



BioComplex Trial in the SW October 2019

Across the UK broiler industry there has been an increased interest in seaweed based nutraceuticals. One product that had been tried on a number of broiler farms was bioComplex. BioComplex is manufactured from Hebridean seaweed and is designed to absorb harmful waste products produced by bacteria in the intestine thus improving gut health and growth. Generally, the feedback was positive but as with all trials there were varying opinions from farmers - the reports were of benefits on well performing farms but of no benefits on mid-range farms. Below we set out to determine if this was the case.

BioComplex was trialled on two farms in the SW (one of which is a top performing farm and the other which was mid-range (predominantly due to a coccidiosis issue)). On both farms there were six sheds in which BioComplex was given to half the sheds from day old until thinning. On both farms at 21 days there was no noticeable difference between the trial sheds and the control sheds in terms of weight, mortality, litter or gut health on post-mortem examination.

However, by 28 days on the top performing farm the trial sheds had much better litter than the control sheds, the manager reported that *"the birds looked cleaner and brighter"*. The water intake and the weights were better in the trial sheds. The control sheds had to be treated for enteritis with antibiotics whilst the trial sheds were unaffected. The results are shown below:

	House	Age (Days)	Clear Weight (Kg)	Average daily weight gain (g/Day)	Pododermatitis (%)	Hock Marks (%)	Rejects (%)	Mortality	EPEF	FCR
Control	1	40	2.47	62	16	21	1.39%	3.12%		
Control	2	40	2.56	64	16	21	1.39%	3.61%		
Control	3	41	2.63	64	Not available	Not available	Not available	3.32%		
BioComplex	4	38	2.62	69	Not available	Not available	Not available	4.61%		
BioComplex	5	39	2.53	65	7	24	1.04%	3.84%		
BioComplex	6	39	2.61	67	7	24	1.04%	3.91%		
Control	Mean			63	16	21	1.39%	3.35%	373	1.63
Biocomplex	Mean			67	7	24	1.04%	4.12%	395	1.60

Savings:

- We had 35 less birds rejected per 10,000 in the BioComplex shed saving £52.50
- If we correct for kill age to 38 days we had an extra 152g/bird in the trial shed so for 10,000 birds we had an extra 1520kg equating to £1,064
- The FCR was better in the BioComplex sheds equating to a saving of £160/10,000 birds
- The BioComplex sheds had not been treated saving £42/10,000 birds

Total: £1,318.50

Costs:

- The product cost £170/10,000 birds
- Extra feed corrected for age in the BioComplex birds per 10,000 birds is £656
- Extra mortality in the BioComplex sheds £54/10,000 birds

Total: £880

Difference= £438 per 10,000 birds equating to 4.4p/bird profit

On the mid-range farm there was no noticeable difference between the trial and control sheds throughout the crop or at kill.

The trials confirmed our suspicion that BioComplex is excellent and supporting gut health and therefore growth and performance on farms where management is good and disease challenge is low. Where there are management issues or a high coccidiosis challenge then BioComplex will not be able to counteract them.

It is worth keeping in mind that the effect of BioComplex is cumulative. The better the gut health, the better the bacteria the birds pass out in their droppings. Although our disinfection will destroy over 99.9% of bacteria, it is the composition of the 0.1% that is left that is important. Over several crops this 0.1% of bacteria should become more favourable.

Is BioComplex suitable for my farm?

- **Yes- if the site performs well generally**
- **Yes- if the coccidiosis levels are low**
- **No- there are either management or disease challenges**



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