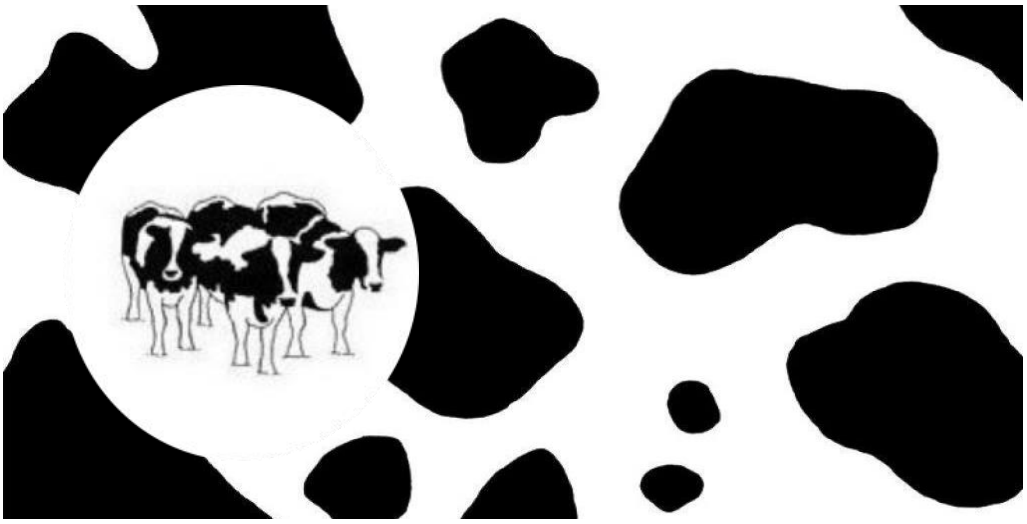

Dairy Details
November 2018
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Implants… An Actual Free Lunch?

You know that saying, "There's no such thing as a free lunch". Well, when it comes to implanting steers, this may not be true. According to research, implants in steers:

- Increase daily gains by 18-25%
- Increase feed intakes by 6%
- Increase feed efficiency by 8-15%
- Increase carcass weight by 5%
- Increase rib-eye area by 4%

These improvements happen because implants increase the amount of lean tissue (muscle) that is laid down.

The table below shows what that means in extra dollars per animal.

Table 3. Effect of implanting at each production phase on increase in ADG, live weight (LW), and value

	Increase in ADG, %	Increase in LW, kg	Increase in value, $/animal[a]
Suckling steer calf[b]	5	8	$16.32
Stocker steer[c]	15	15	$25.20
Feedlot steer[d]	20	34	$51.34
All phases[e]		57	$92.86

Duckett et al. (2001)

The beef industry, like all agriculture sectors, has had very narrow profit margin over the last couple years. Taking advantage of implant technology to increase the efficiency of your beef animals will definitely increase your margins, putting more money in your pocket.

Implant technology probably has one of the best return on investments you'll find in agriculture at **$5-$10 per $1 spent**. Many producers' reason for not using a good implant program is because they don't have the time or the facilities to get the implants into the cattle.

What's an implant's worth in $/hour?

- Start a 3-implant program
- Implant cost = $15/head
- 5 minutes/implant = 15 minutes
- ROI = $600/hour

And my calculation of 15 minutes per animal is being pretty generous, depending on your facilities. If you can make $600/hour, why would you drag your feet?

Occasionally we hear of markets for "natural" cattle that have not received implants and will reward producers with premium prices. But, such markets are inconsistent and the premium has to be quite substantial to outweigh the ROI of implants. You are always guaranteed to get more money for heavier cattle, but natural cattle markets are unpredictable.

Things to Consider With Implants

- **Age:** Most implants are designed for a specific stage of production such as calves, feeders or finishing cattle. Benefits of implants are additive throughout the production cycle. Multiple implants throughout a steer's life will yield the maximum return. Work with your veterinarian and read labels carefully for recommended ages and weight ranges before implanting animals.
- **Sex:** Some implants are gender-specific. Again, read labels carefully.
- **Breed Type:** In beef cattle there are two types of breeds: Exotic and British. Exotic breeds (such as Charlois or Simmental) often gain faster and are harder to finish, making a less aggressive implant strategy more desirable. While British breeds (Herefords, Angus) are easier to finish and they can handle a more aggressive implant strategy to finish. For Holstein steers, a low to moderately aggressive implant program is ideal. If using potent implants, Holstein may become "stagy" with too much frame.
- **Nutritional Program:** Implanted cattle must consume enough calories to support the implants. Once implanted, a steer's intake will often increase by 6%. If there are not enough "groceries" to support the implant, the animal could experience a negative energy balance and the value of the implant will be lost.

Do Implants Affect Beef Quality & Safety?

There has been some research showing that implanted cattle won't grade as well. One study showed that the implanted group has 8-10% less animals grade choice compared to the non-implanted group. Whether or not this affects you depends on how you market your cattle. If you sell on quality grade, you may see some decreased premium. However, the increased performance achieved with implants usually pays out much more than the lost premiums.

Some consumers have expressed concern that beef from implanted steers is not safe to eat. They are concerned with high amounts of estrogen in meat. This table shows the extremely low level of estrogen in implanted beef compared to other common foods.

Table 1. Estrogenic activity of common foods (ng/500g)

Food	Estrogenic Activity
Soy flour defatted	755,000,000
Tofu	113,500,000
Pinto beans	900,000
White bread	300,000
Peanuts	100,000
Eggs	555
Butter	310
Milk	32
Beef from implanted steer	7
Beef from non-implanted steer	5

Hoffman and Eversol (1986), Hartman et al (1998), Shore and Shemesh (2003), USDA-ARS (2002). Units are nanograms of estrone plus estradiol for animal products and isoflavones for plant products per 500 grams of food

With a potential ROI of $5-10 for every $1 spent, every beef producer should consider using an implant program. There is no "one size fits all" implant program. Consider your marketing plan and "work backwards" to determine when to implant. Work with your veterinarian to develop an implant program that best suits your farm.

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