

Research Institute of Agricultural Engineering in Prague (RIAE)

Feed and additives

Martin Dedina

12th November 2008, Milano

Types of additives

- Masking and neutralizing agents
- Adsorbers - zeolites
- pH regulators
- Oxidizing agents
- Flocculants
- Disinfectants and antimicrobials
- Biological agents – enzymes, bacteria
- Urease inhibitors – yucca extracts

Community register of feed additives

pursuant to Regulation (EC) No 1831/2003

- Hundreds of additives listed
- Discussion dealing with efficiency for ammonia abatement
- Discussion about costs for their application
- Avoidance of preference of some additives against to others in the competition on market
- VevoVitall (benzoic acid) p. 293 of the Register is the first agent mentioned in the Guidebook with emissions reduction 25-30%

Broilers fed with Biostrong 510

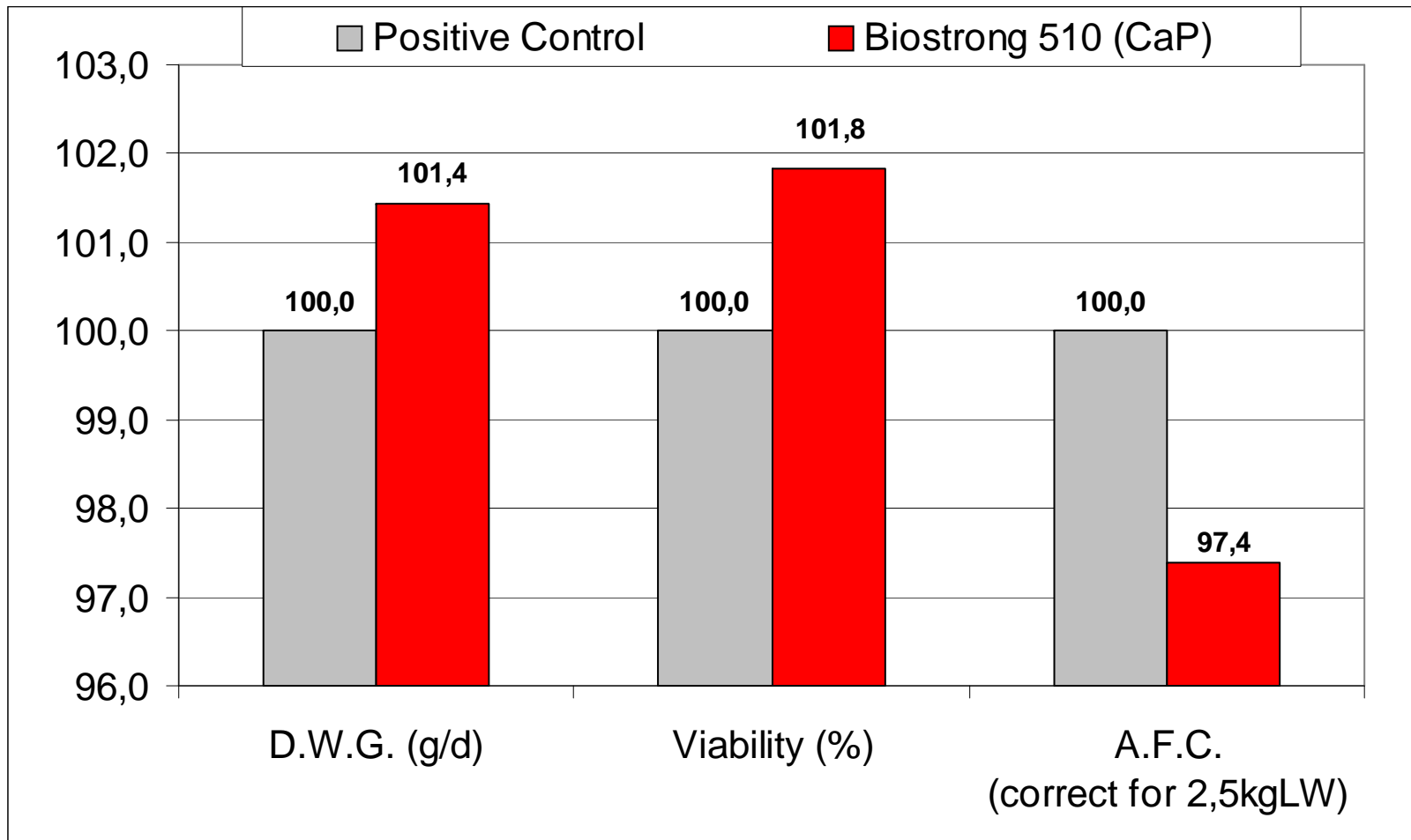
Commercial flocks, Integration, Brazil, 4.880.000 birds housed, August 2008

- Location:** Integration, Paraná State, Brazil
- Design:** 2 treatments, 24.500 birds per house, 211 houses evaluated in total (27 houses for trial),
Cobb 500, as hatched, 16 birds/m², Dark-house expanded and pelletized, corn / soy based diets
- Pos. Control:** Standard feed, with AGPs, MBM, PBP¹⁾; 45.07 days on av.
- Trial:** Standard feed, with AGPs, MBM, PBP, 150ppm of Biostrong 510 (Performizer Ca,P); 44.56 days on av.
- Coccidiostatic:** Same program for both treatments
- Period:** June until August 2008

1) PBP = poultry by product

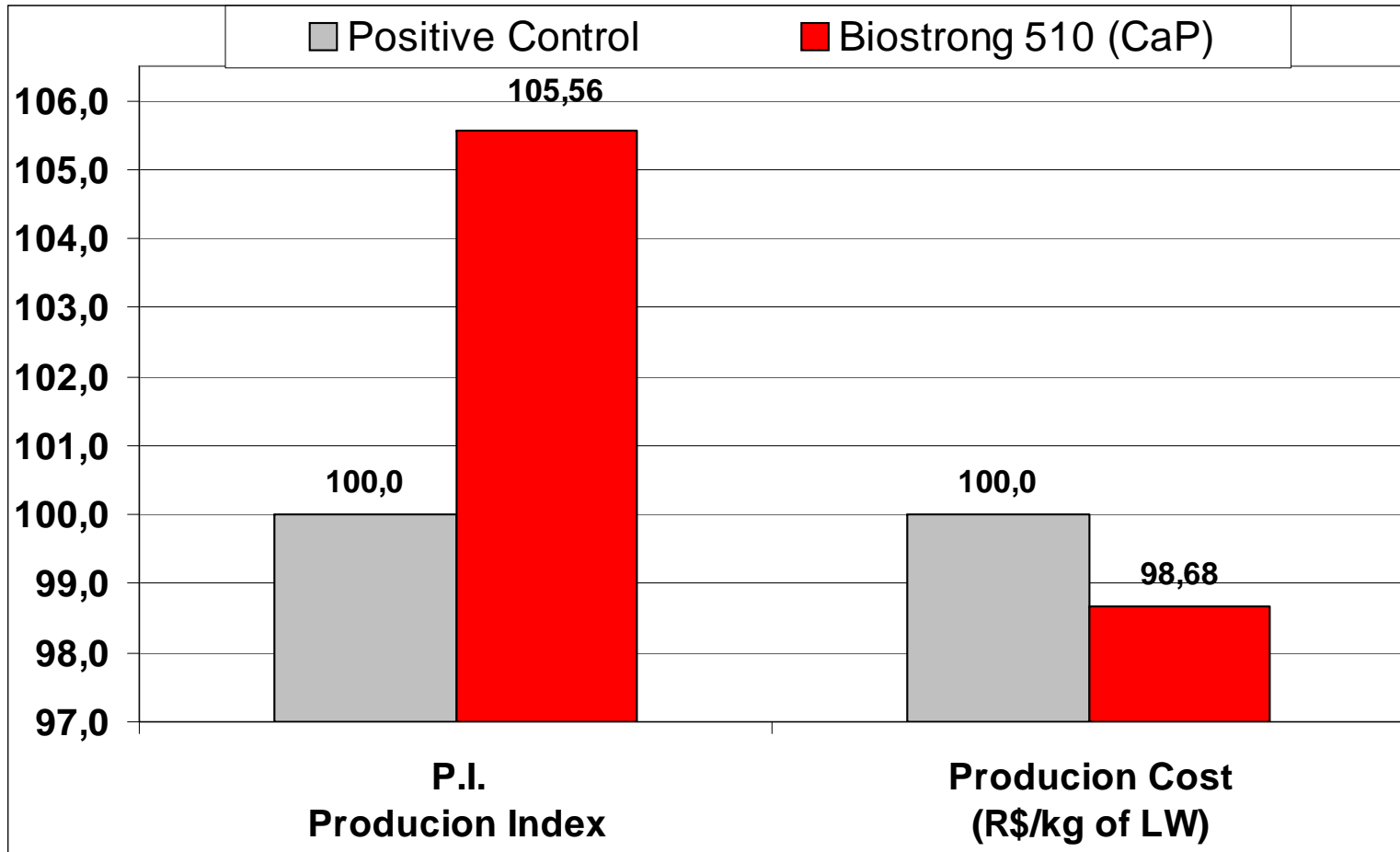
Broilers fed with Biostrong 510

Commercial flocks, Integration, Brazil, 4.880.000 birds housed, August 2008



Broilers fed with Biostrong 510

Commercial flocks, Integration, Brazil, 4.880.000 birds housed, August 2008



Broilers fed with Biostrong 510

Commercial flocks, Integration, Brazil, 4.880.000 birds housed, August 2008

Ammonia production

Ammonia measurement 10cm above floor (ppm) - average values					
Date (age)		11/06/2008 (22 days)		23/06/2008 (34 days)	
Ventilation		Air flow = 0,1 m/s		Air flow = 0,4m/s	
Treatment		Free	Barrier	Free	Barrier
	Positive control	39,17	47,67	25,00	31,33
	Biostrong 510	18,33	21,17	14,33	16,00
	Rel. reduction (%)	-53%	-56%	-43%	-49%

Each ammonia value represents the average of six measurements;

The barrier is a "duralex" plate with the size of 30cm x 50cm, trying to simulate the crowded flock conditions in front of the measurement point

Suggestions and questions

- Need for independent studies and researches?
- To established a list of potentially appropriate agents for NH₃ abatement based on trade marks?
- What parameters the agent has to fulfill for inclusion to the guidebook?