

Eastman Entero-Nova™ 400
to support swine health



EMEA



Eastman Entero-Nova™ 400 is a concentrate of α -monoglycerides of short- and medium-chain fatty acids. It contains a wide range of monoesters that work together to support the healthy growth of animals.

The product can control many major pathogenic bacteria in swine (*Salmonella*, *E. coli*, and *Clostridium*) and has been shown to have no inhibitory effects against *Lactobacillus*.

Compared to free fatty acids, α -monoglycerides have a greater pathogen inhibition effect. The activity is pH independent, meaning it is not limited to the acidic regions of the gastrointestinal tract.

Entero-Nova 400 is designed for use in feed in liquid (400L) or solid (400C) form. It is user friendly and has excellent handling properties, including low odor, no corrosivity, and good thermostability and flowability. It does not need any withdrawal period.

Proven effect in trials

Trial 1

The trial was carried out on an experimental farm in Imasde Agroalimentaria in Spain. The objective was to compare a negative control diet (without additives) with a positive control diet (with 150 ppm of colistin plus 3,100 ppm of ZnO) and Entero-Nova 400C (2.5 kg/T).

- The diet was based on wheat, whey, SBM, and SPC (13.8 MJ ME, 1.28% dig. Lys) and fed to the piglets for 14 days after weaning.
- Eight replicates of 10 piglets; three treatments, two compartments, and four repetitions with 10 animals each; total of 240 animals weaned at 25 days

Key findings

- No significant difference was found between the ZnO + colistin group and the monoglyceride group.
- There were numerical improvements in performance parameters with Entero-Nova 400C treatment compared to the negative control diet.
- Entero-Nova 400C can be an effective alternative to ZnO + colistin during the critical weaning period.

Figure 1. Daily weight gain

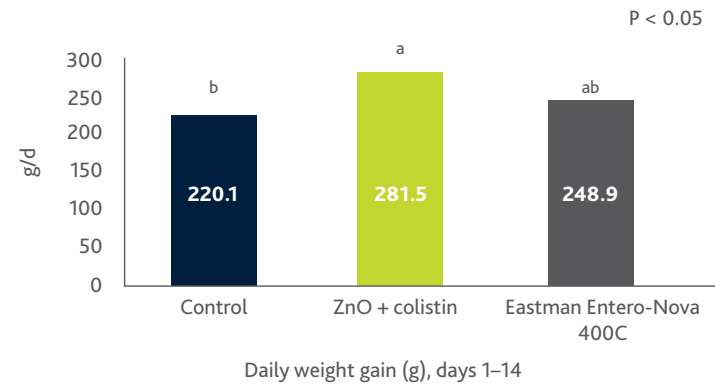


Figure 2. Body weight

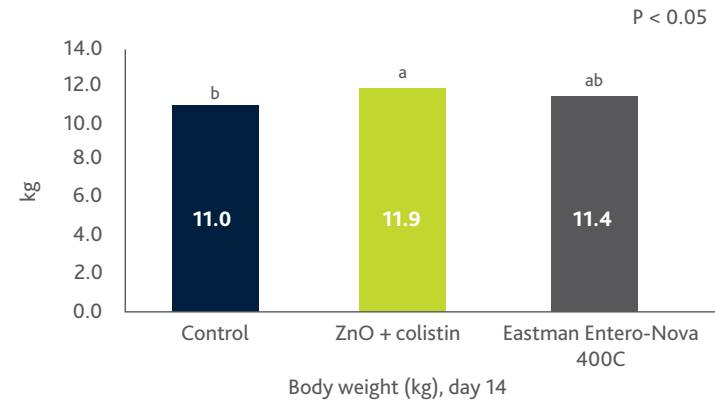
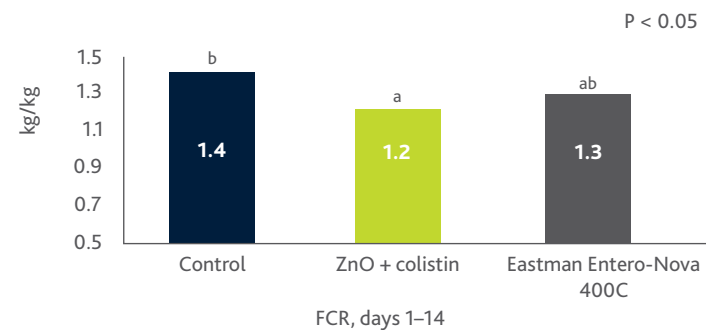


Figure 3. Feed conversion ratio



Published results Zibler et al., 2017¹

¹Zibler, E., U. Steinruck, M. García, P. Medel, 2017. Einfluss einer substitution von zinkoxid und colistin in prestarter-ferkelfutter mit monoglyceriden mittelkettiger fettsäuren. Tagung Schweine- und Geflügelernährung. Universität Halle-Wittenberg: 189-191.

Trial 2

This commercial trial was carried out at a Spanish integrator. The main objective was to compare the effect of ZnO (3,000 ppm) with Entero-Nova 400C and organic acids (OA) in the performance of piglets between 9–20 kg of body weight.

- Typical European diets based on wheat and soybean meal formulated to meet the nutritional requirements of the animals
- Eight replicates of 30 piglets
- Trial conducted from day 38 until day 66 of age

Key findings

- The product application significantly improved the feed conversion ratio compared to the ZnO treatment.
- The average daily gain was maintained.
- The product reduced the number of treatments required compared to the ZnO treatment.
- Entero-Nova 400C and OAs represent a good alternative to ZnO in piglet diets.



Figure 4. Feed conversion ratio

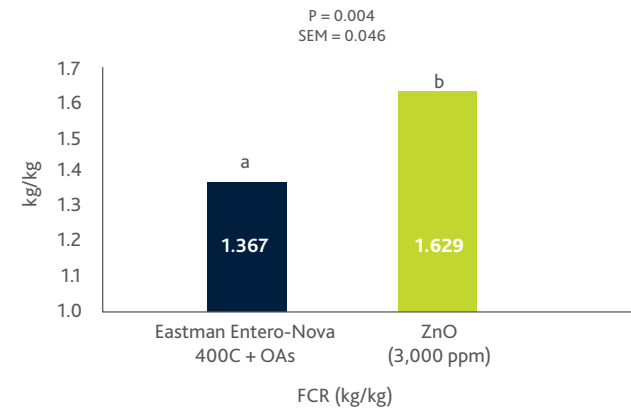


Figure 5. Average daily weight gain and feed intake

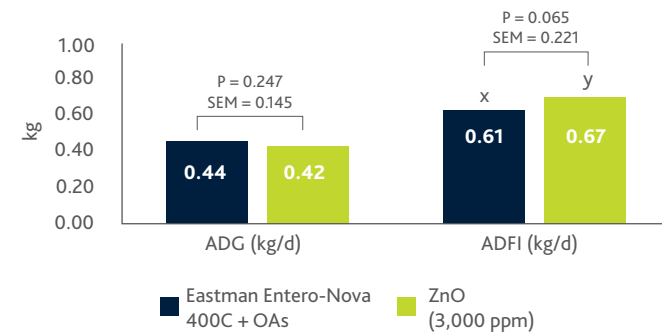
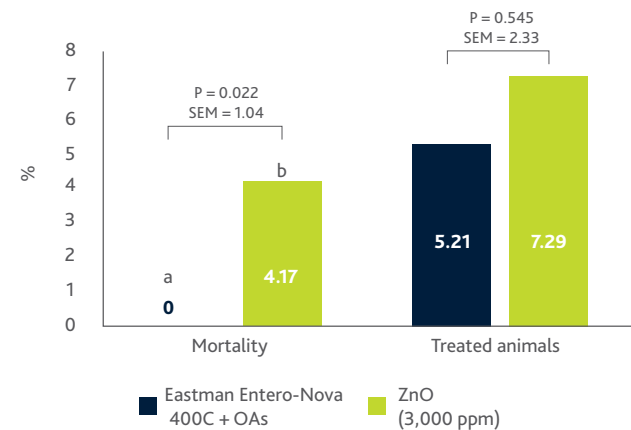


Figure 6. Mortality and treatment



Technical product characteristics

- Selection of α -monoglycerides of short- and medium-chain fatty acids (C1, C3, C4, C6, C8, C10)
- Microflora modulation and regulation (helps control *E. coli*, *Salmonella*, and *Clostridium*)
- Optimizes intestinal morphology and physiology
- Supports the animal through periods of high stress (weaning and lactation)
- Supports health, welfare, and performance
- pH-independent activity; efficient in the whole gastrointestinal tract
- Synergistic effect between monoglycerides and other compounds (especially organic acids)
- Neutral taste and odor
- Good technical properties
- Heat stable and noncorrosive

Product types

- **Liquid form:** Eastman Entero-Nova 400L
- **Solid form:** Eastman Entero-Nova 400C

Application rates

Feed class	Creep feed	Pre-starter	Starter	Grower	Fattener (> 80 kg)
Eastman Entero-Nova 400L (kg/T)	2.0–3.0	2.0–3.0	1.5–2.5	1.0–1.5	1.0–1.5
Eastman Entero-Nova 400C (kg/T)	3.0–4.0	3.0–4.0	2.5–3.5	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.

References

Additional data available on request

Zibler, E., U. Steinruck, M. García, P. Medel, 2017. Einfluss einer substitution von zinkoxd und colistin in prestarter-ferkelfutter mit monoglyceriden mittelkettiger fettsäuren. Tagung Schweine- und Geflügelernährung. Universität Halle-Wittenberg: 189-191.

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