Utah State University
DigitalCommons@USU

All Archived Publications | Archived USU Extension Publications

1-1-1990

Growth Stimulants An Easy Way to Boost Production

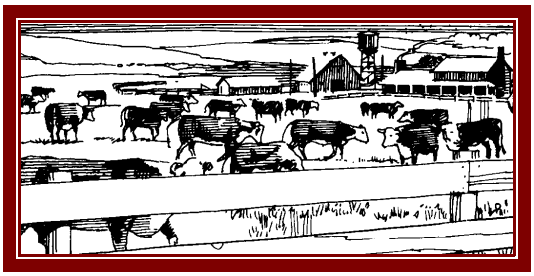
Nyle J. Matthews

Warning: The information in this series may be obsolete. It is presented here for historical purposes only. For the most up to date information please visit The Utah State University Cooperative Extension Office

Recommended Citation
Matthews, Nyle J., "Growth Stimulants An Easy Way to Boost Production" (1990). *All Archived Publications.* Paper 12.
http://digitalcommons.usu.edu/extension_histall/12

This Article is brought to you for free and open access by the Archived USU Extension Publications at DigitalCommons@USU. It has been accepted for inclusion in All Archived Publications by an authorized administrator of DigitalCommons@USU. For more information, please contact becky.thoms@usu.edu.

Utah State University Extension
electronic publishing



Growth Stimulants

An Easy Way to Boost Production

Nyle J. Matthews
Extension Area Livestock Specialist

February 1990 AG 235

A tiny pellet inserted under the skin of a calf's ear may increase weight gains as much as 15 to 20 percent. This same result would take years to accomplish through breeding and selection. These tiny pellets are growth stimulants. They are made of hormones that are constructed to slowly release minute amounts into the blood stream that stimulate the animal to produce natural body hormones. One of these hormones is a growth hortnone. It regulates the rate of growth of the animal. Increasing the rate of growth will almost always improve feed efficiency and reduce maintenance costs. These pellets are called implants. They don't necessarily increase mature size, but rather stimulate early growth causing the calf to reach market weight more quickly and at less expense to the producer.

PRODUCTS AVAILABLE

There are four manufacturers of growth promoting implants. The implants vary in size and shape and require different implanting guns. The following table shows recommended use of the products available.

TABLE 1: AVAILABLE GROWTH STIMULATING IMPLANTS

Product	Company	Active Ingredient	Recommended Use
Steeroid	Anchor	Progesterone & Estradiol	Feedlot Steers over 400 lbs
Heiferoid	Anchor	Testosterone & Estradiol	Feedlot Heifers over 400 lbs
Synovex S	Syntex	Progesterone & Estradiol	Feedlot Steers over 400 lbs
Synovex H	Syntex	Testosterone & Estradiol	Feedlot Heifers over 400 lbs
Synovex C	Syntex	Progesterone & Estradiol	Nursing Calves over 45 days
Ralgro	Pitman Moore	Zeranol	Market Steer & Heifers all ages
Compudose	Elanco	Estradiol	Market Steers
Finaplex S		Trembolene Acetate	Market Steers

Note: Fach product has special instructions that are included. Manufacturers recommendations for reimplantation and withdrawal should always be followed closely.

IMPLANTING TECHNIQUE

Dosage of the implants is pre-measured and all come prepackaged ready to use. The costs range from $.95 to $1.75 and some labor is required for installation. Returns, however, are generally many times that of the costs. Most of the implants are cleared to be installed in the middle third of the ear and should be placed on the back side. This location has been carefully researched for proper absorption rate and the chance of getting it into a blood vessel is less.

Proper implanting technique is important. Some common errors that may result in less than optimum response are: 1) Crushing the pellet while implanting. 2) Pushing the pellets into a ball or cluster (the needle should be inserted all the way in and the pellets deposited in a row as the needle is removed). 3) Pushing the needle through the ear and dropping the pellets on the ground. 4) Depositing the pellets between the skin layers or in cartilage. 5) Cutting a blood vessel causing hemorrhage around the pellets. 6) Causing infection of the implant site because of unsanitary conditions.

EXPECTED RESULT

As indicated in Table 1, implants are available for all growth phases of young beef cattle. These growth stimulants are proven to be more effective, however, when cattle increase in size and are placed on high energy feed. Steers on a fattening ration should average about 15% faster growth with about 7% greater feed efficiency. Weaned calves on a growing ration will generally respond with 10–12% faster gains from growth stimulants. The result in nursing calves, however, is much lower, about 5% on the average. Nursing calves respond better if they are on good feed, but may not respond at all if feed for calves and mothers is limited. Implants work better on nursing calves if given when they are a little older. Syntex recommends that Synovex C be given after calves have reached 45 days of age. Other researchers have suggested 200 pounds as a minimum weight for implanting calves. Table 2 shows results of implants on steer calves in two Utah herds with different growth rates.

The calves in these trials were implanted in the spring and grazed with their mothers until fall when they were weighed off test. They were not re-implanted. Compudose and Ralgro gave significantly better gains than the control in herd A, but the small gains in herd B were not significant. Herd B had much lower rates of gain overall and the implant period extended beyond the effective range of any of the products used.

PROPER USE

The producer who sells weaner calves will have to use implants during nursing to gain any benefit. Producers who sell yearlings may use them during nursing and should definitely use them during the growing phase. A rancher who retains ownership until slaughter should make continued use of implants from weaning to slaughter when the effect is greater and the feed cost higher.

TABLE 2: COMPARISON OF THREE GROWTH STIMULANTS IN NURSING STEER CALVES IN TWO UTAH HERDS

HERD A (154 Day Trial)				
Treatment	**Control**	**Compudose**	**Ralgro**	**Synovex C**
Number	16	18	17	18
Average lbs gained	378	419	414	406
A.D.G.	2.45	2.72	2.69	2.64
% Over Control		10.8*	9.5*	7.4
HERD B (247 Day Trial)				
Treatment	**Control**	**Compudose**	**Ralgro**	**Synovex C**
Number	18	19	19	19
Average lbs gained	320	344	329	321
A.D.G.	1.30	1.39	1.33	1.29
% Over Control		7.5	2.8	0

*Indicates statistically significant difference from control.

Most implants will give a response for 100 to 120 days, but Compudose is suggested for 200 days. Once calves are implanted, implanting should continue at regular recommended intervals. If calves are not reimplanted they lose the advantage accumulated. The implanting program should be organized to give continuous benefit of stimulants right up to slaughter. In herd B, all implants had wom off before weaning and calf gain had almost returned to normal.

Only Synovex C is cleared for use on replacement heifers. Research has shown that replacement heifers may exhibit as much as 90 days delay in sexual development when implants are given at weaning. Conception rates are often greatly reduced. Using implants on replacement heifers as small calves had a minimal effect on reproduction, but it still should be avoided if possible. Likewise, implants have been shown to retard sexual development of young bulls. Ranchers should always follow the recommendations of the manufacturer closely when using growth stimulants.

Utah State University is an Equal Opportunity/Affirmative Action Institution
Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Robert L. Gilliland, Vice President and Director, Cooperative Extension Service, Utah State University. (EP/07-95/DF)