



## 4t-fi. A proven acid even stronger!

Animal producers suffer from losses caused by bacterial contamination and associated effects on the livestock, such as lower daily weight gain and increased mortality.

The strongest bactericidal and bacteriostatic effects among organic acids have been demonstrated for formic acid.

Our manufacturer has made the documented effects of formic acid even stronger – by combining this trusted acid with registered salt to enhance the efficacy range.

4t-fi stands for:

- ✓ high amount of active ingredients (~85%)
- ✓ very strong antimicrobial effects
- ✓ unique ingredients compositions

The antimicrobial effects are beneficial for the birds in many respects:

- ✓ 4t-fi reduces the total microbial load in the drinking water and in the upper digestive tract
- ✓ 4t-fi optimizes protein digestibility
- ✓ 4t-fi improves performance due to increased digestibility and better FCR

Table 1: Antimicrobial effect of formic acid against different bacterial (after Strauss and Hayler, 2001) – Minimal Inhibition Concentration MIC in %

Bacteria	MIC (%)
Salmonella typhimurium	0.10
Escherichia coli	0.15
Listeria monocytogenes	0.10
Campylobacter jejuni	0.10
Clostridium botulinum	0.15
Clostridium perfringens	0.10
Pseudomonas aeruginosa	0.10
Staphylococcus aureus	0.15





Table 2: Comparison of broiler performance using **4t-fi** at 350 ml per 1000 litres drinking water and a Negative control.

	Control	<b>4t-fi</b> (1 litre) for 10 h/d for 25 d	Difference (%)
Birds (n)	48,000	48,000	-
Age (days)	40	40	-
Final weight (g)	2.324	2.450	+5.4
ADG (G D <sup>-1</sup> )	58.6	60.6	+3.4
FCR	1.65	1.62	-1.8
Mortality (%)	6.48	4.10	- 36.7
EPEF	331	358	+8.2

*Trial carried out in Turkey (2017)*

The use of **4t-fi** under practical conditions applied via the water can be a part of the new feeding concept, leading to cost-effective and pathogenic-free livestock production!

For further information please email us at [info@agritech-is.com](mailto:info@agritech-is.com).

