



ENV 3

ExperiorTM

(lubabegron premix)

SUPPORTING BEEF ENVIRONMENTAL
STEWARDSHIP EFFORTS

Elanco

ExperiorTM

EXPERIOR™ AT-A-GLANCE

Every day, feedlot operators must balance increasing **environmental stewardship demands** with delivering business results.

Experior (lubabegron premix) creates the **freedom** and **flexibility** to support environmental sustainability without hindering animal performance measures (average daily gain, feed efficiency, or carcass characteristics).*

* Animal performance measures (average daily gain, feed efficiency, or carcass characteristics) were not negatively affected by Experior at any dose, compared to animals not fed Experior.¹

Experior is approved for the reduction of ammonia gas emissions per kilogram of live weight and hot carcass weight in beef steers and heifers fed in confinement for slaughter during the last 14 to 91 days on feed.

Experior is the first Health Canada-approved product labeled to reduce gas emissions from an animal or its waste.²

Ammonia gases impact the environment and come from many sources.

"Reduction of ammonia gas reasonably may be expected to provide some benefit to the environment."²

Based on existing information, reliable prediction of the reduction of ammonia gas emissions cannot be made on a herd, farm or larger scale.

GENERAL INFORMATION

Experior (lubabegron premix)

Beta-adrenergic agonist/antagonist

Premix contains 10 g per kg (4.54 g per lb)

How Supplied: 10 kg bag

Dosage: Feed 1.5 to 5.5 grams of lubabegron per tonne of feed (1.5 to 5.5 ppm), on a 100% dry matter basis, continuously to beef steers and heifers fed in confinement for slaughter as the sole ration during the last 14 to 91 days on feed.

IMPORTANT SAFETY INFORMATION

Caution: Do not use in animals intended for breeding because safety and effectiveness have not been evaluated in these animals.

Do not use concurrently with beta-adrenergic agonists such as ractopamine and zilpaterol.

Do not allow horses or other equines access to feed containing Experior 10.

A decrease in dry matter intake may be noticed in some animals.

The label contains complete use information, including cautions and warnings. Always read, understand, and follow the label, and use directions.



WHY REDUCING AMMONIA GAS EMISSIONS IS IMPORTANT

- ➔ Air quality and addressing air emissions is a shared responsibility, including for feedyard owners and operators.
- ➔ Feedyards should be aware of the environmental concerns and management strategies associated with air emissions, including ammonia.³
- ➔ The Canadian beef industry contributed 35 percent of ammonia emissions in 2011.⁴
- ➔ Ammonia gas is thought to be a significant contributor to the eutrophication of waterways and the formation of atmospheric haze and noxious odours.⁵
- ➔ Experior is thought to act by increasing nitrogen (amino acid) uptake and the amount of nitrogen retained in the carcass as muscle protein, thereby reducing the amount of urea excreted in manure (manure is considered the urine and feces combined).⁵
- ➔ The urea in manure is rapidly converted by an enzyme, urease, to ammonia and ammonium. Subsequently, this ammonia is volatilized (i.e., released as a gas) to the atmosphere.

Thus, the reduction in excreted urea from the animal results in a reduction in ammonia gas emissions to the environment.

Ammonia gas emissions were measured for individual animals or small groups of animals held in environmentally controlled facilities. Based on existing information, reliable predictions of the reduction of ammonia gas emissions cannot be made on a herd, farm, or larger scale.

EXTENSIVELY EVALUATED, EXPERIOR CAN BE USED WITH CONFIDENCE.

Through several studies conducted for approval, Experior was deemed safe when used according to its label. Animal and human safety analysis showed no negative impact on animal health or food safety.

- Animal safety information was evaluated in 4,240 animals across 15 studies.⁷ These studies demonstrated that, when fed according to its label, use of Experior did not affect animal lameness.⁷
 - Lameness issues in the studies appear to be related to nutritional management and pen conditions.⁷ Lameness incidence for animals fed Experior was not significantly different from commercial feedlot incidence.⁷
 - Most cases resolved while the animals were still receiving Experior, indicating that lameness is not related to the product.
- Experior has also been evaluated in post approval research involving 2,160 animals, results of which support Experior's safety profile.⁹
- Experior was found to be safe to the target animal when administered for the reduction of NH₃ gas emissions per kg of Live Weight (LW) and Hot Carcass Weight (HCW) in beef steers and heifers fed in confinement during the last 14- to 91-days on feed.
- A caution statement is included on the label: "A decrease in dry matter intake may be noticed in some animals."
- Human food safety analysis supports a zero-day pre-slaughter withdrawal period for Experior doses up to 5.0 g/t or 5.5 ppm.⁷

FREQUENTLY ASKED QUESTIONS

1. What is Experior?

Experior (lubabegron premix) is an important new tool that enables beef producers to care for the environment and their cattle. This is increasingly important as beef producers manage a complex business while trying to meet customer expectations. Experior is approved for the reduction of ammonia gas emissions per kilogram of live weight and hot carcass weight in beef steers and heifers fed in confinement for slaughter during the last 14 to 91 days on feed.

2. What does Experior do?

Experior helps support the beef industry's environmental stewardship efforts. Every day, feedlot operators must balance expectations of increasing environmental stewardship, while managing a complex business. Experior creates the freedom and flexibility to do both through the reduction of ammonia gas emissions from cattle. Clinical studies suggest that cattle fed Experior at 5.0 g/t or 5.5 ppm for 91 days emit approximately 16% less ammonia per pound of hot carcass weight compared to animals not fed Experior.⁷

3. How does Experior work?

Experior is a beta-adrenergic agonist/antagonist that is thought to act by increasing nitrogen (amino acid) uptake and the amount of nitrogen retained in the carcass as muscle protein, thereby reducing the amount of urea excreted in manure (manure is considered the urine and feces combined). The reduction in excreted urea from the animal results a reduction in ammonia gas emissions to the environment.

4. Is Experior safe for my cattle?

Through several studies conducted for approval, Experior was deemed safe when used according to its label. Animal safety analysis showed no novel animal safety issues when lubabegron was fed.

5. Does Experior have a pre-slaughter withdrawal time?

Human food safety analysis supports a zero-day pre-slaughter withdrawal period for Experior doses up to 5.0 g/t or 5.5 ppm. A four-day voluntary removal is required to export Experior fed cattle to all major markets.

6. Do packers in Canada accept cattle fed Experior?

Elanco is working with packers to ensure acceptance of this Health Canada-approved technology.

7. Is beef from Experior-fed cattle accepted in major export markets?

Yes, Experior-fed cattle are accepted in all major export markets with a 4-day voluntary removal. Health Canada's approved label for Experior states "no withdrawal period is required in beef cattle when treated according to the label." However, to mitigate a potential for a non-compliant residue finding in the countries that import beef from Canada, Elanco recommends the participant review the withdrawal data published by Rincker P. et al. (presented at the AMSA Reciprocal Meat Conf. 2021),⁸ and in consultation with feedlot's veterinarian/nutritionist, in order to meet existing export residue thresholds which may be known and/or in effect at the time of slaughter or otherwise, feedlot consider to voluntarily discontinue feeding Experior for at least four (4) days prior to slaughter.

REFERENCES

- ¹ FDA Announcement Press Release 2018. "FDA Approves Experior for Reduction of Ammonia Gas Released from Beef Cattle Waste." <https://www.fda.gov/animal-veterinary/cvm-updates/fdaapproves-experior-reduction-ammonia-gas-released-beef-cattle-waste>. Accessed 11/06/18.
- ² U.S. Roundtable for Sustainable Beef. 2020. "Air & Greenhouse Gas". <https://www.beefsustainability.us/high-priority-indicators/air-greenhouse-gas>. Accessed 06/10/22.
- ³ Agriculture and Agri-Food Canada. 2021 "Agricultural Ammonia Indicator." <https://agriculture.canada.ca/en/agriculture-and-environment/climate-change-and-airquality/agricultural-ammonia-indicator>. Accessed 06/10/22.
- ⁴ Agriculture and Agri-Food Canada, Agricultural Ammonia Indicator. <https://agriculture.canada.ca/en/agriculture-and-environment/climate-change-and-air-quality/agricultural-ammonia-indicator>. Accessed May 2022.
- ⁵ USDA Center for Vet Med. Luccia M. 2018 "Experior FONSI" <https://animaldrugsatfda.fda.gov/adafda/app/search/public/document/downloadFonsi/1271>. Accessed 06/10/22.
- ⁶ USDA FOI. 2018. "NADA 141-508 Experior" <https://animaldrugsatfda.fda.gov/adafda/app/search/public/document/downloadFoi/5005>. Accessed 06/10/22.
- ⁷ Elanco Animal Health. Data on file.
- ⁸ Rincker, P, Vogel, G. et al. 2021. "Tissue concentrations from beef cattle fed lubabegron fumarate following voluntary removal for multiple timepoints". Presented AMSA Reciprocal Meat Conf. 2021. Abstract #17.1.

To learn more about Experior,

contact your Elanco representative at **1-800-265-5475**
or **Elanco.ca/products-services/beef/Experior**.

As your trusted supplier for a healthier herd, Elanco offers a full portfolio of beef products. Ask your veterinarian how your cattle can benefit from Elanco's beef portfolio of vaccines, BRD solutions, parasiticides, implants, and more.

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