

Lohmann Dual

Meat and eggs

TECHNICAL COLUMN

Whilst hens lay eggs, the cockerels have to gain more meat.

The dual purpose chicken unites both of these production forms

A chicken which lays eggs and is later perfect for a hearty Sunday roast was not out of the ordinary back in grandmother's good old days, but then again, the high performance of today's hybrid birds was just as unthinkable back then.

Due to specialisation in laying performance as well as gaining more meat, breeders have formed separate chicken lines. Whilst both genders can be used for the production of meat, this is naturally not possible for the production of eggs.

The culling of day-old male chicks is a constant issue for animal welfare activists as well as in politics and ethics. One possibility which is intensively and currently being researched on is sex determination in eggs.

The dual purpose chicken is an alternative to this. Finding a compromise for both sides is, however, hardly possible as laying more eggs and at the same time, gaining more



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Lohmann Dual

Lohmann Dual – the name for the line which was especially created by Lohmann Tierzucht for dual purpose birds. The chickens have



Picture 1: Variety of dual purpose chicken

meat, is simply implausible. Several approaches are currently being pursued by organic farming associations nationwide. These range from using strains which have practically been forgotten to slow-growing male layer breeders or even special dual purpose chickens. As an example of the many ongoing projects, we would like to present one of the Lohmann approaches to you.

white feathers and lay eggs which are obviously lighter in shell colour as compared to normal brown eggs, but the main difference to commercial layer lines, is their body conformation. Thus, Lohmann Dual combines good laying performance with an acceptable gain on meat.

Lohmann Tierzucht is and remains a layer breeding company

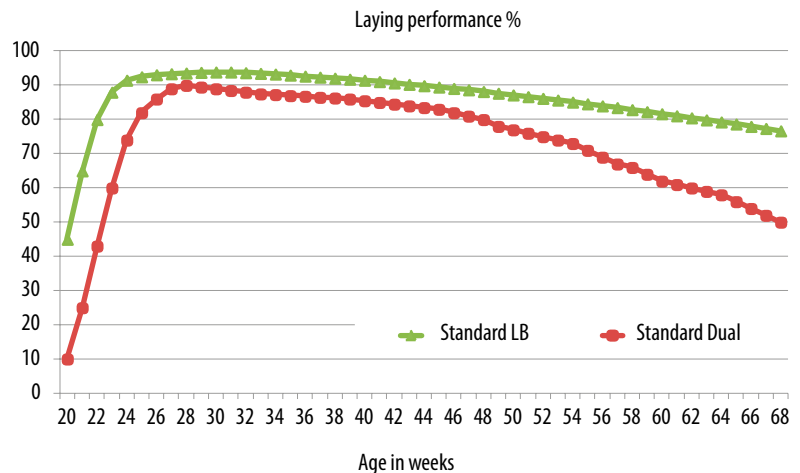


Figure 1: Egg production for Lohmann Dual versus Lohmann Brown

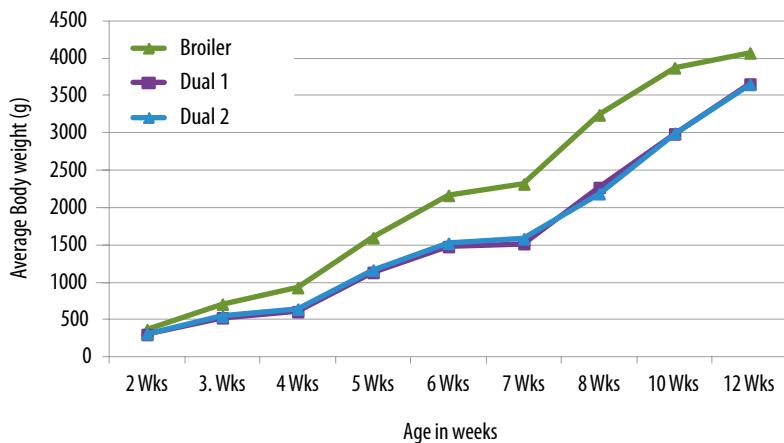


Figure 2: Live weight development of slow-growing broiler versus two dual purpose lines under fattening with commercial broiler diets

which focuses on good egg numbers in Lohmann Dual. With an expectation of about 250 eggs per annum, Lohmann Dual is more than 65 eggs behind the current standard of Lohmann Brown.

Together, with a daily feed intake of 140 g, Lohmann Dual consumes up to 30g more per day and therefore, feed costs can be calculated at 50 % more for the entire laying period than for commercial layers. Moreover, dual purpose chickens lay eggs which have a smaller egg size, thereby lowering egg mass output in addition.

Figure 3: Yield at slaughter on the 56th day

Traits	Broiler	Dual purpose bird	
Live weight	3240 g	2269 g	2186 g
Carcass weight	2034 g	1507 g	1472 g
Dressed carcass	63 %	66 %	67 %
Portion of breast	23 %	17 %	17 %
Portion of leg	29 %	32 %	31 %
Valuable cuts	52 %	49 %	48 %

Although we have to accept these economic disadvantages and ecological imbalance of using more feed to produce less high quality protein-food, a minor part will be compensated by the higher meat production of this dual purpose bird

which is a cross between layer and broiler genetics.

Figure 4: Yield at slaughter on the 70th day

Traits	Broiler	Dual purpose bird	
Live weight	3871 g	2986 g	2995 g
Carcass weight	2847 g	2044 g	2045 g
Dressed carcass	74 %	68 %	68 %
Portion of breast	23 %	17 %	17 %
Portion of leg	29 %	33 %	31 %
Valuable cuts	52 %	50 %	48 %

Figure 5: Comparison of fattening performance

Traits	Broiler	Dual purpose bird		
Body weight	35th day	1595 g	1131 g	1164 g
	42nd day	2163 g	1478 g	1521 g
	49th day	2315 g	1517 g	1582 g
	56th day	3240 g	2269 g	2186 g
	70th day	3871 g	2986 g	2995 g

Live weight gain in Lohmann Dual is moderate in comparison to a slow-growing broiler. From week three until ten weeks of age, dual birds and broilers grow further apart. Even on a long term fattening of 12 weeks, if slow-growing broilers already become adipose, both breeds adjust slightly in body weight.

In the fattening period, male dual purpose birds have a live weight of about 2 kg at 8 weeks of

age, whereas a slow-growing broiler normally has a bodyweight of 3.2 kg at this stage.

Fed with broiler diets for 70 days, the dual cockerels reached a live weight of 3 kg. The weight of the carcass was about 2 kg. In terms of carcass performance, there are hardly any differences between the dual cockerels and conventional broilers. The amount of valuable parts was at 50 %. Unlike special broiler lines, the dual cockerels have a much lesser portion of breast meat in favour of the portion of the thighs.



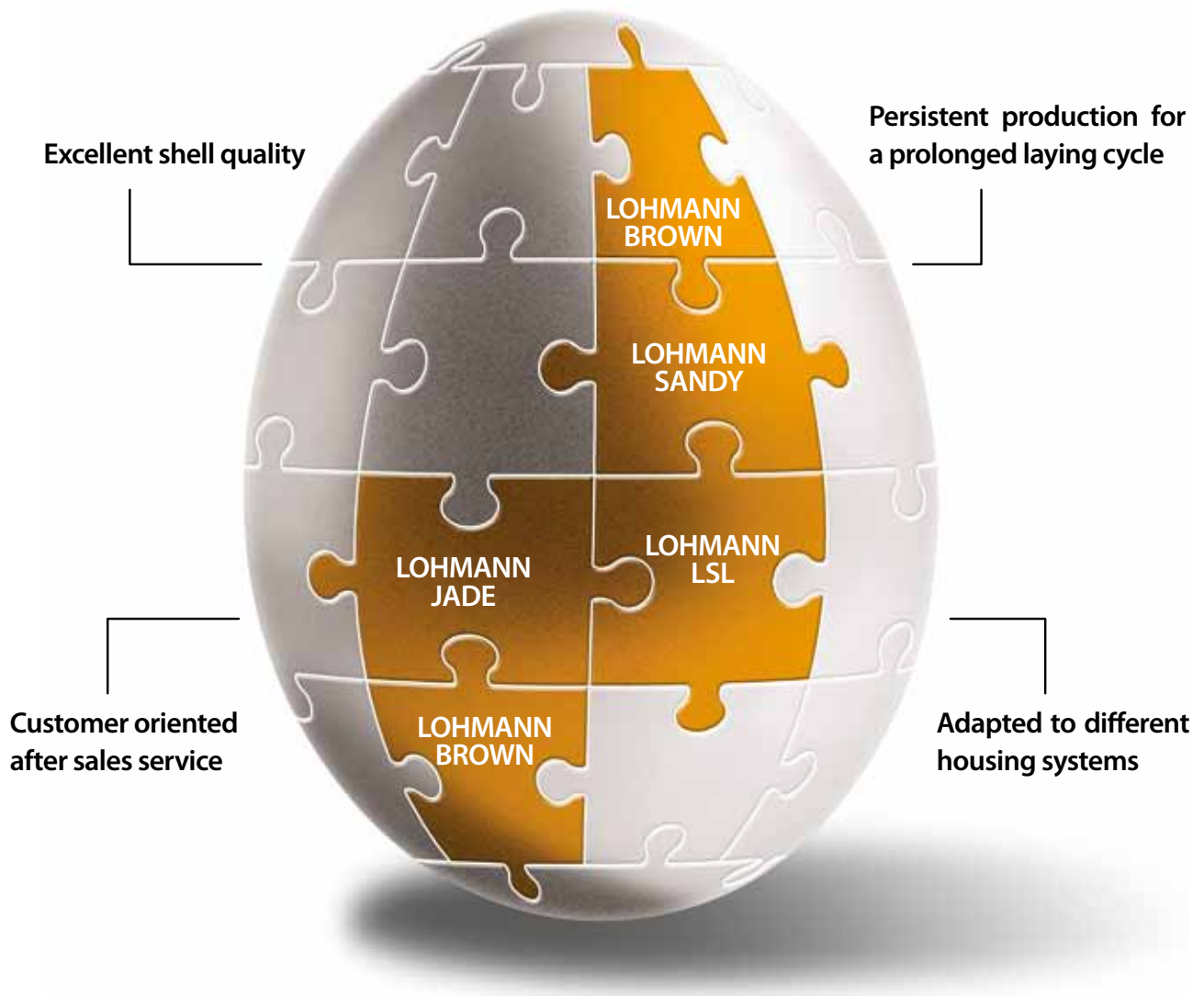
Picture 2: Lohmann Dual Layers in testing

Rearing both genders together is even conceivable now. By doing so, there will be no need to have separate barns although you will waste some growth. Even the cockerels are fed with feed for young pullets in the rearing period. With this process, the weight of the cockerels is at approximately 2.5 kg.

The slaughter schedule can be determined depending on requirements and the marketing strategy. ■

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