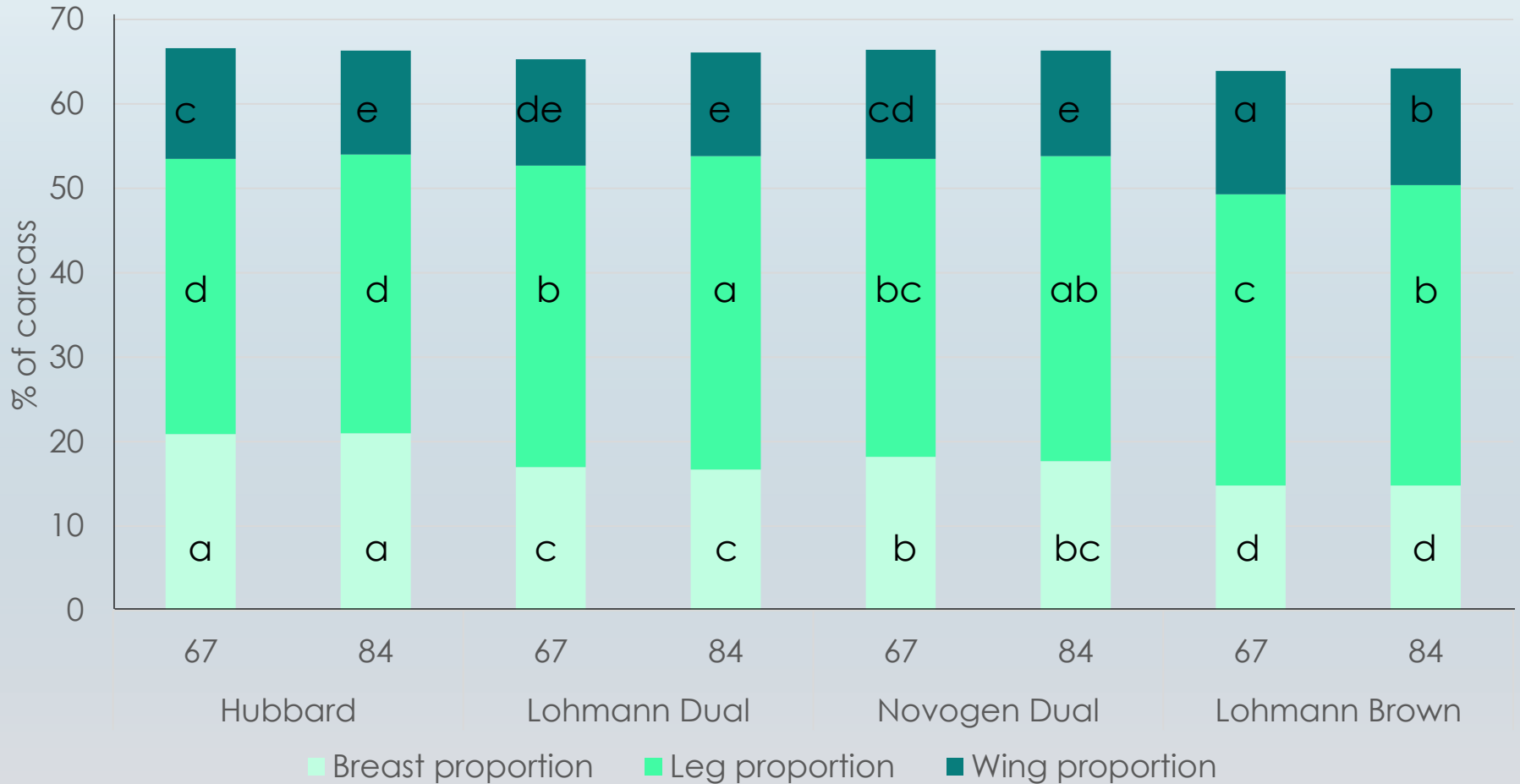
	Hubbard S 757		Lohmann Dual		Novogen Dual		Lohmann Brown	
Days of fattening	67	84	67	84	67	84	67	84
Carcass weight (kg)	1.2 ^b	1.6 ^a	1.1 ^b	1.6 ^a	1.1 ^b	1.5 ^a	0.6 ^d	0.8 ^c
Breast angle (°)	119 ^b	126 ^a	97 ^e	104 ^{cd}	98 ^{de}	105 ^c	78 ^f	84 ^f

^{a-f}Means within a row carrying no common superscript are significantly different (P<0.05)



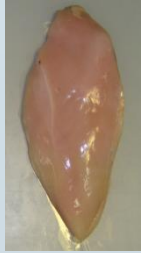
Carcass composition

^{a-e}Means within a row carrying no common superscript are significantly different (P<0.05)

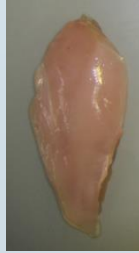


Conclusion

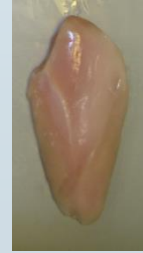
- Dual-purpose types performed at a same level as the slow-growing broiler type
- Disadvantage of dual-purpose types: Smaller breast meat and breast meat proportion



Hubbard



Lohmann Dual



Novogen Dual



Lohmann Brown

- On d 84 compared to d 67, valuable cuts were heavier but similar in proportion of total carcass.
- The layer cockerels were inferior in all important traits.

Thanks!

- Aviforum
- All the involved people for their help
- Coop Research Program of the ETH Zurich World Food System Center and the ETH Foundation
- Swiss Federal Office of Agriculture

For your attention!



Photo: rm