

**We support** cattle farmers in their commitment to continue finding better ways to provide quality beef for you and your family. Zilmax<sup>®</sup> (zilpaterol hydrochloride) is a Food and Drug Administration (FDA)-approved feed supplement that improves cattle's natural ability to convert feed into more lean beef<sup>1,2,3</sup> that is flavorful, tender and juicy.<sup>4,5</sup>

## Zilmax Certification Program

In the spirit of continuous improvement, Zilmax quality assurance practices have been enhanced to include a robust, detailed training and certification process.

Zilmax Feedyard Certification				
Product Stewardship	Feed Mills & Feeding Protocols	Certification Trainings	Feedyard Agreement	Residue Avoidance
Component Feeding Label	FDA Mill License Right Mix	Feedyard Team Training & Verification	Standard Operating Procedures	On-farm Quick Test
Retained Product Ownership Control	Right Delivery	Feedyard Certification Database	Identified Feedyard Users	Quarterly Feed Sampling
Best Management Practices	Right Cleanout Feed Assays		One-year Terms	Withdrawal Feed Sampling
Responsible Beef				

### Product stewardship drives certification

Component feeding allows cattle feeders to mix Zilmax in feed to deliver a targeted lower dose of 60 mg/head/day of zilpaterol. FDA-regulated Zilmax supplements, manufacturers, feed mills and distributors must comply with very strict manufacturing, processing, handling and storage protocols.

Stewardship includes enhanced product ownership. Merck Animal Health will own all Type A and B product (except Type B liquid feed) until the product is sold to a Certified Feedyard.

### Certification begins with training

Every member of a Certified Feedyard team is required to complete the certification training program on safe and effective Zilmax use. Training logs will be maintained in the Zilmax Feedyard Certification Database, and annual retraining is required.

The Zilmax Feedyard Certification Database records and stores items such as certifications, assay results, supplier authorizations and standard operating procedures (SOPs) to assure that Zilmax is only sold to Certified Feedyards. Feedyards identify preferred Zilmax suppliers; Merck Animal Health will notify approved suppliers that a feedyard has met all requirements to purchase and feed Zilmax.

For more information, go to [www.zilmax.com](http://www.zilmax.com).



## Feedyard use agreement terms provide conditions for certification

Guidelines for safety, feeding, cattle management, cattle selection and animal handling all contribute to the responsible use of Zilmax in today's cattle feedyards. To use Zilmax, Certified Feedyards must follow animal well-being guidelines, standard operating procedures and best management practices such as:

- Evaluate cattle before feeding Zilmax
- Assess seasonal risks and environmental conditions that may have potential negative effects on cattle
- Follow Beef Quality Assurance guidelines for low-stress cattle handling, including moving, processing and shipping cattle
- Train employees annually
- Follow storage, handling and use guidelines
- Maintain inventory controls and daily production logs
- Adhere to mixing, delivery and feeding protocols
- Follow assay protocols
- Use feed withdrawal and cattle management procedures
- Conduct ongoing homogeneity tests

## We're committed to responsible beef

Merck Animal Health is the first to offer Zilmax on-farm quick strip tests. These tests are provided free of charge to ensure product compliance, and give customers the ability to test withdrawal feeds 24/7 to ensure the feeds are residue-free.

## References

- <sup>1</sup>FDA. Freedom of information summary. Original new animal drug application NADA 141-258. Zilmax (zilpaterol hydrochloride) Type A medicated article for cattle fed in confinement for slaughter. <http://www.fda.gov/downloads/AnimalVeterinary/Products/ApprovedAnimalDrugProducts/FOIADrugSummaries/ucm051412.pdf>. 2006. Accessed Apr. 26, 2007.
- <sup>2</sup>Hilton, G. G., Garmyn, A. J., Lawrence, T. E., Miller, M. F., Brooks, J. C., Montgomery, T. H., Griffin, D. B., VanOverbeke, D. L., Elam, N. A., Nichols, W. T., Streeter, M. N., Hutcheson, J. P., Allen, D. M. and Yates, D. A. Effect of zilpaterol hydrochloride supplementation on cutability and subprimal yield of beef steer carcasses. *J. Anim. Sci.* 2010. 88:1817-1822.
- <sup>3</sup>Boler, D. D., Holmer, S. F., McKeith, F. K., Killefer, J., VanOverbeke, D. L., Hilton, G. G., Delmore, R. J., Beckett, J. L., Brooks, J. C., Miller, R. K., Griffin, D. B., Savell, J. W., Lawrence, T. E., Elam, N. A., Streeter, M. N., Nichols, W. T., Hutcheson, J. P., Yates, D. A. and Allen, D. M. Effects of feeding zilpaterol hydrochloride for twenty to forty days on carcass cutability and subprimal yield of calf-fed Holstein steers. *J. Anim. Sci.* 2009. 87:3722-3729.
- <sup>4</sup>Mehaffey, J. M., Brooks, J. C., Rathmann, R. J., Alsup, E. A., Hutcheson, J. P., Nichols, W. T., Streeter, M. N., Yates, D. A., Johnson, B. J. and Miller, M. F. Effect of feeding zilpaterol hydrochloride to beef and calf-fed Holstein cattle on consumer palatability ratings. *J. Anim. Sci.* 2009. 87:3712-3721.
- <sup>5</sup>Hilton, G. G., Montgomery, J. L., Krehbiel, C. R., Yates, D. A., Hutcheson, J. P., Nichols, W. T., Streeter, M. N., Blanton Jr., J. R. and Miller, M. F. Effects of feeding zilpaterol hydrochloride with and without monensin and tylosin on carcass cutability and meat palatability of beef steers. *J. Anim. Sci.* 2009. 87:1394-1406.

Merck Animal Health

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### IMPORTANT SAFETY INFORMATION

Zilmax has a withdrawal period 3 days prior to slaughter. Not for use in animals intended for breeding. Do not allow horses or other equines access to feed containing zilpaterol. Do not use in veal calves. Not to be fed to cattle in excess of 90 mg zilpaterol/head/day in complete feed. If pen consumption of complete feed exceeds 26.5 lb/head/day (90% dry matter basis), zilpaterol should not be fed in complete feed. For complete safety information, refer to product label and Zilmax website.

