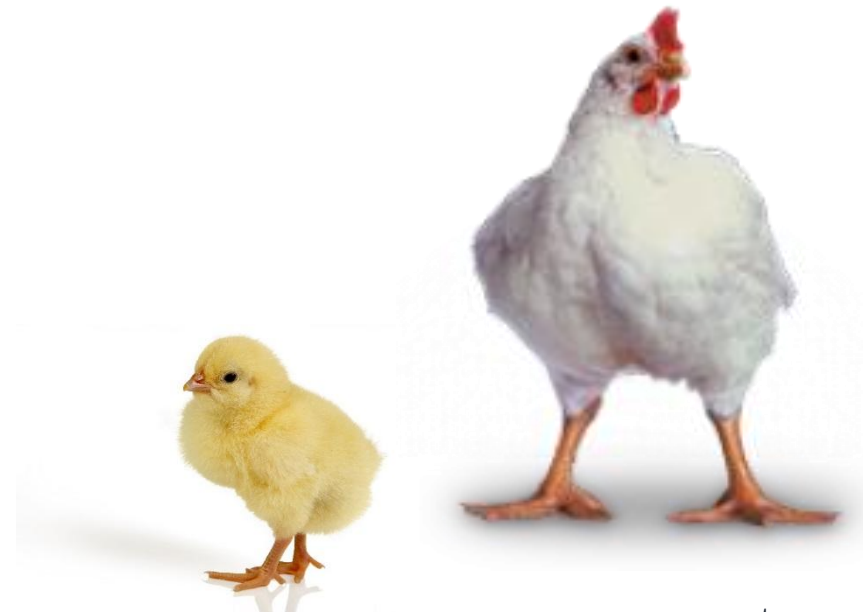


Reducing protein and energy rates in diet while maintaining broiler zootechnical performances: Case study of Nor-Spice AB® supplemented diet

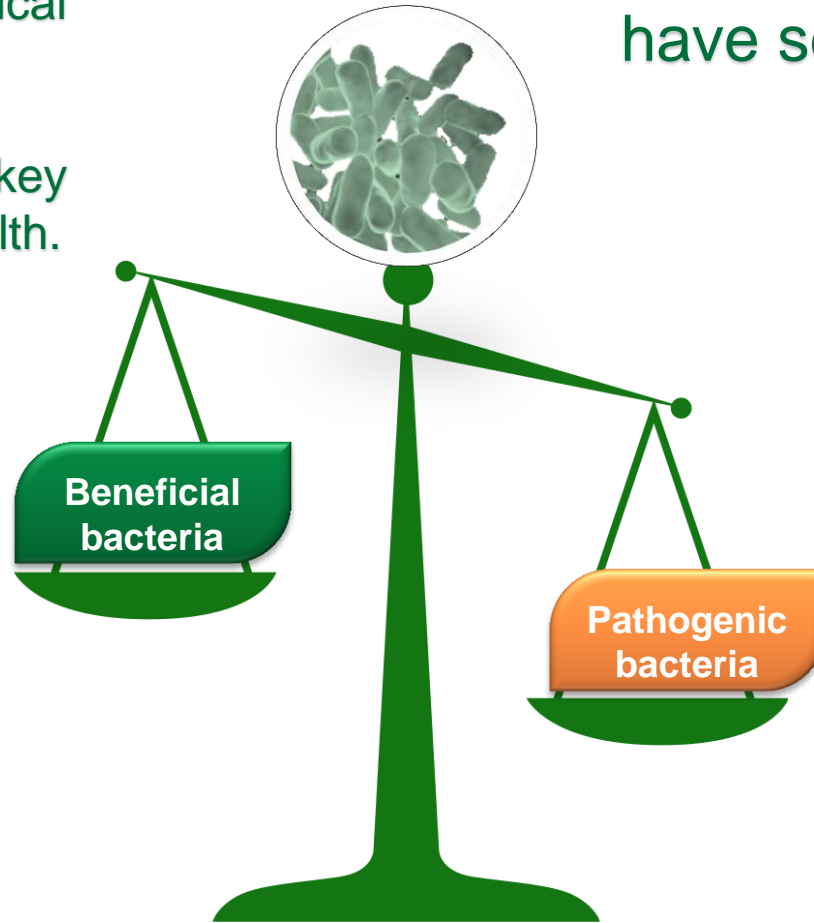
Amine BENARBIA, DVM, PhD



Introduction

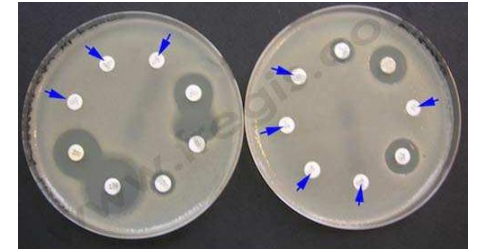
Gut Health is important for the expression of the zootechnical performance of broilers.

The intestinal flora plays a key role in maintaining gut health. (Chahine and Bahna, 2010)



The use of antibiotics as growth promoter have several sides effects:

Development of resistant strain of pathogenic bacteria



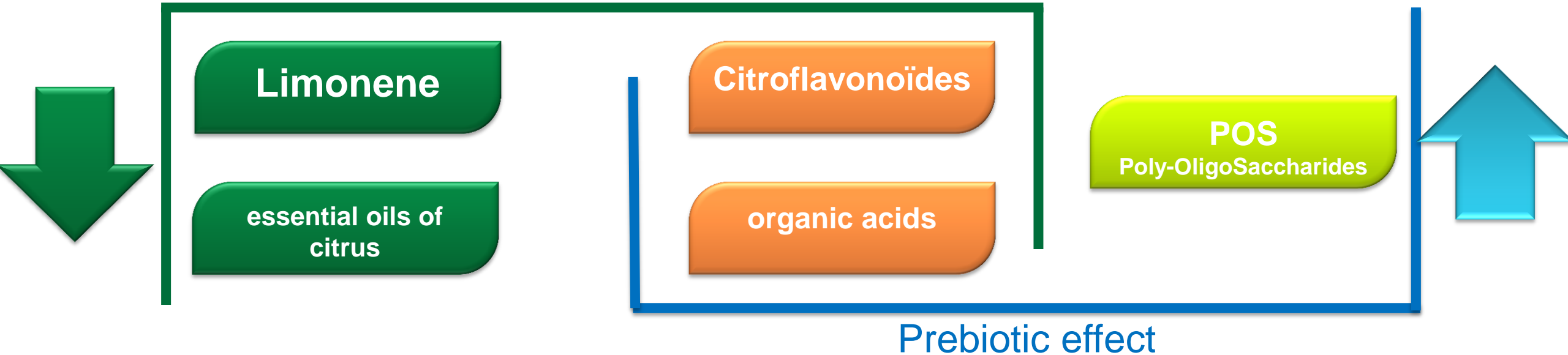
Chemical residues in the food chain



Nor-Spice AB[®] : a natural product



Control the development of pathogenic bacteria



A complex composition for a complementary action.

Experimental design



Group 1
Optimal feed



Feed intake



weight



Mortality



Group 2
Optimal feed
+ NSAB 250 ppm



Group 3
Low cost feed

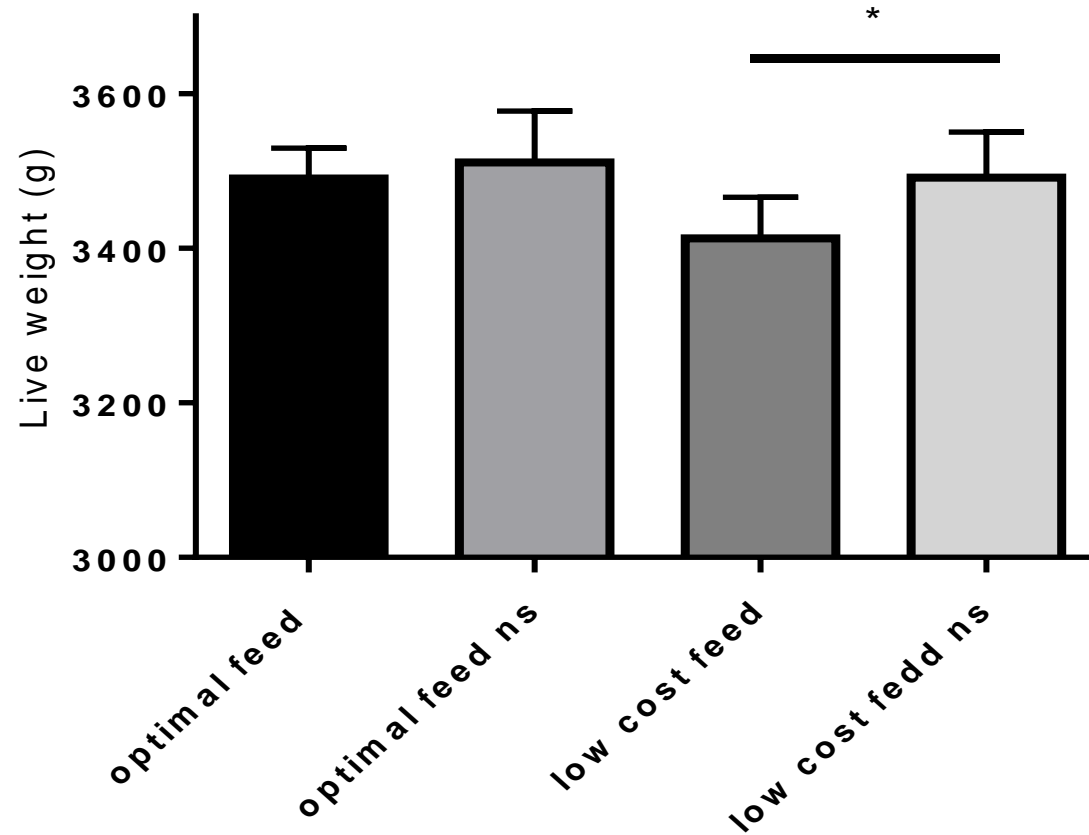


Group 4
Low cost feed
+NSAB 250 ppm



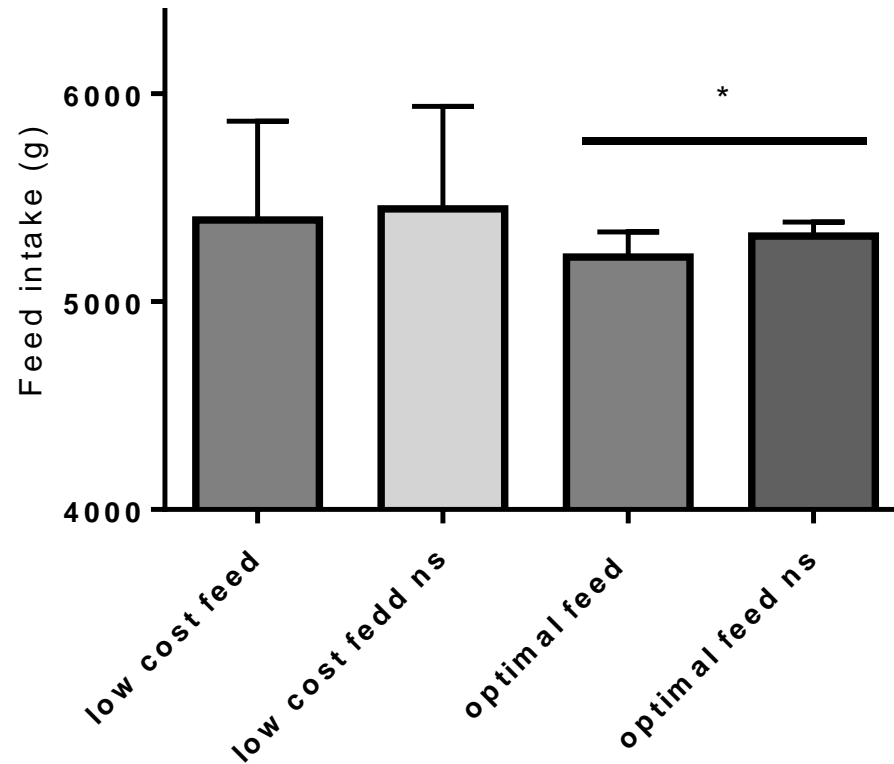
Trials has been conducted in the BARC station.
Low cost feed : -7% energy, 5% Digestible AA

Results: Final live weight



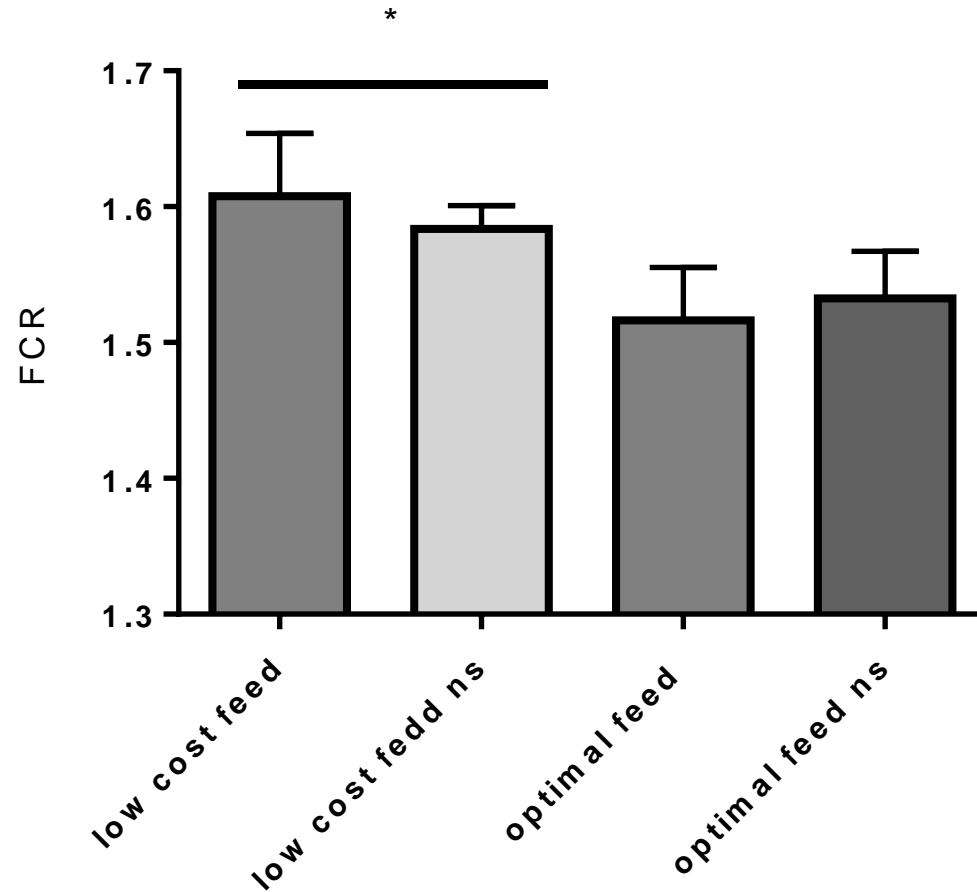
Supplementation with the NOR-Spice AB[®] increases the final live weight.

Results: feed intake



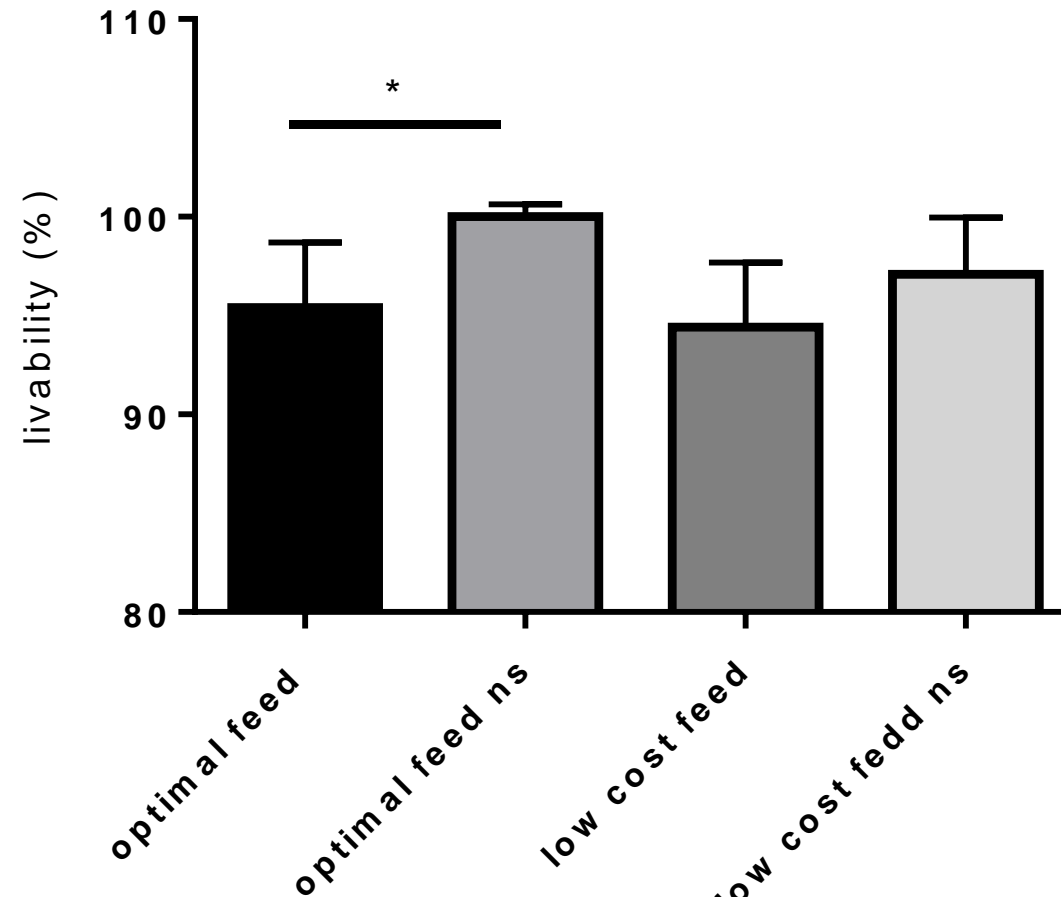
Feed supplementation with the NOR-Spice AB[®] tends to increase feed intake.

Results: Feed Conversion Rate (FCR)



Feed supplementation with NorSpice AB[®] improves the FCR.

Results: livability



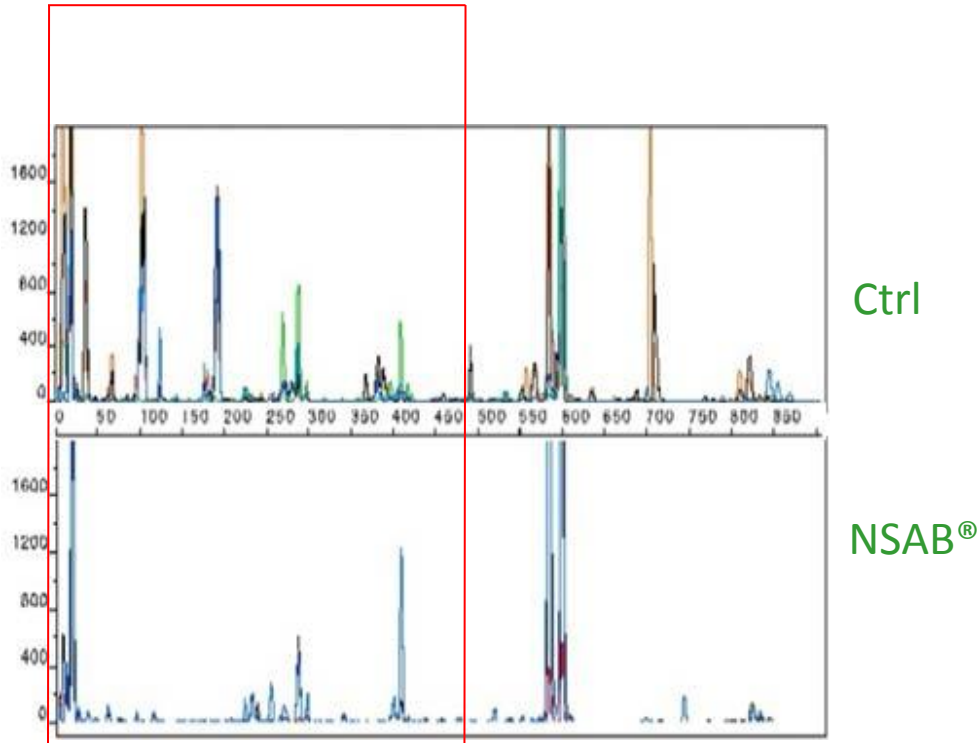
Feed supplementation with NorSpice AB[®] improve livability

Discussion

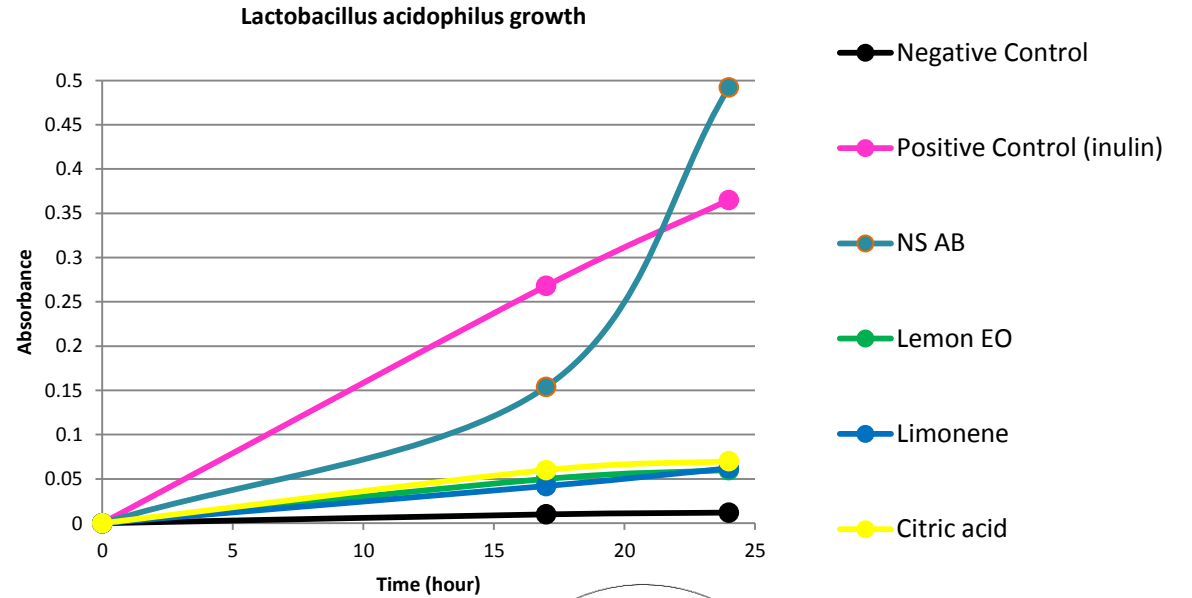
- Increase in feed intake.
- Increase in final body masse.
- Improvement of feed conversion rate.
- Decrease in mortality.

The effect of NSAB® Supplementation was more pronouce in case of use of economic feed.

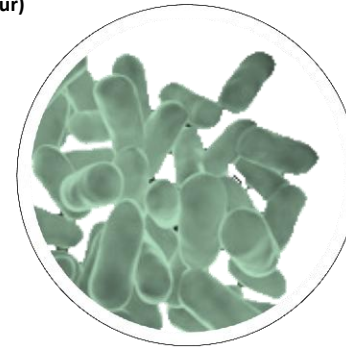
Discussion: Effects on intestinal microbiota



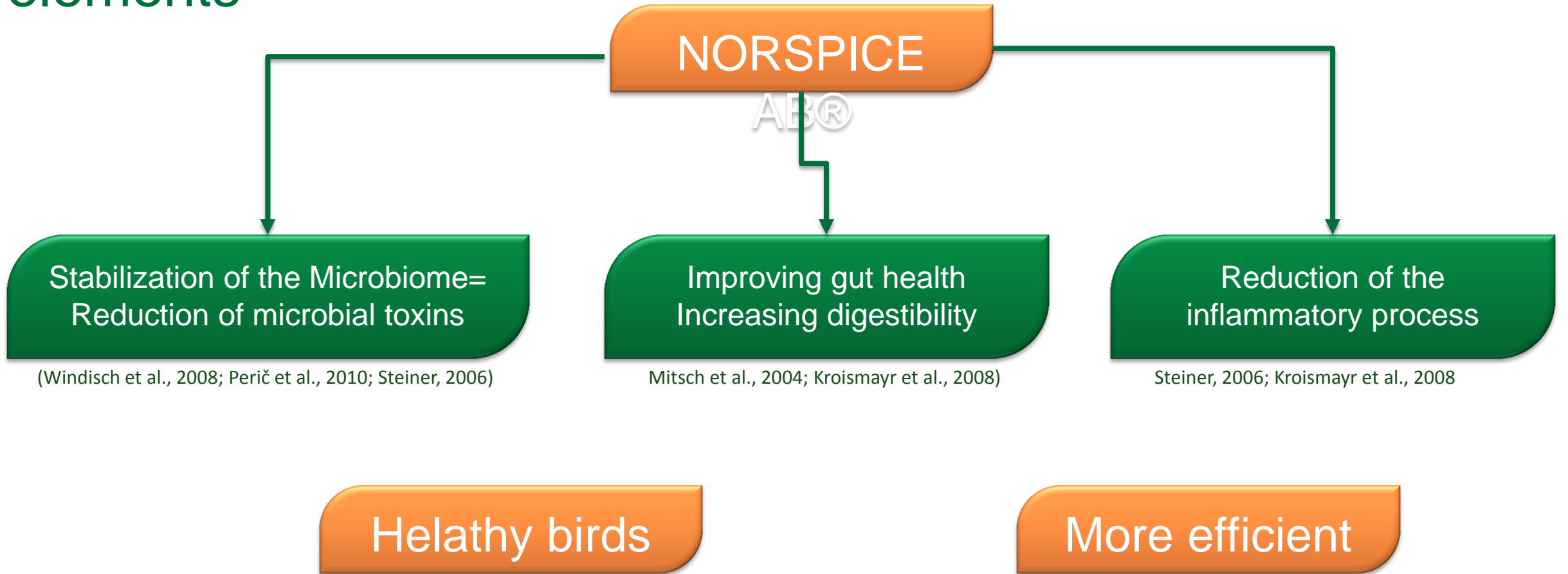
- *Pathogenic Flora*
- *E. coli*
- *Campylobacter*
- *Brachyspira*
- *Salmonella*
- *Bacteroïde*
- *Pasteurella*
- *Prevotella*



Beneficial lactic flora



Discussion: healthy gut= healthy bird= more efficient use of elements



Advantages

- An alternative for the use of AB as growth promoters.
 - Natural product:
 - No withdrawal period.
 - No residues.
-
- Improve health and animal welfare=> Improve productivity.
-
- Complex composition for a complementary action:
 - No risk of developing resistant strains.



Summary

- The action of supplementation of NSAB® was more marked in the case of a “low cost” diet.
- Economic feed= charge less.
- Equivalent performance with a 11.47% cheaper feed.
- Efficient at low dose: 250 ppm (250 g/T feed).

ROI = 1:3 minimum