

Caution urged in use of calf growth stimulants

By Lawrence Hutchinson
and Sharon Harmon

UNIVERSITY PARK — Growth stimulant implants are synthetic or naturally occurring hormones that are placed under the skin in a calf's ear. How these implants promote growth is not completely understood. They appear to work by stimulating the production of

other hormones, particularly growth hormone. Growth hormone, a naturally produced substance from the pituitary gland located at the base of the brain, is an important regulator of the rate and efficiency of beef cattle growth.

When approved implants for nursing calves are used properly, a

15-pound to 25-pound or more increase in weaning weights can be expected. Growing and finishing cattle will grow eight to 20 percent faster and five to 12 percent more efficiently. These responses can reduce the cost of beef production by 10 to 20 percent per head. Implant costs are minimal in relation to the economic gains.

Several different types of implants have been approved for use in beef cattle. Compudose[®] is approved for steer calves from birth. It is a silicon rubber implant containing 24 mg. of estradiol 17B. Because of the structure of the silicon rubber implant, the estradiol is released slowly over a 200-day period. The effective life of Compudose is therefore 200 days or more. All other implants currently approved are in a compressed pellet form and are generally assumed to be effective for 80 to 120 days.

Ralgro[®] is approved for use in both steers and slaughter heifers from birth. Its active ingredient is zeranol, a substance derived from a mold commonly found in corn. Ralgro has a 65-day withdrawal period. The dosage is 36 mg. in three 12 mg. compressed pellets.

Steer-oid[®] contains 200 mg. of progesterone and 20 mg. of estradiol benzoate in the form of eight compressed pellets. It is approved only for steers over 400 pounds. Since Steer-oid is composed of naturally occurring

hormones, it does not have a withdrawal period.

Synovex[®] is marketed in three formulations. Synovex-S is for steers and Synovex-H is for slaughter heifers. Both of these products are cleared only for cattle over 400 pounds. Both Synovex S and H products contain 20 mg. of estradiol benzoate. The Synovex-H formulation also contains 200 mg. of testosterone propionate, while the Synovex-S formulation contains 200 mg. of progesterone. Synovex-C is approved for suckling calves of both sexes, and contains 100 mg. of progesterone and 10 mg. of estradiol benzoate.

Proper technique is important when implanting any of these products. When any compressed pellet implant except Compudose is crushed, its effective life is reduced. Recent research has shown that the effective life of these implants can be 140 days or longer. This may be true if proper implanting is used and no pellets are crushed.

Crushing may also increase the incidence of "buller" steers. Buller steers exhibit unusual sexual activity in the feedlot and are a tremendous loss in reduced performance and increased labor. Dollar losses for buller steers were estimated at over \$23 per head in 1976.

Implant location is important in reducing implant loss. Synovex, Steer-oid and Compudose manufacturers all recommend implanting in the middle one-third of the ear. Implanting close to the base or outer edge of the ear can increase the incidence of implant loss or reduce performance. Ralgro, on the other hand, should be implanted at the base of the ear. Recent research has shown a substantial increase in performance by implanting Ralgro at the base of the ear instead of implanting one inch from the base of the ear.

A dirty needle or a manure-covered ear may lead to an infectious injection. If the compressed pellet implants become encapsulated in connective tissue, infection may occur or the implant may become ineffective. Studies indicate that a silicon rubber implant, such as Compudose, may be more easily rejected when infection occurs.

There are some common mistakes in implanting. If the implant needle is not withdrawn slightly before the pellets are deposited, the pellets may be crushed. A dull needle or a needle inserted at the wrong angle can puncture the cartilage. The implant should be deposited between the skin and cartilage. The major veins of the ear should be avoided.

Currently, Ralgro is the only implant that has a withdrawal time. Reimplanting should be done early to insure the maximum response without violating the withdrawal period. Early reimplanting is beneficial economically, since implanting or handling heavy feedlot cattle (less than 65 days prior to slaughter, for example) may actually reduce performance. In any event, do not implant cattle with Ralgro within 65 days of slaughter.

Diethylstilbestrol (DES) was banned by the FDA in 1979. Use of DES as either an implant or feed additive is illegal and subject to legal penalties.

Implants are a definite economic advantage to the beef industry. Proper, responsible use will ensure their availability in the future.

(Lawrence Hutchinson is a Penn State professor of veterinary extension, and Sharon Harmon is a Penn State veterinary science research assistant. Part of the information above was collected from the Iowa State University publication, "Growth Stimulants for Beef Cattle.")

Fallen fruit branches can lead to poisoning

CREAMERY — Trees and branches downed by wind storms or deliberate pruning can cause problems to children and livestock if clean-up is not done carefully.

According to County Agent Paul Reber, the leaves of the genus Prunus — including apricots, cherries, peaches and plums — contain cyanide. Under normal growing conditions, the leaves are

not a problem. However, these leaves release hydrogen cyanide as they wilt, which can cause problems if eaten.

Damaged wild cherry trees along fields and in the woods next to pastures can be especially dangerous to livestock who eat the leaves with other forage plants. Some farmers have lost animals who have eaten a substantial amount of wilted cherry leaves.

The sweet odor from wilting leaves also may attract small children who live to nibble on almost anything. Chewing a few leaves may cause some stomach discomfort, but probably won't cause serious problems. Nevertheless, caution your children against chewing or eating any plants not grown specifically for food.

If you have wilting apricot, cherry, peach, or plum branches on your property, drag them out of reach of children and livestock. Better yet, get rid of them altogether.



American Chianina Association NORTHEAST REGION JUNIOR FIELD DAY

held in conjunction with the

York Interstate Fair

York, Pennsylvania

Sunday, September 8

Northeast Region Junior Heifer Show 3:30 p.m.
(black division, white division)

Northeast Region Junior Steer Show 4:30 p.m.

Judge: Dr. William Henning, Penn State University

Entry deadline August 14, 1985

\$10 per head entry fee

Mail entries to Mrs Marjorie Brothers
Lake View Farm
R D 1
East Berlin, PA 17316
(717) 259-0564

— PREMIUMS —

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Grand Champion \$250
Reserve champion \$100
plus class money

Steer Show
Grand Champion \$300
Reserve Champion \$150
plus class money

Chianina open show at the York Fair
September 7, 1985

All open show entries must be made directly
to the York Fair.

Larry Moore - Field Day Chairman
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