

# CATTLE IMPLANTS

# SEE A DIFFERENCE IN YOUR HERD AND YOUR BOTTOM LINE.

**IMPLANTS HAVE THE LARGEST RETURN ON INVESTMENT (ROI) OF ANY TECHNOLOGY AVAILABLE TODAY FOR BEEF PRODUCERS.<sup>1</sup>**



## IMPLANTS HAVE A **\$3 BILLION** TOTAL VALUE TO THE BEEF INDUSTRY PER YEAR.<sup>2\*</sup>

\$74/steer value added from implant for non-confined steers.<sup>3\*\*</sup>  
 \$132/steer value added from implant for confined steers.<sup>4†</sup>

**THE USE OF IMPLANTS ENABLES PRODUCERS TO COST EFFECTIVELY IMPROVE ANIMAL GROWTH RATES, FEED EFFICIENCIES AND LEAN MUSCLE MASS.**

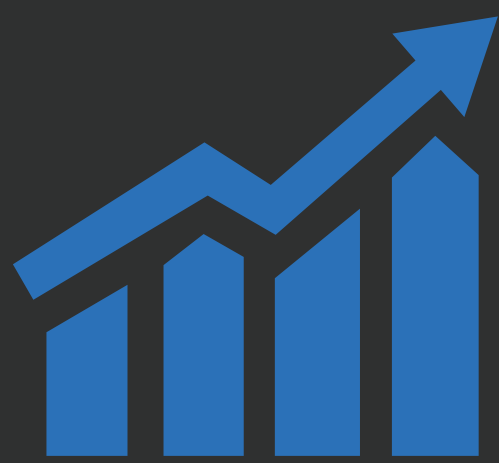
Implanting cattle increases their rate of gain

**15-20%<sup>5</sup>**

Regardless of cattle weight or feedlot capacity, about 90% of feedlot heifers and steers were implanted at least once according to the 2013 NAHMS feedlot study.<sup>1</sup>

& improves feed efficiency

**8-12%<sup>6</sup>**



### MECHANISMS OF ACTION:

There are three main types of implants utilized:<sup>7</sup>

- **ESTROGENIC**
- **ANDROGENIC**
- **COMBINATION IMPLANTS**  
(estrogenic and androgenic compounds)

With more than **400 STUDIES** on record and over **50 YEARS** in commercial use, implants have been proven to be safe for the food chain.<sup>1</sup>



### SAFETY:

There is no required withdrawal period before harvest of implanted cattle. Beef from implanted cattle has very low levels of estrogenic activity compared to many other common foods.<sup>8</sup>

FOOD	ESTROGENIC ACTIVITY nanograms per 3 oz. serving of food
Beef from non-implanted cattle	1.2
Beef from implanted cattle	1.9
Potatoes	225
Soy milk	11,250,000

### SUSTAINABILITY:

As greater amounts of protein are needed to feed a growing population, technologies that increase lean tissue production will become increasingly important.

If U.S. beef farmers and ranchers did not use productivity-enhancing technologies to produce the same amount of beef currently available, they would:<sup>9</sup>

- **NEED 10 MILLION MORE CATTLE IN THE U.S. BEEF HERD.**
- **NEED 81 MILLION MORE TONS OF FEED ANNUALLY.**
- **PRODUCE 18 MILLION MORE METRIC TONS OF CO<sub>2</sub> EQUIVALENTS.**

<sup>1</sup>Assumes 90% of 25.39 million feedlot steers and heifers harvested in 2020 received implants. 32,151,300 total head were harvested in 2020. Feedlot steers and heifers harvested in 2020 accounted for 78.7% of the total, equaling 25,303,073. 90% of 25,303,073 = 22,772,765. 22,772,765 x \$132/head = \$3,006,004,000 total value.  
<sup>2</sup>Assumes \$1 lbs. live weight gain x \$1.40/lb = \$74 of additional value.  
<sup>3</sup>Assumes 110 lbs live weight gain x \$1.20/lb = \$132 of additional value.  
<sup>4</sup>Based upon 2021 public search for beef cattle implants in pubmed.gov resulting in 415 results.

<sup>5</sup>Aphis.usda.gov "The use of growth-promoting implants in U.S. feedlots." 2013. Available: [https://www.aphis.usda.gov/animal\\_health/nahms/feedlot/downloads/feedlot2011/Feedlot11\\_is\\_Implant\\_1.pdf](https://www.aphis.usda.gov/animal_health/nahms/feedlot/downloads/feedlot2011/Feedlot11_is_Implant_1.pdf). Accessed: Jan. 23, 2021.  
<sup>6</sup>Livestock Slaughter January 23. USDA. National Agricultural Statistics Service.  
<sup>7</sup>Duckett, S. and Andrae, J. 2001. "Implant strategies in an integrated beef production system." J. Anim. Sci. 79:E110-E117.  
<sup>8</sup>Duckett, S., Owens F. and Andrae J. 1997. "Effects of implants on performance and carcass traits of feedlot steers and heifers." 1997 OSU Implant Symposium.  
<sup>9</sup>FDA. "Steroid hormone implants used for growth in food-producing animals." U.S. Food and Drug Administration. Available: <http://www.fda.gov/AnimalVeterinary/SafetyHealth/ProductSafetyInformation/ucm055436.htm>. Accessed: Jan. 23, 2021.  
<sup>10</sup>Preston R. 1999. "Hormone containing growth promoting implants in farmed livestock." Advanced Drug Delivery Reviews.  
<sup>11</sup>Thrift M. AN318/AN318: "Implants for cow-calf and stocker beef cattle." Available: <https://edis.ifas.ufl.edu/an318>. Accessed: Jan. 23, 2021.  
<sup>12</sup>Preston, R. 1997. "Rationale for the safety of implants." In: Symposium: Impact of implants on performance and carcass value of beef cattle. Oklahoma Agricultural Experiment Station P-957. pp. 199-203.  
<sup>13</sup>Capper, J. L. & D. J. Hayes. 2012. "The environmental and economic impact of removing growth-enhancing technologies from U.S. beef production." J. Anim. Sci. 90:3527-3537.