

Igenity[®] BCHF

Bovine Congestive Heart Failure Test

Mitigate Risk for Costly BCHF

Bovine Congestive Heart Failure (BCHF)

stands as a significant threat to the health and productivity of feedlot cattle. In severely affected cattle pens, mortality rates have surged to 7%, translating to staggering annual losses surpassing \$250,000 for a single operation (Heaton et al., 2022).

Igenity BCHF is a revolutionary genomic test designed to evaluate the potential BCHF risk breeding stock will pass off to their offspring. By utilizing Igenity BCHF to assess genetic predisposition for BCHF in breeding stock, producers can effectively manage the risk of BCHF within their herd, confidently produce feeder calves that will have a lower risk of mortality from BCHF in a feedlot setting, and decrease economic losses attributed to BCHF.



CORE ADVANTAGES

- Easy to interpret 1-10 scores where a score of 1 represents the lowest risk of BCHF and a score of 10 represents the highest risk.
- Cull high scoring and keep low scoring replacement heifers with a genetic predisposition to produce calves with a lower risk of BCHF.
- Group cattle based on their Igenity BCHF scores to better manage and mitigate potential health issues in high-risk cattle.

ADVANTAGES FOR YOUR OPERATION

- Manage mortality and morbidity rates related to BCHF in offspring from Igenity BCHF tested breeding animals, through targeted management strategies such as enhanced monitoring, tailored nutrition plans, and reduced stress.
- Mitigate economic losses related to cattle death or decreased performance due to BCHF related complications.
- Increase overall bovine heart health standards by selecting animals with lower prevalence of heart failure related genes.

Igenity Score	BCHF (%)
1	0.0
2	3.5
3	7.1
4	10.6
5	14.1
6	17.6
7	21.2
8	24.7
9	28.2
10	31.8

More FavorableLess Favorable

The table on the left demonstrates the relative percentage risk of BCHF for each Igenity BCHF score, allowing the ability to cross-reference the 1-10 scores with the correlated risk of BCHF. Each increase in Igenity Score represents a 3.5% increase in risk of BCHF with a score of 1 representing 0% risk and a score of 10 representing a 31.8% risk.

Reference population:

Over 32,000 commercial-fed cattle in the Pacific Northwest were phenotypically identified for cardiac morphology (Buchanan et al., 2023). A subset of 25,187 individuals underwent genotyping to assess the genetic characterization. The Breeds in the reference population were Angus; Angus X Charolais; Angus X Charolais X Hereford; Angus X Hereford; Angus X Holstein, Charolais; Charolais X Hereford; Charolais X Holstein; Charolais X Holstein X Jersey; Charolais X Jersey; Hereford; Holstein; Multi-breed

References:

Buchanan, J. W., Flagel, L. E., MacNeil, M. D., Nilles, A. R., Hoff, J. L., Pickrell, J. K., & Raymond, R. C. (2023). Variance component estimates, phenotypic characterization, and genetic evaluation of bovine congestive heart failure in commercial feeder cattle. *Frontiers in Genetics*, 14, Article 1148301.

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