



USE OF CHRISAL PIP PROBIOTICS IN ROMANIAN POULTRY FARMS

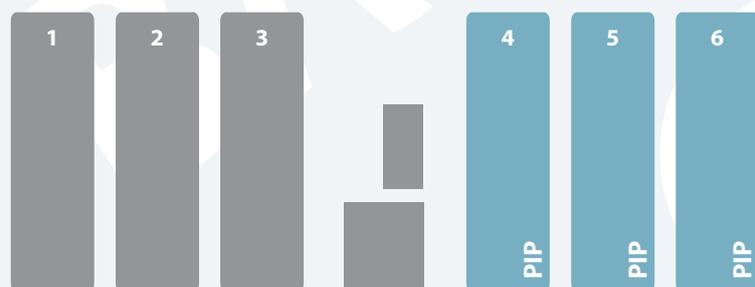
In the past year Better Air Solutions, an Israeli based company has experimented with the use of Chrisal's PIP probiotics, in one of Romania's top poultry farms.

Even though in the beginning people were reluctant in renouncing the use of antibiotic treatments, and toxic cleaning products for the animal housings, after the first test the results were very promising thus from a growth in weight of just 0.88% in the first trial we managed to get to a 7.93% by the end of the fourth one.

And this is just the average slaughter weight, we also noticed a small decrease in the death rate and in the consumption of feed, but keeping in mind we are talking about millions of poultry per cycle transforming those percentages in numbers, is quite a lot.

The experiment was done in two stages. The first one was in a farm, named F2, with six equally sized buildings each with two floors. The first three buildings were left to be the standard, and the last three were to use the PIP products. We chose the last three because they were constantly the most problematic, and being always the last to be populated the microbial load was highest.

In the cleaning procedures of the test batch we only used water and Pip AHC, following the instruction set given to us by Chrisal; then we gradually inserted the Pip Water Plus in the drinking water and the AHS through an misting array



F2 layout

The poultry used came from the same source, thus having the same average weight and the same genetic background

These are the results as given to us by the F2 farm:

1, 2, 3

avg. feed consumed (Kg)	673460
average slaughter weight (Kg)	2352
slaughter age (days)	39.35
death rate (%)	4.38
antibiotic treatments (#)	3

4, 5, 6

avg. feed consumed (Kg)	638400	- 5.04%
average slaughter weight (Kg)	2373	+ 0.88%
slaughter age (days)	38.29	- 1.06
death rate (%)	4.16	- 0.22%
antibiotic treatments (#)	1	- 2

1, 2, 3

avg. feed consumed (Kg)	627310
average slaughter weight (Kg)	2072
slaughter age (days)	39.1
death rate (%)	4.51
antibiotic treatments (#)	3

4, 5, 6

avg. feed consumed (Kg)	621230	- 0.98%
average slaughter weight (Kg)	2128	+ 2.63%
slaughter age (days)	38.7	- 0.4
death rate (%)	4.05	- 0.46%
antibiotic treatments (#)	1	- 2

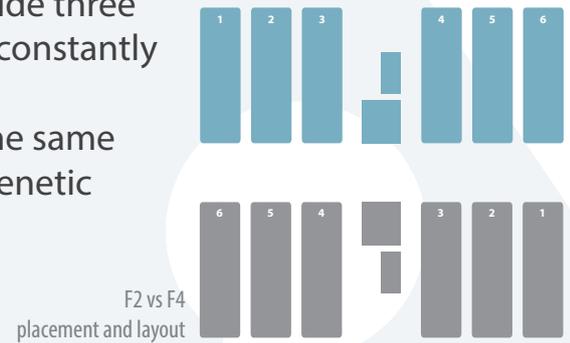
The table below is the course of the batch throughout 35 days. the rows in lighter green are the buildings that used probiotics

7 ZILE		14 ZILE		21 ZILE		28 ZILE		35 ZILE	
GR.	MORT. %	GR.	MORT. %	GR.	MORT. %	GR.	MORT. %	GR.	MORT. %
199	1.1	430	1.78	866	2.72	1354	3.68	2056	4.69
203	1.16	457	1.83	819	2.76	1220	3.77	1948	4.81
207	0.92	463	1.59	927	2.43	1369	3.15	2031	3.9
201	0.97	462	1.61	834	2.43	1270	3.28	1981	4.21
207	1.06	467	1.86	944	2.64	1483	3.45	2044	4.25
202	1.1	468	1.83	963	2.67	1442	3.46	2013	4.34
190	1.01	422	1.67	873	2.38	1369	3.13	1915	3.97
177	0.97	428	1.63	852	2.34	1255	3.08	1812	3.94
198	1.13	439	1.93	908	2.76	1387	3.62	1961	4.47
196	1.08	429	1.83	903	2.58	1235	4.52	1827	5.33
181	1.16	448	1.91	898	2.7	1247	3.45	1820	4.26
176	1.26	424	1.92	868	2.76	1206	3.59	1800	4.38

Having seen the promising test results we moved on to the next stage of testing. We finished installing our machines in the entire F2 farm and we placed it against one of its neighbouring farms, F4.

They are both located on the same plateau alongside three more farms. We chose F4 because because it has shown constantly the best average results of the five of them.

Like in the test before, the poultry came all from the same source, having the same average weight and the same genetic background.



F4

avg. feed consumed (Kg)	718550
average slaughter weight (Kg)	2.289
slaughter age (days)	39
death rate (%)	4.96
antibiotic treatments (#)	5

F2

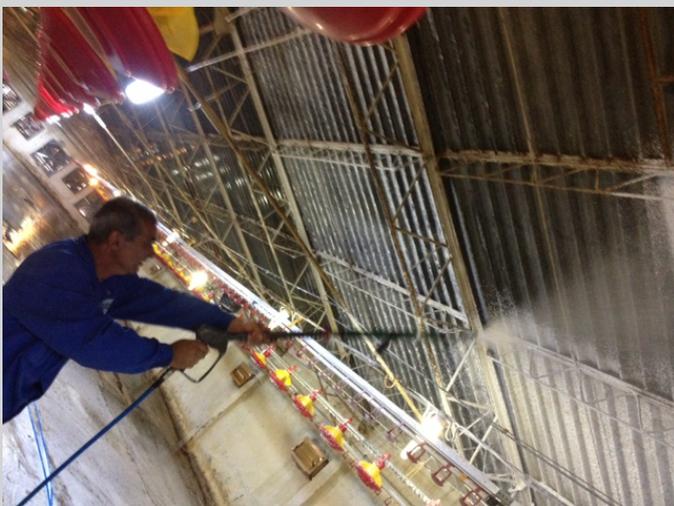
avg. feed consumed (Kg)	699550	- 2.64%
average slaughter weight (Kg)	2.363	+ 3.13%
slaughter age (days)	39	0
death rate (%)	4.85	- 0.11%
antibiotic treatments (#)	2	- 3

F4

avg. feed consumed (Kg)	697000
average slaughter weight (Kg)	2101
slaughter age (days)	38
death rate (%)	5.42
antibiotic treatments (#)	4

F2

avg. feed consumed (Kg)	702240	+ 0.74%
average slaughter weight (Kg)	2282	+ 7.93%
slaughter age (days)	38	0
death rate (%)	4.73	- 0.69%
antibiotic treatments (#)	1	- 3



preparations and cleaning of the animal housing using PIP AHC and a high pressure water machine