

# Beef Logic

by Bob Long



## Implants increase length of feeding period

Growth-promoting implants increase rate and efficiency of gain in cattle being fed for slaughter just as in nursing calves. However, the metabolic effects of these hormone and hormone-like implants are not always positive. Therefore, it's important to know how to use these products and the results to expect. A list of available implants follows.

### Implants for finishing steers

1. Ralgro — active ingredient is zeranol and the implant is effective for about 100 days.
2. Synovex S — contains progesterone and estradiol and is effective for 100 days.
3. Compudose — contains only estradiol but is effective for 200 days.
4. Finaplix S — contains trembolone acetate.
5. Revalor S — contains trembolone acetate and estradiol and is effective for about 100 days.



### Implants for finishing heifers

1. Ralgro -the same product as used for steers with the same effects.
2. Synovex H — contains testosterone and estradiol and is effective for approximately 100 days.
3. Finaplix H — contains trembolone acetate.
4. Melengestrol acetate (MGA) — unlike other growth-promoting products, MGA is not an implant but is added to the feed. Further, instead of increasing growth by metabolic effects, MGA improves rate and efficiency of gain by reducing the disturbance and activity of heifers in heat. Estrus or heat occurs in non-pregnant heifers every 18 to 21 days, therefore, a pen of 100 heifers will have a few individuals in heat at all times and the disturbance and activity causes a decreased feed intake and increased energy requirement resulting in depressed gain and feed efficiency. MGA suppresses heat thereby improving rate and efficiency of gain. A disadvantage is the requirement for withdrawal (removal of MGA from feed) 48 hours before slaughter.



The manufacturer of each of these growth-promotants claims superiority. However, the response to these products is quite uniform and feeders can expect an improvement of 5 to 10 percent in both rate and efficiency of gain from each.

In addition to increased gain and efficiency, cattle implanted with growth-stimulators produce leaner carcasses than untreated cattle fed the same diet for the same length of time. This increased leanness is desirable in view of the beef industry problem of excess fat. However, the treated cattle not only carry less subcutaneous fat but also have less marbling than controls. Less marbling means a lower Quality Grade and a smaller percentage of the cattle grading USDA Choice. With a usual price spread in favor of Choice over Select, reduced marbling is a major disadvantage.

In order to have adequate marbling to reach Choice, implanted cattle must be fed longer than similar cattle not implanted. During this required additional three or four week feeding period, the advantages in gain, conversion and leanness of implanted cattle over controls becomes less and can disappear.

Manufacturers of implants have insisted in advertising that research shows no "statistical" difference in Quality Grade between implanted and untreated cattle. However, examination of all the data leaves no doubt that implanted cattle show lower Quality Grades than similar untreated cattle fed the same length of time.

Unfortunately, the people behind Revalor S have used an even more questionable advertisement. The ad says, "While all implanted calves had increased average daily gains and increased live/carcass weights compared to controls, RevalorS scored higher than any single-compound implant in important quality categories like marbling and juiciness." What the ad really says is, all implanted cattle gained faster and were heavier at the end of the test than untreated cattle (no surprise). Further, the controls were not included in the quality comparisons nor were certain of the implants. The implication is that Revalor S improves quality yet the data does not support that. The headline of this ad states, "A few choice words about quality beef." It would appear that the words chosen are not appropriate.

Physiologically, when cattle are implanted, the growth curve is extended and physiological maturity and its associated marbling is delayed. Therefore, when implanted cattle are compared with controls after the same number of days on feed the two groups are at a different physiological endpoint which makes the comparison illegitimate. Further, the additional time on feed required to put the implanted cattle into the Choice grade dictates slaughter at heavier weights which increases beef supply and depresses price. Perhaps, the use of medium-framed feeder cattle genetically superior for gain, feed conversion and carcass traits fed without implants is indicated.

