



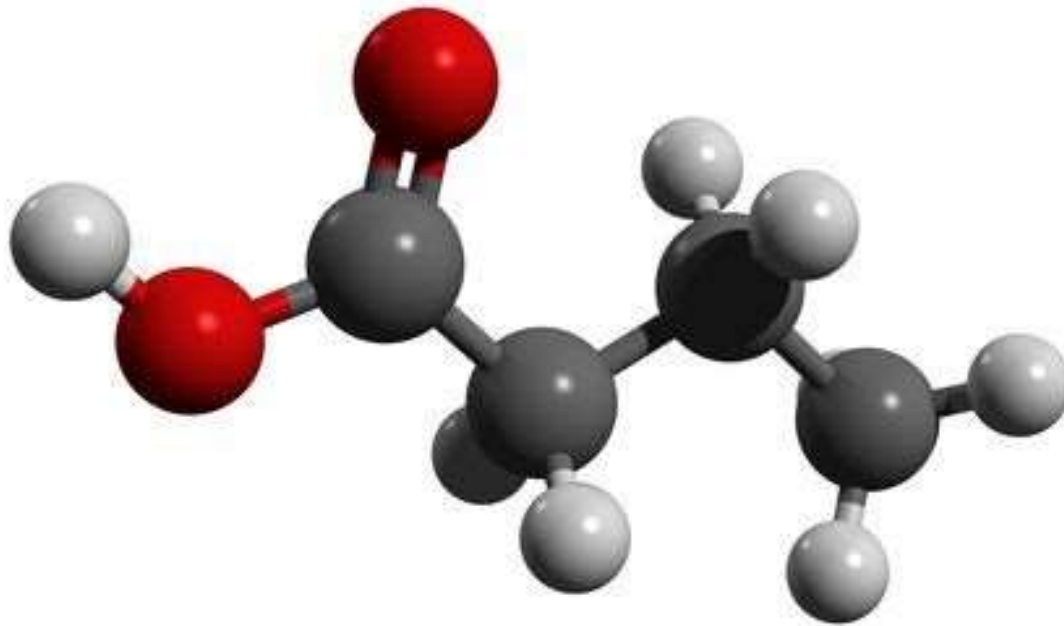
NOREL

A N I M A L N U T R I T I O N

GUSTOR

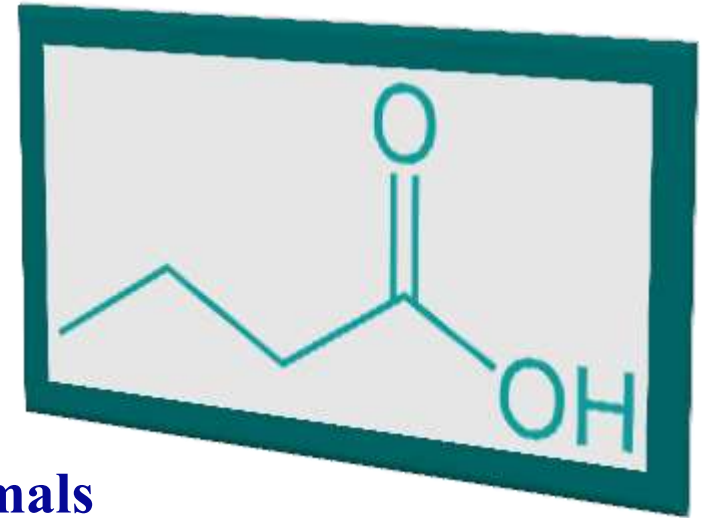
BP70

Butyric acid



Butyric acid

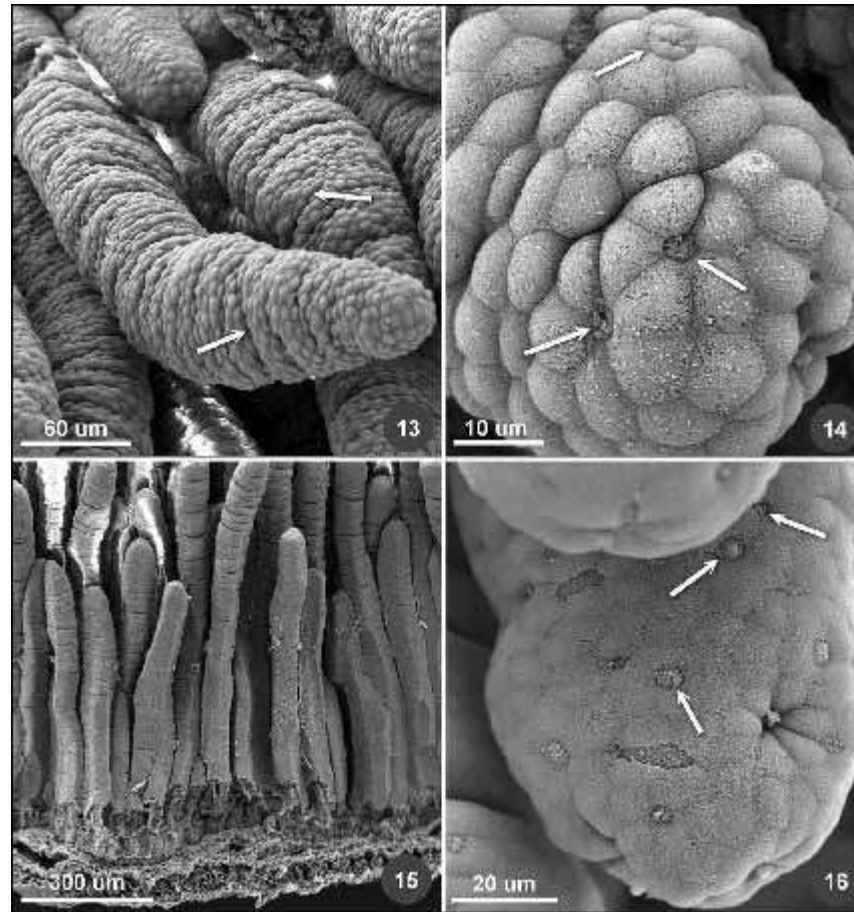
..short chain fatty acid resulting from microbial fermentation ...



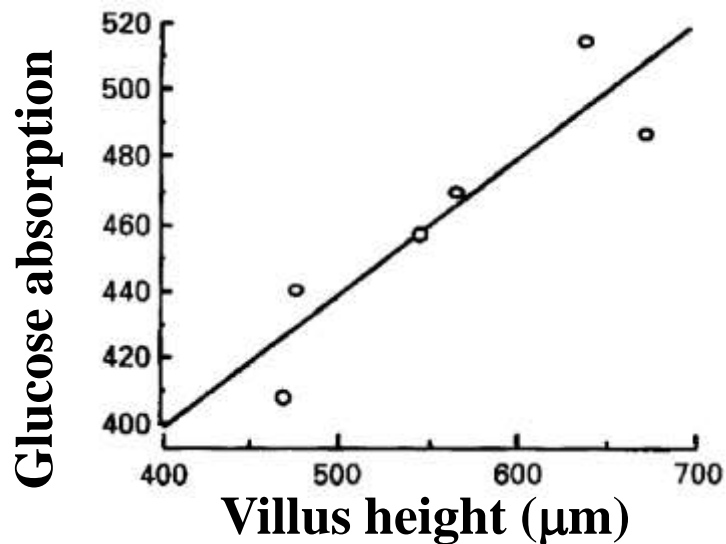
- naturally present in the intestine of animals
 - provides antimicrobial activity
 - enhances villi and crypt development
 - high in caloric content
 - readily metabolized by intestinal epithelium
 - preferentially oxidized by colonocytes
 - anti-inflammatory properties
-  • volatile and corrosive (in feed) → Use of salts



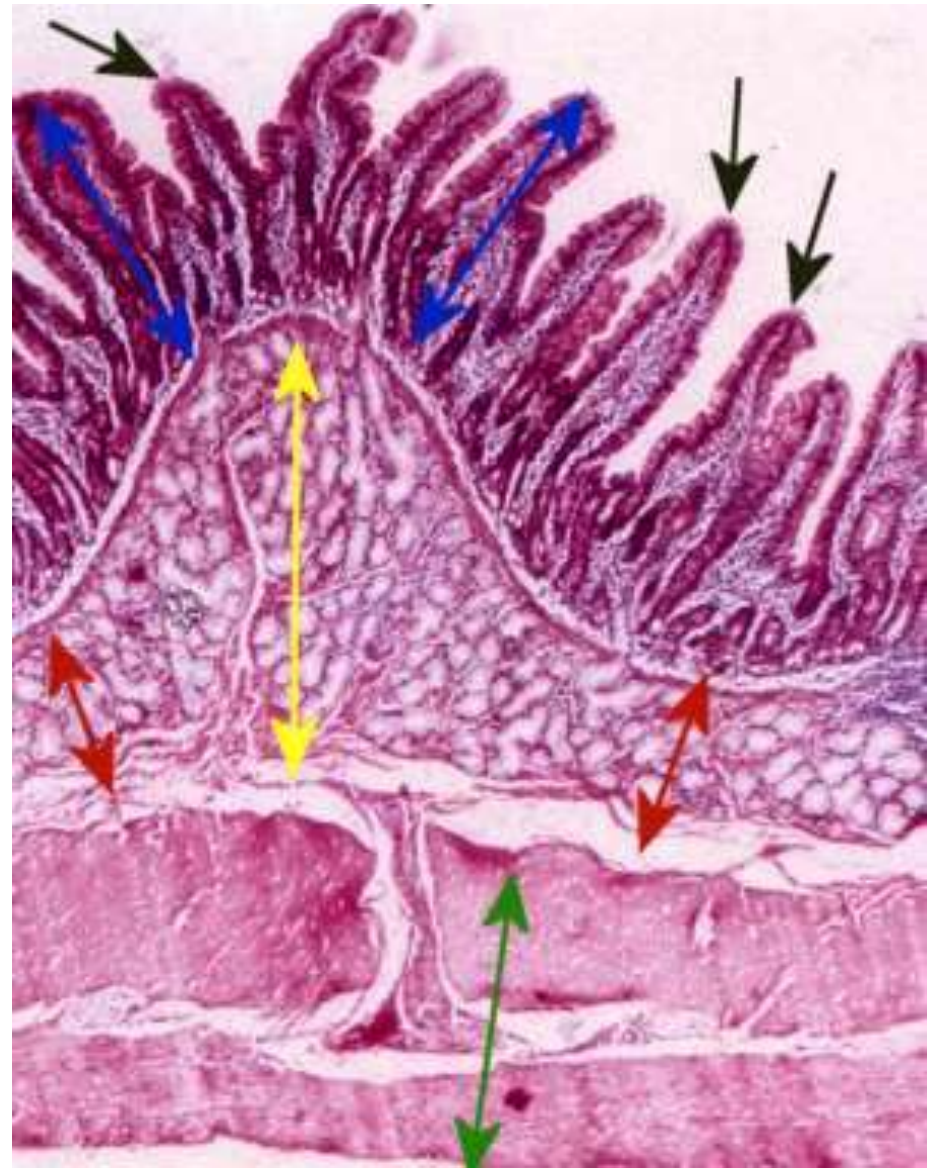
Sodium butyrate as a source of energy for the intestinal mucosa



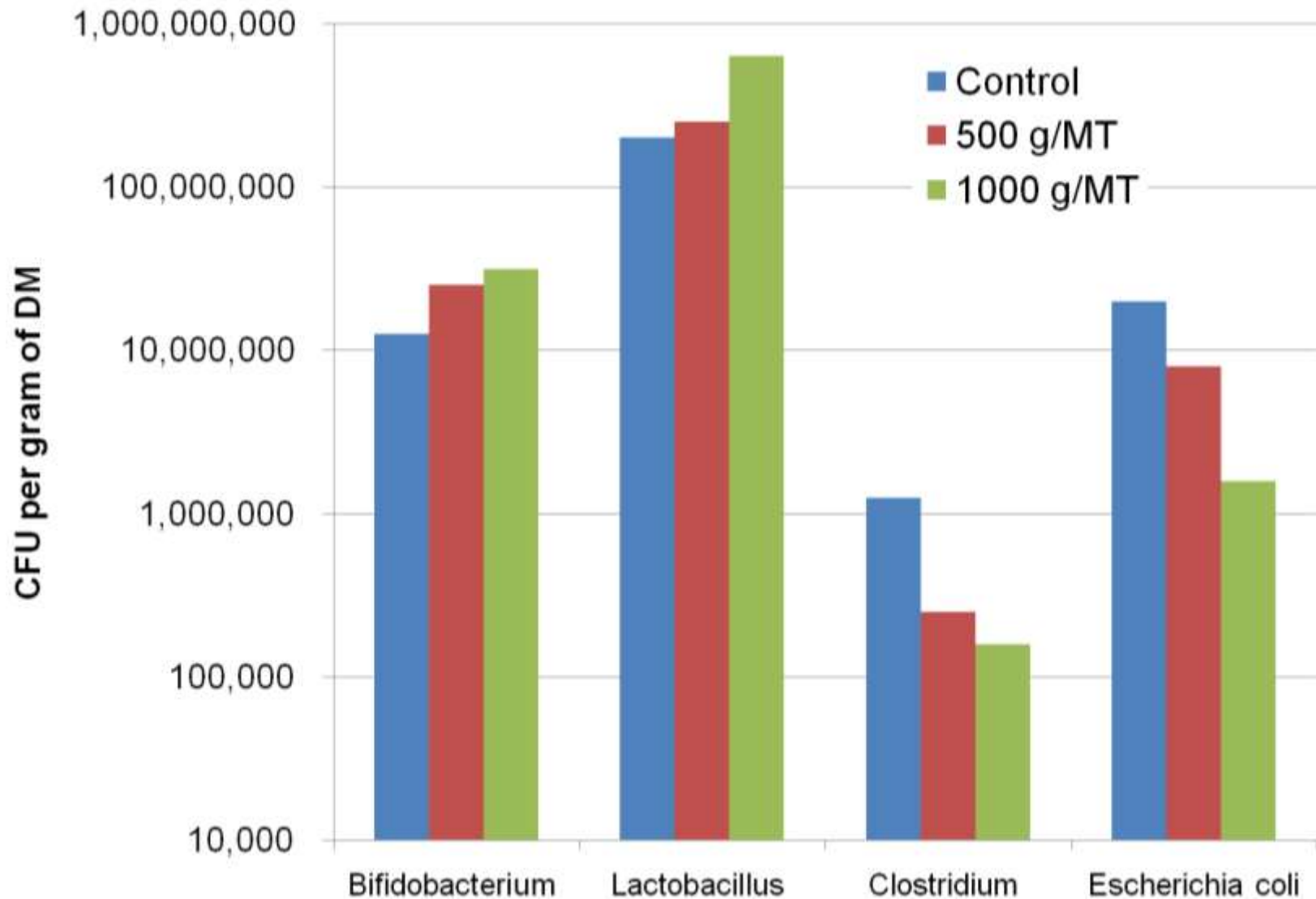
- Sodium butyrate stimulates the gastrointestinal cell growth, acting as the main nutrient of enterocytes.
- Enterocytes: The better size, length and health, the greater the absorption of the nutrients.



Pluske et al., 1996

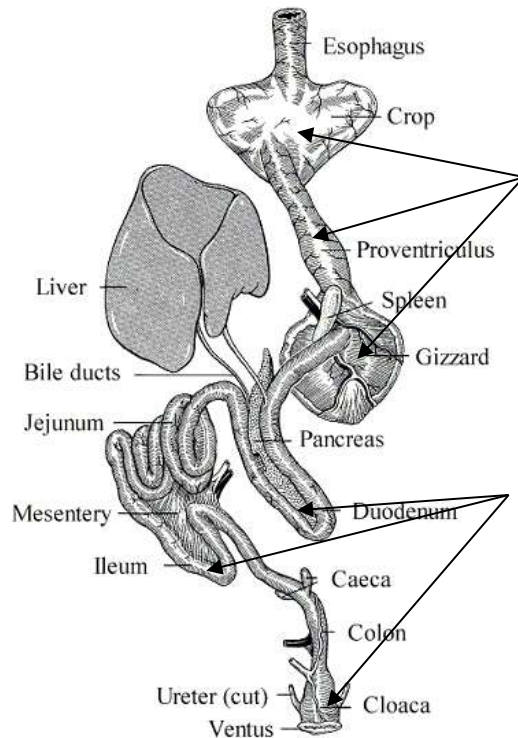


Effects of sodium butyrate on micro flora of **small intestine** of piglets after weaning at 6.7 kg live weight (duration of the trial 30 days) - Lu *et al.*, 2008



GUSTOR BP70: 40% free Na But + 30% protected Na-But

Vegetable Fat protection allows Butyrate to reach the distal parts of the GIT



Free Butyrate acts in 1st half GIT

Protected Butyrate acts in 2nd half GIT



Effect of Sodium Butyrate in layers

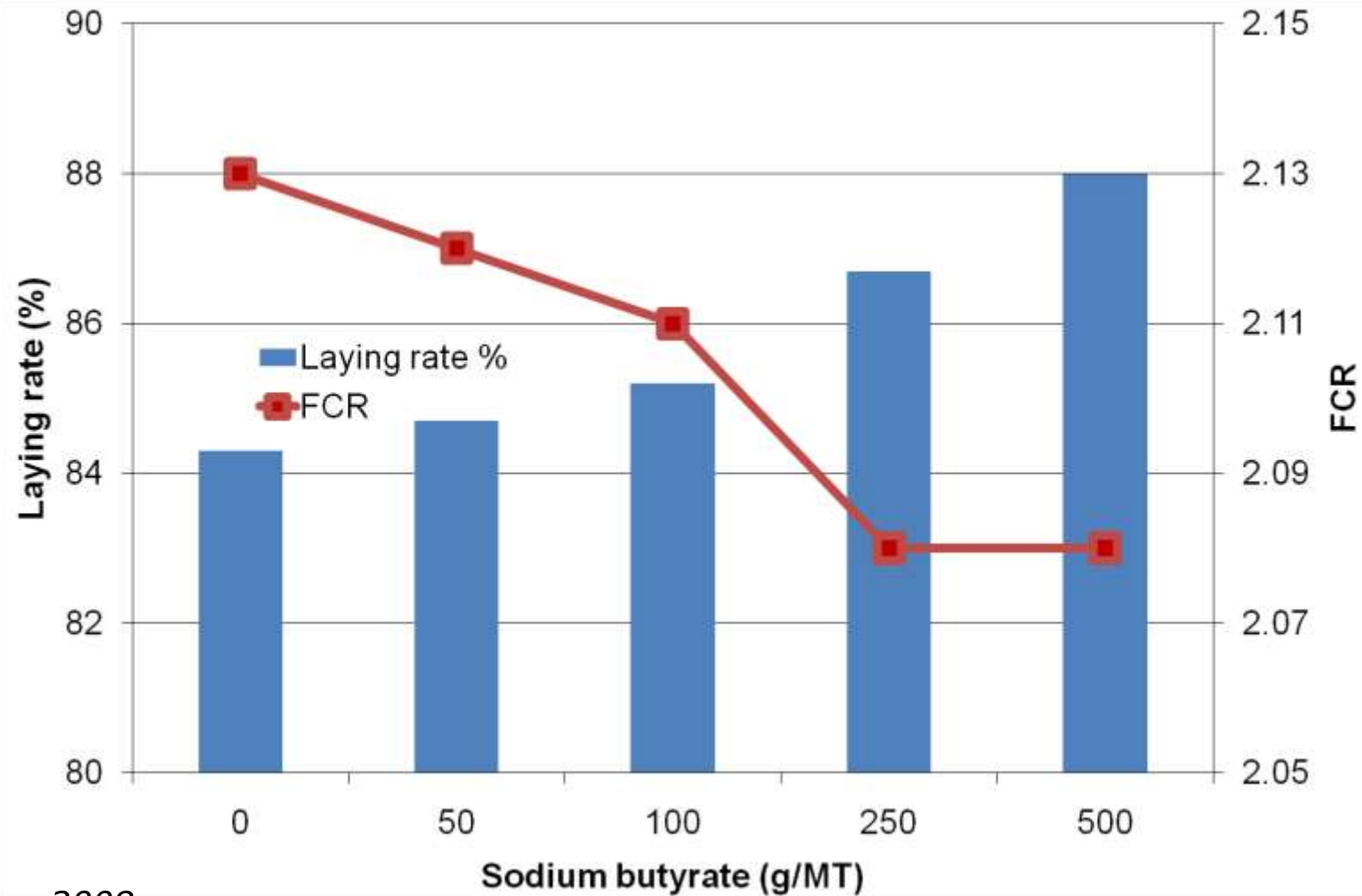
van Eys, 2008

- Better production due to less damage of intestinal wall

Na-But ppm	Laying %	Egg Wt g	Egg M g/h/d	ADFI g/h/d	FCR
0	84.3	66.4	56.0	119.1	2.13
50	84.7	66.5	56.3	119.0	2.12
100	85.2	66.2	56.4	118.9	2.11
250	86.7	66.5	57.7	119.6	2.08
500	88.0	65.7	57.8	120.2	2.08



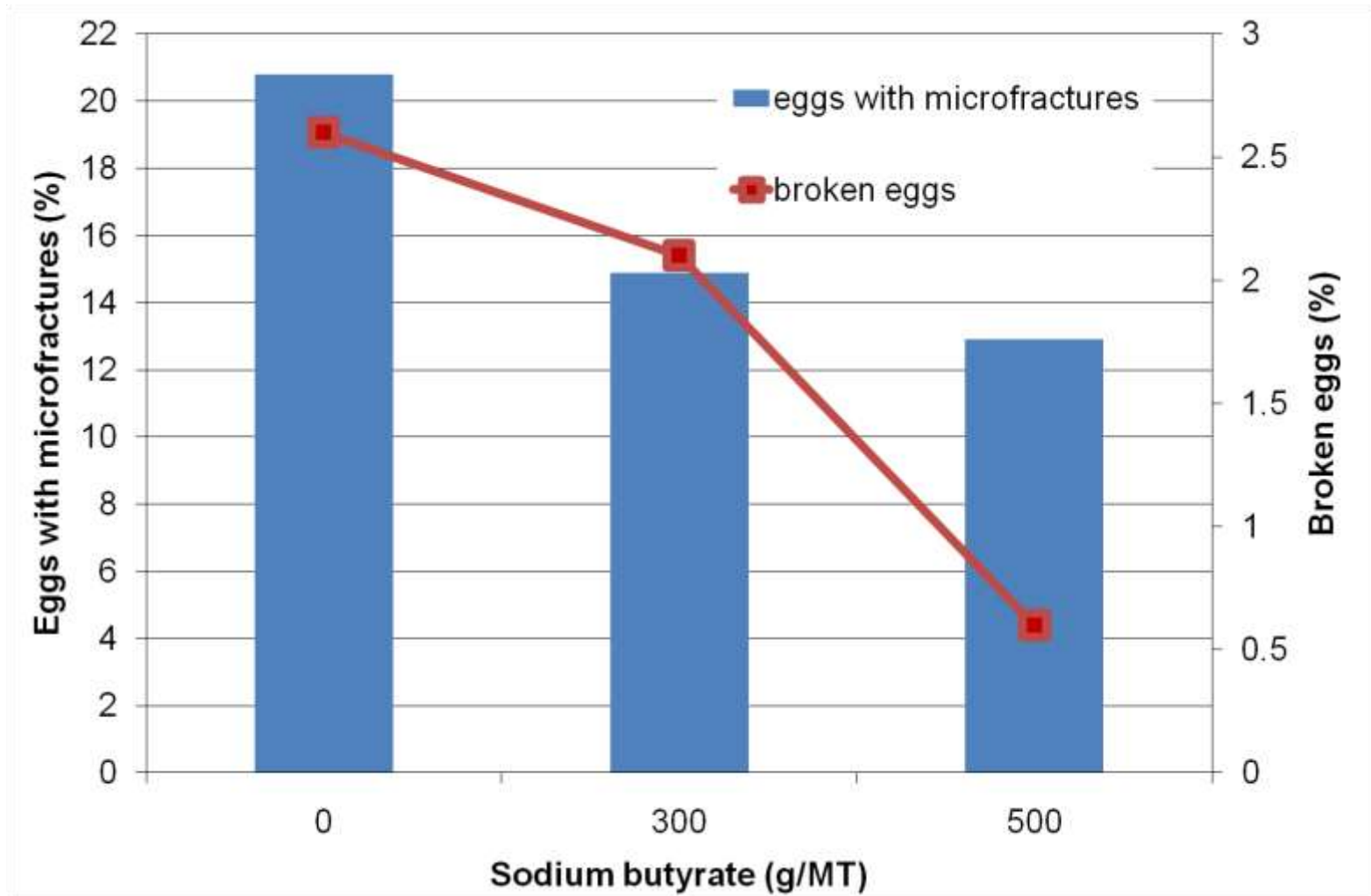
Effect of Sodium Butyrate in layers from 54 to 58 weeks of age



van Eys, 2008



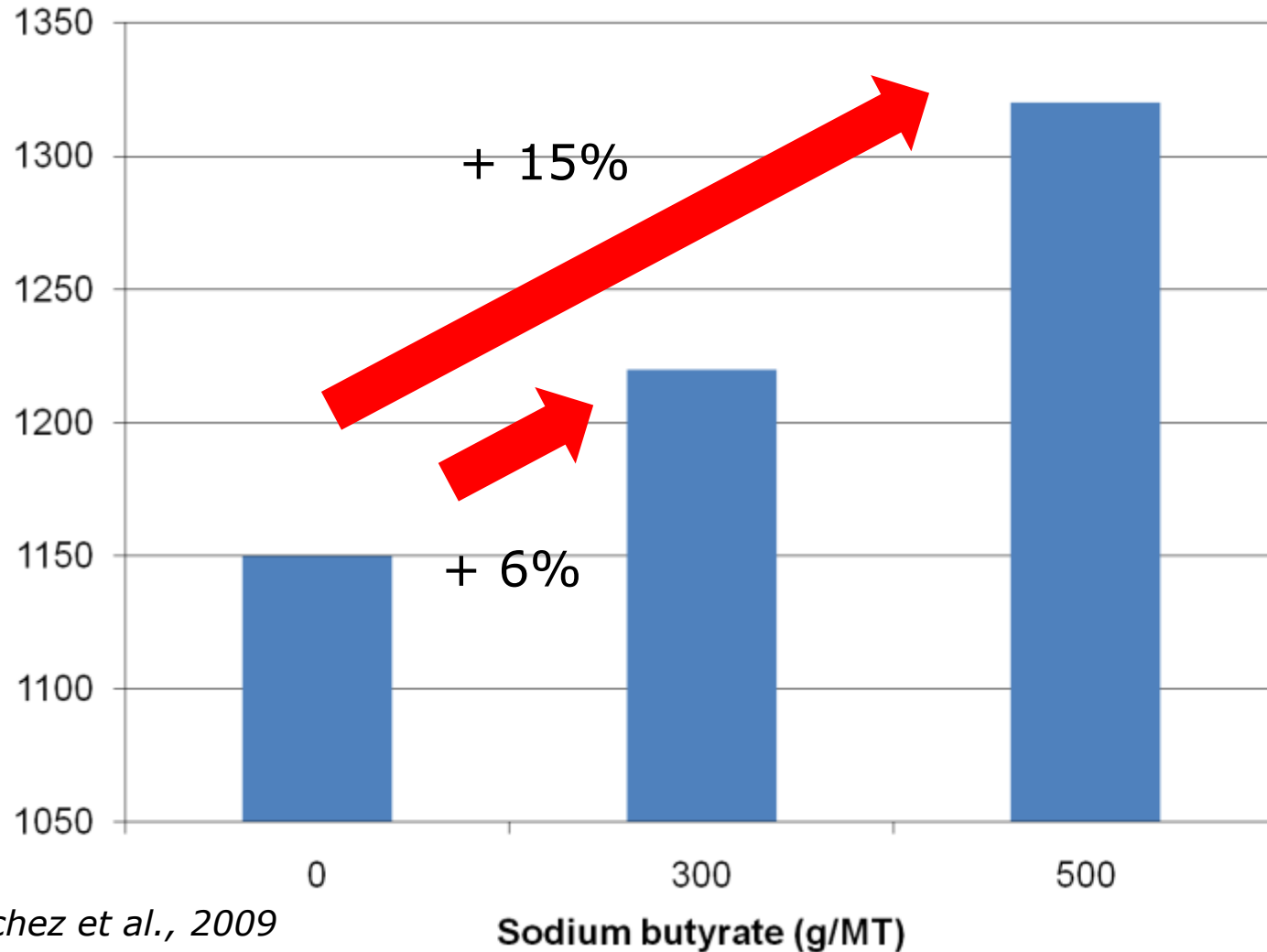
Effect of Sodium Butyrate on egg quality



Sanchez et al., 2009



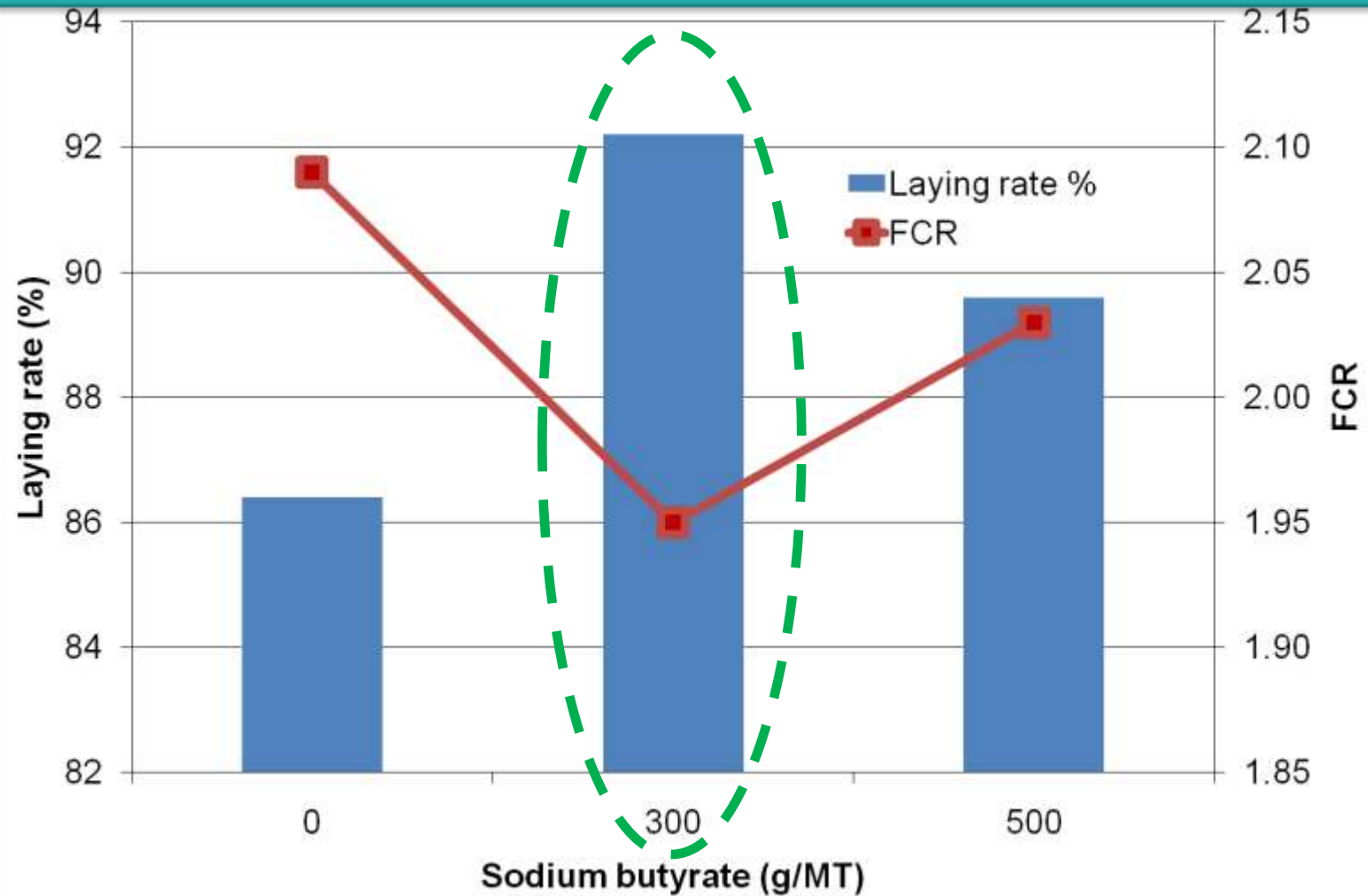
Effect of Sodium Butyrate on villi length (μm) in layers



Sanchez et al., 2009



Effect of Butyrate in layers (Bovans, 63 weeks of age)

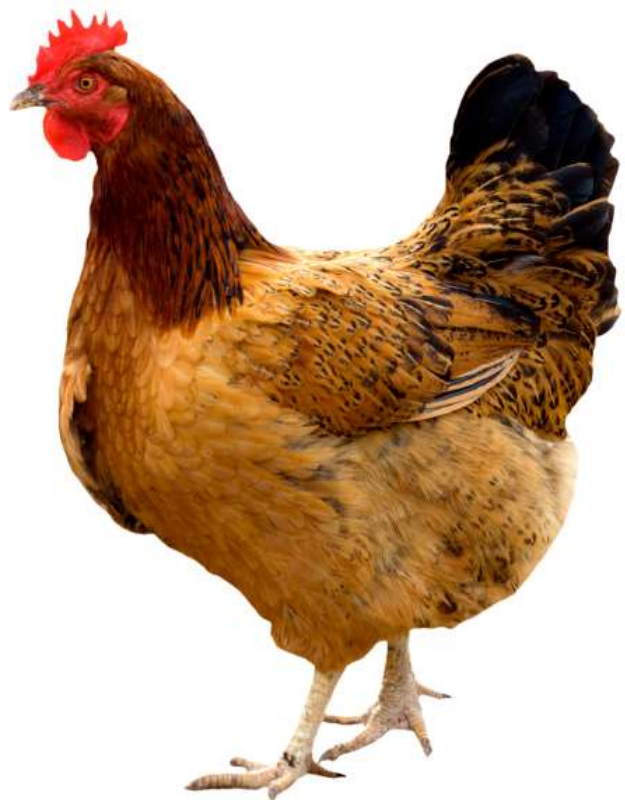


Sanchez et al., 2009

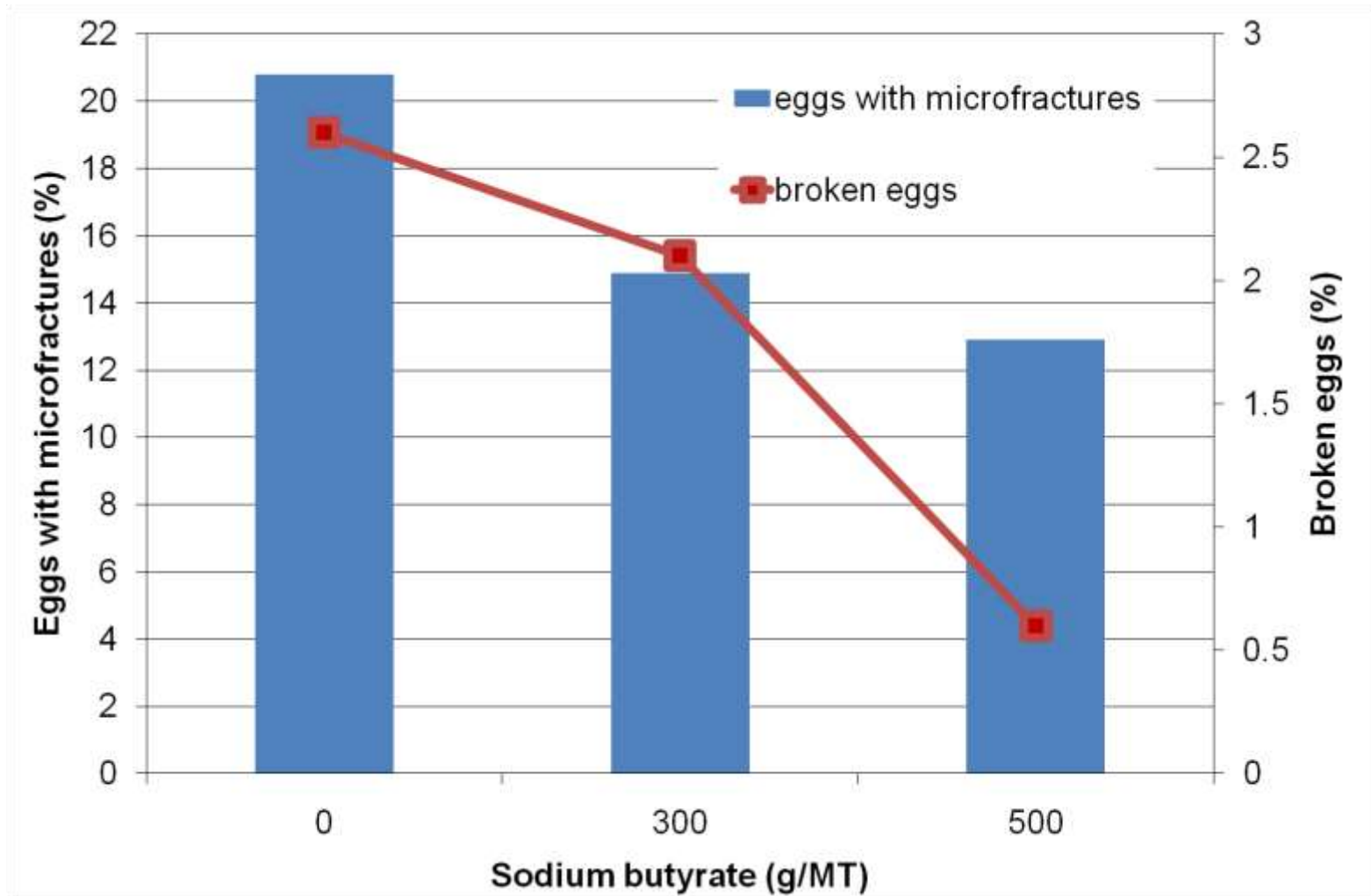


Gustor in layers & breeders

Effect on egg quality



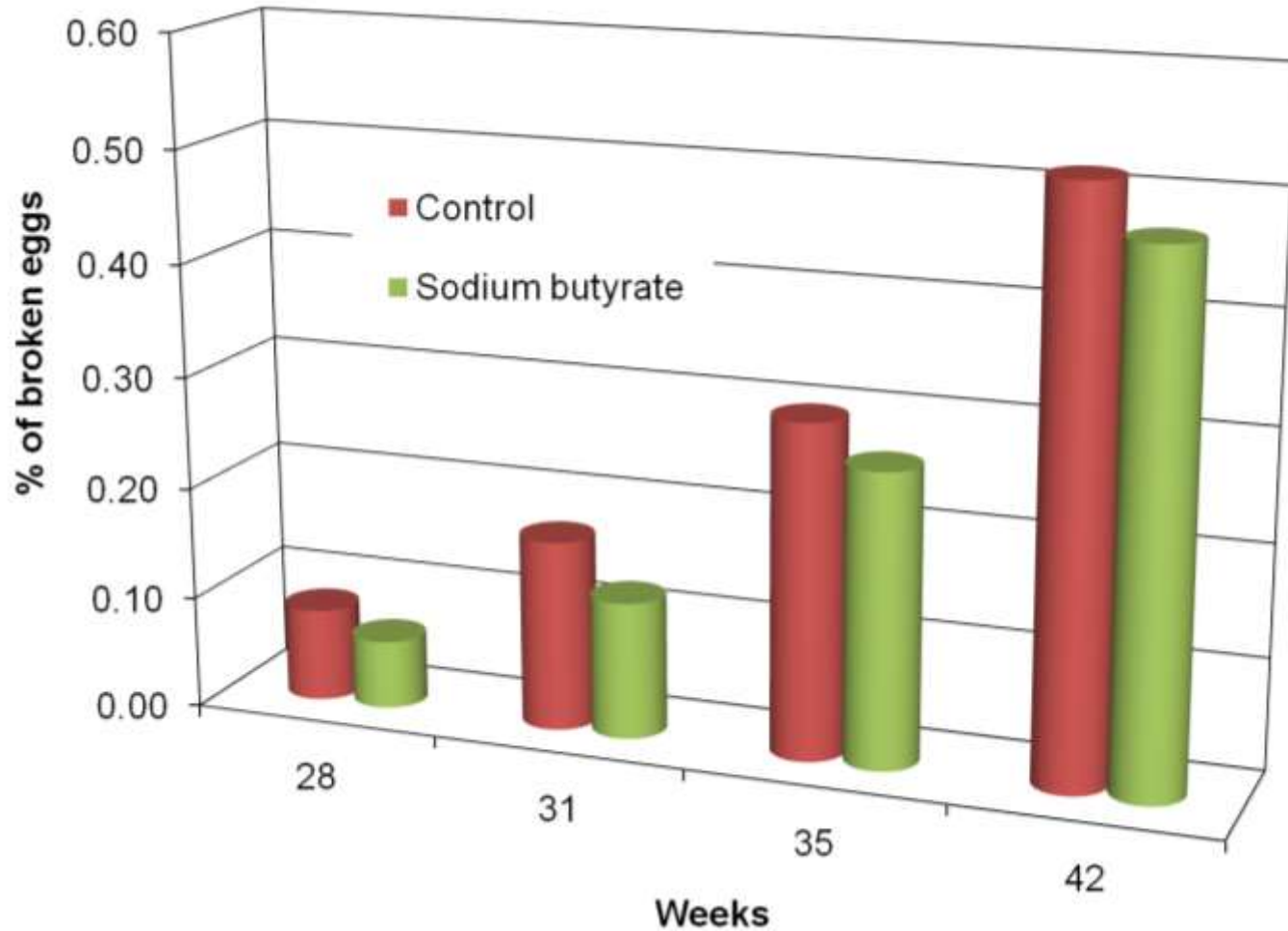
Effect of Sodium Butyrate on egg quality



Sanchez et al., 2009



Effect of Sodium Butyrate (250 g/Ton) in ISA breeders 28 weeks old



AVPA, 2006

