

Eastman Entero-Nova™ 200
for growing animals



Eastman Entero-Nova™ 200 is a concentrated product containing a mixture of butyric acid esters: monobutyryl and tributyrin. Esterification of butyric acid alleviates the unfavorable handling characteristics, creating a product with low odor and corrosivity that remains stable through feed processing and pelletization. Butyric acid is used very quickly by the cells of the gastrointestinal (GI) tract. Esterification protects the butyric acid from being used immediately and enables delivery of butyric acid further into the GI tract. This is important to ensure the beneficial effects of butyric acid along the entire GI tract.

The mixture of monobutyryl and tributyrin has been demonstrated to improve the functionality of the intestine by increasing absorptive surface area and improving the barrier function. Not limited to effects inside the intestine, other beneficial effects of the combination include modulation of inflammation and systemic stress responses in the animal.

Entero-Nova 200 is designed for use in feed in liquid (200L) or solid (200C) form.



Proven effect in trials

A trial at a Spanish integrator:

- The main objective was to compare the effect of Entero-Nova 200C with the addition of organic acid on the performance of broilers.
- Trial was carried out from 0–21 days.
- Treatments consisted of a control with no product added and Entero-Nova 200C dosed at 2 kg/MT.

Key findings

- Final body weight was significantly increased in birds receiving Entero-Nova 200C.
- Villus height was significantly increased and crypt depth significantly decreased in birds receiving Entero-Nova 200C.
- Longer, thinner, healthier-looking villi could be seen in microscopy images of the intestine.

Figure 1. Entero-Nova 200C significantly increased body weight at 21 days.

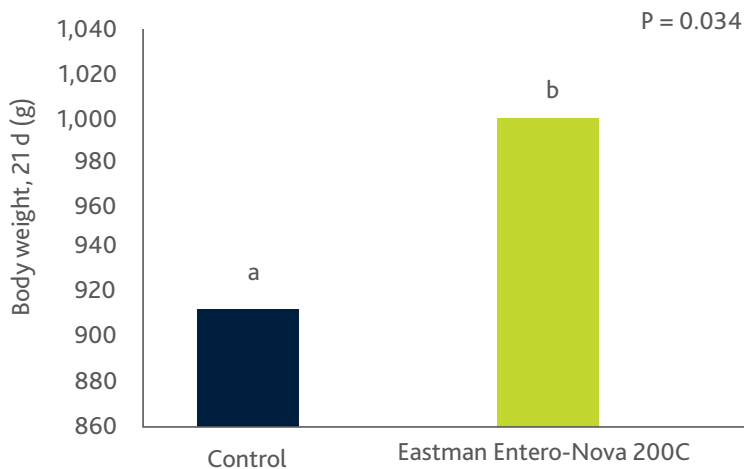


Figure 2. Intestinal morphology of control animals showing short, wide villi

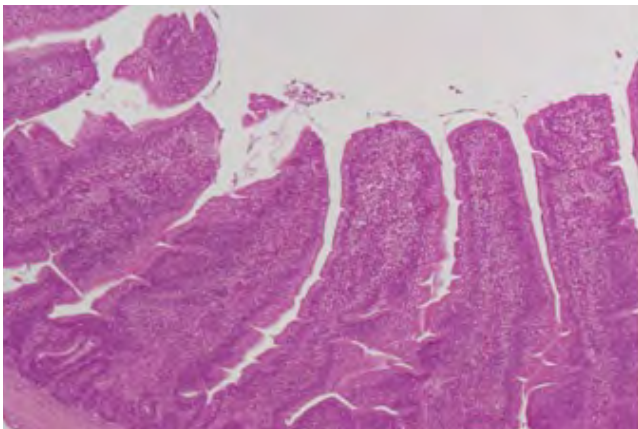


Figure 3. Villus height: crypt depth ratio showing a trend for a bigger ratio in birds supplemented with Entero-Nova 200C

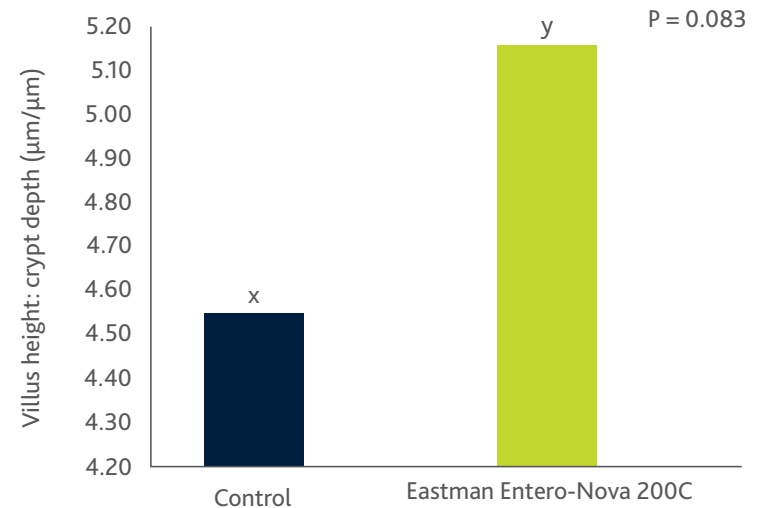
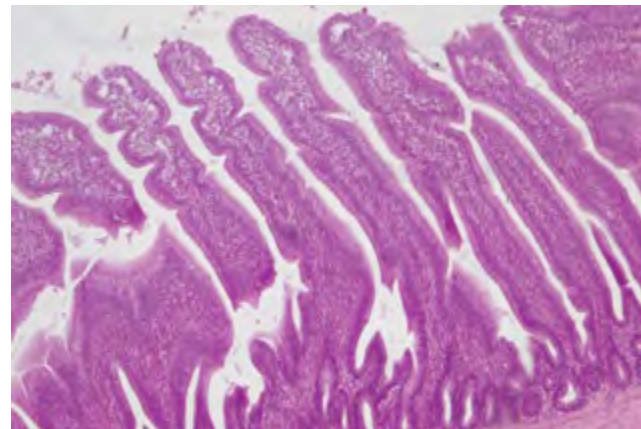


Figure 4. Intestinal morphology of Entero-Nova 200C-treated animals showing long, slender villi



Technical product characteristics

- Concentrated blend of monobutyryn and tributyrin
- A source of protected butyric acid
- Optimizes intestinal morphology and barrier function
- Helps manage inflammation and stress response
- Supports the resilience of animals
- Supports health, welfare, and performance
- pH-independent activity, effective in the whole gastrointestinal tract
- Neutral taste and odor
- Good technical and handling properties
- Heat stable and noncorrosive

Product types

- **Liquid form:** Eastman Entero-Nova 200L
- **Solid form:** Eastman Entero-Nova 200C

Application rates

Poultry									
Feed class	Broilers, starter	Broilers, grower I	Broilers, grower II	Broilers, finisher	Laying hens	Turkeys, 0–3 wks	Turkeys, 3–6 wks	Turkeys, 6–9 wks	Turkeys, 9–12 wks
Eastman Entero-Nova 200C (kg/T)	1–2	1–2	0.5–1.5	0.5–1	1–2	1–3	1–3	1–2	1–2

Swine					
Feed class	Creep feed	Pre-starter	Starter	Pre-growing	Fattener (> 80 kg)
Eastman Entero-Nova 200C (kg/T)	2.0–3.0	2.0–3.0	1.5–2.5	1.0–2.0	1.0–2.0

The specific inclusion rate will depend on the objective of the product application and product type (liquid or solid). Discuss with your Eastman representative.

Certain statements may not be applicable in all geographical regions. Product labeling and associated claims may differ based on government requirements.

EASTMAN

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