



The GAR REPORT

Summer 2002

PROUD TO BE A FOUNDING MEMBER OF U.S. PREMIUM BEEF.

Editor's note:

The Summer issue of the GAR Report will review several marketing opportunities for GAR customers. If you are a GAR customer and have cattle or calves to sell, we encourage you to take advantage of these opportunities. Premiums are being paid for GAR genetics and we continue to explore other marketing opportunities to add value to your GAR influenced cattle.

Part I of a two-part synchronization article contributed by Dr. Bill Beal, Virginia Tech, can also be found in this issue. Dr. Beal is a cattle industry expert in the field of estrus synchronization and we appreciate his continued support of Gardiner Angus Ranch. The conclusion will appear in the next issue of the GAR Report.

Again, we want to thank Troy Marshall for allowing us to reprint an editorial from the May 20, 2002, issue of The Seedstock Digest.

In four years GAR influenced cattle sold through U.S. Premium Beef® have returned premiums and dividends to our customers in excess of \$1,000,000!

Since 1885



If you have industry related questions or specific issues that may be addressed in the GAR Report, please submit to:

GARDINER ANGUS RANCH

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Developing marketing opportunities for our customers a high priority

SUPERIOR VIDEO AUCTIONS

Gardiner Angus Ranch will once again sponsor sections during three summer Superior Video Auctions. The sections will feature Gardiner influenced cattle and will be noted as such in the Superior catalog.

The sale dates and consignment deadlines are as follows:

Sale	Date	Consignment Deadline
Sandhills Classic Kearney, NE	8/7-9	7/22 @ 5PM (MST)
Labor Day Sale Denver, CO	8/28-30	8/12 @ 5 PM (MST)
GAR Influence Replacement Female Sale (Tentative)	11/1	10/22 @ 5 PM (MST)

In past sales GAR influenced cattle have sold well above market price.

If you are interested in consigning cattle to any of the upcoming Superior Video sales, contact Superior representatives, Bill or Barrett Broadie at (620) 635-4043, Superior Livestock Auction (970) 842-5566 or (817) 624-3800; or contact Gardiner Angus Ranch (620) 635-2932.

USPB DELIVERY RIGHTS

Each year Gardiner Angus Ranch offers 4,000 shareholder delivery rights to our customers selling cattle through U.S. Premium Beef. Those delivery rights have enabled GAR customers to receive in excess of \$1,000,000 in total premiums and dividends paid in four years.

During fiscal 2001, GAR customers earned an average of \$60.07 per head over the cash market by selling their cattle through U.S. Premium Beef. For every 100 head of GAR influenced cattle sold through U.S. Premium Beef, our customers received an additional \$6,007.

Even during difficult markets, GAR customers have opportunities to add value to their cattle through the use of Gardiner genetics.

FEED LOT RELATIONSHIPS

Gardiner Angus Ranch is committed to expanding marketing options for our customers. One of the priorities is providing information regarding the value of GAR genetics, advantageous pricing formulas, successful feed lot relationships, and the overall understanding of increasing the profitability of GAR influenced cattle.

Value-based pricing systems, such as U.S. Premium Beef® are designed to pay producers based on INDIVIDUAL performance. Through the use of Electronic Identification Devices (EIDs) and other state-of-the-art technology, feed yards are managing and sorting cattle for a range of grid formulas and end points.

Gardiner Angus Ranch genetics are marketable in virtually all value-based systems. We know WHAT Gardiner Angus cattle will produce. Having feed yard and marketing relationships that know HOW to manage and feed Gardiner cattle to the optimum end point is imperative.

One such operation is Sam Hands, Triangle H Grain and Cattle, Garden City, Ks, a long time customer, friend and business associate of Gardiner Angus Ranch. Although Sam is a commercial cattleman, Triangle H is also a feeding operation with years of experience. Triangle H is a leader in sorting cattle for optimum end points and collecting individual feedlot and carcass data. All cattle are marketed "on the rail."

"Most all of our cattle are 'ranch fresh' from known genetics. From developing and testing GAR bulls, working with their customers to sort and feed their cattle, our relationship with Gardiner's is a win-win for us both," says Sam.

Another feedlot partner is Irsik and Doll, Cimarron, KS, a diversified feeding operation consisting of five locations and a combined one-time capacity of 170,000 head. Named by *CERTIFIED ANGUS BEEF®* as a Cattle Feeding Partner of the Year for 2000, Irsik and Doll offers a full complement of marketing options including financing of the cattle, daily scheduling with four major packers, complete

Three Common Management Traps

—Troy Marshall, *Seedstock Digest*, May 20, 2002

Editor's Note: We, again, want to thank Troy Marshall, Editor & Publisher, Seedstock Digest, for allowing the reprinting of his on-target and timely editorial and on the quality and content of his weekly e-mail newsletter. For those interested, you can receive The Seedstock Digest weekly through subscription only.

Subscription Rates: \$139.00 per year US (\$159.00 Canada & Mexico)

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The cattle industry and the seedstock industry in particular have a lot of proud traditions. Few businesses can boast of the type of commitment, work ethic, and or sense of values that define the cattle business. However, our record (when measured as profits) has been lukewarm at best. The following are three common traps that every producer should be aware of as they develop their strategic plans and make important management decisions.

THE FIRST TRAP:

Getting caught up with the herd.

If someone else is doing it, then I probably should be doing it too. Certainly, there is a lot to be learned from observing others, and adapting "good" ideas rapidly has always contributed to the success of producers, but by following the course staked out by the pioneers or by following the path that the majority is taking can make it very difficult to differentiate oneself from the crowd. The trap of getting caught up with herd, leads to a lack of focus, and makes it very difficult for one to differentiate your operation from the competition. In marketing, this means there is a tendency to put together marketing programs that are nearly identical to others. Just pick up a breed magazine and see how many ads have a short headline, one to three pictures of animals with their EPDs, pedigree, and a ranch logo with contact information. We tend to think an ad is fairly sophisticated if the ad copy lists a couple of benefits. What does the typical advertising program convey? Is it a unique selling proposition, something unique about what is being offered for sale, or does it have the same look and feel as nearly every other ad? Is it merely a similar version of every ad in the magazine?

The trap of getting caught up with the herd is possibly even more pronounced when it comes to developing a consistent breeding program. There is both safety and comfort in using the bulls or bloodlines that everyone is using, or in putting selection pressure upon the traits that others are selecting for. However, this can result in either a breeding

program that is commoditized and generic or one that is lacking in purpose and vision.

THE SECOND TRAP:

Developing a production vs. product mentality.

Typically, producers do a good job of feeding their cows, and allocating resources to maximize production from their given resources. They do a good job of producing their product, but spend precious little time determining what product they should be producing and how they are going to market it. Shifting to a product mentality shifts the focus to marketing the product and leads to creating acceptable revenue flows that are sustainable.

For example, let's consider the animal breeding and genetics side of the equation. We are very good at improving EPDs and creating genetic trends. We embrace technologies like embryo transfer, AI, and ultrasound. We put considerable effort in identifying new tools like genetic markers and we measure nearly every facet of an animal's productive life, always striving to improve performance incrementally. The industry does a very good job of producing. In fact we are so production driven that the average producer doesn't make the time to really develop a plan to create the proper product. Seedstock producers continually make genetic progress; cow/calf operators continually purchase the "best" bulls, yet we do so with a time horizon that rarely extends beyond this year's calf crop. From a genetic perspective we are a lot like the corporations who fail to position themselves for long-term profits because they are focused on short-term profit considerations and measures. A major sin of the production mentality is that it tends to create a very shortened planning horizon. The emphasis is on next year's calf crop, bull sale or replacement females, instead of emphasizing the longer-term goals of the herd. Production is important, but production alone will not pave the road to profits.

THE THIRD TRAP:

Paying lip service to important concepts.

Nearly everyone will agree that significant time should be invested in marketing the products you produce, or that genetics matter, or that cows should be matched to the environment, etc. The problem is that strategic planning, marketing, and management decisions do not always align with or take advantage of these important concepts. There is recognition that the implementation of these important concepts could have significant results, but they are rarely the most urgent tasks, they do not demand intention so they move down the priority list. These important principles and concepts are left to another day. Unfortunately, that day rarely arrives.

Giles Family & Krier's Combine to offer 1,000 GAR Influenced Females, November 18, 2002

Two long-time Gardiner Angus Ranch customers will offer approximately 1,000 superior replacement females this fall. The sale will be held at the Pratt Livestock Auction, Pratt, KS, November 18, 2002. Giles Ranch Co., Bucklin, KS, and Krier Cattle Co., Ashland, KS, have purchased Gardiner bulls for over 25 years. The females are sired by GAR bulls, sons of 6807, EXT, 1489, GAR Precision, and New Design 036. The cattle have been raised on native grass in large, open range pastures in Northern Clark County, KS.

Due to the sale of the ranch leased by Krier's for over 50 years, their offering will be a complete cow herd dispersal. The extreme drought in Western Kansas has prompted the sale of the Giles Ranch females. Regardless of circumstances, this sale is an excellent opportunity for beef producers. Take advantage of a large offering of young, highly productive females from proven, high accuracy Gardiner Angus Ranch genetics.

Recently, both Giles and Krier's topped the market at the 6/25/02 Superior Video Auction with GAR influenced cattle. Since 1998, 820 head of Giles Ranch retained ownership steers marketing through U.S. Premium Beef averaged 64.13% yield, 74% Choice or better, 25% CAB, 8% Farmland Angus Beef, 95.3% YG 1, 2 & 3's.

For further information, contact: Roger Giles (620) 826-3683, Norman Giles (620) 635-4403, Mark Krier (620) 635-2151 or (mobile) 635-5883 or Mark Gardiner (620) 635-2760.

Marketing Opportunities

(Continued from page 1)

data collection and formula feeding for all value-based pricing systems. Producers can follow cattle by pen or individually, through a password protected, internet accessible central database servicing all five feed yards.

HRC Feed yard, Terry Ryan, manager, Scott City, KS, is yet another certified U.S. Premium Beef® feed yard with an excellent history of feeding GAR cattle.

The bottom line — there is a feed yard right for your operation, regardless of size. Genetics, herd health and ranch management are the fundamental requirements for a successful feeding experience resulting in profitable cattle that return a premium.

For further information, contact GAR or:

Sam Hands (Triangle H) • (620) 276-6546

Ron Kramer (Irsik & Doll) • (620) 855-3111

Terry Ryan (HRC Feed yard) • (620) 872-5328

U.S. Premium Beef, Farmland National Beef Unaffected by Farmland Industries' Filing

KANSAS CITY, MO (June 3, 2002) — In response to continued questions stemming from Farmland Industries' recent filing for reorganization under Chapter 11 of the U.S. Bankruptcy Code, U.S. Premium Beef, Ltd. (USPB) announced today that Farmland National Beef Packing Company, L.P. (FNB) is not for sale and operations will continue as normal.

"Farmland National Beef's operations are unaffected by the financial challenges facing Farmland Industries," Steve Hunt, USPB CEO, said in making an announcement to clarify the relationship between FNB and Farmland Industries. "FNB is a Limited Partnership owned entirely by U.S. Premium Beef and Farmland Industries, Inc. FNB operates as a separate entity and is not a division of Farmland Industries or U.S. Premium Beef. Furthermore, no assets of FNB are pledged to Farmland Industries' bank group and therefore are unaffected by Farmland Industries' filing," Hunt explained. "It is business as usual for our beef company."

"Farmland National Beef is a very success-

ful business structured as a partnership," Hunt added. "FNB owns and operates two slaughter and fabrication plants in Liberal and Dodge City, KS, along with two newly acquired case ready plants in Pennsylvania and Georgia. FNB markets high quality beef products in both the domestic and international marketplace out of its headquarters in Kansas City, MO, and offices in Chicago, IL, Tokyo, Japan, and Seoul, South Korea. In addition, FNB owns a majority interest in Kansas City Steak Company, a portion control/mail order catalog business, and ALF Ventures, LLC, a joint venture formed to commercialize a food safety initiative involving activated lactoferrin," he said.

"U.S. Premium Beef has enjoyed a very successful partnership with Farmland Industries and we look forward to that continuing," Hunt said. "We hope that the recent action taken by Farmland Industries will provide it with the time to reorganize its business and financing and emerge as our continued partner in the beef business."

"While there has been much speculation

as to the future of Farmland Industries' meat interests, FNB is not for sale," Hunt reiterated. "Should Farmland Industries' ownership interest in the beef partnership become available, USPB would pursue its priority position, as defined in our partnership agreement, to buy Farmland Industries' ownership interest."

U.S. Premium Beef is a beef marketing company that has producer ownership from every segment of the beef industry. More than 1,700 producers from 37 states have marketed cattle through the company since it began operations on Dec. 1, 1997. The U.S. Premium Beef system is a unique designed supply process that rewards producers for vertically integrating their beef businesses by owning cattle through value-added processing. By participating in the company, USPB members have realized more than \$90 million in grid premiums and dividends.

For more information, contact: Bill Miller, Director of Communications, U.S. Premium Beef, Ltd., 866.877.2525.

Understanding the "tools" we have to use for synchronization

—W.E. Beal, Department of Animal and Poultry Sciences, Virginia Tech

Editor's note:

Friend and colleague, Bill Beal, Virginia Tech, has been a constant resource throughout the years in maximizing the A.I. and embryo transplant programs at Gardiner Angus Ranch through synchronization. We continue to use Dr. Beal's research in newsletters in an effort to provide our customers and readers the most current and relevant synchronization information.

The evolution of estrous synchronization programs has been a continuous process for the past 50 years. Within the continuous process there have been flurries of activity centered around the availability of new pharmaceutical products or new research methods, like ultrasonography. Today we are "blessed" or "cursed" with a wide variety of estrous synchronization programs and "new" programs (or variations on old ones) keep popping up in the scientific literature and popular press on a regular basis.

The result of this abundance of estrous synchronization programs is a mentality that can best be described as "**synchronization of the month club**." Producers, extension personnel and veterinarians who lack the time to keep up with the multitude of new or varied programs are often confused. As one veterinarian told me recently, "its embarrassing to have a client call you up and ask you about "60-40-20 Synch" and you have NO idea what he's talking about."

I've come to the conclusion that there is no way to know every drug combination out there

being used for synchronizing estrus. I believe a far better approach is to understand what can be done with the pharmaceutical and management "tools" that are available, then you can understand the principle behind any synchronization program.

There are three approved pharmaceutical "tools" that can be used alone or in combination to synchronize estrus. Understanding the actions of **PROSTAGLANDIN** ($\text{PGF}_{2\alpha}$), **GONADOTROPIN-RELEASING HORMONE** (GnRH) and **PROGESTINS** is the key to being able to explain how any synchronization program works. The objective of this article is to describe the effects of the "tools" used for estrous synchronization and to consider their role in the most common synchronization programs.

PROSTAGLANDIN

Since 1972 when $\text{PGF}_{2\alpha}$ was demonstrated to regress the corpus luteum in cattle, prostaglandin has been used as an effective method for synchronizing estrus in cycling heifers and cows. Today, $\text{PGF}_{2\alpha}$ or analogues of $\text{PGF}_{2\alpha}$ are commercially available under the tradenames, "Lutalyse", "Estrumate" and "Prostamate". Injection of prostaglandin is effective in regressing the corpus luteum between day 5 and 21 of the estrous cycle, hence, a common recommendation to synchronize estrus in a herd of cattle was to administer two injections of $\text{PGF}_{2\alpha}$ 11 to 14 days apart.

Prior to 1982 it was believed that after day 4 of the estrous cycle all cows were equally

responsive to a luteolytic dose of $\text{PGF}_{2\alpha}$. More recently it has been demonstrated that cattle injected with $\text{PGF}_{2\alpha}$ between day 5 and 9 of the cycle are less responsive than those injected later in the cycle. A summary of several studies noted that the response to $\text{PGF}_{2\alpha}$ was lowest (67%) among heifers treated on days 5 through 9, moderate (77%) when heifers were treated on days 9 through 12 and highest (> 91%) among those injected after day 12 of the cycle. Hence, to maximize the response to $\text{PGF}_{2\alpha}$ an effort should be made to insure that cows or heifers are beyond days 10 to 12 of the estrous cycle at the time of treatment.

The average interval from injection of prostaglandin to estrus is usually 50 to 72 hrs. Variation in the timing of estrus is created in part by differences among cows in the time required for an ovulatory follicle to develop. Estrus occurred an average of 48 to 59 hrs. after treatment in four studies in which a prostaglandin product was administered on days 5 to 8 of the estrous cycle. In contrast, the average time of estrus was 53 to 72 hrs. if heifers in the same studies were treated between days 12 and 15 of the estrous cycle. Hence, while estrus is synchronized within a 5-day period following $\text{PGF}_{2\alpha}$ treatment, regardless of the stage of the cycle at the time of treatment, the precision of the synchrony of estrus is reduced by variation due to differences in the stage of follicular development at the time of treatment.

Fertility is high following prostaglandin syn-

chronization. Results of most studies indicate that conception rates are similar for beef cows or heifers synchronized with PGF₂α and those bred after a naturally-occurring heat. In one of the largest experiments (3,443 head) it was reported that lactating cows or heifers bred 12 hrs. after detection of a PGF₂α-synchronized estrus had a conception rate of 59%. Untreated cows and heifers in the same herds achieved a 62% conception rate when bred 12 hours after a natural heat.

When a single timed insemination has been employed following PGF₂α, some timed-bred groups of cows have had acceptable conception rates, however there has been significant variation and a greater incidence of very low conception rates have occurred when timed breeding was used. In a large trial involving 45 herds, a 22% lower conception rate was recorded when a single, timed breeding at 80 hours post-PGF₂α was compared to breeding 12 hours after detecting a synchronized estrus. The lower fertility, and in particular the range in conception rates (6.7 to 85.7%), in those herds of cattle timed bred after PGF₂α is most likely related to the greater variation in the timing of estrus following PGF₂α treatment as compared to other synchronization programs.

GONADOTROPIN-RELEASING HORMONE (GnRH)

GnRH is a naturally-occurring hormone that is released from the bovine hypothalamus to cause the release of luteinizing hormone (LH) from the pituitary gland. During a normal estrous cycle of a cow, the surge in LH occurs at the beginning of estrus. The LH surge is responsible for initiating events that result in ovulation of the dominant follicle approximately 27 to 30 hours after the onset of estrus.

GnRH is a small peptide hormone that can be synthesized and sold as a pharmaceutical product. The native compound or an analogue of GnRH are marketed under the tradenames: "Cystorelin", "Fertagyl" or "Factrel". When 50

to 250 mg of the synthetic product is injected, it induces an LH surge similar to the natural pre-ovulatory surge of LH.

Development of follicles during the bovine estrous cycle occurs in waves of growth during which several follicles begin growing until a single, dominant follicle (DF) becomes significantly larger than subordinate follicles (Figure 1). The dominant follicle inhibits growth of subordinate follicles, and those subordinate follicles regress. In the presence of a CL the DF deviates in size to become noticeably larger, then proceeds through a "growth phase", a "static phase" and into a "regression phase" in which it loses the ability to inhibit other follicles and a new follicular wave is initiated. Conversely, in the absence of a CL, increased secretion of gonadotropins causes the DF to mature, secrete estradiol and ovulate. Estrous cycles of most cows consist of two or three waves of follicular development with the last wave giving rise to the ovulatory follicle.

The injection of GnRH and the LH surge that follows affect follicles on the ovary in different ways depending on the presence or absence of a CL, and the stage of DF growth at the time of GnRH administration. If the CL has been regressed (by PGF₂α) and GnRH is administered, the DF will ovulate approximately 30 hours after GnRH treatment. Conversely, administration of GnRH causes luteinization of the DF and emergence of a new wave of follicles approximately 1.5 day later if the CL is present and the DF has deviated in size from the subordinate follicles. Unfortunately, GnRH is unable to induce ovulation or induce a new wave of follicles during the first 3 days following emergence of a new follicular wave. During that time the DF has not developed a population of LH receptors. Therefore, although GnRH induces an LH surge, LH is unable to luteinize follicles and induce the emergence of a new follicular wave.

Given the different responses of follicles to GnRH, the drug can be used as a tool for estrous

cycle control in either of two ways:

IF A CL IS PRESENT: GnRH induces a new wave of follicles in 1.5 days

IF A CL IS NOT PRESENT: GnRH will induce ovulation 30 hours later

Controlling the time of emergence of a new follicular wave and synchronizing the follicular wave status of animals within a group is the newest technique used to improve the synchrony of estrus and precise timing of ovulation. Treatment of all animals at the beginning of an estrous synchronization treatment induces the synchronous emergence of a new DF such that at the end of the treatment (usually 7-9 days later) all animals in the group have a DF at the same stage of development. When the CL is regressed, by PGF₂α administration, the synchrony of estrus is remarkably "tight" and the option of inducing a timed ovulation is more realistic because all animals in the group have a large follicle at the same stage of development.

Preceding traditional methods of estrus synchronization with a treatment that eliminates a growing or static dominant follicle has had two very exciting effects. First, it synchronizes follicular development among cows prior to the estrus synchronization treatment. In turn, variation in the timing of estrus is reduced because development of the ovulatory follicle is more uniform. Second, and perhaps even more exciting, is the finding that when an LH surge is induced by GnRH in a group of animals that have had both follicular development and luteal regression synchronized, the range of the timing of ovulation is remarkably precise and the possibility of achieving high pregnancy rates following a single, timed insemination is enhanced.

(Continued in the next issue of the GAR Report)

Plan now to join us Saturday, April 5, 2003, for the Gardiner Angus Ranch 24th Annual Production Sale.



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