

**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

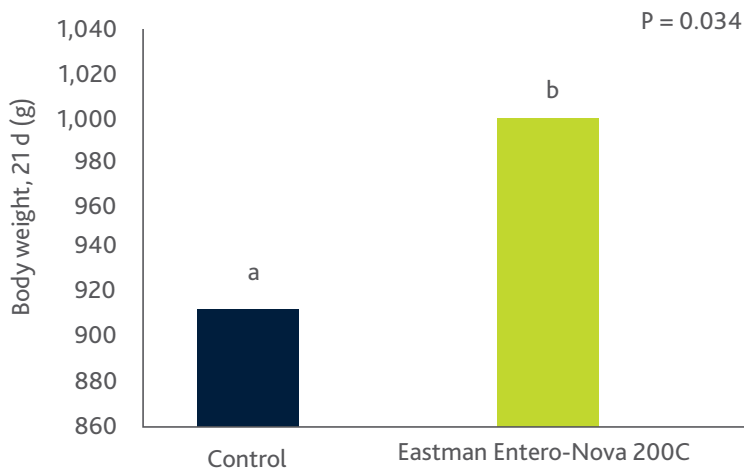
A trial at a Spanish integrator:

- 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.

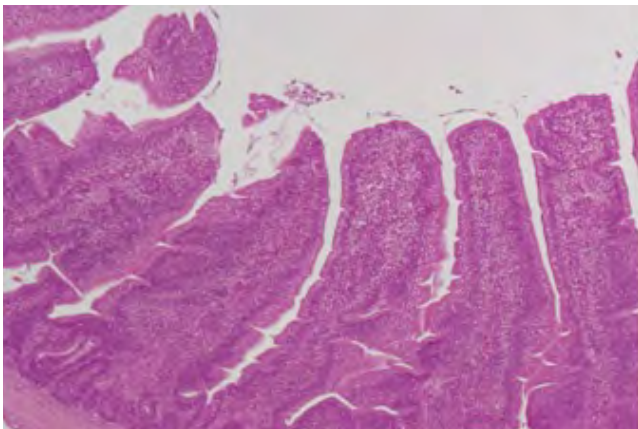
## Key findings

- 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.

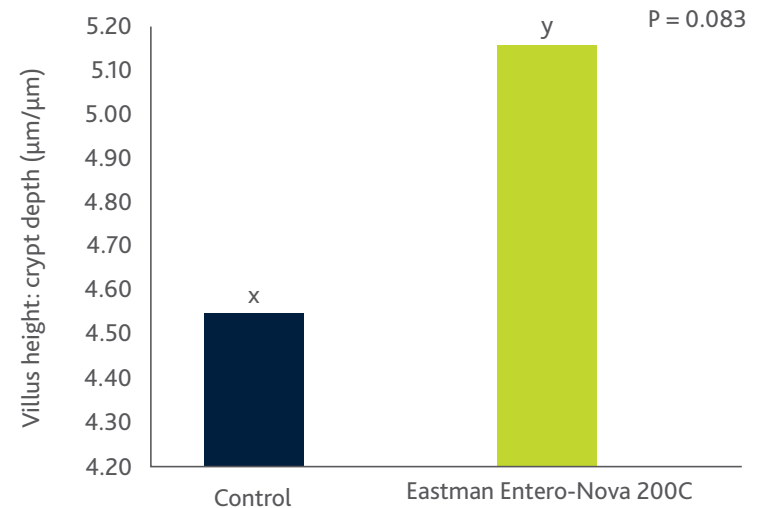
**Figure 1. Entero-Nova 200C significantly increased body weight at 21 days.**



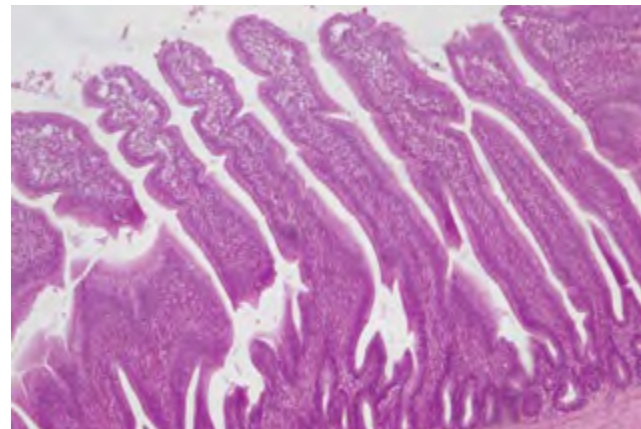
**Figure 2. Intestinal morphology of control animals showing short, wide villi**



**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

## Eastman Corporate Headquarters

P.O. Box 431  
Kingsport, TN 37662-5280 U.S.A.

U.S.A. and Canada, 800-EASTMAN (800-327-8626)  
Other locations, +(1) 423-229-2000

[eastman.com/locations](http://eastman.com/locations)

Although the information and recommendations set forth herein are presented in good faith, Eastman Chemical Company ("Eastman") and its subsidiaries make no representations or warranties as to the completeness or accuracy thereof. You must make your own determination of its suitability and completeness for your own use, for the protection of the environment, and for the health and safety of your employees and purchasers of your products. Nothing contained herein is to be construed as a recommendation to use any product, process, equipment, or formulation in conflict with any patent, and we make no representations or warranties, express or implied, that the use thereof will not infringe any patent. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS AND NOTHING HEREIN WAIVES ANY OF THE SELLER'S CONDITIONS OF SALE.

Safety Data Sheets providing safety precautions that should be observed when handling and storing our products are available online or by request. You should obtain and review available material safety information before handling our products. If any materials mentioned are not our products, appropriate industrial hygiene and other safety precautions recommended by their manufacturers should be observed.

© 2023 Eastman. Eastman brands referenced herein are trademarks of Eastman or one of its subsidiaries or are being used under license. Non-Eastman brands referenced herein are trademarks of their respective owners.