



## New BOLIFOR® MSP trial – proves a competitive chloride-free sodium and highly-available phosphorus source for broiler feed.

Maintaining the optimal performance of broilers fed standard corn, wheat and soybean meal normally requires a chloride-free sodium source to be added to feed. A chloride-free sodium source enables the balancing of Na<sup>+</sup>, K and Cl<sup>-</sup> levels to reach an optimal dietary Electrolytic Balance (dEB) of approximately 250 mEq. In addition, it prevents overly high chloride levels, thus minimising the risk of higher water content in faeces, which causes wet litter surface and leads to increased foot damage.

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Where conventional broiler feeds often use sodium bicarbonate, monosodium phosphate offers a competitive alternative that adds both chloride-free sodium and highly available phosphorus to feed and delivers significant advantages (see table 1). In a new trial of BOLIFOR® MSP in broiler feed, it not only matched the performance of sodium bicarbonate but also surpassed it – with significantly higher feed intake and a tendency towards higher growth rate and body weight (see table 2). No difference in water consumption between the diets was observed.

The trial, conducted in 2012 at Feed Innovation Services (FIS) in Wageningen, Netherlands, aimed to investigate if BOLIFOR® MSP could replace sodium bicarbonate without any negative effects on broiler performance. Two dietary treatment groups, consisting of 12 cages containing 6 birds each, were fed a corn, wheat and soybean meal-based diet for five weeks. Feed and water available ad libitum. MCP and sodium bicarbonate (0.3%) were added to the feed for group 1 and MCP and MSP (0.41%) were added to the feed for group 2.

TABLE 1 - TRIAL RESULTS OF BROILERS FED EITHER MCP + SODIUM BICARBONATE (GROUP 1) OR MCP + MSP (GROUP 2)

| RESULTS               | GROUP 1<br>SODIUM BICARBONATE | GROUP 2<br>BOLIFOR® MSP | DIFFERENCE | -      |
|-----------------------|-------------------------------|-------------------------|------------|--------|
| Body weight (g)       | 2055                          | 2096                    | + 2%       | p<0.10 |
| Av. growth rate (g/d) | 57.5                          | 58.7                    | + 2%       | p<0.10 |
| Feed intake (g/d)     | 90.3b                         | 93.5a                   | + 3.5%     | p<0.05 |
| Feed conversion rate  | 1.57                          | 1.59                    | -          | ns     |

### FURTHER ADVANTAGES OF BOLIFOR® MSP

- Slightly acidic – pH between 5.5 and 6.5.
- Unique combination of sodium and phosphorus gives excellent palatability.
- Compact nutrient release space in formula for other important nutrients such as energy.
- Lower environmental impact – highly available phosphorus cuts need for inorganic phosphorus by approx. 5%.

TABLE 2 - MATRIX VALUES OF PHOSPHATES AND SODIUM BICARBONATE

| INGREDIENT                         | CALCIUM (%) | PHOSPHORUS (%) | APPARENT P (%)<br>digestibility */ | SODIUM (%) |
|------------------------------------|-------------|----------------|------------------------------------|------------|
| BOLIFOR® MCP Monocalcium phosphate | 16          | 22.7           | 85%                                | -          |
| BOLIFOR® MSP Monosodium phosphate  | -           | 24             | 91%                                | 20         |
| Sodium bicarbonate                 | -           | -              | -                                  | 27.3       |

\*/CVB 2000 NL