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Report

BIO AKTIV TRIALS MADE IN EGYPT

Ain-SHAMS University / CPC Group / B.A.E.GmbH



Under the Supervision of :

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- Mr Fernando Parra (CPC Group).**
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Introduction:

The following trials were carried on the experimental farm of the Department of Animal science, Faculty of Agriculture, Ain Shams University, Cairo , Egypt. The team carried on these experiments is Faculty members with Ph.D. degrees. The scientific rules were covered completely with ultimate integrity of university heritage.

BioAktiv :

1-Manufacturing Process:

Bio Aktiv powder is largely made on the basis highly purified and pulverized natural chalk meal. Other supporting materials are common salt and magnesium sulfate.

The production process was developed by **NON-MEDICAL** practitioners.

A synthesizer feeds the specific natural vibration of Oxygen into a large energy Accumulator which generates a powerful vibrating field with the natural frequency of the **Oxygen ATOM**. Depending on final product use, other vibrations such as those of trace elements and other materials are added to, or superimposed on , the oxygen Vibration.

The supporting material, e.g. Chalk meal or Common Salt, is introduced into this ultrahigh vibrating field and **RESONATED** for several hours (6 to 8 hours) so that it takes on the specific information permanently. It may then, for example, transmit the information to water and have the effect described.

IMPORTANT, it should be noted that **NO RADIOACTIVE** energy or whatever kind is used. **NOT** are chemicals are added to the basic materials. The final products are not toxic and present no risk to humans, animals and soil. **THIS IS GARANTEED.**

The manufacturer keeps a number of important details secret, including particularly the (formulas) for generating vibrations which are behind the success of the powder

Bio Aktiv products are International certificated , GMP-B2 , QS

Composition:

-Bio Aktiv Animal feed:(CaCo3)

Chalk of Natural purity

CaCo₃=90%

Ca =36%

-Bio Aktiv Liquid : (NaCl)

Sodium chloride

NaCl =99,9%

Na =39%

Material and methods:

The Bioaktiv products were supplied from the company in Germany B.A.E. GmbH and Bio Aktiv Evolution e.k . Birds and feed were bought from cairo poultry company (CPC). Birds were vaccinated at CPC before delivery to the experimental site.

During the experimental period, there was a total separation between all experiments to avoid any possible interference from side product transfer such as oxygen as it was indicated by B.A.E. GmbH and Bio Aktiv Evolution e.k.

Fifty bird are included in each trial. The experiment lasted for 35 days. A weekly record was applied for each bird through the experimental treatments. A complete block design was practiced and SAS linear statistical analysis was used.

Protease, Amylase, Celullase and Xlylanase enzymes were analyzed in the stomach and the intestine for all birds.

Blood samples were taken to check the effect of the treatments on the blood pictures.

Samples from liver and intestine were taken to check the histological changes as results for the treatments.

Carcass parameter were measured and recorded to check the treatment effect.

A. BioAktiv Experiment:

From the obtained results it showed that, the two Bioaktiv products should a better improvement in FCR in comparison to the control treatment as follows:

The FCR went down from 1.677 in control group to 1.626 in BioAktiv treatments

RESULTS

Table (1): LBW, feed intake and feed conversion rate for the broilers fed bioaktiv products

	wt.,kg	feed intake, kg	FCR
Control	1.55	2.6	1.677419
caco3 250	1.54	2.55	1.655844
caco3 500	1.55	2.53	1.632258
caco3 750	1.58	2.57	1.62658
Nacl 5	1.55	2.56	1.651613
Nacl 10	1.59	2.6	1.63522

OTHER RESULTS:

- There were no important statistical differences between treatments for mortality rates ,But mortality was proved in CPC farms in same trial (See report Poultry Focus / September ,October Issue 2009)
- observation on internal organs showed no stress from experimental compounds.

Enzyme analysis in the digestive tract:

A. Effect of Bioakive products on Amylase, Protease, cellulase and. xylanase activities

Results in Table showed amylase, protease and cellulase activities were high significant affect by different levels of CaCO₃ and NaCl, but no effect on xylanase activity.

1. Amylase activity

Sample Name	Unit		Sample Name	Unit	
Control stomach	0.3476		Control intestine	35.84229	
Ca 250stomach	0.715		Ca 250 intestine	40.521	
Ca 500 stomach	0.924	S	Ca 500 intestine	43.30332	S
Ca 750 stomach	0.566		Ca 750 intestine	45.50929	
Na 5 stomach	0.7167	S	Na 5 intestine	40.14991	S

Na 10 stomach	0.742		Na 10 intestine	42.65515	
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The dietary CaCO₃ 500 mg/ton was high amylase activity of stomach. When high amylase activity of stomach in chicken feed CaCO₃ 750 mg/ton. It is obvious that high NaCl level in the diet increased amylase activity of stomach and intestine.

2. Protease activity

Sample Name	Unit		Sample Name	Unit	
Control stomach	10.216		Control intestine	7.8921	
Ca 250 stomach	11.569		Ca 250 intestine	8.562	
Ca 500 stomach	13.258	S	Ca 500 intestine	10.456	S
Ca 750 stomach	12.554		Ca 750 intestine	11.258	
Na 5 stomach	11.365		Na 5 intestine	8.659	
		S			S
Na 10 stomach	13.365		Na 10 intestine	10.289	

It is obvious that high NaCl level in the diet increased protease activity of stomach and intestine.

3. cellulase activity :

Sample Name	Unit		Sample Name	Unit	
Control stomach	3.452		Control intestine	24.269	
Ca 250 stomach	5.925		Ca 250 intestine	27.326	
Ca 500 stomach	9.589	S	Ca 500 intestine	33.323	S
Ca 750 stomach	12.231		Ca 750 intestine	36.592	
Na 5 stomach	5.538		Na 5 intestine	26.8509	
		S			S
Na 10 stomach	9.425		Na 10	33.015	

			intestine		
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The high CaCO₃ and NaCl levels in the diet increased cellulase activity of stomach and intestine.

4. xylanase activity :

Sample Name	Unit		Sample Name	Unit	
Control stomach	6.734		Control intestine	24.038	
ca 250 stomach	10.658		CA 250 intestine	42.159	
Ca 500 stomach	13.125	ns	Ca 500 intestine	57.462	ns
Ca 750 stomach	15.8523		Ca 750 intestine	61.751	
Na 5 stomach	10.456		Na 5 intestine	41.256	
		ns			ns
Na 10 stomach	12.958		Na 10 intestine	55.685	

Blood parameter for BIOAKIV

No effect of treatment on cholesterol, total lipid, AST, ALT, Ca, P and creatinine. There was an effect on total protein, albumen and globulin. The highest values were recorded for chicken given high levels of CaCO₃ and NaCl.

treat	TP g/dl	Alb g/dl	Glb g/dl	chol mg/dl	Tlip mg/dl	AST IU/L	ALT U/L	Ca (mg/dl)	P (mg/dl)	creatinine (mg/dl)
Con	3.686	1.266	2.420	117.085	454.269	30.20	44.20	9.860	5.860	0.793

						0	0			
Ca 250	4.523	1.108	3.415	112.228	523.719	29.400	43.210	10.250	6.150	0.764
Ca 500	4.824	1.097	3.727	113.970	371.157	26.800	42.890	10.360	6.250	0.783
Ca 750	4.953	1.085	3.868	122.261	424.288	28.000	42.560	10.450	6.320	0.773
Na 5	4.523	1.105	3.418	123.065	445.161	29.400	43.210	10.210	6.270	0.783
Na10	4.824	1.097	3.727	126.064	467.552	28.000	42.690	10.160	6.300	0.789
	s	s	s	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.

Carcass characteristics of BIOAK groups

No effect of treatment on live body weight % gizzard, liver, heart, spleen, bursa, abdominal fat and dram, but effect, % carcass, breast, thigh and intestine. It is obvious that high CaCO₃ and NaCl levels in the diets increased significantly carcass, breast, thigh and decreased %intestine.

tre at	LB W	%Carcass	% G iz z ar d	%liver	%hear t	%sple en	%burs a	%abd fat	%brea st	%thau gh	%dram	%intesti n
Co n	1.55	63.12887	2.016707	2.682718	0.421162	0.125542	0.114567	1.490743	10.87619	4.705459	5.161824	7.855628
Ca 25	1.54	66.26572	1.97364	2.65378	0.439438	0.13252	0.153507	0.924205	11.89264	4.965444	5.466432	6.762559
Ca 50	1.55	67.51827	2.152914	3.478432	0.453507	0.073465	0.134009	0.703604	11.9323	5.193621	5.023926	6.029708

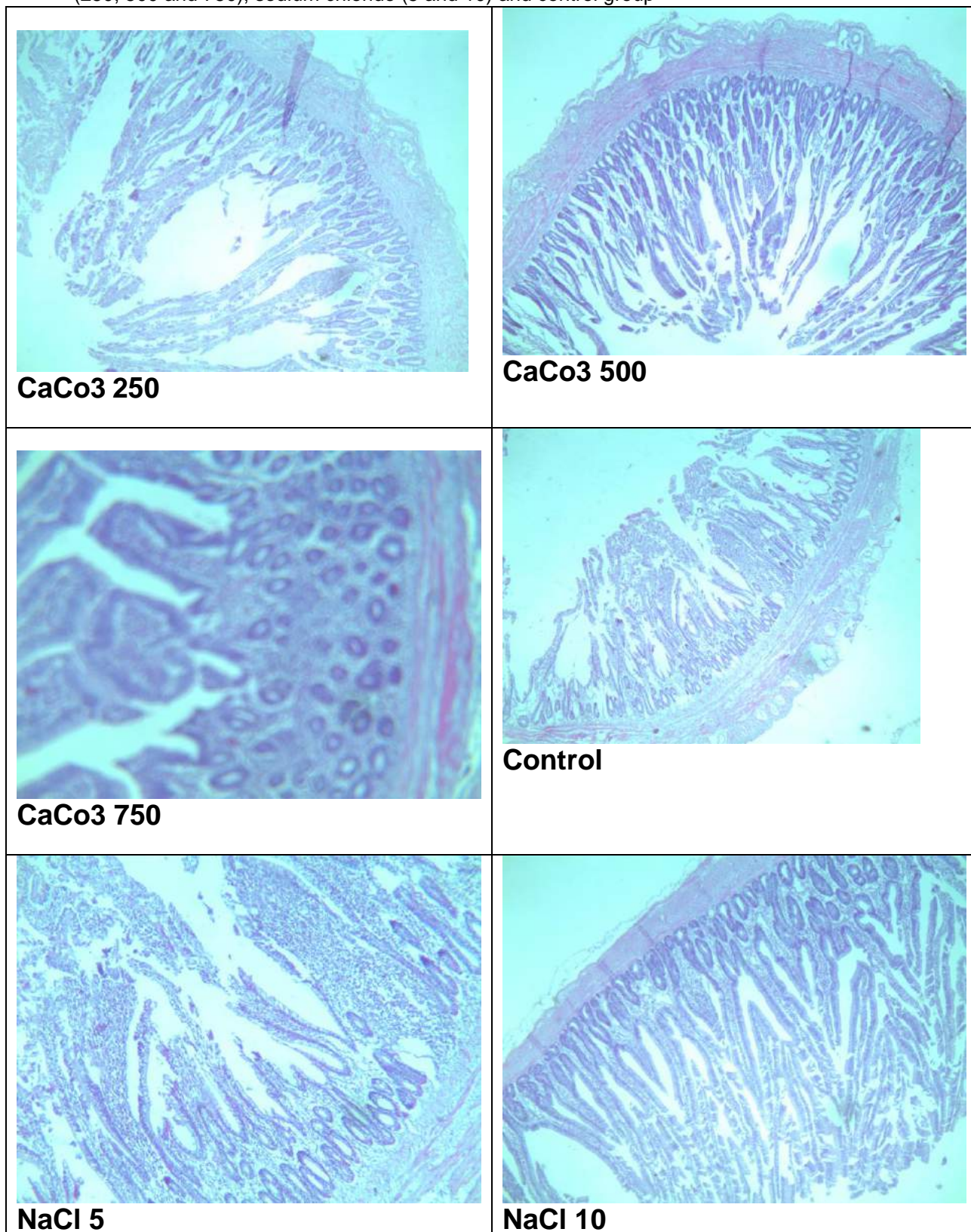
Ca 75	1,58	67.53215	2. 57 24 34	3.16196 4	0.57197	0.08616	0.10640 3	1.20146 9	11.85073	6.110733	4.818058	6.89581
Na 5	1.55	66.59457	2. 20 12 46	3.46627 6	0.52554 5	0.15057 9	0.14747 3	1.53432 3	10.0105 2	4.42790 3	5.240996	8.02423 7
Na 10	1.59	67.41727	2. 05 16 14	3.37943 2	0.46206 9	0.08365 1	0.12300 5	0.69043 6	12.5323	5.20726 3	4.87004	6.26957 1
	ns	s	n s	ns	ns	ns	ns	ns	s	s	ns	s

SUMMARY:

From the obtained results we conclude:

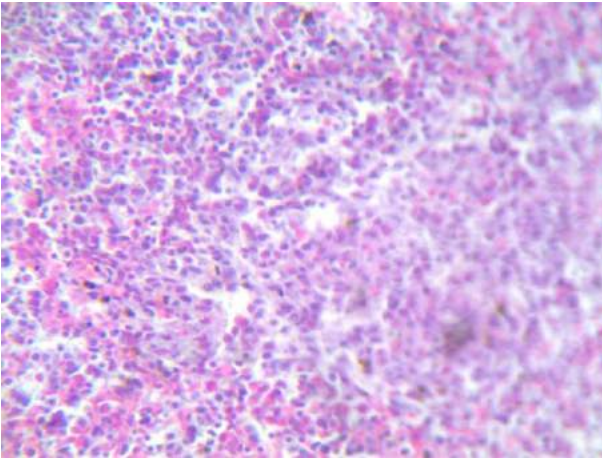
- The use of CaCo3 at 500 gm / ton with a reservation for the 750 gm / ton if the economics will permit.
- The use of Bioaktiv Nacl at 1 gm/ 10 L. for this catogry
- No effect of treatment on live body weight % gizzard, liver, heart, spleen, bursa, abdominal fat and dram, but effect, % carcass, breast, though and intestine. It is obvious that high CaCO3 and NaCl levels in the diets increased significantly carcass, breast, though and decreased %intestine.
- The increase in stomach and intestine enzymes in BioAktiv groups are good explanations for the improvements in the FCR
- The histological and blood pictures showed that BioAktiv products are very safe on birds and accordingly birds are safe for human consumption.
- Mortality was proven in the other trials in CPC farms (See Reprot Poultry Forum (Issue September/ October 2009).

Fig 1. The histological structure of small intestine from broiler fed bioaktiv Calcium carbonate (250, 500 and 750), sodium chloride (5 and 10) and control group

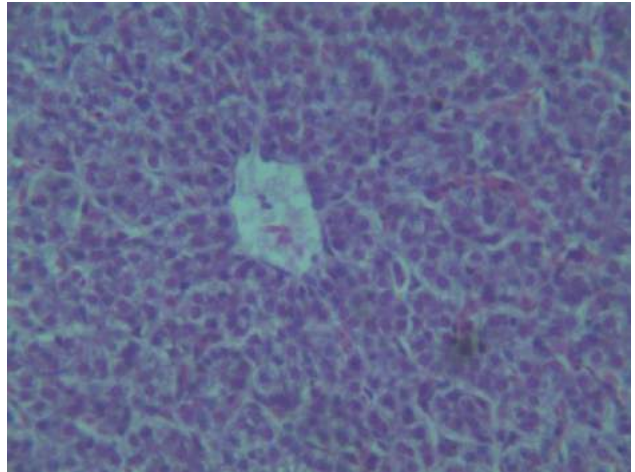


The observations from the histological sections for small intestine in broiler group fed with bioaktiv Calcium carbonate showed clear developmental increase in intestinal villi length and number in group CaCo3 500 followed by group CaCo3 then control group. Section from group CaCo3 750 showed developmental structure for intestinal villi but not clear. On the other hand, section taken from small intestine for groups supplemented with NaCl concentration showed clear developmental structure for intestinal villi than control group.

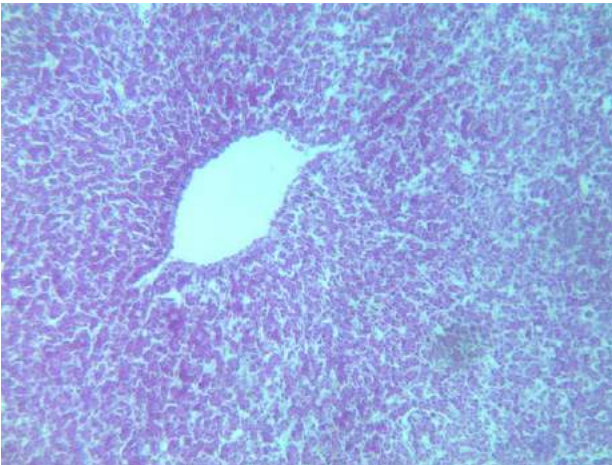
Fig 2. The histological structure of liver from broiler feed Bio Aktiv 250/500/700 and control group



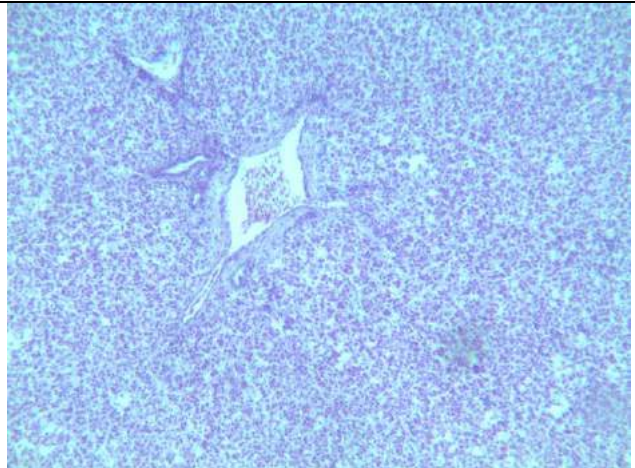
BIO AKTIV 250



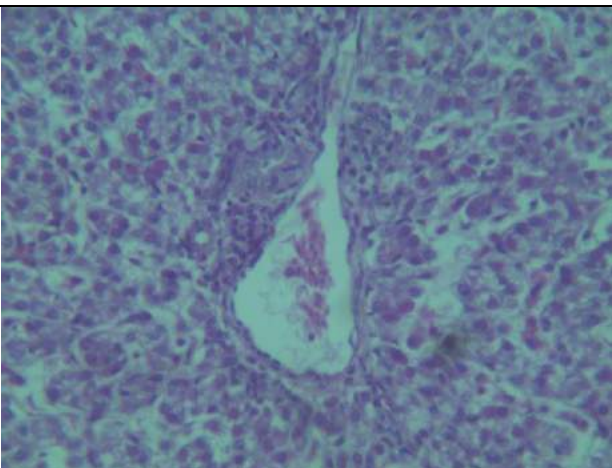
BIO AKTIV 500



BIO AKTIV 750



BIO AKTIV LIQUID



CONTROL

The observations from the liver histological sections in broiler group fed with Bio Aktiv (Feed and Liquid) concentrations showed normal distribution for cells and ducts, absence of any lesions when compared with control group fed with basal diet without Bio Aktiv (Feed & Liquid) supplementation.

Good vibrations keep broilers healthier

It may sound a bit 'new age' but the introduction of natural oxygen vibrations to the digestive tract of broilers, either in feed or in water, appears to be improving bird health, reducing mortality and increasing food conversion, so that not only are more birds reaching maturity, they are doing so at increased weights.

The BioAktiv range of products were developed some 16 years ago as a result of a co-operation between a homoeopathist and an engineer, who designed an oscillating device that, operating at the frequency of oxygen atoms in a contained chamber, transfers the specific natural vibration of oxygen into a delivery medium, either calcium or salt, over a period of several hours so that it takes on the specific information permanently. Depending on the final product use, other vibrations such as those of trace elements can be added to or superimposed on the oxygen vibration.

How does it work?

"While the calcium itself is a valuable additive in poultry feed, it is used purely to introduce the oxygen vibration to the digestive tract of birds" says Ron Edmonds, who is the UK distributor of BioAktiv products and is currently assessing the results of trials on several UK broiler units.

"Once in the birds, it stimulates the aerobic (beneficial) bacteria and reduces the level of anerobic (harmful) bacteria in the bird's gut, improving digestion and boosting the immune system. The product is completely natural and safe for people, animals and the environment."

Research across Europe and North Africa

A recent seminar organised by BioAktiv Evolution GmbH was held in Germany to present and exchange the results of research trials of BioAktiv poultry products across Europe, including Egypt, UK and France. Of particular interest were the outcomes of studies comparing two whole farm units that had been carried out by the Cairo Poultry Group, and results from trials at Cairo University, supervised by Professor Hany Gado, who has spent some years undertaking research on the product in France.

The results of the Cairo Poultry Group farm studies showed definite improvements in mortality, reduced days to slaughter weight and improved FCR.

With BIOAKTIV Calcium Carbonate		Control farm = no BIOAKTIV	
Number of Birds Started	196700	Number of Birds Started	215150
Culled Birds	0.25%	Mortality	2.96%
Average Age at Marketing	33.6 Days	Culled Birds	0.43%
Average Flock Body Weight	1.534 Kg	Average Age at Marketing	35.14 Days
FCR	1.63	Average Flock Body Weight	1.585 Kg
EEF	271	FCR	1.68
Medication cost (Vaccines + Medicines + Cleaning and Disinfecting)	0.5819 LE/Kg	EEF	273
		Medication cost (Vaccines + Medicines + Cleaning and Disinfecting)	0.589 LE/Kg

Cairo University experimented with differing concentrations of product, either in powdered form or liquid, focusing on improvements in FCR. The trials showed best results from using CaCO3 at 500gm/tonne in feed, giving a FCR improvement of 13.04% or NaCl at 1gm/10L liquid providing improved FCR of 9.4%. The general health of birds treated also showed significant improvement, with less stress, less illness and better growth being observed.

Winning Ways

In the UK, whilst BioAktiv Liquid Feed has only recently been introduced, initial results are proving positive, with again improved FCRs, increased weights, better litter quality, lower rejects and lower mortality.



Such was the impact of the Cairo research trials that BioAktiv went on to win an Innovative Product Award.

Ron Edmonds at E.W.I. Associates Ltd has 10kg trial cartons of BioAktiv Liquid Feed available for those who wish to make trials, at an introductory price of £25.00 plus VAT per kilo, delivery is free. Normal price is £30.00 in 25 kilo cartons. It is estimated that the cost of applying BioAktiv Liquid feed to the drinking water adds less than 0.1p to the cost of a bird for the crop.

For more information email ewibio@tiscali.co.uk or tel: 0116 2592590

Official NCP sampling for broilers underway

As part of the National Control Programme for Salmonella in broiler flocks Defra have to collect control samples annually from 10% of holdings with more than 5,000 birds. Testing to meet this requirement will be taking place over the next few months. The holdings are selected at random and producers will be contacted by local animal health officers to inform them if they are to be tested as part of the NCP. For more information about the NCP for broiler flocks please go to <http://www.defra.gov.uk/animalh/diseases/zoonoses/pdf/ncp-guide-salmonella.pdf>



4% hike in MHS charges will not be imposed at the moment

The Food Standards Agency is to proceed with the introduction of regulations for a new system of calculating charges for official controls in meat plants.

The new system will base charges on the time cost of the inspection process at meat businesses. Subject to the normal Parliamentary procedures, the new system will take effect from 27 September in Northern Ireland and 28 September in Great Britain.

Increases to charges that had been proposed by the FSA are not being introduced at this time. This means that, if official control time remains unchanged, meat businesses will not face an increase in the charges they pay when time-based charging is introduced. Charges could be lower for some businesses where official control time is reduced.

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